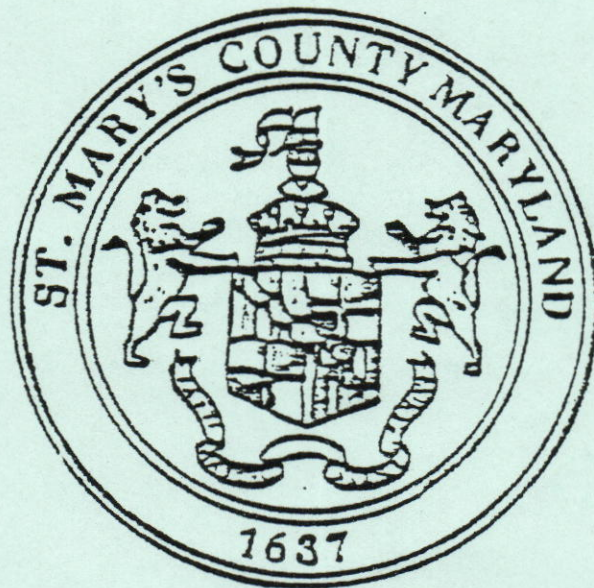


COMPREHENSIVE LAND USE PLAN  
OF  
ST. MARY'S COUNTY, MARYLAND



OFFICE OF PLANNING & ZONING

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ST. MARY'S COUNTY

COMPREHENSIVE LAND USE PLAN

ADOPTED: APRIL, 1974

AMENDED: MARCH 1977 and  
DECEMBER, 1978

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COUNTY COMMISSIONERS  
OF  
ST. MARY'S COUNTY, MARYLAND  
1 9 8 2

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Title: Comprehensive Land Use Plan of  
St. Mary's County, Maryland

Subject: Process and Conclusions Relating to the  
Comprehensive Land-Use and Related Plans  
for St. Mary's County, Maryland

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Tri-County Council for Southern Maryland  
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Prepared By: Office of Planning & Zoning

## ABSTRACT

The Comprehensive Plan for St. Mary's County utilizes an innovative urban-oriented economic growth model to help describe and isolate growth and development pressures within the County by census tract areas. Based on this analysis, the consultants derive a concept plan for future growth that integrates both economic development pressures by area with a complete land inventory of ecologically sensitive areas along the waterfront. Innovative use is made of natural resource studies prepared by State and private organizations to identify and justify potential preservation and recreation areas.

Following the delineation of the Comprehensive Land Use and Open Space/Recreation Plans, the consultants outline a complete implementation strategy based upon a development districting plus conventional zoning approach.

Design aspects of residential alternatives serve as the basis for density recommendations. Supporting plans for transportation, public utilities and community facilities comprise the latter elements of the Comprehensive Plan.

The Comprehensive Plan is a seven-staged model which first establishes environmental sectors, evaluates alternative growth strategies, develops the economic growth model, distributes growth via an activity center concept, analyzes environmental/natural resource issues, and synthesizes all elements into a Comprehensive Land Use Plan and implementation strategy.

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INTRODUCTION

## INTRODUCTION

The preparation of the amended Comprehensive Land Use Plan for St. Mary's County has involved a wide range of activities including inputs from all levels within the County. The process began in April, 1975, and the plan has evolved to this point as a result of a continuing dialogue among the County government, the public, related State, local and Federal agencies, and the general public. It is important to emphasize that the preparation of the Comprehensive Land Use Plan is a process of evolution. It begins at a level of factual data - existing conditions both physical and social - and evolves through a series of stages into what is called a Comprehensive Land Use Plan. Because the process itself is as important as the so-called final product, the description of that process occupies an unusually large segment of this Comprehensive Land Use Plan. Understanding the reasons for this approach is an important prerequisite for understanding the plan itself, and these reasons are apparent from the fundamental goal of preparing this Comprehensive Land Use Plan. This plan was built around the need to supply the County with a flexible set of goals, standards, and development criteria to control, direct, and guide future growth. The central goal of the plan is to establish a program and strategy to guide the future development of St. Mary's County, maintaining and improving the quality of the natural environment while accommodating the projected level of growth in a well-ordered physical environment.

One of the most important characteristics of the County is the quality of life, both existing and potential, and the way to improve and ensure that quality of life is to improve the natural, physical, and social environments. All these elements are inter-related and they are all compatible. This plan has been directed at helping to maximize the potential for high quality natural and physical environment as one important step in helping to reinforce a high quality of life in the County.

In developing this process, several stages are presented:

1. The first stage is the building of a sector concept for the County. Building on the facts describing the existing land use and the demographic and economic characteristics, an attempt has been made to identify a system of service areas throughout the County. This service



center system is designed to facilitate the distribution of future land use and community service requirements based on existing land use patterns, potential for economic development, and projected population. This first stage is also directed at providing a definable set of districts with distinct environmental and land use characteristics that will eventually serve as the basis for implementation of the Comprehensive Plan.

2. The second stage involves the selection of a viable growth strategy for the County. This stage involves an analysis of several alternatives based on economic development patterns both existing and projected. The conclusions reached in this analysis serve as major policy decisions for the remaining stages in the building of the land use plan.
3. Stage three is the preparation of an urban oriented economic growth model which is used to evaluate the current potential for future economic growth. The primary objective of this model is to prepare a usable tool for identifying those areas of the County which will experience the pressures for growth so that appropriate strategies for guiding that growth can be prepared.
4. Stage four involves the projection of future growth, based on the conclusions reached in the analysis of previous stages. The objective of this stage is to develop a flexible process of projecting growth that can accommodate unforeseen variations. A population level is identified as the framework for long-range planning, and a staging process is estimated for reaching that population level.
5. Stage five identifies a system of activity centers in the County. Two levels of centers - major centers and community service centers - are identified and a picture is prepared of how the projected growth should be distributed. The overriding objective is to establish a system so that projected growth can be distributed to achieve maximum efficiency in the provision of public and private facilities and services.
6. Stage six recognizes the goal of enhancing the natural environment and ensuring that the issues relating to natural resources are woven into the fabric of the Comprehensive Plan. The natural environment is the most important characteristic of St. Mary's County,

and this plan is directed at preserving and enhancing the natural beauty of the land. Various issues relating to environmental quality are discussed and relevant actions are proposed.

7. Stage seven presents the land use plan and develops a strategy for its implementation. Evolving from the previous stages, this stage is based on three basic objectives:
  - a. To protect the quality of the waterfront area and to achieve and maintain a high level of natural excellence while assuring that all compatible development is of a similarly high quality.
  - b. To concentrate growth in designated areas in order to provide a framework for efficient provision of public services.
  - c. To control and limit growth in less densely populated areas which do not allow efficient provision of elements of the infrastructure and redirect those growth pressures into those areas programmed for concentrated growth. This allows for and encourages the preservation of agricultural, forest, and related activities.

#### Summary List of Additional Generalized Goals and Objectives

1. To establish a program and strategy for controlled growth in St. Mary's County, maintaining and improving the quality of the natural environment while accommodating a reasonable level of urban-oriented economic growth.
2. To identify an appropriate rate of growth for the County that is realistic both from past trends and from the County's ability to provide appropriate public services.
3. To develop an economic model for assisting in the identification of areas subject to pressures for development and growth.
4. To protect and enhance the County's environmental qualities through the preparation of a land use plan recognizing nature as a primary component of physical and social design.

5. To provide a planning framework which maximizes potential for stimulating the County's economic base for utilizing and expanding the labor force, for reducing reliance on a single major employer, the Naval Air Test Center, Patuxent River, Maryland.
6. To recognize and protect areas of significant natural beauty and resources, to maintain and improve the quality of the County's waterways.
7. To adequately protect the County's ground-water resources and potential for creation of surface water resources.
8. To provide a framework within the County for an ordered hierarchy of settlements with appropriate services and employment potential.
9. To provide a physical land use configuration designed to minimize trip generation while maximizing the use of available and projected transportation facilities and by so doing decrease the potential for highway related air pollution.
10. To initiate measures and policies aimed at preventing further decline of the agriculture and seafood industries.
11. To provide and develop facilities to support the Naval Air Test Center and to pass such ordinances and resolutions as necessary to ensure the continued operational capabilities and growth of NATC and its outlying facilities.

Major questions involving the policy determination of the comprehensive planning process are concentrated in the following sections:

1. Stage 2: discusses the alternative growth strategies available to the County and selects an alternative as the framework of the land use plan.
2. Stage 5: distributes the projected population based on policy determinations relating to design and economic efficiency.
3. Stage 6: discusses policy determinations relating to the identified environmental issues.
4. Stage 7: presents a strategy for implementation based on the policies established for future growth.

EXISTING LAND USE AND CURRENT ECONOMIC PARAMETERS

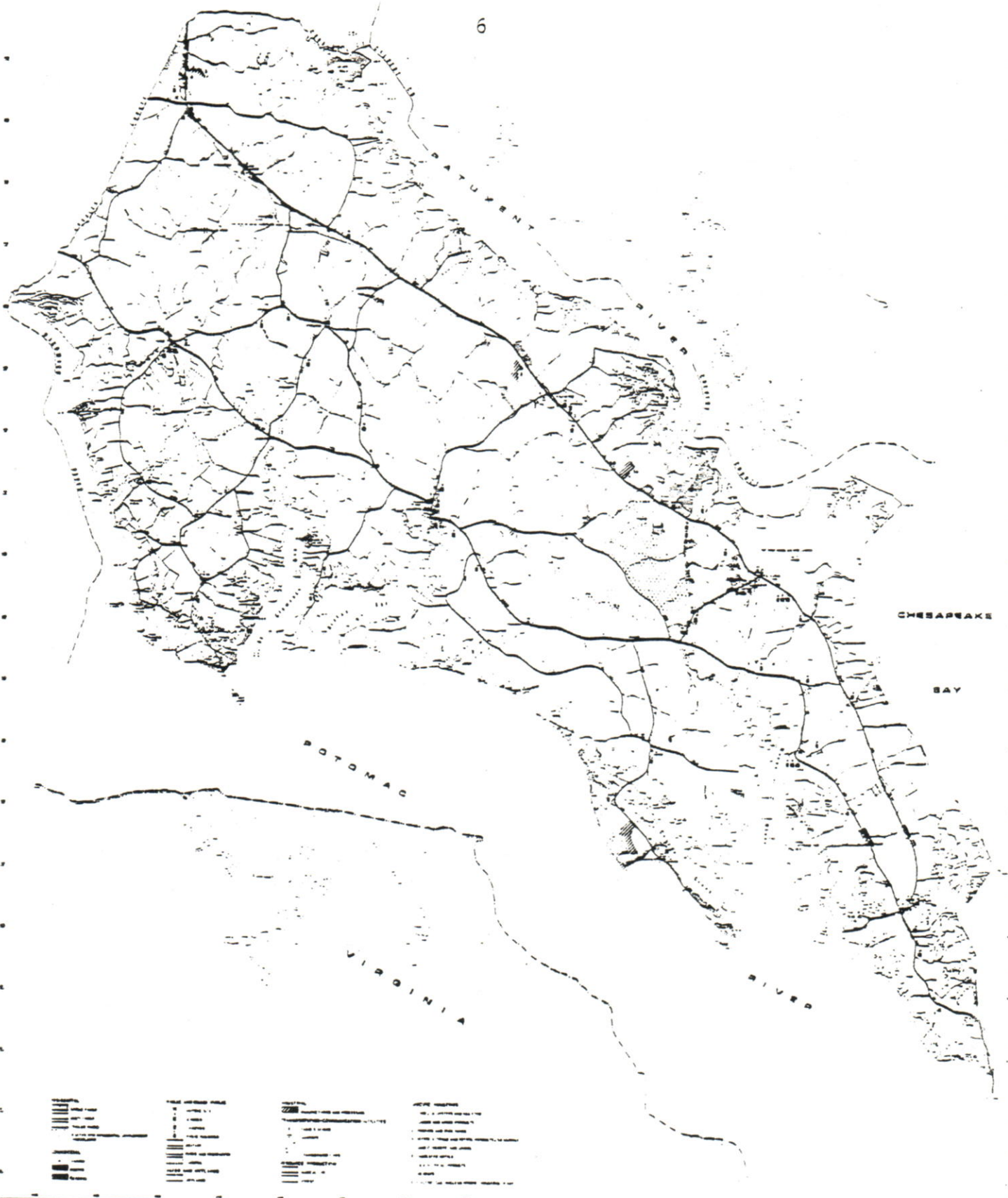
Summary of Existing Land Use Characteristics

The pattern of existing land use in the County has been analyzed and presented in an earlier report prepared by this office in August, 1973; and, therefore, only a summary of that report appears in this Comprehensive Plan document. The full report should be attached to the Comprehensive Plan as an appendix since the material it contains serves as an important stage in the development of the land use plan.

The inventory of existing land uses was divided into several categories:

1. Residential - including single- and multi-family dwelling units, trailer parks, land plotted for residential development but as yet undeveloped, and planned unit development areas.
2. Public and Quasi-Public - including historic sites, schools, churches, public buildings, land fills, military installations, park and recreation areas.
3. Commercial - including marinas and general and marine commercial facilities.
4. Industrial - including manufacturing and processing facilities, with identification of special industries.
5. Transportation, communication, and utilities - including airports, radio stations, transmission lines rail lines, and highway network.
6. Resource Production - including agriculture and forest.
7. Water and Wetlands - including inland water and wetland areas.
8. Aircraft Impact Districts - areas which could have a derogatory effect on operations of civil or military airports.

The composite land use map is shown in Figure A. The urbanized uses, including residential, commercial and industrial, cover approximately 4.76% of the total County acreage. Adding public and quasi-public to this total gives 10.32%. Total agricultural land use is 40.61% and forested land uses is 49.07%. The important statistic is that only 10% of the entire County is presently "developed" with only 5% in actual urbanized use including



# ST. MARY'S COUNTY - MARYLAND

## A. LAND USE INVENTORY - AUGUST 1973

Prepared for the Commissioners of St. Mary's County, Maryland, by the Office of Angela C. Demetriou, A.I.A.

residential and commercial. Almost 50% of the County is still forested with another 40% in agricultural use. In terms of actual land area, the County has considerable opportunity to absorb new development while maintaining and preserving vast open areas. The 1967 Comprehensive Plan of Harland/Bartholomew and Associates indicated that agricultural land use occupied almost 54% of the total land area of the County, decreasing from 64% in 1954. Assuming comparability of the figures would indicate a decreasing amount of land devoted to agriculture from 1954 to 1973:

	<u>ACRES</u>			<u>Δ</u>	<u>Δ</u>	<u>% Δ</u>	<u>% Total Area</u>		
	<u>1954</u>	<u>1967</u>	<u>1973</u>	<u>1954-73</u>	<u>1967-73</u>	<u>1954-73</u>	<u>1954</u>	<u>1967</u>	<u>1973</u>
<u>Agriculture:</u>	149,882	126,455	95,639	54,243	30,816	36.2	63.8	53.8	40.6

while developed land has increased:

<u>Developed:*</u>	17,326	24,323	+7,000			40.4	7.4	10.32
--------------------	--------	--------	--------	--	--	------	-----	-------

\* Developed includes: Single and multi-family residential  
Trailer Parks  
Military  
Parks and Recreation  
Public Facilities (i.e. churches, schools)  
Commercial  
Industrial  
Airports

The current pattern of developed land uses is made up of three distinct elements:

1. Concentration around the Lexington Park area and around Leonardtown
2. A linear pattern of development along major arteries
3. Scattered subdivision development along the waterfront.

Substantial new residential development has taken place along the waterfront - along both the Patuxent and Potomac Rivers, and considerably more is presently being proposed. Sizeable subdivisions have created both seasonal and year-round homes, and it can be expected that pressures for this kind of development will continue and intensify. The major portion of the County's developed land is concentrated in and around Lexington Park with 52.3% of the total developed land located in the Eight Election District. The next closest area is the First Election District with 13.8% of the developed land.

The County's principal commercial center is also located in Lexington Park, primarily resulting from the location of the adjoining Naval Air Test Center, Patuxent River, Maryland, hereafter referred to as NATC and the resultant concentration of population. The concentration of retail and entertainment facilities in this area is reflective of the importance of the base personnel in the generation of retail activity. The form of the center, originally compact and close to the main gate, has begun to spread away from this immediate entrance to the base, particularly along Route 246 in the direction of Great Mills. Smaller concentrations of commercial facilities are located in Leonardtown and at crossroads of the more important roads throughout the County.

Existing industrial uses are mostly service oriented rather than manufacturing, and industrial use presently occupies a very small percentage of the total land area - approximately 0.3% or just over 700 acres. Approximately 1200 additional acres around St. Mary's County Airport have been zoned for industrial use.

Detailed statistics concerning the existing land use allocated by election district as well as discussion of the complete methodology used to generate this data is included in the previously mentioned report.

## ECONOMIC CHARACTERISTICS

### I n t r o d u c t i o n

The potential for future growth and development in the County must be directly tied to the potential for economic development, otherwise the County becomes a commuter-oriented economy. The basis on which predictions for growth can be made is only on the existing economy. Several characteristic measures of the economy can be generated on a comparative basis with the same characteristics for the surrounding region and for the State of Maryland. Problems with economic analysis for the County are twofold:

1. One is that the unit of the County for which data is available is the election district - which is too gross a scale to adequately examine present locations of the existing labor force. Distribution of employment by economic sector can only be examined in terms of the election district.
2. The second and most important difficulty in the County - which in itself is an important conclusion about the economy - is that the very little private industry or manufacturing experience in the County does not allow any determination of trends or patterns.

Therefore, this discussion of economic characteristics of the County is based on analysis of existing conditions and is designed to identify salient points about the present economy. In the subsequent section on development of the land use plan, these existing characteristics are used to develop an economic model which ranks election districts according to potential for future growth in terms of existing characteristics. The conclusions generated by the model will then be used to help analyze the land use pressures as a basis for an understanding of where pressures will have to be applied to either control or stimulate growth.

The analysis of current economic conditions contains three parts:

1. Labor force characteristics.
2. Economic base characteristics.
3. Income analysis and potential retail demand.



Conclusions from this material are then combined with the information generated by the economic model, developed in the next section as part of the growth strategy discussion, in an effort to understand more fully the factors affecting future development in the County.

## L a b o r F o r c e C h a r a c t e r i s t i c s

### Dependency Ratios

The dependency ratio is a relative measure of how many people in a specified area are supported by the potential labor force. Generally, it is assumed that population groups in the age brackets birth to seventeen and sixty-five and over are dependent on or supported by the potential labor force defined as the population aged eighteen through sixty-four. The ratio of these two population groups is useful on a comparative basis in graphically illustrating the dependency load which must be supported by the potential labor force. The dependency ratio is defined as follows:

$$r_d = \frac{0^P_{17} + 65^P_{+}}{18^P_{64}} \times 100$$

where

$0^P_{17}$  = Number of persons ages birth through 18

$65^P_{+}$  = Number of persons ages 65 and over

$18^P_{64}$  = Number of persons ages 18 through 64

$r_d$  = Number of dependents per one hundred members of the potential labor force.

The calculated ratios for Calvert, Charles, and St. Mary's Counties, and, for comparison purposes, the Tri-County Council and Maryland are given in Tables 1 and 2 in units of number of dependents per one hundred members of the potential labor force.

St. Mary's County has the lowest dependency ratio for the Tri-County region, and the most plausible reason for this distinction is apparent from the pyramid graphs of population distribution by age group, sex, and race (see Figure 1). St. Mary's County's demographic structure is similar to other areas with large military bases with a disproportionately large number of young males ages 20 through 29. In terms of the dependency

TABLE 1

Dependency Ratios<sup>1</sup>

	<u>1960</u>	<u>1970</u>	<u>July 1, 1973</u>
Maryland	78.2	75.0	69.6
Calvert	113.0	101.0	87.6
Charles	102.0	96.0	87.7
<u>St. Mary's</u>	<u>90.0</u>	<u>84.0</u>	<u>76.6</u>
Tri-County	98.0	92.0	83.2

<sup>1</sup>1960, 1970 from Census Bureau, 1973 from Maryland Department of Health and Mental Hygiene

TABLE 2

Calculations of Dependency Ratios, 1973

$$= P_0 - 17 + P65^+$$

<u>Age Group</u>	<u>Calvert</u>	<u>Charles</u>	<u>St. Mary's</u>	<u>Tri-County</u>	<u>Marvland</u>
P0-17	8,990	23,350	19,340	51,680	1,345,850
P18-64	12,710	29,700	28,670	71,080	2,402,370
P65+	2,140	2,690	2,610	7,440	325,720
TOTAL	23,840	55,740	50,620	130,200	4,073,940
Dependency Ratio:	.876	.877	.766	.832	.696
% Change 1970-1973	-13.3%	-8.6%	-8.8%	-9.6%	-7.2%

ratio, the larger share in this age bracket results in a ratio which is less than that of the surrounding counties which do not have large military installations.

Although the dependency ratio for St. Mary's County is the lowest in the Tri-County region, it is still considerably higher than that of the State of Maryland as a whole. This fact is also apparent from the population pyramids which show that St. Mary's County has a much higher percentage population in the age bracket 0<sup>P</sup>17 than Maryland. In general, these demographic characteristics indicate a large young population of school age with the resulting demand for high investment in the educational sector. In addition, there is a considerable out-migration of population in the middle age brackets from 40 to 50, causing a possible shortage in experienced personnel at all levels of the work force.

The dependency ratio shows an increase of 30% from 1950-1960, but a decrease of 7% from 1960-1970. From 1950-1960, the population group 0-17 increased by 57% while the population group 18-64 increased by only 19%. However, from 1960-1970, the population group 0-17 increased by 15% while the population group 18-64 increased by 75%. These growth characteristics resulted from the increased birth rate in the 1950's following World War II with a subsequent increase in the population group 18-64 as the "post-war babies" joined the labor force. The slower rate of increase for the 18-64 group during the 1960's than the rate of increase for the 0-17 group during the 1950's reinforces the conclusion that potential labor force out-migration is a definite problem in the County.

