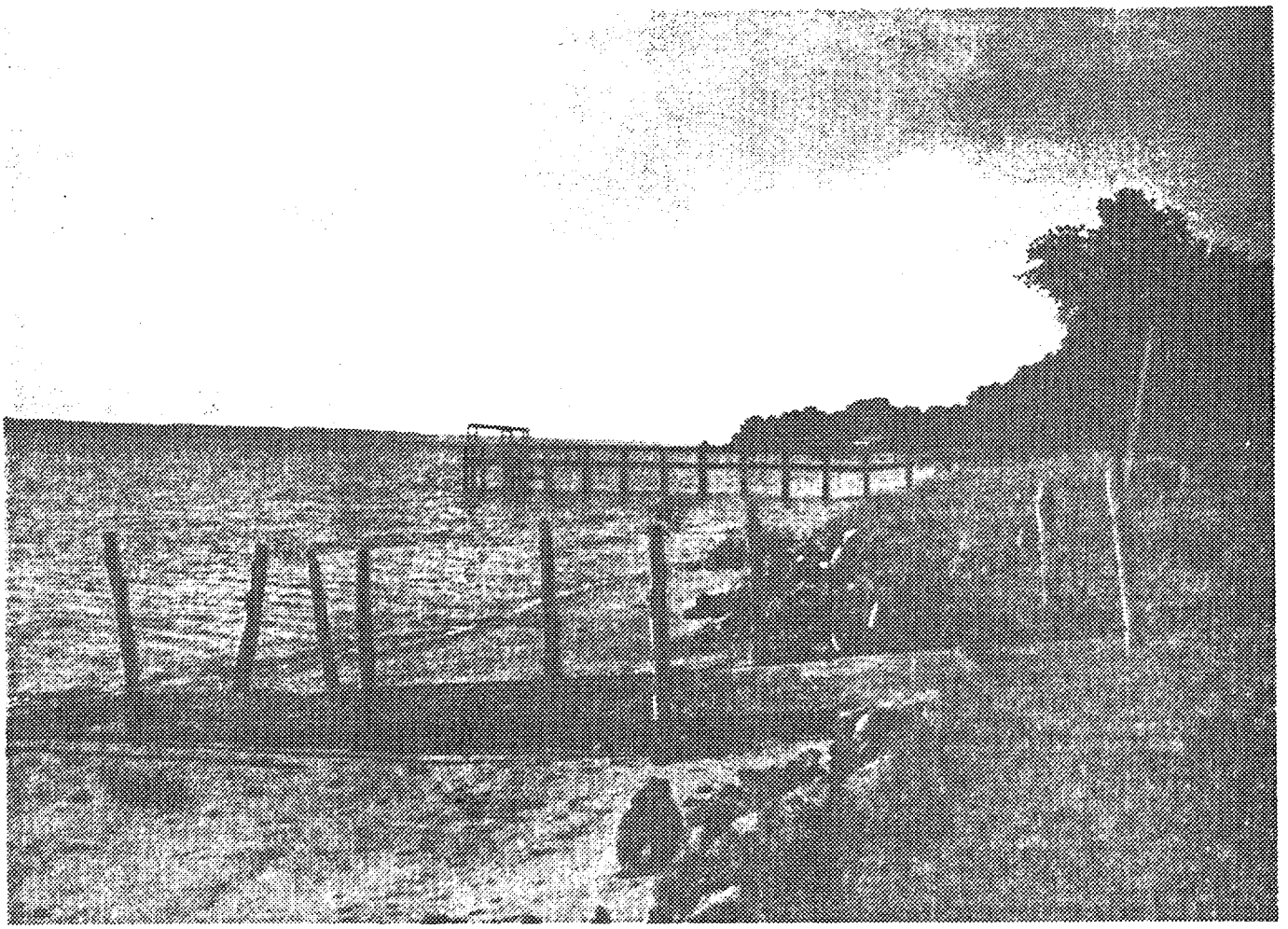
GLOUCESTER COUNTY

COMPREHENSIVE PLAN

December, 1989

Draft

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO



ACKNOWLEDGEMENTS

This study has been funded by the Council of the Environment through a grant provided by the Coastal Zone Management Act of 1972 (as amended), administered by the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management.

TABLE OF CONTENTS

TABLE OF CONTENTS

Page

Acknowledgements i
Table of Contents ii
List of Tables vi
List of Figures vii
List of Maps vii

PART I: THE FRAMEWORK FOR GROWTH MANAGEMENT 1

Definitions and Purpose 1
Legal Basis for Comprehensive Planning 2
Past Comprehensive Planning Efforts 2
Components of a Growth Management Program 2
Process for Plan Development and Adoption 3
Organization of the Document 3

PART II: GROWTH MANAGEMENT PLANNING CONSIDERATIONS 4

Regional Setting and Development Trends 6
Recent Housing and Population Growth Trends 6
Projected Population Growth Trends 7
Growth Management Planning Considerations 11
Cost of Public Services 11
Sense of Community and Rural Character 11
Quality of the Natural Environment 11
Quality of the Man-Built Environment 12
Deficiencies in Service 12
Transportation Trends 13
Dimensions of Growth Management 13
Conclusion 14

PART III: GOALS AND OBJECTIVES 16

General Goals 16
Land Use 16
Natural Resources 20
Housing 20
Transportation 21
Recreation 22
Economic Development 24
Public Facilities and Services 25
Social Services 27
Human Resources 28
Historic, Architectural, and Archaeological Preservation 28

PART IV: PLAN ELEMENTS

SECTION 1: LAND USE . . . 30
Land Use Plan Concept and Implementation Strategies . . . 30
Development District . . . 30
Village Centers . . . 33
Planned Unit Development Districts . . . 34
Rural Service Centers and Crossroad Settlements . . . 36
Residential Districts . . . 38
Business and Commercial Park Districts . . . 39
Employment and Industrial Park Districts . . . 42
Highway Corridor District . . . 43
Historic Preservation District . . . 45
Rural/Agricultural Conservation District . . . 45
Resource Conservation Districts . . . 48
Summary . . . 50

SECTION 2: ECONOMIC DEVELOPMENT . . . 51
Economic Development Trends . . . 51
Region . . . 51
Population Components in the Local Economy . . . 52
Industry . . . 52
Employment Trends . . . 53
Income . . . 56
Finance . . . 57
Construction . . . 57
Taxable Sales . . . 58
Issues . . . 58
Recent Economic Development . . . 58
Growth Prospects . . . 59
Implications of Projected Growth . . . 60
Employment Scenarios . . . 61
Employment by Sector: 2010 . . . 62
Strategies . . . 64
Development Approach . . . 65
Goal and Objectives . . . 66
Implementation Recommendations . . . 66
General Implementation Strategies . . . 66
Resources . . . 69
Summary . . . 70

SECTION 3: TRANSPORTATION . . . 71
Background . . . 72
Functional Classification of Highways . . . 72
Traffic Volumes and Trends . . . 72
Capacity Analysis . . . 75
Safety . . . 78
Commuter Patterns . . . 79
Highway Improvements . . . 80
Other Transportation Facilities and Services . . . 81

SECTION 3: TRANSPORTATION, continued
Issues 82
Implementation Recommendations. 83
Policy Statement 83
Planned Improvements. 87

SECTION 4: COMMUNITY FACILITIES AND SERVICES. 91
Background 91
Water Service. 91
Sewage Service 96
Solid Waste. 96
Education 101
Public Libraries. 104
Public Safety 105
Health Care. 105
General Government 107
Public Buildings 107
Dog Control 107
Issues 108
General Community Facility and Service Provision 108
Sewage Disposal. 109
Education 110
Public Safety 111
Libraries 113
Solid Waste 113
Administrative Facilities. 113
Implementation Recommendations. 113
Development Service Districts 114
Capital Programming 114
Voluntary Proffers 114
Fiscal Impact Analysis. 114
Adequate Public Facilities Standards 115
Special Taxing Districts 115

SECTION 5: HOUSING. 116
Background 116
Issues 119
Affordable Housing. 119
Housing Condition 120
Housing Availability 121
Implementation Recommendations. 122
Summary 126

SECTION 6: PARKS AND RECREATION 127
Recreation Inventory. 127
Planned Facilities 130
Issues 131
Implementation Recommendations. 133
Summary 138

SECTION 7: HISTORIC AND CULTURAL RESOURCES 139
Protection and Preservation Programs 141
National Historic Landmark 141
National Register of Historic Places 142
Virginia Landmarks Register. 142
Virginia Historic Preservation Easement 142
Local Historic Overaly Zone. 143
Non-Profit Preservation and Conservation Organizations. 144
Implementation Recommendations. 144
Summary 145

SECTION 8: NATURAL RESOURCES PROTECTION 146
Background Information and Environmental Quality Issues 146
Geology 147
Soils 149
Topography. 152
Floodplains. 153
Watersheds and Drainage 153
Surface Water Supply 154
Groundwater Supply. 156
Tidal and Non-tidal Wetlands 157
Shoreline Erosion 159
Forest Resources 159
Wildlife 160
The Chesapeake Bay Preservation Act 161
Purpose. 161
Goals. 162
Local Program Elements. 162
Chesapeake Bay Preservation Area Designation Criteria 163
Land Use and Development Performance Criteria 165
General Performance Criteria 165
Performance Criteria for Resource Protection Areas. 168
Administrative Waivers and Exemptions 170
Exceptions to the Criteria 171
Local Program Development 172
Implementation Recommendations. 172
Summary 174

PART V: IMPLEMENTATION RECOMMENDATIONS 175
Plan Administration and Enforcement 175
Implementation Action Plan. 175
Development Standards and Design Guidelines 176
The Rural Landscape. 177
Community Centers 178
Highway Corridors and Scenic Roadways 179
Development Appearance Standards 180
Summary 184

LIST OF TABLES

Table	Title	Page
1	Population Projections	9
IV-2-1	Major Firms and Employees	52
IV-2-2	Employment by Sector	53
IV-2-3	Employment by Place and by Residence	56
IV-2-4	Population to Employment Ratios	61
IV-2-5	Employment Scenarios, Year 2000	62
IV-2-6	Projections of Employment by Sector	63
IV-3-1	Average Daily Traffic Trends of Primary Roads	75
IV-3-2	Deficient Road Sections	76
IV-3-3	Volume to Service Volume Ratios of Primary Routes	77
IV-3-4	High Accident Road Sections -- Primary	78
IV-3-5	High Accident Road Sections -- Secondary	79
IV-3-6	Commuting Patterns	79
IV-4-1	Groundwater Zones	93
IV-4-2	Withdrawals from the Confined Aquifers	95
IV-4-3	Groundwater Withdrawals	95
IV-4-4	Treatment Plant Sewage Discharger	98
IV-4-5	Refuse Container Sites	100
IV-4-6	Public Schools Enrollment	101
IV-4-7	Public Schools Capacities Versus Enrollment	103
IV-4-8	Operating Costs	104
IV-4-9	Projected Pupil Enrollment 1989-2010	110
IV-4-10	Projected Classroom Needs 1995-2010	110
IV-5-1	Housing Status and Units Per Structure	117
IV-5-2	Dwellings by Types 1970-89	117
IV-6-1	Public Recreation Facilities Summary	128
IV-6-2	Landings and Access Site	129
IV-6-3	Park Standards	132
IV-6-4	Projected Demand For Parks	132
IV-6-5	Recreation Needs: 1990-2010	134
IV-7-1	Historic Sites and Buildings	140
IV-8-1	Development Suitability of Soils	151

IV-8-2 Hydric Soils 152
IV-8-3 Gloucester County Streams. 154
IV-8-4 Point Sources of Pollution Facilities 155

LIST OF FIGURES

Figure	Title	Page
1	New Dwelling Units.	7
2	Total Building Permits by Magisterial District.	8
3	Illustrated Commercial Park Concept	41
IV-2-1	Employment by Sector.	54
IV-2-2	Average Annual Percent Change Employment by Major Sectors.	55
IV-3-1	Commuting Trends	80
IV-4-1	Public Schools Enrollment 1979-80 Through 1988-89	102
IV-5-1	Purchasing Power	118

LIST OF MAPS

Map	Title	Page
II-1	Regional Location.	5
IV-1-1	Land Use Concept Plan	30a
IV-3-1	Functional Classification of Highways	73
IV-3-2	1988 Average Daily Traffic Volumes of Primary Roads	74
IV-3-3	Highway Deficiencies	89
IV-3-4	Transportation Plan	90
IV-4-1	Groundwater Zones	94
IV-4-2	Water and Sewer Systems	97
IV-4-3	Solid Waste Disposal.	99
IV-4-4	Community Facilities	112
IV-8-1	Natural Development Constraints.	148
IV-8-2	General Soil	150

Part I

THE FRAMEWORK FOR GROWTH MANAGEMENT

THE FRAMEWORK FOR GROWTH MANAGEMENT

Gloucester County, located at the southeastern section of Virginia's Middle Peninsula on the York River, was formed in 1651 from York County and named for Henry, Duke of Gloucester, third son of Charles I. Throughout most of the County's past, growth has been gradual and slow and the County has remained predominantly rural in character. Throughout the 17th and 18th centuries, this was a tobacco-producing area. Evidence of the many old plantation homes and colonial churches can be seen around the county. However, in recent decades development pressures within the County have been increasing in response to the rapid urbanization and expansion of the Hampton Roads region.

As the County grows and changes over the next twenty years, this Comprehensive Plan will serve as a guide for making public and private decisions regarding Gloucester County's growth and development. The Plan is a culmination of a cooperative effort, pulling together the knowledge and skills of diverse citizens and staff. This Plan represents a future *vision* of Gloucester County in 2010 along with recommendations for bringing that *vision* to fruition. The ideas of the Plan are a distillation of the community's many desires, tempered by what seems feasible and reasonable. This Plan is not intended to be a *static document.* It should be reviewed and updated periodically to reflect new development trends, shifts in the economy, or changes in the community's goals and objectives.

Gloucester County is a special place with a unique character, culture and history that distinguishes this community from thousands of counties across America. This Comprehensive Plan particularly addresses the preservation and enhancement of these special qualities and that distinctive personality felt by the citizens who live and work here. This sense of uniqueness and pride of place are the guiding forces and strongest motivation for those who have contributed to the realization of this document.

DEFINITIONS AND PURPOSE

The Comprehensive Plan is an official public document adopted by the County Planning Commission and Board of Supervisors. The Plan is a general, long-range, policy and implementation guide for decisions concerning the overall growth and development of the County.

The Plan is *comprehensive* because the elements cover the entire range of development issues which can be influenced significantly by the County Board of Supervisors and other governing authorities and agencies. The Plan is *general* because the recommendations are broad, rather than narrowly defining decisions for land use at specific sites. The Plan is *long-range* because consideration is given to the problems and opportunities which may arise over the next twenty years. The Plan is *dynamic* because there can be amendments to adapt to new situations and meet new challenges.

Although adopted as an official public document, the Comprehensive Plan is not a development ordinance. This plan serves as a catalyst and guide to the establishment of, or revisions to, other ordinances or planning tools. These include the zoning and subdivision ordinances, the capital improvements program, and area plans for various sections of the County. The Growth Management Plan Map, included in this plan, serves to illustrate how and where the Plan's policies and recommendations will be carried out. This mapped information is general in nature and not appropriate for determining the suitability of specific sites for any specific use.

LEGAL BASIS FOR COMPREHENSIVE PLANNING

The preparation of a comprehensive plan is the legal responsibility of the County Planning Commission under Virginia Planning Enabling Legislation, Title 15.1, Article 4, of the Code of Virginia, 1950, as amended. Any ordinance pertaining to the use of land or the growth and development of the County should conform to the goals, objectives, and policies as they are presented in this Plan.

PAST COMPREHENSIVE PLANNING EFFORTS

Adoption of the first Comprehensive Plan occurred in 1974. The Plan was updated and adopted again in 1980. This Comprehensive Growth Management Plan is therefore the third major effort to establish a set of goals and objectives for County growth and development.

Gloucester County adopted its first zoning ordinance and its first subdivision ordinance in 1983. Since initial adoption of these development ordinances, amendments have been adopted incrementally over ensuing years.

Presently, planning and zoning is administered under the County Department of Community Development and Codes Compliance. The Department is overseen by a Director who also oversees the Building Department. The County Department of Community Development and Codes Compliance has a staff of seven persons including a full-time Codes Compliance Officer, a Senior Planner, a Planner II, an Administrative Assistant, and three part-time Secretaries. The Building Department, housed in the same office, has a staff of eight full-time persons including a Building Official, a Building Inspector, a Codes Compliance Inspector, a Mechanical and Plumbing Inspector, two Electical Inspectors, and two Secretaries.

COMPONENTS OF A GROWTH MANAGEMENT PROGRAM

This Comprehensive Plan provides the basic framework and direction for all components of what may be considered the County's overall Comprehensive Planning

Program. It is not a stand-alone document but is supported and, in turn, supports related Planning Program documents such as the ones listed below.

- *Zoning Ordinance*, December 1983
- *Subdivision Ordinance*, September 1983
- *Capital Improvements Budget, Fiscal Years 1990-1994*
- *Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review*, MPPDC, January 1989
- *Soil Survey*, September 1980

These documents and others, when used concurently, are the supporting basis for directing and manageing growth in Gloucester County.

PROCESS FOR PLAN DEVELOPMENT AND ADOPTION

Preparation of this Comprehensive Plan began in mid-1989 with the hiring of the planning consulting firm of Redman/Johnston Associates, Ltd. In September of 1989 the Board of Supervisors appointed a seventeen (17) person Citizens Plan Advisory Committee (PAC) to work with the consultants and County staff to formulate a new Plan. The PAC consisted of County residents representing different geographical areas and interests throughout Gloucester County.

Beginning in September, the PAC worked with the consultants and County staff to identify and discuss important planning issues and background information relevant to the Comprehensive Plan. The resulting "Implementation Options for Managing Growth" paper and other planning background data helped to formulate this Plan.

In addition, the PAC conducted a workshop to review and revise a set of draft goals and objectives for the Plan which were initiated by the Planning Commission. Following these meetings, the consultants and County staff prepared this draft Comprehensive Plan.

ORGANIZATION OF THE DOCUMENT

The Comprehensive Plan is organized into five chapters. These chapters deal with all aspects of land use in Gloucester County.

Following this introduction, Part II highlights past trends and future projections of population and housing. Part III lists the goals and objectives for this Plan. Part IV, the Plan Elements, includes background, issues, and implementation recommendations pertaining to the subject of each section. In particular, Section 1 of Part IV presents the central theme of the report, the Land Use Plan, which designates how, when, and where growth should occur. The other sections include discussions on Economic Development, Transportation, Community Facilities and Services, Housing, Parks and Recreation, Natural Resources Protection, and Historic and Cultural Resources. The final chanpter of the Plan, Part V, addresses implementation techniques which details necessary actions, responsibilities and a schedule for implementing the goals and objectives of the Plan.

Part II

GROWTH MANAGEMENT PLANNING

CONSIDERATIONS

GROWTH MANAGEMENT PLANNING CONSIDERATIONS

Throughout its long history, Gloucester County has been characterized by a number of compact, and rural settlements spread over a landscape of farmlands, waterways, shoreline, and extensive undisturbed natural areas. For years, the County has been noted for it rural character and image, its York, Severn, Ware and North River shoreline, its rich historical and cultural heritage, and its slow-paced way of life. Unique among Virginia counties, some 60% of the County is established in forest cover as testimony to its rural and environmental character.

The rapid growth of the past decade has brought great changes to the County; changes welcomed by many, lamented by others, but a concern to all. Inevitably, in the process of growth and change, Gloucester County's renowned assets have been threatened by growing liabilities as sprawl development along County roads increased traffic volumes, congestion along the Route 17 corridor, particularly on the Coleman Bridge, an endangered natural environment, services unable to meet needs, housing problems, and disappearing farms. These threats to the quality of life have heightened the interest given to growth and development issues by both citizens and elected officials.

The public's growing concern about growth and development, and changes in the quality of life in Gloucester County have for several years prompted questions about the capacity of the 1980 County Comprehensive Plan to deal effectively with changing conditions. A shift in public attitudes gave added impetus to the desire for a complete review and reevaluation of the assumptions, goals, and policies on which the County's 1980 Plan was based.

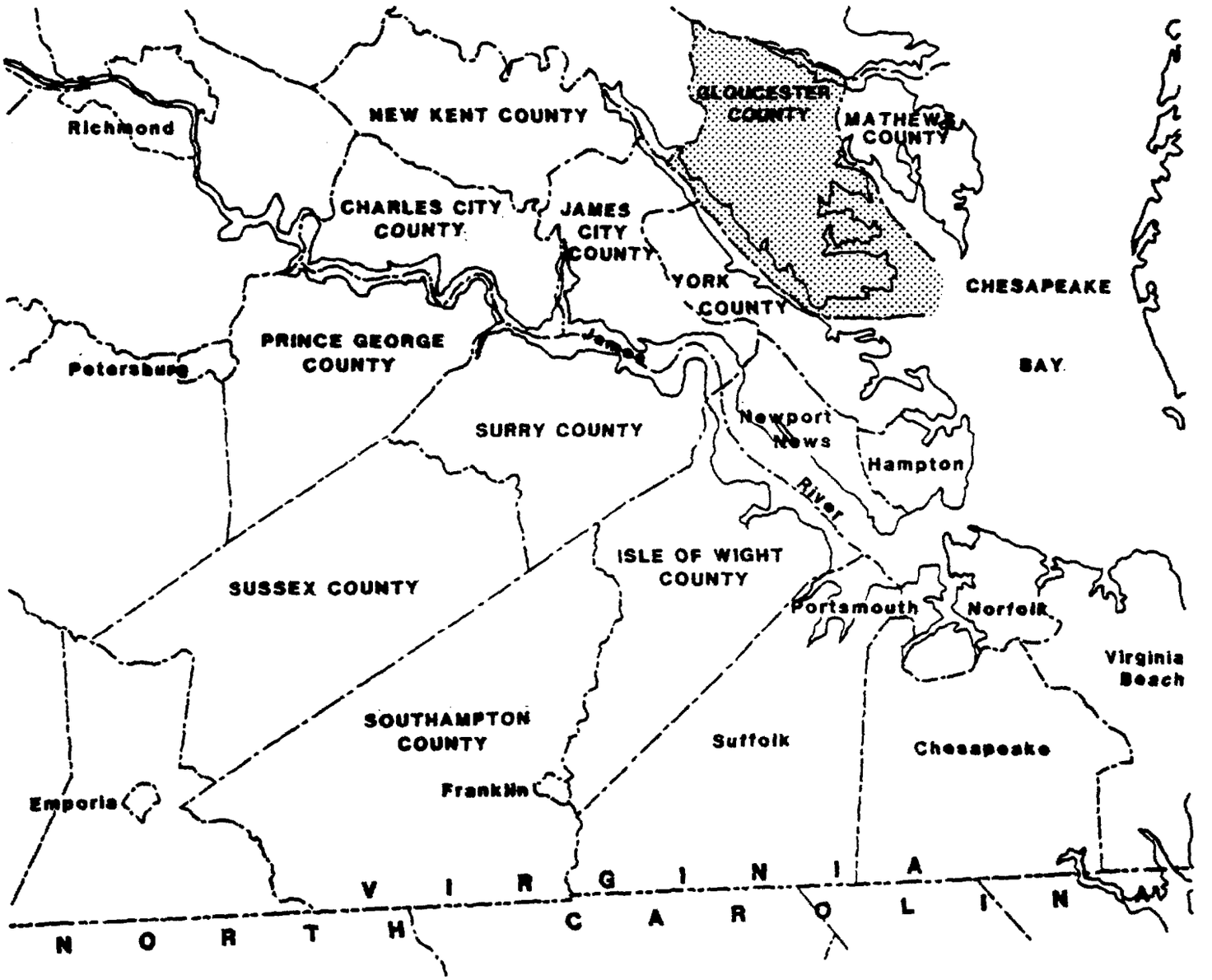
In the face of increasing development pressures, the County has determined the central theme or concern to be addressed in this Plan is management of future growth. For that reason a growth management philosophy influences virtually all Comprehensive Plan elements contained within this document. **This philosophy is motivated by a desire to balance population growth in Gloucester County with the ability or capacity of the County to provide the demand for the public facilities and services prompted by growth while concurrently maintaining the rural nature and quality of the County.**

The need for such a balance has been underscored by the increasing rate of growth evidenced in the County in recent years and the perceived changes by County residents concerning the influence growth has had on the character of the County and their quality of life.

Because growth management is an overwhelming County concern and is pervasive in it's effect on virtually every component of this Plan, the following section of the plan identifies the nature and influence that growth in Gloucester County has had on County lifestyles in recent years. Moreover this section establishes a County definition of growth management and outlines the various means by which the County "Growth Management" philosophy is to be effected through the many plan elements which are designed to manage the future form, pattern, qualities, and distribution of growth in Gloucester County.

REGIONAL LOCATION

MAP II-1



REGIONAL SETTING AND DEVELOPMENT TRENDS

To some extent the character of Gloucester County has changed substantially over the past two decades. The rural nature of much of the County has been gradually eroded and a suburban character has taken its place. The County's proximity to urban centers in the south and the outward march of suburban development from the greater Hampton Roads/Newport News area, has transformed portions of Gloucester County (See Map II-1) to a suburban development pattern which is most pronounced in southern County areas. This transformation to what may now be considered a County that is part of the Metropolitan area has clearly disrupted the County's capacity to deliver timely, cost-effective services to support the needs of it's growing resident population.

Metropolitan area residents to the south are lured by the promise of lower taxes, lower housing costs, rural character, and relative freedom from the congestion evident in Counties nearer to the Newport News and Greater Hampton Roads Metropolitan area. Their exodus to the promise of Gloucester County has unfortunately brought with them increased traffic volumes on highways not designed to serve the greater use they prompt.

Likewise, increasing school enrollment will likely outstrip the County's capacity to provide classroom space. Route 17 has established its notoriety for gridlock as rush hour traffic has increased in recent years as a result of bedroom community development. Moreover, the level of traffic volume of 32,000 vehicles per day is expected to rise to 44,000 vehicles daily by the year 2010 absent a second bridge crossing of the York River.

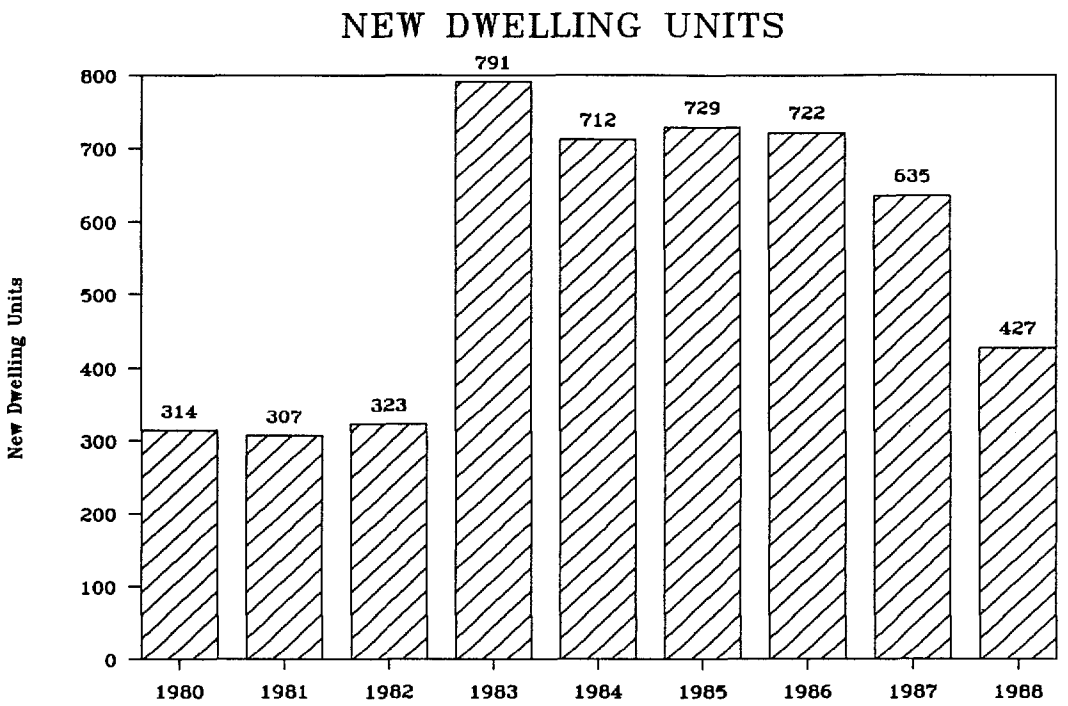
The extension of this Hampton Roads Sanitary District Sewer facilities to Gloucester from the south and construction of planned impoundment reservoirs to meet water supply needs can be expected to effectively stimulate growth in the next 10 years. These facilities, necessary to provide adequate facilities to support growth and address the problem of failing septic systems in many County areas will represent a significant opportunity to guide the location and form of expected future County development.

RECENT HOUSING AND POPULATION GROWTH TRENDS

Recognition of the amount, distribution and timing of population growth and development are fundamental to County achievement of Growth management objectives. These factors, in turn, determine the cost of providing the facilities needed to support the new population and also determine non-residential growth facility needs of the County.

Gloucester County is one of the fastest growing Counties in the State. The County has demonstrated an average annual growth rate of 6.4 percent from 1980 to June 1989. Figure 1 indicates the growth in dwelling units by year. From this graph, it is easy to see that the highest growth occurred from 1983 to 1987. Recent years have shown some decline in the rate of growth; however, the growth is still substantial.

Figure 1



Source: Gloucester County Dept. of Community Development
Note: d.u.'s for 1989 only include Jan. thru June

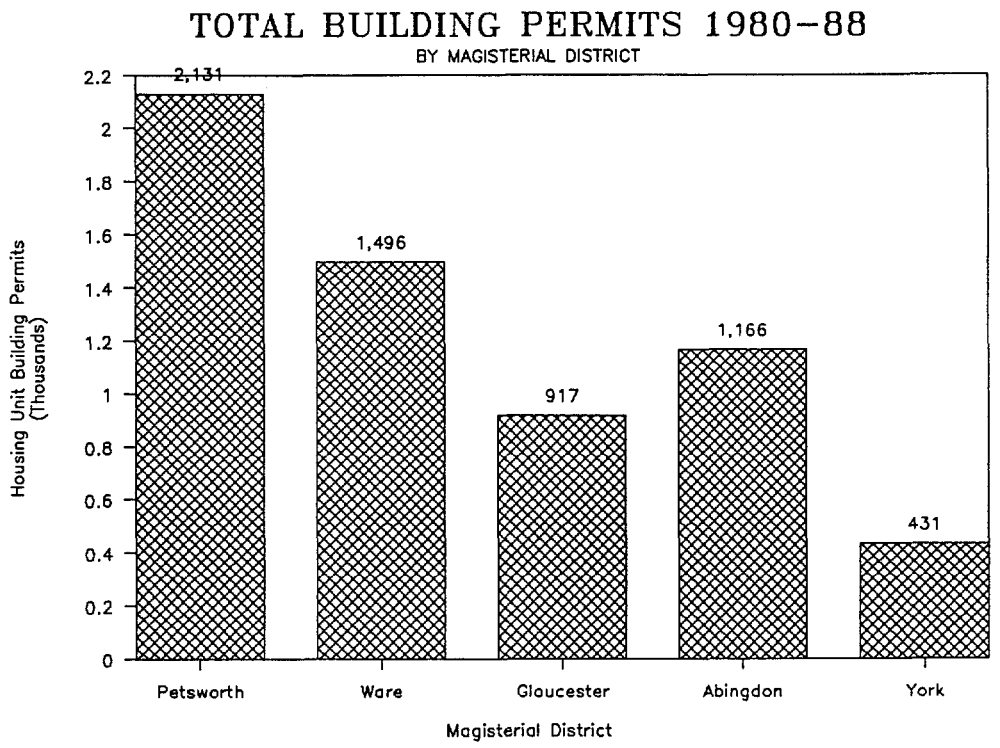
Figure 2 show the residential building permit activity for the decade by magisterial districts. From this figure it is easy to detect where the highest growth is occurring. In absolute numbers the Petsworth and Ware Districts have seen almost 60 percent of the building permits for housing units since the last census. Though the growth has been greatest in these districts, the development has sprawled throughout the County.

PROJECTED POPULATION GROWTH TRENDS

Past trends alone, clearly fail to serve to project the future distribution of population in Gloucester County. Therefore several approaches to project future rates of growth were considered, each of which were tempered by knowledge of current policies and market trends. The most notable market trend is that Gloucester and surrounding counties are clearly linked to the Metropolitan Newport News/Hampton Roads area economy and the county will continue to experience growth pressures resulting from proximity to Metropolitan area forces.

While this regional trend may establish a baseline for what may be expected in Gloucester County's future, a number of other variables can and will clearly influence the County's future rate of growth. These include:

Figure 2



Source: Gloucester County Office of Community Development, 1989

Note: "Building Permits" include Single Family, Mobile Homes and Multi-Family Dwellings

- The capacity of the County's infrastructure (Public sewer, Public water, roads, school facilities and Solid Waste Management) to support reasonable levels of public service;
- The commitment of the County to proactively manage its growth through land use controls including zoning regulations, and subdivision and development standards; and
- The level of investment made to enhance the capacity of the County infrastructure necessary to sustain an increasing population.
- Citizen commitment to maintaining the rural character of Gloucester County.

The public investment required to sustain the recent growth rate is likely to exceed the financial capability of the County given the fact that the base case or current levels of service and capacities are presently exceeded by the present population.

The County is playing catch-up today in the areas of needed road improvements, increased sewer capacity, and establishing better standards for development that

control the distribution and form of future growth so that the service delivery costs to support future development can represent more cost-effective public investments than may have been necessary in past years.

In reality, no single projection is **safe** when peering 21 years into the future. As a result, we should consider alternative growth scenarios which might evolve in Gloucester County.

Table 1

POPULATION PROJECTIONS GLOUCESTER COUNTY

YEAR	DWELLING UNITS	POPULATION	PERCENT CHANGE (POPULATION)
1980	8,312	20,107	
1985	10,745	27,378	36.2
1990	13,822	35,218	28.6
1995	16,572	40,717	15.6
2000	19,322	47,474	16.6
2005	22,072	52,222	10.0
2010	24,822	58,729	12.5

SOURCES:

U.S. Census Data, 1980; Office of Community Development, Gloucester, Virginia; Redman/Johnston Associates, Ltd.

ASSUMPTIONS:

1. Household sizes of 2.8 for 1980-90; 2.7 for 1990-2000; and 2.6 for 2000-10.

2. A 10 percent vacancy rate throughout the planning period. (The county had almost 9 % vacancy in 1980.)

3. An average annual increase in dwelling units of 550, which is consistent with the average annual rate from 1980-88.

NOTE:

An average annual increase in dwellings of 550 does not take into consideration increased exurban growth pressures recently experienced by Gloucester County.

A **CONTINUED DEVELOPMENT TRENDS SCENARIO** is one in which Gloucester County's occupied housing inventory grows at about the same level as it has during the 1980s, approximately 550 dwelling per year. Table 2 indicates that, by 2010, there would be 25,000 dwellings and about 59,000 people. Such a growth pattern would respond to the continuing attractiveness of Gloucester County as a place to live and work. The result of such a scenario would be a county with as many

dwellings and people as the City of Suffolk has today. The following kinds of factors would contribute to realization of such a continued growth scenario:

- Continued strong economic growth of both the Newport News and Norfolk Metropolitan areas with substantial continuing pressure for more affordable, low cost housing.
- Moderate development of employment opportunities in Gloucester County with only moderate gains in residential attractiveness.
- Construction of Alternative 5 across the York River and widening of Coleman Bridge.
- Improvement of Rt. 17 from Gloucester to the York River.
- A planned expansion of sewer facilities in the HRSD service area and rate controlling mechanisms enacted through zoning outside that sewer service area.

A **SLOWED DEVELOPMENT SCENARIO** is one in which Gloucester County's occupied housing inventory grows no more rapidly than it has in recent years, and, perhaps, somewhat more slowly. This scenario describes the population projections made by the Department of Planning and Budget, October 1986. These projections indicate that by 2000 there would be about 37,500 people. Assuming a conservative 2.7 people per household that would mean approximately 13,800 dwellings or about 400 more than we currently have. That level of growth would mean annual construction of about 40 dwellings a year. Such a growth pattern might respond to a general regional economic slowdown. It might also reflect a lessening of the County's comparative attractiveness relative to other suburban counties. The following kinds of factors would contribute to realization of such a slowed growth scenario:

- Slowing economic growth of both the Newport News and Norfolk Metropolitan areas.
- Little development of employment opportunities in Gloucester County and little or no gain in residential attractiveness.
- Construction of neither bridge alternatives, an outcome leaving Gloucester County with diminished accessability.
- A limited expansion of the sewer collection system in the HRSD Service Area, and rate-controlling mechanisms enacted through zoning outside the development area.
- Little improvement to the Rt. 17 corridor serving the County.

Clearly County actions and policies can and will influence the projected population increase which serves as a basis for this Comprehensive Plan and the means by which it is implemented.

GROWTH MANAGEMENT PLANNING CONSIDERATIONS

The dimension of growth which will be faced by Gloucester County over the next 20 years underscore the County's interest in and need for attention to growth management. Some 26,000 new residents in approximately 10,000 new households will likely locate in the County during the 20-year period. The form, pattern and distribution of new development needed to satisfy this growth in population together with the qualities of commercial and industrial development to meet these residents' shopping and employment needs will influence a number of factors which taken together represent the future quality of life in the County.

COST OF PUBLIC SERVICES

Among the factors which influence quality of life are the costs to provide requisite public services to County residents including constructing community facilities necessary to house many of these services. They include schools, roads, police protection, fire protection and provision of adequate water supplies and wastewater treatment and solid waste management facilities.

The County's resident labor force is increasing rapidly as employment in the Newport News/Hampton Roads Suburbs accelerates and as participation by County residents increases. A large portion of the resident County work force commutes south to various metropolitan area job destinations resulting in heavy peak hour traffic volumes and inevitable delays on the Coleman Bridge.

In terms of increased employment and rising family income, economic development is generally recognized as a benefit to the County. However; growth, particularly a bedroom community form of growth, can result in greater demands for public services than the County can supply. It can also produce unacceptable impacts on the natural and man built environmental features of the County. Both demands for services and the costs of services and facilities have increased rapidly in the past decade.

SENSE OF COMMUNITY AND RURAL CHARACTER

While the future costs of County services are of obvious and tangible import, a number of other more subtle County qualities can also be influenced by the amount, form, distribution and qualities growth takes in the County. The rural nature of many County areas has gradually disappeared with a suburban character taking its place in these areas; yet, a number of County areas today retain their rural character resulting in a sense of belonging and cohesiveness. This "sense of community" and rural character, pronounced in the Bena, Dutton and neck areas of the County will clearly be influenced by the form and distribution of County growth.

QUALITY OF THE NATURAL ENVIRONMENT

Gloucester County's natural environment assets include an extensive shoreline, broad estuarine rivers, forested areas, vistas of the York, Ware, Severn, North & Piankatank Rivers and rural landscapes. These features create a setting of notably

beauty. Ironically, the development which accompanies population growth is threatening the natural features which attract people to the County.

The consumption of land by man-made development has resulted in the loss of some of these important environmental features, and can diminish the environmental quality of the County and its aesthetic appeal. As development proceeds, floodplains, wetlands, upland natural areas, steep slopes, and shoreline areas are altered and wildlife habitats are lost. As woodlands are cleared for development, watersheds are denuded, soil is washed into streams and rivers, and upland wildlife habitats reduced. Development in floodplains often results in both property and natural environmental damage from increased flooding. The loss of wetlands may result in increased runoff, erosion, siltation, water pollution, and the loss of shellfish, fish and other wildlife habitats.

QUALITY OF THE MAN-BUILT ENVIRONMENT

Much of the County' existing settlement pattern was established before land use or growth management standards were established in Gloucester County. Because of the continuing inability of existing ordinances to deal with land-use problems, the man-made environment fails in many ways to measure up to the quality expectations of the residents of the County today.

Deficiencies include strip commercial development along the highways, a condition which is unattractive and reduces the safety and traffic-carrying capacity of roadways. Certain County areas evidence insufficient protection of neighborhoods from heavy traffic and incompatible land uses. Housing conditions in many rural areas of the County are substandard.

Gloucester County contains a number of older communities with irreplaceable social, physical and cultural assets. Many of these communities are declining and deteriorating. They are by-passed in favor of newer suburbs where a greater array of services and amenities exist. These areas cannot be neglected. They house a substantial portion of the County's population. Many of these settlements serve not only as rural service centers; but, provide physical and cultural opportunities in the form of spacious, well-built homes and architectural styles which demonstrate instructive aspects of County history.

DEFICIENCIES IN SERVICE

Rapid population growth in recent years frequently caught the County unprepared and created service demands which overload facilities and services in many communities. Sewer treatment and water supply and school construction demands have resulted. Low density development makes it difficult to provide important services to scattered population without increasing service costs. Sometimes, as in the case of public transportation, service become economically infeasible in very low density areas.

TRANSPORTATION TRENDS

There is little question that private automobiles will continue to be the dominant mode of transportation in Gloucester County. While many of the County's citizens seek improvement in public transportation, it will be economically feasible only with subsidies and only in those areas of high population density.

In short, both fiscal as well as quality of life features of Gloucester County will be influenced by future growth and the pattern it takes.

DIMENSIONS OF GROWTH MANAGEMENT

Consideration of efforts to manage growth has led Gloucester County to recognize there are several basic types of growth management, each having a different aspect or function. One aspect of growth management is seeking to influence the type and amount of growth. A second aspect is one in which it is the location or distribution of the growth that is to be controlled. A third is related to the cost of the development and who pays for development related costs. Finally, quality control can be employed to some degree with all implementation strategies accommodating growth by applying specific performance standards to control qualities of site design and provide environmental protection.

For the most part, the need to manage growth is due to the inability of the County to provide facilities such as sewers, schools and highways which are necessary to meet projected demand. In Gloucester County, there is certainly a concern over financing needed improvements. That concern is primarily related to the fear that current residents will have to pay for growth. Based on the issues identified by the County Plan Advisory Committee, there are indications that the rate of growth in Gloucester County is now outstripping the County's and State's ability to provide certain services. These include, most notably, transportation systems, school construction, and sewer and water facilities.

Clearly, there is a real need to coordinate land use decisions in order to efficiently extend sewer service. Thus, coordinating land use planning with sewer service extension is one of several overriding objectives of this Plan. Other objectives of this plan include providing adequate transportation system improvements, school facilities, and local job development. Water quality and habitat protection also rank high among the concerns of County residents. The desire to preserve the County's agricultural land resources and rural character is a closely related objective. Finally, all of these objectives require a means of controlling the location of growth within Gloucester County.

The cost of providing service is important, but is only part of the problem. Equally important is the need to upgrade the level of service. For example, Gloucester County, like most rural and urbanizing counties, has relied on volunteer fire and ambulance service and State and Federal funding for water, sewer and school facilities. As a rural county grows, it eventually reaches the point where a different level of service is required as well as a more responsive funding mechanism. All of these development related costs must be paid for and the questions of who pays is an issue upon which most citizens and elected officials have had to focus their attention in recent years. The amount, distribution and timing of population growth

and development are all conditions that County growth management objectives are intended to address. These factors, in turn, determine the costs of providing the facilities needed to support the new population and also influence the qualities of non-residential (commercial, industrial, and institutional) growth in the County.

CONCLUSION

Given the problems and opportunities which Gloucester County is facing, a philosophy of growth management was forged that can be basically described as a "contained growth" strategy.

This philosophy provides for management of the location of future County growth by providing specific areas in the southern and central portions of the County for containment of the majority of expected development. This strategy permits more efficient use of current and planned transportation improvements as well as sewer service facility extensions planned within the Route 17 corridor sewer service area. Containment of the majority of County growth in southern and central portions of the County requires less land to be consumed Countywide by future land uses and, therefore, permits retention of rural character and continued agricultural use and activity in other currently rural areas of the County. Maintenance of rural densities in these areas will minimize demand for public investment and capital investment and capital improvements permitting the County to focus future capital improvements to "contained growth" areas. These improvements can then be considered more cost-effective as public investments will be focused in areas where the greatest concentration of users or beneficiaries exist to utilize them.

Development in southern and central county areas will take advantage of better transportation access to metropolitan areas and reduce the potential for negative environmental impacts to sensitive resources in the County including the Piankatank and North River as well as substantial reaches of the Mobjack Bay/Piankatank and North river system shorefronts.

The "contained growth" philosophy is supported by a number of studies conducted nationwide in recent years which have evaluated the differences in impact on social, environmental and economic resources resulting from alternative development patterns. Noteworthy among such studies is one undertaken jointly at the Federal level by the Council on Environmental Quality, the Department of Housing and Urban Development and Environmental Protection Agency. The conclusions of their research are documented in "The Costs of Sprawl" published in 1974. Stated in general form, the major conclusion of their research is that, "for a fixed number of households, 'sprawl' is the most expensive form of residential development in terms of economic costs, environmental costs, natural resource consumption and many types of personal costs".

The growth management locational framework for Gloucester County further recognizes that not all growth can or will be contained within the South Central area of the County. Therefore, some portion of expected development is to be supported in designated Town Centers and Village Centers in more rural County areas. These areas are intended to continue to serve as rural service centers to

both existing and future rural residents with residential densities established through land use controls to assure their rural character is retained. In short, development will be encouraged in areas where adequate public facilities exist or can be efficiently provided. Management of the location of growth is but one of many growth management measures designed to achieve County objectives. Management of the costs of development, particularly in those areas where future development is to be contained, are important components of Gloucester County's growth management strategy.

Finally, the qualities of development need to be afforded attention through adoption of land use controls which include quality of site design and environmental protection performance standards particularly where higher development densities are to be contained. A development guidance system component of the Comprehensive Plan assures that new large scale developments in what is to be termed the "development district" (see Land Use Plan Element) are designed to minimize environmental impacts and public costs, and foster quality in site design as threshold requirements for development approval through conditional rezoning.

In summary, the primary purpose of the Comprehensive Plan is to manage future Gloucester County growth, recognizing that a serious commitment to this objective requires management of growth's rate, location, quality and costs. Only through treatment of all these aspects of growth can real results be anticipated.

Following elements of the Plan, particularly the Land Use Plan Element, establish detailed policies which serve to implement these growth management concepts.

Part III

GOALS AND OBJECTIVES

GOALS AND OBJECTIVES

General Goals

A. To seek the highest quality of development and design for the future growth of Gloucester County.

B. To foster and encourage public participation in the planning and decision-making process to ensure that the wishes of the community are translated into appropriate courses of action.

C. To protect the unique character and identity of Gloucester County through careful management of the natural resources.

D. To plan for future developments that will allow quality growth in the economic base and to supply job opportunities for its residents.

E. To encourage economic development that will be compatible with the physical and social development of Gloucester County.

F. To protect and enhance the environmental quality of Gloucester County and the Chesapeake Bay for present and future residents.

G. To provide a plan for the growth of the County in order to enhance the quality of life for all its residents.

Land Use

Goals

A. To provide for the safe continuation of the uses that were established prior to zoning and land use controls.

B. To assure balanced, desirable, and convenient physical relationships between residential, commercial, industrial and public use areas, both at the neighborhood and County levels as well as protecting the environmentally sensitive and ecological integrity of the land in order to meet the needs of the County residents.

Objectives

1. To identify adequate and suitable development patterns for safe, orderly, and efficient growth.

C. To encourage the provision of efficient and attractive residential areas with safe and sanitary housing for all citizens of the County.

Objectives

1. To establish minimum housing standards, including lot size, off-street parking, drainage, and landscaping in order to avoid over-crowding and to protect the values of surrounding areas.

2. To encourage placement of mobile homes in well designed mobile home subdivisions or on standard lot size according to the County subdivision ordinance.

3. To encourage residential development to locate in or around designated population centers in the County.

4. To ensure that development shall occur on lots capable of supporting the individual water supply and sewage disposal systems or in areas that have access to central water supply and sewage treatment systems.

5. To ensure that the character of residential areas will be preserved by preventing the intrusion of incompatible, non-residential uses.

6. To upgrade and maintain public facilities and utilities in existing service areas.

7. To enforce regulations and codes in order to preserve, enhance, and stabilize existing and future residential areas and to maintain the quality of housing. To update regulations and codes as growth and development patterns warrant.

8. To provide for safe automobile and pedestrian traffic in neighborhoods, to provide multiple access facilities to allow for future accessibility to the road network, and to provide access for emergency vehicles and prevent landlocking of parcels.

9. To encourage varying residential densities dependant upon the type of development, location, topography, soils, and degree of improvements.

D. To promote high quality standards of residential development and sound housing for all residents.

Objectives

1. To ensure that developers of subdivisions provide, where appropriate, streets, drainage facilities, curbs, sidewalks, recreational areas, open spaces, and other private improvements for the health, safety, welfare, and convenience of its citizens.

2. To provide for the design of residential and neighborhood developments that are safe and free from incompatible land uses.

E. To encourage efficient and attractive commercial development to provide convenient access to goods and services, increase the number of local jobs for County residents, and broaden the economic base of the County.

Objectives

1. To direct the form of commercial and industrial development of park or campus-like form as opposed to linear or corridor form along County roadways.

2. To require businesses to provide adequate lighting, drainage, off-street parking areas, and adequate safe access for customers.

3. To encourage businesses to remove architectural barriers to the handicapped and elderly.

4. To require commercial and office property abutting residential areas to provide measures designed to reduce detractive impacts and nuisances to the residential areas. Improvements should be sought in existing situations whenever permits are received for expansion or alterations.

5. To provide planned and concentrated areas of commercial uses that provide diverse goods and services in a convenient and efficient manner to County residents at appropriate intersections of primary and secondary roadways.

6. To consider the location and design of business areas in relation to both vehicular and pedestrian circulation systems.

7. To support development of commercial businesses based on the County's unique physical characteristics and historical significance.

8. To ensure that adequate land access and utility provisions are made for commercial development and that such provisions are compatible with other land uses.

9. To encourage existing non-conforming commercial structures to upgrade and improve their structural soundness, aesthetic appearance, circulation systems, and road accessibility.

10. To encourage retail and recreational uses at appropriate locations along the waterfront and to promote a healthy tourist trade in the County.

F. To maintain present and encourage additional industrial development to provide local job opportunities for County residents and to broaden the County's economic base.

Objectives

1. To identify and preserve sites having the appropriate topography, geology, accessibility, public utilities, highway access, and relationships to existing or future land uses that are necessary for industrial development.

2. To protect land with unique potential for economic and industrial development from encroachment by other land use activities.

3. To develop an industrial promotion and marketing program in cooperation with existing public and private agencies and utilities to publicize to desirable industries the advantages of locating in Gloucester County.

4. To cooperate with the local and state industrial development authorities in their efforts to promote the location of new industry and the preservation, expansion, and upgrading of existing industries.

5. To encourage commercial recreation, tourism, fisheries, and water- and boating-related industries.

6. To encourage and support retention of the agriculture, fishing, and forestry industries.

7. To assist private enterprise in creating planned industrial parks.

G. To encourage the coordination of industrial development with the related development of public utilities and transportation facilities so that public and private programs are directed toward a common goal without duplication of effort.

Objectives

1. To furnish public utilities in advance, where appropriate, not only to stimulate development, but also to encourage location in suitable areas.

2. To encourage the establishment of attractive, efficient industrial parks with adequate road access and capacity, utilities, service roads, and other supporting services.

3. To direct industries into areas that have access to major transportation routes that will provide rapid and safe movement within the County and to sources of supply and distribution of raw materials to points outside the County. This should be achieved within the limits of the existing or planned transportation system.

H. To encourage the establishment of industries that cause minimal negative impacts on the environment; to encourage compatible industrial development that will make efficient use of the area's labor force, raw materials, and transportation facilities, thereby stimulating employment and investment opportunities in order to stabilize and diversity the economical base.

Objectives

1. To encourage quality by regulating the design of industrial areas so that it harmonizes with the high standards of community appearance through use of landscape materials, fences, and service drives so that industrial areas are pleasant to work in and are visual assets to the community.

2. To minimize the blighting influence of industrial areas on adjacent and neighboring land uses.

Natural Resources

Goals

A. To conserve an manage Gloucester County's natural resources and community assets.

Objectives

1. To protect Gloucester County's groundwater, surface water, rivers, bays, and ultimately the Chesapeake Bay from pollution, sedimentation, or depletion.

2. To protect our wetlands and natural resources from unnecessary destruction due to increased drainage, filling, or construction that would hamper vegetation, water storage, erosion control, or support of plant and wildlife habitats.

3. To conserve prime agricultural and forested lands and guide residential, commercial, and industrial development to areas suitable for urban growth.

4. To cooperate and actively work with local, regional, state, and federal environmental agencies to implement safe and effective programs and policies to protect Gloucester's natural resources.

5. To update and revise local ordinances as needed in order to protect and enhance the County's natural resources.

Housing

Goals

A. To encourage housing of various types, bedroom mix, and price levels so as to accommodate current and future County residents.

Objectives

1. To encourage that existing substandard housing be brought up to minimum standards or replaced where renovation is not feasible through available federal, state, or local programs.

2. To explore alternate means of meeting the housing needs of low-, moderate-, and fixed-income residents.

3. To consider revisions to the land development and construction codes to reflect new techniques and innovations in order to facilitate housing development, rehabilitation, and construction.

Transportation

Goals

A. To guide the development of the County road system into a network that facilitates safe and convenient local traffic as well as high-speed, long-distance traffic.

Objectives

1. To work with the Virginia Department of Transportation to keep them abreast of the changing needs of the County's primary highways and secondary road systems and to improve the flow of traffic on arterial and major collector streets by identifying needed improvements.

2. To develop long-range transportation plans in coordination with all other development plans.

3. To develop short-range plans, including, but not limited to, acquiring rights-of-way easements and setbacks for anticipated transportation facilities prior to land development so as to minimize land acquisition costs.

4. To provide, where appropriate, adequate buffers to protect adjacent properties from adverse effects of the transportation system.

5. To define alternative transportation corridors to facilitate intra-County travel, keeping in mind the problems of channelization on the U.S. Highway 17 corridor.

6. To work to provide all residents safe and, where feasible, multiple access to and from all neighborhoods.

7. To maintain effective County enforcement of land use ordinances for the efficient and safe use of roadways within the County.

8. To encourage effective enforcement of laws affecting the efficient and safe use of roadways within the County.

B. To work to ensure that industrial, commercial, and residential development result in minimal negative impact on road systems and traffic patterns within the County.

Objectives

1. To encourage and ultimately require that road systems serving the new development be constructed to state standards and taken into the state road system for maintenance.

2. To ensure that sound, long-range design standards are followed in all construction of private roadway facilities in the County.

3. To require developers to pay their share of road improvements within their sites and adjacent to them; to encourage developers to proffer their share of off-site improvements in order to serve traffic generated by their sites.

4. To require that state standards for all entrances to primary and secondary roads be met as a part of all new construction or major modifications of land use.

C. To encourage the provision of adequate mobility for all segments of the community.

Objectives

1. To encourage adequate and accessible transportation for all residents who are physically and transportationally disadvantaged: the handicapped, the elderly, and those of low income.

2. To assist commuters by encouraging the development of parking lots, public information services, and commuter service programs.

3. To encourage the development of innovative and effective means of improving ground, water, and air transportation systems.

Recreation

Goals

A. To develop and implement a comprehensive recreational program to ensure adequate open space, park and recreational areas, facilities, and activities to serve the leisure time needs of present and future citizens.

Objectives

1. To provide for a variety of activities in a County-wide recreational system, devoting areas to specific forms of recreation in proportion to the potential demand.

2. To provide instructional courses to stimulate activity participation, use of facilities, and exposure to new recreational activities.

3. To use the potential of public schools to help meet community recreational needs.

4. To include a variety of programs and activities to meet the needs of special population groups such as teenagers, the elderly, handicapped, or those who are only able to participate during evening or weekend hours.

5. To coordinate public and private sector efforts in meeting recreational needs; to encourage co-sponsorship of programs and events.

6. To ensure that recognized standards for development of County open space and recreation facilities are used.

7. To encourage the multiple use of transportation and utility rights-of-way for recreational facilities when the safety of the public can be ensured.

8. To acquire park acreage, when possible, that includes structures or sites of historical significance to serve as nuclei of future County parks; to additionally include the acquisition of mill ponds, if possible, to supplement park land.

B. To place high priority on selective acquisition, preservation, and recreational uses of areas with natural resources.

Objectives

1. To emphasize the County's water resources in recreation planning.

2. To acquire and retain forested land for public use as an excellent setting for a variety of outdoor recreational activities.

C. To provide the proper legal and financial framework for the provision of park and recreation facilities and programs.

Objectives

1. To secure local, regional, state, and federal assistance and grant monies, where feasible and appropriate, to assist in the development of recreational opportunities for the County.

2. To incorporate into local ordinances provisions requiring the dedication of adequate and suitable park and recreation lands in new subdivisions and planned unit developments and the preservation of flood plains, marshlands, and other ecologically significant areas.

3. To use the Capital Improvement Program for acquisition and development of public sites.

4. To use all possible types of incentives, including taxation to add parkland facilities to the County.

D. To coordinate open space and park acquisition and development programs so that they are in balance with the pace and direction of development within the County.

Objectives

1. To acquire recreational sites in advance of development in order to reserve prime sites, achieve flexibility in site selection, and avoid higher land prices in the future.

2. To develop a master site plan for each proposed park site, including school facilities delineating areas of activity, circulation patterns, building locations, parking areas, and other developmental components.

E. To increase citizen and tourist awareness of recreational opportunities int he community through an expanded program of public relations and contact with other recreationally oriented organizations.

Objectives

1. To use all available and appropriate means to publicize departmental program services.

2. To use the State Department of Tourism to promote local events.

Economic Development

Goals

A. To provide a balanced economy for future growth.

Objectives

1. To encourage the expansion of the local employment base so that County residents have an opportunity to work in their own County.

2. To encourage the continuation of those industries that are basic to the local economy, including agriculture, fisheries, lumber and wood products, food and kindred products, health care facilities, and service industries.

3. To encourage a diversified industrial base that reflects the effective use of the County's human and natural resources and minimizes the impact of single industry changes or declines in the economy.

4. To encourage cooperation with the County, Industrial Development Authority, Chamber of Commerce, and regional industrial associations.

5. To make available the community services and facilities necessary to attract and maintain business and industry.

6. To provide for the most economic and efficient expenditures of public funds for Capital Improvements.

7. To monitor the continuing development of Gloucester in terms of ecological impact, circulation system impact, sewer and water impact, development types and mixes, economic heterogeneity, employment level and diversification, and economic stability.

8. To encourage training and educational programs within the County, including Rappahannock Community College, the High School, and adult education services to stimulate learning and growth to provide additional

options for all age groups to live in, work in, and benefit from the County; to encourage continued cooperation between these institutions for the most varied and beneficial educational opportunities for the County.

Public Facilities and Services

Goals

A. To provide for the well-being of all citizens of the County through all necessary and desirable community facilities and services in a manner reflecting both present and future County needs.

Objectives

1. To promote efficiency in County government by providing adequate facilities for general County services and administration.

2. To encourage development to take place inside service areas of existing and projected public facilities and utilities in order to minimize the tax burden on local residents and businesses.

B. To establish a clear set of priorities for services between the County and developer/builder in the planning and programming of every development.

Objectives

1. To ensure the acquisition of land for public needs such as parks, schools, roads, open space, and fire and police facilities.

C. To improve public services and provide beneficial growth patterns so that all citizens are treated equitably.

Objectives

1. To plan and develop major public facilities, such as roads, utilities, schools, and passive and active recreational facilities together, rather than on a piecemeal basis.

2. To direct growth in a manner whereby public services can be effectively provided without adversely affecting the general welfare of the community.

D. To determine water and sewer needs based on existing and future requirements and to develop plans on projected needs and priorities established; to program the development of new and replacement facilities so that funds available may be most economically employed by establishing priorities and developing a Capital Improvement Program and an annual Capital Budget; and to satisfy the projected needs by acquiring sites of proper size and location for facilities in advance of urban development.

Objectives

1. To professionally design and engineer water and sewer supply facilities and lines for the provision of economical and efficient service with maximum advantage taken of opportunities for increased return on investments through multiple use of facility locations and rights-of-way.

2. To coordinate the plans of existing private utility companies and proposed public facilities so as to minimize waste and duplication of efforts and to create a more efficient distribution of utilities.

3. To plan utilities expansion along lines of desirable growth.

4. To adopt and maintain a master plan for the supply and distribution of water and for the collection and treatment of sewage.

5. To secure local, state, and federal assistance, whenever feasible and appropriate; to plan, design, and construct new and replacement water and sewer system improvements.

6. To design both trunk and distribution sanitary sewer systems in areas with a known high growth potential in terms of capacity to accommodate future expansions.

7. To plan the size and location of sanitary and storm sewers according to the drainage areas and land uses to be served as shown in this plan.

8. To program sanitary and storm sewer extensions to those developing areas of the County in order to promote balanced and cost-effective growth in the County.

9. To use public sewer facilities for new development instead of using individual septic systems in areas that will be delineated.

10. To program water main extensions to those developing areas of the County to promote balanced and cost-effective growth.

11. To design and construct new and replacement water facilities in order to provide adequate fire protection.

12. To continue to study new sources, as well as look into regional solutions, for the County's future water and sewer supplies.

E. To promote the general health, safety, and welfare of the lives and property of all County residents.

Objectives

1. To maintain and enhance existing facilities and equipment.

2. To expand both fire protection and emergency medical service facilities to include substations in areas of greatest population growth as the need arises.

3. To provide effective and adequate police protection for the County.

4. To promote a hygienic environment and high standards of health for all County residents by providing adequate facilities for health care and sound water and sewer systems.

F. To provide quality educational facilities to serve citizens of all ages in the most effective, efficient, and economical means possible.

G. To maintain high standards for the library system and to plan for its expansion, accessibility, and improvement as necessary.

H. To provide for a long-range view of refuse disposal through ecologically-, environmentally-, and economically-sound disposal methods.

Objectives

1. To encourage recycling and reuse of refuse.

2. To explore a regional approach to refuse disposal to meet the community's needs as well as relieve potential tax burdens on residents.

3. To meet all local, state, and federal health, safety, and environmental protection requirements for refuse disposal.

4. To determine the location of potential solid waste landfill sites to accommodate future growth.

5. To maintain and improve the existing solid waste disposal system; to encourage alternative methods to landfilling.

Social Services

Goals

A. To provide an effective social service and public assistance system that is designed to meet the basic needs of families who need help. The system shall provide services within the needy family's home community and within an environment that promotes family stability whenever possible.

Objectives

1. Service Programs -- To provide services that provide assessment and delivery of broad services that include intake services, adult services, prevention and support services for families, adult protective services, child protective services, foster care and adoption services, and employment services to meet family needs.

2. Benefit Programs -- To provide income support benefits to assist families that are unable to provide the necessities of life and maintain minimum standards of health and well-being through their own efforts.

3. Administration -- To define the mission of the agency; to hire staff and provide resources to accomplish the mission; and to re-evaluate the progress made towards accomplishing the objectives.

Human Resources

Goal

A. To promote equal opportunities in housing, education, employment, and justices.

Objectives

1. To increase efforts to upgrade and revitalize the housing, business, educational, and recreational sectors of low-income areas.

2. To ensure safe, sanitary, and structurally sound housing for all sectors of the community.

3. To provide for the literacy of all the citizens of the County.

4. To initiate programs that will encourage the employment of local residents, especially the unemployed.

5. To expand efforts to assist the disadvantaged, elderly, and handicapped to allow for their greater participation in all phases of the economy, including, but not limited to, housing, employment, medical services, transportation, and financial aid.

6. To plan, coordinate, and promote viable Human Resource programs with other community agencies.

Historic, Architectural, and Archeological Preservation

Goals

A. To respect historic values, including preservation of historic sites and buildings representing various periods of architecture.

Objectives

1. To preserve and maintain structures of significant historical or architectural value and their immediate environment.

2. To encourage the adaptive reuse of historically significant and sound buildings and structures.

B. To survey and recognize buildings and sites of historic and architectural value.

Objectives

1. To investigate opportunities for funding a complete survey of historical and archeological structures and sites. The landmarks would be ranked by priority for preservation or conservation efforts.

2. To establish a program for encouraging or assisting owner of historical landmarks to submit applications to the National Register of Historic Places and the Virginia Landmarks Register.

3. To allow development of historic and archeological sits only after screening of the sites by rigorous archeological methodology.

C. To encourage compatible development in and surrounding historic areas and buildings.

Objectives

1. To involve the Historical Committee in the review of rezoning requests, acquisition, and demolition of properties or major changes of sites in historic areas.

2. To provide the Historical Committee with the opportunity to review development plans for projects that are located near historic properties.

D. To make every reasonable effort to protect and preserve archeological resources affected by or adjacent to any acquisition, stabilization, preservation, rehabilitation, restoration, construction, or reconstruction project.

E. To improve accessibility and levels of use of historic places.

Objectives

1. To use the possibility of acquiring major historical or archeological sites for public use as museums, tourist attractions, and parkland.

2. To promote tourism of Gloucester's historic landmarks.

Part IV

PLAN ELEMENTS

Section 1

LAND USE

LAND USE

THE LAND USE PLAN CONCEPT AND IMPLEMENTATION STRATEGY

The County future land use concept plan is presented on the Land Use Concept Map and is shown in terms of 14 general areas or categories. These 14 land use concepts have been derived from the objectives and are in consonance with the general theme and philosophy of "managed growth". They have directly shaped the development of the recommended Land Use Concept Plan Map. Each of these concepts are represented as Planning Districts listed below:

- Development District
- Village Centers
- P.U.D. Districts
- Rural Service Centers and Crossroad Settlements
- Residential Districts
  - Suburban Residential
  - Suburban Estate
  - Countryside District
- Business/Commercial Parks Districts
- Employment/Industrial Park Districts
- Highway Corridor District
- Historic Preservation District
- Rural/Agricultural Conservation District
- Resource Conservation District

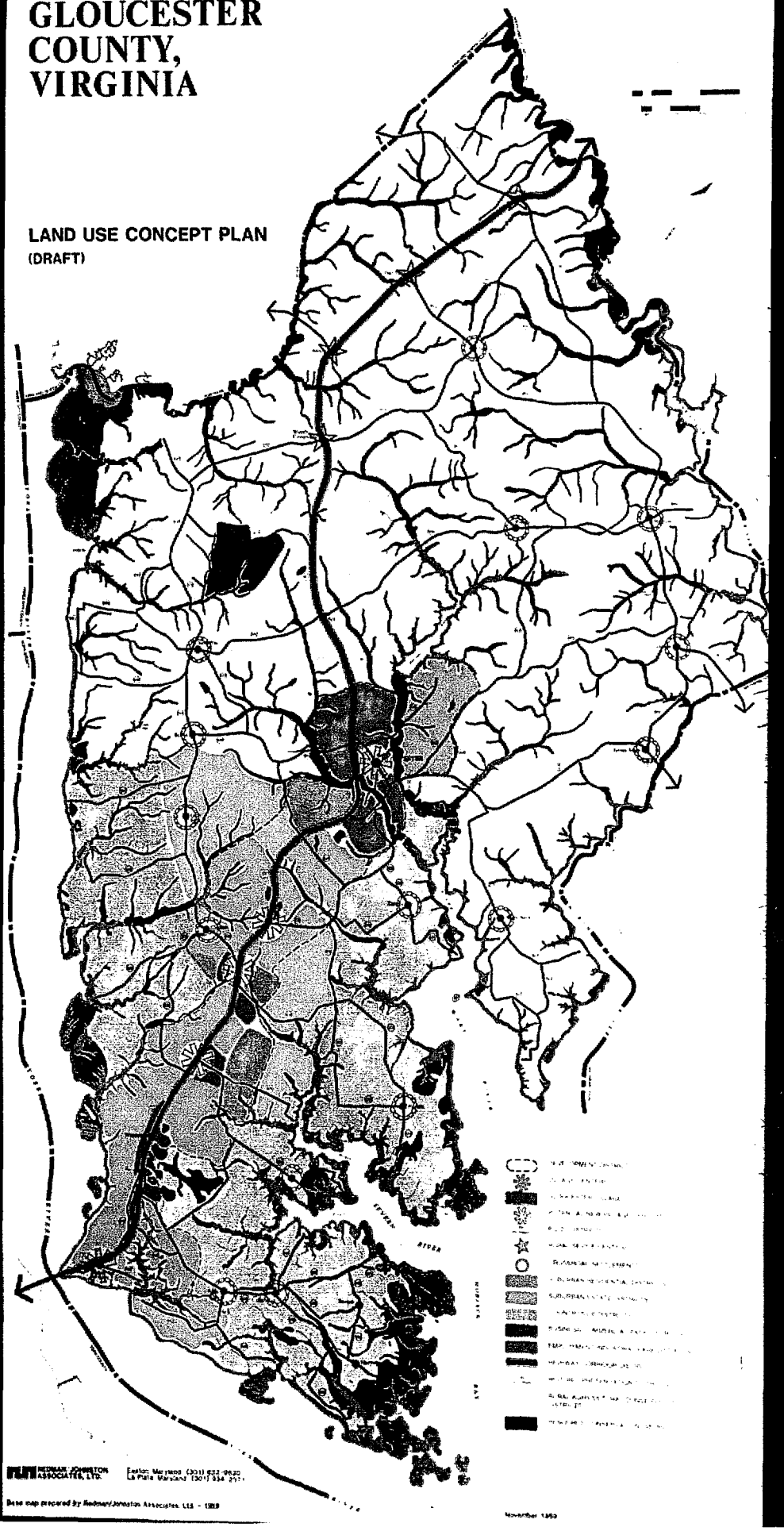
These districts are described in terms of their respective roles in directing County growth in the remaining sections of this Plan element. Illustrated on the Land Use Plan Map are districts derived from a combination of a number of determinants including: existing land use patterns; projected growth and development trends; the natural capacity and suitability of the land to support development; the availability or proposed future availability and adequacy of development infrastructure (roads, sewer and water), and the Goals and Objectives established in this document. Each district description outlines the general type, intensity and character of development that should be encouraged within the district. The Land Use Plan Map shows the general location of different districts throughout the County. The Land Use Plan also establishes the framework and basis for a further refined classification of land into districts for zoning purposes pursuant to adoption of the Comprehensive Plan. In addition to serving as a general guide for implementing land use policy, the Land Use Plan also should serve as a guide to County decision makers regarding community facilities (primarily water and sewer) and transportation (roads) planning.

DEVELOPMENT DISTRICT

The concept plan map indicates designation of a primary development district which generally coincides with the HRSD future sewer service area. This major development district is currently, and is planned to be, the principal center of population, services and employment for the County.

GLOUCESTER COUNTY, VIRGINIA

LAND USE CONCEPT PLAN
(DRAFT)



Its location along the Route 17 corridor and established patterns of development from the Coleman Bridge North to the Gloucester Village area together with availability of planned future infrastructure serve as a basis for its delineation. The Development District, and immediate surrounding land comprise the most suitable areas for new population growth. Growth in and around these areas will prevent the outward sprawl of residential development into rural County areas, and keep the new population close to the existing centers where residents can be economically provided with utilities, services, and employment. In addition, the impact upon the County road system will be minimized since families will have the opportunity to be located physically close to the jobs and services which they require. These considerations plus the need to preserve the open character of the County's outlying areas (as called for in the Agricultural Conservation and Natural Resources elements of the Plan) indicate that:

> **The areas in and adjacent to the Route 17 Sewer Service Corridor and The Gloucester Village should accommodate most of the County's population growth through the year 2010.**

Likewise, economic objectives and recommendations contained in later sections of the Plan emphasize the importance of both areas in the County's economy.

> **These areas should continue to function as the centers for commercial activity of a regional or sub-regional nature and for employment opportunity in the County.**

And, moreover:

> **The Gloucester Village should remain the center of major Countywide governmental administrative functions and services and other institutional uses serving a Countywide population.**

The land area shown within the development district shares several common attributes. These areas appear to be, to some extent, subject to greater development pressure than many other County areas. Affected lands have in place or provide opportunity to put in place the kind of services required by development. These services include an existing or planned transportation system that can accommodate the movement of people and goods, and sewer and water facilities that can service development at greater residential densities or can service industrial and commercial uses. Each of these areas is in some part or in some way already characterized by development activity which suggests that efforts to preserve farm land or to establish significant resource protection programs would be less effective in these areas than if established in other County areas. The major advantage of the development district concept is to map in advance those areas where the County will plan for provision of infrastructure and will accept the responsibility for working with the development interests of the County to be sure it is put in place. However, this in no way implies that the costs of development will be solely borne by the County taxpayer. In providing opportunities for development in these areas, the County can thereby better achieve its resource protection and its agricultural preservation objectives by reducing pressure for development in other County areas dominated by farming activity or more sensitive natural resources.

Growth in the Development Districts can be more cost effectively managed in that these areas are currently planned for sewer and water facilities. The challenge is to

ensure that public services and facilities and highway systems keep pace with the conversion of land in these areas from rural to suburban development and does not exceed the capacity of public services and facilities. Likewise, the plan must provide protection for natural resources such as tributaries to the Ware and Severn Rivers, which penetrate into the greater development district and elements of rural character that are considered desirable in these areas, while recognizing that the overall character of these areas will be that of a development service district in contrast to other areas of the County where rural character is and should remain dominant.

Ensuring the high quality of new development in the development district is a major policy objective of the Plan since growth is expected to occur in these areas. To improve the visual and functional qualities of development within the development district, the County will need to evaluate and revise its land use management ordinances to establish performance standards for landscaping, control of access, lot coverage, and buffering from adjacent transportation corridors. Future commercial and industrial forms of development within the development district on sites not presently zoned for such uses should be carefully evaluated to assure site characteristics permit these objectives to be achieved. The past linear form of commercial development, particularly along Route 17, has not always enhanced the visual quality of development and has reduced the ability of major roads to serve through-traffic. Future areas designated for commercial development should be large in size (e.g. 5 to 10 acres) and should be located at intersections providing site frontage on at least two streets with adequate depth to provide space for service roads. Such sites can utilize access provided by these streets and are adequate in size to house several uses with shared access, thereby minimizing multiple outlets to the major road system. There larger size permit sufficient land to accommodate landscaping between use and highway to enhance development visual qualities. Clustering of residential development should be encouraged within the development district to maintain open space. Such development, even when exclusively residential in nature, should be buffered and separated by landscaping from major routes or adjacent incompatible land uses.

The development district represents the area of the County which is anticipated to have the closest link to the Newport News/Hampton Roads Metropolitan area. The area has the best opportunities for the use of alternative modes of transportation and has, ready access to the Rt. 17 corridor. This area will foster a form of development which may permit transit to become a viable alternative to automobile travel. The County would be required to adopt a growth management structure which permits the development of denser residential forms along the corridor in this area to cost effectively provide future transit options. Suburban scale residential densities are generally considered necessary to justify fixed bus routes operating on one-half hour intervals. Reasonably dense clusters of suburban employees are required if public transit, private commuter buses, and carpools are to function without excessive route deviations and time delay.

Finally, it is important to note that these general residential density guidelines for the development district will also be influenced by the existing development pattern already established within the delineated development district. Construction of zoning districts and standards for development will require focus at a site by site level to frame districts and standards which respect the historic settlement pattern and achieve the objectives outlined herein for undeveloped portions of the development district.

VILLAGE CENTERS

With a defined Development District designated to manage the location of the majority of projected future County Growth, the County has determined a need to further refine the degree to which the location and form of development are managed within these areas. The Historic settlement patterns in certain locations within these districts or their location within the district at the intersection of major county roads suggest several areas which may serve as regional development centers within the Development District. The most notable of these ares is Gloucester itself which serves as a focus for the seat of County government and has traditionally served the County central business district role.

While the location and existing pattern of development has served as the rationale for Gloucester designation as a Village Center, opportunities exist to create additional new Village Centers in several locations within the Route 17 corridor development district.

Future Village Centers represent opportunities to cluster develop into new regional centers which serve the commercial services and retail shopping needs of current and future County residents. Each Village Center should provide opportunities to establish a recognizable center of development with its own unique "sense of place" within the County. Future development within each Village Center should vary somewhat based on the existing pattern of development and the future development mix which occurs.

Each Village Center, however, should evolve as a mixed-use regional center for residential, office, retail, and service development. Light industrial development may also be appropriate in some Activity Centers in the form of well-planned business and industrial parks.

Gloucester with its current mix of Land Uses and Historic structures as its focal point provides opportunities for further enhancing its traditional "village" development form. Located at the County's Center, the basis is formed for evolution of a center with a traditional grid street system. Its public square or "green" permits a focus for many community activities. Its future development should build on this theme with vacant land around it to be set aside for shops, offices, public building and homes. Such form of development would reflect the characteristics and qualities of traditional settlement in the County as reflected in historic structures today.

Prospective Village Centers within the development district do not currently manifest a development theme or "village" image. However, over time they can evolve through future development and/or redevelopment to take on Village Form and characteristics providing a linear series of centers linked by present and future road systems within the development district.

Located at the foot of the Coleman Bridge and near the Route 1202 & 17 intersection, Gloucester Point affords opportunities to become a South County Village Center and focus for area development.

Likewise, attention to future development form at the Route 216, 636, 614 & 628 intersections of Route 17 can result in creation of Village Center form. These areas represent major intersections of the County road network within the development

district wherein commercial uses and activities are economically viable and where a mix of residential, office and industrial uses could be developed over time. Few can presently be characterized by any development theme.

Existing structures at these intersections may form the basis for development of New Village Centers through management of the form of development in areas that surround the intersections on vacant land near existing uses. The mix of uses and identities of these future Village Centers can respond to resident needs over time with the character they evolve being a result of the functions each may come to serve in County life. The distribution of Village Center permits absorption of projected residential development in several prospective areas to provide a reasonable degree of location options in the County. Development standards should be framed to foster a clear sense of identify and distinct character within future Village Centers.

Preparation of more specific plans for each County Village Center should be undertaken by the County to better permit focus on how the qualities and form of their development may best be managed.

The function of these areas is to serve as centers within the Development Service District to concentrate higher density residential development and the associated commercial and public service functions necessary to provide a community character which represents a physical center and focus for growth.

Development standards for Village Centers should be framed to establish a clear sense of distinct character while providing a physical center for focusing the distribution of future County growth. A mechanism for the establishment of new Village Centers as the need arises in the Development District is envisioned to assure a means of managing development form over time.

Standards for commercial development within Activity Centers should enhance the character of the community and create or reinforce a community theme. In many areas, this will require re-development of vacant or underused buildings. Such a theme at Gloucester Village is one clearly related to County history.

PLANNED UNIT DEVELOPMENT DISTRICTS

Planned Unit Development Districts, although not shown on the Growth Management Plan Map, are established to provide for areas within the Development Service District where more intense residential and mixed-use development can be accommodated outside designated Village Centers.

Rather than mapping each of their future locations in advance, Planned "Unit Development Districts will be designated in accordance with performance standards to be structured in the County Zoning Ordinance. These designations will be limited to locations with the Development Service District where public benefits, in the form of highway improvements, provisions of affordable housing, provision of parks, provision for sites appropriate for construction of schools or other needed community facilities, are provided as a part of the development approval process in exchange for higher densities. Threshold size and location requirements for their designation would also be framed in County ordinances to guide decisions concerning their location.

Designation for sites as Planned Unit Development Districts should be determined on the basis of conditional zoning action whenever projects are evaluated and approval awarded to those development proposals which offer specific County or neighborhood benefits and/or a demonstrated capability to implement County Comprehensive Growth Management Plan objectives. Examples of objectives for which approval might be granted include:

Type of Objective	Potential Methods of Achieving Objective
o Community Facilities	Approval considerations can be based on proximity to existing or developer provided facilities (i.e., sewer lines, schools, fire departments and recreation facilities).
o Transportation	The receiving road network must meet minimum standards for level of service or the facility must be upgraded to accept development. Approval can be considered for making improvements that are consistent with the overall Transportation Plan.
o Housing	Approval considerations could be based on the inclusion of affordable housing as a component of the Planned Unit Development.
o Economic Development	Approval consideration could be granted for development proposals that provide jobs which strengthen the economic base of the County. Evaluation would be based on the number and type of permanent jobs created.
o Historic Preservation	Approval consideration could include the preservation of identified historic sites through easement or restoration by the developer.
o Open Space and Parks	Approval consideration might include an increased amount of development with clustering, open space, and parks and recreations facilities provided.

While encouraging higher density residential development in portions of the Development Service District in exchange for developer proffers that provide public benefits, this concept does not encourage densities that are substantially higher or incompatible with surrounding neighborhoods. Moreover, development approval should not proceed absent proffers that provide substantial public benefits and demonstrated consistency with Plan objectives.

Furthermore, PUD District densities for new sites adjacent or near to established neighborhoods should be required to buffer the edges to minimize impacts to

establish neighborhoods. This approach acknowledges existing development patterns and recognized historic development conditions.

In short, higher residential densities or mixed use development will be permitted only in such areas of the Development Service District where infrastructure in the form of sewer, water and transportation systems would not be adversely impacted or could be accommodated within a defined geographic cell. It is recognized that to permit higher densities in many portions of the Development Service District would be disruptive of community character and the expectations of existing residents.

RURAL SERVICE CENTERS AND CROSSROAD SETTLEMENTS

Several villages and crossroad settlements perform a number of functions in the growth management program. These include service as centers for rural residential development and providing for commercial services for rural areas of the County. The ability of these activity centers to accommodate some portion of the future growth of the County is a function of their location and the existing scale of development and range of services provided to surrounding rural areas. Characteristics common to most of these rural service centers are the existence of post offices and country stores and, in some cases, fire departments.

The concept of the "rural service center" is included in the land use plan in order to recognize and provide for the special needs of these County unincorporated population centers. These centers include such places as Glenns, Dutton, Bena, Achilles, Maryus and Adner. These centers are often very different in character.

These rural service centers serve a multitude of functions in Gloucester County. They range in scale from a fork in the road where a general store and beauty parlor are located, to a rapidly expanding community that is beginning to emerge as a service center of regional scope. Their distribution throughout the County is shown on the Plan Concept Map. Many have historic qualities which suggests future development near them should be limited in scale or, if unchecked, could overwhelm or disrupt their more rural character.

These Rural Service Centers and Crossroad Settlements however, share much in common, and collectively they play an important part in Gloucester County life. In general, these villages tend to be basically residential in character, but also often offer some employment through limited commercial services as well as public or institutional uses. In general, **the County should preserve and enhance the present character of the rural service centers and crossroads in order that they may continue to act as local activity centers and serve their traditional roles in County life.**

In the future it is possible that additional rural service center sites might be identified. However, their future designation should be a function of their need to serve as service centers in the context of their existing distribution in the County. These new centers might be termed either Rural Service Center or Crossroad Settlements and would be limited to providing the most basic retail services for the convenience of the rural population.

Generally, the areas shown as rural service centers or crossroad settlements should:

- o remain small in population size.
- o remain small in physical area.
- o be allowed to continue to provide limited, highly localized commercial services (such as a gas station or general store, etc.).
- o be allowed to continue to provide limited employment opportunity.
- o have a population density which is greater than the surrounding non-village and more rural areas.

The need for central water and sewer is not anticipated in the County rural service centers or crossroad settlements. However, in villages where land application of waste water is a feasible treatment technology (i.e. soils are potentially suitable), these systems can allow greater clustering of residences and opportunities for commercial use. In order to assure the continued small size of the rural service centers, any central water or sewer system which is eventually provided should be built to serve land area and development only within the immediate physical confines of the settlement itself and not extend to adjacent areas.

Since there is great variety in the size and range of services and facilities established in existing villages, two designations are recommended to differentiate and guide the future range and type of development which may occur within or near them to maintain their character. The first designation is "rural service center district" which would accommodate a wider variety of commercial uses. Areas considered appropriate for this designation, by virtue of the existing pattern of development and their location on the Route 17 corridor north of Gloucester wherein commercial uses are either established or should be provided for, are listed below. Conversely the second village center designation or what is more appropriately called "crossroad settlement" can be considered a more suitable designation where the degree in variety of commercial uses is less intensive and where the scale of residential development should be limited. Finally, areas directly adjacent to existing uses in each rural service center could provide for their continued development consistent with the degree and scale of the individual rural service centers. To this end, architectural themes should be framed for each rural service center or crossroad settlement with development within their confines subject to architectural review for compatibility with the particular image of the area.

The following settlements have been designated Rural Service Centers in the Land Use Plan:

- o Glenns
- o Woods Crossroads
- o Adner
- o Owl Trap

Crossroad Settlements have been identified in the following areas:

- Harcum
- Achilles
- Clopton
- Pampa
- Dutton
- James Store
- Ware Neck
- Zanoni
- Belroi
- Bena
- Gum Fork
- Glass
- naxera
- Sassafras
- Pinero

RESIDENTIAL DISTRICTS

Four residential districts have been established to reflect the variety in character of areas which have been subjected to development pressures in the past and will likely be subject to such pressures in the future. These districts are located both in the development district and along many of the peninsulas formed by rivers along the southeast edges of the County. Each district serves a specific purpose in the context of the Land Use Plan.

Suburban Residential District

This district is intended to provide for the majority of residential development for future population growth in the sewered areas of Gloucester County. This district permits moderate density development in a manner that is consistent with the provision of a high-quality SUBURBAN character. Significant areas of open space shall be provided in this district in order to maintain this character.

Suburban Estate District

This district is intended to provide for a form of suburban living in a superior living environment. These areas may be sewered by community systems designed as a part of the development. Open space is extensive and this open space is designed to create a more rural image than is normally the case, resulting in an estate form of character even though lot sizes are well below those found in typical large lot residential areas.

Countryside District

This district is intended to protect and preserve existing subdivision and neighborhoods where the lots are generally in excess of two (2) acres and where substantial additional development is feasible. It is intended that the regulations applying to this district preserve and enhance the estate character of these neighborhoods. This district shall also be used to designate areas where new development of estate-type character can be built.

This district is intended to serve both as at transitional district between farmlands and more urban areas, and to strictly limit development in coastal and other areas containing resources that require protection. The performance standards permit density to be allocated in accordance with the district's unique preservation role. When fully developed, such areas shall retain their rural character.

The combined effect of the Development District, the Village Centers, the Rural Service Centers, the Residential and Mixed Use Planned Unit developments, and Residential Districts which would permit infill development are intended to represent five specific types of areas or districts wherein most of the future residential development of the County should be contained. It is a clear and direct approach to reasonable, yet effective, growth management. In providing for growth in these five types of areas, a range of options will exist that should meet the needs of future residents who locate in the County as well as the existing County residents who may work their way through different housing markets over time. These areas together represent some 40 percent of the County with 60 percent of the County land area to be limited to either Resource Protection, Rural/Agricultural Conservation district designations.

BUSINESS AND COMMERCIAL PARK DISTRICTS

Historically, commercial developments were located adjacent to arterial or collector highways within the County. Constructed over a period of time, these commercial uses were built without adherence to a predetermined plan. The resulting strip development pattern along the Route 17 corridor South of Gloucester creates visual clutter and causes greater than necessary traffic conflicts for residents of the County as the number of vehicles utilizing Route 17 increase over time. To depart from highway strip development practices, and to accommodate commercial and service activities attracted to the County because of its strong residential growth, commercial growth clusters or business and commercial parks offer an opportunity to provide for the needs of area residents while preserving much of the natural landscape and discouraging visual cluster.

The Land Use Plan Concept requires basic policies for directing future commercial activities into planned commercial clusters. Utilization of this approach will decrease traditional strip development practices, which have occurred adjacent to the Route 17 corridor in the past. This approach will encourage new commercial activities to locate in clusters where the drawing power of one store will create an interchange of customers among all stores. To the extent possible, future commercial activities should be restricted to areas of similar commercial types of minimize conflicts between incompatible uses.

Business and commercial parks are intended for land consumptive commercial activities such as executive parks, office/warehouse uses, building supply, and the like not accommodated in the Village Centers. These parks are to be developed in a phased manner in accordance with a Comprehensive Site Plan. Activities are contained in a single structure or groups of structures in accordance with a specific site plan. Architectural review treatments are recommended to assure pleasing and attractive commercial and industrial work or shopping environments. Open spaces are proposed to be landscaped to add to the attractiveness of facilities as well as serving as a natural buffer between adjoining uses. All supporting facilities should be planned as an integral part of the site. To accomplish this commercial park concept, minimum tract sizes need to be determined which will allow adequate landscaping, parking, external buffering and adequate internal circulation and access The minimum tract sizes zoned for Commercial Parks will vary depending on the scale and nature of the commercial development with smaller lots permitted within the larger zoned tract. In no case should commercial park districts be permitted on

less than two acres. The configuration of these districts should be planned to limit frontage on major route yet provide for a greater depth-to-frontage ratio in dimensions.

Site Plan approval procedures for business and commercial parks should be required and offer several advantages in coordinating new activities with existing coordination of ingress and egress points with the local street system. Traffic controls can be provided in accordance with anticipated volumes. On-site parking facilities and internal traffic patterns are also controlled via the site plan review process. The form of this Commercial Park Concept to be fostered in future development is illustrated in Figure IV-1-1. Located at the intersection of two (2) major routes, the illustration provides controlled circulation and substantial landscaping in association with building groups, housing, shopping, and office functions.

The Land Use Plan Concept Map indicates a core area where future commercial development should occur. This area is centrally located in the most concentrated population area of the County and is accessible to the region via Route 17 proximity. Future commercial development in these areas would serve to complement the existing centers in the area. These areas, combined with the designated Rural Service Centers along the corridor, will channel commercial development into nodes. The Highway Overlay District discussed in this element is intended to preserve the visual qualities of the County transportation corridor in spite of the location of commercial parks.

In additional to the areas located on the Plan Concept Map as the Business and Commercial Park Districts, Planned Commercial Parks will be permitted as a floating zone in the Development District. A Planned Commercial Park District which is approved as a floating zone must be developed in accordance with a comprehensive site plan. A park-line atmosphere is to be created which provides an attractive buffer between commercial uses and other neighboring land uses. Among the locational criteria that should be considered when approving a planned commercial development floating zone is the direct traffic access to arterial or collector routes.

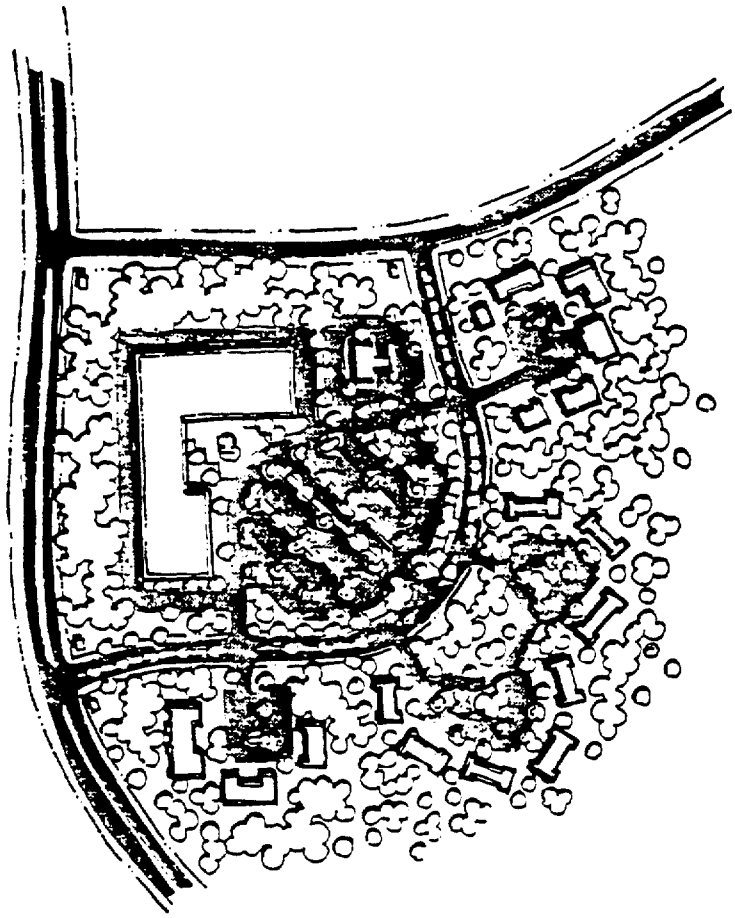
Planned Commercial Park designation priority should be established for existing commercial strips with adequate access to arterial as collector routes and where added district depth could improve development form.

Within the Business and Commercial Park Districts are areas with distinct functions and intensities of existing commercial development such as the immediate Route 17 corridor. The impacts of highway oriented uses need to be managed in a different way than less intense commercial uses. Hence, a distinct classification structure is needed to group compatible commercial uses. It is envisioned that auto service oriented uses should be grouped in appropriate areas along the Route 17 corridor when they may already exist corridor while more upscale office parks and retail areas are most appropriately concentrated in other segments of the corridor.

Existing commercial uses on existing lots have an established form and pattern of development that will not always permit Commercial Park like configuration. These areas of existing commercial use are generally located in one of two commercial zoning districts in the County at the present time. Further breakdown of these two zoning districts in recommended to provide more distinct treatment of these existing developed commercial areas. Districts created should provide treatment for the range

Figure 3

ILLUSTRATED COMMERCIAL PARK CONCEPT



of use from neighborhood business to highway oriented commercial uses and establish access control and landscape or buffer performance standards appropriate to their redevelopment or infill development over time. Where possible, service roads or access management policies should be established in existing commercial areas adjacent to major routes (e.g., Route 17) to minimize the effects of marginal friction on the thru-traffic capacity and primary functions of these routes.

EMPLOYMENT AND INDUSTRIAL PARK DISTRICTS

In recognition of the need to provide additional, up-graded and diverse job opportunities for residents of the County, it is proposed that several areas be reserved for development into employment and industrial clusters or parks. The land use analysis revealed that industrial land use in the County is significantly less than comparable counties and cities on the peninsula. Proposed land areas are intended to meet future needs of the County. A variety of sites are necessary to permit the location of industrial uses which provide employment opportunities. Several industrial clusters are necessary to provide for the location of industry according to their specialized needs while protecting the environment of the surrounding community.

Proposed industrial lands were selected based upon a series of principles. These are:

- A variety of industrial sites should be available in several concentrated locations near collector and arterial highways.

- The character and aesthetics of adjoining residential areas should be preserved by requiring industrial activities to meet strict performance standards or by assuring their location is removed from nearby residential areas.

- A variety of types of industry job opportunities should be encouraged within the County area which can be expected to have varying land use requirements.

- Industrial locations should provide large land areas suitable for horizontal expansion of sufficient size to provide on-site storage, parking and landscaped areas.

- At least on industrial area should be located in such a way that it can be associated with present or alternative future siting or airport function and use and be encouraged to serve as an airport industrial park capable of sustaining use by corporate aircraft to enhance the County's capability to attract industry.

- Industrial lands must be located to minimize any adverse influence on adjoining land uses including the environmental attributes of the area.

- All industrial activities should be located so that can be reasonably served by a complete array of community facilities.

The Land Use Plan Concept Map suggests the concentration of industrial activities in several key locations. Some area has been reserved around the Airport to make

potential use of that facility although airport business park opportunities may be limited by airport growth constraints in this area. Other areas are set aside adjacent to the commercial core on the Route 17 corridor to provide ready access to the regional transportation network.

All activities in these areas should be served with water and sewer and situated with direct access to either arterial highways or major collector routes. It is intended that development performance standards and the approval process will control the quality of development. Industrial development in these areas is afforded access to State routes and is generally removed from residential neighborhoods. To encourage the development of industrial activities to high standards, business park-type development should be encouraged. Where development occurs in an area on a fragmented basis, uniform standards should be established which will assure that virtually all industrial uses are located in a park-like setting.

In additional to the designated areas on the Concept Map, the Business/Industrial Park District can be located as a floating zone district within the Development District and areas adjacent to major routes if the criteria described above are met. A business park district which is approved as a floating zone must be developed in accordance with a comprehensive site plan. Implementation of the site plan assures compatibility of industrial operations with surrounding areas. A park-like atmosphere is created which provides an attractive buffer between industrial uses and other neighboring land uses. If properly developed, the business parks provide a pleasing working environment for employees of County firms. Because of its potential for attracting employee and truck traffic, access to the park is controlled by public policy. Internal street layouts should be consistent with County plans and policies as a method of reducing friction at major intersections.

HIGHWAY CORRIDOR DISTRICT

The Highway Corridor District is intended to address architectural and aesthetic controls as well as special access and buffering requirements along the County's major highways.

The Highway Corridor District is an area within which certain specific public policies relating to aesthetics and architectural plan review would be administered by the County through overlay zone regulations in the Zoning Ordinance. Views afforded to drivers and passengers, whether residents, workers or visitors, traversing the major transportation routes of Gloucester County provide a lasting visual and, therefore mental, impression of the County's character. Although the visual experience probably forms only a small part of a person's overall experience in the County, it, nevertheless, is of special public concern and requires public attention of the County's image is to be a positive one now and in the future.

Not all development in Gloucester County requires the same level of public scrutiny. The most critical visual areas lie along the major transportation routes since they are shared by all citizens and tourists. Hence, corridors of 500 to 1000 feet from the right-of-way of the major transportation route rights-of-way are identified for specific regulatory implications.

The visual character today along these corridors is diverse, ranging from areas primarily rural, natural, and scenic to areas with disorganized and cluttered roadside development. The intent of the policies for the Highway Corridor is not to preclude the diversity that already exists; but, rather to encourage and better articulate the variety of visual experiences along the current highways as well as along the corridor of the proposed future routes for the County's major roads.

The purpose of the Highway Corridor District is to protect and improve the quality of visual appearances along these linear corridors and to provide guidelines to ensure that buffering, landscaping, lighting, signage, and proposed structures are internally consistent and of a quality which contributes to County character.

Future development of lands within the Corridor shall be subject to the policies specific to the particular neighborhood in which they lie (and ultimately the particular zoning district in which they occur), as well as the following policies that are specific to the overly corridor. These policies are not intended to restrict or prevent the construction of buildings within each Corridor, nor to require the removal of existing structures. The Corridor policies are not setback requirements, although certain minimum setbacks will be required to protect highway rights-of-way and maintain sight clearances for traffic safety.

The corridor along Route 17, for a distance of 500 to 1000 feet from the right-of-way is designated as the Highway Corridor Overlay District. Other routes may be established in the future as determined appropriate.

Policies specific to the Highway Corridor include:

- Increased buffering requirements to screen unattractive buildings from view which provide for a mix of canopy, understory tree and shrub level plantings.

- Special standards for signage height, design, size, materials, and lights to maintain and enchange visual qualities.

- Special consideration of new development within this district including assessment of visual impact of development, assessing pre-development visual conditions and how the proposed development will affect them.

- Proposals for new development within the Highway Corridor are to be reviewed by a Corridor Review Committee (CRC) or an architectural review committee which shall make recommendations to the Planning Commission.

- The review of projects in the Highway Corridor will acknowledge the designation of villages and rural service centers as integral to the unique visual character of the corridor.

- Sectional service roads, as well as reverse frontage, should be used as a tool to achieve access control within the Highway Corridor District.

- Landscaping should be used to soften lighting and signage impacts and to be located in groupings to identify entrances to sites.

HISTORIC PRESERVATION DISTRICT

The Land Use Plan Concept also identifies districts that serve to achieve other County Land Use objectives and, in particular, historic and cultural conservation objectives for County ares which are dominated by cultural and/or historical resources within Gloucester. The Plan delineates historically significant areas at the Gloucester Courthouse area.

The vision of the Plan is that additional areas of unique and special historic or cultural value, where historic structures exist in concentration, may be identified over time for such designation. Many of the identified historic sites in the County (see Historic Preservation element) should also be included for designation as landmark site subsequent to discussions with owners the their voluntary participation in historic district landmarks site zoning designation. The Abingdon Church is one such example. The County Historical Society of Gloucester County should promote this concept with owners of sites of historic significance identified in the Plan. Development adjacent to such sites which could irreversibly influence or affect these scattered sites and their environmental settings should be subject to architectural review procedures to minimize adverse impact to these unique historic or architectural symbols of past County culture and heritage.

RURAL/AGRICULTURAL CONSERVATION DISTRICT

The Rural/Agricultural Conservation District is intended to maintain and conserve rural character and farmlands in County areas consistent with Comprehensive Growth Management Plan objectives. Rural/Agricultural Conservation District land areas are intended to provide for a full range of agricultural and farming activities and related uses along with some low density residential development.

The conflicts between farming and rural non-farm development (residential) should be minimized as the needs of farming are acknowledged and non-farm development is accommodated as a subordinate use. When non-agricultural land uses extend into agricultural areas, farms often become the subject of nuisance suits. As a result, farms are sometimes forced to cease operations. Many others are discouraged from making investments in farm improvements. In recognition of the farmer's "right-to-farm" without being restricted by neighboring residential areas, hours of operation of farm equipment, restrictions on odor-producing fertilizers, and other restrictions designed to limit the perceived negative impacts associated with reasonable farming practices should not be imposed on farming activities within the Rural/Conservation District. The general intent of the Rural/Agricultural Conservation District is to encourage farming and maintain rural qualities in areas so designated in the County.

Rural/Agricultural Conservation, as a component of the Comprehensive Growth Management Plan, is not limited to traditional farming but extends to all aspects of the County's rural character. Agricultural land refers not only to tilled fields, but also to open fields, pastures, and woodlands which are either prospects for additional farm acreage or are valuable as they are for their many contributions to the environment and to the rural appearance of the County. Agriculturally related or support industries (farm implement dealers, supply services, storage and processing facilities, etc.) should be permitted within this district in recognition of their important support of the farming community.

Residential Density Options

Residential development and density in the Rural/Agricultural Conservation District should be minimized to avoid future conflicts between farming activities and rural homes. Two options are recommended for residential density in the Rural/ Agricultural Conservation District. A property owner or developer should be able to choose the option which best suits their needs and objectives. The first density option is based on a sliding scale approach. Using this option, density is determined by the size of the parcel. The second option provides property owners the incentive of higher possible densities if certain standards of rural residential development are met. These density bonus incentive standards include such conditions as development clustering, visual enhancement to reinforce rural character, rural highway access controls, and restricting sensitive lands or agricultural lands with conservation easements.

Sliding Scale Approach

Under this option the base density for lots of twenty (20) acres or less should automatically be one (1) dwelling unit per five (5) acres. One (1) additional lot should then be allowed for every additional twenty (20) acres. A 100 acre parcel, for example, would yield eight (8) lots. This provision is based on the assumption that parcels of twenty (20) acres or less do not typically constitute adequate land area for productive or economically viable farming operations. The disadvantage of this approach is that it will most likely cause the creation of large lot subdivisions which are land consumptive and do not promote conservation of agricultural lands. Nevertheless, such development form will assure relation of rural character and will minimize demand for public service and the costs implicaties or demand associated with serving growth.