#### Labor Force Participation

It is difficult to gauge the relative positive or negative impact of the calculation of labor force participation rates because of the dominance of military employment in the County. Labor force participation rates are determined as follows:

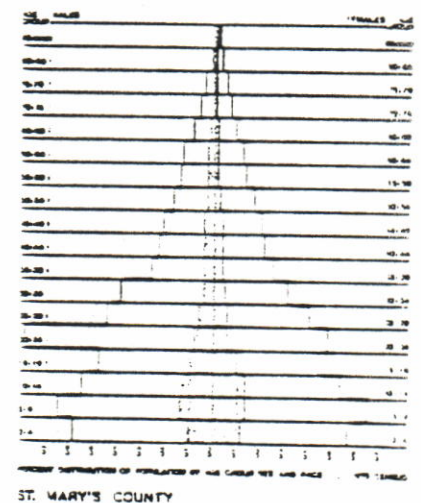
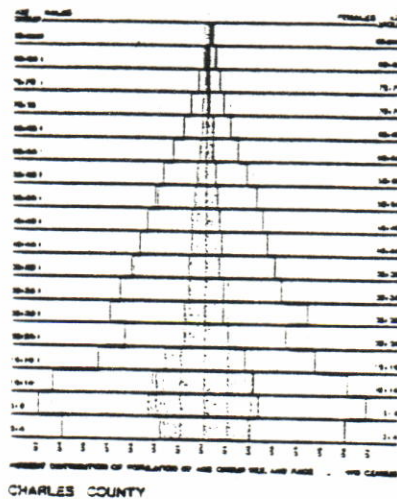
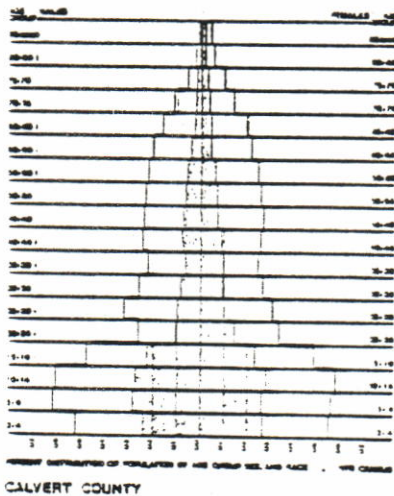
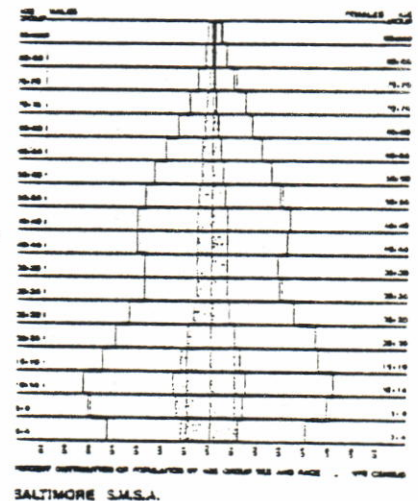
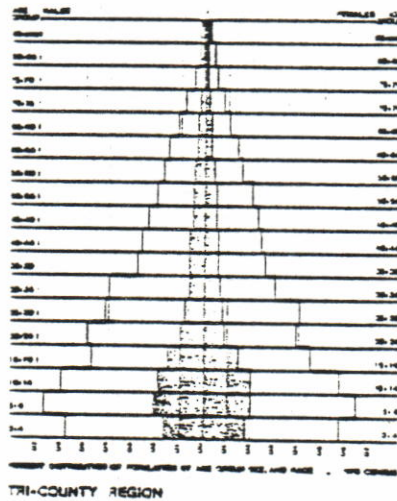
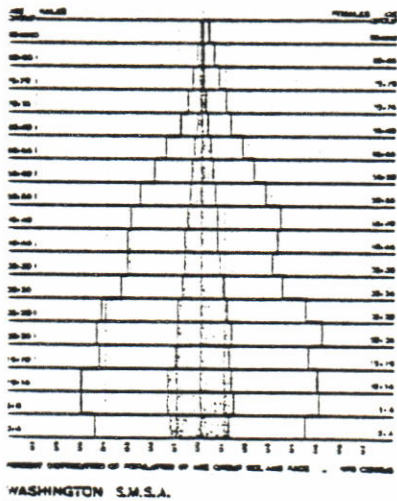
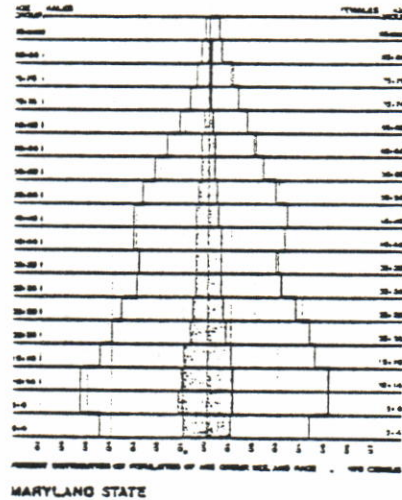
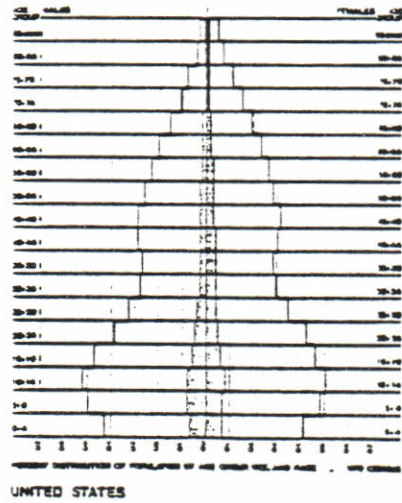
$$r_{LF} = \frac{N_L}{18^P_{64}} \times 100$$

where

$r_{LF}$  = The number of actual labor force participants per 100 potential labor force participants

$N_L$  = The number of people currently employed (including known unemployed actively seeking employment)

Figure 1: Demographic Characteristics



18<sup>P</sup>64 = The number of people in the potential labor force defined as the population group ages 18 to 64.

Results are indicated in Table 3.

Inclusion of the military component of the labor force results in a labor force participation rate of 70% in 1960, increasing to 72% in 1970. During this period of time the military component of the total labor force decreased from 34.5% in 1960 to 32.1% in 1970. The labor force participation rate of approximately 70% to 72% is consistent with or slightly higher than that for the nation or the state.

#### Unemployment Rates

The unemployment rate for non-military employees decreased from 4.5% in 1960 to 4.1% in 1970. (See Table 4). The U.S. rate in 1970 averaged 4.9% while the Maryland rate averaged 3.3%. Addition of the military to the employment base (assuming virtually 100% employment) lowers the average unemployment rate to 2.8%.

TABLE 3

MARCH, 1974 EMPLOYMENT  
(At Place of Work)  
State-Insured and Federal Employment

	Calvert	%	Charles	%	St. Mary's	%	Maryland	%
Mining	-	0.0	-	0.0	-	0.0	1,638	0.1
Construction	1,548	45.3	822	8.6	732	9.7	99,041	8.2
Manufacturing	234	6.8	851	8.9	239	3.2	253,000	21.0
Trans., Comm., Util.	96	2.8	772	8.1	477	6.3	70,871	5.9
Wholesale	47	1.4	501	5.2	291	3.9	70,271	5.8
Retail	711	20.8	2,763	28.8	1,807	24.0	267,571	22.2
Fin., Ins., Real Estate	260	7.6	378	3.9	311	4.1	77,520	6.4
Service and Other	522	15.3	1,095	11.4	1,152	15.3	238,788	19.8
Federal Government	-	0.0	2,404	25.1	2,526	33.5	128,228	10.6
Total Employment	3,418	100.0	9,586	100.0	7,535	100.0	1,206,928	100.0

SOURCE: Employment and Payrolls, First Quarter 1974  
Department of Employment and Social Services  
July, 1975

RFD, October, 1975

1972 EMPLOYMENT  
(At Place of Work)

TABLE 4a

	Calvert	%	Charles	%	St. Mary's	%	Maryland	%
Farm Proprietors	749	9.9	833	5.7	980	5.1	19,303	1.2
Non-Farm Propriet.	678	9.0	1,214	8.2	1,422	7.4	100,956	6.2
Wage and Salary Workers								
Farm	151	2.0	149	1.0	127	0.7	6,936	0.4
Federal Civilian	37	0.5	2,944	20.0	3,464	18.1	131,262	8.0
Military	93	1.3	306	2.1	6,236	32.6	51,328	3.1
State & Loc. Gov't.	990	13.1	1,656	11.3	1,397	7.3	204,816	12.5
Manufacturing	248	3.3	664	4.5	219	1.2	248,891	15.2
Trans., Comm., Util.	108	1.4	591	4.0	487	2.6	80,115	4.9
Trade	862	11.4	3,374	22.9	1,957	10.2	332,535	20.3
Fin., Ins. Real Estate	204	2.7	257	1.7	330	1.7	74,821	4.6
Services	1,051	13.9	1,792	12.2	1,813	9.5	283,387	17.3
Construction & Other	2,375	31.5	935	6.4	682	3.6	104,051	6.3
Total Employment	7,546	100.0	14,715	100.0	19,114	100.0	1,638,401	100.0

SOURCE: Bureau of Economic Analysis  
U.S. Dept. of Commerce August, 1974



TABLE 4

## Labor Force and Unemployment

	<u>Calvert</u>	<u>Charles</u>	<u>St. Mary's</u>	<u>Maryland</u>
<u>1960</u>				
Labor Force	5,398	10,683	9,293	1,190,791
Unemployed	340	352	324	56,823
%	6.3	3.3	3.5	4.8
<u>1970</u>				
Labor Force	7,524	16,776	12,637	1,605,619
Unemployed	257	509	524	52,862
%	3.4	3.0	4.1	3.3
<u>March, 1975<sup>1</sup></u>				
Labor Force	11,880	20,531	14,633	1,815,284
Unemployed	1,088	1,396	897	136,896
%	9.2	6.8	6.1	7.5

1

Department of Employment and Social Services, May 5, 1975

## Economic Base Characteristics

### Defintions

$$\text{Location quotient} = \frac{\text{state employment in industry A}}{\text{total state employment}} \times \frac{\text{total employment in County}}{\text{total state employment}} = X$$

The solution for X indicates the number of County workers that would be employed in industry A if County employment in this industry relative to total County employment reflected state employment in this industry relative to total state employment.

This method holds that the extent to which County employment in the industry A exceeds X represents County specialization which is generally aimed at the export market, and therefore is the part that constitutes basic employment in that industry.

$$\text{Base ratio} = \frac{\text{basic employment}}{\text{non-basic employment}}$$

$$\text{Base multiplier} = \frac{\text{total employment}}{\text{basic employment}}$$

### Characteristics

Employment data for 1960 and 1970 was taken from the Census for both St. Mary's County and Maryland as a whole, and the location quotient method was used to determine the basic sectors for the County. Three basic sectors are evident:

1. Agriculture and Fisheries - both basic and non-basic employment decreased from 1960 to 1970, by 40% and 52% respectively.
2. Construction - both basic and non-basic employment increased by 361% and 34% respectively.
3. Government - both basic and non-basic employment increased by 51% and 78% respectively.

Calcualtion of the base multiplier shows an increase from 3.69 in 1960 to 4.10 in 1970, indicating that by 1970 the total employment in the County was just over 4 times the basic employment. This relatively low value indicates the economic base of the County is not overly strong since it does not spawn a high number of supportive jobs to the basic sector.\*

\*Tables 5 and 6 show the current breakdown of employment for both Maryland and St. Mary's County for comparison purposes. Based on this comparison, the location quotient method was used to separate basic and non-basic employment by sector which in turn is used to generate the base ratio and multiplier. The results are shown in Table 7.

TABLE 5

Maryland Trends in Civilian Employment

	1970	% of Total	1972	% of Total	Δ	Δ %
Manufacturing	270,400	18.0	248,891	15.7	-21,509	5.5
Non-Manufacturing						
Construction <sup>1</sup>	95,854	6.3	104,051	6.5	8,197	8.6
Transportation, Communication, and Utilities	81,160	5.4	80,115	5.0	-1,045	-1.3
Trade	304,575	20.3	332,535	21.0	27,960	9.2
Services	257,889	17.1	283,387	17.9	25,498	9.9
Finance Insurance Real Estate	69,324	4.6	74,821	4.7	5,497	7.9
Government	300,271	20.0	336,078	21.2	35,807	11.9
Other <sup>2</sup>	124,548	8.3	127,195	8.0	2,647	2.1
Total Employed	1,504,021	100.0	1,587,073	100.0	83,052	5.5

Source: Regional Economics Information System, Bureau of Economic Analyses, U.S. Department of Commerce, August 2, 1974.

<sup>1</sup>Includes construction, mining, and other.

<sup>2</sup>Includes self-employed and farm workers.

Δ Change (numbers)

Δ % Percentage change

TABLE 6

## St. Mary's

## Trends in Civilian Employment

	1970	% of Total	1972	% of Total	$\Delta$	$\Delta\%$
Manufacturing	215	1.8	219	1.7	4	1.9
Non Manufacturing						
Construction <sup>1</sup>	621	5.3	682	5.3	61	9.8
Transportation, Comm., Util.	476	4.1	487	3.8	11	2.3
Trade	1,837	15.7	1,957	15.2	120	6.5
Services	1,702	14.5	1,813	14.1	111	6.5
Finance, Ins., R.E.	251	2.1	330	2.6	79	31.5
Government	4,101	35.0	4,861	37.7	760	18.5
Other <sup>2</sup>	<u>2,516</u>	<u>21.5</u>	<u>2,529</u>	<u>19.6</u>	<u>13</u>	<u>.5</u>
Total Employment	11,719	100.0	12,878	100.0	1,159	9.9

Source: Regional Economic Information System  
 Bureau of Economic Analysis  
 U.S. Department of Commerce  
 August, 2, 1974

<sup>1</sup>Includes construction, mining, and other.

<sup>2</sup>Includes self-employed and farm workers.

TABLE 7

Economic Base Theory

St. Mary's County (As compared to Maryland)

		1970	% of Total <u>employment</u>	1972	% of total <u>employment</u>
Number Employed:					
Manufacturing	B	0		B 0	
	N	215		N 219	
Construction	B	0		B 0	
	N	621		N 682	
Trans., Comm.	B	0		B 0	
	N	476		N 487	
Trade	B	0		B 0	
	N	1,837		N 1,813	
Services	B	0		B 0	
	N	1,702		N 1,813	
Fin, Ins, R.E.	B	0		B 0	
	N	251		N 330	
Government	B	1,757	35.0	B 2,131	37.7
	N	2,344		N 2,730	
Other	B	1,496	21.5	B 1,447	19.6
	N	1,020		N 1,082	
Total Basic		3,253		3,578	
Total non-basic		<u>8,466</u>		<u>9,300</u>	
TOTAL		11,719		12,878	
Basic Ratio:		.384		.385	
Base Multiplier:		3.60		3.60	

In general, the construction industry shows considerable growth as does civilian government employment associated with the Naval Station and other public institutions. Agriculture and fisheries is declining rapidly with respect to percentage of the County's total employment. It is also important to note the weak employment in the financial sector -- a general indicator of local economic weaknesses. There is no question that government sector employment is dominating the County's economy on an ever-increasing scale, employing over 30% of the total employment in contrast with 19% for the State of Maryland. This is shown in Table 8 which separates out the major civilian employment sectors for Maryland and St. Mary's County. Projecting these trends to 1980 shows a further increase in civilian government employment to 36% of total employment along with a base multiplier increase to 4.3 - showing a general strengthening of the economy with an increasing dominance of the government sector. Tables 9 and 10 show the projections in civilian labor force through 1980 for both Maryland and St. Mary's County. The comparable State and County sectors are then compared using the location quotient to estimate the separation between basic and non-basic employment.

Additional employment characteristics are shown in Tables 11, 12, and 13 which place St. Mary's County in the context of the Tri-County Region and the State of Maryland as a whole. Table 11 presents data for comparison of Calvert, Charles, and St. Mary's County on unemployment and underemployment. The predominance of government and military employment contributes to the fact that the unemployment and underemployment rates in St. Mary's County are the lowest of the Tri-County area.

Tables 12 and 13 show the trends in employment participation by race and sex for both Maryland and St. Mary's County. In all areas St. Mary's County is well below State-wide participation rates. It is also important to note that the situation has not improved at a rate equivalent to that of Maryland and has actually decreased in the area of non-white employment participation. Improvement will have to be generated both with respect to female and non-white employment participation rates if the potential labor force and potential employment opportunities are to expand. The considerable importance of the government sector is even more apparent from the analysis of personal income data for the County.

#### Income Analysis

Data has been gathered to analyze the income characteristics of the identified basic sectors of the County and is shown in Table 14. Agricultural income per employee increased considerably even though employment decreased. This would

generally indicate that productivity per employee increased. However, the percentage of the total earnings generated by the agricultural sector declined while government and private sector earnings increased, indicating a decline in the relative contribution to the total earnings of the County by the agricultural sector. The most striking characteristic of the income data is the fact that earnings from the government sector presently account for over 70% of the total income generated in the County and has increased slightly between 1959 and 1969. This situation, coupled with the fact that over 60% of the total employment in the government sector is associated with the Patuxent Naval Air Test Center, demonstrates just how dependent the County's economy is on the continued viability of this facility. This reliance must be reflected in the Lexington Park Area Master Plan as well as that of the County as a whole. One of the primary goals of the County Government is to provide and develop facilities to support the Naval Air Test Center and to pass such ordinances and resolutions as necessary to ensure the continued operational capabilities and growth of the Naval Air Test Center and its outlying facilities.

One of the first steps toward this goal was Resolution No. 74-43 titled "Aircraft Impact Districts" of 13 November 1974. This resolution contains specific guidelines for land use in air Installation Compatible Use Zones. (See Part II, The 7th Stage)

PART I: EXISTING LAND USE AND CURRENT ECONOMIC PARAMETERS



TABLE 8: GROWTH PATTERNS IN SELECTED MAJOR CIVILIAN EMPLOYMENT SECTORS FOR ST. MARY'S COUNTY V. MARYLAND

<u>Maryland</u>	<u>1960</u>	<u>% of Total Employment</u>	<u>1970</u>	<u>% of Total Employment</u>
Total employed:	1,133,968		1,552,747	
Construction	73,577	6.5%	101,054	6.5%
Trade	198,205	17.5	295,170	19.0
Government	164,435	14.5	296,676	19.1
Agriculture				
Forestry				
Fisheries	95,280	8.4	46,147	3.0
Mining				
Finance				
Insurance	48,000	4.2	77,158	5.0
Real Estate				
 <u>St. Mary's</u>				
Total employed:	8,969		12,113	
Construction	708	7.9	1,363	11.2
Trade	1,437	16.0	2,157	17.8
Government	2,393	26.7	3,958	32.7
Agriculture				
Forestry				
Fisheries	1,966	21.9	1,094	9.0
Mining				
Finance				
Insurance	157	1.8	306	2.5
Real Estate				

TABLE 9:

MARYLAND

TRENDS IN CIVILIAN LABOR FORCE - PROJECTIONS

	<u>1980</u>	<u>% of Total Employment</u>
1. Number Employed	2,273,337	100%
2. Manufacturing	322,582	14.2
Non-Manufacturing:		
3.    Construction	138,787	6.1
4.    Trade	439,567	19.3
5.    Services	690,760	30.5
6.    Fire	124,024	5.4
7.    Government	535,263	23.5
8.    Other*	22,354	1.0
9.    Subtotal	1,950,755	
10. Unemployed	53,518	
11. Total Labor Force	2,326,855	
12. % Unemployed	2.3	

\* Includes: Agriculture, fisheries,  
forestry, mining

14-15 year old workers

TABLE 10:

ST. MARY'S COUNTY

TRENDS IN CIVILIAN LABOR FORCE - PROJECTIONS\*

	<u>1980</u>		<u>% of Total Employment</u>
1. Number Employed	18,155		
2. Manufacturing	775	B = 775 <sup>0</sup> N = 775	4.3
Non-Manufacturing:			
3. Construction	2,624	B = 1,517 N = 1,107	14.5
4. Trade	3,238	B = 3,238 <sup>0</sup> N = 3,238	17.8
5. Services	3,767	B = 3,767 <sup>0</sup> N = 3,767	20.7
6. Fire	596	B = 596 <sup>0</sup> N = 596	3.3
7. Government	6,546	B = 2,280 N = 4,266	36.0
8. Other*	609	B = 427 N = 182	3.4
9. Subtotal	17,380		
10. Unemployed	698		
11. Total Labor Force	18,853		
12. % Unemployed	3.7		

\* Includes: Agriculture, fisheries,  
forestry, mining

14-15 year old workers

Total B = 4,224  
N = 13,931  
18,155

Base Ratio: 0.303  
Base Multiplier: 4.3

\* Method - constant % change from 70-80 using 60-70 rate of change for No. 2-8 to get employment by sector.

TABLE 11:

TRI-COUNTY AREA 1970  
TOTAL EMPLOYMENT AND UNEMPLOYMENT<sup>1</sup>

	Work Force	Employed	Unemployed	Under-Employment <sup>2</sup>	
				Worked 30 Weeks or Less	Worked 26 Weeks or Less
Calvert	7,613	7,356	257(3.4%)	2,548(33.5%)	1,882(24.7%)
Charles	17,592	17,055	537(3.1%)	5,053(28.7%)	3,677(20.9%)
St. Mary's	18,606	18,074	532(2.9%)	4,576(24.6%)	3,378(13.2%)
<hr/> Tri-County	<hr/> 43,811	<hr/> 42,485	<hr/> 1,326	<hr/> 12,177	<hr/> 8,937

<sup>1</sup>Source: 1970 Census Fourth Count figures for population 14 years old and over, and figures include military.

<sup>2</sup>Weeks worked figures are for the total population 14 years old and over and includes figures for persons not currently in the work force as of the census date. I.e., summer employment of school age population and persons who retired during 1969. R.F.D., D.F., October 16, 1972.

TABLE 12:

MARYLAND

TRENDS IN EMPLOYMENT PARTICIPATION  
BY RACE AND SEX

	Total	Male	Female	White	Non-White	
Numbers:						
Population <sup>1</sup>	3,100,687	1,532,925	1,567,762	2,573,814	526,873	
Labor Force	1,190,791	793,541	397,250	993,123	197,668	
Employment	1,133,968	756,547	377,421	955,000	178,968	
Participation Rates:						1960
Employment	36.6	49.4	24.1	37.1	34.0	
Labor Force	38.4	51.8	25.3	38.6	37.5	
Numbers:						
Population <sup>2</sup>	3,922,399	1,916,241	2,006,158	3,199,283	723,116	
Labor Force	1,605,619	983,895	621,724	1,327,307	278,312	
Employment	1,552,747	956,645	596,102	1,290,315	262,432	
Participation Rates:						1970
Employment	39.6	49.9	29.7	40.3	36.3	
Labor Force	40.9	51.3	31.0	41.5	38.5	

<sup>1</sup>Figures do not include military labor force.

<sup>2</sup>Figures do not include military labor force; figures also adjusted to 14 years old and over.

Sources: 1960 Census PC(1) 22C, Table 53  
1970 Census PC(1)-C22, Tables 48, 53  
R.F.D., D.F., August 28, 1972

TABLE 13:

ST. MARY'S

TRENDS IN EMPLOYMENT PARTICIPATION  
BY RACE AND SEX

	Total	Male	Female	White <sup>3</sup>	Non-White	
Numbers:						
Population	38,915	20,849	18,066	31,672	7,243	
Labor Force <sup>1</sup>	9,387	6,561	2,826	7,324	2,063	
Employment	8,969	6,342	2,627	7,088	1,881	
Participation Rates:						1960
Employment	23.0	30.4	14.5	22.4	26.0	
Labor Force	24.1	31.5	15.6	23.1	28.5	
Numbers:						
Population	47,388	25,094	22,294	38,758	8,630	
Labor Force <sup>2</sup>	12,637	7,840	4,797	10,341	2,296	
Employment	12,113	7,649	4,464	9,936	2,177	
Participation Rates:						1970
Employment	25.6	30.5	20.0	25.6	25.2	
Labor Force	26.7	31.2	21.5	26.7	26.6	

<sup>1</sup>Figures do not include military labor force.

<sup>2</sup>Figures do not include military labor force; 1970 figures adjusted to include 14-15 year olds employed except for non-white.

<sup>3</sup>Figures are estimated for 1970 with negro totals for labor force and employment replacing non-white figures. This further causes an estimate of white figures by subtracting negro from the total column.

Sources: 1960 Census PC(1)22C, Tables 83, 87 and PC(1)22B, Table 27  
1970 Census PC(1)-322, Table 35 and PC(1)-C22, Tables 121,  
123, 126

R.F.D., D.F., August 28, 1972

TABLE 14

St. Mary's County  
Per Capita and Per Worker  
Income by Major Industry

	Number Employed		Total Earnings (\$000)		Income Per Employee		% Increase
	<u>1967</u>	<u>1972</u>	<u>1967</u>	<u>1972</u>	<u>1967</u>	<u>1972</u>	<u>1967-72</u>
Farm	1,270	1,107	3,357	4,082	2,643	3,687	39.5
Government	9,907	11,097	64,497	107,938	6,510	9,727	49.4
Private Sector	5,800	6,910	26,817	43,465	4,623	6,290	36.0
Total Earnings	16,977	19,114	94,671	155,485	5,576	8,134	45.9
Total Personal Income			107,888	183,910			70.5
Residence Adjusted Income			112,400	194,800			73.3
Total Population <sup>1</sup>			44,153	48,400			9.6
Total Households <sup>1</sup>			10,876	12,714			16.9
Income Per Capita			2,546	4,025			58.1
Income Per Household			10,335	15,322			48.3

Source: Regional Economics Information System, Bureau of Economic Analysis, U.S. Department of Commerce, August, 1974.

<sup>1</sup>Population and households are estimates based on building permits issued made by Tri-County Council.

P o t e n t i a l   R e t a i l   D e m a n d

The trade sector of the economy employs approximately 17.8% of the total labor force of the County, which is slightly less than the composite Maryland figure of 19.0%. There is general feeling in the County that potential retail expenditure which could be generated by the County residents is lost to neighboring areas. To help estimate the amount of supportable retail space in the County, a model has been developed to project the approximate potential demand for retail space that could be generated by the population projected for St. Mary's County. The model entails several steps:

1. Project household and per capita personal incomes to 1980 using the trends apparent from 1950-1969 ..... Table 15
2. Estimate retail expenditure as a percentage of income ..... Table 16
3. Estimate sales volume in dollars per square foot of gross leaseable area ..... Table 17
4. Calculate average and aggregate potential expenditure by category ..... Table 18
5. Project potential retail space needs as a function of the projected sales volume per square foot of gross leaseable area and projected sales ..... Table 19

(See attached Tables 15, 16, 17, 18, 19).



Although these calculations are carried out only through 1980, the process can be extended as soon as more extensive experience is generated for retail expenditures as a percentage of income. In addition, better data for estimated retail expenditures as a percentage of income for St. Mary's County is necessary for more accurate projections. Present data is limited because of the essentially rural nature of the economy and because the effects of the Navy Exchange privileges on local retail habits have not been adequately measured. Therefore, the potential demand for retail space indicated in Table 19 can only be taken as an order of magnitude to be refined over the next several years based on current experience. The more important figure is the projected growth in demand through 1980, equal to 625,000, which is equivalent in volume to a large regional shopping center. To adequately interpret the potential demand for retail space in terms of what level of services is desired, would necessitate a detailed market survey of the County. This could be a detailed element of future economic planning in the County.

TABLE 15

St. Mary's County Trends  
In Per Capita and Household Incomes

	<u>1949</u>	<u>1959</u>	<u>1969</u>	<u>1973</u>	<u>1979</u>
<u>Census Data</u>					
\$ Per Capita	721	1,366	2,500		
	┌89.5┐	┌83.0┐			
\$ Per Household	3,326	5,962	9,814		
	┌79.3┐	┌64.6┐			
<u>Bureau of Economic Analyses</u>					
\$ Per Capita	1,446	1,663	2,959	4,345	6,518
	┌15.0┐	┌77.9┐	┌46.8┐	┌50.0┐	
\$ Per Household	6,674	7,257	11,587	15,524	21,734
	┌8.7┐	┌59.7┐	┌34.0┐	┌40.0┐	

TOTAL PERSONAL INCOME  
RESIDENCE ADJUSTED  
(Millions of Dollars)

TABLE 15a

	CALVERT <sup>1</sup>	CHARLES <sup>1</sup>	ST. MARY'S <sup>1</sup>	MARYLAND <sup>1</sup>	UNITED STATES
1929	3.1	6.2	6.4	1,245.3	85,803.4 <sup>2</sup>
(% Change)	(3.2%)	(-8.1%)	(-21.9%)	(2.8%)	(-9.0%)
1940	3.2	5.7	5.0	1,280.1	78,122.2 <sup>2</sup>
	(240.6%)	(357.4%)	(742.0%)	(195.9%)	(189.5%)
1950	10.9	27.1	42.1	3,788.3	226,197.2 <sup>2</sup>
	(107.3%)	(119.9%)	(53.7%)	(84.6%)	(69.3%)
1959	22.6	59.6	64.7	6,993.7	382,840.3 <sup>2</sup>
	(154.9%)	(137.9%)	(116.7%)	(122.1%)	(96.1%)
1969	57.6	141.8	140.2	15,532.6	750,900.0 <sup>3</sup>
	(18.9%)	(16.0%)	(16.2%)	(9.4%)	(7.6%)
1970	68.5	164.5	162.9	17,000.0	808,300.0 <sup>3</sup>
	(17.5%)	(14.7%)	(8.5%)	(7.7%)	(6.8%)
1971	80.5	188.6	176.7	18,303.9	863,500.0 <sup>3</sup>
	(13.5%)	(20.3%)	(11.2%)	(10.2%)	(8.8%)
1972	91.4	226.8	196.5	20,162.4	939,200.0 <sup>3</sup>
	(19.8%)	(8.8%)	(9.8%)	(10.0%)	(10.2%)
1973	109.5	246.8	215.8	22,184.7	1,035,400.0 <sup>3</sup>

- SOURCES:
1. Bureau of Economic Analysis  
U.S. Dept. of Commerce April 11, 1975
  2. Office of Business Economics  
U.S. Dept. of Commerce June 8, 1971
  3. Statistical Abstract of the United States, 1974  
U.S. Dept. of Commerce July, 1974

PERSONAL INCOME PER CAPITA  
(Residence Adjusted)

TABLE 15b

	CALVERT	CHARLES	ST. MARY'S	MARYLAND	UNITED STATES
1929	326	384	423	768	705 <sup>2</sup>
(% Change)	(-7.1%)	(-16.4%)	(-19.6%)	(-9.4%)	(-16.0%)
1940	303	321	340	696	592 <sup>2</sup>
	(195.1%)	(258.3%)	(322.9%)	(131.2%)	(152.7%)
1950	894	1,150	1,438	1,609	1,496 <sup>2</sup>
	(61.3%)	(61.0%)	(17.0%)	(41.8%)	(44.5%)
1959	1,422	1,852	1,682	2,281	2,161 <sup>2</sup>
	(96.3%)	(64.2%)	(77.9%)	(76.1%)	(71.4%)
1969	2,830	3,041	2,993	4,016	3,705 <sup>3</sup>
	(16.5%)	(13.0%)	(14.4%)	(7.5%)	(6.5%)
1970	3,298	3,437	3,423	4,317	3,945 <sup>3</sup>
	(11.1%)	(8.6%)	(3.8%)	(6.0%)	(5.7%)
1971	3,664	3,734	3,553	4,575	4,171 <sup>3</sup>
	(8.9%)	(12.9%)	(10.2%)	(8.9%)	(7.8%)
1972	3,991	4,216	3,914	4,981	4,497 <sup>3</sup>
	(15.6%)	(4.2%)	(12.0%)	(9.3%)	(9.4%)
1973	4,612	4,394	4,384	5,446	4,921 <sup>3</sup>

SOURCE: 1. Bureau of Economic Analysis  
U.S. Dept of Commerce April 11, 1975  
2. Office of Business Economics  
U.S. Dept. of Commerce June 8, 1971  
3. Statistical Abstract of the United States, 1974  
U.S. Dept. of Commerce July, 1974

RWD, Oct., 1975

TOTAL EFFECTIVE BUYING INCOME  
(Millions of Dollars)

TABLE 15c

	Calvert	Charles	St. Marv's	Marvland	United States
1968	42.4	98.7	98.8	11,805.8	585,313.1
	(-1.7%)	(-0.9%)	(-2.4%)	(5.3%)	(7.0%)
1969	41.7	97.8	96.4	12,435.0	626,220.0
	(18.2%)	(22.0%)	(18.5%)	(7.7%)	(8.3%)
1970	49.3	119.3	114.2	13,393.6	678,239.3
	(40.4%)	(31.4%)	(12.7%)	(12.7%)	(8.9%)
1971	69.2	156.8	128.7	15,092.4	738,283.3
	(6.1%)	(18.9%)	(9.5%)	(9.6%)	(7.2%)
1972	73.4	186.5	140.9	16,535.5	791,506.1
	(21.8%)	(7.3%)	(11.6%)	(10.4%)	(11.3%)
1973	89.4	200.2	157.3	18,254.9	880,725.6
	(3.9%)	(22.5%)	(16.9%)	(11.1%)	(11.0%)
1974	92.9	245.2	183.9	20,289.8	978,025.8

SOURCE: Sales Management Magazine  
Survey of Buying Power 1969-1975

MEC, RFD September, 1975

TABLE 16: ST. MARY'S COUNTY  
ESTIMATED RETAIL EXPENDITURES AS A PERCENTAGE OF INCOME  
 (Based on Washington Metropolitan Area 1970-1980)

	<u>1970</u>	<u>1975</u>	<u>1980</u>
<u>Shoppers' Goods</u>			
General Merchandise	8.6%	8.7%	8.8
Apparel	3.3	3.3	3.3
Furniture	<u>2.3</u>	<u>2.3</u>	<u>2.3</u>
<u>Sub-Total</u>	14.2%	14.3%	14.4%
<u>Convenience Goods</u>			
Food	11.7	11.7	11.7
Drug	3.0	3.0	3.0
Other	<u>5.4</u>	<u>5.4</u>	<u>5.4</u>
<u>Sub-Total</u>	20.1%	20.1%	20.1%
<u>Eating &amp; Drinking</u>	3.1%	3.2%	3.3%
<u>Retail Services</u>			
Personal Services	2.6	2.7	2.8
Miscellaneous	0.7	0.8	0.9
Repair Services	—	—	—
<u>Sub-total</u>	3.3%	3.5%	3.7%
<b>TOTAL</b>	40.7%	41.1%	41.5%

\* Source: Gladstone Associates

TABLE 17:

ST. MARY'S COUNTY  
ESTIMATED SALES VOLUME/GLA

	<u>Sales Vol/GLA</u> <u>\$ Per Sq.ft.</u>	<u>Sales Vol/GLA</u> <u>\$ Per Sq.ft.</u>	<u>Sales Vol/GLA</u> <u>\$ Per Sq.ft.</u>
	<u>1970</u>	<u>1975</u>	<u>1980</u>
Gen.Merchandise	56	67	76
Apparel	67	80	90
Furniture	60	72	81
Food	97	116	131
Drugs	65	78	88
Other	91	109	123
Eat & Drink	73	88	99
Personal	49	59	67
Miscellaneous	12	15	21

\* Source: Dollars and Cents of Shopping Centers 1972,  
Urban Land Institute

TABLE 10:

ST. MARY'S COUNTY  
POTENTIAL RETAIL EXPENDITURES

	<u>1970</u>		<u>1975</u>		<u>1980</u>	
Pop. (III)	47,388 (12,100)		49,782 (13,640)		55,000 (15,670)	
Average III Income	\$13,378		\$17,848		\$22,317	
	<u>Aver.</u>	<u>Agg (000)</u>	<u>Aver.</u>	<u>Agg (000)</u>	<u>Aver.</u>	<u>Agg (000)</u>
<u>Shoppers Goods</u>	<u>\$1,900</u>	<u>\$22,990</u>	<u>\$2,552</u>	<u>\$34,809</u>	<u>\$3,214</u>	<u>\$50,363</u>
Gen. Merch.	1,151	13,927	1,553	21,183	1,964	30,776
Apparel	441	5,336	589	8,034	736	11,533
Furniture	308	3,727	410	5,592	514	8,054
<u>Convenience Goods</u>	<u>\$2,689</u>	<u>\$32,537</u>	<u>\$3,587</u>	<u>\$48,927</u>	<u>\$4,486</u>	<u>\$70,296</u>
Food	1,565	18,937	2,088	28,480	2,611	40,914
Drug	401	4,852	535	7,297	670	10,499
Other	723	8,748	964	13,149	1,205	18,883
<u>Eating &amp; Drinking</u>	<u>\$ 415</u>	<u>\$ 5,022</u>	<u>\$ 571</u>	<u>\$ 7,788</u>	<u>\$ 736</u>	<u>\$11,533</u>
<u>Retail Services</u>	<u>\$ 441</u>	<u>\$ 5,336</u>	<u>\$ 625</u>	<u>\$8,525</u>	<u>\$ 826</u>	<u>\$12,943</u>
Personal Serv.	348	4,211	482	6,574	625	9,794
Misc. Repair	93	1,125	143	1,951	201	3,149
<b>TOTAL</b>	<u><b>\$5,445</b></u>	<u><b>\$65,885</b></u>	<u><b>\$7,335</b></u>	<u><b>\$100,049</b></u>	<u><b>\$9,262</b></u>	<u><b>\$145,136</b></u>
 Total Expenditure Potential =	\$65,885,000		\$100,049,000		\$145,136,000	





PART II: BUILDING THE LAND USE PLAN

## BUILDING THE LAND USE PLAN

### I n t r o d u c t i o n

St. Mary's County is located on the periphery of the major urban complex stretching from Washington to Baltimore, and up to this period of time has been almost entirely isolated from the urbanizing pressures experienced in the areas closer to these centers. The conditions allowing and, in a sense, forcing this isolation are beginning to change; and in order to direct the process of change in a desirable way, a strategy of growth and development in the County is becoming a necessity.

That the pressures for change are growing is evident from several characteristics of the County that reflect in a miniature way the urbanizing process more typical of a larger scale. The population in the County is growing, and rate of growth is increasing. But the process of growth appears to be more related to an expanding residential market in the form of scattered subdivisions rather than as a result of an increase in the quantity and diversity of the economic base. What appears to be happening is the result of a spillover effect from the growth occurring in the Maryland counties within the Washington Metropolitan Area. As pressures for development and related costs have increased in Prince George's County, and as restrictions on new development have increased concurrently, Southern Maryland (Charles County, St. Mary's County, and Calvert County) has begun to provide an increasingly attractive outlet. Although the pressures are only just beginning to be felt in St. Mary's County the trends are becoming increasingly clear. It is essential, therefore, to recognize and understand these pressures and guide them into positive results for the County.

Two characteristics serve as the primary considerations on which the planning process begins, and these characteristics encompass both the social and physical nature of the County. First, one of the most important resources of the County is the natural environment, including the many miles of shoreline along the Patuxent and Potomac Rivers and the Chesapeake Bay, including the high percentage of forest land with its varied and extensive wildlife, and including the variety of wetland areas that contribute directly to the natural life cycle. It is essential that the comprehensive plan protect these resources, enhancing their value to the County wherever possible. Second, another primary "resource" is the rural and relaxed form of life in the County -- a resource that also must be protected and enhanced wherever possible.

Recognizing the preservation needs of these two basic resources is essential, but just as essential is recognizing the fact that economic diversification and development is necessary and desirable. The difficulties involved in juxtaposing these two forces into a compatible existence with positive implications for the County as a whole is enormous. Too often the process of integrating preservation with development has led to extensive conflicts resulting in stagnation of the economy and fiscal imbalance, and it appears that St. Mary's County is not immune from these potential problems. As indicated by the analysis of the economic characteristics of the County, major problems exist because of the "one-industry" nature of the economy. The Patuxent Naval Air Test Center along with other governmental employment accounts for over 70% of the personal income generated in the entire County, and over 50% of the population is related directly to the Station's operation. It is apparent that economic growth in the County is not on the same terms as residential growth, and if these trends should continue it will be increasingly difficult to provide and maintain the necessary infrastructure for balanced growth. Residential growth alone cannot provide the fiscal strength for provision of adequate public services.

Once these problems and potentials have been recognized, it is necessary to create a strategy to alter the development trends and redirect the pressures toward a more optimum process of growth and development that is compatible with the need for preservation. The economic analysis has identified on a County-wide basis the problem areas with which the planning process must deal, but it is also necessary to build a strategy of "space dynamics" that can control where growth will take place to achieve a desirable population distribution as well as a desirable level of population. This process must also help identify the environmental issues and resources and work these into the proposed land use plan.

The objective of this comprehensive plan for St. Mary's County is to propose a "process" as well as a "result." No comprehensive plan can provide definitive answers on how an entire county will or should look in the future. The most important and essential service a plan can provide is really how to identify issues and, once identified, how to incorporate these issues into policies for land use and development. Too often it is expected that a picture of proposed land use is the "ultimate" pattern of growth to be achieved. It is more important, however, to identify the issues being faced in the County and to develop a strategy for dealing with those issues. This plan identifies as the major issue facing the County the need for dealing with the forces of preservation

and development in a compatible manner such that the resulting physical and social environment is enhanced. It is toward this end that a planning strategy has been prepared. The strategy is as important as the picture which will be presented as a result of applying the strategy. Therefore, what this plan is primarily designed to do is build with the County and for the County a tool which can be used to control the pace and direction of growth and development, for if the pace as well as the direction of growth can be controlled then the County and its people are in the enviable position of really helping to define the future.

The First Stage - Building the  
Sector Concept

To identify from a physical land use point of view where the conflicts exist between preservation and development pressures, the broad area of the County has been divided into distinct sectors based on the physical environment and the current patterns of land use. The purpose behind dividing the County into these smaller units or sectors is twofold:

1. To provide a system of service areas throughout the County that will facilitate the distribution of future land use and community service requirements based on existing land use patterns, potential for economic development, and projected population.
2. To provide a definable set of districts with distinct environmental and land use characteristics that will eventually serve as the basis for the implementation strategy for the comprehensive plan.

The designation of sectors will allow various groups of land areas to be created with similar characteristics. As a result, this system can provide the basis for preparation of a land use control strategy which can be applied in a comprehensive but generalized way.

The delineation of service sectors will be based primarily on the interaction of existing physical land use patterns, including:

1. Land predominantly used for urban and urban related activities.
2. Land predominantly used for agricultural activities.
3. Elements of the natural environment.
4. Primarily forest and undeveloped land areas.
5. Major highways.

Each of these elements will be discussed in turn so that the existing pattern of land use can be built up in a step-wise fashion.

### Spacial Distribution of Existing Urban Oriented Land Uses

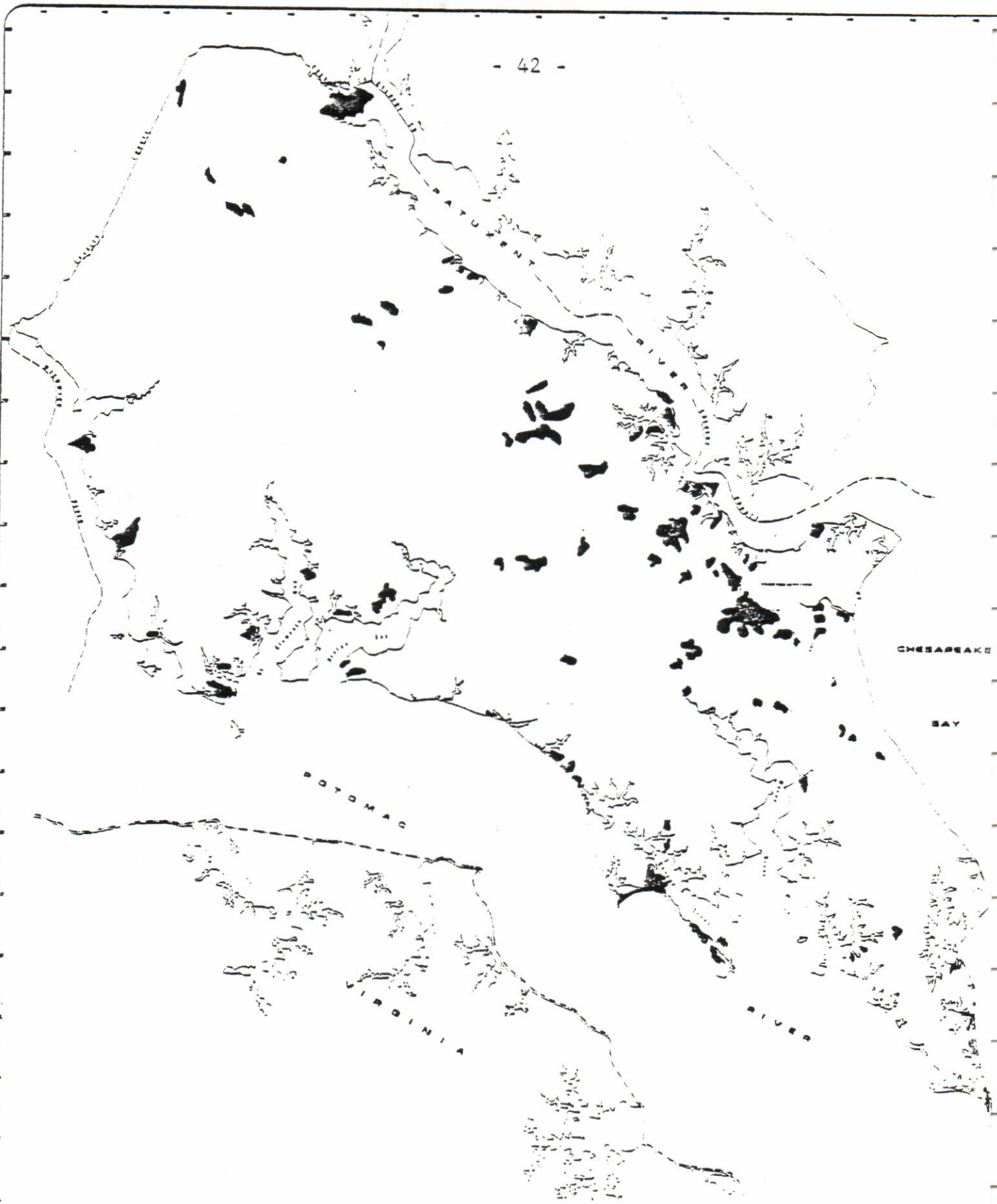
Under present conditions, two major patterns of land use with respect to urban uses are apparent. The first pattern comprises the largest concentrations of residential and commercial land uses which occur along the primary highway network, stretching primarily along Routes 5 and 235 from Charlotte Hall to Lexington Park. Commercial development is occurring north of Leonardtown on Route 5 and between Great Mills and Lexington Park along Route 246. The second pattern is that of the shoreline of both the Potomac and Patuxent Rivers and the Chesapeake Bay. Development trends appear to be accentuating both of these patterns. Route 235 between Lexington Park and Hollywood is slowly being filled in with continuously developed areas, and the same is true along Route 246 between Lexington Park and Great Mills. Also development appears to be reaching out from Leonardtown in two directions - toward both Loveville and Lexington Park. Both patterns are illustrated in Figures 2 and 3. Figure 4 shows the existing named towns and cities for comparison.

The scattered subdivision development along the water's edge is slowly encompassing more and more of the desirable shoreline. It is apparent that if this trend were to continue a larger and larger portion of the shoreline would be filled in with a thin line of residential and marine commercial development, minimizing the opportunity for maintaining public access to the County's most attractive natural resource.

Continued development in the same manner will eventually cause a sprawl to occur throughout the County along major highway links and along the shoreline. This pattern of development will maximize service and transportation problems, both public and private, as well as intensify the difficult problems of preserving environmental quality.

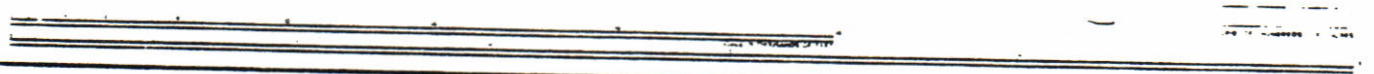
### Agricultural Land Use

Agricultural land use is predominantly concentrated in the northern half of the County, as well as along the Potomac River shoreline and throughout the county center. (Figures 5 and 6). Major soil associations that are compatible with intensive cropping are concentrated along the Patuxent and Potomac River shorelines and along the Chesapeake Bay shoreline. It appears that along these areas agriculture is still the predominant use. Lexington Park, Hollywood areas and the Fifth (5th) District has an extremely large and significant amount.