Density Bonus Approach

As an alternative to the sliding scale approach, property owners can opt for higher densities in return for residential subdivision design which better achieves rural character and agricultural conservation objectives. Under this approach the base residential density in the Rural/Agricultural Conservation District should be one (1) dwelling unit per ten (10) acres, but may be increased to one (1) dwelling unit per eight (8) acres, or one (1) dwelling unit per five (5) acres if certain development standards are met as a condition of density increase.

Using this option, residential density in the Rural/Agricultural Conservation District could be determined as follows:

Base residential density of one (1) dwelling unit per ten (10) acres may be permitted provided:

1. Clustering of development on the site provides for all dwelling units and lots to be located within 50 percent of the total site area of the parcel.

2. The remaining 50 percent of the site should be permanently established as open space, either in farm or forest use, and restricted from further development through covenants or easements.

3. All residential lots created through the act of subdivision should be served served by one point of access to County roads.

4. Residential structures in the subdivision should be located at least 100 feet from the existing County road right-of-way and screened from the right-of-way by an existing or planted landscaped buffer.

5. All residential structures should be setback at least 100 feet from all active farm operations.

Base residential density may be increased to one (1) dwelling unit per eight (8) acres if the following conditions are met:

1. Clustering of development on the site provides for all dwelling units and lots to be located within 40 percent of the total site area of the parcel.

2. The remaining 60 percent of the site should be permanently established as open space, either in farm or forest use, and restricted from further development through covenants or easements.

3. All residential lots created through the act of subdivision should be served by one point of access to County roads.

4. Residential structures in the subdivision should be located at least 150 feet from the existing County road right-of-way and screened from the right-of-way by an existing or planted landscaped buffer.

5. All residential structures should be setback at least 100 feet from active farm operations.

Base density may be increased to one (1) dwelling unit per five (5) acres if the following conditions are met:

1. Clustering of development on the site provides for all dwelling units and lots to be located within 30 percent of the total site area of the parcel.

2. The remaining 70 percent of the site should be permanently established as open space, either in farm or forest use, and restricted from further development through covenants or easements.

3. All residential lots created through the act of subdivision should be served by one point of access to County roads.

4. Residential structures in the subdivision should be located at least 200 feet back from the existing County road right-of-way and screened from the right-of-way by an existing or planted landscaped buffer.

5. All residential structures should be setback at least 100 feet from active farm operations.

Through the clustering approach, the developer is able to decrease lot sizes in return for setting aside permanent open space. This provides many benefits including lower land costs for the lot purchaser and decreased road construction costs since lots are grouped together as opposed to scattered throughout the site. The community benefits through provision of open space, farmlands and rural character. Despite smaller lot sizes, the overall density of the subdivision remains unchanged.

Using this approach, a property owner with a 100 acre farm can create up to 20 lots (one dwelling unit per five acres) provided they are clustered onto 30 acres of the farm and the remaining 70 acres would be left for farming or open space. The homes would also have to be setback 200 feet from the County road and located on a single access road with driveways. Numerous individual drives onto County roads would not be allowed. The homes would have to be screened from County roadway view, thereby protecting rural character. Homes would also have to be setback from active agricultural operations in order to minimize farming impacts on home sites.

The same scenario on a 40-acre property would yield eight (8) lots on 12 acres and would leave 28 acres in open space or farming. Average lot size for lots on both the 100 and 40 acre parcel would be 1.5 acres.

The open space land could be left in its natural state or maintained for farming or forestry purposes. Control of the open space land can be left with the original property owner or dedicated to a homeowners association. Regardless of which density determination option is used, the base density of a parcel or tract should be calculated on the amount of "net-buildable" land present. Land areas encumbered by natural development constraints such as wetlands should not be included in the base density calculation of a tract. Minimum lot sizes for clustered development in the Rural/Agricultural Conservation district should be a function of soil suitability for septic tank systems.

The above described residential density provisions recognize that while rural character and agricultural conservation are important County objectives, there remains a need to allow farmers and rural property owners to subdivide and sell single-family home lots as the need arises. The Plan recommends that rural residential subdivisions be directed to areas of the Rural/Agricultural Conservation District which have good proximity to existing residential areas and commercial and public services. Rural residential subdivisions should not be encouraged in remote areas where County roads are not adequate for increased traffic or in areas where existing agricultural activities predominate.

RESOURCE CONSERVATION DISTRICTS

The County's growth management objectives indicate that special emphasis should be placed on the preservation of natural resources, sensitive natural areas, and waterfront areas. Given the exurban Newport News, Hampton Roads development pressures, there will likely exist an almost unlimited demand for waterfront homesites in the County. Without a firm commitment to preserve the natural beauty and environmental resources in these areas, the County could find these important natural assets exploited.

The Growth Management Plan Map therefore designates land areas along all shoreline and tributary streams of the County as the Resource Conservation District. These areas include tidal and nontidal wetlands which are adjacent to shorelines and tributary streams as well as floodplains.

The Resource Conservation District should include "Resource Preservation Areas" (RPAs) as defined by the recently adopted Chesapeake Bay Preservation Act. The Preservation Act affects all drainage areas of the County which impact Chesapeake Bay water quality. RPAs must include: tidal wetlands, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams; tidal shores; and a vegetated buffer located adjacent to and landward of the above listed features.

Resource Management Areas (RMAs) must be provided contiguous to the entire inland boundary of the RPA. The following land categories should be considered for inclusion in the RMAs: floodplains; highly erodible soils; highly permeable soils; nontidal wetlands not included in the RPAs.

As per State requirements, the County will prepare a Shoreline Area Management Plan as a subsequent extension of this Plan. The Shoreline Area Management Plan will contain policies for water quality protection in RPAs and RMAs and will recommend land use regulatory approaches designed to improve Bay water quality. The Plan's Resource Conservation District contains environmentally sensitive land areas both within the Chesapeake Bay watershed.

In most cases only passive recreation use and low density residential development is appropriate in the Resource Conservation District provided development design is protective of environmentally sensitive features.

The qualities of Gloucester County's natural resources are an important component of the County's heritage and major factor influencing the County's continued economic and environmental well being.

Major areas of the County in the Resource Conservation District include the York, Rianatank, North, Ware River and Severn River shorefronts. This is not to suggest that these are the only areas of the County where resource conservation should be practiced, but rather, these are areas where the largest concentrations of environmentally sensitive features exist. Wherever resource constraints are present, development proposals should be carefully reviewed and mitigation measures prescribed.

Performance standards for development within areas designated Resource Conservation districts should be framed to implement protection policies. Such policies or standards should provide that:

- No development be permitted on slopes exceeding 25 percent where soils are unsuitable.
- Development in floodplains should be limited and responsibly managed
- Clearing of woodlands and forests should be minimized to the extent possible.

- In general, only very limited low density residential development should be permitted in these areas of the Resource Conservation District which are developable.

- When development does occur in the Resource Conservation District, all environmental impacts should be avoided and in cases where impacts do occur, mitigation measures should be employed.

- The State and private conservation organizations should actively pursue programs to purchase and/or acquire easement for privately owned lands in the Resource Conservation District so they can be preserved.

It is the intention of the County to accommodate waterfront planned communities that can meet the established performance criteria.

SUMMARY

The Land Use Concept Map represents the cumulative application of the districts described earlier in this section. The map is in reality the result of an "overlaying" of 14 separate maps, one representing each of the 14 concepts. Whenever conflicts develop as to which category of use should apply, the more specific or highly restrictive category should govern policy. For example, the Resource Conservation District is the most restrictive and therefore would provide the overriding policies in the area where it is applied.

To reiterate, the basic intent of the growth management concept is that the County channel most of its future residential, commercial and industrial development into and around the Development Service District, and Rural Service Centers, and should preserve lands in the Resource Conservation and Rural/Agricultural Conservation Districts. Existing residential neighborhoods should be recognized and protected. The aesthetic and functional characteristics of major County roads should be preserved within the Highway Corridor Districts. The location of the districts will serve as the basis for County structuring of zoning classifications with the intent and purpose to frame land use controls and performance standards for development consistent with each Planning District.

Sprawling suburban development in Gloucester County has had negative consequences. Farmlands, open space, natural areas, and rural character has been depleted. The costs of providing services to sprawling development is high. The Growth Management Plan proposes to guide development to those undeveloped areas where major public facilities are in place or planned, while reducing development pressures in those areas where facilities cannot be provided as efficiently. The Plan channels anticipated future growth into a more harmonious and efficient pattern which is consistent with plan goals and objectives.

Section 2

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT TRENDS

Perhaps the most difficult element to assess in the Comprehensive Plan, and the one which has the greatest effect upon future development is the economy of the County. The complexities of the system, the outside influences, and the lack of specific information pertaining to an individual jurisdiction all tend to complicate the economic analysis.

This economic development element will discuss certain elements of the economy of Gloucester County and will make some judgments about the causes and effects of past events or proposed actions.

REGION

By virtue of its location, at the southeastern tip of the Middle Peninsula of Virginia, Gloucester County is included in the Norfolk-Virginia Beach-Newport News Metropolitan Statistical Area (MSA), which is the country's 28th most populated MSA. This MSA, composed of nine cities and three counties, is second only to Northern Virginia area in total population. Although Gloucester County is part of the Middle Peninsula Planning District, it is the regional influence of the Hampton Roads area which will have greatest influence on the future economic development of the County.

Gloucester, the county seat, is 59 miles east of the state capital of Richmond, 45 miles north of the city of Norfolk and the ports of Hampton Roads, one of the world's largest and busiest natural deep-water harbors, and 135 miles south of Washington, D.C. The Norfolk Naval base, along with a trio of Army bases combine to make the largest military complex in the world. With an annual payroll of $5.5 billion, the U.S. Government is the most significant employer in the region. Newport News Shipping, based in Hampton Roads, is the states largest employer. Although service industries are the mainstay of the region's economy, the area is attracting many new and diverse industries. In 1987, $368 million in capital investment in new and expanding firms, providing 8,224 new jobs, was reported.

The projected population growth of Hampton Roads between 1987 and 2005 will rank the area 33rd among the top 50 growth markets in the nation. Gloucester County, exhibiting the fastest growth rate throughout the Commonwealth of Virginia, will play a greater role in the future economic development of the region.

The following pages will present and discuss certain elements of the economy of Gloucester County and will attempt to make some judgement about the causes and effects of events or actions, particularly related to the translation of goals and objectives into implementation strategies for the County.

POPULATION COMPONENTS IN THE LOCAL ECONOMY

It may be safely stated that the basis for any economy is the relationship of supply and demand. Many different measures exist which attempt to gauge these two factors. The simplest method for trying to make the initial determination of the direction of demand is to predict the future population and what characteristics that population might display.

INDUSTRY

Gloucester County's industries have traditionally been oriented toward to its natural resources. The seafood industry and the farming industry remain as the main local industries. The introduction of industries related to ladies garments, fiberglass sailboats, the manufacture of concrete bricks, and brass, lumber, and metal products as well as Research and Development of Ocean Mining, has helped to diversify the County's industrial base.

Major employers in Gloucester include the School District, the Virginia Institute of Marine Science of the College of William and Mary, and the Walter Reed Memorial Hospital. Table IV-2-1, indicates the County's major firms and their corresponding number of employees.

Table IV-2-1

MAJOR FIRMS AND EMPLOYEES
GLOUCESTER COUNTY

Firm	Location	Product/Service	Employees
Virginia Institute of Marine Science	Gloucester Point	Research & Training	339
Haywood Seafood	Bena	Seafood	89
Ownes & Blake	Bena	Seafood	50
York River Seafood	Gloucester Point	Seafood	35
Virginia Power	Gloucester CH	Electricity	95
Continental of Virginia	Gloucester	Telephone Service	48
County School Board	Gloucester	Education	405
County Government	Gloucester	Government Services	85
Walter Reed Hospital	Gloucester	Medical Care	210

SOURCE: "Gloucester County, A Community Profile," 1988-89

EMPLOYMENT TRENDS

Virginia's employment growth almost doubled the national average between 1980 and 1986, and was the third highest in the nine-state South Atlantic Region. The Northern Virginia MSA job market grew the fastest of the Virginia's 22 planning districts with a 5.7 percent growth rate. Fredericksburg followed with an increase of 4.8 percent. The Hampton Roads job market expanded by approximately three percent while the Gloucester County market grew at a nine percent rate.

The 3.3 percent unemployment rate in Gloucester County for 1988 is significantly lower than that of the nation (6.3%) and of the State of Virginia (4.2%) as well as for the Norfolk-Virginia Beach-Newport News MSA (4%). In fact, the County has the lowest rate of any of the cities and counties making up the MSA.

Table IV-2-2

EMPLOYMENT BY SECTOR

	1984	1985	1986	1987	1988	Ave. An. % Change '84-'88	1988 % of Total
TOTAL GLOUCESTER	4,408	4,855	5,179	5,813	6,000	9.03%	100.00%
AGRICULUTRE	62	63	64	92	94	12.90%	1.57%
CONSTRUCTION	237	297	372	447	495	27.22%	8.25%
MANUFACTURING	301	250	254	300	327	2.16%	5.45%
TRANS., COMM., PUB. U	243	238	243	253	276	3.40%	4.60%
WHOLESALE TRADE	252	223	277	293	248	-0.40%	4.13%
RETAIL TRADE	1,103	1,374	1,231	1,455	1,367	5.98%	22.78%
FIRE	150	190	199	256	261	18.50%	4.35%
SERVICES	925	967	1,097	1,172	1,242	8.57%	20.70%
GOVERNMENT	1,120	1,226	1,374	1,494	1,673	12.34%	27.88%
TOTAL VIRGINIA (X 1000)	2,333	2,455	2,558	2,680	2,781	4.80%	100.00%
CONSTRUCTION	133	152	169	183	195	11.65%	7.01%
MANUFACTURING	421	423	425	429	427	0.36%	15.35%
TRANS., COMM., PUB. U	127	132	137	142	146	3.74%	5.25%
WHOLESALE TRADE	116	117	123	128	131	3.23%	4.71%
RETAIL TRADE	400	430	456	482	503	6.44%	18.09%
FIRE	117	123	132	144	150	7.05%	5.39%
SERVICES	495	545	579	626	668	8.74%	24.02%
GOVERNMENT	505	516	520	530	544	1.93%	19.56%
TOTAL MSA (X 1000)	484	511	532	553	565	4.18%	100.00%
CONSTRUCTION	30	34	38	39	38	6.67%	6.73%
MANUFACTURING	67	68	69	68	68	0.37%	12.04%
TRANS., COMM., PUB. U	25	25	26	26	26	1.00%	4.60%
WHOLESALE TRADE	21	21	22	24	25	4.76%	4.42%
RETAIL TRADE	95	103	108	113	115	5.26%	20.35%
FIRE	21	23	24	27	27	7.14%	4.78%
SERVICES	105	114	120	130	136	7.38%	24.07%
GOVERNMENT	120	122	125	127	130	2.08%	23.01%

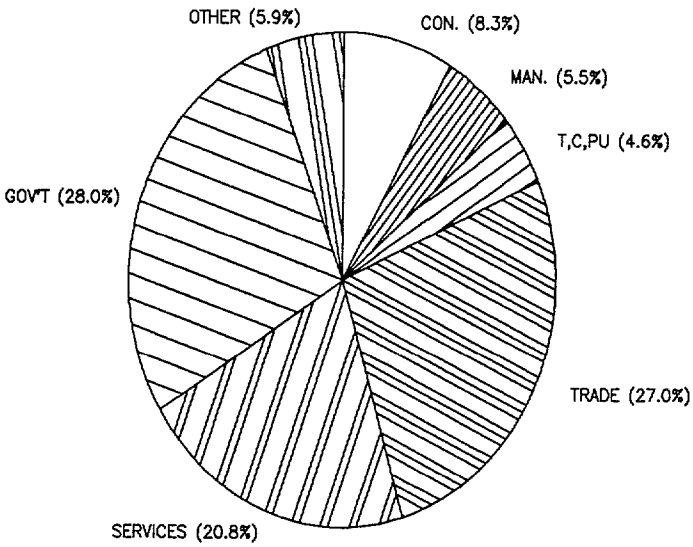
SOURCE: Virginia Employment Commission, 1989

In Table IV-2-2, the rate of growth of non-agricultural employment and that of the total population between 1984 and 1988 is indicated. In both cases, Gloucester County's rate of change is more than double that of either the MSA or the State.

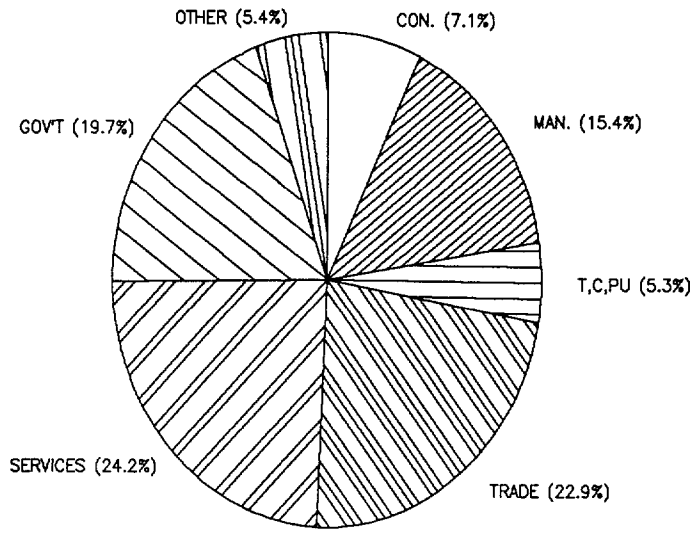
Figure IV-2-1 indicates 1988 breakdowns of total employment by major divisions for the State of Virginia, the Norfolk-Virginia Beach-Newport News MSA, and Gloucester County. Generally, state employment reflects that of the nation, with services making up close to a quarter of the total distribution of jobs in each. Retail trade is a close second, with government third and manufacturing fourth.

Figure IV-2-1
1988 EMPLOYMENT BY SECTOR

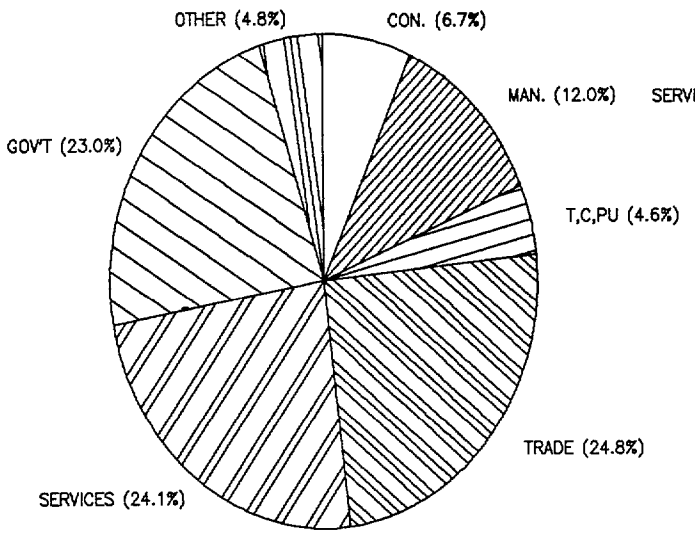
GLOUCESTER COUNTY, VIRGINIA



STATE OF VIRGINIA



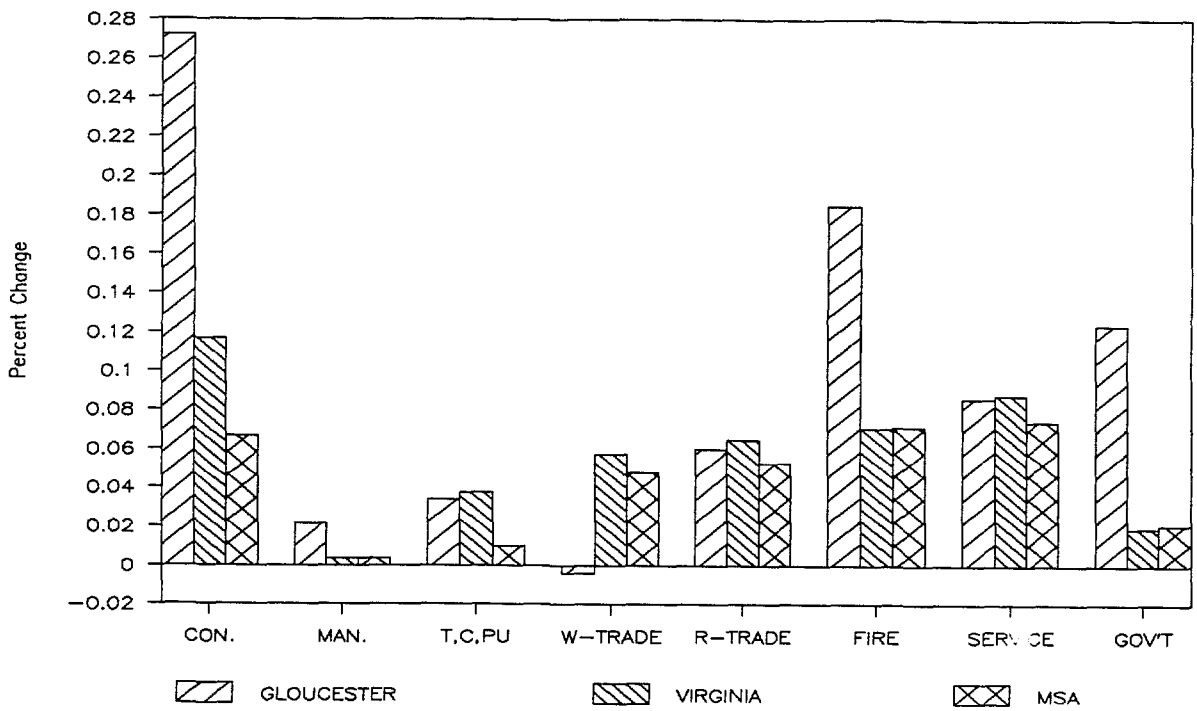
METROPOLITAN STATISTICAL AREA



SOURCE: Virginia Employment Commission, 1989

The distribution for the MSA exhibits a higher percentage of government employment, and a lower percentage for manufacturing. In Gloucester County, this effect is further amplified, with government employment making up the greatest percentage of the total employment picture. The percentage of retail trade is also higher than the MSA. The percentage of manufacturing is roughly half of the percentage of the MSA and almost a third less than the percentage for the State and the Nation. The importance of the government and trade sectors in the overall economy of Gloucester becomes apparent here.

Figure IV-2-2
ANNUAL AVERAGE PERCENT CHANGE
EMPLOYMENT BY MAJOR SECTORS
1984-88



CON. - Construction
MAN. - Manufacturing
T,C,PU - Trans., Comm., & Public Utilties
W-TRADE - Wholesale Trade
R-TRADE - Retail Trade
FIRE - Finance, Insurance, Real Estate
SERVICE - Services
GOV'T - Government

SOURCE: Virginia Employment Commission, 1989

The average annual percent change (1984-88) in the major sectors of employment for Gloucester County, the MSA, and the State are indicated in Figure IV-2-2. The most obvious aspect of these trends is the rapid rates of growth shown for the Finance, Insurance, and Real Estate (F.I.R.E.), Government, and Manufacturing sectors (all six times the rate of the State and MSA), as well as the Construction sector (growing at twice the State rate and four times that of the MSA). The growth in the Transportation, Communication, and Public Utilities (T,C,&PU), Retail Trade, and the

Services sector has generally kept pace with that of the State and MSA. Wholesale Trade employment had the only negative growth rate of all sectors, decreasing by 0.4 percent, while wholesale employment for the State increased 6.0 percent, and for the MSA, 5.0 percent.

With respect to the trends within the County (Table IV-2-2), the Construction sector had the most rapid expansion rate followed by F.I.R.E. Government and Agriculture both occupied third place with equal rates of growth. Because the total employment numbers for Agriculture in the County are a small percentage of total employment (1.5%), growth in this sector does not have the impact on the County as other sectors. A strong positive growth does indicate that this sector is still and important component of the overall trend.

Table IV-2-3 indicates the relationship between the increase of employment by place and of the civilian labor force by residence. With allowances for unemployment and the fact that self-employed persons, domestic workers, and others not on a regular civilian payroll, only 40 percent of the civilian work force in Gloucester County is employed in the county of residence. The indication is that the greater part of the total labor force of Gloucester goes elsewhere for employment.

Table IV-2-3

EMPLOYMENT BY PLACE AND BY RESIDENCE, 1988

	Civilian Labor Force (By Residence)	Non-Agricultural Employment (By Place)	Total Percentage
Virginia	2,997,080	2,780,000	93
MSA	588,074	565,000	96
Gloucester	14,762	6,000	41

Source: Virginia Employment Commission

INCOME

Annual per capita personal income for persons in Gloucester County in 1986 was $12,535, which was the second lowest for the cities and counties in the Norfolk-Virginia Beach-Newport News MSA, exceeding only that of Portsmouth. The per capita income for the MSA as a whole was $14,462 in 1986, ranking it fifth out of the eight MSAs in the state. (The per capita income for the Washington, DC-Maryland-Virginia MSA was $20,148, considerably higher than the Virginia state average of $15,433). Although the per capita income in Gloucester was lower than the MSA and the State, it's average growth rate from 1979 to 1986 was considerably higher than both (7.7%). The average annual growth rate in the MSA was 5 percent; in Virginia, 4.6 percent.

The median household income for Gloucester County in 1986 was $24,799, which is midway between the highest income category in the MSA; $38,077 in Poquoson; and the lowest, $18,474 in Norfolk. With relation to the MSA as a whole, the median household income for Gloucester County is practically the same and is just slightly

lower than the level for the state. The average annual increase in median household income in Gloucester has kept pace with the MSA as well as with the state increase and is expected to do the same through 1990.

The average annual percent increase of the Median Family Income in Gloucester County between 1979 and 1986 was 5.5 percent while the increase for the MSA was 6.9 percent and the State, 7.9 percent. The indication is that more families comprise a household in Gloucester County than in either the MSA or State.

FINANCE

In 1987, nearly $13 billion was deposited into financial organizations in Hampton Roads, representing nearly 19 percent of the total deposits in the state of Virginia. In Gloucester County, the total deposits amounted to $165,402,000, of which $128,739,000 was in commercial banks and $36,663,000 was in savings & loans. The commercial bank deposits represent a change of 5.4 percent from the previous year's deposits of $122,739,000. In 1988, commercial bank deposits were $156,614,000, a 17.8 percent increase from 1987. Total commercial deposits for the MSA during the same time period 1987-1988 declined by 5.9 percent. Currently there are six banks in Gloucester County: Chesapeake National, CRESTAR (two branches), Dominion, First Virginia, Newport News Savings Bank, and Peninsula Trust.

For the fiscal year 1989-90, Gloucester County raised its real estate tax 15 cents while most other municipalities in the MSA raised taxes only a few cents (with the notable exception of Portsmouth which raised taxes by a dime per $100 of assessed value). This increase follows on a 14 cent increase for fiscal year 1988-89. The highest real estate tax rate in the MSA for fiscal 1989-90 is Suffolk's at $1.30 and the lowest is Williamsburg's at 52 cents per $100. Gloucester has the lowest personal property tax rate in the Hampton Roads MSA as well as the lowest automobile tax.

The largest source of local revenue for Gloucester County in 1988 came from general property taxes including real estate and general property taxes making up 30 percent of the total revenues received. The largest portion of the revenues received came from federal and state sources totalling $12 million and $1.8 million respectively. Service fees accounted for 5.1 percent of total revenues, debt/loan proceeds 3.9 percent, 1.9 percent came from reserves with the remaining revenues coming from other taxes and miscellaneous sources.

The largest portion of the funds, 61.8 percent were used for education, with new school construction, repairs, and busses accounting for capital expenditures. Another 14 percent of the funds were used for Capital Projects, 6.2 percent for public safety, 4.8 percent for general government, with the remaining funds used for Public Works, Health & Welfare, Judicial, Debt Services/Leases and General Government. As the county has managed to keep sufficient operating cash on hand, no short-term financing has been needed to meet obligations.

CONSTRUCTION

In 1987 $1,482,329,000 worth of construction activity took place in the MSA, down from $1,820,779,000 in 1986, indicating a minus 19 percent change. This change

reflects the general construction trend for the United States as a whole, where the housing construction pace in 1987 was a its lowest since 1982. Single-family home construction was down in all but seven of the top twenty markets in the nation, with Hampton Roads ranked 26th; Washington, DC was second in the nation in building activity. Housing starts in Hampton Roads in 1988 numbered 16,200, down 17.3 percent from 1987.

Residential building permits issued in Gloucester county in 1987 numbered 690 representing a decrease of 31.9 percent from the 1986 level of 910. In 1988 total permits numbered 504, a decrease of 37 percent from 1987. The total number of permits for the MSA decreased by 4.8 percent during the same period. The greatest increase in permits issued in the MSA was in Hampton which had an increase of 58 percent, while the greatest decrease was Portsmouth, 61.2 percent, for the same period. It is interesting to note that mobile homes accounted for a total of 41 percent of the residential permits issued in Gloucester County in 1988, and 22 percent in 1977.

The assessed valuations for real estate in Gloucester County for the period 1980-87 increased by 54 percent, placing it fifth in the MSA, with Hampton showing the greatest increase at 68 percent and Suffolk the least increase at 29 percent. More recently, in the period 1984-88, Gloucester County has held its fifth-place ranking with a 38 percent increase while James City County has taken over first ranking with an increase in real estate valuations of 50 percent while York County has shown the slowest growth in valuations, 20 percent. In terms of number of real estate transfers for the same period, Gloucester County, with a change of 21.9 percent, was halfway between James City County, 51.6 percent, and Virginia Beach, -0.4 percent, in the MSA. The average house cost in Hampton Roads during the first quarter of 1988 was $91,800, making this MSA 31st in the country in resale costs.

TAXABLE SALES

Gloucester County's taxable sales have increased 48 percent from 1980 to 1988 ranking it fifth in retail sales growth in the MSA, almost equal to the 51 percent rate of the MSA as a whole. Between 1986 and 1988, taxable sales decreased by almost 10 percent, reflecting the same trend in eight of the 12 areas in the MSA, with the sales for the MSA decreasing by four percent. The most notable decreases were in Newport News (15 percent) and York County (12 percent). The most notable increase was in Poquoson - approximately 80 percent.

ISSUES

RECENT ECONOMIC DEVELOPMENT

The following recent events in Gloucester County indicate that the continuing economic development of the County is anticipated :

- In 1988 the Economic Development Department was established to provide staff support to the County Administrator and to the Gloucester County

Industrial Development Authority in matters related to the County economic development process.

- The design for the extension of sewer lines into the southern half of the county by the Hampton Roads Sanitation District is planned to be complete by spring 1990.

- The Beaver Dam Reservoir, located in the center of the County, will be ready to supply water to the southern part of the county in approximately one and one-half years.

- Plans are proceeding for the development of the 65 acre Gloucester Industrial Park, the first industrial park in the County, as is the construction of the York River Shopping Center in the county's southeastern corner. (Another shopping center is also being planned for).

- Improvements to portions of the regional transportation system within Gloucester County (such as the improvement of the Coleman Bridge York River crossing, an additional upriver crossing, improvements to Route 17 and a possible Route 17 bypass) are planned to relieve congestion while making the County more accessible for those who reside and work there.

These public facility improvements combined with increased coordination of development efforts will be instrumental in attracting future development within the County. However, the form and location of this development and the manner in which it conforms with the desires of the residents of the County are issues which must be addressed if a successful strategy is achieved.

GROWTH PROSPECTS

The following summary findings form the basis of the recommendations for Gloucester County's economic development:

- The projected annual population growth rate for the period 1980-2000 in Gloucester County is projected to be 6.8 percent, resulting in a population of 47,474 in the year 2000, more than double the 1980 population level for the County. This rate is almost three times that of the MSA and four times that of the State for the same period.

- Total non-agricultural employment in Gloucester County has increased at an annual average rate of nine percent between the years 1984-1988. This rate is twice that of the MSA and the State.

- Government employment made up the greatest part of the County's employment in 1988 with Retail Trade a close second, followed by Services, reflecting the general trend in the MSA. Manufacturing employment is one half the level of the MSA and two-thirds less than the State.

- The Construction, F.I.R.E., Manufacturing, and Government sectors are the fastest growing employment areas in the County, each with an average annual growth easily exceeding that of the MSA and State.

- Agricultural employment also increased; the actual numbers are low so that this growth may be somewhat misleading, although this sector is still of primary importance to the County.

- Only 40 percent of the resident civilian labor force is employed in Gloucester County.

- Gloucester County's unemployment rate was 3.3 percent in 1988, the lowest rate of any city or county in the MSA.

- The ratio of employment to population in Gloucester County 1988 was one job for every five people while, for the MSA, the ratio was 1:2.5 and, for the State, 1:2.2. In the year 2000 the ratios are projected to be: Gloucester County, 1:6.8; MSA, 1:2.3; and the State, 1:2.1.

- The annual per capita personal income for persons in Gloucester County was second lowest in the MSA; its rate of growth was greater than the MSA, and the State.

- The average annual increase in median household income has kept pace with the MSA and the State.

- Commercial bank deposits in Gloucester County increased 5.4 percent in 1987 while those for the MSA declined 5.9 percent.

- Residential building permits decreased 37 percent between 1987-1988. In 1988, 41 percent of the residential permits were for mobile homes.

- Real estate valuations increased 54 percent between 1980-87, slightly higher than the MSA's average of 51.3 percent.

- Taxable sales in Gloucester have increased by 48 percent compared to 51 percent for the MSA between 1980-1988, with more recent sales (1986-88) decreasing 10 percent compared to 4 percent in the MSA. The relationship between the rate of population growth of population and sales in Gloucester, 1980-88, is 1.8 while for the MSA the factor is 5.4. Gloucester County's sales have not kept pace with its population.

IMPLICATIONS OF PROJECTED GROWTH

It is quite evident from the above that Gloucester County will continue to experience a substantial amount of growth in the near future. The annual per capita personal income in the County is growing at a rate faster than that of the MSA, median household income is increasing, commercial bank deposits have increased as have real estate valuations; all encouraging signs. However, there are aspects of this growth which are not so positive and which will have a profound effect upon the Gloucester County of the future.

The primary characteristic of development to date is that 60 percent of the civilian labor force seeks employment outside of the County, making Gloucester County a "bedroom" community of the expanding Hampton Roads area and, to a lesser extent,

of the Richmond area. With a ratio of one job for every five people (Table IV-2-4), there simply are not enough jobs in the County. With a County unemployment rate of just 3.3 percent, those who are seeking jobs apparently are not having much trouble finding them, even if these jobs are outside of the County. The great disparity between the rate of population growth and the increase in taxable sales, as compared to the whole MSA, indicate that those who are working outside of the County are also spending their money outside. The attraction of more in-county jobs seems to be the primary goal for the economic development of the County.

Table IV-2-4
POPULATION TO EMPLOYMENT RATIOS

	1984	1988	2000
VIRGINIA			
EMPLOYEES	2,333,000	2,780,000	3,226,000
POPULATION	5,635,500	6,015,100	6,664,600
RATIO	2.4	2.2	2.1
MSA			
EMPLOYEES	485000	565000	643000
POPULATION	1,261,400	1,388,100	1,510,500
RATIO	2.6	2.5	2.3
GLOUCESTER CO.			
EMPLOYEES	4,408	6,000	6,951
POPULATION	24,500	30,600	47,474
RATIO	5.6	5.1	6.8

SOURCES: Virginia Employment Commission, 1989
'Virginia Population Projections 2000,' Va. Dept of Planning & Budget, 1986
Redman/Johnston Associates, Ltd., 1989

EMPLOYMENT SCENARIOS

In Table IV-2-5, possible employment scenarios for Gloucester County are shown for the period 1989-2000. These scenarios are based upon projected population to employment ratios as indicated in Table IV-2-4. Assuming a continuation of the 1984-88 employment trends to the year 2000, the ratio for Gloucester will increase to 6.8, wile the ratios for the MSA and the State will decrease to 2.3 and 2.1 respectively. Although the accuracy of these projections is difficult to assess, they do indicate the general direction employment trends are heading.

Scenario "A" , with a 6.8 population to employment ratio, indicates that, by the year 2000, the County will have a total of 6,951 employees with an average annual percent change of 1.3%. There will be 6.8 persons for every job in the County, meaning that more persons will have to seek employment outside of the County than at present.

Scenario "B" indicates that the County's ratio would be 5.0 if the annual average rate of increase of employment proceeded at 4.9%, the current rate of change in employment for the State (and close to the MSA rate of 4.1). In this scenario, total County population would be 9,495.

Scenario "F" is based upon the current population to employment ratio of the MSA and the County, or 2.5. If this rate were to be realized in Gloucester County in the year 2000, its's average annual rate of increase in employment would have to be 18.0 percent, or three and one-half times the current rate of the MSA and State, and twice the current County rate.

Table IV-2-5
GLOUCESTER COUNTY
EMPLOYMENT SCENARIOS
YEAR 2000

Scenario	Employ. to Pop. Ratio	Resulting Number of Employees	1988-2000 Ann. Ave. % Change
A	6.8	6,951	1.3%
B	5.0	9,495	4.9%
C	4.0	11,869	8.2%
-> D	3.5	13,564	10.5% <-
E	3.0	15,825	13.6%
F	2.5	18,990	18.0%
G	2.0	23,737	24.6%

SOURCES: Virginia Population Projections 2000, VA Dept. of Planning & Budget, 1986; RJA, 1989

Scenario "D" is a median approach. By achieving an average annual rate of change in employment growth of 10.5 percent (slightly higher than the current County level),the population to employment ratio for the County could be decreased to 3.5, with a total year 2000 employment of 13,546. This would enable to County to "make up ground" in attempting to attract a greater percentage of in-county employment. The current nine percent County employment growth rate for the 1984-88 period represents an overall negative trend, decreasing from a high of 12 percent growth between 1986-87. To maintain an average annual rate of 10.5 percent for the 1989-2000 period would be somewhat difficult but necessary if the County is to capture a greater percentage of in-county employment by the year 2000.

EMPLOYMENT BY SECTOR: 2000

The largest employment sector in the County at present is Government. Although this sector can be expected to grow in the future, it will largely depend upon demands to keep governmental services in pace with population growth. As such, the percentage of the total made up by government employees will most likely decline to eventually reflect levels currently displayed by the MSA and the State (an average of 21 percent). As a result, this sector cannot be expected to account for any large increase in the proportion of County jobs in the future.

Trade sector employment, including Wholesale and Retail Trade, is a close second to the Government sector in Gloucester County. When compared to the rest of the Norfolk-Virginia Beach-Newport News MSA, and with the State, the percentage of employment in this sector is high, although the rate of change is lower. (The Wholesale Trade portion of this sector has a negative rate of growth for the 1984-1988 period). A reverse of this trend, to bringing Wholesale Trade in line with regional percentages, seems appropriate.

The rate of increase of jobs in the Finance, Insurance, and Real Estate (F.I.R.E.) sector is more than twice that of the MSA and the State, but the percentage of these jobs to overall County employment is comparable, and can be expected to remain stable. The rates of change for the Transportation, Communications and Public Utilities (T,C & PU) and services sectors are comparable to those of the MSA and State as are their respective percentages of total population. These trends are expected to continue.

The Construction sector, which has had rapid expansion through the years 1984-1988, may be tending to level out at a percentage in keeping with the MSA and State

levels; although, future construction activity will more than likely keep growth in this sector healthy.

The greatest potential for an increase in the percent of total employment is seen in the Manufacturing sector, including the manufacture of both durable and non-durable goods. Although this sector has had a annual rate of change in excess of that of the MSA, it still remains at a disproportionate part of the total. A one-hundred fold increase in the percentage of jobs in this sector is necessary in order to bring this sector levels comparable to the MSA and State.

The 13 percent increase in the Agricultural/Fishing sector is the second greatest increase in employment for Gloucester County in the 1984-1988 period, indicating the continuing importance of these activities for the overall economy of the County.
Table IV-2-6, indicates employment levels in the County for the year 2000 by employment sector according to both the continuation of the current 1984-1989 trend as well as employment projected based upon scenario "D". The later is based upon the attraction of a greater percentage of "in-county" employment as outlined above. It is believed that the "mix" of employment types indicated, which more closely reflects the distribution of employment in the MSA as well as the State, would allow for a greater diversification of the Gloucester County economy.

Table IV-2-6

PROJECTIONS OF EMPLOYMENT BY SECTOR

	1989	1990	1995	2000	2005	2010
TOTAL GLOUCESTER	6,031	6,356	6,656	6,951	7,179	7,414
AGRICULUTRE	100	108	146	184	222	260
CONSTRUCTION	448	490	701	912	1,123	1,334
MANUFACTURING	317	320	336	352	368	384
TRANS., COMM., PUB.	317	332	406	480	554	628
WHOLESALE TRADE	227	222	197	172	147	122
RETAIL TRADE	1,325	1,369	1,591	1,813	2,035	2,257
FIRE	240	258	348	438	528	618
SERVICES	1,310	1,387	1,772	2,157	2,542	2,927
GOVERNMENT	1,736	1,859	2,475	3,091	3,707	4,323

SOURCE: Virginia Employment Commission, 1989

As shown, the current trend would result in 6,951 jobs, or one job for every 6.8 persons. A projected average annual growth of 10.5 percent, according to scenario "D", would result in the creation of 6,613 jobs, or a total of 13,564 jobs in the County in the year 2000. (This representing one job for every 3.5 persons). This doesn't mateh the projected ratio's for the MSA or the State for the year 2010, since doing so would require an average annual percent change of 24.6 percent which would be very difficult to maintain for the eleven year period.

The distribution of jobs by division according to scenario "D", indicates that the greatest increase in the percentage of jobs would be in the Manufacturing sector, indicating the strengthening of the manufacturing base and the gradual leveling off of the rate of increase in the government division.

The types of manufacturing industries which might be suitable in Gloucester County would range from electronics and electronic equipment manufacture to printing, publishing, and plastics. Given a range of 5-100 employees per acre for this type of development, anywhere from 15 to 315 acres of land could be needed for potential manufacturing facilities siting in 2000. Although it is not possible to accurately predict the County's, it seems that 315 acres would be adequate. (The proposed Gloucester Industrial Park is approximately 65 acres in size).

STRATEGIES

Gloucester County's economic development strategy is an integral component of the Comprehensive Plan process. The County's economic growth has direct consequences for land use, transportation and other infrastructure elements. The ability to pay for the costs of growth and to manage growth effectively is related to the balance achieved between commercial/industrial development and residential development. The following points indicate some of the links between economic development and other aspects of the Plan:

- **Local economic development can affect the type and quality of residential development.**

  The growth of the County's internal employment base can affect the location, timing and quality of residential development. New office and industrial developments providing jobs for primary wage earners will generate different housing demands than the County's expanding retail/residential service jobs. The latter jobs, which are more typically held by part-time workers and by household members other than the primary worker, will generally command lower salaries.

- **Increased employment opportunities within Gloucester County will present different transportation requirements than those based upon increased out-migration to jobs.**

  The extent to which Gloucester County's growth is dependent upon employment expansion beyond the County's borders, specifically in the Hampton Roads area, has direct consequences for the County's transportation facilities and other infrastructure requirements. Reinforcement of the out-commuting flow directed toward the Hampton Roads area will require further investments in commuter highway capacity or transit service.

- **Economic development is linked directly to the issue of paying for the costs of growth.**

  The ability to support a wide range of community facilities and services is dependent, in part, on the non-residential development that the County can sustain. To the extent that local commercial/industrial development does not occur, more reliance must be placed upon residential property taxes -- affecting both present and future home owners.

- **The character of the County's development, from its land use patterns to the incomes and lifestyles of its residents, is affected by the economic development that can be encouraged within the County's borders.**

DEVELOPMENT APPROACH

In Gloucester County, the principal organization affiliated with the County Government charged with the formulation of plans, policies, and programs designed to accomplish local economic development is the Gloucester County Industrial Development Authority (GIDA).

The seven members of GIDA, appointed by the Board of Supervisors, are charged with fostering industrial growth within the County, and thereby creating employment opportunities. Some of GIDA's more important powers are the ability to purchase land for industrial use and the ability to apply for special state programs, e.g. the shall building program. GIDA is staffed by the County's Department of Economic Development.

There are also four organizations that perform key roles in Gloucester's economic development process. These organizations are as follows:

1. Department of Economic Development, Gloucester. Established by the Board of Supervisors in 1988, Gloucester's Department of Economic Development provides staff support to the County Administrator in matters relative to the County's economic development process. Additionally, the department provides staff support to GIDA. The Department of Economic Development is charged with the attraction of new commercial and industrial development within the County. The department works closely with the Virginia Peninsula Economic Development Council.

2. Virginia Department of Economic Development. The Virginia Department of Economic Development is the coordinating agency for the marketing of the Commonwealth. Additionally, incentive programs such as the Shell Building Initiative and Industrial Training Program are centralized through VDED. Providing a global marketing effort, managers throughout the United States, Europe, and the Pacific Rim assist localities with prospective manufacturing, processing, and headquarters offices facilities.

3. Virginia Peninsula Economic Development Council. Composed of representatives from four cities and three counties, VPEDC provides potential investors or companies looking for relocation sites a central point for inquiry. With an executive director of marketing, as well as other staff, its primary role is to provide assistance to the localities in marketing the individual city or county. Gloucester is a member of this council.

4. Gloucester Chamber of Commerce. Composed of individuals and organization representatives of the business community, the Chamber of Commerce serves as the collective spokesman for private enterprise within the County. The Chamber, through a number of work program elements, encourages the expansion of existing businesses. The Chamber does not implement projects, but

serves as a catalyst in stimulating other organizations, such as GIDA. It employs its own staff.

GOAL AND OBJECTIVES

The goal and objectives of Gloucester County's economic development program are based on several important County needs. As the County has been the fastest growing area in the Commonwealth, with 40 percent of its civilian labor force seeking employment outside of the county, the overall goal of the County is to broaden its economic base to minimize the impact of this growth has on infrastructure and, correspondingly, on the county real estate tax rate by providing a balanced economy for future growth. The Objectives serve to clarify this goal are included in Part III of this plan.

IMPLEMENTATION RECOMMENDATIONS

GENERAL IMPLEMENTATION STRATEGIES

Gloucester County is currently facing the classic situation that has confronted other counties influenced by an adjacent growing metropolitan area. The phenomenon can be briefly summarized by the following scenario: a rapid upsurge in residential growth, followed by a rise in the costs associated with residential development ranging from roads and schools to recreation and public safety services. In the usual pattern, the residential property tax is insufficient to meet the needs of the expanding community. The need for more aggressive commercial and industrial development to help share the burdens of growth is usually identified. The last response is often met with mixed feelings, depending upon the perspectives and interests of particular groups of residents. On the one hand, more robust economic development is seen as a way out of the "Paying for Growth" dilemma; on the other hand, that very added growth, if not managed properly, begins to alter the quality of life of the residents, both long settled and new homeowners.

Gloucester County is now at a key decision point for its future development. The following options indicate the direction that the County should take with respect to this development:

1. **Business/industrial development**

   As the population base expands, the growth of business and professional services should generate a demand for added industrial activity. Industrial activities that could fit this demand include electrical equipment manufacture, transportation equipment, printing and publishing, plastics, petroleum products, and non-electric products.

   However, the factors that have served to inhibit industrial development in the past are likely to continue to operate until significant changes in the County's infrastructure are made. The most significant changes are related to the

availability of sanitary sewer to potential business/industrial sites and the improvements to the regional traffic circulation system, including the Coleman Bridge and Route 17 improvements.

a. Coordinate expansions of public water and waste water utilities with future designations of industrial sites.

b. Through the planning period, determine the need, viability, and possible location for the development of an industrial airpark.

c. Incorporate new zoning classifications that reflect current industrial development practice, including designations such as research parks, science and technology parks, and similar categories appropriate to technology-driven businesses.

d. Allow business park development as floating zones within the Development District with strict performance based locational standards.

e. Provide bonus points within the development guidance system for evaluating Mixed Use and Planned Unit Developments for the creation of permanent professional and skilled in-County jobs.

f. Provide sufficient industrial land relative to market requirements to provide for flexibility and reduced costs in site selection.

g. Provide incentives to encourage developers to redevelop areas that have outlived their original purpose.

h. Encourage a wide range of graduate level programs at area educational facilities such as the Rappahannock Community College.

2. Small business development initiatives

Although traditional economic development approaches have focused on the attraction of new facilities to a locality, most new employment growth is generated by the expansion of existing establishments and the nurturing of new firms. Programs to promote the start-up and development of new firms may play a prominent role in future Gloucester County economic expansion. A number of existing or new programs can support this component of the implementation strategy.

a. Encourage the retention and expansion of existing business and industry through innovative local assistance programs such as technical assistance, small business assistance, and employment training.

3. Tourism/recreation enhancement

The hospitality industry -- lodging places, restaurants, and other establishments that serve visitors -- is a logical choice for future growth and development. Gloucester County is particularly well-suited to day travellers from the greater Hampton Roads and Richmond markets. In addition to historical sites and attractions within the County, there are a number of destinations throughout

the Southern Virginia region, particularly Williamsburg, that could generate a greater market for overnight visitors.

a. Create some special attractions that serve the recreational needs of the County visitors by planning for expanded parks and recreation facilities.

b. When developing waterfront communities, provide for public access areas attractive to visitors.

c. Promote the development of a waterfront conference facility.

d. Promote the restoration of historic sites.

4. Consumer service/retail development

The growth of Gloucester County is bringing with it new consumer purchasing power. The marketplace is responding to this reality with the construction the York River Shopping Center as well as planning for a second center. The development in the form of retail establishments, accompanied by a range of local services from banking and real estate services to personal and commercial recreation services, will most likely locate anywhere, in the absence of any specific policy initiatives on the part of the County. However, if the market is so appealing to commercial developers, the County could be in an enviable position with regard to controlling both the location and quality of new development proposals.

a. A development guidance system could afford an opportunity for the community to give priority to new commercial projects that satisfy a number of objective criteria of value to the County.

b. A system of bonus points reflecting such considerations as traffic impacts, building and site design quality, employment benefits and other measurable impacts on the community could enter into a rating system for development.

c. Commercial/retail sites outside the Development District should be selected with a view toward strengthening the identity and individuality of the Village Centers, Rural Service Centers, and the Crossroad Settlements in Gloucester County.

5. Coordination

Gloucester County's Department of Economic Development should continue to serve as the coordinating entity in economic development projects. County departments, such as Engineering, Community Development, and Planning, all have roles in the economic development process requiring close coordination in projects are to prove successful. Additionally, efforts of GIDA, the Chamber of Commerce, and private enterprise require close liaison with the County agencies. This coordinating role should continue to be a major function of the Department of Economic Development.

RESOURCES

There are resources available for implementing economic development efforts other than the organizational capabilities already described. These include a number of state programs to include financing, infrastructure, and training.

1. Community Development Block Grants

CDBGs are available to eligible cities, counties, and towns for industrial or commercial revitalization, site development, access road construction, railroad span construction, and water and sewer projects.

2. Economic Development Revolving Loan Fund

The Economic Development Revolving Loan Fund provides loans to Industrial Development Authorities (IDAs) within communities eligible for Community Development Block Grant non-entitlement funds. The loans may be relent to private businesses within the IDA service areas.

3. Tax Increment Financing

The purpose of the Tax Increment Financing (TIF) program is to remove blighted conditions by improving the real estate tax base and by attracting private investment to the area. A local government may adopt TIF by passing an ordinance designating a blighted area as a development project area.

4. Virginia Revolving Loan Fund

The Virginia Revolving Loan Fund (VRLF) provides loans to assist eligible Virginia localities create or retain permanent jobs. The loans may be used for asset financing for manufacturing and related uses and may include the acquisition of land and buildings, development or redevelopment of real estate rehabilitation and renovation of buildings, and purchase of equipment and other fixed assets. The loans may be used for on-site and off-site public facilities supporting manufacturing and related uses.

5. Industrial Access Road Program

Virginia Department of Transportation (VDOT) administers a program to assist in constructing industrial access roads to serve new and expanding manufacturing or processing companies. The program may be used to improve existing roads, construct a new road, and to maintain the access road after completion as part of the secondary highway system or road system of the locality.

6. Rail Industrial Access Program

The Rail Industrial Access Program provides funds to construct railroad tracks to new or substantially expanded industrial and commercial projects having a positive impact upon economic development.

7. **Shell Building Initiative**

This initiative provides funds for selected cities and counties to construct industrial shell buildings to attract basic employers to the community. The funds are awarded on a competitive basis. The Virginia Supplemental Retirement System has agreed to loan sufficient funds for the initiative to the Virginia Department of Economic Development (VDED). VDED will then loan the funds for a shell building to a selected locality and the Commonwealth of Virginia will make the interest payment on the loan. Upon the sale or lease of the building by the locality or at the end of five years, whichever is first, the locality will repay the principal and interest to the commonwealth.

8. **Industrial Training Programs**

The Industrial Training Division of the Virginia Department of Economic Development will prepare and coordinate an industrial training program tailored to meet the specific needs of new or expanding companies seeking to increase employment in Virginia. Industrial training will recruit prospective trainees, provide specialists to analyze job training requirements, develop and implement training programs, conduct "Train the Trainer" programs, arrange for adequate training facilities, and prepare instructional audiovisual materials for in-depth training orientation. These services are provided at no cost to the employer.

SUMMARY

The selected combination of strategies should incorporate a balance of commercial/industrial development while ensuring the quality of life that citizens and local officials seek for Gloucester County's future.

In practice, a local economic development strategy for a growing metropolitan area jurisdiction will not focus on one major direction to the exclusion of others. A more likely and successful strategy will incorporate a combination of directions. The strategy will reflect a willingness to respond to current opportunities, as well as incorporating basic principles sought in accommodating community growth.

The implementation actions presented in this Plan element focused on particular sectors or components of the local economy -- business/industrial development, the small business community, tourism/recreation -- which are seen as targets or opportunities for future growth. Woven throughout the recommendations are specific actions relating to transportation investments, land use policies, utility requirements, educational facilities and resources, and other elements required to support desired levels of commercial/industrial development.

Section 3

TRANSPORTATION

TRANSPORTATION

Although the Virginia Department of Transportation (VDOT) has primary responsibility for the highway system, Gloucester County is a strong partner in transportation planning. This occurs because of its role in identifying highway improvement needs and its policies and regulations which guide land use and development in the County. Gloucester County's transportation system for the year will 2010 require special consideration for growth management issues. From the analysis and the discussion of growth management three important transportation planning directions are apparent:

1. The capacity of the major arterials is key to growth management of the County and should be carefully conserved. This implies strict access control and residential and nonresidential design standards that emphasize internalization of circulation systems.

2. Within the designated growth areas, pre-planned expansion of the highway system is required to ensure that the function and viability of growth centers do not have a negative impact on the quality of life within the County.

3. Increasingly, the private sector will have to be part of the solution of transportation issues, including financing and other transportation systems modifications.

Besides a strict capacity-based approach to highway systems evaluation, consideration must be made of the impact of roads and traffic on community character. This is particularly true in the rural villages where development historically has been primarily highway-oriented. Stripping the rural roads of the County with residential and nonresidential development will undoubtedly result in a loss of the rural character that the County wants to retain. In the village centers, the evolution of the local road system will heavily influence the form of future development. Access control policies will in turn influence the future local road systems.

This element of the Comprehensive Plan sets the framework for addressing the growth management considerations discussed above. The goals and objectives statement contained in Part III provides the general guidance for developing more specific policies and implementation tools. Background for transportation planning is provided through an assessment of existing transportation network, of highway capacity, of safety conditions and of planned improvements to identify the issues, problems, and opportunities. Finally, this element uses the current traffic situation in Gloucester County as the basis for developing short and long term strategies to satisfy year 2010 needs.

BACKGROUND

FUNCTIONAL CLASSIFICATION OF HIGHWAYS

The skeletal framework of the County's highway system are the arterial and collector highways shown on Map IV-3-1. The map also reveals that the majority of the highway system is composed of local roads and secondary highways primarily functioning to provide access to individual properties. The state's classification is based on the Federal Functional Classification of Highways which further classifies highways as rural or urban based on the proportions of vehicle miles of travel and road mileage. Characteristics of the broad classification of highways are as follows.

Principal Arterial: Carries a high volume of traffic for intra-state, inter-county and inter-city travel. Traffic on this type of road normally has the right-of-way except in areas of high hazard, where controls are used.

Minor Arterial: Carries a high volume of traffic for intra-county and inter-community travel. These roads normally serve the higher classification roads providing access to and from the arterials.

Major Collector: Serves intra-county and inter-community travel, but at a lower volume, and usually connects to an arterial to provide access to the surrounding land. Access is not directly from this road but from a sub-road connected to the collector. They may serve community shopping areas, schools, parks and cluster developments.

Minor Collector: Serves intra-community travel at a volume below the major collector. Provides access to the land using lower order roads and sometimes direct access from itself.

TRAFFIC VOLUMES AND TRENDS

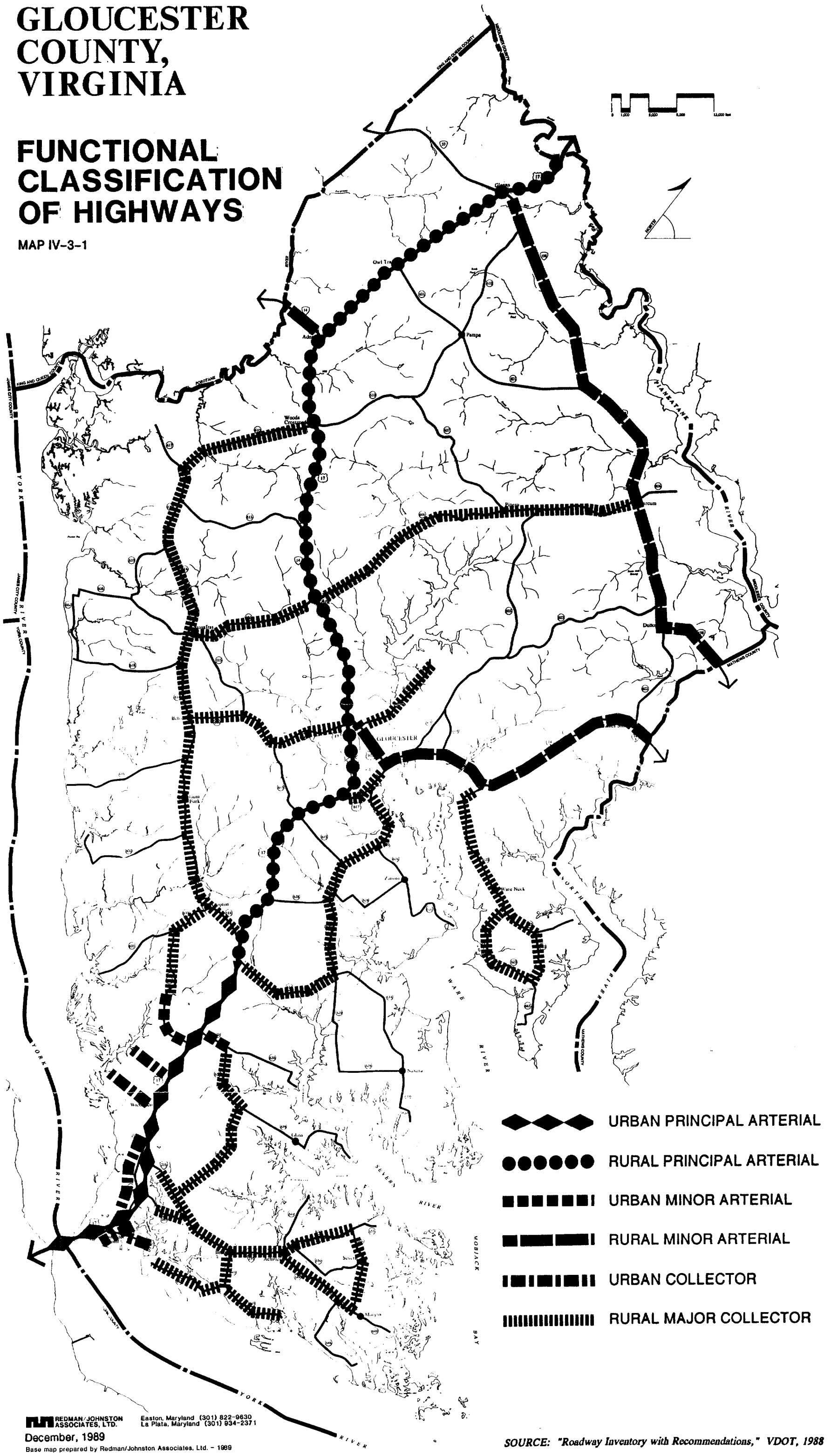
Average daily traffic (ADT) on roadway segments, available from VDOT (1988), is plotted on Map IV-3-2, Average Daily Traffic Volumes. Total average daily traffic (ADT) on U.S. Route 17 exiting the County exceeded 32,000 vehicles per day in 1988. These volumes and locations reflect the importance of this route as a major connector to York County and a commuter route to work places south of the County such as the Cities of Hampton and Newport News. Other heavy traffic volumes, associated with recent growth and the commuting patterns, occur in the southern part of the County. Route 17 from Rt. 216 Hayes to Rt 1208 near Gloucester Point carries a volume of over 40,000 vehicles per day. From Rt. 17 Business south of Gloucester to Rt. 216, Rt. 17 has volumes at points as high as 33,000. In the Gloucester Courthouse area Rt 17 Business has heavy traffic from Gloucester Courthouse east to Rt. 14-3, 16,300 vehicles per day. Rt. 14-3 leading east into Mathews County carries 11,800 vehicles.

Table IV-3-1 shows Average Daily Traffic Trends of Primary Highways in Gloucester County from 1982 to 1987. Some of these highways have almost doubled in traffic during this time period. Rt 17 from Rt. 17 B north to Rt. 17 B south increased 95 percent from 1982 to 1987. Rt. 14 from Rt. 17 to King and Queen County

GLOUCESTER COUNTY, VIRGINIA

FUNCTIONAL CLASSIFICATION OF HIGHWAYS

MAP IV-3-1



REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

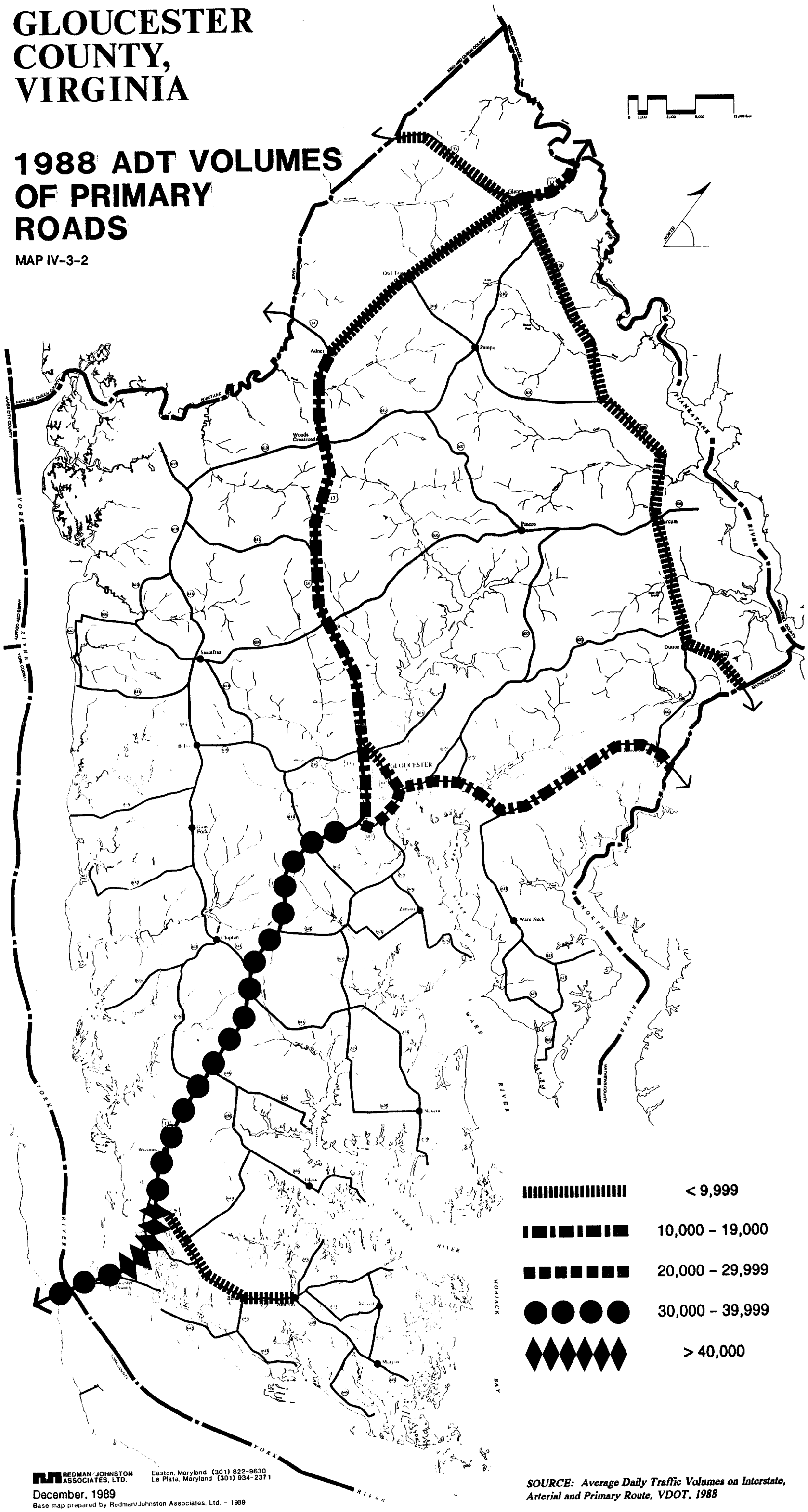
Base map prepared by Redman/Johnston Associates, Ltd. - 1989

SOURCE: "Roadway Inventory with Recommendations," VDOT, 1988

GLOUCESTER COUNTY, VIRGINIA

1988 ADT VOLUMES OF PRIMARY ROADS

MAP IV-3-2



REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

Base map prepared by Redman/Johnston Associates, Ltd. - 1989

SOURCE: Average Daily Traffic Volumes on Interstate, Arterial and Primary Route, VDOT, 1988

increased 86 percent during the past five years. These rates of increase exceed the annual rate of increase in population. Thus, the recent development trends are yielding greater travel on the County's primary highway system. If these traffic trends continue, the excess capacity the County now enjoys on many of its roadways will soon be depleted.

Table IV-3-1

AVERAGE DAILY TRAFFIC TRENDS OF PRIMARY ROADS 1982-1987

Route	From	To	1982 ADT	1987 ADT	% Change	Average Yearly %Change
3	RT 17 BUS	MATHEWS CL	7,775	11,275	45.02%	9.00%
14	W RT 17	KING QUEEN CL	1,615	3,010	86.38%	17.28%
17	MIDDLESEX CL	RT 33	8,060	10,475	29.96%	5.99%
17	RT 33	RT 601	5,190	7,105	36.90%	7.38%
17	RT 601	N RT 14	5,190	7,105	36.90%	7.38%
17	N RT 14	RT 606	6,855	10,025	46.24%	9.25%
17	RT 606	N RT 17B	8,840	14,035	58.77%	11.75%
17	N RT 17 B	S RT 17 B	6,960	13,595	95.33%	19.07%
17	S RT 17B	RT 216	19,935	32,760	64.33%	12.87%
17	RT 216	RT 1208	26,570	39,685	49.36%	9.87%
17	RT 1208	NE COLEMAN BR	21,030	31,680	50.64%	10.13%
17	NE COLEMAN BR	YORK CL	21,030	31,680	50.64%	10.13%
B17	N RT 17	11 MS RT 1007	4,700	8,150	73.40%	14.68%
B17	11 MS RT 1007	RT 3	10,885	15,490	42.31%	8.46%
B17	RT 3	S RT 17	12,110	19,115	57.84%	11.57%
33	RT 17	KING QUEEN CL	4,205	5,965	41.85%	8.37%
198	MATHEWS CL	RT 606	1,090	1,940	77.98%	15.60%
198	RT 606	RT 601	1,010	1,730	71.29%	14.26%
198	RT 601	RT 17	1,240	1,815	46.37%	9.27%
216	RT 17	RT 649	5,185	7,395	42.62%	8.52%

Sources: 1982 and 1987 Summaries of Accident Data, VDOT

CAPACITY ANALYSIS

Levels of service are often used as measures of system performance in transportation planning analysis and to define public policy concerning highway performance. (See Appendix --- for a definition of level of service descriptors.) They are also used in traffic impact analysis to determine local traffic impacts of proposed developments.

Definitions of level of service differ for intersections and roadway segments, for city streets, and for controlled access highways. In urban and suburban areas, where intersections are closely spaced, traffic signals usually govern arterial and street capacity. Route 17 B in the Gloucester Courthouse area is an example of this situation. Thus, in urban and suburban locations roadway adequacy is assessed at intersections in the traffic impact analysis process. Another related measure of highway capacity is the volume to service volume (VSV) or volume to capacity ratio as used below.

Based on the Roadway Inventory contained in the Virginia Statewide Highway Plan, the County's highway system generally contains excess capacity to accommodate future growth. However, current and projected volume to service volume (VSV) ratios indicate that many of the County's highways will require close monitoring. Table IV-3-2 lists the road sections which have a 1987 VSV greater than 0.8 or a projected 2010 VSV greater than 1.0. This is an indicator that the road section will likely exceed its design capacity within the planning horizon and therefore warrant further study and targeting of programmed State short- and long-range transportation improvement projects. For example, Rt. 17 from Rt. 216 to Rt. 636 was operating at volume to service volume ratio (VSV) of 1.14 in 1986. The Section between Rt. 1204 to Rt. 216 is currently nearing capacity.

Table IV-3-2

DEFICIENT ROAD SECTIONS

Route	To	From	1986 ADT	2010 ADT	DSV	1986 VSV	2010 VSV
17	SE York River	NE York River	24,000	22,000	24,000	1.00	0.92
17	SE York R. Brg.	RT 1204	24,000	22,000	24,000	1.00	0.92
17	RT 1204	RT 1208	23,800	21,800	24,000	0.99	0.91
17	RT 1208	RT 216	23,800	21,800	24,000	0.99	0.91
17	RT 216	RT 636 E	27,400	21,200	24,000	1.14	0.88
17	RT 636 E	RT 614 E	27,400	21,200	24,000	1.14	0.88
17	RT 615	RT 17B S	21,000	36,700	30,839	0.68	1.19
33	King&Queen CL	RT 17	5,550	11,900	5,525	1.00	2.15
198	RT 17	RT 601	2,100	5,400	4,990	0.42	1.08
216	RT 17	.55 ME RT 17	7,900	9,100	4,769	1.66	1.91
216	.55 ME RT 17	RT 649	7,900	9,100	4,769	1.66	1.91
614	RT 631	RT 17 N	6,000	7,500	3,461	1.73	2.17
616	RT 17B	RT 1016	2,350	2,500	2,733	0.86	0.91
616	RT 1016	Bevrdam Swamp	2,350	2,500	2,733	0.86	0.91
641	RT 216 E	Sarah's Cr.	4,600	8,000	5,160	0.89	1.55
641	Sarah's Cr.	RT 17	3,650	7,000	5,160	0.71	1.36

ADT: Average Daily Traffic DSV: Design Service Volume VSV: Volume to Service Volume Ratio

NOTES: 1. Road sections listed as deficient included those whose 1986 VSV > 0.8 and/or whose projected 2010 VSV > 1.0

2. Projected 2010 ADT's reflect the effect that the Upper York River Crossing, Alternative 5 will have on Route 17.

SOURCE: "Roadway Inventory with Recommendations," Virginia Statewide Highway Plan, VDOT, 1989

Comparing Table IV-3-2 with Table IV-3-3, it is seen that the capacity deficiencies have increased dramatically based on 1988 Average Daily Traffic. Rt. 17 between Rt. 216 and Rt. 1208 increased from a VSV of 0.99 to 1.69. Rt. 33 to King Queen County increased from a VSV of 1.00 to 1.13.

Though the southern part of the County and the Courthouse area are the most noteworthy in terms of limited capacity, other areas of the County need to be monitored for capacity constraints when considering future land uses. Rt 33 west to King and Queen County has exceeded design capacity.

Table IV-3-2 shows projected increases in average daily traffic for the selected road sections on the County's federal-aid highways for the year 2010. The projections on Route 17 have been modified by the impact of the future completion of the York River Bridge crossing. Other agencies have made different assumptions about the impact of an upriver bridge crossing. Projections being developed by the Peninsula Planning District Commission in conjunction with the State Highway Department District Office estimate that the Coleman Bridge Crossing will still get the majority of the increased traffic at 66,310 vehicles per day and the upper river crossing will initially receive only 8300.

Table IV-3-3

VOLUME TO SERVICE VOLUME RATIOS OF PRIMARY ROUTES 1988 and 2010

Route	From	To	1988 ADT	2010 ADT	DSV	1988 VSV	2010 VSV
14/3	RT 3, Fort Nonsense	RT 17B	11,850	18,000	32,463	0.37	0.55
17/33	RTS 17B & 33	RTS 33 & 198	11,100	15,600	30,839	0.36	0.51
17	RTS 33 & 198	RT 14	7,550	18,000	32,463	0.23	0.55
17/14	RT 14	RT 606	10,535	14,800	30,839	0.34	0.48
17/14	RT 606	RT 17B	14,300	16,000	30,839	0.46	0.52
17	RT 17B, W of Glou.	RT 17B, E of Glou.	14,290	20,000	32,463	0.44	0.62
17	RT 17B, E of Glou.	RT 216	33,390	36,700	30,839	1.08	1.19
17	RT 216	RT 1208	40,515	21,800	24,000	1.69	0.91
17	RT 1208	RT 1001, Yorktown	32,320	22,000	24,000	1.35	0.92
17B/14	RT 17	Court House	8,565	12,400	22,724	0.38	0.55
17B/14	Court House	RTS 17B & 3/14	16,335	20,000	32,463	0.50	0.62
17B	RTS 17B & 3/14	RT 17B, E of Glou.	20,155	22,700	29,233	0.69	0.78
33	RT 17	RT 14, Shacklefords	6,240	11,900	5,525	1.13	2.15
198	RT 3	RT 606	2,030	2,900	4,990	0.41	0.58
198	RT 606	RT 601	1,805	3,150	4,990	0.36	0.63
198	RT 601	RT 17	1,890	5,400	4,990	0.38	1.08
216	RT 17	RT 649	7,810	9,100	4,769	1.64	1.91

ADT: Average Daily Traffic DSV: Design Service Volume: VSV: Volume to Service Volume Ratio

SOURCES: "Roadway Inventory with Recommendations," Virginia Statewide Highway Plan, VDOT, Aug. 1989
Average Daily Traffic Volumes on Interstate, Arterial and Primary Routes, VDOT, 1988

SAFETY

Annually, the Traffic Engineering Division of VDOT monitors and summarizes motor vehicle accidents that occur along identified road sections. The accident, injury and death rates are calculated by dividing the total number of accidents, people injured, or people killed by the annual vehicle miles of travel at a location. Rates are expressed per 100-million vehicle miles of travel. The accident rates for primary and secondary highways in the County are shown on Tables IV-3-4 and IV-3-5. The accident rate is used for establishing priorities only and not for comparing the safety performance of different intersection and road design types.

High-accident road sections, for the purpose of this analysis, will include those road sections that exceed the State average accident and/or injury rates. The highest accident rate-road sections within the Primary System, ranked by accident rate, are shown on Table IV-3-4. The highest accident and injury rates on a Primary Road in the County occur on Rt. 17 in Gloucester between Rt 17 business north and south. Rt. 17 from Rt 33 to Rt. 601 had the highest death rate in the County of 14.9 which is over five times greater than the State average. None of these road sections has been identified by VDOT for inclusion in the federally funded Hazard Elimination Program.

The highest accident rate roads with greater than 1000 ADT within the Secondary System are shown on Table IV-3-4. The highest accident and injury rates on a Secondary Road in the County occur on Rt. 1307. Route 649 had the highest death rate of 50.9 which is 16 times greater than the state average for secondary roads

Table IV-3-4
HIGH ACCIDENT ROAD SECTIONS -- PRIMARY*
Gloucester County

Route	From	To	Total Accidents	Accident Rate	Injury Rate
14	W. Rt. 17	Kingqueen CL	1	88	175
17	Rt. 33	Rt. 601	6	39	164
17	N. Rt. 17 B	S. Rt. 17 B	12	144	204
198	Mathews CL	Rt. 606	4	138	172
198	Rt. 606	Rt. 601	2	103	163
198	Rt. 601	Rt. 17	4	136	136

SOURCE: Virginia Department of Transportation's 1987 Summary of Accident Data.

* Road sections included are those primary highways which exceed the State average accident and/or injury rates. The State average for accident rates is 207; the State average for injury rates is 129.

Table IV-3-5

HIGH ACCIDENT ROAD SECTIONS -- SECONDARY*

Route	Total Accidents	Accident Rate	Injury Rate
614	42	570	515
616	13	342	369
641	14	609	391
643	4	429	0
649	10	509	560
1208	4	489	734
1216	8	489	122
1304	2	323	323
1307	5	1361	816

SOURCE: Virginia Department of Transportation's 1987 Summary of Accident Data.

* Secondary roads having an average daily traffic greater than 1,000. Road sections included are those highways which exceed the State average accident and/or injury rates. The State average for accident rates is 389; the State average for injury rates is 213.

COMMUTER PATTERNS

Commuting patterns offer another indicator of growth trends which affect transportation systems. Although work trips generally represent about 28 percent of all trip purposes, they provide data during a time of day in which transportation facilities are most heavily used. Origin/destination information from 1980 on Gloucester County work trips indicate some interesting patterns. Commuting patterns indicate that Gloucester County is a net exporter of commuters and that over 40 percent of the County's work force commute more than one half hour to work. Table IV-3-6 shows an increase in out commuting from 1960 to 1980. Workers commuting within the County declined from 65 percent in 1960 to 44 percent in 1980. During the same period, the percentage of workers commuting to Hampton, Newport-News, and other points outside the County increased steadily. These trends are graphically represented on Figure IV-3-1.

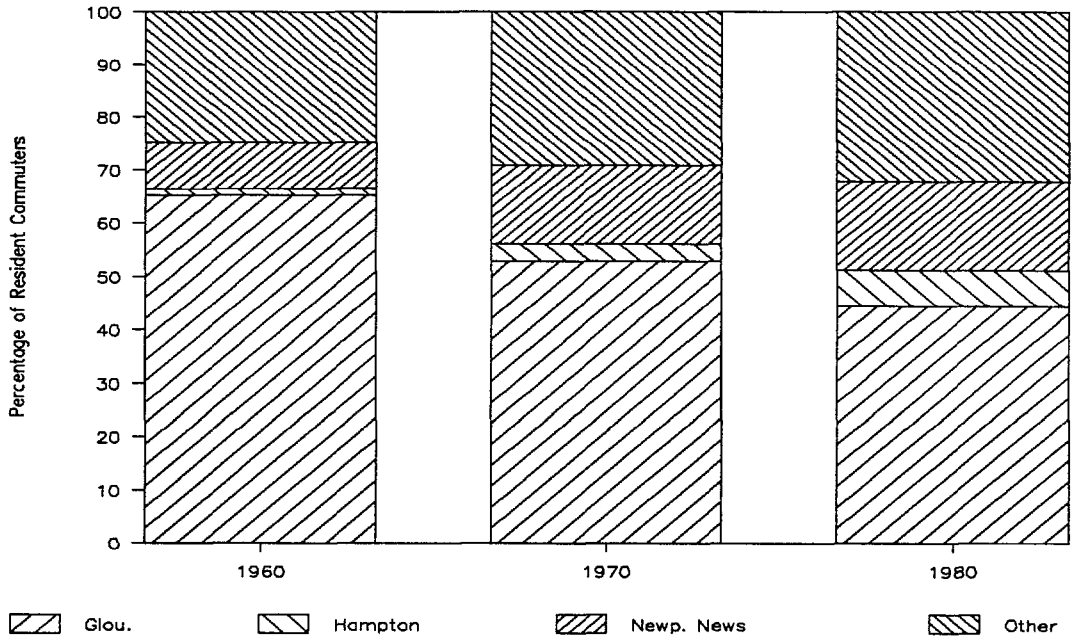
Table IV-3-6

COMMUTING PATTERNS
GLOUCESTER COUNTY, VIRGINIA

	1960 Number	1970 Number	1980 Number
Total resident workers	3,741	5,048	8,308
Place of work:			
Gloucester County	2,440	2,666	3,689
Hampton	44	168	568
Newport News	331	745	1,384
York & Other	926	1,469	2,667

Sources: U.S. Census Data; Peninsula P.D.C.; and, Gloucester Co. Comp. Plan, 1980

Figure IV-3-1
COMMUTING TRENDS



SOURCES: U.S. Census Data; Peninsula P.D.C.; Gloucester Co. Comp. Plan, 1980

Many new residents moving into Gloucester County are oriented to long-distance commuting and subsequently generate the greatest impact on the arterial routes serving the area, including Routes 17, 14 and 33. Thus commuter trips will continue to contribute to a major proportion of congestion and to unfavorable travel times to employment centers and non-work travel times within the County. One objective of the County might be to examine ways to encourage a reduction in the use of single-occupancy vehicles. To maintain quality transportation service in Gloucester County, strategies must be developed to provide incentives that would encourage commuters to switch to higher-occupancy alternatives. Traffic congestion, reduced travel times and costs are major issues that will face Gloucester County as the existing excess highway capacity is rapidly depleted by future growth.

HIGHWAY IMPROVEMENTS

Through its Six Year Improvement Program, VDOT sets priorities for the funding and construction of improvements to the Primary and Urban Highway Systems in Gloucester County. The FY 89 Thru 94 Program identifies the following projects:

- The construction of a variety of transportation system improvements along the U.S. Rt. 17 corridor including the construction and reconstruction of turning lanes.

- The construction of a parallel lane on Rt. 33 from Rt. 17 to King and Queen County line. Expected completion mid-1993.

- The construction of a left turn lane at the intersection of Rt. 216 and Rt. 641.

- Preliminary engineering for two additional lanes over the York River at the Coleman Bridge. Expected completion mid-1991.

The County and the State have jointly developed a Capital Improvement Program for the Secondary Highway System. Proposed funding for this six year program totals $7.6 million. The projects are widely distributed throughout the County. The focus of this ambitious program is to maintain and improve the secondary road system by resurfacing, reconstructing existing facilities and improving access in the rural areas. Many of the reconstruction and widening projects will make incremental increases to the capacity of those rural highways.

OTHER TRANSPORTATION FACILITIES AND SERVICES

Bus Service

Greyhound Bus Lines offers inter city passenger bus service on their New York-Washington-Norfolk schedule. The Cavalier Transportation Company runs a local bus between Richmond and Deltaville which serves Gloucester County. The Newton Bus Service at Gloucester provides charter service to all points plus regular commuter service to the Newport News Shipbuilding and Dry Dock Company. The County is also included in the Newport News commercial zone for intra-city access.

Rail Transportation

There are no railroads in Gloucester County, but with direct highway access facilities to Newport news, less than 30 miles from Gloucester Courthouse, rail service is conveniently close to this area. The Chesapeake and Ohio Railway's ocean terminal is in Newport News and its lines extend as far west as Chicago and the midwest, offering freight and passenger services. Shipments may also be made by rail via the Chesapeake and Ohio from the city of Williamsburg about 25 miles from the center of the County. The Southern Railway has a line to West Point, less than 10 miles from Gloucester County's western border, where shipment of freight is also handled.

Air Transportation

Gloucester Airport, a privately owned airport is located one mile south of Gloucester Courthouse and is open to the public. It has one runway 4,500 feet along with 3,500 feet paved, and is lighted from dusk to dawn. Fuel, rental and charter service, flight instruction, restaurant, and adjoining golf course are available.

The nearest commercial airline service is at patrick Henry International Airport in Newport News, about 30 miles away. This field is served by several large commercial carriers with many scheduled daily flights to other Virginia cities and Washington, D.C.

Water Transportation

The York River, which forms the southern boundary of Gloucester County has a minimum 22-foot deep channel which is used by ocean going vessels which call at the town of West Point nearly 34 miles from the mouth of the river. Barges and other smaller vessels use the Piankatank River and the Mobjack Bay and its tributaries.

ISSUES

Gloucester County's transportation system for the year 2010 requires special consideration in view of several emerging issues:

- Increased development along the U.S. 17 corridor in the southern part of the County will erode safe and efficient operation in this segment if not properly managed.

- Increased through traffic, combined with increased local traffic on Route 17 will require additional capacity or a parallel highway be added.

- Most county secondary roads have limited capacity to support substantial increases in traffic volumes as a result of local land uses.

- A reduction in federal funding for roadways places more financial responsibility at the state, county and local levels -- as well as with private developers -- to fund new roadways and roadway improvements. Roadway construction funds must, therefore, be carefully expended, and road needs carefully identified and programmed.

- Such issues lead to greater concern about the ability of the existing roads to serve current and projected new development traffic in terms of control of access along principal corridors such as U.S. 17.

- Current development patterns will not support a major investment in transit service in the County. If transit is ever to become a viable alternative travel mode in Gloucester County, the land use plan must establish areas along major transportation corridors at high enough residential and employment densities to support such service.

- Congestion of the County's arterials is not solely the product of too much volume, but also of too many conflicting turning movements at intersections and driveways. This side friction inhibits the safe and efficient flow of traffic.

The Virginia Depart of Highways and Transportation (VDOT) is proposing to alleviate the identified traffic congestion at the George P. Coleman Bridge across the York river between Gloucester and York Counties. This planning effort is the single public action that will have the greatest impact on the transportation network and hence land use patterns in Gloucester County. There are currently two primary upriver crossing alternatives being considered. They are Alternative 1 and 5 shown

on Map IV-3-4. Alternative 1 is located 13.5 miles upriver from the existing Coleman Bridge with linkage to Rt. 17 at an interchange approximately at Rt. 606 (Ark Road). Alternative 5 is located seven miles upriver from the existing bridge with linkage to Rt. 17 with a cloverleaf interchange at the Rt 615 intersection.

Adding an upper river bridge crossing will provide some benefits to the County by facilitating the free movement of commuters to and from the Hampton Roads-Newport News area, thus relieving some burden from the limited-capacity U.S. Rt. 17 facility. The upriver alternatives do not negate the need for additional lane capacity at the Coleman Bridge crossing. Economic development benefits will be derived from the improved linkage to the industrial growth phenomenon of this area. In considering upriver crossing alternatives, the State and the County need to consider the transportation and land use implications of the planned James River crossing which would tie Gloucester even closer to the Norfolk metropolitan area.

IMPLEMENTATION RECOMMENDATIONS

The Implementation Plan is broken into two subsections: the Policy Statement and the Transportation Plan. The Policy Statement provides a framework to strategically adapt the County's transportation system to address specific development problems unique to a given locale. The Transportation Plan identifies both needs and planned improvements in order to create a transportation network that is consistent with the objectives and implementation of the Land Use Plan.

POLICY STATEMENT

The transportation plan cannot succeed without proper support and leadership from County government. The following implementation strategies establish the policy framework from which the County will create and maintain a functioning transportation system within the context of planned growth in the County.

- **Capital Programming** -- Capital programming has been recognized as a proactive way of avoiding some of the past transportation capacity problems. To ensure that opportunities for pre-planned expansion are not missed, the County will require the annual revision of the County's Capital Improvements Program to be coordinated with the Comprehensive Plan and any recommended amendments resulting from the annual review of the Plan and planning process. It is the responsibility of the Office of Community Development to monitor changing growth and development trends in the County and to advise the County Public Works Department and State Highway Administration accordingly. The annual process involving the Department of Community Development, the Department of Public Works, and the State Highway Department will evaluate the relationship between the State's available resources and the demands upon the County's road systems created by proposed land uses and land use trends.

  The County should begin platting rights-of-ways for new roads and streets when the land use patterns allow. The annual Capital Improvements Budget should include funds for the design of proposed road improvements not included in the

State's Six Year Improvement Program so that adequate rights-of-ways can be reserved. This will also permit the coordinated completion of the improvement if undertaken by different entities such as private developers. Pre-planned expansions should be made in development centers such as the development districts and village centers in order to identify the need for future roads.

- **Increased Coordination of the Land Use/Transportation Planning Process**-- More emphasis should be placed on coordination between the County, VDOT, and PPDC and MPPDC staffs on matters related to planning and programming improvements and transportation systems management. There are several steps that can be taken to improve the current transportation planning process: the State and County should work very closely together to evaluate the transportation system implications of the County's new growth plans; elected officials should be major participants in this process; and coordinated State and County transportation management policy should recognize the need to expand upon the current level of commuter ridesharing in order to reduce single-occupant vehicles. This is particularly important at the intersection of arterial and major collector highways serving commutersheds and U.S. Rt. 17.

- **Quality of Service/Adequate Public Facilities Standards** -- The County's Level of Service (LOS) policies establish a recognizable basis for evaluating alternative plans and/or policies. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. With establishment of LOS policies, the County makes a clear statement to developers and reflects the public's expectations about the quality of highway service it expects to achieve or maintain as growth occurs. With level of service established, the County then has a policy based, quantified capacity measure from which to assess the traffic impacts of new developments. Whether or not a particular development will generate traffic that will exceed the capacity of the road can be determined from analysis, and the question of road impacts is then no longer subjective.

- **Traffic Impact Analysis** -- As part of the Zoning process and implementation of the LOS Policy, the County should require a traffic impact analysis of all major new projects. This analysis will be used to determine if post-development traffic levels and patterns will be consistent with the County's Transportation Plan and highway policies and will minimize potential safety and congestion problems. At a minimum, the traffic analyses should include a description of past and present roadway conditions, existing roadway capacity, traffic accidents, existing and projected traffic volumes (ADT and peak a.m. and p.m. traffic), existing and projected levels of service, and existing and proposed sight lines based on facts and reasonable generation factors for the site and the immediately affected road networks and intersections. Where the County has short-term planned improvements scheduled, it may permit such improvements in the traffic impact analysis. The County shall adopt precise standards for the preparation of these analyses.

- **Access Management** -- An access management program should be created, initiated, and supported by appropriate ordinances to ensure that access is not unnecessarily provided along key road links or near major intersections, particularly along the designated Highway Corridor Districts.

The following techniques should be considered in managing access to principal corridor roadways.

- Limit the number of conflict points by installing physical barriers, modifying driveways, and installing signals at driveways, etc.

- Separate basic conflict areas by regulating the minimum spacing of driveways, by spacing driveways optimally in the permit authorization stage, by consolidating access for adjacent properties, by buying abutting properties, by denying access to small frontage parcels, and by require access via collector streets, i.e. service roads, etc.

- Minimize the need to decelerate in traffic by geometrically designing access points.

- Remove turning volumes or queues from sections of the through lanes by pavement marking alterations, geometric design modifications, right-of-way acquisition (including acquisition for such techniques as constructing a service road or bypass road), or requiring adequate internal site circulation.

- Adopt guidelines for access type and minimum spacing of intersections.

Zoning and Subdivision provisions should require that development project design minimize left turn movements or conflicts both on the site and in the street.

Driveways should be designed to achieve clear sight lines based on design speeds as adopted by VDOT. Site access and circulation should conform to the following standards:

- Where reasonable access is available, the vehicular access to the site should be arranged to avoid traffic use of local residential streets situated in or bordered by residential districts.

- The road giving access to the site should have sufficient traffic carrying capacity and be suitably improved to accommodate the amount and type of traffic generated by the proposed development.

- Where necessary to safeguard against hazards to traffic and pedestrians and/or to avoid traffic congestion, the County should require that provisions are made for turning lanes, traffic directional islands, frontage/service roads, driveways, and traffic controls within the road.

- Access driveways should be designed with sufficient capacity to avoid queuing of entering vehicles on any road or street.

o **Commercial and Industrial Parks** -- Linear development should be discouraged and interior uses encouraged when developing in planned parks where access control is efficient and where interior roads, rather than arterial or collector roads provide access to each use. This land use technique will discourage shallow strip development. Deeper commercial zoning allows effective site

design and maximizes the use of each access point. As shopping centers, office parks, and industrial parks function on the basis of a known location, so can general commercial. When two or more commercial uses can use a single access, substantial improvement to the flow of traffic can result.

- **Highway Corridor Overlay Zoning** -- Overlay zoning brings to an area additional requirements and standards above those of the underlying zone. Special transportation related improvements in the Highway Corridor District shown on the Land Use Concept Plan should include access controls and transportation impact analysis for high-volume uses.

- **Integration of Land Uses** -- Integrating housing into overall design of large scale employment centers will help reduce the need to travel. Building homes within or immediately adjacent to the work place not only reduces vehicle miles of travel, but also present opportunities for workers to walk or bike to work. Flexibility in zoning will be provided to permit such large scale mixed-use development through floating zones. To minimize noontime travel, the types of uses that should be permitted in a mixed-use project include retail and customer service activities, eateries, convenience retail, financial services, gas stations, photocopy centers and consumer merchandise.

- **Proffers** -- In terms of highways, the County will indicate the need for dedication of rights-of-ways for new roads, for road extensions, and to widen existing highways through the Transportation Plan and Capital Improvements Program.

- **Fiscal Impact Analysis** -- The development of a per-unit fiscal impact of residential and commercial development would provide a rational basis on which to except proffers from developers. It is intended that the fiscal impacts be calculated for roads. Though impact fees are not expressly authorized for Gloucester County, the detailed impact analysis will establish the basis for such fees once the County is enabled by the State legislature. State enabling legislation does allow for the voluntary funding of off-site road improvements and reimbursements of advances by the governing body (Section 15.1-466 E of the Code of Virginia). The standards for determining the reimbursement in State law are basically the same as those that govern the development of impact fees. The fiscal impact analysis should be used as a basis for proffering under this statute. An Impact Fee system, requiring developers to pay for area-wide transportation improvements based on the estimated amount of traffic their project will generate, should be evaluated.

- **Special Service Districts** -- This approach should be used as a financing mechanism when service roads are needed to control access along a highway corridor.

- **Right of Way Reservation and New Road Construction** -- The County will preserve rights-of-way for road improvements consistent with the Transportation Plan Map and the State and County capital improvement programming.

- **Development of Local Circulation Plans** -- Developing traffic circulation plans for each Village Center, for selected rural service centers, and for a portion of

the Development District is needed to provide adequate traffic facilities and access control on a smaller scale.

- **Transit Development** -- The County needs to encourage the development of an adequate bus service for the Development Service District that would reduce inter-county/city traffic.

- **Transportation Management Strategies** -- The County should encourage innovative mechanisms, including private cooperation, and financial support by developers and the business community, which could be incorporated into financing policies. Transportation Management Associations (TMAs) have traditionally been a coalition of employers who engage in a wide range of activities including the promotion of ridesharing, the purchasing of vans for vanpools, the financing of area-wide street improvements such as signal upgrades, and even the planning for long-range transportation projects.

  Most TMAs are supported through membership fees, sometimes voluntary, more often mandatory. Most TMAs have been initiated by employers within defined geographic area. The southern part of the County, including the Rt. 17 Corridor, for example, may be a geographic area base for a TMA as it develops.

  Some of the County's larger employers, such as Virginia Institute of Marine Sciences and Walter Reed Hospital, who want to reduce the number of employees who drive to work during peak hours have the option of implementing relatively low-cost transportation management strategies that would reduce the number of peak-period vehicle trips. The shipyards at Newport News offer an opportunity for employers to initiate their own transportation programs that would help extend the capacity of the York River Bridges.

  Transportation management strategies selected by employers generally provide employees with incentives either to use alternative commute modes or to commute during non-peak hours. These include:

  - instituting flexible or staggered work hours;
  - facilitating carpool and vanpool formation;
  - setting aside preferred parking locations for carpools and vanpools;
  - providing company-chartered commuter bus service;
  - charging employees for parking;
  - building on-site bicycle paths and safe storage areas; and
  - providing transit passes or other forms of transit subsidy.

  Not all businesses will immediately understand how they can benefit from trip reduction. Educating the private sector is an important part of developing and selling the concept of transportation systems management.

PLANNED IMPROVEMENTS

Map IV-3-3 summarizes the identified highway deficiencies in the County in terms of capacity as well as safety. The Transportation Plan Map (Map IV-3-4) shows the

improvements, both planned and needed, to address the identified deficiencies and other transportation objectives. The following are highlights of the plan map.

Study Corridors--The Plan Map indicates a need to evaluate the need for high way safety improvements on high accident corridors. The Plan map identifies the alternative York river crossings being evaluated by VDOT.

Planned Improvements--The Plan includes transportation improvements already programmed by the State such as additional lane capacity on Rt. 33.

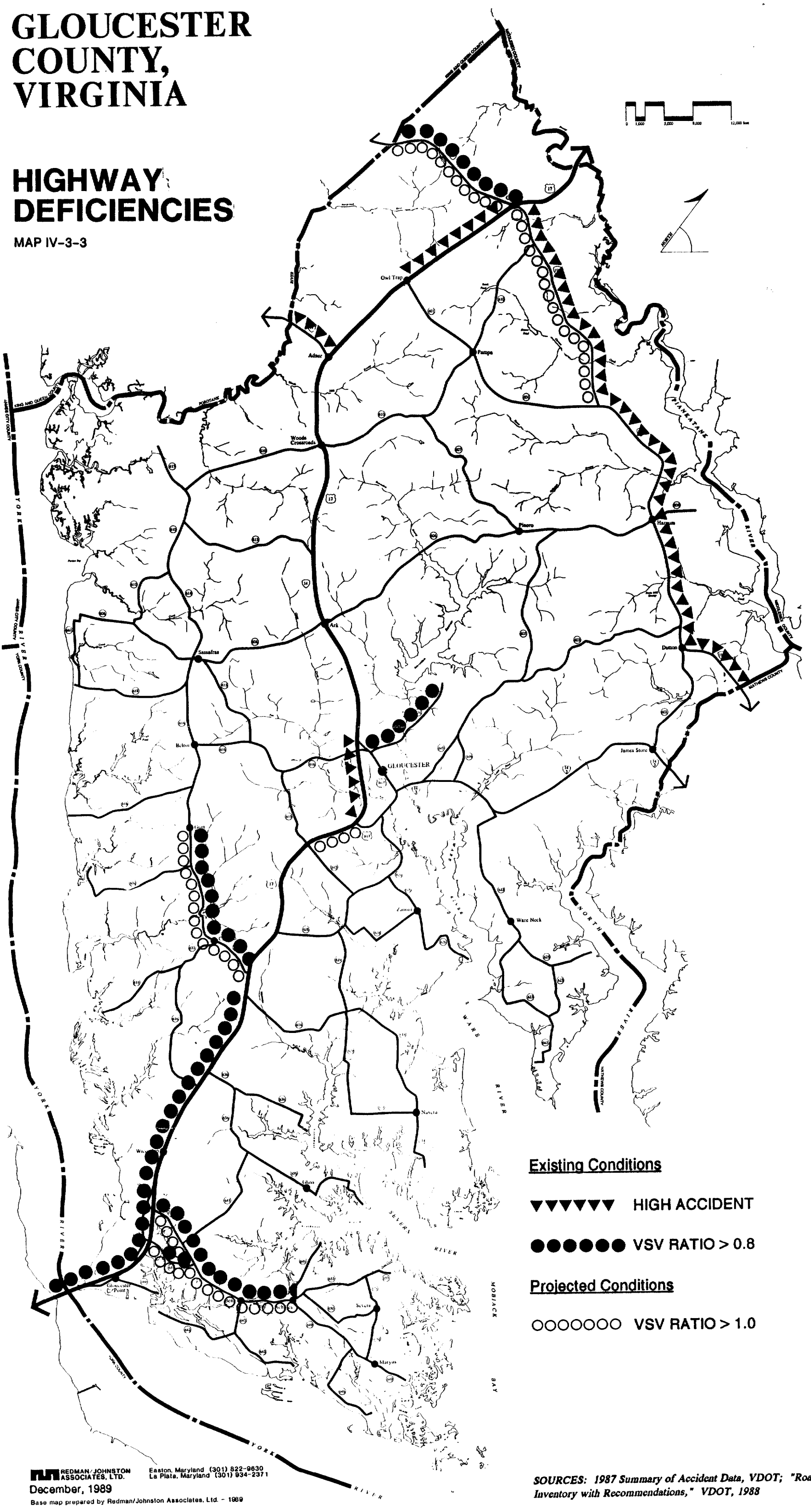
Identified Needs--The Plan identifies transportation improvements than are needed but not already included in the State's Six Year Improvement Program. To accommodate the anticipated growth in the Development District and the increase in traffic volume on Rt. 17, a parallel facility is indicated. It is envisioned that this would be a controlled access highway primarily for through traffic. The Plan shows a number of road sections which will require increased capacity within the planning horizon.

Commuter Facilities--In addition to the highway improvements, new park and ride facilities need to be planned along the Rt. 17 corridor.