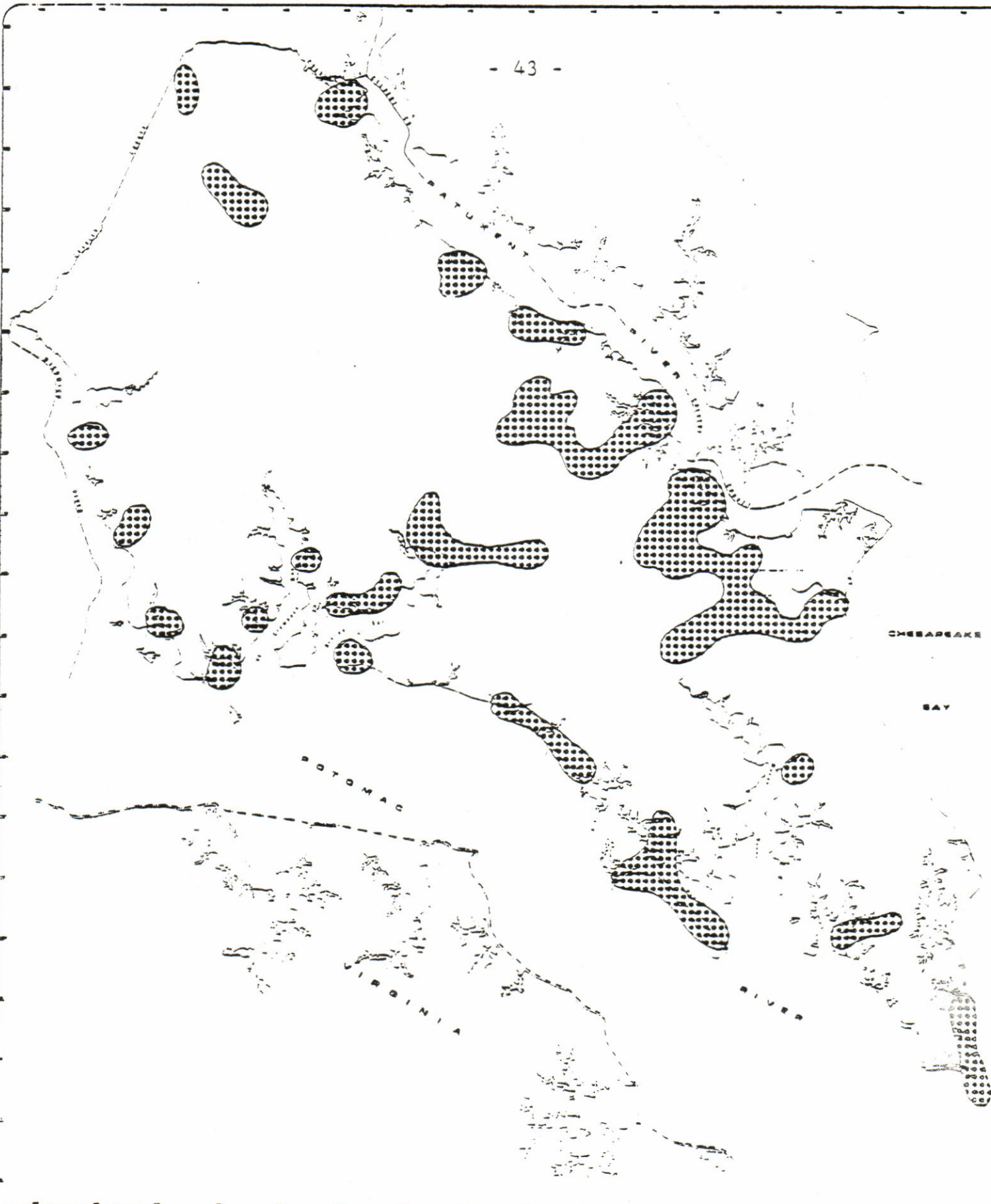


# ST. MARY'S COUNTY - MARYLAND

2. URBAN AREAS







# ST. MARY'S COUNTY - MARYLAND

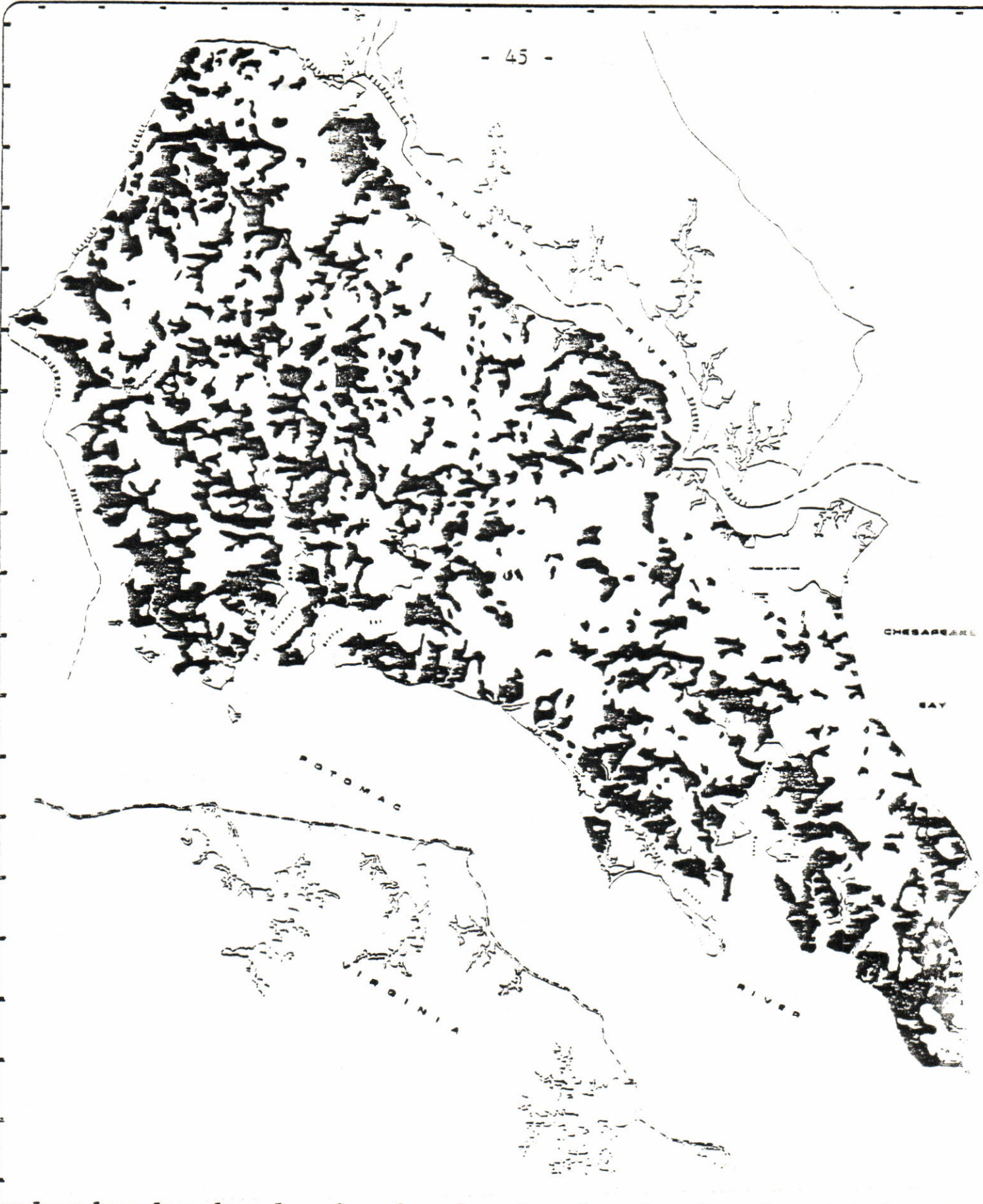
## 3. EXISTING URBAN & RESIDENTIAL AREAS





4. CITIES & CROSSROADS

# ST. MARY'S COUNTY - MARYLAND



# ST. MARY'S COUNTY - MARYLAND

## 5. AGRICULTURAL-CROPLAND AND PASTURE





**ST. MARY'S COUNTY - MARYLAND**

**6. AGRICULTURE - PATTERN OF EXISTING LAND USE**



of the prime agricultural lands been used for urban oriented uses. In general, however, land devoted to farming is decreasing and some of the best farm land is under pressure for development into residential subdivisions.

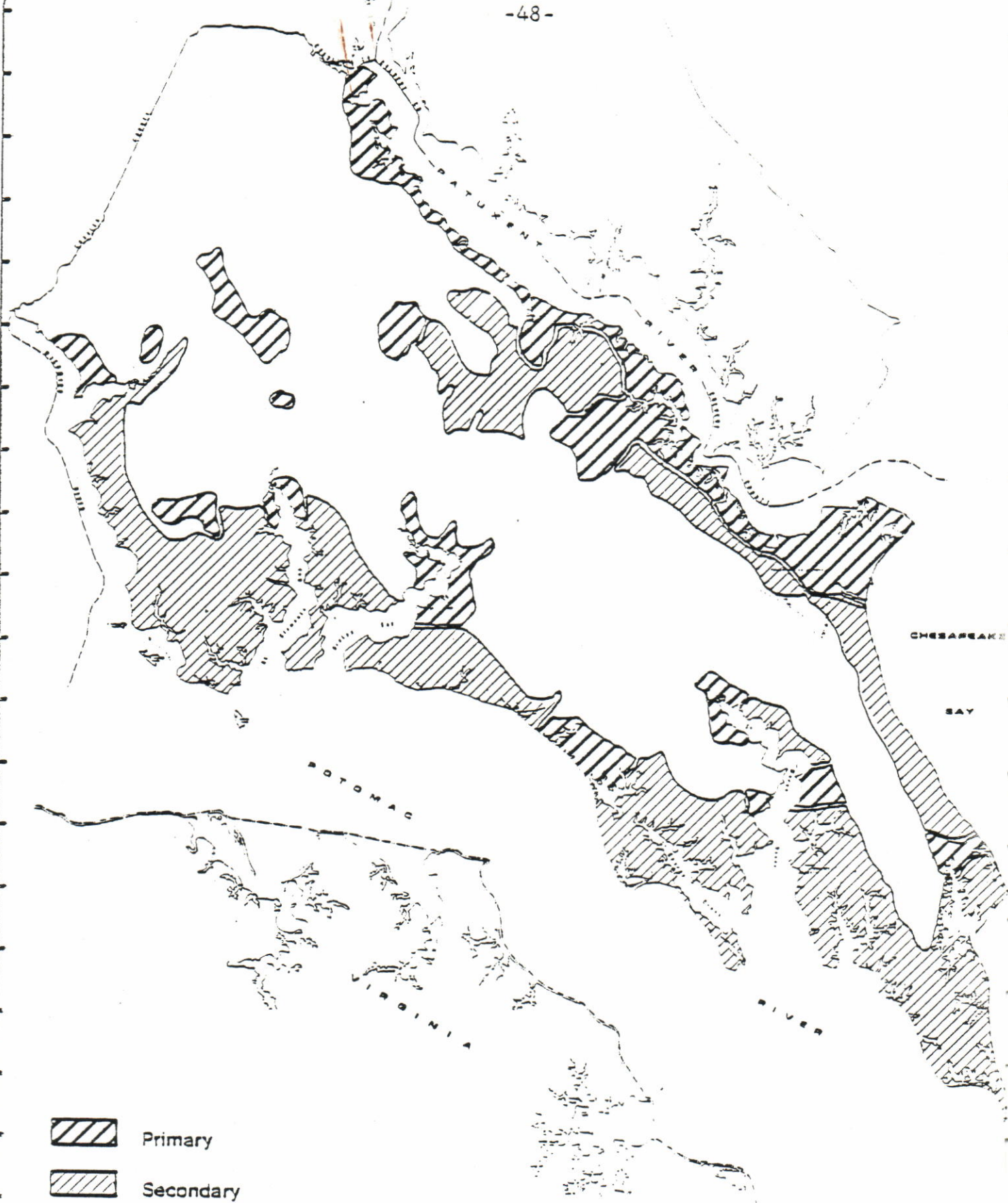
Figure 7 shows the current distribution of soil associations compatible with intensive cropping. Figure 5 shows the distribution of cropland and pasture in the County, and Figure 8 shows where the prime agricultural soils are actually being used for farming. If agriculture is to remain an important element of the economy, then every effort will have to be made to preserve those areas where the best farming can be carried out.


### Major Natural Features

Other natural features to be taken into account in delineating the sectors of the County include the major stream valleys and their drainage areas and the major wetland areas. Figure 9 shows the nine drainage areas of the County identified by the rivers, streams or bays into which surface water drains:

1. Patuxent River
2. Chesapeake Bay
3. Chaptico Bay
4. St. Clements Bay
5. Breton Bay
6. St. Georges Creek
7. St. Mary's River
8. Smith Creek
9. Point Lookout.

Figure 10 shows the designated sanitary districts of the County which evolved from these natural drainage areas. Figure 11 shows the major wetland areas spreading into the interior. In these areas development pressures, should they occur, must be curtailed to preserve the natural control of erosion and an important aspect of the natural life cycle. Figure 12 shows the proposed water catchment areas from the St. Mary's County Sewer and Water Plan which must be examined for potential preservation as future surface water supplies for the County. A study is presently underway (Fall 1976) to evaluate needs and potential sites.



-  Primary
-  Secondary

# ST. MARY'S COUNTY - MARYLAND

## 7. AGRICULTURAL SOILS

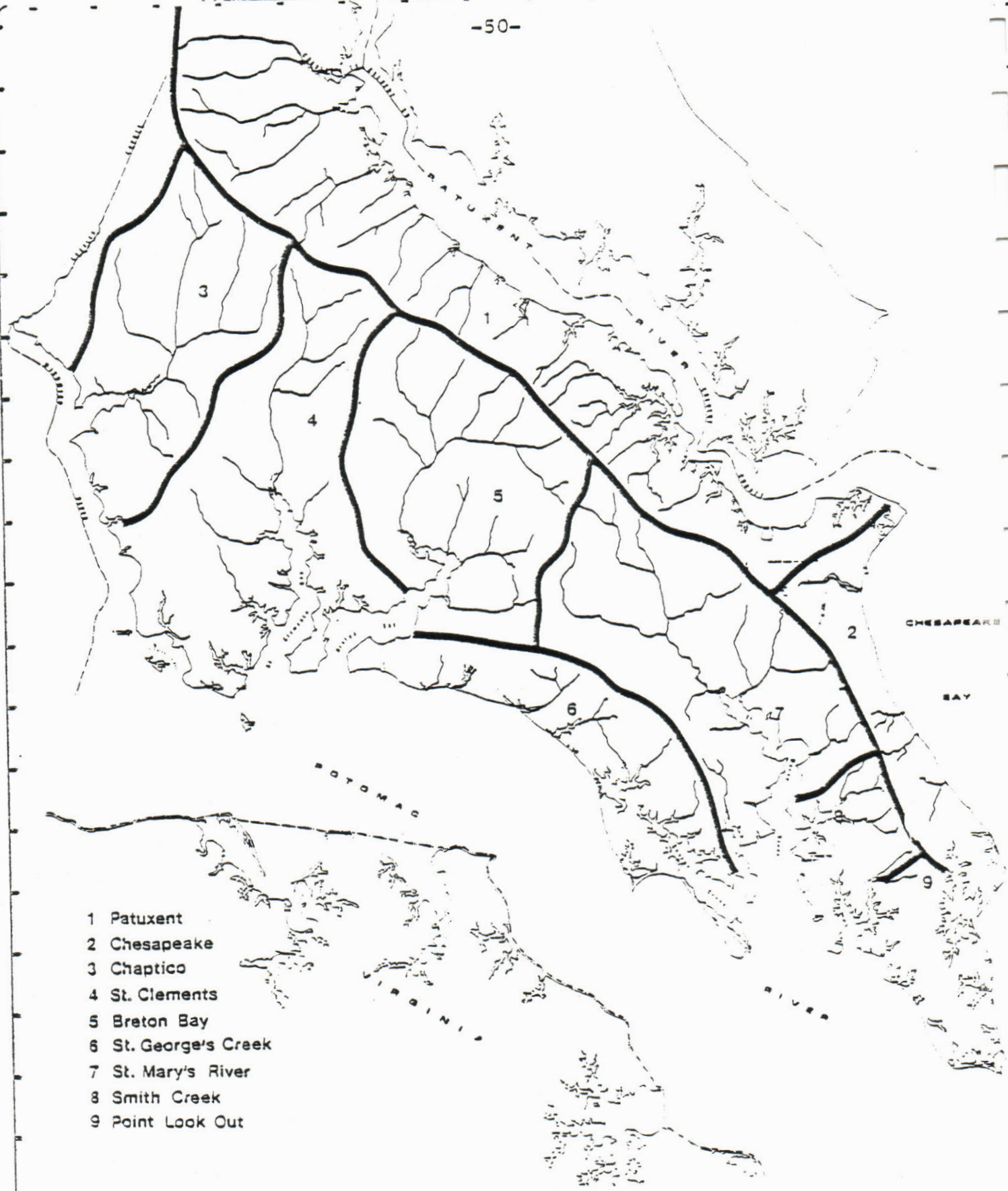




# ST. MARY'S COUNTY - MARYLAND

8. INTERSECTION OF SOILS & AGRICULTURAL USE MAP

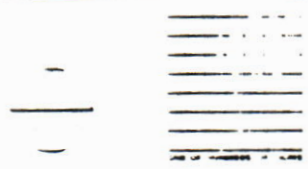




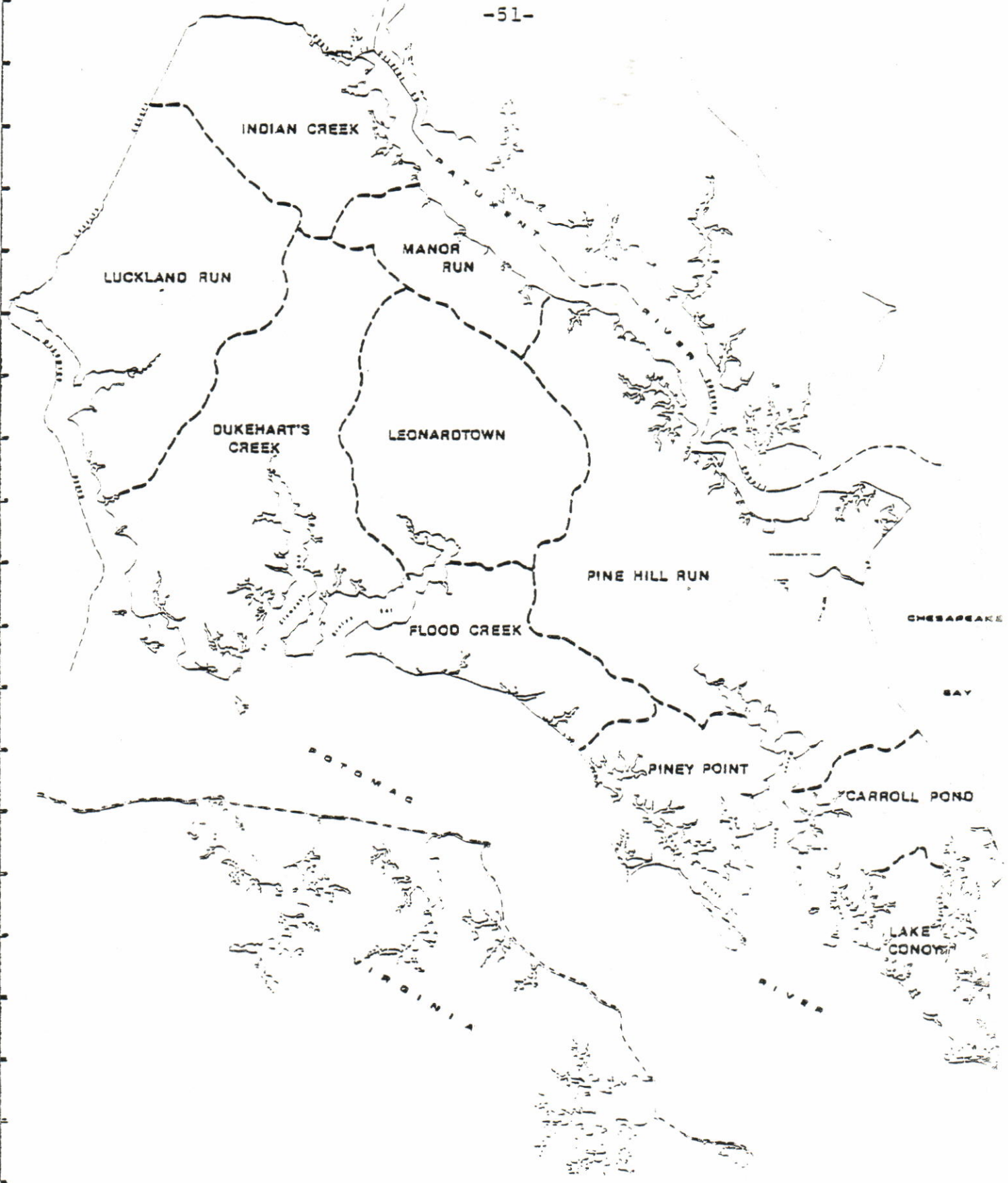
- 1 Patuxent
- 2 Chesapeake
- 3 Chaptico
- 4 St. Clements
- 5 Breton Bay
- 6 St. George's Creek
- 7 St. Mary's River
- 8 Smith Creek
- 9 Point Look Out

# ST. MARY'S COUNTY - MARYLAND

## 9. NATURAL DRAINAGE AREAS



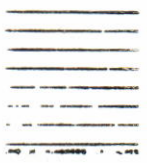


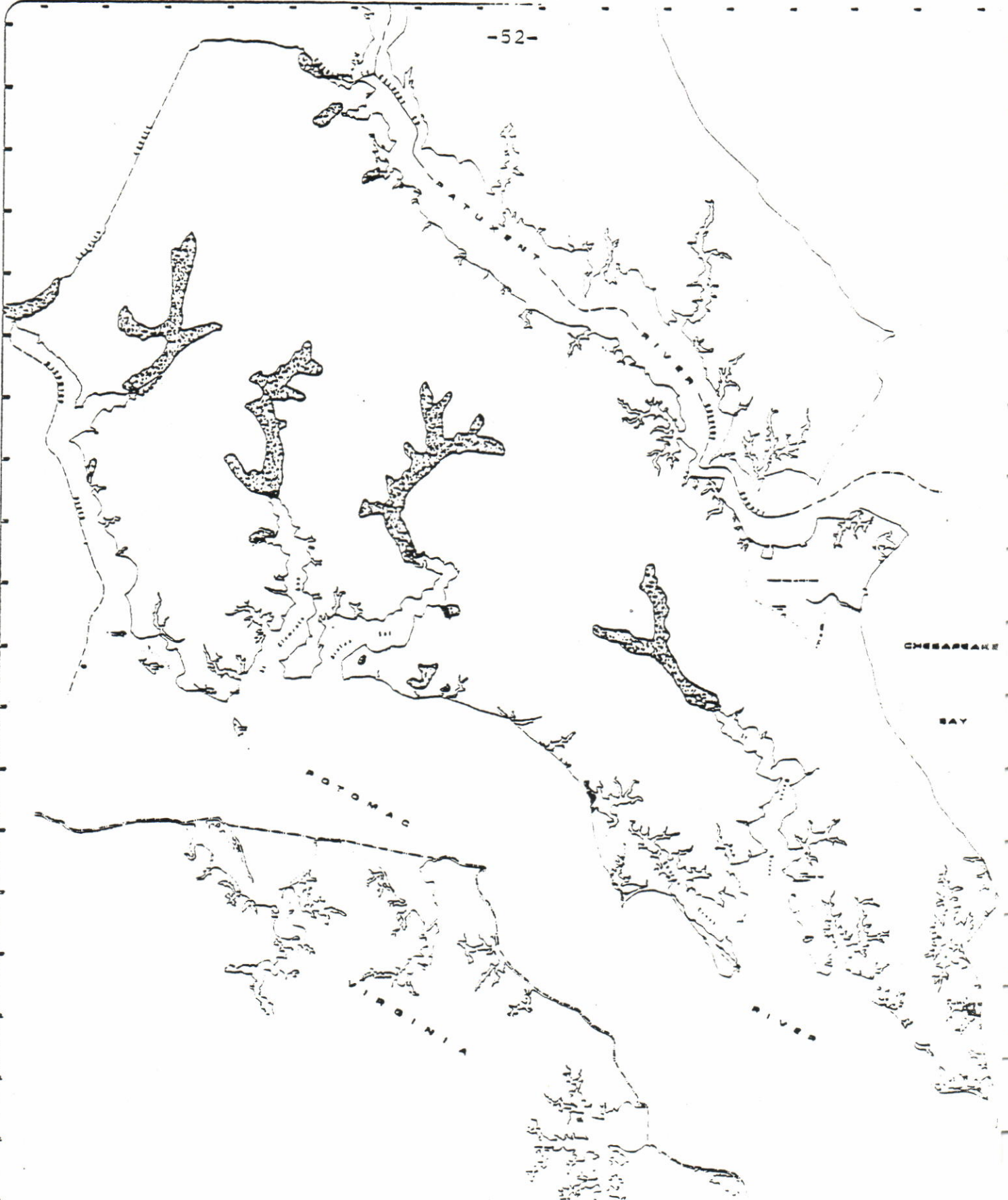


# ST. MARY'S COUNTY - MARYLAND

## 10. SANITARY DISTRICTS

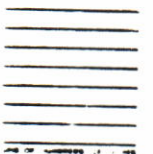
Source: Beavin Co.





# ST. MARY'S COUNTY - MARYLAND

## 11. WETLANDS



The remaining predominantly undeveloped areas of the County are presently devoted to forests that add to the natural areas harboring a considerable variety of wildlife species. The wetland and inland natural areas combine to provide natural habitat for mink, otter, osprey, swan, heron, bald eagle, wood duck and many others.

#### Functional Relationship of Existing Major Land Uses

The County land use structure is concentrated around the Route 5 and 235 Corridor, with development maximizing access to the major highway route connecting Lexington Park to all population centers to the north (Figures 13, 14, and 15). Route 5 and 235 to Lexington Park serves as the main artery for the County, and all uses of major impact are connected to this artery almost in the sense of a biological organism. The major organs of the County are:

1. Lexington Park - the economic center of activity.
2. Leonardtown - the government center.
3. St. Mary's City - developing into an historic center with tourist potential, and an educational center.
4. Charlotte Hall - New Market - developing into a residential service center.