GLOUCESTER COUNTY, VIRGINIA

HIGHWAY DEFICIENCIES

MAP IV-3-3



REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

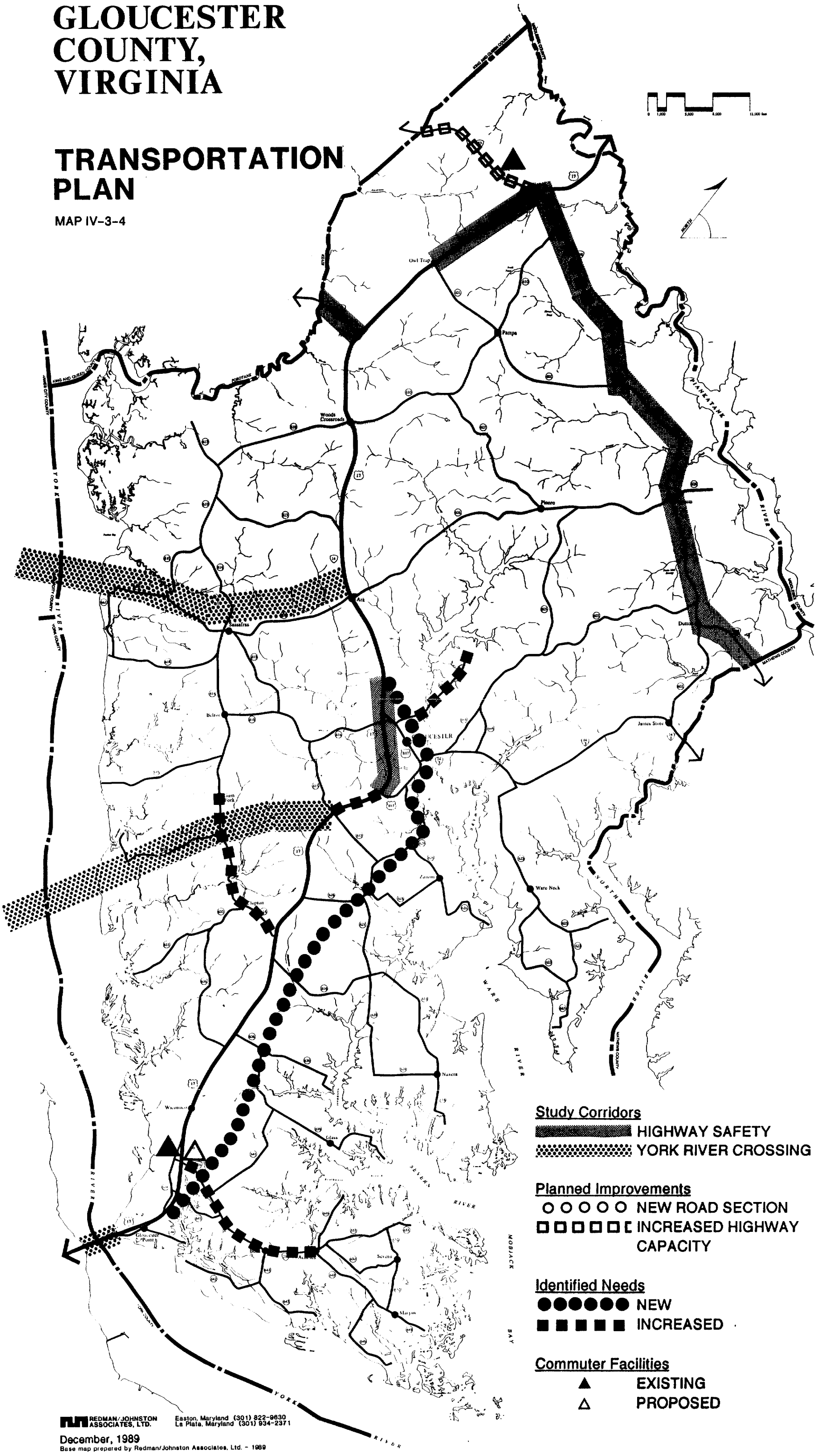
Base map prepared by Redman/Johnston Associates, Ltd. - 1989

SOURCES: 1987 Summary of Accident Data, VDOT; "Roadway Inventory with Recommendations," VDOT, 1988

GLOUCESTER COUNTY, VIRGINIA

TRANSPORTATION PLAN

MAP IV-3-4



REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

Base map prepared by Redman/Johnston Associates, Ltd. - 1989

Section 4

COMMUNITY FACILITIES

COMMUNITY FACILITIES AND SERVICES

Ensuring that the provision of services and facilities is phased with the demand or need is a major component of a community's growth management. Community facilities and public services are those minimum facilities and services the County provides for the common good. Generally, public facilities include land, buildings, equipment and whole systems of activity provided by the County on the behalf of the public. The quality of public facilities contributes to the quality of life in the County. Some facilities, such as clean drinking water and adequate sewerage disposal are necessities; others, such as theaters and parks, are highly desirable for cultural and educational enrichment.

BACKGROUND

Gloucester County provides a variety of public services and facilities for its residents which include water supply, sewage disposal, solid waste disposal, schools, libraries, public safety, and health care. The provision of these services facilitates growth and development, however, the absence of services or facilities does not effectively deter unguided growth. Rapid residential and commercial development places a burden on the County to meet service and facility needs.

A survey of existing services and facilities, in conjunction with population and economic data on which to base projections of need, provides an indication of what future improvements and additions might be necessary. In order to accurately anticipate needs, all projected figures should be updated constantly as new population and economic data become available. This section will focus on identifying existing and projected capacity of community facilities to identify the issues and problems of providing these services in the context of the County's projected growth rate and geographic distribution. To begin capacity analysis of the facilities based on growth, we will generally use the population projections shown in Table 1, part II to the Year 2010. If other projections are used, they will be so noted. The following is a discussion of the existing capacities and levels of service for selected community facilities and services as well as projected demands. Planned facilities included in the County's annual financial planning process are noted.

WATER SERVICE

A number of laws control the use and quality of water in the Commonwealth of Virginia. A state-operated water allocation system defines water rights. This takes place within the state's judicial system and use of the Riparian Doctrine, which allow for landowners to make reasonable use of the water resources adjoining their land. Secondly, the Groundwater Act of 1973 allows the Water Control Board to designate management areas in which water withdrawals are regulated. This allows the Board to state ownership and have control of the water beneath a landowners parcel of land. Areas outside of those management areas are controlled by common law. Thirdly, the State Water Control Law mandates the protection as well as the

restoration of state waters. The standards are continuously reviewed and revised as appropriate. Fourthly, the State Health Department is in charge of ensuring that all public drinking water supplies are pure, provides guidance to determine if a water supply or waterworks permit is to be issued, and assists applicants in completing all necessary paperwork pertinent to water supply. These are just some of the laws and agencies who help protect and regulate water.

Groundwater Supply

The County lies within the Coastal Plain Province and has water-bearing unconsolidated sediments of Cretaceous, Tertiary, and Quaternary age over Pre-Cretaceous bedrock. The unconsolidated sediments range from approximately 1,200 foot depths in the western section, to approximately 2,400 foot depths along the eastern edge of the county.

The Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review, MPPDC, Jan. 1989 contained the following discussion of groundwater in Gloucester County: "All of the aquifers listed, with the exception of the St. Mary's-Choptank, are tapped for either domestic or industrial use in the MPPD region. Gerglund, 1977, divided the MPPD aquifers into three general system: water table aquifers, upper artisan aquifers, and the principal aquifers.

"The water table aquifer system includes the Yorktown-Eastover and Columbia aquifers .... This system is a reliable source for domestic groundwater ... but it lacks the storage capacity necessary for large-demand uses. The upper artisan aquifer system generally includes the Chickahominy-Piney Point and Aquia aquifers. The aquifers are basically an adequate source of groundwater for domestic, subdivision, light industrial and agricultural demands. It appears from specific capacity data collected that the West Point area has the greatest groundwater capacity, with lower yields to the west and east of this area. Specific capacity is defined simply as the productivity of a well which is rated in gallons per minute per foot change in hydraulic head. The third and final aquifer system is the principal aquifer, which includes the Brightseat-Upper Potomac, Middle Potomac, and Lower Potomac aquifers. This system of aquifers is by far the deepest and the thickest of all three systems, with potentially large groundwater yields in both the central and eastern MPPD. Eastern areas (which includes the eastern half of Gloucester County), while having the capability of producing large volumes of water, yield water which is high in chlorides and minerals: therefore, it is unsuitable for domestic or industrial use."

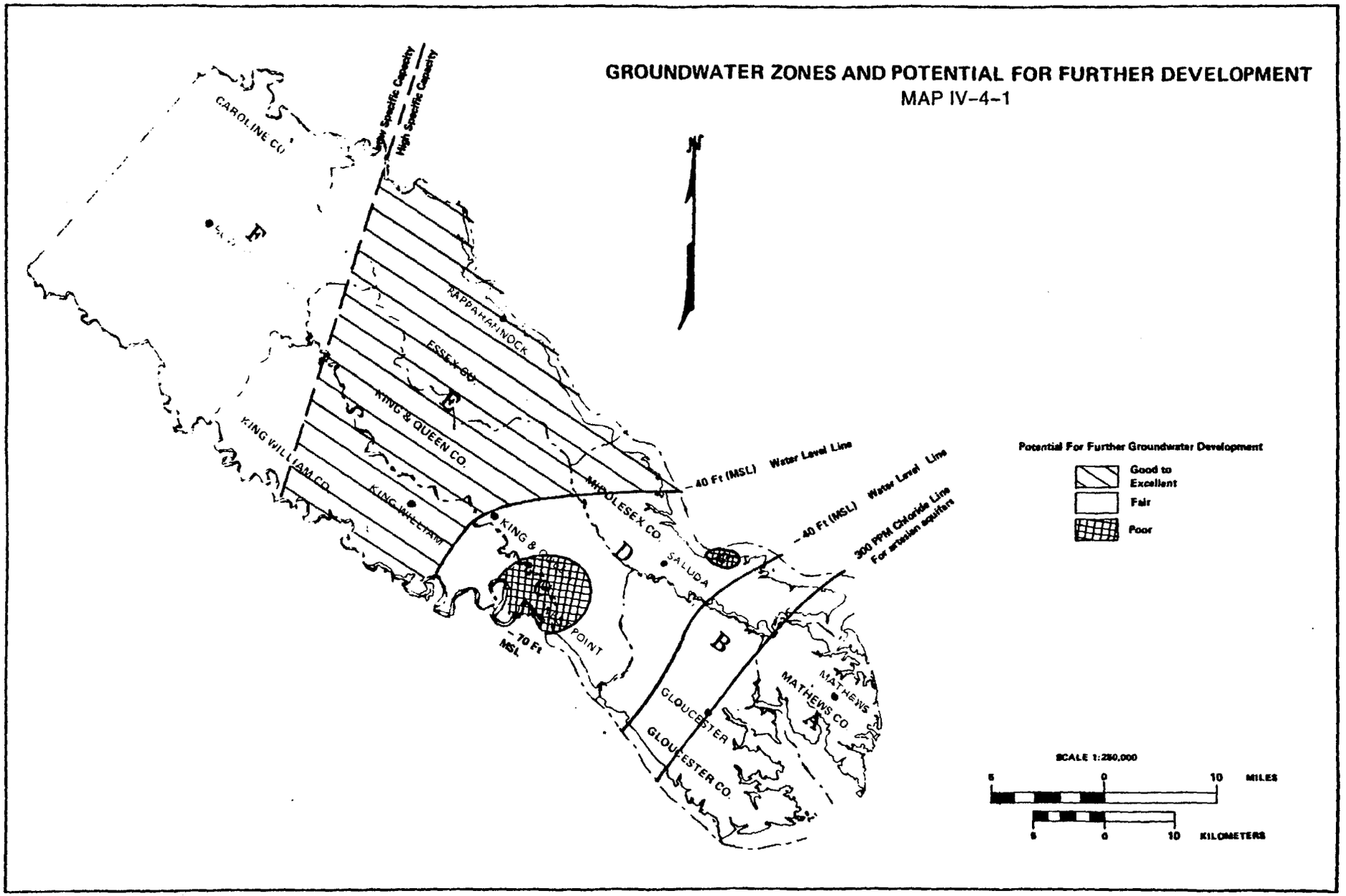
Analysis of groundwater sources by the State Water Control Board indicates that the estimated availability of water from sources throughout the Middle Peninsula varies considerably. The groundwater availability table (IV-4-1) and map (IV-4-1) show the location of zones in the Middle Peninsula and the general availability of groundwater within each zone. Gloucester falls within zones A, B, and D which indicate only fair potential for future groundwater development. The A zone is also considered the brackish water zone.

In 1983, at least 0.554 million gallons of water per day were withdrawn from aquifers in Gloucester County. Individual domestic groundwater use was not included in the following table originally compiled by USGS, therefore, actual usage was greater.

Table IV-4-1
GROUNDWATER ZONES

Groundwater Zones (see map)	Characteristics of Zone	Estimated Availability of Well or Well Field Site (mgd)	Estimated Groundwater Availability in Zone (mgd)
A	Yorktown aquifer has a low yield potential. Principal and upper artisan aquifers not suitable for potable use.	0.2 mgd from a well field in the Yorktown aquifer and Columbia Group	2-5 mgd
B	Buffer zone between pumping centers and high chloride zone.	0.2 mgd from principal and upper artisan aquifers.	2-5 mgd
C	High water level declines. Currently pumpage is 16.3 mgd in West Point and 2 mgd in Urbanna.	Limited availability from upper artisan and principal aquifers due to risk of de-watering aquifers.	19-22 mgd (includes current groundwater use of 18.3 mgd)
D	Moderate water level declines.	0.2 mgd in upper or principal aquifer.	2-5 mgd
E	Slight to no water level declines.	Variable depending on local capabilities of principal artisan aquifer, no more than 2 mgd per well field in the principal aquifer. Cones of depression should not overlap. 0.2 mgd per well in the upper artisan.	5-15 mgd
F	Moderate yield characteristics in principal and upper artisan aquifers.	0.2 mgd in the principal aquifer	2-5 mgd (bedrock aquifers not considered)
		TOTAL AVAILABILITY:	32-57 mgd

SOURCE: Gloucester County Comprehensive Plan, 1980



SOURCE: Gloucester County Comprehensive Plan, 1980 (VA State Water Control Board - TRO)

Table IV-4-2

WITHDRAWALS FROM THE CONFINED AQUIFERS OF THE COASTAL PLAIN OF VIRGINIA, 1983 - GLOUCESTER COUNTY -

Aquifer	Withdrawal (mgd)
Yorktown-Eastover	0.129
Chickahominy-Piney Point	0.0
Aquia	0.074
Brightseat-Upper Potomac	0.074
Middle Potomac	0.0
Lower Potomac	0.0
TOTAL	**0.277**

SOURCE: Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review, MPPDC, Jan. 1989

Table IV-4-3

GLOUCESTER COUNTY GROUNDWATER WITHDRAWALS (MGD)

Place	Groundwater Withdrawal 1984	1985
Sea Breeze Mobile Home Park	----	0.006
Gloucester Courthouse	0.135	0.155
Gloucester Point	0.156	0.173

SOURCE: Virginia Water Control Board. Water Withdrawal Report, Data Bulletin No. 70.

Aside from the demand for domestic and commercial uses, improved water sources are important to fire protection and the attraction of industrial development to the County.

Surface Water Supply

Gloucester County is presently completely dependent on groundwater as a potable source of water due to the lack of any large, freshwater rivers or lakes. However, in September 1988, the County began construction of a new 768 acre impoundment site as it began to dam a portion of Beaverdam Swamp. The impoundment is expected to provide 2.5 MGD of water. Subtracting 1.3 MGD for existing or

allocated development, 1.2 MGD is available for future growth. This excess capacity will accommodate an estimated 4800 households or equivalent commercial and industrial development alone. When combined with groundwater supply, the County anticipates that this impoundment will provide adequate water supplies for future development beyond the 20 year planning horizon.

Along with the construction of the reservoir, the County is currently designing and constructing the necessary treatment facility and distribution system. The proposed water treatment facility is designed to handle 2.0 MGD. A 12 inch water main is being extended to the Gloucester Point area. For a location of the water plant and planned water service areas see Map IV-4-2.

SEWERAGE SERVICE

The following describes the status of central sewer service within the County. Table IV-4-4 provides a list of municipal and industrial sewage treatment facilities discharging into state waters. At present only one public sewerage system at Gloucester Courthouse provides general municipal sewage collection and treatment in the County. The remaining municipal dischargers represent schools, hospitals, etc.

The Gloucester County POTW, discharging into Fox Mill Run, which flows into the Ware River, has been examined by the VWCB. The biomonitoring studies that have been conducted indicate that the discharge is having a detrimental impact on Fox Mill Run. The plant discharge has been assigned more stringent discharge limits. The plant is old, and the cost of improvements is high. Gloucester County decided during 1988 to hookup with the Hampton Roads Sanitation District (HRSD). At the present time, design of a sewer main from Gloucester Courthouse to the York River POTW has begun (see Map IV-4-2), with completion expected in the spring of 1990. The line will be laid under the York River. A major feeder line will also be constructed along Route 216 to Achilles. Any additional lines and/or hookups would be outside of the basic HRSD contract and would be at the expense of the County, developers, or homeowners. Construction should be completed during the early 1990s.

SOLID WASTE

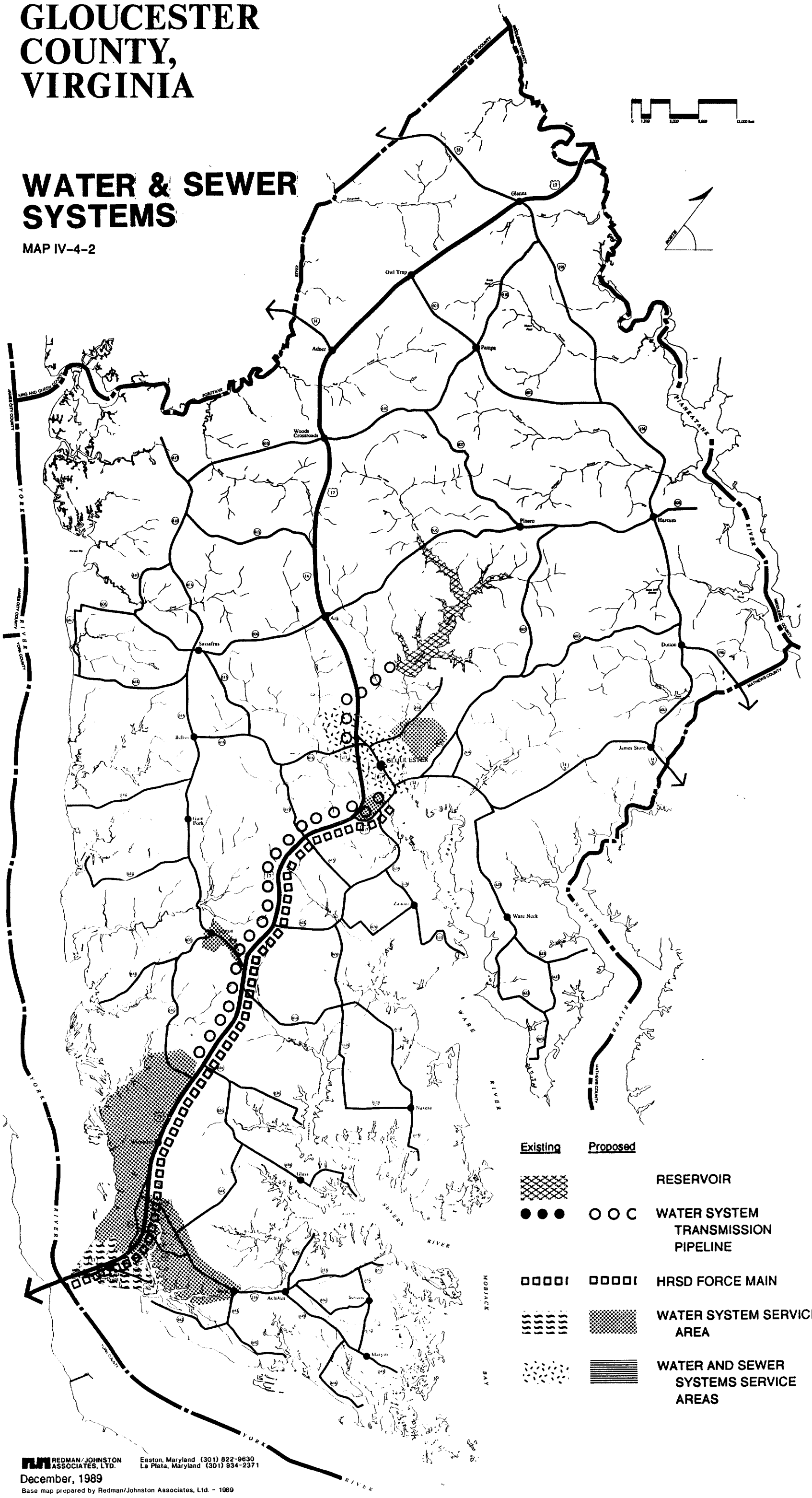
At present Gloucester County owns one landfill site, located on Route 17, opposite the Gloucester Airport. It is estimated that approximately 58.5 tons per day, or 21,084 tons annually, of waste is generated in the County (*Regional Solid Waste Management Plan, 1989*, Middle Peninsula Planning District Commission). At this rate, the landfill is expected to reach capacity by late 1992 or early 1993.

The 55.07-acre landfill, is inspected every 4-6 weeks by the State Division of Solid and Hazardous Waste Substances, which provides ratings and recommendations to the landfill operator and the County. Gloucester's landfill ratings have been good. Problems with the present site include soils that contain too much sand for landfill purposes and an absence of topsoil for suitable cover. Solid waste system improvements, in the future, should include a site with more clay and less sand in the soil.

GLOUCESTER COUNTY, VIRGINIA

WATER & SEWER SYSTEMS

MAP IV-4-2



REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

Base map prepared by Redman/Johnston Associates, Ltd. - 1989

Table IV-4-4

GLOUCESTER COUNTY
TREATMENT PLANT SEWAGE DISCHARGER

Municipal Discharger	Receiving Waters	Design Flow
Achilles Elementary School, Route 216	Thorntons Creek (York Basin)	.006 MGD
Gloucester Intermediate School, Route 17, White Marsh	Intermit. tributary Hayes Mill Pond Carter's Creek (York Basin)	.0128 MGD
Rappahannock Community College Route 33, Glenns	unnamed tributary to Dragon Run	.018 MGD
Gloucester Sanitary District 1	Fox Mill Run	.15 MGD

Industrial Discharger	Receiving Waters	Limits
Sawgrass Point, Inc. Gloucester Point	intermit. tributary to Sarah Creek	TSS, 30/60/1 pH, 6-9
Gloucester Sanitary District 1 Riverside Middle Pennisula Hospital (formerly Walter Reed Memorial Hospital) Route 17, Gloucester	Beaverdam Swamp (tributary Ware River	pH, 6-9

SOURCE: Phase I: Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review, MPPDC, 1989.

In October 1988, more stringent regulations were adopted by the Virginia Waste Management Board in attempts to reduce the environmental pollution. Existing landfills have until 1991 to come into compliance. The new regulations will require, among other controls, double liners, leachate collection/treatment, and groundwater monitoring.

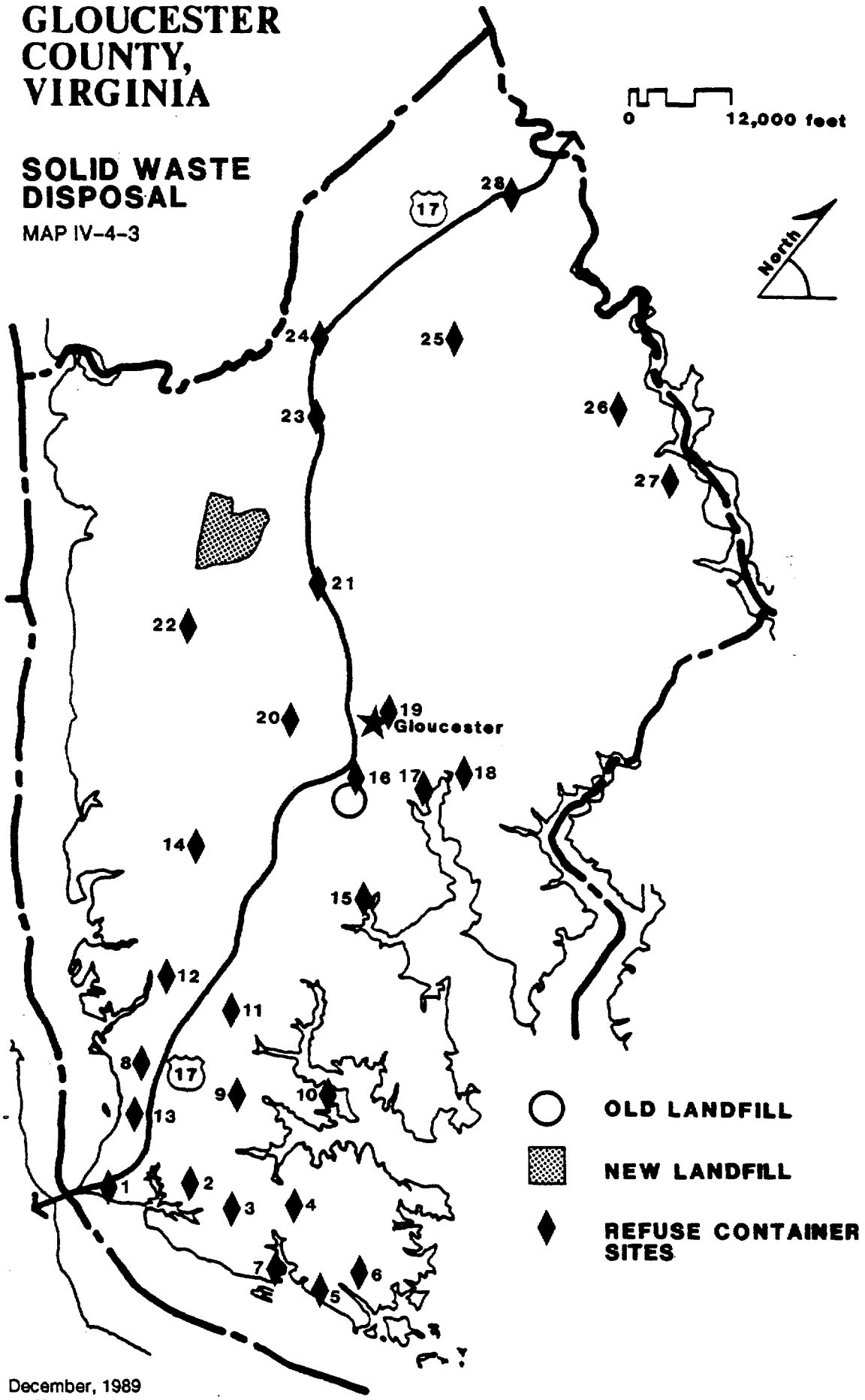
Gloucester County is currently in the final stages of feasibility studies for a new 940-acre landfill site located off Route 17 near Marlfield. The new facility will be designed and constructed to meet all environmental regulations. It will have adequate capacity well beyond the 20-year planning horizon.

The County contracts with a private firm for solid waste collection services. The system consists of 227 "greenboxes" at 28 locations, which are serviced two to five times per week. (See Map IV-4-3 and Table IV-4-5 for distribution of sites.) Since these collection stations are unmanned, management of these sites has been difficult.

GLOUCESTER COUNTY, VIRGINIA

SOLID WASTE DISPOSAL

MAP IV-4-3



December, 1989

REDMAN/JOHNSTON ASSOCIATES, LTD.

Eastern, Maryland (301) 822-0630
La Plata, Maryland (301) 934-2371

Base map prepared by Redman/Johnston Associates, Ltd. - 1989

Table IV-4-5

GLOUCESTER COUNTY REFUSE CONTAINER SITES

Site No.	Location
1	Gloucester Point, beneath bridge on Rt. 1208
2	Tidemill, at intersection of Rt. 216 and Rt. 699
3	Bena, at intersection of Rt. 216 and Rt. 643
4	Perrin, at intersection of Rt. 653 and Rt. 1104
5	Jenkin's Neck, 6 miles south of Rt. 646 from intersection with Rt. 649
6	Maryus, on Rt. 649, 0.6 mile east of intersection with Rt. 652
7	York River Seafood, 0.15 mile off Rt. 1102
8	Wicomico, on Rt. 1304, west of Abingdon School
9	Lowground Road, 0.8 mile on Rt. 641 south of intersection with Rt. 656
10	Glass, 1 mile on Rt. 656 north of intersection with Rt. 620
11	Brays Point, at intersection of Rt. 636 and Rt. 656
12	Coke, on Rt. 636 south of intersection with Rt. 633
13	Hayes, off Old Rt. 17 behind Abingdon Rescue Squad
14	Gum Fork, on Rt. 614, 0.4 mile south of intersection with Rt. 631
15	Paynes Landing, at end of Rt. 630
16	Gloucester County Sanitary Landfill, off Rt. 17 across from airport
17	Ware House Landing, end of Rt. 621
18	Ware Neck, on Rt. 623
19	Gloucester Courthouse, behind Health Department
20	Bellamy, on Rt. 616 just north of intersection with Rt. 615
21	Ark, on Rt. 17 next to Ark Post Office
22	Sassafrass, on Rt. 614 just south of intersection with Rt. 606
23	Woods Cross Roads, intersection with Rt. 17 and Rt. 610
24	Adner, just south of intersection of Rt. 14 and Rt. 17
25	Pampa, 0.2 mile south on Rt. 610 from intersection with Rt. 601
26	Ferrys Creek, 103 miles east on Rt. 198 from intersection with Rt. 601
27	Harcum, 0.9 mile north of Rt. 606 from intersection with Rt. 198
28	Glenns, just north on Rt. 17 from intersection with Rt. 33

SOURCE: Regional Solid Waste Management Plan, MPPDC, 1989

In 1989, the total annual cost for solid waste collection services is $385,000 with disposal costs being approximately $233,000. That puts the total cost for the solid waste management system at approximately $618,000 per year. The County currently charges no tipping fee for commercial or residential haulers.

Materials that would otherwise become solid waste can be collected, separated, or processed and returned to the marketplace in the form of raw materials or products is a method that both extends the lifetime of a landfill and helps to protect the environment. The recycling of reusable waste materials can substantially reduce the required capacity of future landfills by 10 to 15 percent. Building and construction waste typically comprising ten percent of the waste load can be recycled or disposed of by alternative means.

The Abingdon Community Park Committee in cooperation with Clean Community Committee for the benefit of Abingdon Community Park are actively involved in promoting recycling in Gloucester County. Their collections have concentrated on glass and newsprint items. In addition to the private efforts, the County's Department of Public Works has submitted an application to the Department of Mines, Minerals, and Energy to perform a recycling feasibility study for Gloucester County.

EDUCATION

General

The Gloucester County School System employs approximately 650 people with approximately 34 percent of the teachers having advance degrees. Gloucester County presently operates eight public schools that include kindergarten through 12 grade (see Map IV-4-4). All schools are accredited by the Commonwealth of Virginia. The high school and middle school are also accredited by the Southern Association of Schools and Colleges. Past and current enrollments for these schools are listed in Table IV-4-6.

Table IV-4-6
PUBLIC SCHOOLS ENROLLMENTS
1979-80 THROUGH 1988-89
GLOUCESTER COUNTY, VIRGINIA

School Facility	1979-80 (grades)	1988-89 (grades)	Average Annual % Change
Abingdon Elementary	515 (K-4)	581 (K-5)	
Achilles Elementary	414 (K-4)	469 (K-5)	
Botetourt Elementary	540 (K-4)	596 (K-5)	
Petsworth Elementary	N/A	734 (K-5)	
TC Walker Elementary	N/A	807 (K-6)	
Gloucester Middle	627 (5-6)	N/A	
TOTAL grades K-6	2,096	3,187	3.8%
Gloucester Intermediate	627 (7-8)	N/A	
Page Middle	N/A	771 (7-9)	
TOTAL grades 7-8	627	771	2.1%
Gloucester High	1,292 (9-12)	1,447 (9-12)	
TOTAL grades 9-12	1,292	1,447	1.2%
TOTAL	4,015	5,405	2.9%

Sources: "Gloucester County Comprehensive Plan," 1980
Gloucester County Board of Education, 1989

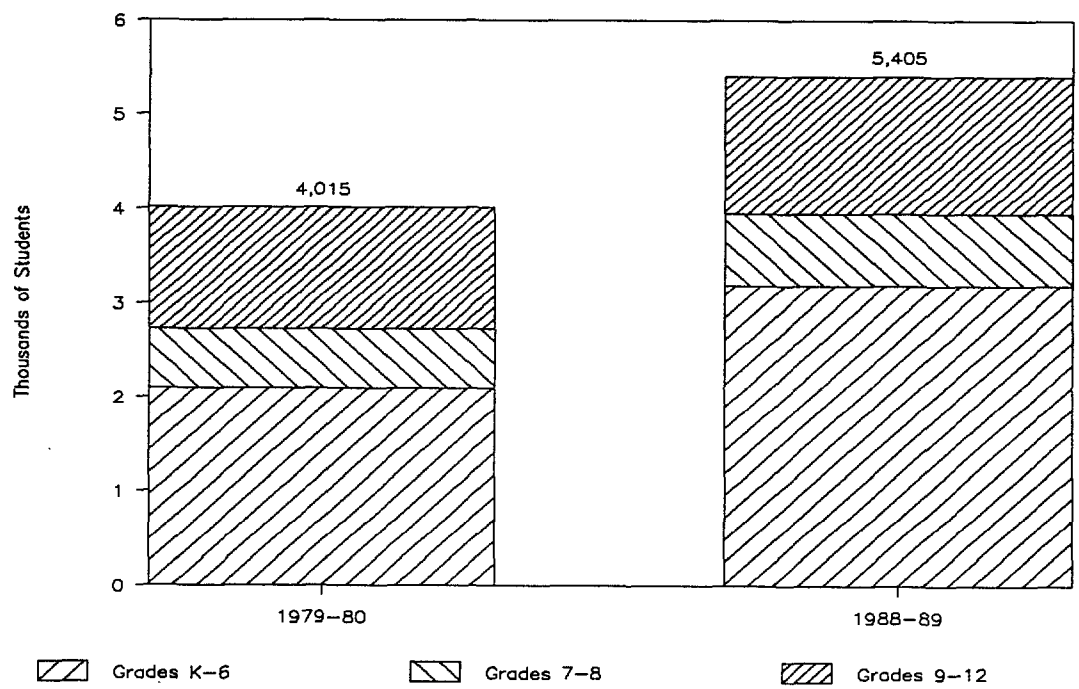
Table IV-4-6 indicates the effect of growth on public school enrollment during the decade. Total enrollments have increased by 1,400 students, which represents an average annual percent change of 2.9. The growth rate is substantially less than the increase in dwelling units. This is indicative of a national trend in smaller pupil generation rates per household formed. Current school facilities planning indicates that many schools exceed capacity; however, with the planned facilities completed, the projected enrollments should be met.

Figure IV-4-1 shows that the greatest increase in students over the past decade has been in elementary age children (grades K-6). This indicates that expansion of the middle school and high school will need to be planned for in order to accommodate the larger student body anticipated in the next five to ten years.

Figure IV-4-1

PUBLIC SCHOOLS ENROLLMENTS

1979-80 Through 1988-89



SOURCES: Gloucester Co. Board of Education, 1989; Gloucester Co. Comp. Plan, 1980

As can be seen in Table IV-4-7, all existing schools are presently over capacity with the school system servicing 1,159 more students than it was designed to accommodate. Mobile units are present at all facilities to lessen the impact on individual classrooms. The School Board's goal is to remove all the mobile units by 1990 through the construction of a new middle school and new classrooms to be added to Abingdon Elementary (10 classrooms) and to Page Middle (eight classrooms). In addition to the planned construction, all sixth graders will be transferred to Peasley Middle School upon its completion in 1990.

Table IV-4-7

GLOUCESTER COUNTY PUBLIC SCHOOLS CAPACITIES VERSUS ENROLLMENT 1989

School Facility	Existing Capacity	Existing Enrollment	Proposed Capacity*	Existing Mobile Units
Abingdon Elementary	382	581	632	9
Achilles Elementary	333	469	333	7
Botetourt Elementary	441	596	441	7
Petsworth Elementary	571	734	571	8
TC Walker Elementary	581	807	581	11
Page Middle	715	771	915	5
(Peasley Middle,due open '90)	N/A		700	
Gloucester High	1,223	1,447	1,223	9
TOTAL	**4,246**	**5,405**	**5396**	**56**

* New construction combined with deletion of existing mobile units.

SOURCES: Gloucester County Comprehensive Plan, 1980
Gloucester County Board of Education, 1989

Special Programs

In addition to the regular skills programs normally provided, Gloucester County's school system also has a Vocational Education Program and a Special Education Program. Both programs are staffed by directors and teachers with specialized training, and are housed in classroom space adapted to their special needs.

The Special Education Program provides services in several areas at various levels within the school system: learning disabled, educable or trainable mentally retarded, speech impaired, emotionally disturbed, and visually impaired. Children and young adults aged two through 21 who are handicapped can enroll in special education programs. Students with special education needs or handicaps also have access to programs in Mathews and Middlesex counties such as the emotionally disturbed student program in Middlesex County and the trainable mentally retarded person vocational training provided at the Puller Center, Gloucester Courthouse, sponsored by Mathews County. If a student needs training provided outside the area, it is arranged and financed, in part or full, by the school system.

The Vocational Education Program is intended to provide those students in the program, or in individual courses, with skills upon graduation. Special facilities and equipment are provided for a wide variety of vocational training, particularly to meet the needs of those students not planning to attend college after high school.

Education Costs

The local cost per child figures (Table IV-4-8) do not include capital outlay and debt service which are a part of the total operating cost figures. According to the State

Department of Education, construction costs during FY 1986-87 approximated $6,500/pupil for elementary schools, $7,100/pupil for middle schools, and $6,900/pupil for high schools.

Table IV-4-8

OPERATING COSTS

	1978/79	1988/89
Local Cost of Operation/Child	$ 1,251	$ 2,682
Total Operating Cost	5,618,414	17,755,000

SOURCE: Gloucester County Comprehensive Plan, 1980

Higher Education

In addition to the county school system, Rappahannock Community College, at Glenns, and the Virginia Institute of Marine Science, at Gloucester Point, offer educational opportunities at the college level; specialized services to meet educational needs, cultural events, workshops, meetings, lectures, conferences, seminars, special community projects, and advisory services. Approximately fifty percent of Gloucester High School's graduates continue their education in four year, two year, business or trade schools. Students in the class of 1988 were awarded $223,792 in scholarships.

Gloucester County is also well situated relative to the regions's 11 major colleges and universities, including the College of William and Mary in Williamsburg, which is a state university. There are also 10 private career schools within the region.

PUBLIC LIBRARIES

The Gloucester Library system includes a library located in the Gloucester Court House area and one in the Gloucester Point area (Map IV-4-4). Being a member of an Interlibrary Loan program gives residents access to a much larger selection than could be held in an individual building. General services provided by the library include book loans, access to reference volumes and periodicals, and State library services. Other services and special events include story times for preschool children, feature length movies, film showings for nursing home patients, poetry readings, recordings and cassette players for loan, hearing and vision-impaired services, genealogical resources, and access to the U.S. Library of Congress services.

The Gloucester Library has about 6,500 square feet with the latest addition, and the Gloucester Point branch has 800 square feet. Combined, the branches have about 17,500 volumes. Use of the library system has increased 92 percent in the past two years.

In 1988-89 the library used $53,500 provided by the county for operating expenses. The state provided $17,271 which was used for books and library materials. The

balance of the $81,459 spent was met through generous private grants, contributions, fines and copier fees for copier.

Additional library related services are available to Gloucester residents through the County schools' libraries, Virginia Institute of Marine Science at Gloucester Point, and the Rappahannock Community College at Glenns. Public libraries in nearby urban areas such as Williamsburg and York County are also utilized by County residents.

PUBLIC SAFETY

The Sheriff's Department is currently housed in the courthouse complex. Staffing in 1980 consisted of one sheriff, nine deputies, and four switchboard operators. As of October 31, 1988, staffing consisted of 40 sworn officers and seven civilian employees, providing county residents with 24-hour police protection. The Sheriff's Department works closely with the State Police and Sheriff Departments in neighboring localities. Specially trained units include the Canine Corps, the Dive Team and Boat Patrol. The Gloucester County Jail is staffed to provide services for 20 inmates.

Increase urbanization requires expanded and increasingly sophisticated public safety services. One indicator is the increase in the crime rate and in the crime index that has been evident in recent years. The crime rate has increased from 41,987.3 in 1985 to 2,258.3 in 1988. The crime index rose from 457 in 1985 to 633 in 1988. During that time, six sworn officers and one civilian were added to the sheriff's staff.

Two volunteer rescue squads serve Gloucester County: Abingdon Volunteer Rescue Squad and the combination Gloucester Volunteer Fire and Rescue Squad. Fire protection is also provided by a volunteer fire department located in the Abingdon District. All Gloucester County rescue squads and fire departments have working agreements with neighboring counties for additional protection and service. Map IV-4-4 shows the distribution of these facilities.

The Gloucester County Rescue Squad has a station on Main Street in the Court House as well as one at Harcum on Route 606. Equipment consist of five pumpers, an equipment truck, a boat and three ambulances. Plans for expansion in the coming year include the construction of a third station at the intersection of Routes 606 and 615 in Sassafras.

HEALTH CARE

Health services in Gloucester County include a variety of general practitioners and specialists with local offices, a hospital, a local public health center, a regional mental health clinic, mental retardation services, and substance abuse counseling. Walter Reed Memorial Hospital, located near the county courthouse on Route 17 (Map IV-4-4), offers hospital care including 24-hour emergency room services, laboratory and X-ray facilities, EKG and a pulmonary function physical medicine department, intensive care/coronary care units, and general medical beds.

The Gloucester Health Department has a wide variety of services offered to the community, which include Home Health Services, Tuberculosis follow-up, Family Planning Clinics, Crippled Children's Follow-up, Maternal and Child Health Clinics, Immunizations, Sanitation (Septic Tank Permits, Food Establishment Inspections), a federally funded Nutrition Program - WIC (Women, Infants, and Children), and a family planning project. Local contributions are based on a 100 percent assessment of land values. Gloucester contributes about 45 percent of the local public health center costs.

Located on Route 17 south of the courthouse, the Middle Peninsula-Northern Neck Mental Health Services Clinic provides counseling, psychotherapy, psychiatric, and diagnostic services to residents of the county and the surrounding area. Client fees are based on income and the clinic depends heavily on local funds and matching State and Federal funds.

The Northern Neck-Middle Peninsula Mental Retardation Services is authorized to screen, plan and integrate services for persons experiencing multiple problems related to mental retardation. It also serves as an advisor to families of the mentally retarded, requesting services from local agencies or State facilities.

Adult Activity Centers provide a structured day for the mentally retarded, and are designed to help them participate in the normal activities of their community, avoid unnecessary placement in a State institution, and to relieve total family dependence.

The emphasis of the Work Activity Centers is therapeutic, social, and vocational. Training reduces the financial and personal dependency on family and guardians of the mentally retarded and physically handicapped. Fees for services to the mentally retarded and physically handicapped persons are based on the individual's ability to pay. Located in the Lewis B. Puller Center, (a sheltered workshop for the handicapped), Gloucester Courthouse, Old Route 17, the program is intended to provide activities to maximize independence and to provide normalization and work skills for the mentally retarded.

The CARE Program for alcohol and drug abuse offers outpatient treatment and referral for persons with drug and alcohol problems. It also consults with family members in either individual or group therapy sessions. All contacts are kept confidential and service fees are based upon the individual's ability to pay at churches, and civic groups upon request. The CARE Program is located on Route 17 between Gloucester Courthouse and Gloucester Point at Hayes.

The Gloucester County Department of Social Services provides: Casework services toward self-support, strengthening of family life, improving self-image toward becoming a productive citizen for all Income Maintenance and Medicaid recipients, Foster Home investigations and Foster Care placements, Adoptive Home investigations, child placement (Licensed Adoption Agency); Protective services for abused or neglected children; referral to and through all community agencies; work with community clubs and organizations; need resources for agencies and the community; companion services for Social Security Insurance recipients, and Adult Protective Services for the aged, infirm, and disabled.

GENERAL GOVERNMENT

Gloucester County is governed by a five-member Board of Supervisors who are elected for four-year terms. There is one representative each from Petsworth, Ware, Abingdon, York and Gloucester Point Magisterial Districts. A chairman and vice-chairman are selected by the board from among its members.

The Board, in turn, appoints a County Administrator who serves as the chief administrative officer of the county government. The County Administrator implements the policies of the Board of Supervisors, directs the operations of the county government and proposes action to the supervisors for their consideration. Also appointed by the Board is the County Attorney.

Additional elected officials who serve the County include the Clerk of the Circuit Court, Treasurer, Commissioner of the Revenue, Commonwealth's Attorney, and Sheriff.

PUBLIC BUILDINGS

A feasibility study, entitled "Court Green and Botetourt Building" was completed in May of 1979 by Fauber Garbee, Inc., Architects. The study was initiated "for the purpose of determining continued and adaptive uses for the buildings located on the Court Green and the Botetourt Building", since many of the county supported operations, departments, and personnel are housed in these buildings. Included with the study is a "Report of the Architectural Study of the Buildings on the Court House Green, March, 1978", by the Gloucester County Historical and Bicentennial Committee. The report contains an evaluation of each of the buildings and the feasibility study expands on this report through a survey of county space needs, specific recommendations for use and improvement of each building, and long-range and interim proposals.

The long-range proposals briefly outline appropriate future uses and a protective ordinance intended to help preserve the character of the buildings and their immediate surroundings. These buildings are a valuable asset to the County and, as significant historic landmarks, should be maintained and protected through local ordinances.

An additional County office building houses many of the County's various offices and personnel. The structure encompasses approximately 24,600 square feet of space and will house the circuit and district courts, offices of clerks of both courts, accessory space associated with both courts, and judges chambers; juvenile and domestic relations court, office of the clerk, service units, accessory space, and probation office, commissioner of revenue; County treasurer, real estate records; sheriff's department; and a law library.

DOG CONTROL

Gloucester County employs a full-time dog warden and operates an impoundment facility to house those dogs picked up as strays, unlicensed dogs, or those reported as nuisances for whom no owner can be located. The facility accepts animals

brought in by county residents and refers all cats, small puppies, and animals other than dogs to the Gloucester Mathews Humane Society on Route 14-3, about two miles east of Gloucester Courthouse.

ISSUES

Based on the background analysis in the preceeding section, the following issues have been identified as needing consideration by the County to address growth management concerns related to community facility and service provision within the planning horizon of twenty years. The issues discussed begin with general identification and are broken down by functional area.

GENERAL COMMUNITY FACILITY AND SERVICE PROVISION

Traditional planning theory suggests that development should occur around those population or development centers with sewer service. This is a theory that makes sense and, if accomplished, assures a serviceable development pattern. However, this theory may not work in Gloucester County. If growth trends by Magisterial District continue, a substantial portion (over 50 percent) of the County's future growth will locate in the rural part of the County where no major new sewer service or sewer expansions are now planned. These areas tend to be more difficult to accommodate with most County services.

The distribution trend of recent development in the County is being driven by the exurban growth of the Hampton Roads metropolitan area. This trend is pronounced throughout the region. If this growth is to be accommodated without major investment in sewer service facilities, the result will be in the form of suburban or rural sprawl now witnessed in many parts of the County. The current zoning would only add more impetus to the tendency for development to sprawl. Because a couple of acres in the country is what the former suburban resident from the Hampton Roads Metropolitan Area moving to Gloucester County often desires, development will naturally be market responsive.

The County is sensitive to the possibility of increasing its role as a "bedroom community" for other counties, which has implications for public costs and revenues. Applying a countywide generalized pupil generation rate to the households projected in the continued development scenario will yield 4,500 more students by 2010 with the associated school facilities needs. Clearly the County's economic development programs will have to address ways of off-setting imbalances in the resident population versus the jobs formula. In this way the County will attract higher-value land uses (industrial and commercial) that will help it provide adequate public facilities and services without substantial increases in taxes.

Growth in the sewer service areas can be managed along more traditional lines. The challenge is to ensure that public services and facilities and the highway systems keep pace with the conversion of land in these areas from rural to suburban development.

In summary, the general issues facing the County as it considers growth management and community facility and service provision are as follows:

- How to ensure that the capacity of public infrastructure is adequate at the time it is needed in the designated growth centers.
- How to most efficiently provide public improvements for new development.
- How can the rate of growth be controlled to a degree that allows the State and County governments to provide the required infrastructure and facility improvements in a timely manner.
- Future development should be encouraged where adequate public facilities exist or are planned.

SEWAGE DISPOSAL

The provision of sewerage and sewage disposal facilities is one of the most powerful growth management tools available to County policy makers. This is especially true in Gloucester County, where so much of the desirable residential property is unsuitable for development on septic tank disposal systems. The County's ability to grow depends, to a large extent, upon its ability to provide economical sewer service. If sewer capacity cannot keep pace, growth will be restricted in the sewer service areas and be encouraged in the rural areas.

The proposed HRSD interceptors in the southern part of the County (Map IV-4-3) will serve a major portion of the County and provide the potential structure for a County designated development district. The regional approach to providing sewer service offers opportunities for cost effective service and eliminates the difficulties associated with getting approvals for additional discharge locations in the Chesapeake Bay ecosystem. Future locations of additional interceptors have profound implications for the amount and the nature of future growth in those areas.

Approximately 86 percent of the residences in the County are served by individual septic tank-soil absorption systems. These systems consist of a septic tank which serves as a settling chamber, a sludge storage tank, and a drainfield which allows dispersion of the settled wastewater through the soils for further treatment before it reaches the groundwater table. The unsuitability of the soils for septic systems in the many areas has made it necessary for development to be on large lots or, at some locations, for development to be forbidden until sewerage takes place.

One method of controlling the location of growth and improving the efficiency of service provision is to direct future growth in areas of the County already served or proposed to be served with public water and sewer, primarily the HRSD. This is not to imply that the County should deviate from its current policy of requiring residential developers to extend the water and sewer lines at their costs within the overall plans of the County.

EDUCATION

To project future public school space needs, a number of assumptions must be made, including assumptions about federal and State tax policies for private schools, dropout and enrollment rates, standards related to classroom and total school size, and local School Board initiatives. The following assumptions were made in projecting school facility needs: (1) There will be no drastic changes in Federal and State tax policies concerning private schools; (2) the future enrollment and dropout rates (per 100 people) will stay at current levels; (3) no major changes will be made in classroom and school size standards; and (4) private schools, both parochial and secular, will continue to be an educational alternative.

Table IV-4-9 shows the projected pupil enrollment based on the population projections contained in Part II of the Plan. From these projections, school capital needs can be generally gauged. Table IV-4-10 expresses facility demands based on classroom needs. These projections use the current teacher/pupil ratio as an indicator of classroom need to offset the many and varied unique programs in use throughout the County's educational system. Using average school sizes (elementary, 500-900 students and secondary 1,200-1,400 students), the year 2010 public school needs would be for approximately three additional elementary schools, one additional high school, and one additional intermediate school.

Table IV-4-9
PROJECTED PUPIL ENROLLMENT
1989-2010

	Elementary	Secondary	TOTAL
1989	3,187	2,218	5,405
1995	3,703	2,604	6,307
2000	4,313	3,033	7,346
2005	4,750	3,340	8,090
2010	5,341	3,756	9,097

NOTES:
Projections based on Population Projections contained in Part II of this Plan. Though past trends have shown some decline in pupils per capita population, these projections assume this trend will level off; therefore, a constant ratio of pupils to population based on 1989 enrollment was used.

Table IV-4-10
PROJECTED CLASSROOM NEEDS
1995 - 2010

	Elementary	Secondary	TOTAL
1995	25	22	47
2000	54	47	101
2005	74	64	138
2010	102	88	190

NOTES:
Classroom needs are based on the projected change in enrollment divided by the number of pupils per teacher in 1989 (21 for elementary and 17.5 for secondary). These projections assume that the current level of service will be maintained throughout the planning period.

Since it has been found that some parts of the County are growing more rapidly than others, overcrowding at selected schools is likely to result. The planned schools need to be located in those areas where the most growth is expected. In locating schools, the County will also have to consider the advantages and disadvantages of school centralization versus decentralization. Centralization of school facilities generally allow greater variety and sophistication of facilities.

Community-oriented schools reduce transportation costs and allow closer interaction with the student's immediate community.

PUBLIC SAFETY

As the population increases along with their activity, the need to protect the public safety of the County citizens also increases. Adequate police and fire protection, ambulance service and emergency management need to be provided within close proximity to the County residents. Areas of dense population and rapid growth need to expand their capability.

The farther new development is from existing facilities, the more it will cost the County to provide those services. If the County is to experience various concentrations of development at multiple diverse points of the County, the existing facilities would be inadequate to cover all areas. New facilities could be added to serve individual areas, but not without substantial costs. If on the other hand, development is located near existing facilities, it may cost the County added expense, but the cost can be absorbed in phased increments to match the growth rate of development. For example, it is much less expensive to put an addition onto an existing firehouse than to acquire land and construct a new firehouse.

Distance of existing facilities to growth areas is important to response time in emergency situations. Therefore, police and fire protection should be located to serve proposed concentrated residential development as well as commercial and industrial areas. Even non-emergency services can be made more efficient if located closer to the population concentrations. For example, Sheriff's Deputies currently need to drive to Gloucester to process an arrest when many of the apprehensions are made in the southern parts of the County.

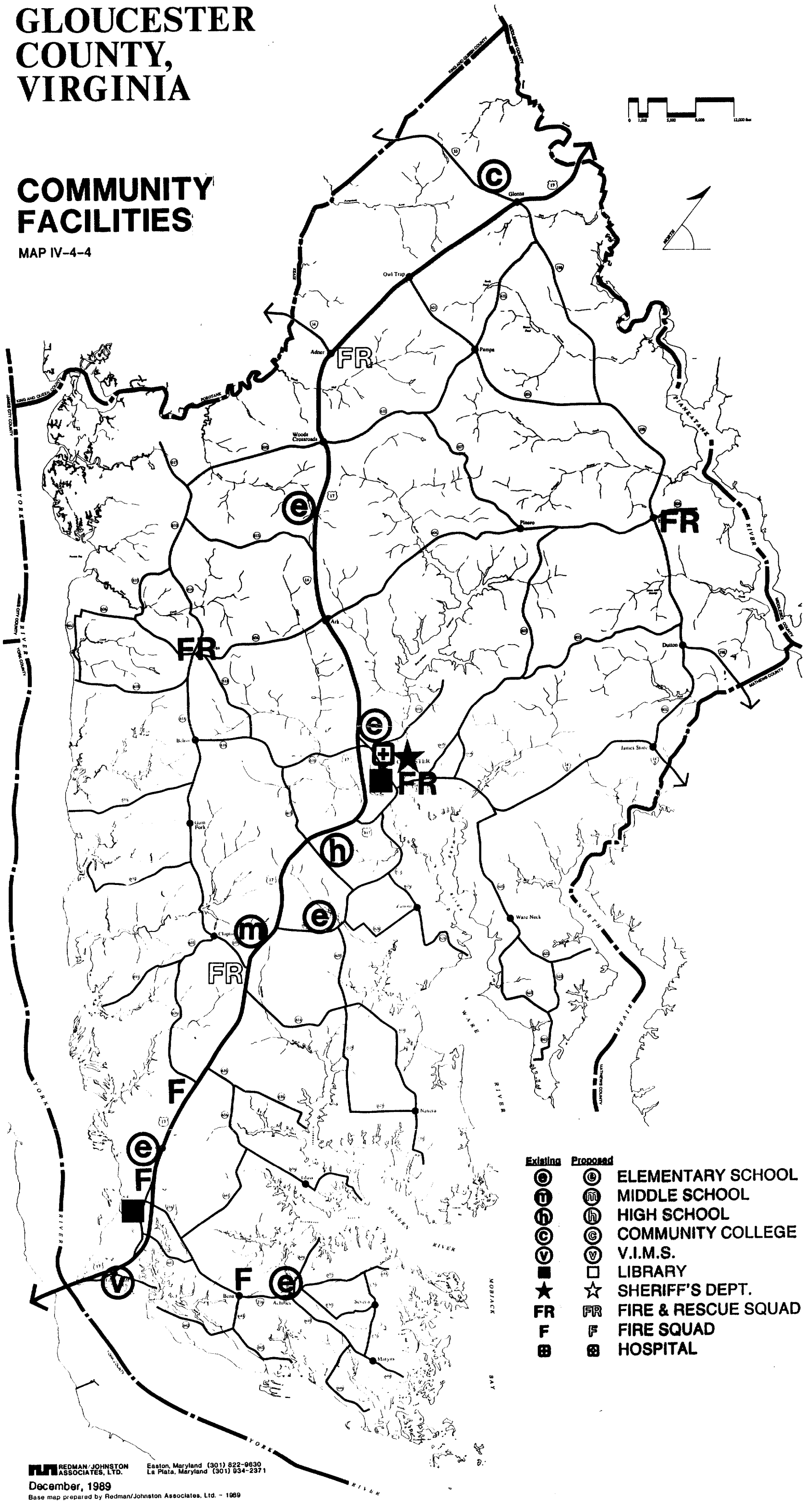
Fire Prevention -- Water supply can be a serious problem for areas outside public water service areas. In those rural areas, a water supply plan could be developed to insure that pumper availability and surface water supplies are coordinated. This would eliminate some of the problems associated with fire protection in rural areas.

Law Enforcement -- Deficiencies in facility space for police functions have been recognized and additional facilities are currently being planned. International City Managers Association studies indicate an average of 2.07 police personnel per thousand population in jurisdictions between 25 and 50 thousand people. Considering those actively involved in law enforcement, the current level of service is approximately 1.35 police personnel per thousand. This ratio does not take into consideration that a substantial portion of the Sheriff's Department's effort is directed toward serving the Courts and other administrative duties. Any reduced manpower needs that may be attributable to the County's low crime rate and rural nature are offset by the greater travel time and distances associated with rural service delivery. The current service level indicates a necessity to closely monitor manpower needs and to increase personnel commensurate with the planned population growth. By the year 2010 police personnel will need to increase by 30 to 45 sworn officers. Along with this increase in personnel will be the need to expand administrative offices and detention facilities.

GLOUCESTER COUNTY, VIRGINIA

COMMUNITY FACILITIES

MAP IV-4-4



REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

Base map prepared by Redman/Johnston Associates, Ltd. - 1989

LIBRARIES

The current level of service in Gloucester County is well below Virginia state standards of two volumes per capita. Past demand for services has not warrented increased services; however, recent trends in library use (up 92 percent in the past two years) reflects the higher level of expectation in service from residents migrating into the County.

Based on the American Library Association standards for service and using the current population projections, the recommended levels of service in the following categories have been estimated: total volumes required; square feet required; ground floor area; and total seats required. The population projections contained in Part II indicate that the 23,000 additional people expected in the County by 2010 will require 57,000 more books, 11,500 square feet of library space and 70 additional seats. The The Gloucester Library System has little capacity for more volumes, thus additional library space will be needed.

Virginia state standards indicate that the main branch of a County library system should have a minimum of 16,000 square feet and 60,000 volumes. Considering the location of the proposed development district in the southern part of the county and the anticipated growth, the Gloucester Point branch library will need to be expanded considerably within the planning period.

SOLID WASTE

The County will be generating more than twice the solid waste per year than it is currently generating due to the future growth; however, the planned landfill near Marlfield will accomodate this growth well within the planning period of twenty years.

The distribution of "green boxes" throughout the County has provided convenient disposal for residents; however, it has created numerous management problems for the County government. The areas around the dumpsters which are not manned can become sites of indiscriminate dumping. Alternative collection techniques would minimize the need for such an extensive use of "green boxes". One solution is the concentration of collection points at manned convenience centers.

ADMINISTRATIVE FACILITIES

Based on nationally derived indicators, the County will need 33 additional employees and 18,000 square feet of additional office space to provide services to future residents.

IMPLEMENTATION RECOMMENDATIONS

There are an array of alternatives available for achieving the objectives relating to the provision of facilities to manage and accommodate growth. This section provides

a brief discussion of the general techniques recommended. More specific recommendations are included as needed for individual public services.

DEVELOPMENT SERVICE DISTRICTS

Development Service Districts established in the growth management plan are based on the premise that new development can be serviced most efficiently if it is limited to certain areas within the County. The key to the success of a Development District is in the availability of services and capital improvements; therefore, the County must provide adequate sewerage capacity, water, roads and schools in order for the districts to accommodate the anticipated growth. It is essential, for example, that these areas have access to adequate sewer if they are to develop at the intensities necessary to manage and define growth within the County.

CAPITAL PROGRAMMING

A capital programming plan should be developed in conjunction with a growth management plan. For example, a well designed capital improvements plan will provide for the orderly extension of sewer and water at a rate needed to accommodate anticipated growth. The capital improvements plan will provide the vehicle for the County to set priorities and to make the most efficient use of available funds. Capital programming is the tool which should be used to guide growth toward predetermined areas of the County and at predetermined rates. The County should use the capital improvements program to guide developers in proffering conditions for the provision of public facilities.

VOLUNTARY PROFFERS

Voluntary proffers provide a direct means of obtaining the needed capital improvements to service new developments. Proffers should continue to be used to help defray the costs of expanding public services and facilities. Off site improvements of public facilities and dedication of land but not cash contributions can be used to offset the impacts of a proposed development associated with a rezoning. (Section 15.1-491.2 Code of Virginia.)

FISCAL IMPACT ANALYSIS

The development of a per unit fiscal impact of residential and commercial development would provide a rational basis on which to accept proffers from developers. It is intended that the fiscal impacts be calculated for water and sewage facilities, parks, roads and schools, as well as, for more public welfare needs such as police, fire, and emergency medical facilities. It is intended that the impacts be calculated based on accepted methodologies and following the standards described below.

Generally, the court decisions upholding impact fees or development exactions require that they meet a three-part standard. First, new development must demand new capital facilities. Secondly, a rational nexus or close relationship must exist between

this new development and the need for these new facilities. Finally, there must be some assurance that sufficient benefit accrues to the particular development that pays the fees. These tests are similar to the standards set forth by the Virginia General Assembly (Section 15.1-491.2 Code of Virginia) for voluntary proffering. Virginia courts have upheld the use of the proffer system when the above referenced standards are adhered to.

Though impact fees are not expressly authorized for Gloucester County, the detailed impact analysis will establish the basis for such fees once the County is enabled by the State legislature. Gloucester County may now use, to some degree, impact fees for water, sewerage and drainage control. (Section 15.1-491.2 Code of Virginia.)

ADEQUATE PUBLIC FACILITIES STANDARDS

Adequate facilities standards will help control the development process by showing that sufficient infrastructure and services are present or will be provided. These standards can ensure that land development coincides with the location and timing of capital facilities. Standards for water, waste treatment, transportation, and educational facilities guide the development review process. County established acceptable levels of service will serve as a basis for determining the impacts of development and for programming capital facilities.

Adequacy of the development should be considered for fire suppression, roads, schools, sewerage, storm drainage, and water. Minimum standards to determine adequacy need to be established for Gloucester County. For example, one of the criteria for determining the adequacy of sewer is that the interceptor is adequate to handle the peak flows calculated by the methodology set forth in the County's local ordinance for water and wastewater service. The County should consider dividing itself into policy areas which have different levels of service required. For example, rural areas may require a Level of Service B for roads, but in urban areas (full service areas) Level of Service D may be tolerated.

Though it is recognized that Gloucester County is not currently enabled to deny approval of subdivisions based on the lack of adequate public facilities, the State law (Section 15.1-466 E) does provide for the means of achieving adequate facilities objectives voluntarily. The County should pursue this technique in light of efforts by a growing number of Northern Virginia counties to gain the authority to more positively tie development approvals to the availability of public facilities.

SPECIAL TAXING DISTRICTS

Special taxing districts should be used by the County to provide certain additional public services for an area benefitting exclusively from such services. Gloucester County has the authority under the Virginia Water and Sewer Act to create Public Service Authorities for the purpose of providing any or all of the utilities and services described in the Act.

Section 5

HOUSING

HOUSING

The two dominant forces affecting the structure and characteristics of the County's housing market in recent years have been the high proportion of mobile home development and the increase in growth primarily in the northern part of the County. These factors, with the housing characteristics and demographic trends, will be examined to provide the background for evaluating the alternative implementation strategies necessary to achieve County housing objectives.

BACKGROUND

This section identifies the characteristics and trends of the Gloucester housing market. The Census Bureau indicates a change of 2743 housing units from 1970 to 1980 or a 53.4 percent increase. This is a trend that has continued and accelerated into the 1980s with an increase of 5100 housing units through the period 1980 to 1989. The current estimate of housing units in the County is approximately 13,822 units.

The characteristics of the housing units accommodating the County's households and unoccupied units are shown in Table IV-5-1. It is particularly relevant that owner occupancy has been maintained and even increased somewhat in the County. Rental units have increased from 14 percent to 16 percent of the housing stock in 1980. Vacant housing declined from almost 14 percent of the housing in 1970 to 9 percent in 1980 These trends generally imply a more stable local housing situation and one increasingly typical of a growing County. The proportional increase in occupied and owner occupied is believed due in large measure to basic changes in the income, and socio-economic level of the households migrating into the County.

Analysis of the physical nature of Gloucester's housing units (see Table IV-5-1) reveals the following characteristics. First, it is obvious that though it has declined proportionally, the dominant unit is the single-family detached home. This type of housing still comprises almost four-fifths of all residential units. Second, the number of units in "apartment" structures (five or more units in the structure) increased by over 300 percent between 1970 and 1980. Third, the mobile home is a significant and increasing factor in the County's overall housing picture. The proportion of mobile homes in the total housing stock increased from 6.2 percent to 12.0 percent between 1970 and 1980. This trend has continued through this decade with almost 16 percent of the current housing stock in mobile homes. Table IV-5-2 shows that 23.3 percent of new home construction since 1980 has been in mobile homes.

Between 1980 and 1988, the County's stock of year-round housing increased by over 5100 units, of which over 800 were multi-family. This reflects a 160 percent increase in multi-family units that existed in 1980. Between 1989 and 2010, the County is expected to add about 550 housing units a year. The Comprehensive Plan and associated County policies will, ultimately, influence where future housing is located in the County as well as the mix of types of housing.

Table IV-5-1

Housing status and units per structure
Gloucester County

	1970	%	1980	%	% Change
Year-round Units	5,135	97.0	7,878	94.8	53.4
Vacant Seasonal	159	3.0	434	5.2	172.9
TOTAL HOUSING UNITS	5,294	100.0	8,312	100.0	57.0
Owner Occupied	3,712	72.3	5,871	74.5	58.2
Renter Occupied	718	14.0	1,275	16.2	77.6
Vacant - For Sale	47	0.9	146	1.9	210.6
Vacant - For Rent	71	1.4	78	1.0	9.8
Vacant - Held for Use			124	1.6	---
Vacant - Other	587	11.4	153	1.9	---
Vacant - Year-round			231	2.9	---
TOTAL YEAR-ROUND	5,135	100.0	7,878	100.0	53.4
Units in Structure:					
1 Unit	4,643	90.4	6,209	78.8	133.7
1 Unit, attached			73	0.9	---
2 Units	73	1.4	179	2.3	145.2
3 and 4 Units	32	0.6	193	2.4	503.1
5 or More Units	69	1.3	281	3.6	307.2
Mobile Homes, etc.	318	6.2	943	12.0	196.5
TOTAL UNITS	5,135	100.0	7,878	100.0	53.4

Table IV-5-2

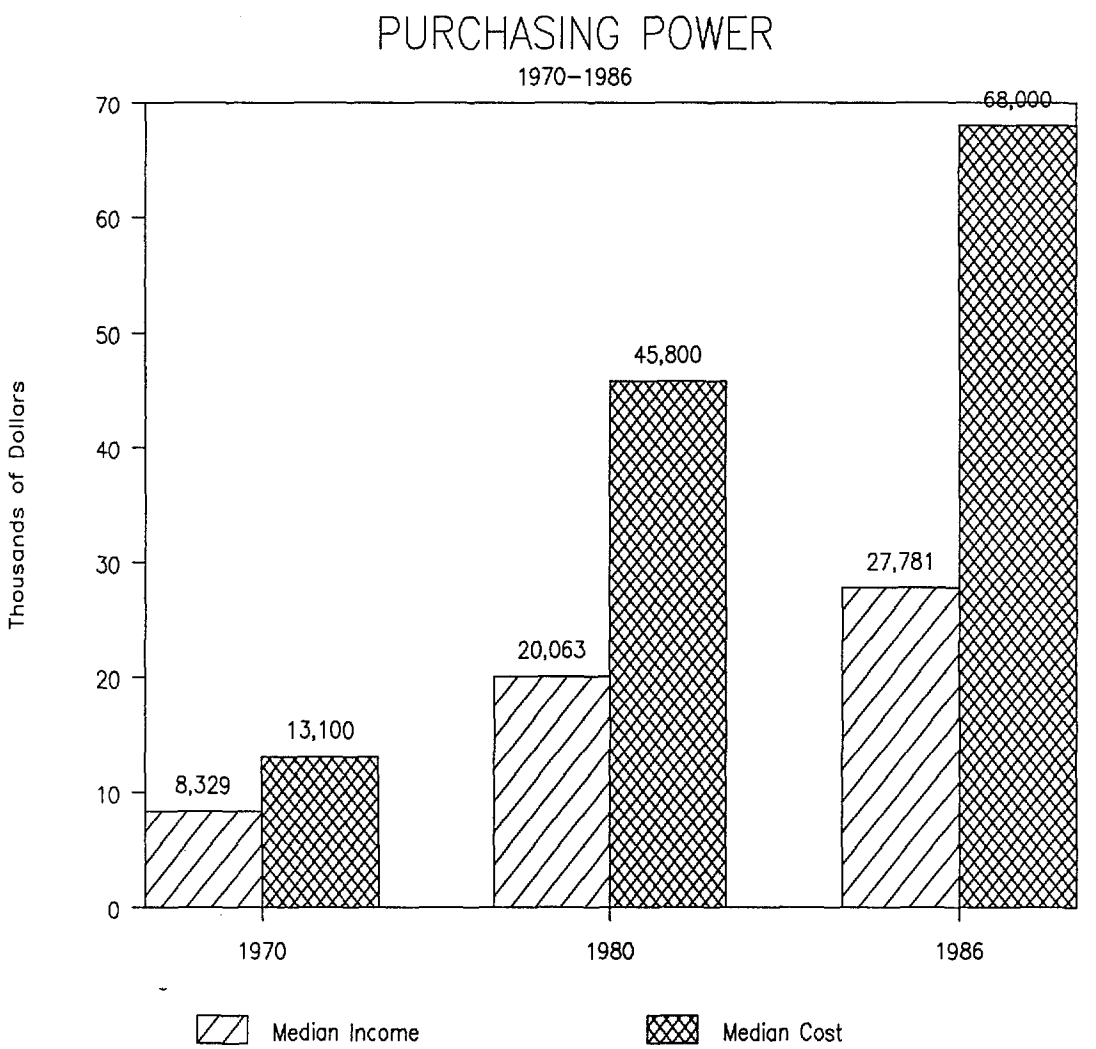
DWELLINGS BY TYPES 1970-89

	Conventional Dwelling Units	%	Mobile Homes	%	Total Dwelling Units
1970	4,817	93.8	318	6.2	5,135
1980	6,935	88.0	943	12.0	7,878
1989	11,277	84.1	2,132	15.9	13,406

SOURCE: Department of Community Development, Gloucester County

Gloucester residents have, in general, noticed that the cost of housing and the cost of living have soared. These observations are substantiated when the median family income is compared with the cost of owner occupied housing in the County since 1970 in Figure 7-1. The median value of an owner occupied house in Gloucester has increased at a greater rate than median family incomes. The median cost of owner occupied housing increased 466 percent since 1970 while the median family income during that time only rose 233 percent, showing a relative loss in purchasing power of the housing consumer.

Figure IV-5-1



Source: US Census, 1970, 1980; Redman/Johnston Associates, Ltd.

ISSUES

AFFORDABLE HOUSING

One consequence of becoming a "bedroom community" is that newcomers not only add to the demand for public services, they also place more stress on the cost and availability of housing. Residents coming into the County are able to afford older structures that, in the past, might have been available for low to moderate income residents. They also build new housing that is markedly higher in value than some of the existing rural dwellings, heightening the degree of disparity between the cost of housing and the existing resident's ability to pay. Many of the new residents either continue to commute to jobs in the Hampton Roads area or they come to retire in Gloucester. Consequently, there is not a corresponding increase in new jobs that in many growing communities alleviates some of the housing problems by increasing the existing residents' financial ability to acquire new housing. The result is an increased gap between the housing that the market provides and what the lower income residents of the County can afford. Problems have also been created by the gap between the quality of housing owned by new residents and the low income sector of the community.

Another serious issue facing Gloucester is the availability of affordable housing for the lower income residents. A gap exists between what is or can be built, and what many of the elderly, lower income residents and newly formed families are able to afford. The predominant form of housing available in the County is the single family detached dwelling unit. Typically, the cost of this particular dwelling type is simply too high for most people falling into these groups. Lower income families are excluded from the housing market when development is restricted to single family residences since they generally cannot afford this type of housing. Most of the high density housing that has been built in the County has failed to meet the needs of those with modest incomes county-wide, especially the six percent "hardcore" underhoused living without bathrooms and/or heating with wood exclusively.

Affordable housing is also a problem for many elderly persons who must rely on limited, fixed incomes. This fact is underscored since 44 percent of the householders (family and non-family) below the poverty level are 65 years or older. Those elderly who are able to afford larger homes may reach a point where they no longer wish to or are no longer able to maintain them, and, therefore, would be interested in smaller homes on smaller lots or attached dwelling units of one type or another.

Newly formed families are another group who often lack the necessary capital for financing even modestly priced single family homes. Instead, they look to multi-family units or mobile homes as a more practical place to live.

The need to provide for more affordable housing is a concern raised by elected officials, planners and citizen groups throughout the County. It has been noted that housing costs in the County increased dramatically between 1970 and 1986. During this period, owner-occupied housing accounted for an increasingly larger share of total housing.

RENTAL HOUSING SUBSIDY PROGRAMS

Affordable rental housing in Gloucester is subsidized through the following:
Department of Housing and Urban Development (HUD)

1. Section 221 (d)(3) provides mortgage insurance to help finance the construction or substantial rehabilitation of large multi-family (5 or more units) rental or cooperative housing projects for low and moderate income families.

2. Section 8 Existing Certificates and Moderate Rehabilitation Housing provide assistance on behalf of households occupying physically adequate, moderate-cost rental housing of their own choosing in the private market. Federal payment per unit equals the difference between the government-established Fair Market Rents and thirty (30) percent of the tenant's income. This Program is administered through the Rental Assistance Office.

3. Section 8 New Construction and Substantial Rehabilitation subsidizes rents of lower-income households occupying public and privately developed projects. Federal payment per unit equals the difference between the government-established Fair Market Rents and thirty (30) percent of the tenant's income. In Gloucester, this Program is administered through the Rental Assistance Office.

Farmers Home Administration (FmHA)

Section 515 of the Housing Act of 1949 authorizes FmHA to make or insure loans to finance the purchase, construction, or rehabilitation of rental and cooperative housing in rural areas for occupancy by the elderly, the handicapped, or low and moderate income families. The purchase of a site and the provision of essential housing-related facilities may be included in a loan where appropriate. The 1983 amendments to the Act require that, to the extent that rental assistance programs are available, all units must be occupied by very low income persons (income below 50% of the median).

The Rental Assistance Office which administers HUD's Section 8 Program, reports that there are a backlog of applicants on a waiting list for the availability of affordable rental housing through the Section 8 Program. With only 50 units in the County approved for Section 8 entitlement, some of applicants waiting for acceptance will be there for as many as three years.

HOUSING CONDITION

The condition of the housing stock in Gloucester, as of 1980, is characterized as follows:

1. Age of the Housing Stock--According to the Census, only 2152 of the year round housing units were built in 1939 or earlier. This is just 16 percent of the current inventory and illustrates the fact that the County has experienced a substantial proportion of its growth since the beginning of World War II. Over 60 percent of the total housing stock was built after 1970.

2. Bathroom Facilities--The absence of bathroom facilities is an indicator of housing problems. In 1980, 432 (6.0 percent) of the total occupied units lacked complete plumbing for exclusive use. As a point of comparison, Mathews County to the east had 9.8 percent of its housing units without adequate plumbing and Middlesex had 9.1 percent. These are units which should be targeted for rehabilitation and may be candidates under the Residential Shoreline Sanitation Program for financing. This Program was established as part of the Chesapeake Bay initiative for the purpose of providing low income residents with funding to repair/replace septic systems which are in violation of sanitation regulations.

3. Heating Equipment--14.4 percent of the housing in 1980 lacked central heating and were heated exclusively with fireplace, woodstove, or portable heaters (electric or kerosene).

Scattered site mobile homes in the County represent a unique housing condition. It has been difficult for the County to control the quality and location of mobile homes on individual lots.

For the most part, the overall housing stock appears to be in reasonably good condition. It does exhibit characteristics of a rural area. Given the fact that a significant proportion of the housing is associated with the exurban migration, the conventionally built housing stock has been priced beyond the affordability by people with relatively modest means. The high proportion of mobile homes being located in the County during the decade has provided a substantial pool of affordable housing in lieu of more conventional multi-family structures.

HOUSING AVAILABILITY

Gloucester's housing stock is in generally good condition; however, some families are ill-housed, and there is a continuing need for new units to accommodate families of modest means. Efforts by the private-developer community in association with County and State agencies began to increase the number, quality and variety of housing units available in the County during recent years.

One housing production requirement must be kept in mind. The effective operation of the housing transfer process involves a continuous creation and rapid turnover of vacancies. There must be an ever-available reservoir of standard housing vacancies to broaden the choices available to those seeking new quarters. This reservoir includes new units produced speculatively for sale or rent and used units put on the market as families are disbanded, move out of the area, or transfer within the area.

Although new units obviously are not produced specifically for a "vacancy reservoir", the maintenance of an adequate vacancy reserve must be taken into account in estimating new production requirements. As population grows, the size of the vacancy reserve must also grow. However, the rate of vacancies (as a percent of the total housing stock) may remain relatively stable. Appropriate target rates may vary with the area, but a common standard is 1 percent for owner-occupied and five percent for renter-occupied units. In 1980, about one percent of the rental units were vacant and ready to be rented. About 1.9 percent of the owner occupied units

were available for sale. These indicators show that the County's "vacancy reservoir" for rentals is a potential area of concern in the overall housing picture.

The movement of a large generation of people now in their twenties out of their parents' homes and into the housing market, the growth of female employment, the associated trend toward postponing marriage and maintaining independent households all contribute to the national trend toward increased number of single heads of households. In Gloucester the single households increased to 17.5 percent in 1980. This is a clear trend which has created a demand for smaller affordable dwelling units.

The following is a summary of the problems and issues related to housing described above:

- A lack of affordable housing exists for a spectrum of the County's households due to a variety of forces.

- The lack of affordable rental housing is most acute with the lowest income households, especially the elderly and single parent households.

- There is a need for improvement of housing conditions in some areas especially for the "hardcore" underhoused usually found in dwellings lacking adequate plumbing and sanitation facilities.

- Mobile homes are used to a large degree by low and moderate income residents; however, concern exists among County residents that the configuration and development of mobile homes sites and parks are not generally providing safe, sanitary or pleasing environments for the residents. Equal concern exists for the negative fiscal impact with such a large proportion of new housing being in the form of mobile homes which generate significantly less revenue for the County.

- Based on current trends, a need exists for small affordable housing units for the single head of household segment of the population, both young and old.

IMPLEMENTATION RECOMMENDATIONS

There are a variety of implementation alternatives available to local governments for the provision of affordable housing. The following implementation techniques have been selected to implement the County's identified objectives.

Flexibility in Housing Types -- Foster land use patterns that reduce unit land costs and encourage flexibility in housing types. This can be achieved through planned residential development and cluster development provisions in the County's zoning ordinance. This strategy will also be implemented by one of the basic concepts of the Land Use Plan which is to allow maximum flexibility in configuring lots into clusters rather than relying on minimum lot sizes to determine the desired density. This flexibility also allows for maximizing efficiency in providing infrastructure to

the homesites. The creation of a Development District in close proximity to places of employment is consistent with housing objectives. The Development District will be capable of accommodating higher density development with adequate road systems and public facilities. The Land Use Plan encourages development in the Rural Service Centers and Crossroad Settlements throughout the County thereby providing flexibility in location of housing, as well as housing diversity. Finally, the Land Use Plan allows for multi-family housing to be permitted in the Village Centers and Development District and other appropriate locations without increasing overall permitted densities.

Use Federal and State Programs -- Continue to use Federal and State programs to help meet Gloucester County's housing needs. The following housing programs should be used by the County to assist residents with low to moderate incomes.

- **Virginia Housing Partnership Program** -- Gloucester is eligible to apply for either a block grant or grant for specific project under this program. Eligible activities include single and multi-family rehabilitation, energy loans, and funding for emergency home repairs.

- **Virginia Housing Production Program** -- Loans are provided to non-profit organizations or for-profit developers to construct single-family homes.

- **Small Cities Community Development Block Grant (CDBG)** -- Funds are passed through the State Department of Housing and Community Development for a variety of housing related projects such as housing rehabilitation programs.

- **HUD Section 236 Program** -- subsidizes mortgages for rental housing projects and provides rent supplements which are subsidy payments to the owners of private rental housing on behalf of lower-income tenants.

- **HUD Section 202 Housing for Elderly and Handicapped** -- provides direct loans for the development of rental housing for the elderly and handicapped. Projects also receive Section 8 subsidies.

- **HUD Section 8 Housing Vouchers** -- provides rent subsidy payments to be based on a newly established payment standard rather than on actual unit rents. The standard is to be based on the Fair Market Rents set for the Section 8 Existing Housing Program. Families renting units above or below the new payment standard will pay more or less than 30 percent of adjusted income for rent.

Bonus Densities for Affordable Housing -- Grant bonus densities to planned development projects to encourage the provision of more affordable housing. It is recommended that in order to encourage the production of housing for low-income residents, the density of development within certain districts may be increased with the following guidelines:

- Development not receive more than a bonus of one additional dwelling unit per acre above the permitted density.

- The units provided must meet all conditions with regard to income qualifications and other standards that may be established by the County to ensure that the units are bonified affordable housing.

- The bonus for low-income housing should not be permitted where subsidized units constitute more than 20 percent of a development, except in the case of a development of less than 10 dwelling units.

Intra-family Transfers -- Permit intra-family transfers of lots in the Rural/Agricultural Conservation Districts for immediate family members to insure availability of ample building lots for family members in spite of lower densities.

Mobile Homes -- Continue to permit mobile homes as a means of providing affordable housing with the needed performance standards to insure their use creates a safe, sanitary and comfortable living environment. Mobile homes, or manufactured housing, tend to be less expensive than most other types of single family homes and, consequently, serve as a practical alternative to affordable housing. Within the Gloucester County Zoning Ordinance, Subdivision Ordinance and other applicable ordinances, mobile home subdivisions and mobile home parks will be required to meet all the same standards as required for other single family dwelling detached development. For example, road standards that apply to conventional housing will also apply to mobile home parks. Mobile homes will continue to be permitted in mobile home parks and subdivisions through conditional zoning in the Development District where the infrastructure can support the density. Individual mobile homes on scattered sites will be permitted in the Agricultural and Rural Conservation Districts, subject to certain performance standards such as controls on types of roof, width and configuration of the units.

Accessory Apartments -- Permit accessory apartments under certain conditions with adequate safeguards to protect the character of the existing residential neighborhoods. This strategy will stimulate new, moderate cost rental housing for both young and elderly households while preserving large, older homes and allowing elderly homeowners to stay in their homes. Among the conditions of approval for accessory apartments is that the accessory apartment be "clearly subordinate to" the main unit. This will be achieved by requiring that the apartment be less than a specified percentage of the square footage of the original house. Another condition is that conversions should not be permitted in new housing. Finally, the house should have at least one owner occupied resident and should, from the exterior, appear to be a single family residence.

Indoor Plumbing/Adequate Sanitation -- Provide technical assistance to get indoor plumbing for all existing low and moderate income residents who want it. Actively promote the Residential Shoreline Sanitation program so that failing septic systems can be brought into compliance in the target areas.

Fixed Floor Area Ratio -- A fixed floor area ratio for single family residential structures in a planned residential development will allow smaller homes to be built on smaller lots. Housing costs can be contained in the small lot single family developments by tying the size of the dwelling unit to the size of the lot by a maximum floor area ratio per lot. This will ensure that the scale of the house is consistent with the lot thus preserving the less dense residential character sought in single family detached housing.

Commercial Apartments -- Permit commercial apartments in the moderately intense commercial use zones in the Activity Centers and Commercial Centers. This type of housing represents a lower cost option for builders since there is no land value associated with the dwelling units. In addition to providing more affordable housing, locating residential uses in commercial areas also provides for the more efficient use of existing infrastructure and government services and greater accessibility to jobs. Because they are used during the hours normally left vacant -- the night and early morning hours -- greater use is made of existing parking lots. The County should tie increased lot coverage or floor area ratios to the provision of second floor residential units as an additional incentive to increasing affordable housing stock.

Housing Code -- Adopt and enforce a housing code to remove substandard conditions of rental housing.

Volunteerism -- Coordinate local resources to rehabilitate and upgrade existing housing. One approach is to use apprentices in the building trades at the Vocational-Technical Center to rehabilitate houses.

Self Help -- Encourage the formation and operation of Self-Help groups. One such organization is the Habitat for the Humanities. The County might consider providing money for these organizations.

Designing for Economy -- Designing for economy can be achieved without sacrificing marketability. The County should proactively educate builders on techniques proven to save money and, when possible, reduce standards that will save money without sacrificing structural strength or aesthetic quality. In most cases current County building codes permit cost saving designs; however, there are opportunities for the County to relax standards. The County needs to evaluate the building code to ensure that unnecessary impediments are not preventing the use of economical designs.

Expedition of the Administrative Process -- The County can make a direct contribution to affordable housing by expediting their procedures regulating land use and housing construction. A basic step the County should take to promote affordable housing is to review the entire regulatory process from zoning through permitting as it is actually experienced by developers, to identify procedures that can be simplified, abbreviated or improved. Some of the features of a regulatory modernization arrangement are as follows:

- Provide formalized assistance to developers prior to application.
- Consider expediting reviews and approvals through a development coordination office possibly in the County Administrator's Office.
- Use administrative hearings in lieu of legislative bodies, or appointed boards or commissions.
- Prepare a variety of policy manuals to be made available to builders and developers as a unified and ready source of information.
- Use "over the counter" or "one stop permitting" when possible, particularly on small projects.

- Use private consultants to augment County planning and engineering staff during periods of intense permit activity.

- Provide for interdepartmental coordination for complex projects possibly through the County Administrator's office or the Department of Community Development where umbrella authority exists to break free any problem areas.

- Review legislative procedures to explore means of reducing processing time.

Housing Trust Fund -- The Virginia Housing Development Authority (VHDA) and Virginia Department of Housing and Community Development (VDHCD) will be administering such a State fund to be used as a revolving loan fund to induce the development of low and moderate income housing statewide. A housing trust fund can be both a generator and a conduit of funds for the development of affordable rental housing. To create a flexible Housing Trust Fund as a mechanism to help fund affordable rental housing, the County should consider the following:

- Designing a housing trust fund that will be a stable source of financing. Sources could include proffers in the form of cash contributions from developers, donations from corporations, county government contributions, and real estate transfer taxes.

- Designating uses for housing trust funds such as interest rate buy-downs for projects meeting affordable rental housing criteria, second trust financing, land cost buy-downs, water and sewer tap fee reductions, rent supplements, and seed money for non-profit developments.

- Actively pursuing state enabling legislation, as necessary, to allow the use of housing trust funds and certain revenue sources for affordable rental housing.

SUMMARY

In the end, it is the inability of the market to easily accommodate the needs of all the residents of Gloucester that underlies the entire housing issue. The housing problem is also one that cannot easily be solved. The federal government and others have been grappling with this issue for decades. Despite these efforts, it is still a major problem, and certainly one that will not be solved by this Plan. The best that can be done is to work at the housing issue from a variety of directions and to seek incremental gains.

Section 6

PARKS AND RECREATION

PARKS AND RECREATION

As a result of a seemingly endless process of land development, federal, state and local governments have become involved in providing recreational systems to insure that recreational, scenic, and open space land is preserved for current and future generations. Parks, recreation, and open space are essential to the health, general welfare, and well-being of the public. Gloucester County must continue to be involved in recreation planning for it is in the community in which people live that their unique recreational interests and needs are best served.

Gloucester can expect the need and resulting demand for recreational opportunities to expand as the population grows, particularly in the southern portion of the County which is the most densely developed area. The County should emphasize senior citizens' programs due to the increasing size of the aging population. Rising incomes in Gloucester could provide citizens with the means to pay for recreational activities of both a private and public nature. Although silent and sometimes forgotten, the disabled, the elderly, and the poor are special segments of the population which need recreational activities. The trend towards more leisure time will intensify citizens' demands for recreational facilities and programs.

In regards to natural features, those areas with soils suitable for development will be under the greatest pressure for urbanization and, therefore, also would be areas of greatest need for public recreation. With a majority of Gloucester's total land area in woodlands, the County should encourage the expanded use of commercial and private woodlands for public recreational activities. With over 12,000 acres of wetlands in Gloucester, the County must safeguard these areas while utilizing their recreational potential. Gloucester's abundant water resources provide excellent water-based recreational opportunities, limited only by the lineal development along the waterfront (prohibiting public access to the water), shoreland erosion, and stinging sea nettles which would limit the swimming potentials.

Land use concentrations indicate that suburban populations tend to demand and participate in more recreational pursuits than do city dwellers. As single-family home lots become smaller, the need for public areas for recreation will increase. Continued growth, leading to denser development, will emphasize the need to expand the County's public recreational program.

RECREATION INVENTORY

An examination of the existing supply of recreation in Gloucester shows that the vast majority of recreational acreage is privately owned. The number of recreational facilities is also largely privately owned. Unfortunately, the general public has access to only a limited number of areas.

> Tindall's Point Park - This nature oriented park is approximately four (4) acres in size. A few picnic tables offer park users seating and table space for picnic meals.

Gloucester Point Beach Park - Covering approximately five (5) acres, this park has picnic tables and grills, a fishing pier, and a small beach for sun bathing.

School Facilities - Outdoor recreational facilities are available at all schools though the general public has very limited time periods where they are allowed access to school facilities. The Gloucester Community Education Department allows the Department of Parks and Recreation free use of school facilities when they are not being utilized by school sponsored activities.

On the other hand, the majority of the recreational programs in Gloucester are sponsored by the Department of Parks and Recreation (DP&R). Enrollment in these programs has been steadily increasing over the years, which indicates that the Department of Parks and Recreation has been quite successful in its endeavors.

Gloucester County's inventory of public facilities as compiled by the Virginia Commonwealth University for the Virginia Division of Parks and Recreation in 1987 is summarized in Table IV-6-1. These facilities are only including those that are always open to the general public.

Table IV-6-1
GLOUCESTER COUNTY PUBLIC RECREATIONAL FACILITIES SUMMARY

Facility	Unit	Number
Beach	acres	1
Boating Access	ramps	1
Fishing Piers	number	2
Nature Trails	miles	*1
Picnicking	tables	13
Playgrounds	number	0
TOTAL ACRES	acres	9

Source: Virginia Division of Parks and Recreation, 1987 and Gloucester County Parks and Recreation

** Leased at high school*

As can be seen in the Public Recreational Facilities Summary table, there are very few public areas or facilities. Semi-public areas, which include such facilities as schools, offer very limited access of facility use through the County's Department of Parks and Recreation and were therefore not included in the above tally. Public use is limited because school-sponsored activities occur during and after school hours; which does not leave much time for activities for the general public.

Gloucester County's extensive shoreline provides residents with ample water area to partake in water-related activities. According to the Virginia Division of Parks and Recreation, 27.08% County residents participate in power boating and 7.19% in sailing. A number of these individuals store their boats out of the water and need to utilize ramps when they go boating. Privately-owned marinas, in addition to supplying boat ramp access to the water and boat storage (slips and/or dry docks), contribute to the economics of the County. There are also a number of other areas where boat ramps give access to the water; however, great majority of these ramps are privately owned and maintained. Oliver's Landing is the only ramp owned and maintained by the County's Park and Recreation Department. At present, there are a few additional ramps where the public has access to the water since these ramps are owned by the Virginia Department of Transportation or the Department of Games and Inland Fisheries. Table IV-6-2 lists both privately and publicly owned sites.

Table IV-6-2

GLOUCESTER COUNTY LANDINGS AND ACCESS SITE

LANDING	BODY OF WATER	ROUTE	ACCESS RAMPS	MARINA SLIPS
Anchorage	North River			6
Aberdeen Creek Landing	Aberdeen Creek	632	1	0
Blevins Landing	Blevins Creek	650	1	0
Brays Landing	Severn River, NW Br.	636		6
Brays Poing Landing	Severn River, NW Br.	636	1	0
Buoy 22 Marina			1	40
Capahosic Landing			1	0
Carmines Landing	York River	1303		
C.C. Conway Seafood	York River			4
Cherry Point Landing	Heywood Creek	654	1	0
Chris Lett Compground	Piankatank River		1	15
Clay Bank Landing	York River	616	1	0
Cooks Landing Marina	Perrin River		1	199
Cooks Landing Marina			1	44
Cooks Landing Marina			1	175
Cooks Seafood Inc.	Sarah Creek			14
Cuba Landing	Perrin River	643	1	0
Cypress Shores KOA			1	0
Deep Point Landing		606	3	0
Dockside Condominium	Sarah Creek			77
Fields Landing		1301	1	0
Freeport Marina	Piankatank River	673	1	32
Gilberts Marina			1	36
Glass Launch Ramp			1	
Glass Marina			1	44
Glass Marine Inc.			1	14
Gloucester Pt. Camp			1	0
Glass Point Landing			1	
Gloucester Point Marina	Sarah Creek, NW Branch		1	132
Gloucester Pt. P.A.A.			2	0
Gloucester Point Ramp			2	0
Gloucester Seafood Inc.	Aberdeen Creek			4
Gloucester Yacht Club	Sarah Creek		1	24
Guinea Landing	Browns Bay	651	1	0
H. Green & Sons Seafood	Perrin River			0
Holiday Marina	Rowes Creek		1	57
Jenkins Neck Landing			1	0
Jenkins Neck Lndg #2			1	0
Johns Point Landing			1	0
Jordan Maine Service Inc	Sarah Creek		1	32
King Landing			1	0

con't next page...

cont'd from previous page

LANDING	BODY OF WATER	ROUTE	ACCESS RAMPS	MARINA SLIPS
Mark Pine Landing			0	0
Marshall Seafood	Severn River			15
Miller Landing	Poropotank River	612	2	0
Monday Creek Landing	Monday Creek		1	0
Nicholson's Marina			1	8
Oliver Landing	Cedarbush Creek	633		6
Paynes Landing			1	0
Paynes launch Ramp			1	0
Phelps Seafood Inc.	Severn River, SW Branch			3
Private Pier w/ docking	Timberneck Creek			24
Public Boat Landing	Ware River	621		0
Public Boat Ramp, Piers	Timbernech	632		42
Public Boat Landing	Aberdeen Creek			15
SE Bonneville Seafood	Severn River			6
Sawgrass Pointe Marina	Sarah Creek			19
Seabreeze MH Pk Docking	Severn River			10
Sedger Creek Landing	Sedger Creek		1	0
Severn River Landing	Severn River		1	0
Shelton Harbor Marina	Severn River			49
Tanyard Landing	Poropotank River	617	1	0
Tanyard P.A.A.			1	0
Thousand Trails Cmpgrd.	Piankatank River		1	
VA Inst. of Mar. Science	York River		0	12
Ware River Yacht Club	Ware River		1	24
Warehouse Creek Landing			1	0
Warehouse Landing			1	0
Welford Taliferro WSD			0	0
Williams Landing			1	0
York River Yacht Haven	Sarah Creek		1	320

Source: "Inventory of Areas and Facilities," Virginia Division of Parks and Recreation, 1987
"Tidewater Virginia Boating Access Inventory," VA Dept. of Conserv. & Rec., 1989

PLANNED FACILITIES

The Gloucester County Department of Parks and Recreation (DP&R) have been working with various groups and organizations in efforts to increase the diversity and availability of parks and recreational facilities in the County.

Ark Park - The DP&R is currently working with the Gloucester Fair Association to develop a thirty (30) acre park on property the Association owns in Ark, Virginia. A lease agreement has been reached by the two groups for using the land for recreational purposes; but, no facilities have yet been developed. Plans call for athletic fields, a recreation center, a swimming pool, fairgrounds, animal show rings, picnic areas and trails.

Abingdon Park - The Gloucester Community Education Department, the Gloucester DP&R and a citizen's committee have joined efforts to develop a small park on land that the County owns adjacent to Abingdon Elementary School. As reported by DP&R, one soccer field should be developed before the end of 1989 with funds raised by the committee and a financial contribution made by the Board of Supervisors.

Pine Mill Soccer Field - A lease agreement was recently signed by the Board of Supervisors and Delmarva Corporation to lease a soccer field in a new subdivision. The lease is for both Fall and Spring soccer seasons with a five year renewal agreement.

As can be seen in the above proposed/planned parks, the County is working with privately-owned properties two out of three times.

In addition to attempting to acquire more facilities, DP&R conducted a needs survey through random phone calls to County residents in June and July of 1989. Through that survey, it has been determined that the three activities that the most families participate in throughout the year are Cultural Programs (67%), Community Special Events (67%), and Visit County Parks (51%). In addition, Educational Programs, Athletics and Swimming are the three activities that are participated in the greatest number of times in a year. This type of information can be very useful in guiding priorities for the County in determining funding for recreational facilities and programs.

ISSUES

A recreation need exists when the demand is greater than the supply. If that need can be identified before it occurs, the possibility exists to meet the need when it occurs instead of after it occurs. A variety of methods with varying degrees of accuracy exist in order to determine present and future needs. Available resources such as personnel and finances preclude the degree of accuracy that could be attainable in determining need.

The Virginia Division of Parks and Recreation's established local recreation and park site standards call for at least ten (10) acres of recreation land for each 1,000 persons in a community, one-quarter of which should be for active recreation (Table IV-6-3). This does not include large regional and state parks, golf courses and other special recreation areas but does provide for all park needs at the neighborhood, community and district park scale.

By these standards, Gloucester County should have approximately 705 acres of recreational area by 1990 (Table IV-6-4), with 176 acres available for active recreation. However, there is only a total of 9 acres of public lands in the County. School facilities consist of 141 acres but there recreational use by the general public is so limited, therefore, only 9 acres can really be counted as parkland. This makes the County deficient by a total of 696 acres! When planning for recreational facilities to make up existing deficiencies and provide for additional future demands, the County must not look just at the total acreage needed but also ensure that a

variety of park types are offered which are distributed equitably throughout the County.

Table IV-6-3
PARK STANDARDS

PARK TYPE	SERVICE RADIUS URBAN/ SUBURBAN	SERVICE RADIUS RURAL	MINIMUM SIZE (acres)	ACRES PER 1,000
Neighborhood	0.5 mile	1-1.5 miles	5	3
Playground or Playlot	0.5 mile	-	0.25	-
Community	1 mile	3-7 miles	20	3
District	5 miles	10-15 miles	50	4
Regional	25 miles	25 miles	100	*
State	1 hour	50 miles	400	10
TOTAL				20

* *Variable*

Source: Virginia Division of Parks and Recreation

Table IV-6-4
PROJECTED DEMANDS FOR PARKS
GLOUCESTER COUNTY, VIRGINIA

	EXISTING PARKS (acres)	ACRES PER 1,000	1990 NEEDS (acres)	2000 NEEDS (acres)	2010 NEEDS (acres)
Population:			35,218	47,474	58,729
PARK TYPE					
Neighborhood	0.0	3	105.65	142.42	176.19
Playground or Playlot	0.0	-	-	-	-
Community	9.0	3	105.65	142.42	176.19
District	0.0	4	140.87	189.90	234.92
Regional	0.0	*	-	-	-
State	0.0	10	352.18	474.74	587.29
TOTAL	9.0	20	704.36	949.48	1174.58

* *Variable*

Sources: Virginia Division of Parks and Recreation
Redman/Johnston Associates, Ltd.

There are a variety of methods that can be used to determine recreational facilities need for a given area. Detailed descriptions of these various methods can be found in *Recreation Needs Analysis: A Review of Techniques and A Preliminary Needs Assessment for Southeastern Virginia*, SVPDC, August 1988. Accuracy of the resulting analysis naturally depends on the number of factors that are able to be included. These factors include accurate counts of existing facilities and

participation use surveys collected from resident and non-resident usage of facilities. For example, one method is the Population Ratio Facility Standards methodology. This is based on Virginia standards (or National standards when state standards were unavailable) detailing the number of people per given activity unit. For instance, the population ratio standard for a Jr. Olympic swimming pool is 10,000 people per pool. If the population of a given area was 20,000, two pools would be needed. Although this method is quick to calculate and easily understood, it does not take into consideration the socioeconomic, geographic, climatical and cultural differences between localities.

In order to have more locally specific needs identified, participation rates requiring surveys are needed. Once again, available resources effect the accuracy as they determine the form the survey takes. The Virginia Department of Parks and Recreation conducted such a survey in 1982 which they updated in 1987 by utilization of a data base. In the 1982 survey, participants were given a list of activities and asked to note which ones they would participate in and how often they would participate. Unfortunately that survey was only able to include County residents utilizing County-located facilities. It therefore did not take into account non-residents utilizing County-located facilities or residents utilizing facilities located elsewhere.

Redman/Johnston Associates, Ltd. has calculated future recreation needs utilizing the Participation Rate method in conjunction with RJA determined-population projections A summary of these findings is in Table IV-6-5.

As noted earlier, there is presently little public waterfront access or parks available in Gloucester County along the York River, Mobjack Bay or their tributaries. The County needs to acquire and develop more active recreational land for public use.

IMPLEMENTATION RECOMMENDATIONS

- **Evaluation:** The County must periodically evaluate the status of recreational facilities and programs to determine if available facilities and programs are meeting the communities' recreational interests and if park designs and program creativeness provide challenge and self-renewal to the user. This can be accomplished through regular surveys of County citizens and facilities users.

- **Inventory Upkeep:** The County should maintain an inventory of both public and private facilities in. By keeping an overall view (public and private) of facilities and programs, the County can ensure that needs are met in a timely and cost-efficient manner for all parties concerned.

- **Parks and Facilities Distribution:** Available parks and park types need to be distributed proportionally around the County such that the needs are located where the users reside. This will require the County's Department of Park and Recreation to maintain records of existing population centers and be aware of where new development in the County will occur.

Table IV–6–5

GLOUCESTER COUNTY RECREATION NEEDS: 1990–2010

ACTIVITY	EXISTING PUBLIC SUPPLY	FACILITY UNIT	1990		2000		2010	
			MIN. NEED	PEAK NEED	MIN. NEED	PEAK NEED	MIN. NEED	PEAK NEED
AUDITORIUM/FAIRS/CONCERTS	0	SEAT	437	656	589	884	729	1,093
BASEBALL/SOFTBALL	0	FIELD	13	19	17	26	21	32
BASKETBALL	0	COURT	13	19	17	26	21	32
BICYCLE TRAILS (PLEASURE)	0	MILE	9	13	12	18	15	22
BOAT ACCESS	1	RAMP	1	2	2	3	2	3
BOATING (POWER)	27529	ACRE	272	409	367	551	454	682
CAMPING	0	ACRE	18	28	25	37	31	46
CANOE TRAILS	1	MILE	2	3	2	4	3	4
EQUESTRIAN TRAILS	0	MILE	3	5	5	7	6	9
FISHING	27557	ACRE	297	445	400	600	495	743
FOOTBALL	0	FIELD	7	10	9	13	11	16
GOLF	0	HOLE	18	26	24	35	29	44
ICE SKATING	0	RINK	2	4	3	5	4	6
NATURE WALKS	2	MILE	1	2	2	3	2	3
PICNICKING	13	TABLE	40	60	54	81	67	100
SOCCER/LACROSSE	0	FIELD	9	13	12	18	15	22
SPECTATOR SPORTS	0	SEAT	768	1,152	1,035	1,552	1,280	1,920
SUNBATHING (BEACH)	1	ACRE	4	6	6	9	7	11
SWIMMING (BEACH)	>1	ACRE	5	7	6	10	8	12
SWIMMING (Jr.Olym.POOL)	0	NUMBER	3	4	4	5	4	7
TENNIS/RACKET SPORTS	0	COURT	5	8	7	10	9	13
WATERSKIING	0	ACRE	264	396	356	534	441	661

Sources: Virginia Division of Parks and Recreation, 1987; Redman/Johnston Associates, Ltd., 1989

- **Environmental Awareness:** Increase promotion and awareness of the natural environment through nature interpretation and nature oriented facilities which can emphasize the importance of the environment, show how man can coexists with nature, and educate residents on how to protect and preserve nature.