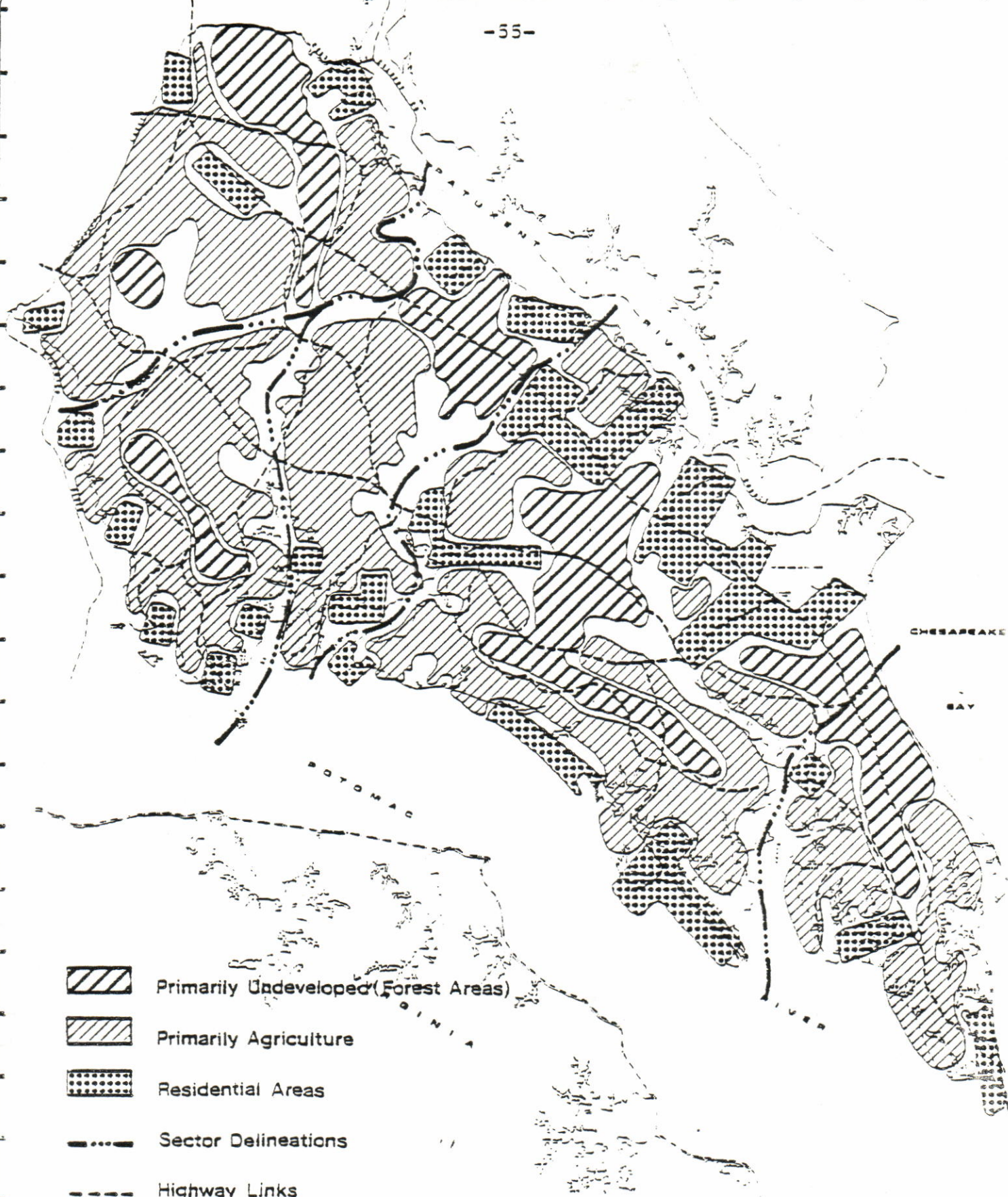
These centers show the strongest character and the strongest ties to an existing physical location by nature of the capital investment involved, the historic sites, or the already existing major facilities.






Several other areas of the County are beginning to develop and will experience pressures for development, and one of the most obvious areas is that in the vicinity of Mechanicsville-Charlotte Hall. The major thrust for the new residential development in the form of a wave effect will reach St. Mary's County first in this area because it serves as the primary entrance to the County at the head of the Route 5 and 235 Corridor. The comprehensive plan must recognize the potential for such development pressures and be adequately prepared to guide and control them in a positive manner. The potential for such development is evident in the area already, as shown by Golden Beach, and numerous other developments.

Other important areas include the following:

1. Hollywood - Highway retail and residential center located at the intersection of Routes 245 and 235.





-  Primarily Undeveloped (Forest Areas)
-  Primarily Agriculture
-  Residential Areas
-  Sector Delineations
-  Highway Links

# ST. MARY'S COUNTY - MARYLAND

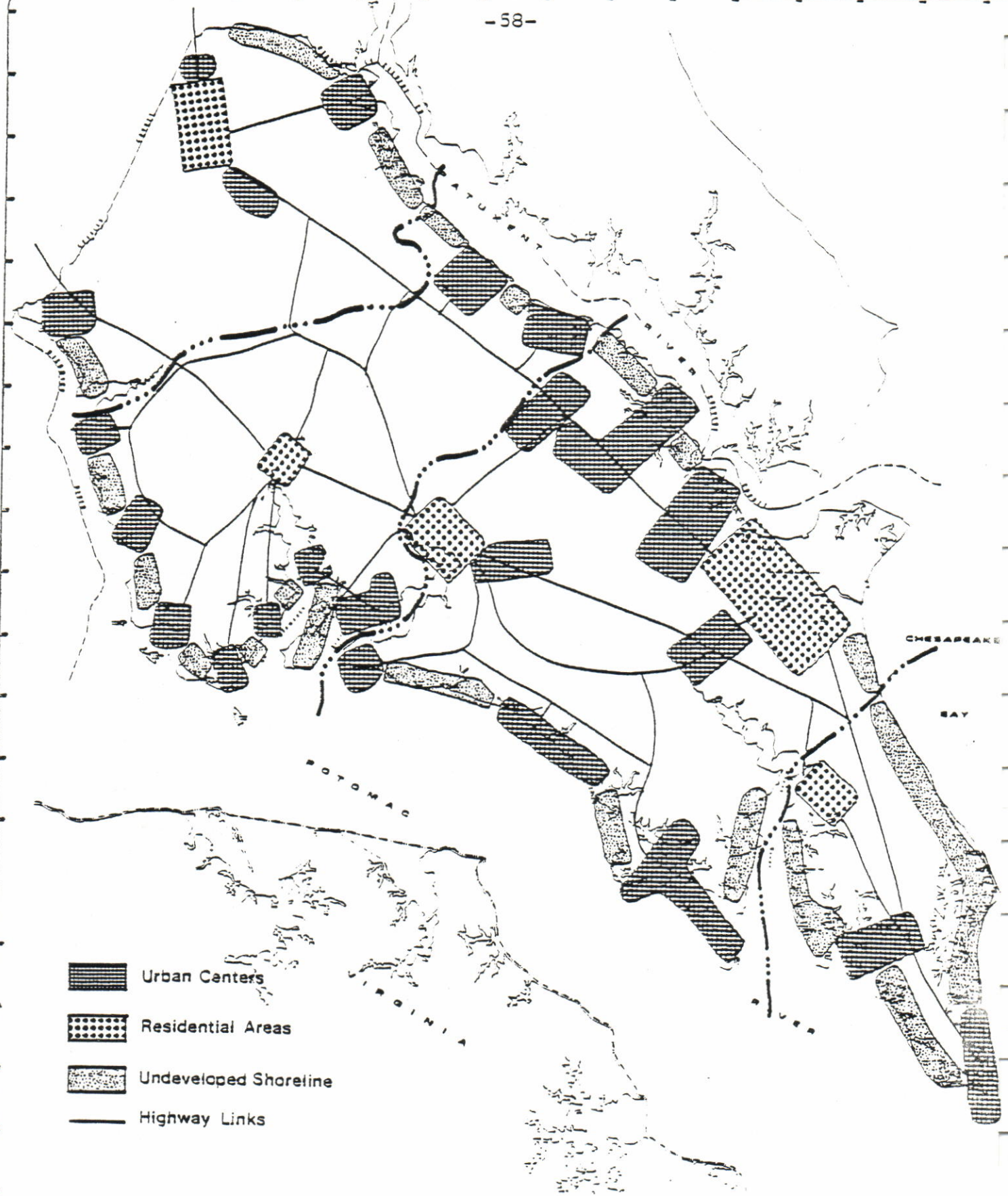
## 14. EXISTING PATTERN OF USE









2. California - A smaller crossroad area, center of some highway retail and residential at the intersection of St. Andrew Church Road and Route 235. California is near the St. Mary's County Airport and will be the intersection area for the Patuxent River Crossing and Route 235.
3. Piney Point - A concentration of residential land use and the industrial complex of Steuart Petroleum.
4. Scattered residential subdivisions along the upper Potomac River shoreline - These areas appear to be semi-independent and are connected to the major highway network through the crossroads at Clements, Chaptico, and Budd's Creek.
5. Other waterfront subdivisions currently and proposed.

Figures 13 and 16 show the relationship of these existing centers to the Route 235 Corridor as well as to the major concentrations of agricultural and forest areas. Combining the maps of the major natural features with the land use maps shows possible division of the County into several distinct sectors which are primarily separated by water or wetland areas. These divisions first appear in Figure 14 and are refined in Figure 15. Superimposing the major transverse highway network, as shown in Figure 17, defines the system more completely. Adding in the cross-highway linkages, Route 5 and the Potomac River Crossing completes the major sector composite, Figure 18. This figure also shows a further characterization of the sectors with inland and waterfront zones. Figure 19 shows a more simplified sector analysis based primarily on the major highway network and the natural character of the County as inland and waterfront sectors. This delineation, the Sanctuary Concept, will serve as a basis for the implementation rationale.



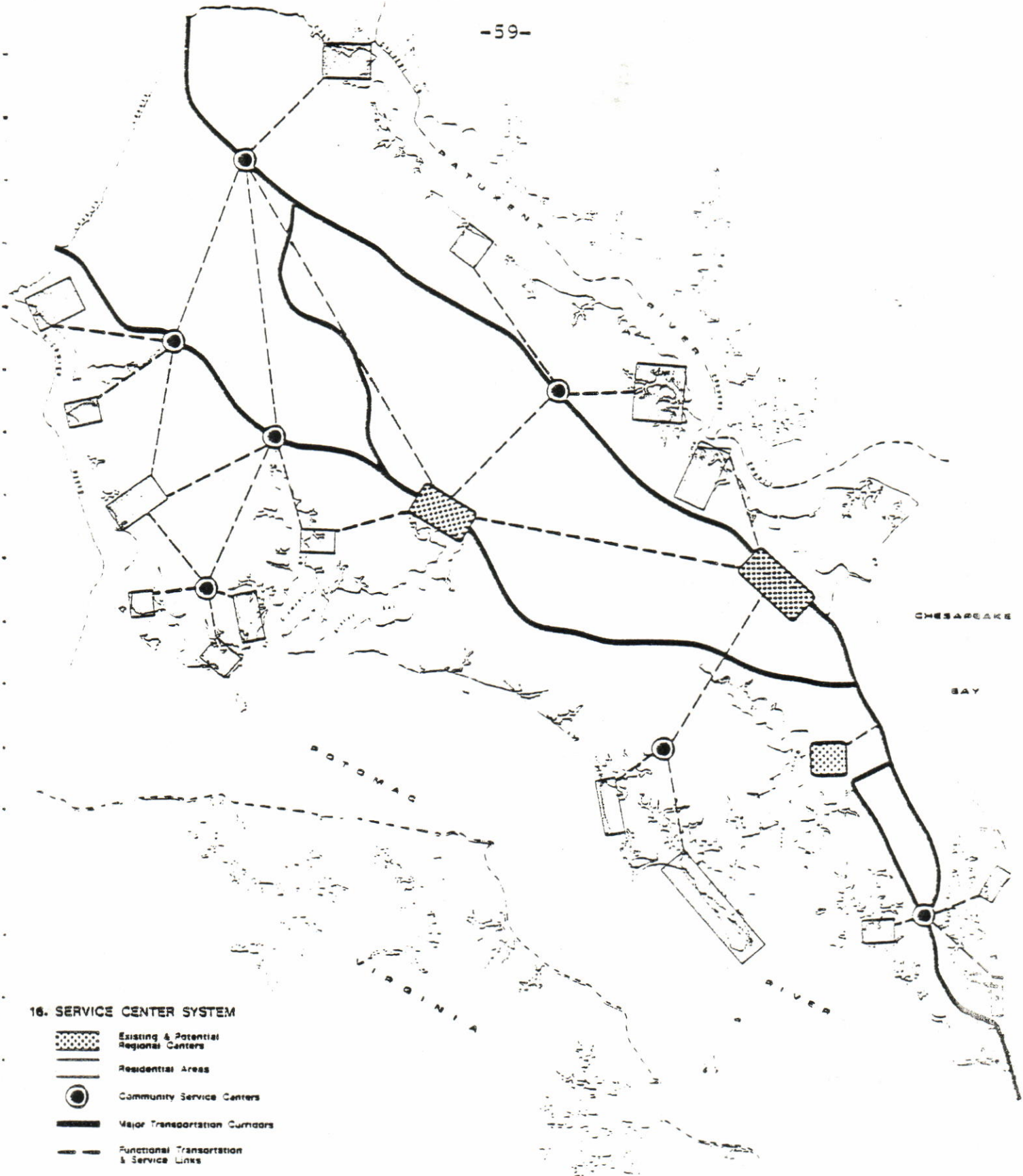
-  Urban Centers
-  Residential Areas
-  Undeveloped Shoreline
-  Highway Links

# ST. MARY'S COUNTY - MARYLAND






## 15. FUNCTIONAL LINKAGES



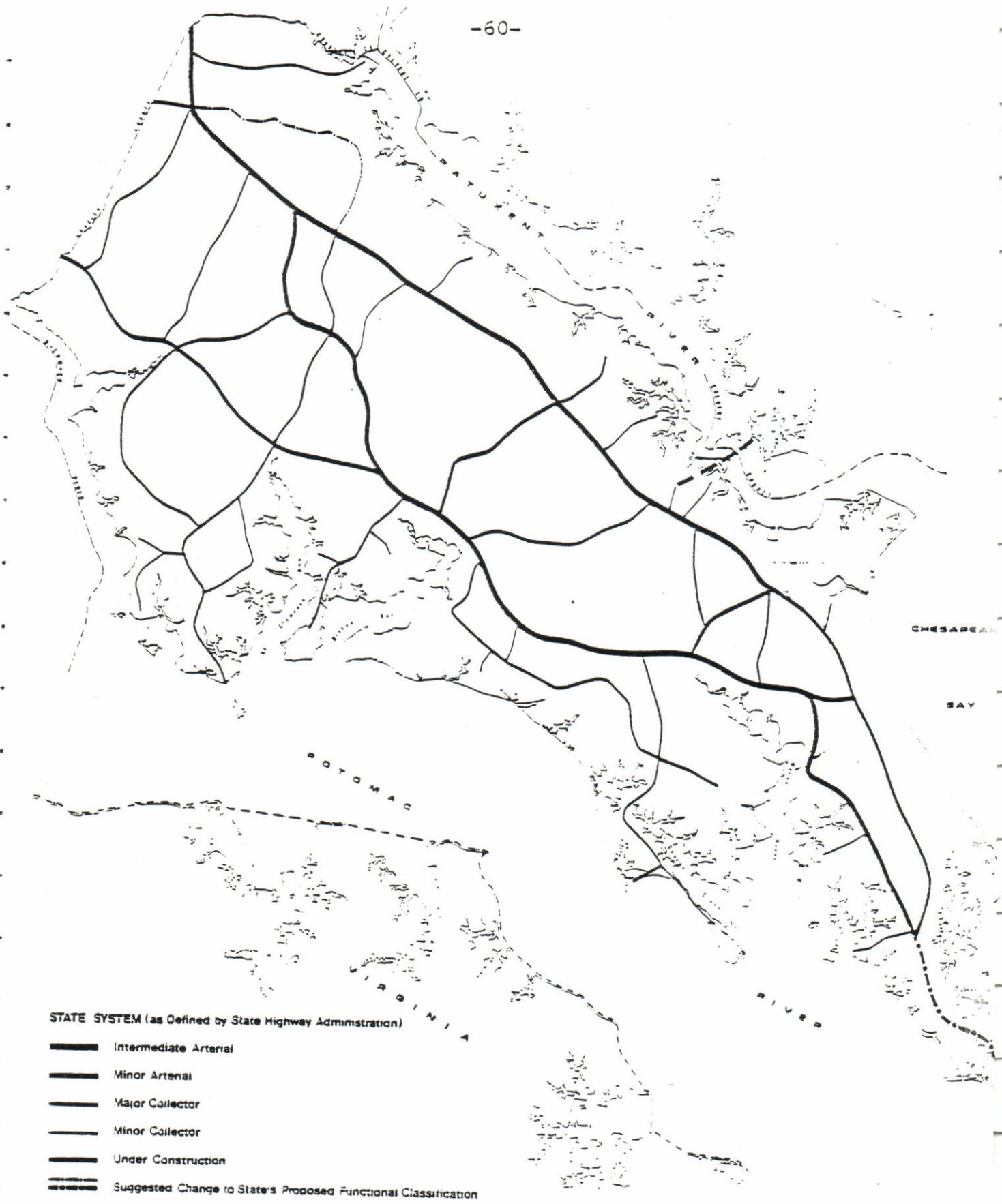




16. SERVICE CENTER SYSTEM

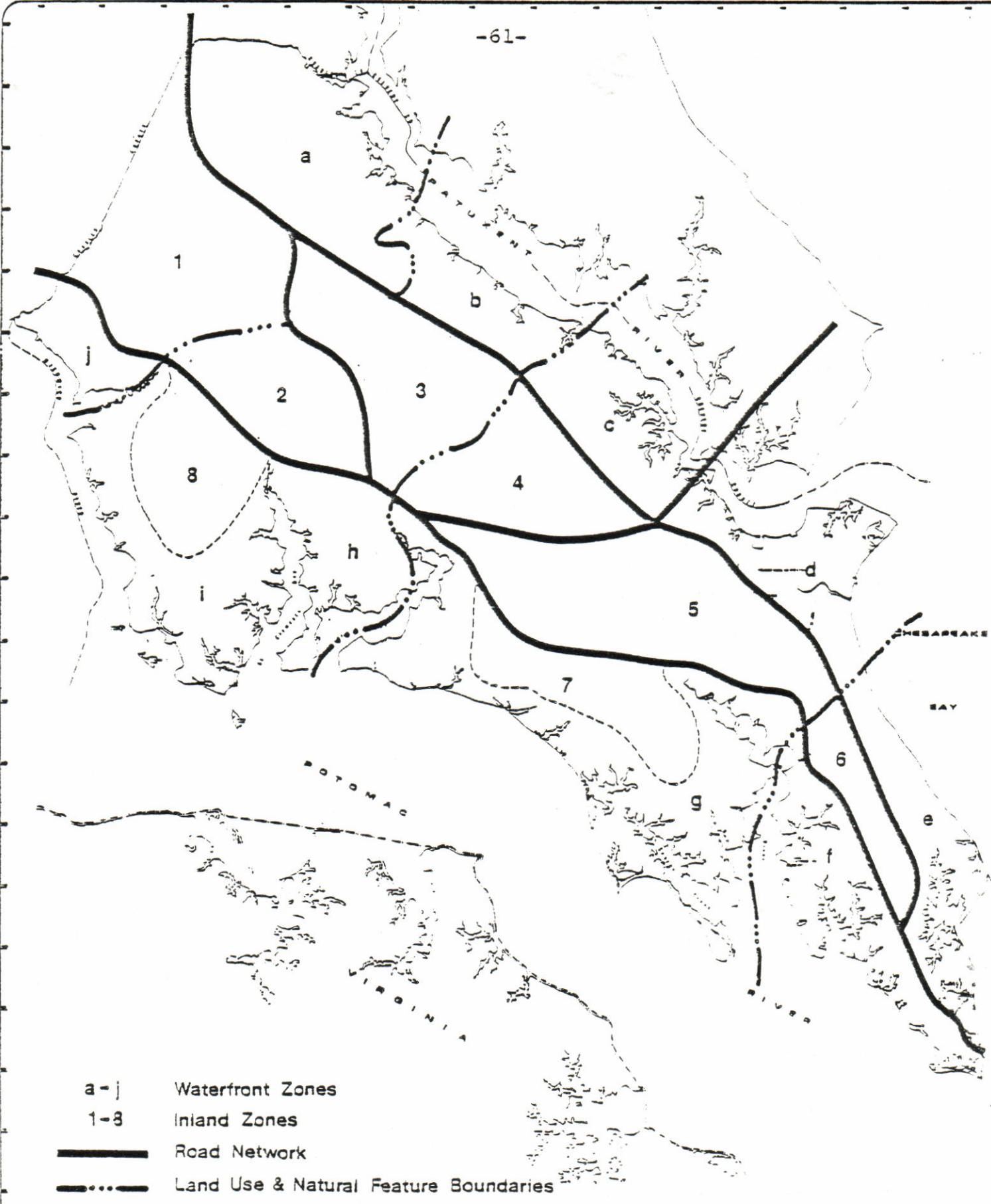
-  Existing & Potential Regional Centers
-  Residential Area
-  Community Service Centers
-  Major Transportation Corridors
-  Functional Transportation & Service Links

ST. MARY'S COUNTY - MARYLAND



# ST. MARY'S COUNTY - MARYLAND

## 17. EXISTING FUNCTIONAL HIGHWAY SYSTEM - 1973

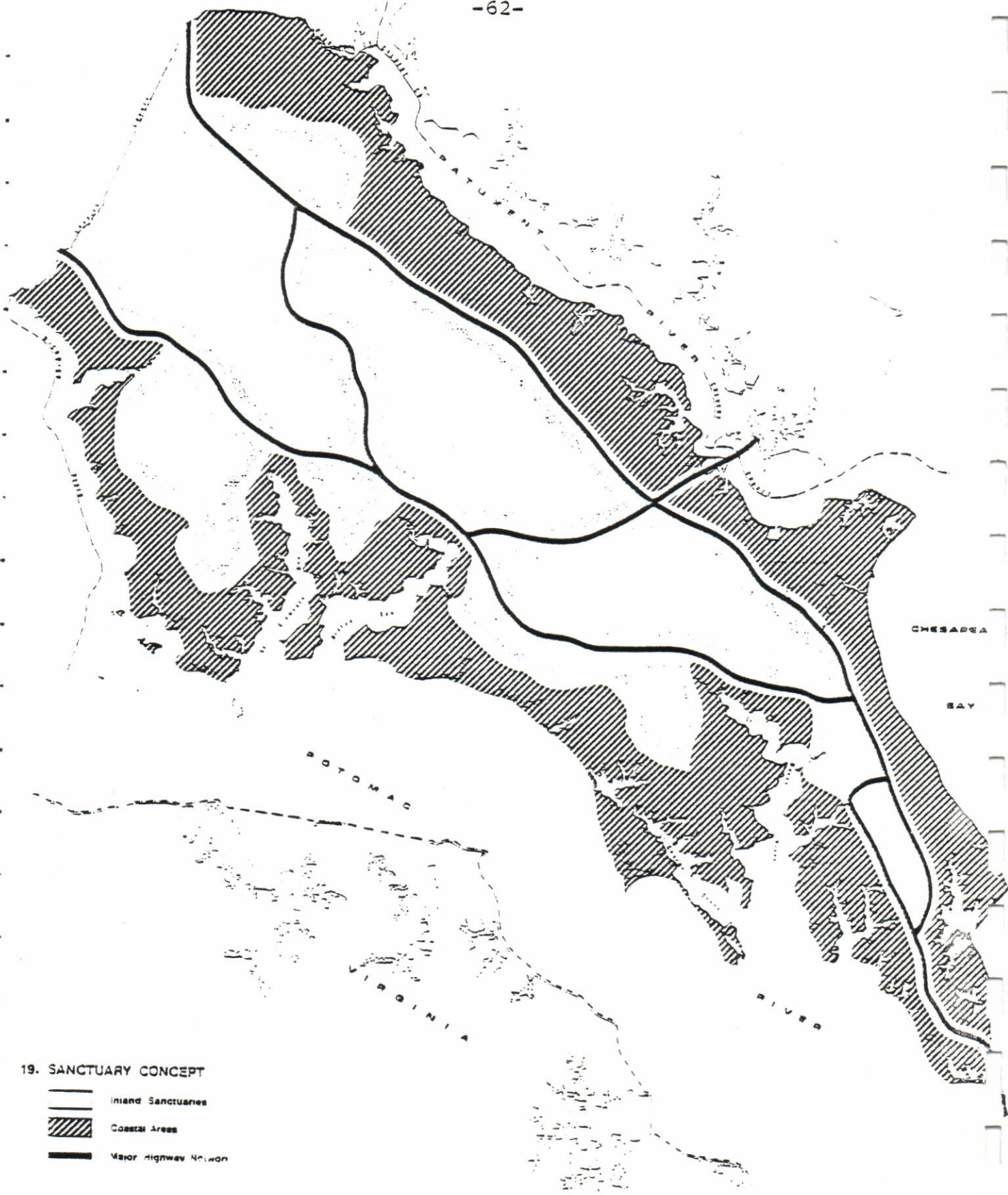


- a - j Waterfront Zones
- 1 - 8 Inland Zones
- Road Network
- - - - Land Use & Natural Feature Boundaries

# ST. MARY'S COUNTY - MARYLAND

18. SECTOR COMPOSITE





# ST. MARY'S COUNTY - MARYLAND

Scale: 1 inch = 10 miles  
Date: 1/1/62

The Second Stage - Choosing a  
Growth Strategy

The functional and spatial patterns of land use suggest several possible patterns of future growth and development in the County, including:

1. No growth.
2. Continued sprawl development.
3. Concentrated development in existing and proposed activity centers.

Each of these alternative concepts must be examined carefully to develop a realistic policy to serve as the basis for the land use plan.