- **Special User Groups:** The County should ensure the availability of a variety of programs for people of all ages and for special user groups such as the physically disabled.

- **Facility Accessibility:** When planning new facilities or upgrading existing facilities, design the facility with innovation such that it is completely accessible to the physically disabled.

- **Creativity:** The County should design creative programs and facilities which provide challenge and self-renewal to the user.

- **Technical Assistance:** In order to maximize facilities' use, involve individuals from special interest groups, such as a senior citizen or a physically disabled person, who can provide technical assistance with recreation program and facility planning.

- **Consulting the Virginia Department of Conservation and Recreation:** Take advantage of recreation consultation and workshops offered by the Department of Conservation and Recreation to become better informed about how to streamline local departmental operations and best methods of developing, operation, and maintaining park and recreation programs.

- **Land Acquisition:** In order to ensure that public recreational land is available when needed, the County should acquire or manage lands with significant conservation or recreation value before encroaching development and rising land values preclude this possibility. This includes such methods as the County reaching an agreement with utility companies in which the use of utility easements as potential outdoor recreation and open space areas (e.g. hiking and equestrian trails) is encouraged.

- **Federal and State Assistance:** Seek Federal and State assistance to secure both Community and Regional Park sites and facilities at a scale necessary to meet the demands brought on by County growth.

- **Virginia Outdoors Fund:** Apply for Virginia Outdoors Fund monies to assist in acquiring and developing recreational lands.

- **Land Contracting:** Explore land contracting options that allows the County to purchase land today but pay for it over a protracted period of time. Annual payments, as opposed to a lump sum payment, creates certain tax advantages for the seller while eliminating the necessity of the County government needing to raise the entire purchase price at one time.

- **Reclamation:** Explore the possibility of reclaiming the old County landfill for recreation purposes. One possible avenue would be to develop it as a golf course.

- **Alternate Density Zoning:** Encourage developers to utilize alternate density zoning by reducing lot size and/or consolidating lot layout in order to provide compensating amounts of open space within the subdivision. Although no increase in the number of lots is allowed, consolidation of layout can save the developer utility costs and the County acquires significant open space at no cost.

- **Dedication or Payment-In-Lieu:** To support County recreation facility acquisition and improvement needs, require dedication of public park space or payment-in-lieu of dedication by large-scale developments.

- **Waterfront Access:** Acquire and develop more waterfront land along the York River, the Mobjack Bay and some of their tributaries to ensure the availability of public access to the water.

- **Regional Park:** Acquire a large tract of land in the County to be developed as a regional park. Provide funding for the Department of Parks and Recreation to do a study to determine the best location (adjacent to the Beaverdam Reservoir?), the method(s) of financing the land acquisition, the park layout and facilities design, and the method(s) of funding construction of the facilities. With increasing County population, the demand for the existence of such a park will continue to rise.

- **Rappahannock Community College:** The Department of Parks and Recreation should work with and support the Rappahannock Community College in developing active and passive recreation facilities that could be used by the general public.

- **Neighborhood Parks:** Encourage developers to design subdivisions whose central theme is the neighborhood park that includes a playground apparatus, open space and a hard-surface activity area. In addition to providing recreational areas in the County, residents will have the enjoyment of having a park within easy walking distance of their home which provides limited types of recreation for the entire family.

- **Linkage Trails:** Use trails to link park lands, conservation areas, scenic landscapes and historic/cultural sites.

- **Wetlands As Open Space:** Explore funding methods for acquiring or ensuring the protection of specific environmentally sensitive areas to be set aside as open space. The *1989 Virginia Outdoors Plan* identifies the following wetlands in Gloucester County as priorities for protection: Purtan Island, Catlett Islands, Four Point Marsh, Bush Point Marsh, Dragon Run, and Poropotank River.

- **Capital Improvements Program:** Ensure funding in the County's Capital Improvements Program to meet future recreational needs.

- **Cooperation:** The County should encourage public and private organizations who offer recreation opportunities to work together to insure that all available recreation resources are effectively and broadly used by County residents in an effective manner.

- **Shared Use:** Promote shared use of facilities by two or more governmental agencies and by the public and private sectors to maximize utilization of existing facilities and minimize costs of building and/or maintaining duplicate facilities.

- **Private Investment:** To ease the County's responsibility of providing recreational facilities, encourage private enterprises to invest in recreational facilities (e.g. swimming pools and golf courses).

- **Local Participation:** Identify and draw into recreational programs individuals and groups with abilities in devising and leading unique recreational opportunities for local citizens.

- **Land Use Assessment Law:** Ensure citizen awareness of the Land Use Assessment Law which allows land to be taxed at a rate based on its current use, i.e. open space, rather that its best or potential use. This would encourage private property owners to preserve open space as a visual amenity.

- **Residential Institutions:** Require residential institutions, such as nursing homes and mental institutions, to provide on-site passive and active outdoor recreational facilities. It is important that a variety of readily accessible resources and opportunities to enjoy the outdoors be available to the residents as many of those individuals may rarely, if ever, leave the facility where they reside.

- **Decrease Maintenance Time:** To assist in decreasing personnel needed for keeping park lands litter-free, the Department of Parks and Recreation should support and work with the Department of Public Works in promoting 'Trash Awareness' to the public.

- **Chesapeake Bay Youth Conservation Corps:** Help maintain park and open space lands that are in the Chesapeake Bay watershed through employment of youths with funding in the form of grants awarded by the Chesapeake Bay Youth Conservation Corps. This labor intensive program requires that 75% of all grant monies be expended in wages.

- **Volunteer Program:** Establish a volunteer program such that the Department of Parks and Recreation can have an increase in manpower at a minimum cost, the community benefits from the citizen involvement, and the volunteer can gain job experience as well as become aware of the problems and rewards associated with community park and recreation work.

- **User Fees:** Expand on the system of user fees which generate revenues to assist in supporting park maintenance, operational costs and facility improvement needs. A study has been done by the Department of Parks and Recreation to determine whether residents would pay higher user fees for youth sports. That data, which is still in the process of being summarized, was collected via a mail survey to all active participants of the youth sports program.

- **Tourism:** Capitalize on tourism in the area through publication of recreation site locations and activities, public waterfront access locations, and programs and events to be held in the County.

- **Ordinance Language:** Require recreation and open space provisions by new developments in codes such as the Zoning Ordinance and Subdivision Regulations.

It is not enough for facilities to exist. They must be designed and managed such that residents will benefit from the facilities' existence. Above are listed a number of recommended techniques for ensuring the provision and use of facilities and programs. Part VI, entitled 'Implementation,' describes further the variety of implementation techniques that can be utilized to ensure adequate recreational facilities for Gloucester County residents. Some of those techniques include an Adequate Public Facilities Ordinance, Capital Improvement Programming, Subdivision Regulations, impact analysis, proffers, conditional zoning, and conservation easements and acquisitions.

SUMMARY

By being aware of what facilities, programs and park types are available versus what is needed, Gloucester County is able to establish priorities in order that the goal of meeting the recreational demands of its citizens is reached quickly and cost-efficiently. As with all the elements of this Plan, demands for facilities will increase and change as the County continues to grow. Re-evaluation will be needed periodically in order to ensure that facilities and programs continue to be maintained or established in the most efficient manner.

Section 7

HISTORIC AND CULTURAL RESOURCES

HISTORIC AND CULTURAL RESOURCES

History can be kept alive through education and preservation, both of which can take many forms and vary in intensity. History is something one lives in daily and is not only a "do not touch" museum. Old homes can be restored such that they are comfortable homes of today or they could be refurbished as an office. Historic sites can honor the past while providing a place for leisure activities. An old church can still hold worship services similar to those held one hundred years ago. A number of programs exist to help individuals and groups temporarily or permanently protect sites and structures considered significant. The past is a building block for the future and, if a plan is to be comprehensive, it must incorporate that past as a key element of planning for the future.

Continued historic and cultural resource preservation and enhancement through sensitive land use planning and other administrative means would provide Gloucester County with a number of benefits including:

- Promotion of a strong sense of community pride for County residents;
- Community revitalization through the renovation or adaptive reuse of older structures;
- Increased property values and tax revenues as a result of renovation and restoration; and
- Increased revenues from tourism generated.

The area known as Gloucester County was once inhabited by nomadic Indians. Just prior to the imigration of Europeans, the American Indian living in the area lived in more permanent settlements and had become largely dependent upon agricultureal products. One of the known archaeological sites in Gloucester County is Werowocomoco, Powhatan's principal village where Canptain John Smith was taken prisoner.

With the advent of the Europeans, physical evidence of man's presence become more evident. Spanish mariners explored the area in the late 1500's and the English began colonizing the County in the late 1600's when land in the Middle Peninsula became declared open to patenting in 1649.

Numerous historic sites listed on the National Register are scattered throughout the County. For example, the Gloucester County Courthouse Square Historic District, creating a park-like setting in the heart of Gloucester, contains such buildings as the colonial T-shaped courthouse, Federal-period clerk's office, debtors' jail and other structures. The Gloucester Point Archaeological District, consisting of 59 acres, was added to the National Register in 1985 and to the Virginia Landmarks Register in 1987. Gloucester County also remembers famous people in history by being the birthplace of prominents individuals like Walter Reed, an eminent research scholar and the conqueror of Yellow Fever. The sites are a valuable asset to the community and deserve protection. A variety of methods to safeguard these sites exist, including historic site designation, historic zoning, tax exemptions, and acquisition of

Table IV-7-1
HISTORIC SITES AND BUILDINGS IN GLOUCESTER COUNTY

~ Paradise	~ Woodstock	~ Violet Band
Oakwell	~ West End	~ Old Purton
~ Greenwich	Cappahosic House	~ Mulberry Hall
Tippecanoe	Woodbury	~ New Bottle
Concord	Hava's Hall	*~ Rosewell
*~ Fairfield (Carter's Creek)	Shelly	* Timberneck
Gloucester Towne	Powhatan's Chimney	~ The Hills
Fairfiels (Vaughan's	* Little England	~ Cluverious House
Creek)	~ Salt Springs	Lisburne
~ Brew House	~ Belle Farm	Lansdowne
Eagle Point (Vue de L'eau)	Severn Hall	* Warner Hall
Sherwood (Shabby Hall)	* Lands End	Free School House
Wilson's Creek	Point Lookout	(Peasley House)
Warehouse	Level Green (Beau Pre')	Shipyard
Church Hill (Mordecai's	* White Hall Plantation	Crow Point
Mount)	Hael Western (Hael Weston)	Goshen
Glen Roy	Pig Hill	* Ware Church
Hockley (Erin,	* Lowland Cottage	The Hook
Cowslip Green)	Booth Old Home Site	Site of First Ware Church
Belle Ville	Groomsville	Ware Point
~ Back Creek	(Constantinople)	~ Bloomsbury
Cherokee	* Burgh Westra	Dunhan Massie
* Toddsbury	Exchange	Elmington
Mt. Zion Methodist Church	Newstead	Mill Hill (Morven)
~ Elm Bank	~ Waverley	* Holly Knoll
Freeport	Easton Hill	~ Midlothian
~ Cheesecake	Boxley	Freewelcome
Leaville Springs	Camden	Sunnyside
* Kempsville	~ Glen Auburn	~ Highgate
Church Hill	~ Roseway	~ Turk's Ferry
(Petsworth Parish)	Mounty Prodigal	~ Dragon Ordinary
~ Hickory Hill	~ Poplar Springs (Petsworth	Bacon's Quarter
Aspen Hill	Parish Church)	Pleasant View
Bellamy Methodist Church	* Walter Reed's Birthplace	~ Marllfield
Wayunda	Hickory Fork	~ Valley Front
Fiddler's Green	Springfield (Mundunga)	Belroi (Belle Roy)
~ Wareham	Summerville	~ The Shelter
~ Abingdon	Millwood	Kenwood
~ Gloucester Place	* Abingdon Church	Independence

con't next page

cont'd from previous page

~ Newington	* Roaring Springs	Seawell's Ordinary
~ Compfield	* Court Green Complex	~ Honeypod Tree
* Long Bridge Ordinary	Clifford	Enfield
Airville	~ Mount Pleasant	~ Robin's Mill
* Abingdon Glebe House	Roadview	White Marsh

* denotes listing by the Virginia Historic Landmarks Commission

~ denotes the building is no longer standing

SOURCE: Gloucster County Comprehensive Plan, 1980

PROTECTION & PRESERVATION PROGRAMS

Outsiders, whether they go to a new place as tourists or as potential residents, will be attracted to a community that seems to respect itself and to have character and individuality. Tourists spend money with local merchants, and new residents spend even more. Local industry and business, if they recruit from outside the region, benefit, too, if it can be shown that the community is a good place to live. Historic preservation enhances the community character and shows that the community has pride and self-awareness. There are several methods available by which communities can make historic preservation a reality. While much has been done to preserve local architecture and history, many opportunities still exist to further preservation effort programs.

A number of existing programs provide assistance in protection or preservation, offer tax benefits, provide professional historical/architectural consulting, and so forth. More detailed information on programs including the National Historic Landmark, National Register of Historic Places, Conservation and Preservation Easements, and Historic Overlay Districts can be found from various historic preservation organizations and such publications as *Virginia's Heritage: A Property Owner's Guide to Resource Protection*, published by the Virginia Department of Conservation and Historic Resources.

NATIONAL HISTORIC LANDMARK

A historical resource is generally a site over fifty years old. The criteria for determining these sites has been established by guidelines set forth by the Secretary of the Department of the Interior. A district, site, building, structure or object can be considered a historic resource. The criterion is that the resource must be noted to be significant in American history, architecture, archeology, engineering or culture.

One of the highest honors for a property owner to have bestowed upon their property is the designation of National Historic Landmark. This program, run by the National Park Service, is the primary Federal means of recognizing the exceptional

national significance of historic properties. This program is also one of the major tools used to scrutinize proposals for additions to the National Park System and to select nominations to the World Heritage List.

In recognition of the historic significance of a property, the owner receives a certificate of designation and a plaque bearing the name of the property and attesting to its national significance. In return, the owner agrees to display the plaque publicly although not required to grant public access to the property. Ownership and use of the property is not changed by being listed as a National Historic Landmark. Instead, an honor is granted.

NATIONAL REGISTER OF HISTORIC PLACES

In 1966, Congress established the National Register of Historic Places as the Federal Government's official list of properties, including districts, significant in American history and culture. In Virginia, the Register is administred by the Virginia Landmarks Register. Some benefits resulting from a listing in the National Register include the following:

- National recognition of the value of historic properties individually and collectively to the Nation.
- Eligibility for Federal tax incentives and other preservation assistance.
- Eligibility for a Virgina income tax benefit for the approved rehabilitation of owner-occupied residential buildings.
- Consideration in the planning for federally and state assisted projects.

Listing does not interfere with a private property owner's right to alter, manage or dispose of property.

VIRGINIA LANDMARKS REGISTER

The Virginia Division of Historic Landmarks (VDHL) surveys historic buildings, structures and archaiological sites to determine eligibility of being listed on the Virginia Landmarks Register. As with being on the National Register of Historic Places, listing does not limit or regulate the property owner in what can or cannot be done with the property. In order to be considered for listing on the National Register or having an easement on the property to be accepted by the VDHL, the site usually must first be listed on the Virginia Landmarks Register.

VIRGINIA HISTORIC PRESERVATION EASEMENT

A state-held historic preservation easement monitored by the Virginia Division of Historic Landmarks (VDHL)is an excellent means of perpetually preserving a historical structure and property for future generations. Regulations state that easements may be assignable to other parties or run with the land. The benefits for a property

owner to donate his land to the VDHL include income, estate, inheritance, gift and property tax benefits. In exchange, the owner gives the VDHL the final word regarding proposed alterations. However, for properties whose fair market value is largely based on the value of development rights, this method of preservation may not be the most financially expedient for the property owner or for the VDHL.

LOCAL HISTORIC OVERLAY ZONE

A third, but separate, type of designation is the locally-zoned historic district which is an overlay on the existing zoning ordinance of a specified area. This district, legally allowed by the Code of Virginia, Title 15.1, Chapter 11, Article 9, Section 15.1-503.2, is designed in order to maintain the visual character of the community. It may allow an appointed Commission to monitor changes, alterations and demolition of buildings and structures of architectural or historic significance. In Gloucester County, the governing position is filled by the Board of Supervisors. The main purpose of such zoning is:

- to safeguard the heritage of the County by preserving the District therein which reflect elements of its cultural, social, economic, political or architectural history;
- to stabilize or improve property values in such a District;
- to foster civic beauty;
- to strengthen the local economy;
- to promote the use and preservation of Historic Districts for the education, welfare and pleasure of the residents of the county or municipal corporation.

Monitoring of historic buildings and structures by the Historical Committee under the supervision of the Board of Supervisors is done so that property owners can gain recognition and protect the special character of their historic neighborhood. There are well-publicized design guidelines that the Committee would employ when assisting the applicant in optaining a certificate of approval for alteration or new construction. The government supports these owners' efforts through tax benefits and other programs. By creating such districts, a community can look forward to being able to maintain its identity in the face of advancing new developments.

Article 6 of the Gloucester County Zoning Ordinance details those regulations regarding Historic Districts that fall under the jurisdiction of the County. Eighteen properties are presently located in this zoning category. All of these properties are also included on the National Register of Historic Places.

Books and pamplets have been written which discuss historic sites and structures within the County. Some of these can be found in the library in Gloucester or Gloucester Point. A wealth of information on the County's historical and archaeological sites and structures can also be found at the Virginia's Division of Historical Landmarks, located in Richmond.

NON-PROFIT PRESERVATION AND CONSERVATION ORGANIZATIONS

A number of organizations exist throughout the state of Virginia whose aim is to preserve and conserve archaeological and historical resources. These include, but are not limited to, the Archeological Society of Virginia, the Association for the Preservation of Virginia Antiquities and the Council of Virginia Archaeologists. Individuals can contact the Virginia Department of Conservation and Historic Resources in Richmond for a more complete listing of existing organizations.

IMPLEMENTATION RECOMMENDATIONS

Many historians have long believed that the old is to be appreciated for its beauty and its continuing usefulness, and should be made whole and fresh; the new should fit gracefully into the existing town or its environs. In order for the County to continue to maintain its sense of history, regulations need to be developed.

The following strategies are designed to facilitate achieving this Plan's goal of preserving and enhancing the County's rich cultural and historic heritage.

- **Inventory:** Encourage the establishment, maintenance and updating of a comprehensive listing of historical districts and sites in Isle of Wight County which includes discussion of significant sites. Such a listing with an accompanying map should be readily accessible in the Department of Community Development to alert planners of historic sites in or near proposed developments.

- **Historically Significant Open Space:** Locate open spaces in developments and parks to include historical resources.

- **Adaptive Re-Use:** Promote the adaptive reuse of historic structures for public and private uses including, but not limited to, Bed and Breakfast establishments, craft/gift shops, museums, and studio space for artisans, when such uses minimize exterior structural alteration.

- **Support Owners:** Encourage, through the use of various incentives, the preservation of historic structures. Include tax incentives for major structural or exterior renovation or the donation of protective historic easements.

- **Local Historic Districts:** Encourage, through the use of various incentives, the establishment of local historic districts throughout the County. Include tax incentives and recognition through the awarding of plaques.

- **Zoning Ordinance:** Rewrite the local Historic District overlay section within the Zoning Ordinance such that it provides more detailed guidelines for users. Within it, develop a Historic Area Work Permit to regulate and monitor major structural or exterior renovation.

- **Historic District Commission:** Create a Historic District Commission composed of volunteer citizen residents, all who are qualified by special interest,

knowledge or training in such fields as history, architecture, preservation or urban design.

- **Tourism:** Promote historic sites in the County through tourism via such items as pamphlets distributed at the Chamber of Commerce and other locales. Some existing pamphlets include "Gloucester County Driving Tour", "The Walter Reed Birthplace", "Gloucester Point's Heritage", and "Rosewell, Historic Ruins of Virginia".

- **Support Organizations:** Support efforts of preservation and cultural organizations in the County and encourage open communications between those same organizations.

- **Education:** Encourage school system and community wide participation in historical resources management program through education and public awareness.

- **Awareness of Existing Tools:** Support educational efforts by promoting awareness of existing tools as is done in "A Property Owner's Guide to Resource Protection" published by the Virginia Department of Conservation and Historic Resources.

- **State and Federal Programs:** Support state and federal programs, such as the National Register of Historic Places, which provide incentives to foster protection or restoration of structures.

- **Review Development Proposals:** Review development proposals which may adversely affect historic resources when granting permits for development or other forms of land alteration, such as grading, mining, etc. Negotiate mitigation measures where possible to reduce impact.

- **Transfer Development Rights:** Allow developers to apply development rights to other tracts of land within the County to prevent intense development from occurring adjacent to a historic district.

- **Support Archaeological Research:** Support archaeological research through such techniques as preservation and through encouraging developers to allow archaeologists a limited time to excavate their land before development begins.

SUMMARY

Gloucester County has a past rich in local history, both colonial and pre-colonial. Efforts already exist to preserve that history for future generations. By supporting existing projects, educating residents, and continuing to expand rehabilitation and preservation efforts, County residents will have a heritage that they can give to their children and to tourists.

Section 8

NATURAL RESOURCES PROTECTION

NATURAL RESOURCES

The impact of growth and development on environmental quality in Gloucester County is an issue of increasing public concern. The effects of increased population and physical development manifest themselves on the natural environment in many ways, including: clearing of trees and natural vegetation; loss of plant and wildlife habitat; loss of valuable wetlands and aquatic habitat; lower groundwater levels; groundwater contamination and saltwater intrusion; degradation of surface water quality in streams and rivers; disruption of natural water drainage systems; air pollution; increased amounts of solid wastes; and loss of scenic natural views.

Environmental deterioration is not an inevitable consequence of population growth. The development of new homes, businesses, industries, schools, and roads necessary to accommodate a growing population can occur without unduly threatening the County's environmental quality if steps are taken to ensure new development is designed and built in an environmentally sensitive manner. Certain areas of Gloucester County are much more susceptible to environmental degradation than others due to the presence of sensitive natural features. Future development should be directed away from sensitive areas and guided to areas of the County where environmental impacts will be less severe. Regardless of location, all future development should meet minimum performance standards for environmental protection.

Receiving an average of 41 inches of precipitation annually, Gloucester County has a temperate climate with average temperatures ranging between 42°F in January and 79°F in July. Due to the county's proximity to the Chesapeake Bay and the Atlantic Ocean, extreme variations are somewhat moderated; however, hurricanes and tropical storms are sometimes a hazard. High winds that accompany some storms can cause damage to homes and crops as well as accelerate erosion of shorelines.

Encompassing a total land area of 225 square miles, the County includes a variety of terrains ranging from level land throughout most of the county to a few areas with steep slopes (over 15%) in the northern half of the county. Elevations range between sea level and approximately 133 feet.

The soils of Gloucester are formed from unconsolidated marine sediments. The area generally west of a line running from Hayes north to Dutton contains mostly deep, well drained permeable soils. Most agricultural land and forests are located in this portion of the county, although it contains some areas with sandy ravines. The area generally east of the above mentioned line occurs in a lower elevation and contains a high percentage of soils with wetness problems. These are also soils that have a high clay content which restricts the movement of water. Some locations in this second area are often suitable sites for excavated ponds.

BACKGROUND INFORMATION AND ENVIRONMENTAL QUALITY ISSUES

Characteristics of the natural environment affect development. While some natural characteristics encourage and enhance development, others should limit certain land

uses and the intensity of development. Analysis of the County's natural features provides a means for determining the development capabilities of the land. Map 1 (Natural Development Constraints) depicts the general locations of the County's major natural growth determinants. These include wetlands and floodplains and areas where soils which have limitations for development or are likely unsuitable for conventional waste treatment (e.g. in ground septic system). A more detailed and larger scale map of these features is available for reference at the Department of Community Development. Field verification will be needed to accurately locate any specific constraints, such as wetlands. A discussion of specific components of the County's Natural Resources Element is provided in the following subsections.

GEOLOGY

Gloucester County is capped to depths that range from 20 to 170 feet by marine deposits of fine silty sand, fine sand, and clayey silt. These flat-lying sediments occur on the higher and lower terraces and on the coastal plain peneplain.

In the northwestern part of the County, fine silty sand and clayey silt occur on the coastal plain peneplain. These are reworked sediments from older materials. They lay flat, forming a uniform layer that ranges up to 45 feet thick. The peneplain is the bevelled surface of a formerly higher area.

In the central part of Gloucester County, higher marine terraces are present. On these terraces are sediments of fine silty sand. The sediments have been called the Columbia formation (McGee, 1888), though today, the major higher terrace present is called the Wicomico with some Sunderland terrace occurring at higher evaluations (Wentworth, 1930).

To the east of Gloucester Courthouse a scarp occurs. East of this escarpment clayey silt with fine sand marine sediment is present on the lower terraces. These lower terraces have been named, in order from highest to lowest, the Chowan, the Dismal Swamp and the Princess Anne (Wentworth, 1930). The gentle escarpment has been called the Surry Scarp (Wentworth, 1930).

Tidal marsh and swamp occur in the extreme southeastern and northwestern parts of Gloucester County.

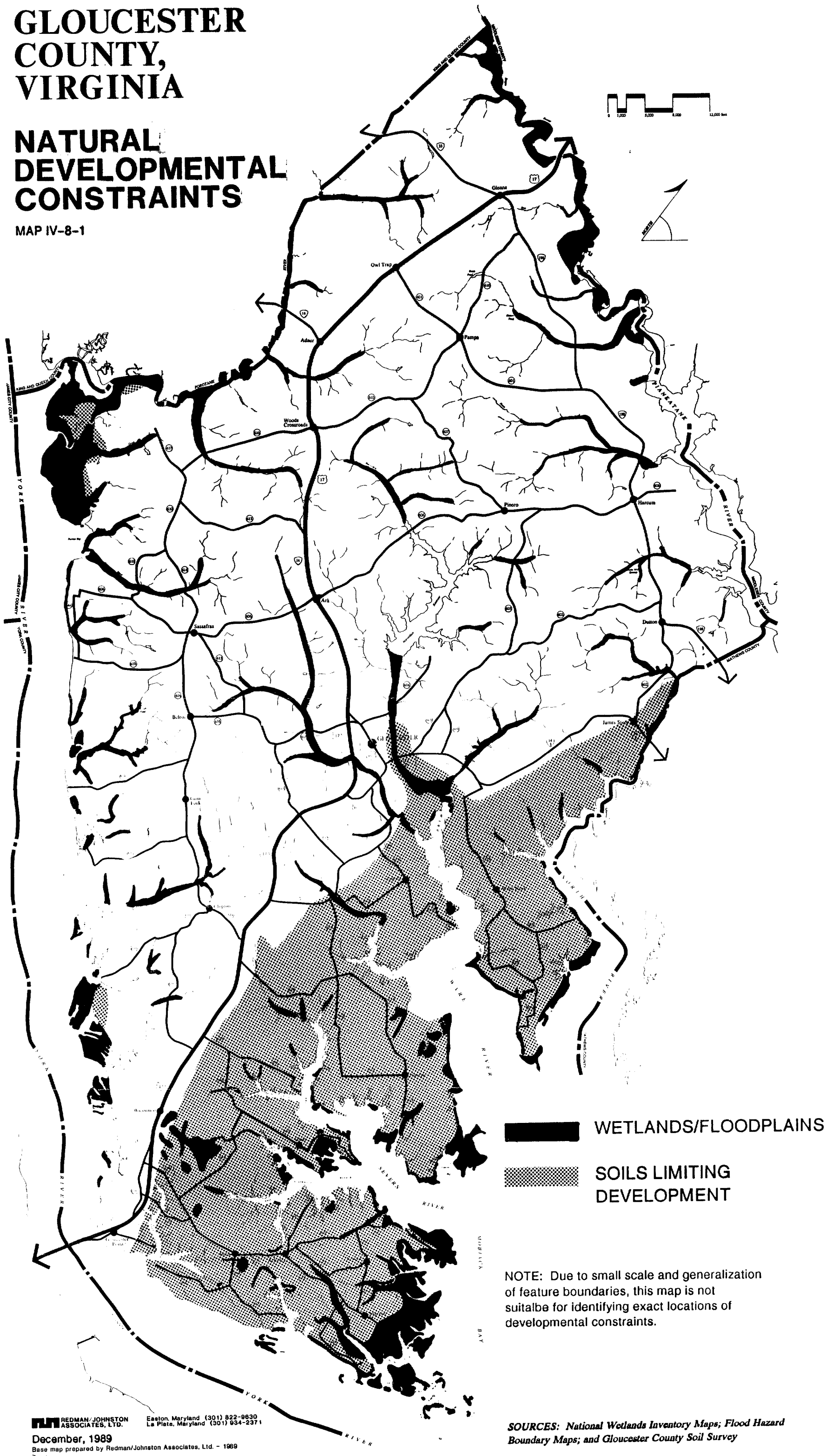
Soils present in the county reflect the parent materials and periods of their deposition. The older more mature soils occur on the bevelled peneplain surface. Soils that are less mature weather from the materials on the higher terraces. The youngest soils occur on the lower terraces.

At depths of 20 to 170 feet below the surface of Gloucester County lays gray fossiliferous marl, yellow and reddish brown sand, and some glauconite. Dipping gently seaward, these are the older marine sediments. From youngest to oldest, they are known as Pleistocene deposits, the Yorktown formation and the St. Mary's formation (Geologic Map Virginia, 1963).

GLOUCESTER COUNTY, VIRGINIA

NATURAL DEVELOPMENTAL CONSTRAINTS

MAP IV-8-1



NOTE: Due to small scale and generalization of feature boundaries, this map is not suitalbe for identifying exact locations of developmental constraints.

SOURCES: National Wetlands Inventory Maps; Flood Hazard Boundary Maps; and Gloucester County Soil Survey

REDMAN/JOHNSTON ASSOCIATES, LTD.
Easton, Maryland (301) 822-9630
La Plata, Maryland (301) 934-2371

December, 1989

Base map prepared by Redman/Johnston Associates, Ltd. - 1989

SOILS

Soils are one of the most basic resources and consist of a mixture of air, water, mineral and organic matter, and living things. *The Soil Survey of Gloucester County, Virginia*, 1980, compiled by the Soil Conservation Service, contains detailed maps of the many soil classifications in Gloucester County. This soil survey is the County's best source of information concerning the locations of soils with development constraints. Map 2 shows the general areas of the six soil associations listed below. When used with other resource information such as slope, hydrology, and flood prone areas it provides useful data on which to plan and base county policies concerning future land use. Gloucester County's numerous soil types fall into one of six general soil classifications. Primary concerns are soils suitability for agriculture and individual waste treatment systems or septic tanks. Typically, soils best suited for agriculture are also the soils best suited for septic tank use. The relationship between the location of these soils and the location of future growth should be taken into consideration in any decisions regarding general land use policies in Gloucester County.

Each general soil association area contains soils of major extent and others of minor extent which follow a definite pattern. The county contains six such associations which are categorized as follows:

1. **Sulfaquents-Fluvaquents Association**: Deep, poorly drained and very poorly drained soils that are flooded by tides and that have a mixed sandy, loamy, and clayey substratum; on saltwater marshes.

2. **Lumbee-Lumbee Variant-Kalmia Association**: Deep, poorly drained and well drained soils that have a dominantly clayey subsoil; at elevations of less than 20 feet.

3. **Meggett-Dogue Association**: Deep, poorly drained and moderately well drained soils that have a dominantly clayey subsoil; at elevations of less than 20 feet.

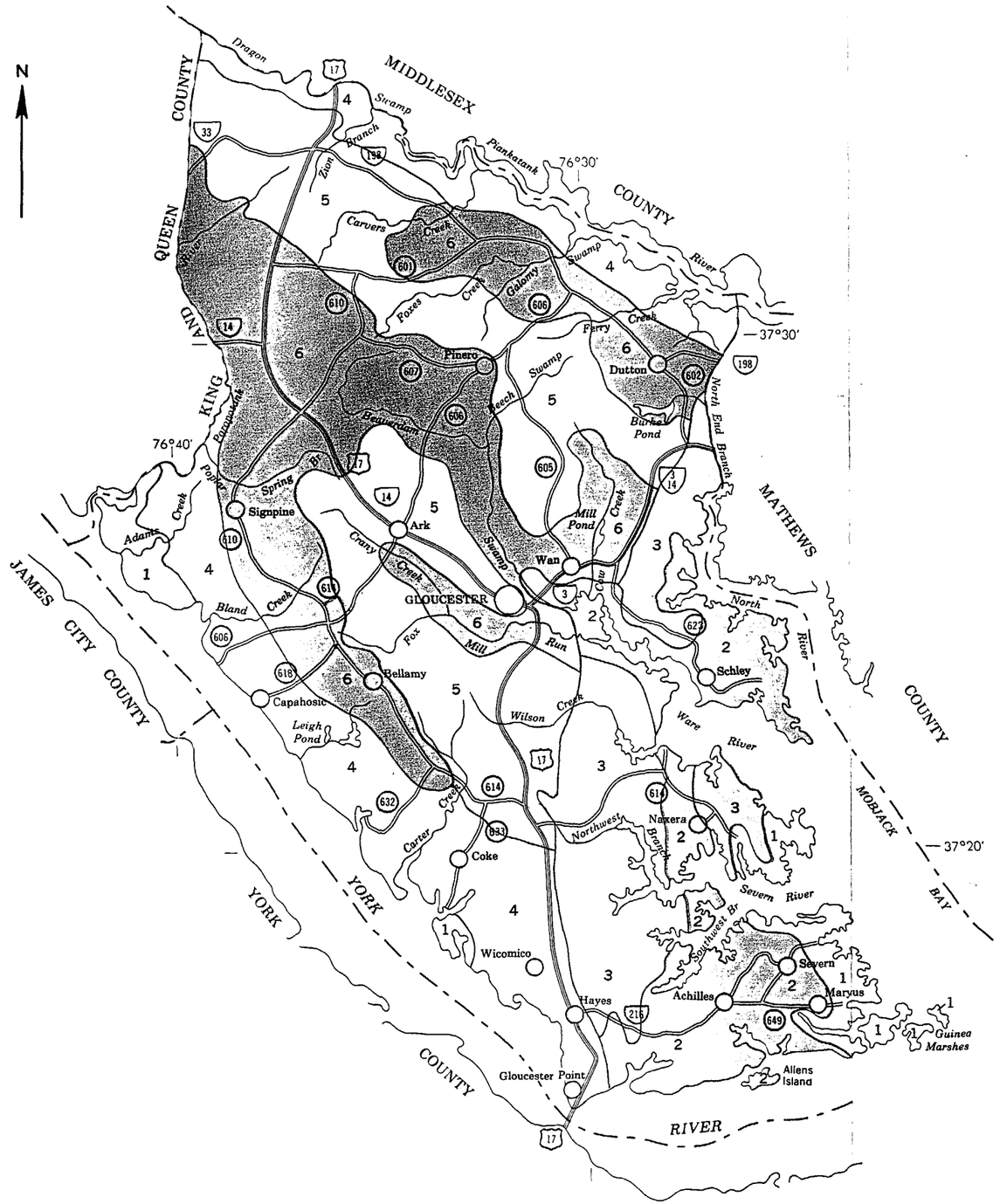
4. **Suffolk-Eunola-Kenansville Association**: Deep, well drained and moderately well drained soils that have a dominantly loamy subsoil; at elevations of 30 to 50 feet.

5. **Emporia-Hapludults-Wrightsboro Association**: Deep, well drained and moderately well drained soils that have a dominantly loamy or clayey subsoil; at elevations mainly above 50 feet.

6. **Kempsville-Hapludults-Eunola Association**: Deep, well drained and moderately well drained soils that have a dominantly loamy or clayey subsoil; at all elevations.

Reducing the number of categories to three general divisions related to soil suitability for individual waste treatment systems provides some indication of the impact that future residential growth may have on the county and its present resources. These categories are: (1) well drained, permeable soils, (2) marginal soils, and (3) soils unsuited for housing using septic systems. Percentages in each category, based on an estimate of 140,037 total acreage, are noted below.

MAP IV-8-2



LEGEND

1	Sulfaquents-Fluvaquents Association: Deep, poorly drained and very poorly drained soils that are flooded by tides and that have a mixed sandy, loamy, and clayey substratum; on saltwater marshes.
2	Lumbee-Lumbee Variant-Kalmia Association: Deep, poorly drained and well drained soils that have a dominantly loamy subsoil; at elevations of less than 20 feet.
3	Meggett-Dogue Association: Deep, poorly drained and moderately well drained soils that have a dominantly clayey subsoil; at elevations of less than 20 feet.
4	Suffolk-Eunola-Kenansville Association: Deep, well drained and moderately well drained soils that have a dominantly loamy subsoil; at elevations of 30 to 50 feet.
5	Emporia-Hapludults-Wrightsboro Association: Deep, well drained and moderately well drained soils that have a dominantly loamy or clayey subsoil; at elevations mainly above 50 feet.
6	Kempsville-Hapludults-Eunola Association: Deep, well drained and moderately well drained soils that have a dominantly loamy or clayey subsoil; at all elevations.

Compiled 1979

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

GENERAL SOIL MAP

GLOUCESTER COUNTY, VIRGINIA

Scale 1:190,080

1 0 1 2 3 4 Miles

1 0 1 2 3 4 Kilometers

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

1-12909

Table IV-8-1

DEVELOPMENT SUITABILITY OF SOILS IN GLOUCESTER COUNTY

	Soil Suitability	Acreage	Percent
I.	Well drained, permeable soils, suited for septic systems.	31,180	22.27
II.	Marginal Soils, portions of which will meet Health Department standards for housing using septic systems. (Only approximately 50% of these soils will meet requirements on depth to gray mottles and permeability rate greater than 1.0 inch per hour. Placing 50% of marginal soils in suited and 50% in unsuited soil group gives a final figure of 39% of County suited for septic systems, and 61% unsuited.)		
	1. Well drained soils with permeability problems.	12,178	8.70
	2. Moderately well drained soils, with permeability problems.	7,275	5.20
	3. Moderately well drained soils, no permeability problems.	12,458	8.90
	4. Sloping soils (6-15% slope).	4,530	3.22
	Total Marginal Soils =	36,441	26.02
III.	Soils Unsuited for Housing Using Septic Systems:		
	1. Marshes:		
	A. Salt Water Flooded	6,842	4.89
	B. Fresh Water Flooded	5,995	4.28
	2. Very poorly, poorly and somewhat poorly drained soils.	30,654	21.89
	3. Steep, and Restrictive Side Slopes.	21,025	15.01
	4. Clayey, well and moderately well drained soils.	6,622	4.73
	5. Fill Areas, Ponds, etc.	1,275	0.91
	Total Unsuited Soils =	72,413	51.71

Source: Gloucester County Comprehensive Plan, 1980

On a more detailed level, a specific type of soil that is unsuitable for development is hydric soil. A hydric soil is one that in its undrained condition is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (plant life growing in water or in a substate that is at least periodically deficient in oxygen as a result of excess water content). Because this list includes soils that are either drained or undrained, not all hydric soils are wetlands (discussed later in this

section).. As seen in Table IV-8-2, 15 percent of Gloucester County's soils are hydric.

Table IV-8-2

HYDRIC SOILS

Soil Name	Acres	Percentage
Lumbee	8,173	5.7
Meggett	12,334	8.6
Osier	595	0.4
Pamlico and Portsmouth	379	0.3
TOTAL	21,481	15

Sources: US Corps of Engineers, 1989
Gloucester County Soil Survey, 1980

Much of the rapid residential and commercial development that the County has been experiencing over the past decade has occurred in the vicinity of Route 17, south of the courthouse to Gloucester Point. An examination of general soils categories and their locations in conjunction with the apparent development trends indicate a number of problems are facing the county regarding various types of land use and the corresponding suitability of their locations. Residential and commercial uses have located in the southeastern half of the county where the soils are poorly suited for residential development. Wastewater disposal and water supply needs are soil-related problems that could be aggravated by unguided future development.

High percentages of well drained, permeable soils are found west of Route 17 between Gloucester Point and Ordinary, and in scattered portions of the northwestern half of the county. A partial answer to present water supply and sewage treatment problems might be to direct some of the future growth to those areas better suited for this development. However, this must be balanced against the need to preserve some of the northwestern half of the county for agricultural and forestry uses, for which it is well suited. Therefore, the best means of overcoming soils limitations for development is to provide public sewer to overcome waste treatment problems and guide future growth as currently planned along the Route 17 corridor. The east side of Route 17 within the proposed development district has a high incidence of hydric soil conditions. This will mean that proposed development will need to be designed with sensitivity to the existence of non-tidal wetlands. This will require the field verification of non-tidal wetlands early in the development process.

TOPOGRAPHY

Planning guidelines generally rate areas with slopes ranging between 0-15% suitable for development, depending on other factors such as erosion, drainage, and soil types. In most instances, areas with slopes greater than 15% are less suitable for construction or require careful design consideration and treatment.

Most land in the County is relatively flat or gently sloping with comparatively few areas having slopes of greater than 15%. The majority of extreme slopes (>15%) are located in the higher terraces in the extreme north-western portion of the county, and in shoreline areas, particularly along some creeks and the York River.

FLOODPLAINS

Floodplains are nearly level land areas which border streams and rivers and are occasionally flooded unless artificially protected. The actual boundary of a floodplain varies significantly depending on the designated frequency of flooding. The 100 year frequency is most often used to determine flood hazard areas. The 100 year floodplain is the area which has a 100 percent probability of being flooded at least once during a 100-year time period; or a one percent (1%) chance of flooding each year.

The 100 Year Floodplain is recognized by federal regulations as the area where the potential for flooding is a significant hazard and where development should be limited or not occur at all. The floodplain is divided into two sections; the floodway and the floodway fringe. Federal Emergency Management Agency (FEMA) requirements address the direct aspects of potential damage that can occur if new development takes place in areas subject to flooding. To qualify for flood insurance, floodway development is prohibited, and floodway areas are, therefore, well protected. The floodway is the land area which is directly adjacent to the water channel. Although FEMA does not prohibit construction in the floodway fringe, development is not encouraged. Floodplain filling and development can result in a major loss in the storage capacity of flood waters, alter drainage patterns, and cause an increased velocity and volume of runoff. While development located on the filled floodplain is reasonably safe from flooding, areas downstream may experience increased flood heights and greater channel water velocity.

Maps of the County's 100 Year Floodplain are available for inspection in the County Office of Community Development.

WATERSHEDS AND DRAINAGE

A watershed is a concave or trough shaped area in which the runoff from the rain and snow eventually drain to a single channel. These drainage units cover the county's entire land surface and eventually contribute to the major rivers. Thus, effective flood control, conservation of fresh water, enhancement of water quality, and control of soil erosion and sedimentation make land use practices in these areas almost as important as those located directly on the shorelines.

The land area occupied by Gloucester County is drained by the York, Piankatank, North, Ware, and Severn Rivers and their tributaries. Major stream segments in the County which serve as drain watersheds to the County's Creeks and Rivers are identified in Table IV-8-3.

Table IV-8-3

GLOUCESTER COUNTY STREAMS

Stream Name	Drainage Area (Sq. Miles)	Length (Miles)	Elevation At Source	Elevation At Mouth	Mouth in County
Sandy Creek	0.94	2.0	42	0	Gloucester
Jones Creek	4.37	3.9	93	0	Gloucester
Aberdeen Creek	3.26	3.4	84	0	Gloucester
Carther Creek	8.51	6.4	90	0	Gloucester
Cedarbush Creek	2.57	3.7	61	0	Gloucester
Timberneck Creek	3.83	4.1	62	0	Gloucester
Sarah Creek	5.22	0.3	0	0	Gloucester
Northwest Branch	2.96	2.5	11	0	Gloucester
Northeast Branch	2.16	2.3	7	0	Gloucester
Poropotank River	39.19	15.6	123	0	King&Queen & Gloucest.
Unnamed Stream	2.44	3.3	135	0	King&Queen & Gloucest.
Woods Mill Swamp	4.92	4.6	131	0	King&Queen & Gloucest.
Poplar Spring Branch	6.26	4.6	107	0	King&Queen & Gloucest.
Adams Creek	2.87	4.5	100	0	Gloucester
Purtan Creek	1.47	2.9	101	0	Gloucester
Leigh Creek	1.40	2.2	100	0	Gloucester
Bland Creek	5.74	4.7	102	0	Gloucester
Fox Creek	2.92	1.7	52	0	Gloucester

Source: Gloucester County Comprehensive Plan, 1980

SURFACE WATER SUPPLY

The Piankatank River on the north; the North, Ware and Severn Rivers spilling out into the Mobjack Bay to the east; and the York River to the south and southwest together establish some 296 miles of shoreline in Gloucester County. All of the aforementioned rivers are tidal and estuarine bodies of water which are an integral part of the Chesapeake Bay estuarine system.

The quality of water in major and minor rivers, tidal and non-tidal wetlands, ponds and lakes have a great impact on surrounding vegetation, wildlife, groundwater supplies and human habitation. The ecosystem is a very integrated system whose balance can be upset for an indefinite period of time when one part of that system is damaged or destroyed (such as when a river becomes polluted through improper treatment of municipal wastewater discharges). Studies continue to occur throughout the country on man's impact to the environment and the environment's ability to recover. It is still unknown if the environment can ever be damaged to a point

where it can not ever recover but there are cases where it can take more than a decade for a polluted river to rejuvenate itself. In order for rivers in and around Gloucester County to support life, supply edible items such as fish and oysters, and be utilized for leisure activities such as swimming and boating, regulations must be enforced to control all types of pollution.

Table IV-8-4

POINT SOURCES OF POLLUTION FACILITIES

Type[1]	Facility	Receiving Waters	Design Flow
MD	Achilles Elementary School	Thorntons Creek (York Basin)	0.006 MGD
MD	Gloucester Intermediate School	intermittent tributary Hayes Mill Pond, Carter's Creek (York Basin)	0.0128 MGD
MD	Rappahannock Community College	unnamed tributary to Dragon Run	0.018 MGD
MD	Gloucester Sanitary District No. 1	Fox Mill Run	0.15 MGD
ID	Sawgrass Pointe, Inc.	intermittent tributary to Sarah Creek	N/A
ID	Gloucester Sanitary District No. 1, Riverside Middle Peninsula Hospital	Beaverdam Swamp (tributary to Ware River)	N/A
IND	Rappahannock Concrete Corp.	N/A	N/A
IND	Rappahannock Concrete	N/A	N/A
IND	VIMS	N/A	N/A
AW	John Ward, Jr.	N/A	N/A
AW	W.N. Horsley, Jr.	N/A	N/A
AW	Michael Sadovic	N/A	N/A
AW	Charles E. Rich	N/A	N/A
AW	John H. Northstein	N/A	N/A
AW	Jack O. Emerson	N/A	N/A
AW	Fred S. Christie	N/A	N/A
SP	Cook's Oyster Co.	Sarah Creek (York Basin)	N/A
SP	C.C. Conway Seafoods	Dunlop Bay (York Basin)	N/A
SP	J.W. Hogge Seafood, Inc.	Monday Creek (York Basin)	N/A
SP	V.A. Haywood Seafood	Monday Creek (York Basin)	N/A
SP	Haywood Oyster Co.	Monday Creek (York Basin)	N/A
SP	Marshall Seafood	Butler Creek	N/A

[1] Permit Type:
MD - Municipal Dischargers
IND - Industrial, No Discharge
SP - Seafood Permits
ID - Industrial Dischargers
AW - Animal Waste

Source: *Phase I: Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review, Middle Peninsula Planning District Commission, January 1989*

Point sources of pollution include municipal and industrial dischargers, and individual waste treatment systems. As of April 1988, there were 22 permits issued under the Virginia Pollution Discharge Elimination System (VPDES). This permit system was previously controlled by the Environmental Protection Agency and, now, by the Virginia Water Control Board which is responsible for regulating pollution dischargers as well as all potential sources of pollution to surface water. Table IV-8-4 lists those facilities in Gloucester County which have VPDES permits.

Non-point sources, which have the most significant impact to surface water quality in Gloucester County, encompass all those inputs to surface water which cannot be identified as having originated from a discrete discharge point. It includes stormwater runoff from agriculture, urban or forested land surfaces, atmospheric inputs, solid waste disposal, land application of sludge and wastewater, septic tank, dredging, development/construction material spills and leaks, marinas, and shipyards as well as impacts from the natural environment such as weathering of soils which provides metals, acids, etc. These types of pollution are not readily quantified though a relationship does exist with the amount of precipitation. Basically, the greater the precipitation, the greater the runoff, therefore, the greater the non-point source impact; albeit, topography, land use, soils characteristics, etc. play an important role as well.

One specific indicator of potential water quality deterioration is the State Bureau of Shellfish Sanitation listing and description of condemned shellfish (oyster) growing areas. Condemned areas are safety zones, established around known or potential sources of pollution, to allow for mixing and dilation of pollutants, dying off of bacteria, etc. Condemnations are based in part on bureau sanitary surveys and bacteriological monitoring. When assigned, they ban direct marketing of shellfish harvested in such areas.

The ratings of satisfactory or unsatisfactory are defined primarily in regard to the number of coliform bacteria. For a rating of satisfactory the maximum limit for fecal coliform in an MPN (most probable number) of 14/100 ml. Usually any count above this limit results in an unsatisfactory rating, thus restricting the waters from the taking of shellfish for direct sale to the consumer.

For more information regarding condemned areas in the locality of Gloucester County, see *Phase I: Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review* compiled by the Middle Peninsula Planning District Commission, January 1989.

In Gloucester County agricultural runoff, residential septic system overflows, effluent from sewage treatment plants, or marina discharges are generally linked with the condemnation of shellfish grounds.

GROUNDWATER SUPPLY

The County lies within the Coastal Plain Province and has water-bearing unconsolidated sediments of Cretaceous, Tertiary, and Quaternary age over Pre-Cretaceous bedrock. The unconsolidated sediments range from approximately 1,200 foot depths in the western section, to approximately 2,400 foot depths along the eastern edge of the county. (As factors such as quality and quantity of water being

used and/or available for use affect housing, commercial and industrial activities, groundwater is discussed in more detail under Community Facilities.)

TIDAL AND NON-TIDAL WETLANDS

There was a time, not too long ago, that wetlands (marshes, bogs, pocosins, and mucky soils) were viewed solely as sources of disease and pestilence. Early government involvement with wetlands were give-away programs with the condition that they be drained and filled for useful purposes such as farming. In the 20th century, well-intentioned public and private efforts to provide flood protection, mosquito control, greater agricultural productivity, better highways, and many other benefits to society have often resulted in filling or draining of wetlands for farming, forestry, industry, and development.

In more recent years research has concluded that wetlands play a vital role in the environment. Wetlands are valuable for the many physical, hydrological, biological, and cultural functions which they provide. These include:

Physical

- Wetland vegetation and shallow waters absorb coastal wave energy and reduce shore erosion.
- Wetlands slow water velocities and reduce sediment in the water.
- Wetland plants and bottom sediments are sinks or collectors of excess nutrients such as nitrates and phosphorous.
- Wetlands trap water borne heavy metals, herbicides, and pesticides.
- Wetland plants re-oxygenate water thereby lowering biological oxygen demand.

Hydrological

- Wetlands act as floodways when associated with rivers and adjacent floodplain which convey water downstream.
- Wetlands store water during floods and release volumes slowly, reducing drastic flood surges.
- Wetlands, while most often are water discharge areas, also may act as water recharge areas.

Biological

- Wetland plants and invertebrates serve as the basis of a highly productive food chain.

- Wetlands are nursery and spawning areas for many species of finfish and shellfish. From 60 to 90 percent of commercially caught fish depend on coastal wetlands for food or spawning.

- Wetlands are also an important habitat for many waterfowl and wildlife species, serving as protective areas for feeding, resting, and breeding.

- Wetlands are habitat for many rare and endangered species, almost 35 percent of protected animal species are found in wetlands, although wetlands cover only about 5 percent of the nation's land area.

Cultural

- Wetlands often contain important historical and archeological sites since they were early sources of food.

- Wetlands serve important recreational and commercial values for fishing, hunting, and trapping.

- Wetlands which are forested may be managed for valuable timber production.

- Wetlands provide scenic open spaces and often serve as areas for bird and wildlife observation.

In light of the above described benefits, wetland activities are increasingly being regulated. In Virginia, tidal wetlands are protected by the 1972 Wetlands Protection Act, as amended. This law requires a special permit prior to starting construction, dredging, or filling a tidal wetland. The Act also serves as the source of authority for actions taken on permits by the Gloucester County Wetlands Board. The Virginia Marine Resources Commission has the ultimate authority to administer the Wetlands Protection Act and reviews all decisions handed down by the County boards. The County Wetlands board reviewed and decided 112 permits of various types during 1988.

Non-tidal wetlands are currently federally regulated by Section 404 of the 1977 Clean Water Act, as amended, which prohibits disposal of dredged or fill material into "waters of the United States" and adjacent wetlands. This has been broadly interpreted by the Environmental Protection Agency (EPA) to include virtually all surface waters in the nation, regardless of size. The Virginia General Assembly is currently considering statewide non-tidal wetlands protection legislation.

The Virginia Institute of Marine Science (VIMS) published a shoreline situation report for Gloucester County which is descriptive of the Tidal Wetlands characteristics in the County.

"Gloucester County, comprising 257.0 square miles, is the southernmost of the three Chesapeake Bay fronting counties of the 'Middle Peninsula'. Its York River, Piankatank River, and Chesapeake Bay shorelands are incised by numerous tidal rivers and creeks. Altogether, there are 296.4 miles of shoreline in the county. The major portion of the shore zone, 87% is comprised of wetlands including fringe, embayed,

and extensive marsh. The only segments of the shore not considered low shore are those along the York River from the Poropotank River to Sarah Creek. Along this area much of the fastland is classified as moderately low shore with bluffs ranging in height from 20 to 40 feet. The rest of the shore zone is composed of beaches. There are only three beaches that have the potential for medium to high density recreational purposes. these are found just southeast of Fox Creek, around Gloucester Point, and on lower Jenkins Neck around Sandy Point." (VIMS)

The marsh and wetland acreage of Gloucester County makes a valuable contribution to the economy of Tidewater Virginia. Of all the counties in the Commonwealth, Gloucester County ranks fifth in wetland acreage; only Accomack, Northampton and the cities of Virginia Beach and Chesapeake supersede it.

Gloucester County's more than 12,000 acres of wetlands are comprised of high and low marshes, creeks, ponds, wooded areas or 'hammocks' and tidal flats. At least 5,000 acres are in marsh. Some 3,500 acres are in creeks, including both the ones draining marshes and those bordered by high ground. Tidal flats comprise another 1,800 acres, and swamp land below the five-foot contour line covers nearly 600 acres. Wooded islands or 'hammocks', areas elevated above the surrounding marsh and usually dominated by pines, cedars, and wax myrtle, add another 1,000 acres to the county's wetlands. Gloucester county has about 40% of the State's hammock-type physiography, more than occurs in any other county.

The recently adopted Chesapeake Bay Preservation Act and Chesapeake Bay Preservation Area Designation and Management Regulations establish mandatory provisions for local tidewater jurisdictions to protect wetlands and water quality. This legislation and its implications for Gloucester County are discussed later in this section.

SHORELINE EROSION

"The magnitude of shore erosion in Gloucester County varies from slight or no change to severe. Historically, Gloucester County has lost 1,153 acres of land from its shoreline in the last one hundred years. This indicates a loss of four acres per mile of shoreline in the last century. This loss has been almost equally divided between the Chesapeake Bay fronting shoreline and the York River shoreline. During different but equal time spans, the York River lost 442 acres while the Bay shore lost 437 acres. However, a review of the rates or erosion reveals a difference in the range of erosion rate for the two areas. The highest rate, 4.4 feet per year, was recorded along a portion of the Bay shore while the maximum along the York shore was 1.9 feet per year." (VIMS).

FOREST RESOURCES

The patterns of ownership and management of forest resources are important when considering forested areas as biological habitat or for their value in protecting water quality. Forested areas provide habitat for numerous plant and wildlife species and also are an excellent filter area for groundwater recharge. Forests also form an excellent windbreak in agricultural areas and serve to prevent windblown soil erosion. In addition, forested areas serve as an effective visual and noise buffer between land

uses. Best management practices for the timber industry ensure the conservation of the County's extensive forest resources.

Although much of the land in the southeast portion of the County (which is the most suitable for growing loblolly and Virginia pine) has been lost to residential development, there are still large undeveloped portions of Gloucester devoted to forestry uses. Good to fair soils occur throughout most of the north and western portions of the County. Most of the forested acres in this area include loblolly and Virginia pine, although other species that are harvested as sawtimber in Gloucester commonly include yellow poplar, red oak, white oak, sweet and black gum,k sycamore, ash, and some red maple. About 400,000 new seedlings are planted each year in Gloucester by the Virginia Division of Forestry and Chesapeake Corporation. This reforestation effort results in about 800 seedlings per acre, per year. Even with reforestation at this level it is doubtful that the present production of forest products in Gloucester can be maintained in the future due to the large scale conversion of forest land to other uses.

Forest surveys indicated that, in 1972, total forested acres in the County include approximately 96,044 acres of productive forest land with the bulk of this land in private industrial ownership (62,734); farmer (17,566); forest industry (13,109); private corporate (2,509); and the rest in County or State ownership. In 1987, the Census of Agriculture reported that Gloucester County had 1,309 acres of farmland being used as woodland. Many more acres are currently being utilized by the forest industry or fall under private ownership. Figures are continually changing due to trends in absentee ownership and corporate land holdings.

WILDLIFE

The numbers and diversity of wildlife species present in an area is determined in part by the quantity and quality of wildlife habitat which is available, especially food availability and cover. The major threat to indigenous species in developing areas is the fracturing and fragmenting of habitat areas. When habitat is cleared for development or agriculture, not only is the cleared habitat area lost, but the habitat area is also degenerated at the development edge. This results in disturbance to interior habitat areas as well. Certain species of wildlife require large, unfragmented habitat areas in order to survive.

The Virginia Department of Conservation and Historic Resources' Natural Heritage Program and the Department of Game and Inland Fisheries' Fish and Wildlife Information System currently maintain inventories of wildlife resources and habitats for the County. Endangered and threatened plant species are protected by the Virginia Department of Agriculture and Consumer services, which uses information from the Natural Heritage Program inventory.

The Natural Heritage Program was established in 1986 in joint cooperation with the Nature Conservancy to identify elements of natural biological diversity which are of rare or special concern in Virginia. The program focuses on rare plants, animals, geological landmarks, natural ecological communities, and other natural features. The locations and characteristics of these natural features are entered into a computerized data base. Sites are rated and superior habitats are targeted for acquisition using the State's Natural Area Preservation Fund. The Natural Heritage

Program also makes information on acquiring environmental easements available to property owners.

The Department of Game and Inland Fisheries has a similar information base of wildlife for planning and management purposes. General mapped habitats may be obtained for planning and/or preservation purposes, but locations of specific sites are closely guarded in order to protect the habitat.

Wildlife present in Gloucester include quail, dove, rabbit, wild turkey, hawks and owls, songbirds, turtles and amphibians, raccoon, beaver, opossum, muskrat, skunk, squirrel, woodchuck and white-tailed deer. Two active Bald Eagle nest sites are currently established in the County. Tidal marshlands attract sora and clapper rail, and numerous varieties of wild ducks and other water fowl. Freshwater fish include large and small-mouth bass and bream. Saltwater fish include shad, blue crabs, croaker, spot, bluefish, channel and black sea bass, menhaden, mackerel, eel, white and silver perch, and a variety of other saltwater species.

The Division of State Planning and Community Affairs include two major areas encompassing parts of Gloucester County on a list of Virginia's Critical Environmental Areas", 1972. These were respectively: the Dragon Run bottomlands due to critical fish and wildlife habitats, valuable non-tidal wetland and flood plains, and poor suitability for development; and the York River due to the critical natural area of the watershed, scenic and recreational value, important wetlands below West Point and on Mobjack Bay, Poropotank marshes, and an important historic site, Rosewell Plantation.

THE CHESAPEAKE BAY PRESERVATION ACT

The Chesapeake Bay is the most significant and important natural resource in the Tidewater Region of Virginia. In response to recent interstate regional agreements between Virginia, Maryland, Washington D.C., and Pennsylvania to clean-up the Chesapeake Bay, The State of Virginia has adopted the Chesapeake Bay Preservation Act which mandates all Tidewater Virginia localities to establish programs, plans, and ordinances to protect and improve Bay water quality. These "local programs" must be in conformance with the Chesapeake Bay Preservation Area Designation and Management Regulations adopted by the Virginia Legislature in September, 1989. In Gloucester County, the York River, the Piankatank River, and the Mobjack Bay watersheds and all their associated tributaries are affected by these regulations. Therefore, management measures to be structured by the County in response to the Bay Preservation Act will likely influence the entire land area of the County as Bay System tributary streams are located throughout Gloucester.

PURPOSE

The purpose of the regulations is to protect and improve the water quality of the Chesapeake bay, its tributaries, and other state waters by minimizing the effects of human activity upon these waters and implementing the Chesapeake Bay Preservation Act, which provides for the definition and protection of certain lands called

Chesapeake Bay Preservation Areas, which if improperly used or developed may result in substantial damage to water quality of the Chesapeake Bay and its tributaries.

The regulations establish the criteria that local governments shall use to determine the extent of the Chesapeake Bay Preservation Areas within their jurisdictions. the regulations establish criteria for use by local governments in granting, denying, or modifying requests to rezone, subdivide, or to use and develop land in Chesapeake Bay Preservation Areas. The regulations identify the requirements for changes which local governments shall incorporate into their comprehensive plans, zoning ordinances, and subdivision regulations to protect the quality of state waters pursuant to the Chesapeake Bay Preservation Act.

GOALS

Local governments are required to develop measures, or local programs, necessary to comply with the Chesapeake Bay Preservation Act and Regulations. In conjunction with other state water quality programs, local programs shall encourage and promote:

- protection of existing high quality state waters and restoration of all other state waters to a condition or quality that will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them;
- safeguarding the clean waters of the Commonwealth from pollution;
- prevention of any increases in pollution;
- reduction of existing pollution; and
- promotion of water resource conservation in order to provide for the health, safety, and welfare of the present and future citizens of the Commonwealth.

LOCAL PROGRAM ELEMENTS

The regulations require that the "Local Program" for Gloucester County shall contain the elements listed below. Elements A and B shall be adopted concurrently and no later than September, 1990. Elements C through G shall be in place by September, 1991.

A. A map delineating Chesapeake Bay Preservation Areas.

B. Performance criteria for land use and development within Chesapeake Bay Preservation Areas.

C. A comprehensive plan or revision that incorporates the protection of Chesapeake Bay Preservation Areas and of the quality of state waters.

D. A zoning ordinance or revision that (i) incorporates measures to protect the quality of state waters in Chesapeake Bay Preservation Areas, and (ii)

requires compliance with all performance criteria for land use and development.

E. A subdivision ordinance or revision that (i) incorporates measures to protect the quality of state waters in Chesapeake Bay Preservation Areas, and (ii) assures that all subdivisions in Chesapeake Bay Preservation Areas comply with the performance criteria for land use and development.

F. An erosion and sediment control ordinance or revision that requires compliance with performance criteria for land use and development.

G. A plan of development process prior to the issuance of a building permit to assure that use and development of land in the Chesapeake Bay Preservation Areas is accomplished in a manner that protects the quality of state waters.

CHESAPEAKE BAY PRESERVATION AREA DESIGNATION CRITERIA

As part of its Local Program for Chesapeake Bay Preservation, Gloucester County will designate portions of the York River, Piankatank River and Mobjack Bay watersheds as Chesapeake Bay Preservation Areas. Land designated as Chesapeake bay preservation areas will be further classified as either Resource Protection Areas (RPAs), Resource Management Areas (RMAs), or Intensely Developed Areas (IDAs).

Resource Protection Areas

Resource Protection Areas (RPAs) shall consist of sensitive lands at or near the shoreline that have an intrinsic water quality value due to the ecological and biological processes they perform, or are sensitive to impacts which may cause degradation to the quality of state waters. In their natural condition, these lands provide for the removal, reduction, or assimilation of sediments, nutrients, and potentially harmful or toxic substances in runoff entering the Bay and its tributaries, and minimize the adverse effects of human activities on state waters and aquatic resources.

The RPAs shall include:

1. Tidal wetlands;

2. Non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams;

3. Tidal shores;

4. Such other lands necessary to protect the quality of state waters;

5. A buffer area not less than 100 feet in width located adjacent to and landward of the components listed in items 1 through 4 above, and along both sides of any tributary stream. The full buffer area shall be designated as the landward component of the RPA notwithstanding the presence of permitted uses or equivalent measures in compliance with

performance criteria for land use and development. Designation of this areas shall not be subject to reduction unless based on site-specific information.

The Resource Protection Areas have been mapped a scale of 1" = 2,000' and are on display at the Office of Community Development and Codes Compliance.

Resource Management Areas

Resource Management areas (RMAs) shall include land types that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area.

A RMA shall be provided contiguous to the entire inland boundary of the Resource Protection Area. The following land categories will be considered by the County for inclusion in the RMAs:

1. Floodplain;
2. Highly erodible soils, including steep slopes;
3. Highly permeable soils;
4. Non-tidal wetlands not included in the Resource Protection Areas;
5. Such other lands necessary to protect the quality of state waters.

RMAs shall encompass a land area large enough to provide significant water quality protection through the employment of performance criteria for land use and development. In evaluating the occurrence of the sensitive land areas listed above, it is apparent that they are quite extensive throughout the County. It is also apparent that both the applicants for development and the County will experience practical difficulty in adequately identifying these resources in a site specific way. For this reason, the County is considering the designation of the entire County as a Resource Management Area.

Intensely Developed Areas

At the option of Gloucester County, the County may designate Intensely Developed Areas (IDAs) as an overlay of Chesapeake Bay Preservation Areas within their jurisdiction. IDAs shall serve as redevelopment areas in which development is concentrated as of the local program adoption date. Areas so designated shall comply with established performance criteria for redevelopment.

In exercising this option, Gloucester County will examine the pattern of residential, commercial, industrial, and institutional development within Chesapeake Bay Preservation Areas. Areas of existing development and in-fill sites where little of the natural environment remains may be designated as IDAs provided at least one of the following conditions exist:

1. Development has severely altered the natural state of the areas such that it has more than 50 percent impervious surface.

2. Public sewer and water is constructed and currently serves the area by the effective date. This condition does not include areas planned for public sewer and water.

3. Housing density is equal to or greater than four (4) dwelling units per acre.

LAND USE AND DEVELOPMENT PERFORMANCE CRITERIA

The purpose of these criteria are to achieve the goals of the Preservation Act and to implement the following objectives: prevent a net increase in non-point source pollution from new development; achieve a 10 percent reduction in non-point source pollution from redevelopment; and achieve a 40 percent reduction in non-point source pollution from agricultural and silvacultural (forestry) uses.

In order to achieve these goals and objectives, these criteria establish performance standards to minimize erosion and sedimentation potential, reduce land application of nutrients and toxins, maximize rainwater infiltration, and ensure the long-term performance of the measures employed.

These criteria will become mandatory upon the Gloucester County local program adoption date. They are supplementary to the various planning and zoning concepts employed by the County in granting, denying, or modifying requests to rezone, subdivide, or to use and develop land in Chesapeake Bay Preservation Areas.

Gloucester County may exercise judgement in determining site-specific boundaries of Chesapeake Bay Preservation Area components and in making determinations of the application of the Act's regulations, based on more reliable or specific information gathered from actual field evaluations of the parcel subject to development, in accordance with development plan review requirements.

GENERAL PERFORMANCE CRITERIA

It must be demonstrated to the satisfaction of Gloucester County that any use, development, or redevelopment of land in Chesapeake Bay Preservation Areas meets the following performance criteria:

1. No more land shall be disturbed than is necessary to provide for the desired use or development.

2. Indigenous vegetation shall be preserved to the maximum extent possible consistent with the use and development allowed.

3. Where the best management practices utilized require regular or periodic maintenance in order to continue their functions, such maintenance shall be ensured by the County through a maintenance agreement with the owner or developer or some other mechanism that achieves an equivalent objective.

4. All development exceeding 2,500 square feet of land disturbance shall be accomplished through a plan of development review consistent with the Code of Virginia.

5. Land development shall minimize impervious cover consistent with the use of development allowed.

6. Any land disturbing activity that exceeds an area of 2,500 square feet (including construction of all single-family houses, septic tanks and drainfields, but otherwise as defined in Section 10.1-560 of the Code of Virginia), shall comply with the requirements of the local sediment and erosion control ordinance.

7. On-site sewage treatment systems not requiring a Virginia Pollutant Discharge Elimination System (VPDES) permit shall:

   a. Have pump-out accomplished for all such systems at least once every five (5) years;

   b. For new construction, provide a reserve sewage disposal site with a capacity at least equal to that of the primary sewage disposal site. This reserve sewage disposal site requirement shall not apply to any lot or parcel recorded prior to the effective date of these regulations, and which lot or parcel is not sufficient in capacity to accommodate a reserve sewage disposal site, as determined by the local Health Department. Building shall be prohibited on the area of all sewage disposal sites until the structure is served by public sewer or an on-site sewage treatment system which operates under a permit issued by the State Water Control Board. All sewage disposal site records shall be administered to provide adequate notice and enforcement.

8. Stormwater management criteria which accomplish the objectives of the Bay Preservation Act regulations shall apply. For development, the post-development non-point source pollution runoff load shall not exceed the pre-development load based upon average land cover conditions. Redevelopment of any site not currently served by water quality best management practices shall achieve at least a 10 percent reduction of non-point source pollution in runoff compared to the existing runoff load from the site. Post development runoff from any site to be redeveloped that is currently served by water quality best management practices shall not exceed the existing load of non-point source pollution in surface runoff.

   a. The following stormwater management options shall be considered to comply with this subsection of these regulations:

      (1) Incorporation on the site of best management practices that achieve the required control;

      (2) Compliance with a locally adopted regional stormwater management program incorporating pro-rata share payments pursuant to the authority provided in Section 15.1-466(j) of the

Code of Virginia that results in achievement of equivalent water quality protection;

(3) Compliance with a state or locally implemented program of stormwater discharge permits pursuant to Section 402(p) of the federal Clean Water Act, as set forth in 40 C.F.R. Parts 122, 123, 124, and 504, dated December 7, 1988;

(4) For a redevelopment site that is completely impervious as currently developed, restoring a minimum 20 percent of the site to vegetated open space.

b. Any maintenance, alteration, use, or improvement to an existing structure which does not degrade the quality of surface water discharge, as determined by the County, may be exempted from the requirements of this subsection.

c. Stormwater management criteria for redevelopment shall apply to any redevelopment, whether or not it is located within an Intensely Developed Area designated by the County.

9. Land upon which agricultural activities are being conducted, including but not limited to crop production, pasture, and dairy and feedlot operations, shall have a soil and water quality conservation plan. Such a plan shall be based upon the Field Office Technical Guide of the U.S. Department of Agriculture Soil Conservation Service and accomplish water quality protection consistent with the Preservation Act and regulations. Such a plan will be approved by the local Soil and Water Conservation District by January 1, 1995.

The Chesapeake Bay Local Assistance Board will request the Department of Conservation and Recreation to evaluate the existing state and federal agricultural conservation programs for effectiveness in providing water quality protection. In the event that, by July 1, 1991, the Department of Conservation and Recreation finds that the implementation of the existing agricultural conservation programs is inadequate to protect water quality consistent with the Act and regulations, the Board will consider the promulgation of regulations to provide more effective protection of water quality from agricultural activities and may require implementation of best management practices on agricultural lands within Chesapeake Bay Preservation Areas.

10. Silvacultural activities in Chesapeake Bay Preservation Areas are exempt from these regulations provided that silvacultural operations adhere to water quality protection procedures prescribed by the Department of Forestry in its "Best Management Practices Handbook for Forestry Operations." The Department of Forestry will oversee and document installation of best management practices and will monitor the in-stream impacts of forestry operations in Chesapeake Bay Preservation Areas. In the event that, by July 1, 1991, the Department of Forestry programs are unable to demonstrate equivalent protection of water quality consistent with the Act and regulations, the Department of Forestry will revise its

programs to assure consistency of results and may require implementation of best management practices.

11. Gloucester County shall require evidence of all wetlands permits required by law prior to authorizing grading or other on-site activities to begin.

PERFORMANCE CRITERIA FOR RESOURCE PROTECTION AREAS

The following criteria shall apply specifically within Resource Protection Areas (RPAs) and supplement the general performance criteria.

A. Allowable Development

A water quality impact assessment shall be required for any proposed development in accordance with the provisions of the Chesapeake Bay Preservation Act and regulations. Land development may be allowed only if it (i) is water dependent or, (ii) constitutes redevelopment.

1. A new or expanded water-dependent facility may be allowed provided that:

   (a) It does not conflict with the Comprehensive Plan;

   (b) It complies with the performance criteria set forth in this part;

   (c) Any non-water dependent component is located outside of Resource Protection Areas;

   (d) Access will be provided with the minimum disturbance necessary. Where possible, a single point of access will be provided.

2. Redevelopment shall conform to applicable stormwater management and erosion and sediment control criteria in this part.

B. Buffer Area Requirements

To minimize the adverse effects of human activities on the other components of the Resource Protection Area, state waters, and aquatic life, a 100 foot buffer area of vegetation that is effective in retarding runoff, preventing erosion, and filtering non-point source pollution from runoff shall be retained if present and established where it does not exist. The 100 foot buffer area shall be deemed to achieve a 75 percent reduction of sediments and a 40 percent reduction of nutrients. Except as noted in this subsection, a combination of a buffer area not less than 50 feet in width and appropriate best management practices located landward of the buffer area which collectively achieve water quality protection, pollutant removal, and water resource conservation at least the equivalent of the 100 foot buffer area may be employed in lieu of the 100 foot buffer. The following additional performance criteria shall apply:

1. In order to maintain the functional value of the buffer area, indigenous vegetation may be removed only to provide for reasonable sight lines, access paths, general woodlot management, and best management practices, as follows:

   (a) Trees may be pruned or removed as necessary to provide for sight lines and vistas, provided that where removed, they shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion, and filtering non-point source pollution from runoff.

   (b) Any path shall be constructed and surfaced so as to effectively control erosion.

   (c) Dead, diseased, or dying trees or shrubbery may be removed at the discretion of the landowner, and silvacultural thinning may be conducted based upon the recommendation of a professional forester or arborist.

   (d) For shoreline erosion control projects, trees and woody vegetation may be removed, necessary control techniques employed, and appropriate vegetation established to protect or stabilize the shoreline in accordance with the best available technical advice and applicable permit conditions or requirements.

2. When the application of the buffer area would result in the loss of buildable area on a lot or parcel recorded prior to the effective date of these regulations, modifications to the width of the buffer area may be allowed in accordance with the following criteria:

   (a) Modifications to the buffer area shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities;

   (b) Where possible, an area equal to the area encroaching the buffer area shall be established elsewhere on the lot or parcel in a way to maximize water quality protection;

   (c) In no case shall the reduced portion of the buffer area be less than 50 feet in width.

3. Redevelopment within Intensely Developed Areas may be exempt from the requirements of this subsection. However, while the immediate establishment of the buffer area may be impractical, the County shall give consideration to implementing measures that would establish the buffer in these areas over time in order to maximize water quality protection, pollutant removal, and water resource conservation.

4. On agricultural lands the agricultural buffer area shall be managed to prevent concentrated flows of surface water from breaching the buffer area noxious weeds (such as Johnson grass, kudzu, and

multiflora rose) from invading the buffer area. The agricultural buffer area may be reduced as follows:

(a) To a minimum width of 50 feet when the adjacent land is enrolled in a federal, state, or locally-funded agricultural best management practices program, and the program is being implemented, provided that the combination of the reduced buffer area and best management practices achieve water quality protection, pollutant removal, and water resource conservation at least the equivalent of the 100 foot buffer area.

(b) To a minimum width of 25 feet when a soil and water quality conservation plan, as approved by the local Soil and water Conservation District, has been implemented on the adjacent land, provided that the portion of the plan being implemented for the Chesapeake Bay Preservation Area achieves water quality protection at least the equivalent of that provided by the 100 foot buffer area in the opinion of the local Soil and Water Conservation District Board. Such plan shall be based upon the Field Office Technical Guide of the U.S. Department of Agriculture Soil Conservation Service and accomplish water quality protection consistent with the Act and these regulations.

(c) The buffer area is not required for agricultural drainage ditches if the adjacent agricultural land has in place best management practices in accordance with a conservation plan approved by the local Soil and Water Conservation District.

ADMINISTRATIVE WAIVERS AND EXEMPTIONS

A. Nonconforming Use and Development Waivers.

1. The County may permit the continued use, but not necessarily the expansion, of any structure in existence on the date of local program adoption. The county may establish an administrative review procedure to waive or modify the criteria of this part for structures on legal nonconforming lots or parcels provided that:

   (a) There will be no net increase in non-point source pollutant load;

   (b) Any development or land disturbance exceeding an area of 2,500 square feet complies with all erosion and sediment control requirements of this part.

2. It is not the intent of these criteria to prevent the reconstruction of pre-existing structures within Chesapeake Bay Preservation Areas from occurring as a result of casualty loss unless otherwise restricted by County ordinances

B. Public Utilities, Railroads, and Facilities Exemptions.

1. Construction, installation, operation, and maintenance of electric, gas, and telephone transmission lines, railroads, and public roads and their appurtenant structures in accordance with the Erosion and Sediment Control law (Section 10.1-560 et. seq. of the Code of Virginia) or an erosion and sediment control plan approved by the Virginia Soil and Water Conservation Board will be deemed to constitute compliance with these regulations.

2. Construction, installation, operation, and maintenance of water, sewer and local gas lines shall be exempt from the criteria in this part provided that:

   (a) To the degree possible, the location of such utilities and facilities should be outside Resource Protection Areas.

   (b) No more land shall be disturbed than is necessary to provide for the desired utility installation.

   (c) All such construction, installation, and maintenance of such utilities and facilities shall be in compliance with all applicable state and federal permits and designed and conducted in a manner that protects water quality.

   (d) Any land disturbance exceeding an area of 2,500 square feet complies with all erosion and sediment control requirements of this part.

C. Exemptions in Resource Protection Areas.

The following land disturbance activities in Resource Protection Areas may be exempt from the Bay Preservation Act criteria provided that they comply with items 1 and 2 below: (i) water wells; (ii) passive recreation facilities such as boardwalks, trails, and pathways; and (iii) historic preservation and archaeological activities.

1. The County shall establish administrative procedures to review such exemptions;

2. Any land disturbance exceeding an area of 2,500 square feet shall comply with the erosion and sediment control requirements of this part.

EXCEPTIONS TO THE CRITERIA

Exceptions to the requirements of the Bay Preservation Act criteria may be granted, provided that: (i) exceptions to the criteria shall be the minimum necessary to afford relief, and (ii) reasonable and appropriate conditions upon any exception granted shall be imposed as necessary so that the purpose and intent of the Act is preserved. The County is required to design an appropriate process or processes for the administration of exceptions.

LOCAL PROGRAM DEVELOPMENT

These performance criteria for land use and development are hereby included as part of Gloucester County's Comprehensive Plan. In addition to designation of County Chesapeake Bay Preservation Areas, the County will incorporate these criteria into its zoning ordinance, subdivision regulations, erosion and sediment control ordinance. The County will also establish a plan of development review and approval process for building permit issuance for development within designated Chesapeake Bay Preservation Areas. Finally, the County will also establish administrative and enforcement procedures as part of its overall Local Program for Chesapeake Bay Preservation.

IMPLEMENTATION RECOMMENDATIONS

The following is a list of specific measures the County should undertake to achieve its environmental quality goals and objectives.

- **Adopt a Local Program:** The County should adopt a Local Program for Chesapeake Bay Preservation which contains the program elements and performance criteria for land use and development as outlined in this chapter.

- **Performance Standards:** Performance standards and controls are recommended to permit development design flexibility and to adapt to variable site characteristics. New environmentally sensitive development regulations are needed which recognize and protect natural site functions. Environmentally sensitive features such as wetlands and critical plant and wildlife habitats should be explicitly protected and buffered from development activities.

- **Open Space:** Open space requirements should be put into effect. The extent to which a site can be covered by impervious surfaces should be limited. Requirements should specify minimum areas that must remain undisturbed and available for stormwater infiltration and site vegetation.

- **Cluster Development:** There should be zoning incentives to promote cluster development. Cluster development makes wise use of land resources and is environmentally sensitive. The County development ordinances should be updated to provide greater incentives for clustering.

- **Runoff Controls:** No net change in runoff should be allowed at development sites. Drainage techniques normally channel stormwater runoff away from the structure and off the site. The volume and velocity of stormwater runoff leaving a developed site should be no greater than pre-development levels, primarily for adjacent property protection and non-source point pollution control.

- **Vegetation Retention/Replacement:** Natural vegetation and trees should be preserved during development. Site clear-cutting should be expressly

prohibited. Mature trees should be protected. A minimum amount of vegetation should be required which corresponds with open space requirements. If tree removal is unavoidable, replacement should be required. Where vegetation is removed, temporary grass seeding should be required for erosion control if the site remains untreated for more than two months.

- **Slope Density Regulations:** Slope density regulations should be enacted. A steeply sloped site cannot support the same development density as a flat site without severe disturbance. Permitted density should decrease as slope increases. Grading activities should be limited in proportion to slope vulnerability.

- **Best Management Practices:** Agricultural and forestry (silvacultural) activities should be subject to the institution of recognized best management practices for soil and water conservation.

- **Require Environmental Impact Assessments:** The County should require proposed development within the Resource Conservation Districts to prepare and submit for review an environmental impact assessment which identifies potential environmental problems and suggests appropriate mitigation strategies and plans.

- **Proof of Government Permits:** The County should continue to require evidence of all federal, state, and local environmental and health permits as a condition of development approval.

- **Regulate Extractive Industries:** Mining and other extractive industries are important to the Gloucester County economy. However, these industries are potential nuisances and can adversely impact the environment and surrounding land uses. Extractive industries should not be concentrated in any geographical areas where the cumulative impacts could harm the area. Guidelines for locating extractive industries and environmental and appearance performance standards should be incorporated into County development ordinances.

- **Limit Development:** The County should limit future development in the Plan's Resource Conservation District to low intensity residential uses, passive park and recreation uses, and water dependent uses or water dependent mixed use developments.

- **Concentrate Development in Development District:** The majority of future county development should be directed to the designated Development District where public sewer services are in place or planned. The future use of on-site sewage treatment systems should be limited to those areas where public sewage systems are unavailable. Larger concentrations of individual on-site sewage treatment facilities in rural and environmentally sensitive areas should be discouraged through density controls, particularly in areas with soils constraints for septic systems.

- **Floodways and Floodplains:** The County should prohibit development within floodways and floodplains which limits natural water storage capacity. Use

of floodway fringe areas for recreational, other non-structural uses, and open space should be encouraged.

- **Coordinate with Other Agencies:** The County should coordinate with state and federal agencies and non-profit conservancy organizations to protect environmentally sensitive lands through acquisition and/or protective easement programs.

- **Beaverdam Reservoir:** Enforce runoff controls around the new Beaverdam Reservoir in order to ensure that the reservoir waters never become polluted. In addition to ensuring that citizens are drinking "safe" water, enforcing runoff controls would also help to ensure that the County would not need to ever spend money in de-polluting the reservoir.

- **Easements:** Encourage landowners to place their highly sensitive environmental lands under easements in order to ensure the protection of those same areas. The *1989 Virginia Outdoors Plan* identifies the following wetlands in Gloucester County as priorities for protection: Purtan Island, Catlett Islands, Four Point Marsh, Bush Point Marsh, Dragon Run, and Poropotank River.

SUMMARY

This plan chapter discusses the characteristics of environmentally sensitive County lands and waters. It describes some of the important reasons for protecting the various natural features which comprise and contribute to the quality of the Gloucester environment. Recommended actions are stated which should achieve the County goals and objectives listed in Part III. Particular focus is accorded to Comprehensive Plan requirements of the recently enacted Chesapeake Bay Preservation Act and Regulations.

In summary, the environmental attributes of Gloucester County strongly influence quality of life. The condition of the environment must be evaluated in terms of the potential impact upon the daily activities and the standard of living of the community. Environmental resources should be protected on behalf of the economic well-being of the general public with regard to both individual property interests and collective taxpayer investments. The quality of Gloucester's environment is one of the factors which makes the County such a desirable place to live and work. The intent of County environmental protection measures is not to stop development, but rather to ensure the compatibility of development with the continued productivity and value of environmentally sensitive land and water areas.

Part V

IMPLEMENTATION

IMPLEMENTATION

The Comprehensive Plan is intended to capture a vision of the future Gloucester County. As such it provides a basis for a wide variety of public and private actions and development decisions which are to be undertaken in the County over time. It is not a static document because a community is not static, but one which provides general guidelines to the local community in order that piecemeal improvements or day to day decisions can be properly evaluated against their long-range impact upon the community and their relationship to existing settlement patterns.

The Plan and, in particular, the Land Use Element indicates the proposed general or conceptual development pattern of the community projected to 2010. However it is not a detailed blueprint. Local conditions, values, and philosophies change as a result of economic and political pressures and the Plan must subsequently be responsive to these changes. The Plan is not a document which encourages regimentation. It is, however, a guide which encourages patterns of development which permit orderly and economical growth of the community in a manner which can be more efficiently served with a variety of governmental services and facilities. Implementation involves the concerted actions of both County elected officials and certain appointed boards. This Part addresses two aspects of plan implementation that need additional treatment: Administration and Enforcement; and Development Standards and Design Guidelines.

PLAN ADMINISTRATION AND ENFORCEMENT

One of the most important, yet often neglected, issues to be considered in the formulation of the Comprehensive Plan, Zoning Ordinance and Subdivision Regulations is administration and enforcement. Even the most well conceived plans and ordinances will lose effectiveness (and in some cases be invalidated) without consistent and equitable administration and enforcement. The responsibility for administering and enforcing the Comprehensive Plan and its associated ordinances and regulations rests primarily with the County Board of Supervisors, Planning Commission, Board of Zoning Appeals and the staff of the Office of Community Development and Codes Compliance. Each group has a different role in administration and enforcement. Their roles need to be defined and understood in the context of this Plan.

IMPLEMENTATION ACTION PLAN

The actions needed to guide construction of plan implementation tools, particularly the preparation of new land use and development regulations, as well as operational features of future administrative structure are summarized below:

1. Where possible, use clear measurable performance standards in ordinances to minimize interpretive confusion.

2. Where uses are subject to Board of Zoning Appeals special exception approval, enumerate minimum standards by use and improve the criteria or standards which the Board uses as a yardstick to determine the appropriateness of a given use in the respective zoning district.

3. Reduce the number of special exception uses where possible by establishing clear standards by which they may be permitted by right and subjected to established standards.

4. Establish a policy for reasonable time frames for review of rezoning application, special exception uses, subdivisions, and uses subject to site plan review and approval.

5. Establish clearer administrative procedures documenting applicant, staff and approval authority responsibilities for processing rezoning, special exception uses, subdivisions, and uses subject to site plan review and approval.

6. Utilize standard forms and checklists for ministerial and administrative procedures which clarify for all parties various application submission requirements, improvement guarantees, and inspection procedures.

7. Review and refine rules of procedure for use by the Supervisors and Boards for all zoning forms of action which require public hearings.

8. Provide adequate budget and staff as well as training and support for administrative procedures and inspection functions, and attempt to coordinate and/or integrate inspection and administrative functions to the maximum extent possible.

9. Revise the penalty section of the Zoning Ordinance to allow civil penalties for less serious violations.

10. Require the annual revision to the County's Capital Improvements Program to be coordinated with the Comprehensive Plan and any recommended amendments resulting from the annual review of the Plan and planning process.

11. The Plan should be reviewed and updated every four (5) years.

DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

This section addresses the many aspects of development design in Gloucester County. Development design can be generally defined as the management of the visual and physical development of the built environment. Primary emphasis is placed on the preservation of the County's rural character. The intention is to respond to growing public concern about the increasing transformation of Gloucester's traditional rural landscape to sprawling suburban residential and strip commercial development similar in nature to the land use pattern ringing most of the metropolitan centers

throughout the Hampton Roads region and the nation. Concern is that, if measures are not taken now, Gloucester could become conventionally suburban, with only vestiges of the traditional rural landscape remaining, that is, compact village centers, scattered farms, open fields, forests.

Managing development design to maintain and enhance the rural character and aesthetics of the County is an important component of Gloucester's Comprehensive Plan. Application of development design standards is appropriate anywhere human features are present, and where the physical and visual properties of development can significantly influence the character of the County's rural and suburban areas, as well as urban areas. Development design guidance, or the lack thereof, significantly affects real estate values, community pride, a sense of obligation to private property, personal enjoyment and satisfaction, and the overall investment climate in Gloucester County.

This section will discuss and recommend various approaches to positively influencing the development design of areas throughout Gloucester County.

THE RURAL LANDSCAPE

Within those areas of the County designated as Rural/Agricultural Conservation Districts, the Plan recommends providing zoning ordinance and subdivision regulation incentives for cluster development. Through the clustering approach for rural subdivisions, the developer is able to increase base densities and decrease lot sizes in return for setting aside 50 to 70 percent of the overall parcel as open space. The resultant open space would be permanently protected by conservation restrictions for future agricultural use, forestry, or simply community open space.

Buildings would either be located in a wooded fringe at the edge of fields, or screened and setback from the fields and public roadways by a landscaped buffer area. Buildings should be sited so that obstruction of views from public ways will be minimized. This can be achieved by taking advantage of topographic changes or existing vegetation. This requirement would preserve rural views and enhance the rural image of the County. Although individual septic systems could be built for each house, joint systems shared by several houses would become possible, allowing siting on the most suitable soils in the tract, and at the greatest distance from any wells. Subdivision lots would be accessed from a single private road instead of numerous driveways fronting on public routes.

Everyone seems to benefit when such creative land development strategies are followed. Farmers who view their land as their "pension" no longer have to destroy their farms in order to retire with a guaranteed income, as their equity is not diminished. Land will still remain available for productive agricultural activities and open space which contributes to rural character. The County government does not have to raise large sums of money to subsidize agricultural preservation through acquisition of land or conservation easements. The administrative complexities posed by alternative measures such as Transferable Development Rights (TDR) programs are avoided. Developers are not placed under any unreasonable constraints, and realtors gain a special marketing tool, in that the rural views from the new houses will be guaranteed by the conservation easements which protect the open fields and forests

from future development. And finally, housing costs may be reduced because of smaller lot sizes and lower land costs.

This residential land development approach is specifically designed for rural areas, where local officials and residents are looking for rural and agricultural conservation options that involve little public expenditure, are easy to administer, allow full equity for rural land owners, and are not unfair to developers.

COMMUNITY CENTERS

The Plan designates numerous Rural Service Centers and Crossroad Settlements throughout the rural areas of Gloucester. These centers which can be generally termed rural centers have traditionally served as focal points for the surrounding rural community. They play an important functional role in providing homes, limited neighborhood-oriented commercial services and businesses, and civic buildings such as churches, post offices, fire halls, etc. Many of the rural centers throughout Gloucester contain historical structures which should be preserved through local historic district zoning.

These centers each have a unique rural character and "sense of place" with which local residents easily identify. Development design standards for rural centers would help to preserve their rural ambience while still accommodating limited future growth in a responsible manner. It is ironic that the traditionally tightly-knit village pattern so typical of rural areas is often illegal to produce or emulate in many, if not most, rural Virginia communities today. Developers are required to rigorously separate different land uses and set each house on suburban size lots. Such regulations inadvertently destroy the rural character of existing settlements at a rapid pace and prohibit the development of other villages and crossroads communities.

The following are recommended development design guidelines for existing and future Community centers:

- Residential, small-scale commercial and public/semipublic uses should be permitted to coexist adjacent to one another as was done in traditional rural villages.

- Where existing buildings express a traditionally modest (pre-zoning) front setback, creating a characteristically close relationship with the street, it would be highly desirable to retain this pattern in order to preserve the community's character.

- Off-street parking lots should be placed only to the rear or side of buildings. the visual impacts of parking areas upon community character can easily be reduced through landscaping and buffering requirements.

- Open storage areas, exposed machinery, and outdoor areas used for the storage and collection of rubbish, should be visually screened from roads and surrounding land uses.

- Because roadside trees are extremely important to the character of any village or settlement, removal of trees over five inches in diameter should

be absolutely minimized, especially along roadways. removal of existing trees can usually be lessened by shifting the site of the building, parking lot, or entrance/exit drives. In addition, planting of new trees along roads is encouraged to reinforce rural character.

- Lighting should be controlled in both height and intensity to maintain rural character. Luminaries should be shielded to prevent excessive lighting and glare beyond lot lines onto neighboring properties or public ways.

- It is particularly important that new construction be designed and built to blend with its surroundings. New construction in rural centers should be compatible with surrounding buildings in terms of formal characteristics such as height, massing, roof shapes, and door and window proportions. Where new construction is surrounded by existing historic buildings, building height and exterior materials should be harmonious with those of adjacent properties.

- One of the most readily apparent aspects of community character is signage. Since signs are intended to be highly visible and attract attention, they often produce a lasting impression on locals and visitors. Signage standards for rural centers should enhance the unique character of the community. Signs in these areas should relate to pedestrians and to people in slow moving vehicles. They should be designed to be readable to these people, thereby encouraging shoppers and passersby to stop and linger. Large auto-oriented signs are a modern addition in these areas and are inconsistent with both the scale of buildings and rural village character. The size, materials, color, lettering, placement , and illumination of signs in rural centers should respect the unique character of existing buildings.

- Provisions should be made in the County's development ordinances to accommodate the limited growth of existing rural centers in a manner which compliments the existing character of the center. Provisions should also be made to allow for the development of additional mixed-use centers in appropriate rural locations throughout the County.

HIGHWAY CORRIDORS AND SCENIC ROADWAYS

Certain major highways and roadways throughout the County have been designated in the Plan as important corridors where access and aesthetics should be controlled in order to either avoid unappealing forms of commercial strip-development and resultant traffic congestion, or to preserve scenic rural views. Both of these objectives have great merit for the maintenance and improvement of rural character in Gloucester.

Along designated scenic routes, development should be limited and buffered from roadway view. Signage should also be limited to avoid detracting from rural vistas. Along major County highways such as Routes 17, 3/14, 33, and 198, limiting access is vital to preserving roadway capacity, decreasing congestion, and improving safety. Commercial development should not be stripped along the corridor, but rather, it

should be concentrated into defined commercial nodes located at major road junctions.

The large-scale and permanent loss of scenic views, characteristic landscapes, and open space is perhaps the most devastating visual result of conventionally regulated commercial highway development in rural areas. The tendency has been for zoning to encourage new development to line both sides of major roadways, eventually obscuring fields, pastures, or woodlands behind commercial frontage lots. This kind of homogenous development contributes greatly to the loss of rural character and community identity.

When zoning highway commercial areas, the County should not succumb to the "broad brush" approach of designating all roadside areas for new commercial development, but should instead examine the rural landscape to identify the amenities and visual resources which are present. Rather than allowing linear developments, commercial zoning can break the standard pattern by designating commercial nodes in compact, centralized areas, with visually important landscapes protected in between. Commercial development, regardless of where it is located in the County, should also be subject to development appearance standards which ensures compatibility to surrounding land uses and promotes a high quality built environment that compliments the community character of Gloucester.

DEVELOPMENT APPEARANCE STANDARDS

All future development in the county, except for single-family homes and farm buildings, should be subject to design review for compliance with minimum development appearance standards. These minimum standards that should be achieved are performance standards rather than inflexible and stringent criteria. The intent of these performance standards is to promote quality development that will compliment the community character of Gloucester. One of the reasons for implementing these standards is, of course, to positively influence development aesthetics. However, this objective is justified by the greater goals of protecting and enhancing real estate values, fostering of civic pride, and improving the overall investment climate within the County.

These standards are not intended to restrict imagination or development creativity, but rather, to assist in focusing on development design principals which should result in enhancing the visual appearance of the built environment in Gloucester. The development appearance standards relate to such factors as: relationship of buildings to the site; relationship of existing buildings and site to adjoining areas; landscape and site treatment; building design; signs; and, maintenance. These standards should not be considered cost prohibitive or overly restrictive since they embody common sense design principles which were traditionally employed throughout the country prior to the advent of post-war suburbanization.

The following are recommended development appearance standards for future multi-family, commercial and industrial development in all areas of Gloucester County:

Relationship Of Buildings To Site

- The site should be planned to accomplish a desirable transition with the streetscape and to provide for adequate planting, safe pedestrian movement, and screened parking areas.

- Site planning in which setbacks and yards are in excess of zoning restrictions is encouraged to provide an interesting relationship between buildings. Buildings in Community Centers are encouraged to minimize front setbacks to enhance the traditional street/building relationships typically found in rural villages

- Parking areas should be treated with decorative elements, building wall extensions, plantings, berms, or other innovative means so as to screen parking areas from public ways.

- Without restricting the permissible limits of the applicable zoning district, the height and scale of each building should be compatible with its site and existing (or anticipated) adjoining buildings.

- Newly installed utility services and service revisions necessitated by exterior alterations should be placed underground wherever possible.

Relationship of Buildings and Site to Adjoining Area

- Adjacent buildings of different architectural styles should be made compatible by such means as screens, site breaks, and materials.

- Attractive landscape transition to adjoining properties should be provided.

- Harmony in texture, lines, and masses should be required. Monotony of design should be avoided.

- Adjacent incompatible land uses should be screened from one another by landscaping, berms, walls, and fences.

Landscape and Site Treatment

- Where natural or existing topographic patterns contribute to beauty and utility of a development they should be preserved and developed. Modifications to topography should be permitted where it contributes to good appearance, or where it is necessary.

- Grades of walks, parking spaces, terraces, and other paved areas should provide an inviting and stable appearance for the pedestrian.

- Landscape treatment should be provided to enhance architectural features, strengthen vistas and important axes, and provide shade.

- Unity of landscape design should be achieved by repetition of certain plant varieties and other materials and by coordination with adjacent development.

- Plant material should be selected for interests in its structure, texture and color, and for its ultimate growth. Plants that are indigenous to the area and others that will be hearty, harmonious to design, and of good appearance should be used.

- In locations where plants will be susceptible to injury by pedestrian or motor traffic they should be protected by appropriate curbs, tree guards, or other devices.

- Parking areas and traffic ways should be enhanced with landscaped spaces containing trees or tree groupings.

- Where building sites limit planting, the placement of trees in parkways or paved areas should be required.

- Screening of service yards and other places that tend to be unsightly should be accomplished by use of walls, fencing, plantings, or combinations of these. Screening should be effective in winter and summer.

- In areas where general planting will not prosper, other materials such as fences, walls, and pavings of wood, brick, stone gravel, and cobbles should be used. Carefully selected plants should be combined with such materials where possible.

- Exterior lighting, when used, should enhance the adjoining landscape. Lighting standards and building fixtures should be of a design and size compatible with the building and adjacent areas. Lighting should be retrained in design and excessive brightness avoided.

Building Design

- Architectural style should not be restricted. Evaluation of the appearance of a project should be based on the quality of its design and relationship to surroundings.

- Buildings should have good scale and be in harmonious conformance with permanent neighboring development.

- Materials should have good architectural character and should be selected for harmony of the building with adjoining buildings. Materials should be of durable quality. Materials should be selected for suitability to the type of buildings and the design in which they are used. Buildings should have the same material, or those that are architecturally harmonious, used for all building walls and other exterior building components wholly or partly visible from public ways. In any design in which the structural frame is exposed to view, the structural materials should be compatible within themselves and harmonious with their surroundings.

- Building components, such as windows, eaves, doors, parapets, should have good proportions and relationships to one another.

- Colors should be harmonious and should use only compatible accents.

- Mechanical equipment or other utility hardware on roof, ground, or buildings should be screened from public view with materials harmonious with the building, or they should be so located as not to be visible from public ways.

- Exterior lighting should be part of the architectural concept. Fixtures, standards, and all exposed accessories should be harmonious with building design.

- Refuse and waste removal areas, service yards, storage yards, and exterior work areas should be screened from view of public ways.

- Monotony of design in single or multiple building projects should be avoided. Variation of detail, form, and siting should be used to provide visual interest. In multiple building projects, variable siting of individual projects should be used to prevent a monotonous appearance.

Signs

- Every sign should have good scale and proportion in its design and in its visual relationship to buildings and surroundings.

- Every sign should be designed as an integral architectural element of the building and site to which it principally relates.

- The number of graphic elements on a sign should be held to the minimum needed to convey the sign's major message and should be composed in proportion to the area of the sign face.

- The colors, materials, and lighting of every sign should be restrained and harmonious with the building and site to which it principally relates.

- Each sign should be compatible with signs on adjoining premises and should not compete for attention.

Maintenance - Planning and Design Factors

- Continued good appearance depends upon the extent and quality of maintenance. The choice of materials and their use, together with the types of finishes and other protective measures should be conducive to easy maintenance and upkeep.

- Materials and finishes should be selected for their durability and wear as well as for their beauty. Proper measures and devices should be incorporated for protection against the elements, neglect, damage, and abuse.

- Provisions for washing and cleaning of buildings and structures, and control of dirt and refuse should be incorporated in the design. Configurations that tend to catch and accumulate debris, leaves, trash, dirt, and rubbish should be avoided.

- Provisions for landscape maintenance and replacement (i.e. native species) should be added.

SUMMARY

Essentially, the broad choice in future development patterns for Gloucester is between a creative extension of the traditional rural character concept, and repetition of conventional suburban development practices, wherein 100 percent of the tract is covered by streets, houses, yards, and strip commercial development. The former enables a large proportion of new homes and businesses to be sited so as to command uninterrupted views across open fields, pastures, and woodlands permanently protected from future development.

When a subdivision, shopping center, or other large scale development is proposed in a rural setting, residents and County officials often have difficulty convincingly describing just what is at stake. Fortunately, or unfortunately, the quality of a rural landscape is not easily measured in dollars and cents. Lacking a direct market value, however, a rural landscape might wrongly be assumed to have no value. This is a very real dilemma in a society which knows the value of very few intangibles, such as rural character.

Application of the development design standards described in this chapter should help the next generation of development to be skillfully fitted into the County in a manner which preserves and enhances rural character and quality of life. Incorporation of these standards into County development ordinances, to the degree possible, will help ensure that necessary discussion occurs and that development design choices are made consciously rather than by default. It is understood that not all design concepts and guidelines can be defined by ordinance language. Nevertheless, this County policy should help County official address the loss of character due to the homogeneous visual appearance of suburban sprawl. It will provide a common yardstick by which to evaluate future development in Gloucester County.