The No Growth Alternative

The concept of "no growth" has come into the forefront of discussion particularly in the Washington Metropolitan area and other metropolitan areas throughout the country. The impetus for a no growth policy has been the fact that the pace of development in the metropolitan areas has far outpaced the public sector's ability to provide adequate sewer, water, education, and other infrastructure facilities. Counties have been unable to plan for and control the unexpected increases in residential development; and, in general, residential development per se has not been able to financially support the service facilities required. The lag effect, rather than improving over time, has actually worsened to the point of making moratoriums against development necessary.

St. Mary's County is now at the stage where a determination of policies concerning growth or no growth are absolutely essential, and it is also necessary to define exactly what is meant by "no growth." Considering the fact that the average natural growth rate in the country is approximately two percent, some growth in population levels is required to accommodate the offspring of present residents, if this is desired. A compound two percent growth rate would imply that the population of the County would double in 35 years. The average yearly growth rate of the County from 1960-1970 was almost 2.0%, but that of the Tri-County Region was almost 3.0%. Increasing the net growth rate to 2.8% would imply a doubling of the population in 25 years. In general, it appears that the average yearly population growth rate for the County is increasing.

To accommodate any increase in population, regardless of the staging, would require an expansion of the County's economic base. As indicated by the economic analysis, the economy is becoming more dominated by the government sector with a decreasing agricultural base; and the primary government employer is the Patuxent Naval Air Test Center which for the foreseeable future will not be subject to major expansion. A "no growth" policy would generally limit the potential for expanding the resident labor force. Since the agricultural employment sector is decreasing, and since the government sector is generally increasing only slightly, with the major employment opportunity stabilized, expansion of the internal economy is going to be necessary just to absorb the slack.

The other basic sector of the economy is the construction industry, which is predominantly residentially oriented. As pointed out previously, growth in terms of residential use only does not lead to fiscal balance -- it generally does not financially support the provision of required services. Expanding residential development without expanding other employment opportunities would lead to a situation of increasing reliance on employment opportunities outside of the County, particularly in the Washington Metropolitan Area, St Mary's County would become more oriented to a commuting environment. Because of the economic picture, adopting a "no growth" policy would therefore lead to an eventual reliance of the County on outside employment opportunities. From a fiscal viewpoint, this situation is not desirable.

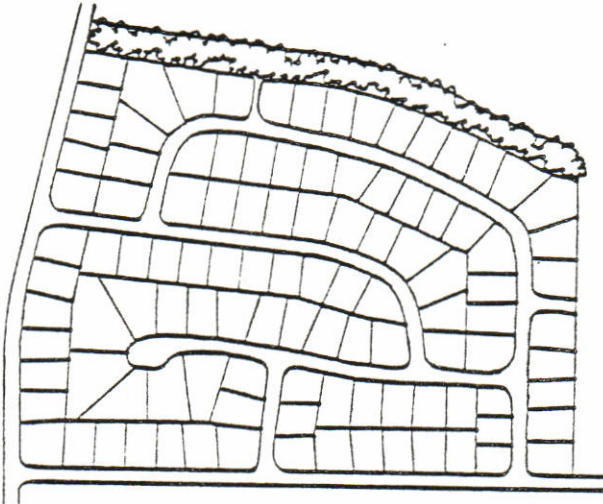
#### Continuation of Sprawl Development

The existing land use pattern shows a concentration of development along the Route 235 Corridor all the way from Lexington Park to the Mechanicsville-Charlotte Hall area, with additional development centering on Leonardtown and stretching out along Route 5 to the Northwest, along Route 245 toward Hollywood, and along Routes 5 and 246 toward Lexington Park. Additional scattered development already exists along the shorelines with more being proposed. Should these trends continue, all the major highways will be lined with development, decreasing transportation efficiency and spreading the service areas for public infrastructure over broad and sparsely populated areas. Sprawl development epitomizes all the planning and fiscal difficulties experienced in more established, older suburban areas. This pattern of land use is inefficient both from the point of view of provision of public services and from the point of view of consumption of land and would not be a viable land use pattern for St. Mary's County.

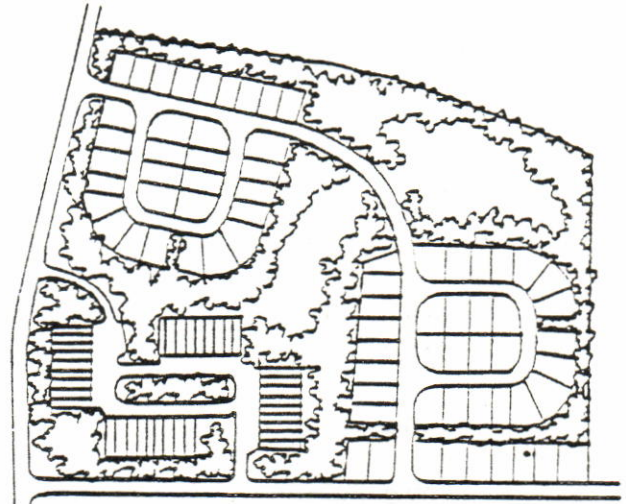
Scattered development is not only inefficient from the point of view of land use, but also from the point of costs to the community. This is true not only on the County scale, but also on the scale of an individual subdivision:

Conventional Subdivision

Cluster Subdivision



Number of Lots : 108  
Open Space : 10%  
Linear Feet of Streets : 5,400  
Linear Feet of Sewer Lines : 5,400



Number of Lots : 108  
Open Space : 50%  
Linear Feet of Streets : 4,900  
Linear Feet of Sewer Lines : 3,900

On the large scale, scattered development contributes to increased costs for highways, sewer and water lines, solid waste disposal, police and fire protection, and other governmental services (some environmental, others not) than would be the case if the land were developed outward from existing centers in an orderly fashion. The cost variation is apparent from a model prepared for Howard County, Maryland, projected to 1985, which is shown in Table 20.

TABLE 20:                      Scattered Development vs. Concentrated\*

	Model I Sprawl	Model II Part Sprawl/ Part Cluster	Model III Closely Clustered
Land Area (acres)			
Residential	49,000	33,900	22,400
Commercial	3,200	2,800	2,500
Industrial	9,000	6,600	4,800
Cost of water Utilities installations	\$65,000	\$47,000	\$32,000
Cost of sewer Utilities installations	\$84,000	\$63,000	\$39,000
Cost of roads	\$55,000	\$38,000	\$26,000
School bus operation (20 years)	\$24,000	\$15,000	\$ 9,000

The annual cost per capita of sewage collection and treatment increases considerably with new development located away from existing centers:\*

<u>Distance from Service Center</u>	<u>Development Density</u>	<u>Cost/Capita</u>
5	64 people/acre	\$5.00
	16 people/acre	\$12.00
20	64 people/acre	\$11.00
	16 people/acre	\$26.00

\*Source: Environmental Plan for New York State  
Preliminary Edition  
New York State Department of Environmental Conservation  
n.d.



Concentrated Development in Existing and Proposed Activity Centers

The concentration of future growth and development in designated centers is a land use policy which can accommodate any proposed growth according to a well-established rate. The process is designed to incorporate a system of interdependent activity centers with concentrations of both population and services. Although the growth center is most often applied on the regional scale in the identification and designation of a hierarchy of urban centers, it can also be applied on a sub-regional scale since it is still possible to determine a system of interdependent centers or "poles" of activity. The physical space characteristics on the County scale parallel those associated with the larger scale regional setting.

Several poles of activity have already been identified in the County: Lexington Park, Leonardtown, and St. Mary's City, and each center has a distinct role. Lexington Park represents the strongest economic center in the County, since this is where the Naval Station is located. In a sense, the station represents the strong center along with the surrounding residential subdivisions which primarily service a population associated either directly or indirectly with the base. Lexington Park is the largest urban area in the County, and the economic structure is presently geared to perpetuate this status. The second largest center is Leonardtown, the County Seat. It serves as the local government center for the County offices and the Courthouse. The third area, which is more in terms of potential rather than reality, is St. Mary's City. St. Mary's College is located here along with the most prominent historical sites in the County. The Charlotte Hall New Market service center is rapidly expanding. These four areas are the primary activity centers in the County.

As indicated by the economic analysis, the economy is becoming more dominated by the government sector with a decreasing agricultural base. The County is becoming increasingly center-weighted, with Lexington Park the primary core. It is apparent that the distinct activities associated with Leonardtown and St. Mary's City help to maintain those centers' unique character. The economy becomes more polarized with major resources in land, labor and capital being centered on Lexington Park. In the meantime, the periphery remains primarily agricultural.

Two major problems seem to exist. First, there is no interdependence between the three activity centers that would strengthen the existence of each. Lexington Park is virtually

self-sufficient except for the control exerted by the County Seat over provision of government services. But even provision of services is on the basis of demand. St. Mary's College is part of the State University system and does not provide direct services to either Lexington Park or Leonardtown, nor is any strong direct control exerted in the other direction. St. Mary's City is not yet a service center for the County.

The second major difficulty relates to the "single-industry" economy of the County. Changing this situation will require the identification of a locational framework to attract a new employment activity, and will include the creation of incentives to meet locational input needs in terms of the following:

1. Transportation and access requirements
2. Geographic location
3. Supply of production factors
4. Potential labor force
5. Market demand factors.

A major rationale for developing a growth center matrix in the County is that the concentration of services and facilities will lead to a concentration of identifiable advantages for location of new economic activities. Such an approach is believed to be essential in the accomplishment of a controlled growth concept for the County. The desired result would be a functionally interdependent system of growth centers, concentrating services and facilities in a manner that can best serve the County as a whole, both physically and fiscally. In addition, the concentration of population maximizes the potential for capturing the retail market within the County which in turn allows the County to increase its revenues through the increased receipts from the sales tax. The initial centers exist as identified, but the functional interdependence has yet to be defined in such a way as to reinforce the concept and attract a desirable level of new economic activity.

There are other arguments for following a growth center concept. In addition to minimizing the cost of attracting new economic activities by the concentration of desired inputs, a growth center approach can divert activity from competing areas while protecting existing agricultural land uses as well. By concentrating the economic inputs in terms of location and

labor force potential, new activities can be encouraged to locate in areas planned for such activities, improving the efficiency and therefore the effectiveness of the planning process. This, too, is a desirable goal of the comprehensive plan.

Several conditions are essential prerequisites to continued growth in the designated centers. Besides the basic questions of population mass and transportation access, the most important characteristic must be the provision of a unique and distinct service which is essential to the County as a whole. Each of the existing centers has the necessary preconditions, but their effectiveness must be measured in terms of the quality of the service being provided and the stability. One method of evaluating the effectiveness is an examination of the characteristics over time and the nature of the role played by the central activity. In Lexington Park the Naval Station is obviously essential to the County. Its stability in terms of its unique national role can be demonstrated by the recent addition to its staff while other military installations have been curtailed.

In Leonardtown the government is essential and stable. In St. Mary's City the College has the potential for becoming the nucleus of an educational center, and this potential must be exploited. Its stability has been enhanced by the recent association of the College with the State University system.

One center that is presently lacking is a concentration of retail and service related activities. The present scattering of services has led to a large loss in potential retail sales within the County. A large portion of retail and service expenditures are lost to areas outside of St. Mary's County.

Other preconditions that must be examined include the following:

1. Potential labor force: A potential labor force must exist that is both diverse and skilled. The existence of incipient growth centers helps to determine the availability of labor through existing experience.
2. Attractive living environment: Attractive and desirable living conditions enhance the overall attractiveness of a potential growth center. In this respect, the abundance of natural resources in the County is a competitive advantage.
3. Adequate power resources and other elements of the necessary infrastructure: Adequate power resources and other elements of the infrastructure are essential for

the realization of any potential economic additions, both in terms of the industry itself as well as the potential labor force.

4. Access to transportation: The continued growth of economic activities requires adequate facilities for marketing of products.
5. Proximity of existing metropolitan area: To satisfy the need for extended cultural and other services which cannot be supported by newly emerging economies, transportation links must exist or be provided to nearby metropolitan areas.
6. Modern government and fiscal structure: It is essential that a modern government and fiscal structure be established for the proper provision, coordination, and distribution of public services. Such a system requires political acumen among the population.

An evaluation system will require a comparative technique to rank potential growth centers in terms of potential for sustained growth. A model has been attempted for the small scale area of St. Mary's County, using data which is available for the nine election districts. Relevant data for these small area delineations is limited, and this problem is reflected in the elements considered by the model. A summary of the evaluative technique is attached and will hopefully assist in the evaluation of potential growth centers in the County.

The Third Stage -- Preparation of  
an Urban Oriented Economic Growth  
Model for St. Mary's County

An attempt has been made to develop a model to measure the potential for economic growth, by election district, in the County. This model correlates several measureable coefficients of growth related to economic development potential, and results in a ranking of election districts. Based on available data, the following coefficients have been defined:

1. Population change. A ratio has been calculated by dividing the percentage change in the population from 1960 to 1970 for each election district by the average percentage population change for the County.

$$r = \left[ \frac{(P_{1970} - P_{1960})}{P_{1960}} \right]_{ED} / \left[ \frac{(P_{1970} - P_{1960})}{P_{1960}} \right]_C$$

ED = Election District

C = County

This coefficient measures the rate of growth for each election district relative to the rate of growth for the County as a whole.

$r_1 > 1$  implies the election district is growing at a faster rate than the County

$r_1 = 1$  implies the election district is growing at the same rate as the County

$r_1 < 1$  implies that the election district is growing at a slower rate than the County.

The results are shown in Table 21.

2. Family Income Ratio. For this coefficient the median family income (1970 Census) for each Election District has been divided by the median family income (1970 Census) for the County.

$$r_2 = \left\{ \frac{I_{ED}}{I_C \text{ 1970}} \right\}$$

$$r_2 \begin{cases} > \\ = \\ < \end{cases} 1 \begin{array}{l} \text{ED income} > \text{County average} \\ \text{ED income} = \text{County average} \\ \text{ED income} < \text{County average} \end{array}$$

The results are shown in Table 22.

3. Economic Base Coefficients. Employment data reported by residents in each Election District (1970) has been used to determine economic coefficients reflecting the conclusions of the economic base study discussed earlier. Two coefficients have been used, using the employment data shown in Table 2. Figure 20 shows the relative volume of current employment by election district, and Figure 21 shows the current delineation of election districts for reference.

a. In areas strong in agricultural production, the production factors--land, labor, and capital--are tied up in agriculture, diminishing the potential for urban oriented development. In addition, agriculture, especially in terms of increased production per unit of land, is still an essential element of the St. Mary's County economy, and every effort should be made to maximize the potential for continued agricultural production. Identifying those areas strongest in agriculture and setting up a growth program to preserve those areas is therefore an important element of the comprehensive plan. Urban growth concepts can be compatible with the agricultural sector of the County, but to ensure continued availability of prime agricultural lands these lands must be isolated from the pressures for urbanization. Therefore, in the process of identifying those areas where potential for urban oriented growth should be encouraged, prime agricultural areas should be protected. This is the primary reasoning behind using the agricultural coefficient as a negative coefficient in the economic model, implying that areas where agriculture is predominant should be protected from pressures of urbanization. Therefore, a negative coefficient has been used relating percentage of total Election District employment in agriculture to percentage of total County employment in agriculture.

$$-r_3 = \frac{\% \text{ of Election District employment in agriculture}}{\% \text{ of County employment in agriculture}}$$

Those Election Districts stronger in agricultural employment than the County as a whole show a ratio  $r_3 > 1$ . The results are shown in Table 24.

TABLE 21

Population Change Ratio

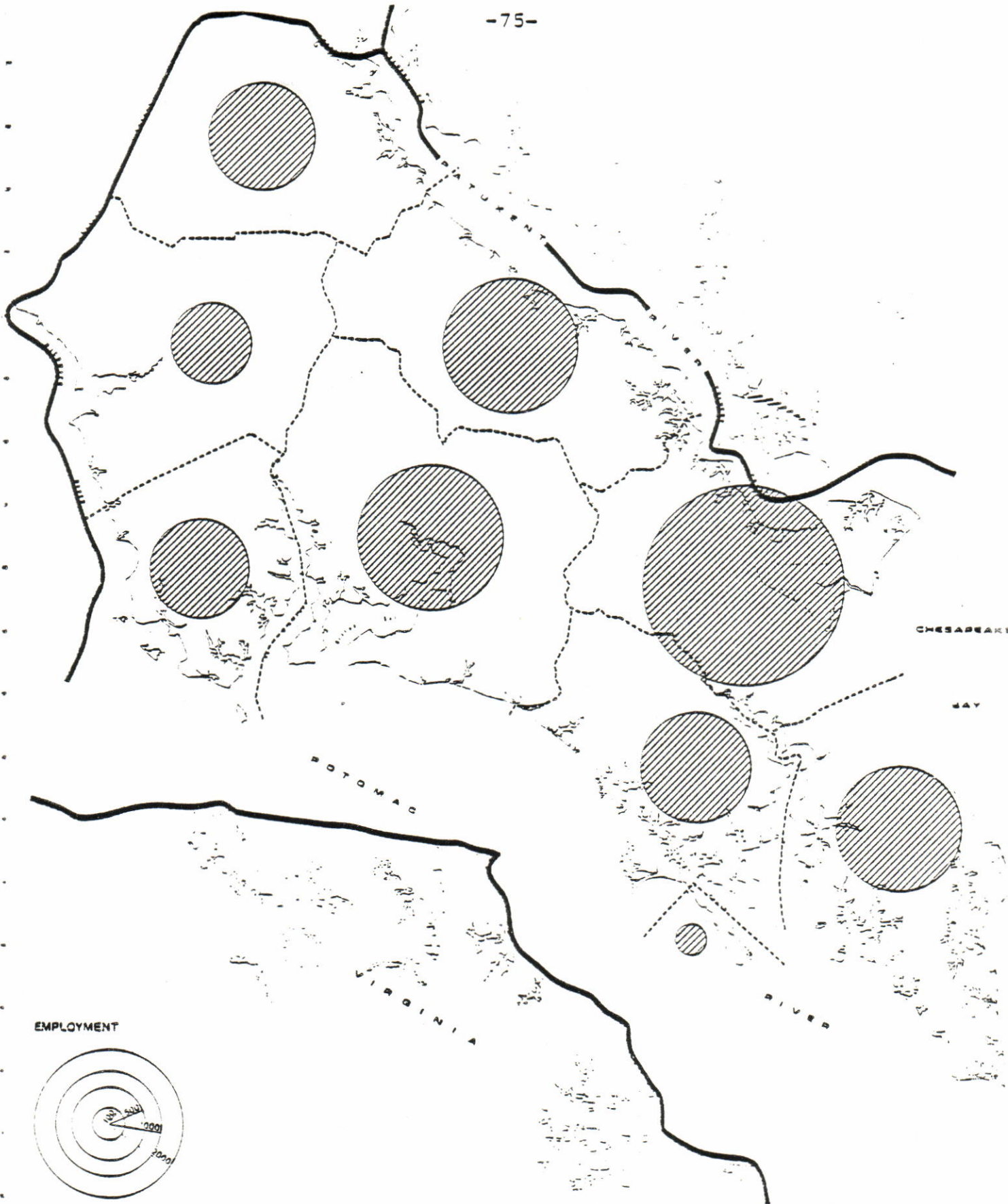
Election District	$a_1 = P_{1975} - P_{1960}$	$b_1 = P_{1975} - P_{1960}$	$r_1 = \frac{a_1}{b_1}$	Rank
	P 1960 ED	P 1960 C		
1	28.9	37.6	.77	5
2 <sup>1</sup>	22.7	37.6	.60	8
3	26.5	37.6	.70	7
4	33.5	37.6	.89	4
5	84.8	37.6	2.26	1
6	82.3	37.6	2.19	2
7	40.1	37.6	1.07	3
8	28.5	37.6	.76	6
9 <sup>1</sup>	22.7	37.6	.60	9

<sup>1</sup>Districts 2 and 9 are combined for estimation purposes, therefore the same increase was used in each which assumes a uniform change. District 2 was ranked higher because of its larger size.

TABLE 22 : EMPLOYMENT DATA BY ELECTION DISTRICT

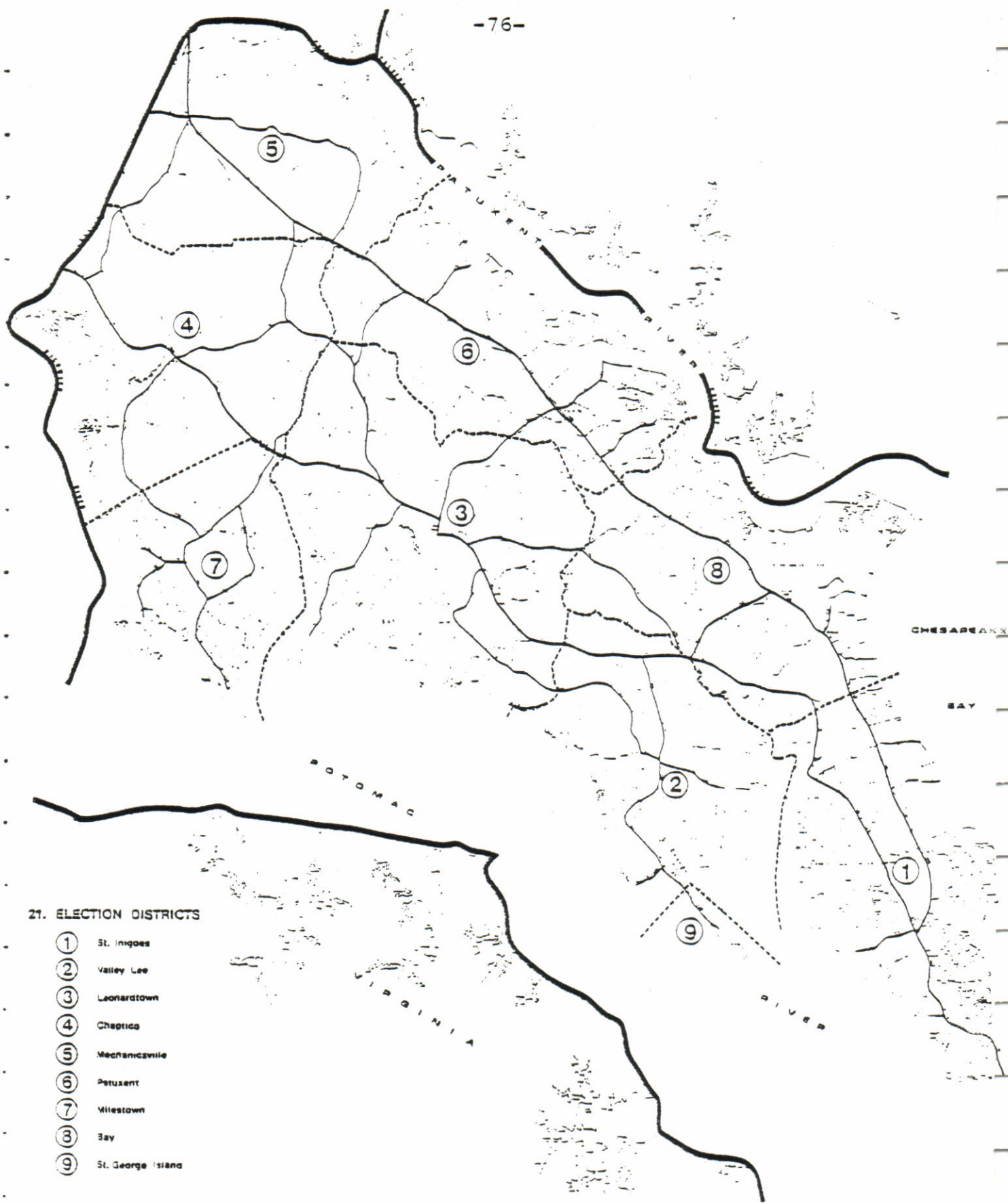
Election District	Agric. & Mining		Construction		Trade		Services		F.I.R.E.		Civ. Govt.		Man.		Total %
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
1. St. Inigoes	55	3.97	138	9.98	207	14.97	281	20.33	41	2.96	591	42.76	69	4.99	1,382 (11.5)
2. Valley Lee	102	9.60	61	5.74	254	23.91	223	20.99	33	3.10	326	30.69	63	5.93	1,062 ( 8.9)
3. Leonardtown	135	7.21	249	13.30	294	15.70	578	30.87	70	3.73	490	26.17	56	2.99	1,872 (15.6)
4. Choptico	116	24.38	83	14.66	99	17.49	117	20.67	6	1.06	92	16.25	31	5.47	566 ( 4.7)
5. Mechanicsville	160	15.70	199	19.52	165	16.19	199	19.52	21	2.06	184	18.05	91	8.93	1,019 ( 8.5)
6. Patuxent	107	6.82	194	12.38	272	17.35	394	25.14	28	1.78	493	31.46	79	5.04	1,567 (13.1)
7. Eilestown	177	20.06	204	23.12	113	12.81	175	19.84	12	1.36	131	14.85	70	7.93	882 ( 7.4)
8. Bay	64	1.81	226	6.39	753	21.30	651	18.42	95	2.68	1599	45.24	146	4.13	3,534 (29.5)
9. St. George Island	10	12	9	11	-	-	12	14	-	-	52	63	-	-	83 ( 6.7)
TOTAL	948	7.92	1363	11.38	2157	18.02	2630	21.97	366	2.55	3958	33.07	605	5.05	11,967 (100)





# ST. MARY'S COUNTY - MARYLAND

20. EXISTING CIVILIAN EMPLOYMENT - 1970



21. ELECTION DISTRICTS

- ① St. Ingoes
- ② Valley Lee
- ③ Leonardtown
- ④ Chaptico
- ⑤ Mechanicsville
- ⑥ Patuxent
- ⑦ Milestown
- ⑧ Bay
- ⑨ St. George Island

ST. MARY'S COUNTY - MARYLAND

- b. Government and Construction: The other elements identified earlier as components of the economic base are government and construction - both of which are positive indicators of urban oriented economic growth. This coefficient has been defined as the ratio of the percentage of government plus construction employment in the Election District to the percentage of government plus construction employment in the County as a whole:

$$r_4 = \frac{\% \text{ of ED employment in Government and Construction}}{\% \text{ of County employment in Government \& Construction}}$$

The results are indicated in Table 24. (Civilian only).

Construction Coefficient:

Using the construction coefficient as an indicator of potential for urban growth is an outgrowth of two major characteristics of the construction industry in St. Mary's County. First, as indicated by the economic base study, the construction industry is one of the three basic sectors of the economy. Second, construction in the County is primarily residential, and concentrations of construction employment are therefore indicators of concentrations of residential growth. The residential growth is, in turn, a result of employment concentration and is, therefore, indicative of potential urban oriented development.

Government Coefficient

The employment in government (civilian only) represents the strongest element of the economic base of the County, and the areas in which government employment is concentrated are the most urbanized. Therefore, in those areas where government employment is strong, pressures for residential development are also strong. Such concentrations also imply a concentration of services, reinforcing the urbanizing trends. As a result, government employment concentrations were taken as indicators of continued pressure for urban-oriented economic growth.

- c. The coefficients are then summed:

$$T = r_1 + r_2 - r_3 + r_4$$

and the results are summarized in Table 25.

TABLE 23: AGRICULTURE BASE COEFFICIENTS

<u>Election District</u>	<u><math>a_3 =</math> % Employed in Agriculture</u>	<u><math>b_3 =</math> % Employed in Agriculture in the County</u>	<u><math>r_3 = \frac{a_3}{b_3}</math></u>	<u>Rank</u>
1	3.97%	7.92%	.50	7
2	9.60%	7.92%	1.21	4
3	7.21%	7.92%	.91	5
4	24.38%	7.92%	3.08	1
5	15.70%	7.92%	1.98	3
6	6.82%	7.92%	.86	6
7	20.06%	7.92%	2.53	2
8	1.81%	7.92%	.23	8
9	.12%	7.92%	.015	9

TABLE 24: GOVT. AND CONSTRUCTION BASE COEFFICIENTS

<u>Election District</u>	<u><math>a_4 =</math> % Employed in Govt. &amp; Constr.</u>	<u><math>b_4 =</math> % Employed in Govt. &amp; Constr. in County</u>	<u><math>r_4 = \frac{a_4}{b_4}</math></u>	<u>Rank</u>
1	53%	44%	1.20	2
2	36%	44%	.82	3
3	39%	44%	.89	5
4	31%	44%	.70	9
5	38%	44%	.86	6
6	44%	44%	1.00	4
7	30%	44%	.68	7
8	52%	44%	1.18	3
9	74%	44%	1.68	1

TABLE 25

Summary of Coefficients

Election District	Pop. $r_1$	Income $r_2$	Ag $r_3$	Govt. $r_4$	Total	Rank
1	0.77	0.99	-0.50	1.20	2.46	3
2	0.60	1.17	-1.21	0.82	1.38	6
3	0.70	1.16	-0.91	0.89	1.84	5
4	0.89	0.88	-3.08	0.70	0.61	7
5	2.26	1.01	-1.98	0.86	2.15	4
6	2.19	0.98	-0.86	1.00	3.31	1
7	1.07	0.82	-2.53	0.86	0.22	8
8	0.76	1.00	-0.23	1.18	2.71	2
9	0.60	1.01	-0.02	1.68	3.27	-

The ranking system presented by the model reflects important characteristics of the existing economic conditions.

1. Election District Eight ranks first as a result of the employment and population concentrated in Lexington Park.
2. Election District Six is ranked second, primarily because of the spin-off residential development growing out of the employment located in the Eighth District, which is contiguous. In addition, growth pressures in this area are also a result of the location along the major transportation corridor - Route 235. This represents the classic picture of the sprawl development process in action.
3. Election District Five is third, primarily because of the growing concentration of commercial and residential activities.
4. Election District Three is the next ranking district, resulting from the concentrated activities in Leonardtown.
5. Election District Nine is St. George Island and is significantly smaller than all other districts in the County. Interpreting all data of Election District Nine as an extension of the contiguous second election district does not change the relative position of the second district. This combination is a more realistic interpretation.

This completes the predominance of the existing centers discussed in Stage One and illustrates the basic structure of existing potential for development that will have to be molded by the land use plan.

## The Fourth Stage - Projected Growth

The concept of projecting population growth over a long period of time has always been a very questionable process, and the skepticism with which most population projections are received has often contributed to the lack of effectiveness of long-range comprehensive planning. Two important assumptions are being made in developing a usable plan for St. Mary's County, and it is necessary to have a clear understanding of these assumptions before the potential effectiveness of the plan can be maximized.

1. The first assumption is that development is essential for the County. The rationale for this assumption has been demonstrated in the discussion of the Second Stage, based on the economic conditions in the County.
2. The second assumption is that the rate of growth can be guided if the staging of that growth is reasonably compatible with the broad view of market pressures. Because market pressures are not realistically forecastable over the long range, the planning process must be flexible enough to accommodate unforeseen variations. For this reason, the basic process of this proposed plan is first: to identify a population level that can be planned for over a long period of time, and second: to examine the staging by which this population level may be reached given past trends and reasonable assumptions about future trends.

The so-called design-level population for this comprehensive plan is slightly more than double the existing population -- approximately 105,000. It must be stressed that this number is approximate - the plan is not saying that this population should or should not be reached in x years. It is saying that by the turn of the century or somewhere in that period of time this may be the population of the County, and to avoid the mistakes of many other areas of the country it is best to be able to plan for a given population level no matter when it might be achieved. The rate at which this population is reached will ultimately depend on the effects of external pressures and must be adjusted continuously as a result.

To say that the population of St. Mary's County may double by the turn of the century is not at all implying that the County will soon experience massive growth. On the contrary, as will shortly be demonstrated, such an increase in population is reflective of a very small rate of growth. During the decade of the 1960's, St. Mary's County experienced an annual com-

pounded rate of growth of nearly 2.0%.\* During the same time period, Charles County experienced a rate almost double that - 3.9%. Even Calvert County grew at the annual rate of 2.7%, and the Tri-County Region as a whole grew at nearly 2.9%. Considering that the national average natural growth rate was 2.0%, St. Mary's County was barely growing at a rate that would absorb their own offspring. If St. Mary's County were to continue growing at the same 2.0% rate, that which would provide the opportunity for absorbing the offspring of the current County residents, the population would double in approximately 35 years - by the year 2008. It is not unreasonable to assume that the County's rate of growth will increase, even slowly, during the next 35 years, especially as the Washington Metropolitan area becomes more and more saturated.

In 1970, the population of the County was 47,388. Looking at the building permit data since 1970 indicates new housing starts in the County totaling 1,220, with 336 in 1970, 353 in 1971, and 531 in 1972. If the average population per dwelling unit for the County is applied, 3.33 persons/dwelling unit (including all housing units), this would imply a population increased of approximately 4,067 by early 1973, or a total population of approximately 51,455. This would indicate a significant increase over the average annual compound growth rate from the 1.989 experienced in the 1960's to 2.783. Averaging the growth rate for the years 1970 through 1972 with that from 1960 through 1970 gives a rate of growth equal to 2.172% compounded annually. The three values are then used as the base for the low, medium, and high population projections indicated in Tables 28, 29, and 30 as follows:

Table 28 assumes a low rate of change:

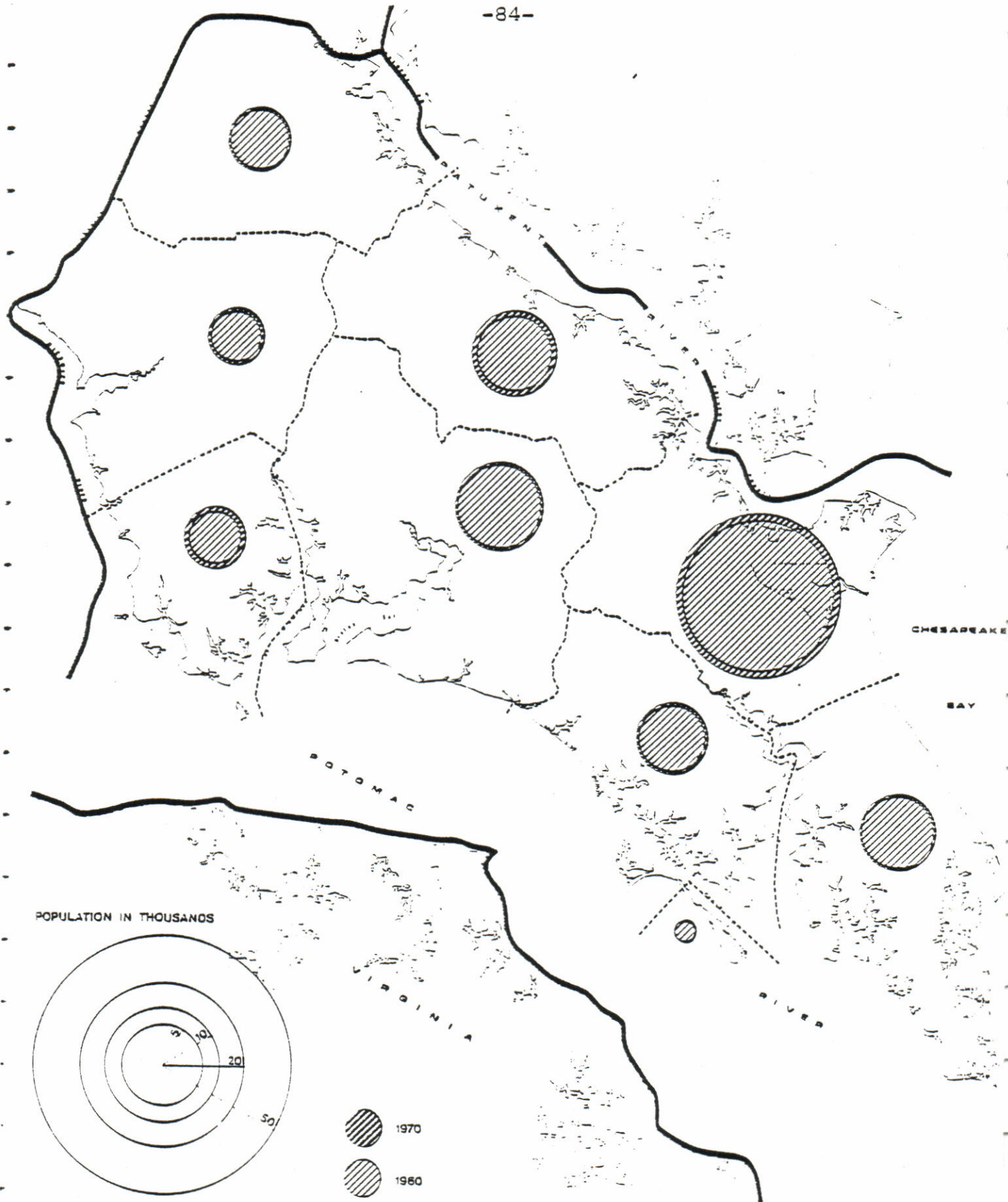
<u>Time Period</u>	<u>Annual Compound Growth Rate (%)</u>
1973 - 1980	2.0%
1980 - 1985	2.1
1985 - 1990	2.1
1990 - 1995	2.2
1995 - 2000	2.3
2000 - 2005	2.5

\* The relative change in population from 1960-1970 by election district is shown in Figure 22, and the population by election district for 1960 and 1970 is shown in Table 26.



TABLE 26:      POPULATION BY ELECTION DISTRICT

<u>ELECTION</u> <u>DISTRICT</u>	<u>Population</u> <u>1960</u>	<u>Population</u> <u>1970</u>
1.	3,496	4,219
2.	2,970	3,494
3.	5,023	5,811
4.	1,858	2,158
5.	2,481	3,285
6.	3,841	5,283
7.	2,392	2,976
8.	16,510	19,837
9.	344	325



# ST. MARY'S COUNTY - MARYLAND

## 22. POPULATION GROWTH 1960-1970

Table 29 assumes a medium rate of change:

<u>Time Period</u>	<u>Annual Compound Growth Rate (%)</u>
1973 - 1980	2.172%
1980 - 1985	2.272
1985 - 1990	2.400
1990 - 1995	2.500
1995 - 2000	2.650
2000 - 2005	2.850

Table 30 assumes a higher rate of change:

<u>Time Period</u>	<u>Annual Compound Growth Rate (%)</u>
1973 - 1980	2.783
1980 - 1985	2.800
1985 - 1990	2.850
1990 - 1995	2.900
1995 - 2000	3.000
2000 - 2005	3.200

All three tables increase only slowly through 1985, based on the assumption that any major changes in the rate of growth of the County will happen later for St. Mary's County than for either of the other Counties in the Tri-County Region. Large rates of growth in the foreseeable future (exceeding 3.5% annually) are not considered likely because of the considerable growth that will be absorbed by the new St. Charles Community now under development in Charles County. It is important to realize that increased employment opportunities will be available in the Tri-County Region as a result of growth in St. Charles, and this fact will likely lead to increased opportunities for commuting work trips originating in St. Mary's County. such opportunities will therefore increase the residential development pressures for the County, increasing the rate of growth over the next several decades paralleling the growth of the new community.

As a result of these considerations, the population growth rates projected in Table 29 appear to be "most likely." However, it must again be stressed that the whole concept of projecting population thirty years in the future is by nature suspect, and hence should only be used in terms of creating an order of magnitude estimate as a framework for the land use plan. The land use plan itself, built on the concept of growth centers or activity centers will be designed in a flexible manner such that population groups and staging can be altered to meet changing situations.

The design population level of 105,000 is used as a model for demonstrating the process by which the land use plan is being developed. As such, it is not a "target" population - only a stage that will be reached, as presently estimated, sometime shortly after the turn of the century.

POPULATION PROJECTIONS

Table 27 - Low

Table 28 - Medium

Table 29 -High

<u>1973</u>	<u>51,455</u>	<u>51,455</u>	<u>51,455</u>
4	52,484	52,572	52,887
5	53,534	53,714	54,359
6	54,604	54,882	55,872
7	55,697	56,073	57,427
8	56,810	57,291	59,025
9	57,947	58,535	60,667
<u>1980</u>	<u>59,106</u>	<u>59,807</u>	<u>62,356</u>
1	60,347	61,166	64,102
2	61,615	62,556	65,897
3	62,908	63,977	67,742
4	64,229	65,430	69,639
5	65,578	66,917	71,588
6	66,955	68,523	73,628
7	68,361	70,168	75,727
8	69,797	71,852	77,885
9	71,263	73,576	80,105
<u>1990</u>	<u>72,759</u>	<u>75,342</u>	<u>82,388</u>
1	74,360	77,226	84,777
2	75,996	79,156	87,236
3	77,668	81,135	89,766
4	79,376	83,163	92,369
5	81,122	85,243	95,048
6	82,907	87,502	97,899
7	84,731	89,821	100,836
8	86,595	92,201	103,862
9	88,500	94,644	106,978
<u>2000</u>	<u>90,447</u>	<u>97,152</u>	<u>110,187</u>
1	92,708	99,921	113,713
2	95,026	102,769	117,352
3	97,402	105,697	121,107
4	99,837	108,710	124,982
5	102,332	111,808	128,982

-87a-  
SUMMARY OF  
GLADSTONE & ASSOCIATES  
POPULATION PROJECTIONS<sup>1</sup>

TABLE 27a

	1970			1985		
	low	most likely	high	low	most likely	high
Calvert	19,000	20,000	21,000	23,000	27,000	28,000
Charles	42,000	44,000	46,000	62,000	74,000	77,000
St. Mary's	45,000	48,000	51,000	55,000	65,000	67,000
Tri-County	106,000	112,000	118,000	140,000	166,000	172,000

Summary of  
Assumptions:

1. Forecasts are based on natural increase of 20 per 1000 per year and net migration.
2. It was assumed more people would move in than would move out of the area.
3. The job opportunities which control the migration were expected to increase.

<sup>1</sup>Source: Robert Gladstone & Associates, The Economy and Population of Southern Maryland.

Date: 1965

### The Fifth Stage - Designation of Activity Centers

Four major elements have now been compiled with which to designate the various activity centers or growth centers in the County:

1. A system of sectors has been delineated to identify characteristic needs spaced throughout the County.
2. Existing centers of activity have been identified and briefly discussed with respect to important and unique characteristics.
3. An economic model has been generated ranking the election district areas with respect to economic growth potential based on existing population and employment data.
4. Projections have been made for future population growth in the County based on current rates of growth, indicating that a population level of approximately 105,000 will be reached within the first five years of the twenty-first century.

The next stage is the identification of those existing and proposed centers where growth should be concentrated, along with a picture of how the projected growth should be distributed to achieve a maximum feasible distribution of public and private facilities and services.

#### The Major Centers

The two established urban centers in the County, Lexington Park and Leonardtown, have already been described briefly along with the potential center at St. Mary's City. Both Lexington Park and Leonardtown are well established in terms of unique characteristics that indicate relative permanence. St. Mary's City, as the potential historical and educational center of the County, offers characteristics similar with respect to "uniqueness" and therefore offers potential as a special activity center. These three centers provide the basic element of a growth center strategy for the County, and, as such, deserve a more comprehensive analysis with respect to potential development. The importance of these centers is reflected in the fact that detailed master plans are being prepared for each area. The Fifth District may also merit a detailed plan.

#### Lexington Park

Lexington Park is the major employment and population center of the County and the most important activity center in the entire Tri-County Region. The 1970 population of the area was

9,136; and the 1970 population of the eighth election district in which Lexington Park is located, was 19,837 or 41.9% of the total County population. Employment and income figures also indicate the concentration of resources in the Lexington Park area. Of the approximately 15,000 member labor force in the County, approximately 8,000 are employed at NATC which is approximately 53% of the total employed in the County. In addition approximately 67% of the total earnings of the County are generated by the Government sector with over 70% of employment in the Government sector located at NATC. Reliance on one employment center must be altered if continued growth is to be assured.

Several factors relating to the Lexington Park area can contribute to the diversification and intensification of economic activity in that area. The new Patuxent River Crossing, now under construction, is a major capital investment in the area that offers potential for new commercial and economic activities as a result of improved and expanded access to the Region as well as to the Baltimore Metropolitan area. Once the crossing is completed, connecting Calvert County to St. Mary's County, Lexington Park will be situated at the crossing of two major transportation corridors - the Route 5/235 corridor to the Washington area and the Route 2/4 corridor to Baltimore. Planning for development in the Lexington Park area must take this fact into account and capitalize on the opportunities presented.

Opportunities for creating a superior living environment in Lexington Park hinge on two major factors that can and must be accommodated by future growth. The continued operations of the PNATC are essential to the continued economic viability of the County, and this fact reinforces the need for planning compatible land uses within the designated noise impact zones of the airport. Continued concentrations of residential land use within the noise impact zones will seriously inhibit the quality of the living environment as well as threaten the future operations of the airport. As a result, it is essential to shift the major concentrations of population away from the designated noise zones, offering incentives for new development in unaffected areas. The rationale for this policy of future growth in Lexington Park is discussed in considerable detail in the special section of this Comprehensive County Plan devoted to the Master Plan for Lexington Park. It is important, however, to present the general framework for development of the Lexington Park area and the general potential for growth in this area since Lexington Park is the major urban center of the County and



will continue to be the major center. It is important, therefore, to recognize the potential for inhibiting elements and plan accordingly to assure a high quality physical as well as economic development.

The second important element offering potential for the creation of a superior residential community in Lexington Park is the new state park presently being acquired for future development. This state park, which eventually will include 2,480 acres plus 300 acres of County Park, must be integrated into the living fabric of the community. Access from all parts of the community, as well as the County, must be accentuated to assure adequate open space and recreation opportunities within easy reach of all residents.

The existence of Lexington Park as the largest existing center in the County reflects the fact that the major portion of the County's investment is here. Expanding and solidifying this position in the County is essential. Indeed, under present circumstances the County cannot afford to accommodate growth in scattered areas - the process should be developed to concentrate growth for more efficient provision of public services. Effort must be directed toward the creation of a viable urban center in the County as the basis for long-term growth. Achievement of this goal will go a long way toward preservation of the important land and ecological qualities of the County while beginning a process of concentrated growth that will allow the provision of services and activities not otherwise available to a more dispersed population. That the basis for such concentration already exists in and around Lexington Park is apparent both from the economic as well as the facility analysis presented to this point. It is the major goal of this land use plan, therefore, to concentrate the great portion of future growth in the Lexington Park area, encompassing a population reaching 40,000 over the next thirty years, with the eighth election district reaching a total population of approximately 43,000. Extraordinary efforts will have to be exerted by the County to accomplish this end, and the success of these efforts must be re-evaluated continuously to keep pace with the process of development in and around the County.

The potential for future development - physical, social and economic - in Lexington Park is therefore a function of several important elements. The strong economic opportunities related to the PNATC and potential for local commercial operations, the opportunities presented by the new Patuxent River Crossing, and the potential for a high quality living environment based on superior open space recreation potential all contribute to the conclusion that Lexington Park can, and should, continue to develop as the major urban center of the County. This potential

forms the basis for the Master Plan for the Lexington Park Area that is prepared as a special section of this Comprehensive Plan.

### Leonardtown

The Comprehensive Plan for Leonardtown projects growth on a relatively short-term basis through 1985, and is based on the primary consideration that Leonardtown will continue to develop as the center for government activities in the County. The Master Plan prepared by Raymond, Parish, Pine and Plavnick of Washington, D.C., is built on a set of guidelines compatible with the overall County Plan:

1. Preservation of existing amenities and buildings, maintaining the identity of Leonardtown as a governmental center and as a retail center for the County.
2. Expansion of the city and its facilities to meet and anticipate future population demands, including expansion of the retail-service-government facilities in the General Business District, stabilization of existing and creation of new residential areas.
3. Improving the qualitative environment of the city through the expansion of the open space/recreation/pedestrian system, and improving the architectural design and compatibility of the central core area.
4. Development of the appropriate land use controls including zoning, housing and building subdivision regulations, and including controls over power and water services provided outside the town's jurisdiction.

The proposed Leonardtown Master Plan emphasizes a strong business and government core area, including new sites for County Governmental buildings and concentrations of multiple-family residential areas near the Town Center. In addition, the plan recommends extensive open space in the flood plain areas around Leonardtown and along Breton Bay. In general, therefore, the plan for Leonardtown recognizes the continued importance of that center with respect to government and retail services, and recognizes the potential for continued growth as an important community center for the County, possibly reaching a population level of 8,000 people within the next thirty years. This population projection is based primarily on an approximate doubling of the third election district population with a concentration in Leonardtown. The resulting population reflects the existing subdivisions along the Potomac River Shoreline with no major increase in their potential population levels.

St. Mary's City

Two strong factors related directly to St. Mary's City contribute to the future potential of this area as a special center for the County - the existence of the only college in the County and the concentration of historical and archaeological sites. The presence of these elements is unique to St. Mary's City and their proximity offers an unusual opportunity to the County for creation of a new special center. There is considerable potential for expansion of St. Mary's College into an educational center for the region, specializing in both historical and environmental concerns. The location is physically superb, and access to the College is certainly adequate. Capitalizing on the history of the area and the existing archaeological sites could be an important aspect of the future growth and development of the County as a whole.

As is evident from the March 1970 plan for St. Mary's City prepared by Robert L. Plavnick, A.I.P.; St. Mary's City: A Plan for the Preservation and Development of Maryland's First Capital, any plan for development of the area will require a very strong design statement concerning the plan and its relationship to the surrounding environment. The physical beauty of the area coupled with the historic importance must become the controlling design policy. There is no reason why this concept cannot be compatible with creation of an important education and visitor center for the region; and the first step, as presented in the St. Mary's City Plan, is the determination and delineation of the historic district for preservation and reconstruction of the archaeological sites. The provision of appropriate tourist facilities must be guided by strong design criteria to preserve and enhance the importance of the area. Very strict control must be exerted over design quality to ensure a high level of implementation of a well-delineated and strong comprehensive plan for St. Mary's City. The current preservation plan should serve as the base for a more extensive process. Estimates have been prepared by Hammer, Siler, George Associates showing that 250,000 visitors a year could be expected to come to St. Mary's City if a minimum development program were undertaken for the historical area. The minimum program was defined to include:

1. A visitor center with an orientation program and exhibits, an information service, adequate parking facilities, and visitor conveniences.
2. A firm development program underway and visible.

3. A minimal level of tourist facilities available in the general area.
4. A well-established promotion program.

It is also estimated that an annual growth in attendance of eighth percent could be reached if the project were continually improved.\* The minimall level of visitors could generate more than \$1.0 million as input into the local economy, creating a new permanent employment base. Together with the economic opportunities presented by the continued presence and growth of the College, a strong potential for creation of an important activity center for the County and the region certainly exists. A permanent population on the order of 5,000 could conceivably be reached over the next thirty years. This potential population level reflects the desire for strong control over possible residential growth within the broad historic district, resulting in a limited development pattern designed to provide opportunities for provision of a minimal public and commercial infrastructure. The land use plan proposes that future development related to the potential permanent population be located primarily south of the designated historic area as indicated on the land use plan so as to maintain the separation of Lexington Park and St. Mary's City, allowing St. Mary's City to retain its individual character and allowing an unencumbered visual approach to the City for visitors.

The land use plan for St. Mary's City then consists of four basic sections:

1. The inner historic preservation area with no development.
2. The university campus development according to an approved master plan which must be compatible with the historic area.
3. A surrounding buffer zone with controlled minimal development.
4. Development to the South to house the permanent population and related facilities.

This development to the South should be subject to architectural/design standards to enhance the overall development of St. Mary's City into an historic center.

It is recommended that the necessary control be exerted to help preserve and enhance the character of the City while

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\* St. Mary's City Plan, p. 7.

at the same time providing the population base necessary to support permanent school and retail facilities. Under this general concept, St. Mary's City could become an important and unique center in the County.

The reinforcement and, in a sense, the creation of the County's largest urban center at Lexington Park is the major proposal of the land use plan with respect to future urban development. The rationale behind this effort of concentrating the population growth into one center is based on a desire to improve the potential for new economic or development opportunities and to provide a serviceable population distribution for the County. Such a distribution pattern implies a concerted effort to curtail growth in the northern sector at the head of Route 5/235, since potential population growth in that area, beyond that already committed, would be predominantly commuter oriented.

The area around Charlotte Hall, Newmarket, and Mechanicsville is at the gateway to the County - at the head of the major transportation artery. As such this area is the first to experience pressures for residential growth spilling over from the decade of the sixties, the fifth election district (in which Mechanicsville is located) averaged just over 34 building permits per year. But the experience of the next six years indicates the possibility of a major alteration in the development pattern as shown in Table 31.

TABLE 30: BUILDING PERMITS ISSUED FOR DWELLING UNITS FOR YEARS 1970-1975\*

Election District	1970	1971	1972	1973	1974	1975 (Oct.)	Total
1	43	36	36	29	47	40	231
2	30	27	45	37	24	22	185
3	56	53	72	64	71	58	374
4	28	32	44	37	59	84	284
5	55	76	162	175	153	143	764
6	83	102	115	103	135	88	626
7	41	45	33	50	40	23	232
8	90	86	113	251	170	56	766
9	0	3	3	2	1	3	12
TOTAL	426	460	623	748	700	517	3,474

\* Source - Office of Land Use and Development, St. Mary's County, Maryland

Under present conditions the existing and immediately proposed public infrastructure cannot support the potential development.

Specifically, the sewer network necessary for any large-scale development does not exist nor is it programmed for the next ten years except in the Lexington Park area.

Another factor influencing the future of the Mechanicsville area is the impact that St. Charles Communities will have. Two possibilities exist. Either St. Charles Communities will absorb a high percentage of growth for the area thereby decreasing the pressure for development in St. Mary's County, or spin-off development from the new community will increase development pressures. The most probable course of events will include a staged combination of both alternatives. As St. Charles Communities grow, it will most probably absorb a significant percentage of the potential development for the Tri-County Region. Following this initial period of approximately five to seven years, it is conceivable that pressures for growth in areas around St. Charles Communities will increase. This additional spin-off will be added to the spillover from the Washington area as counties close in become more and more saturated. As a result, any new population growth in the Mechanicsville area, which is within the fifteen mile radius of Waldorf, would primarily work and shop outside St. Mary's County, and under the present economic and fiscal structure the County cannot afford to provide adequate public services for this type of population. For this reason the land use plan proposes:

1. That a concerted effort be made to retard growth outside the economically viable centers - Lexington Park, Leonardtown and St. Mary's City; since these centers contain the major portion of existing economic activities and will present the best opportunities for capturing new economic development as well as providing the best opportunities for enhancing the fiscal balance of the County.
2. That a continuous evaluation program be set up at the County level to test the effectiveness of this growth strategy over the initial five-year period, during the first stage of development of the St. Charles Communities.
3. That at the end of the five-year period the County must draw conclusions about the effectiveness of the limitation of growth in the northern sector and plan accordingly. At that time the County may wish to alter its strategy to deal with the situation once it has manifested itself.

The intensification of development in Lexington Park, Leonardtown, and St. Mary's City, with the creation of the major urban center at Lexington Park, leads to the population distribution summarized in Table 32.

TABLE 31 ; MAJOR URBAN CENTERS  
PROJECTED POPULATION LEVELS FOR THE YEAR 2003

Lexington Park .....	40,000
Leonardtwn .....	8,000
St. Mary's City .....	<u>5,000</u>
TOTAL	53,000

This population distribution for urban centers indicates that slightly more than 50% of the County population would be located in these three concentrated growth areas. Conceptually, this would imply that the major growth of the County over the next thirty-year period could be absorbed in these three growth centers. Under present conditions, approximately 20% of the County population is concentrated in the two existing centers - Lexington Park and Leonardtown. Development of this element of the Land Use Plan is the first step in transferring the strategy of concentrated development into a plan for future County growth.

The Community Service Centers

Each group of sectors within the County should be serviced by a center that relates primarily to the local service and facility needs for the particular area. These services in general range from community or village shopping facilities to agricultural service and marketing facilities. Public facilities that can be concentrated in the village centers are primarily related to schools, religious institutions, police and fire departments, libraries, etc. A minimal support population for an elementary school or a neighborhood shopping center is on the order of 3,500 to 4,000 people, based on pupil yield ratios for the assumed housing mix and based on a wide range of experience from nationwide surveys of service characteristics of existing neighborhood shopping centers (see section on norms and standards and application methodology in section on projecting future needs for public facilities). As such, the land use plan calls for a system of village or service centers to be established throughout the more rural areas of the County, designed to provide the necessary infrastructure elements to a concentrated village population group on the order to 4,000 people to serve those areas in the most efficient and economical manner. These centers will be built around the elementary school and a neighborhood community and shopping center so that these facilities will not

have to be dispersed throughout the County in a haphazard and inefficient manner. They should generally be located in the vicinity of, but not straddling, important crossroad points in the existing and proposed highway networks in a system that services the entire County population to be located out of the proposed major centers of Lexington Park, Leonardtown, and St. Mary's City.

Examining the service sectors delineated under Stage One of Building the Comprehensive Plan, combined with the designated major centers, indicates a need for establishing centers at the following locations. In all cases, the initial vestiges and as such the plan is designed to intensify these conditions, supplementing the facilities and concentrating residential populations for efficient use of the infrastructure resources. The designated service centers are listed below:

1. Hollywood (intersection of Routes 235 and 245).
2. Ridge (intersection of Routes 235 and 5).
3. Valley Lee (intersection of Routes 244 and 249).
4. Clements (intersection of Routes 234 and 242).
5. Chaptico (intersection of Routes 234 and 238).
6. North of Avenue (intersection of Routes 242 and 470).
7. Mechanicsville (intersection of Route 5/235 and Mechanicsville Road).
8. Charlotte Hall-New Market (intersection of Routes 5 and 6).

A new Commercial-Limited (CL) category may be allowed for areas of the County outside of the general proximity of any of the designated service centers or urban centers so long as such proposed CL developments shall be:

- (a) Compatible with the nature of the existing adjacent neighborhood:
- (b) Can be so situated so as to have no adverse effect on the existing and future vehicular traffic in the area.

Assuming that the center located at Hollywood will be slightly larger than the remaining centers because of the already existing population in that area, the total population allocated to the service centers is as follows:

<u>Center</u>	<u>Projected Population (2003)</u>
1. Hollywood area.....	5,000
2. Ridge area.....	4,000
3. Valley Lee area.....	4,000
4. Chaptico area.....	4,000
5. Clements area.....	4,000
6. Area of Avenue.....	4,000
7. Mechanicsville area.....	4,000
	TOTAL 29,000



Adding to this the population projections for the major centers yields a total of 82,000 or almost 80% of the entire population of the County. The remaining 23,000 or approximately 20% of the population must be distributed in terms of existing subdivisions and in terms of assumptions about future locations of the dispersed element of the population.

Several major assumptions and policy decisions are being made in the designation of these village centers and in the distribution of the remaining 23,000 people projected for the year 2003. The best way to describe these questions is in relation to the existing election districts and their present population, since data is available only for these geographic areas. Specifically, three of the affected election districts, election districts five, six, and seven, show major changes from existing patterns of growth. In election districts five and six, considerable pressures must be exerted to control and limit future residential growth to an overall rate of approximately one percent. Under present conditions the major growth experienced in these areas contributes markedly to the residential sprawl pattern that will eventually choke off the efficient operation of the Route 235 corridor if allowed to continue, as well as exhaust the County's fiscal capacity. Recognition of the importance of this corridor to the growth and vitality of the County has led to the formation of the growth center at Lexington Park, aimed at concentrating future growth in an efficient land use and economic pattern. This concentrated approach must be reinforced to assure its realization. Continued sprawl development along the major transportation corridor would be contrary to this goal. Besides spreading the development pressures beyond the proposed center, continued sprawl in the Hollywood area would serve to restrict the free flow of traffic and goods from the entrance to the County to the major employment and economic center at Lexington Park. Decreasing the efficiency of this arterial flow would slow down the rate of growth of Lexington Park. For these reasons, the proposal is to limit growth in the sixth election district to approximately 0.8% through the next thirty years so that the present population of approximately 6,100 would grow to about 7,500 by the year 2003. In election district five, because of the undesirable potential for a commuter population, the proposal is to limit growth to a rate only slightly greater than 1.0% (accommodating existing commitments) through the next thirty years so that the present population of approximately 4,100 would grow to 6,000 by the year 2003. This restricted growth potential for the Hollywood and Mechanicsville areas is a major change from existing patterns, but it is essential to the viability of the growth center proposed for Lexington Park and to the continued efficiency of the Route 235 highway artery.

The second major proposal for changing existing growth patterns involves the Colton Peninsula area of election district seven. In this area it is proposed that the rate of growth be stimulated in a staged process such that the population levels grow from the almost 3,300 existing now to approximately 11,000 over the next thirty years. A major subdivision already exists at Longview Beach and concentrations of existing residential land use are scattered throughout the Colton area. This proposal would allow an intensification of residential land use in an area that already is becoming primarily residential, capturing the potential for new waterfront development. Two service centers are proposed for the area - one at Clements and one at the intersection of Routes 242 and 470, just north of Avenue. These two centers would be designed to accommodate population levels of approximately 4,000 each, leaving approximately 3,000 people in less densely populated, more rural areas along the peninsula and in existing or proposed subdivisions. The resulting concentration of residential land use in this area would make provision of public sewer and water more economically feasible and would serve to concentrate future waterfront development in one area rather than scattered along the entire waterfront of the County. Staging and implementation can generally be accomplished through provision of sewer and water along with other elements of the public infrastructure as well as zoning and development district guidelines. Any waterfront development must be subjected to a high level of design standards and environmental controls as outlined in the implementation strategy.

A similar process, but to a much lesser extent, is proposed for the Chaptico area in election district four where a major subdivision is partially built at Mill Point Shores and another is proposed at Wicomico Shores. The population of election district four is nearly 2,500. One service center for a concentrated population group of approximately 4,000 is at Chaptico. Including the potential population levels for the existing and proposed subdivisions yields a potential total population for the election district of approximately 6,000 by the year 2003. This growth represents a staged process beginning with an annual growth rate of 2.5% to 1980, increasing to 3.0% from 1980-1990 and increasing again to 4.0% after 1990. As such, this area is projected as one of the fastest growing areas of the County over the next thirty years, and this projection is primarily based on the potential for waterfront development.

Recognizing that the waterfront areas will be subjected to the most intense pressures for future development has led to the formation of a waterfront protection zone growing out of the waterfront sectors delineated in Stage One. This zone is designed to accommodate future residential development in a manner compatible with existing uses, both residential and

agricultural, and compatible with the desire for preservation of important environmental areas. This zone will designate prime areas for preservation and recreation and will encourage agricultural use. In addition, special areas designated for waterfront communities have been indicated on the Comprehensive Plan as extensions of existing subdivision areas to allow for more economic provision of required public services. Future residential development within the waterfront protection zone must be subjected to the most stringent development standards based on criteria involving the following issues:

1. Erosion.
2. Water quality.
3. Protection of wetlands.
4. Protection of wildlife habitats.
5. Protection of stream beds/major tributaries.

The issues relating to the Waterfront Protection Zone are discussed in the special section on Environmental - Natural Resource Issues along with a discussion of the proposed development policies.

The two remaining service centers are proposed to service existing populations in election districts 1 and 2 along with the estimated natural growth of the surrounding areas. Ridge, located in the southern end of the County is proposed to serve primarily the existing population as well as any increase resulting from the growth of St. Mary's City. Total population for the first election district, including 5,000 at St. Mary's, 4,000 at Ridge, and 2,000 in more sparsely populated areas would reach 11,000 shortly after the year 2000. Valley Lee, located on the Piney Point Peninsula is proposed as a service center for the existing population of that area, approximately 3,750, as well as a small amount of future growth. Even if the employment potential of the Steuart Petroleum complex on Piney Point increases as a result of possible expansion of the facilities, it is not projected that the population of the election district as a whole would exceed 7,000 by the year 2003. Of these 7,000, it is projected that approximately 4,000 should be concentrated around Valley Lee, leaving approximately 3,000 people located in more dispersed areas. Population projections for all election districts for the year 2003 are summarized in Table 33. For those districts in which the major centers are located, estimates for the more dispersed population located outside the centers are based on existing and proposed subdivisions and estimated "pulling power" of the proposed centers.

TABLE 32 : POPULATION PROJECTIONS FOR THE YEAR 2003

<u>E.D.</u>	<u>Location</u>	<u>2003 Pop. Estimates</u>	<u>Total</u>
1.	St. Mary's City Area Ridge Area Dispersed (Rural)	5,000 4,000 2,000	11,000
2.	Valley Lee Area Dispersed (Rural)	4,000 3,000	7,000
3.	Leonardtwn Dispersed (Rural)	8,000 5,000	13,000
4.	Chaptico Area Dispersed (Rural)	4,000 2,000	6,000
5.	Mechanicsville Area Dispersed (Rural)	4,000 2,000	6,000
6.	Hollywood Area Dispersed (Rural)	5,000 2,500	7,500
7.	Clements Area "Avenue" North Dispersed (Rural)	4,000 4,000 3,000	11,000
8.	Lexington Park Dispersed (Rural)	40,000 3,000	43,000
9.	Dispersed (Rural)	500	500
<hr/>			
	Total Projected County Population		105,000

St. Mary's County  
POPULATION PROJECTIONS

	Total <sup>1</sup> Population	Military <sup>2</sup> Constant	Total Civilian	Natural <sup>3</sup> Growth	Net Migration
1970	47,388	24,392	22,996	923	(438)
1971	47,873	24,392	23,481	883	(356)
1972	48,400	24,392	24,008	728	628
1973	48,756	24,392	25,364	746	1,237
1974	51,739	24,392	27,347	776	1,052
1975	53,567	24,392	29,175	804	1,000
1976	55,371	24,392	30,979	831	1,000
1977	57,202	24,392	32,810	858	1,000
1978	59,060	24,392	34,668	886	1,000
1979	60,946	24,392	36,554	914	1,000
1980	62,860	24,392	38,468	943	1,500
1981	65,303	24,392	40,911	980	1,500
1982	67,783	24,392	43,391	1,017	1,500
1983	70,300	24,392	45,908	1,054	1,500
1984	72,854	24,392	48,462	1,093	1,500
1985	75,447	24,392	51,055	1,132	1,500
1986	78,079	24,392	53,687	1,171	1,500
1987	80,750	24,392	56,358	1,211	1,500
1988	83,461	24,392	59,069	1,252	1,500
1989	86,213	24,392	61,821	1,293	1,500
1990	89,006	24,392	64,614	1,335	2,000
1991	92,341	24,392	67,949	1,385	2,000
1992	95,726	24,392	71,334	1,436	2,000
1993	99,162	24,392	74,770	1,487	2,000
1994	102,649	24,392	78,257	1,540	2,000
1995	106,199	24,392	81,797	1,593	2,000
1996	109,792	24,392	85,406	1,647	2,000
1997	113,439	24,392	89,047	1,702	2,000
1998	117,141	24,392	92,749	1,757	2,000
1999	120,898	24,392	96,506	1,813	2,000
2000	124,711	24,392	100,319	-	-

<sup>1</sup>1970 is the total from the 1970 Census; 1971-1975 are estimates based upon building permits issued, 1976-2000 are based upon natural growth and net migration estimates occurring during the previous year. (i.e., in 1975 the total population of 53,567 would generate a natural growth of 804, with migration of 1,000 estimated. The 1976 total population would then equal  $53,567 + 804 + 1,000 = 55,371$ .)

<sup>2</sup>Military population held constant for purposes of projection.

<sup>3</sup>1970-1972 data are actual births minus deaths as reported by the Maryland Department of Health and Mental Hygiene. The rate was assumed to stabilize at 1.50% of the total population which is roughly the actual rate for 1972.

Estimates for the pacing by which these levels are reached are based on policy decisions described previously on the rate at which certain areas should develop as well as on projections based on existing experience. Information developed from the economic model for projections of potential areas for economic growth has been used to identify where control policies would have to be exerted and where incentives would have to be applied to help guide the population growth into an efficient land use system. The staging of population growth is an essential element in the preparation of the capital improvements program and vice versa. The staging of the provision of the public infrastructure is a strong control that can be exerted to control the rate of growth into a manageable pattern. Projected population staging by election district is shown in Table 33, and population growth from 1970 - 2003 is shown in Figure 23.

TABLE 33: Population Staging -- 1973-2003 (Projected)

<u>E.D.</u>	<u>1973*</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2003</u>
1.	4,492	5,400	7,300	10,000	11,000
2.	3,754	4,300	5,500	6,700	7,000
3.	6,264	7,500	9,400	11,900	13,000
4.	2,464	3,000	4,000	5,400	6,000
5.	4,094	4,750	5,400	5,800	6,000
6.	6,106	6,500	7,000	7,400	7,500
7.	3,263	4,000	6,400	9,800	11,000
8.	20,676	24,000	30,000	39,700	43,000
9.	332	350	400	475	500
	51,455*	59,800	75,400	97,175	105,000

These totals correspond to the projected growth for the County as a whole as summarized in Table 29. It must again be emphasized that these population projections are not hardline, but, rather, order of magnitude estimates of future population growth. The future planning process will have major impact on the final phasing of population growth -- but the process of planning to accommodate new growth is the same.

\* Based on Census 1970 + 1970 through 1972 building permit data.

TABLE 33a

## St. Mary's County

1960	Total			White			Non-White		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	5,938	2,988	2,950	4,723	2,391	2,332	1,215	597	618
% of Total	15.3	7.7	7.6	12.1	6.1	6.0	3.2	1.6	1.6
5-19	12,574	6,670	5,904	9,933	5,326	4,607	2,641	1,344	1,297
% of Total	32.3	17.1	15.2	25.5	13.7	11.8	6.8	3.4	3.4
20-64	18,675	10,342	8,333	15,655	8,767	6,888	3,020	1,575	1,445
% of Total	48.0	26.6	21.4	40.2	22.5	17.7	7.8	4.1	3.7
65 and Over	1,728	849	879	1,361	671	690	367	178	189
% of Total	4.4	2.2	2.2	3.5	1.7	1.8	.9	.5	.4
Totals	38,915	20,849	18,066	31,672	17,155	14,517	7,243	3,694	3,549
% of Total	100.0	53.6	46.4	81.3	44.0	37.3	18.7	9.5	9.1
1970									
0-4	5,469	2,790	2,679	4,373	2,255	2,118	1,096	535	561
% of Total	11.5	5.9	5.6	9.2	4.8	4.4	2.3	1.1	1.2
5-19	15,645	8,026	7,619	12,129	6,288	5,841	3,516	1,738	1,778
% of Total	33.0	16.9	16.1	25.6	13.3	12.3	7.4	3.6	3.8
20-64	23,934	13,186	10,748	20,355	11,371	8,984	3,579	1,815	1,764
% of Total	50.5	27.8	22.7	43.0	24.0	19.0	7.5	3.8	3.7
65 and Over	2,340	1,902	1,248	1,901	864	1,037	439	228	211
% of Total	5.0	2.3	2.7	4.0	1.8	2.2	1.0	.5	.5
Totals	47,388	25,094	22,294	38,758	20,778	17,980	8,630	4,316	4,314
% of Total	100.0	52.9	47.1	81.8	43.9	37.9	18.2	9.0	9.2
% Change Total	21.8	20.4	23.4	22.4	21.1	23.8	19.2	16.8	21.6

MARYLAND DEPARTMENT OF STATE PLANNING

Population Forecasts

TABLE 33b

	CALVERT		CHARLES		ST. MARY'S		TRI-COUNTY	
1970	20,682	%Δ 14.7	47,678	%Δ 26.4	47,388	%Δ 11.9	115,748	%Δ 18.6
1975	23,720	12.2	60,260	8.0	53,350	7.3	137,330	8.5
1980	26,620	9.4	65,100	19.6	57,250	13.3	148,970	15.4
1985	29,120	13.4	77,880	15.3	64,840	12.6	171,840	14.0
1990	33,030		89,790		73,020		195,840	

Source: Maryland Department of State Planning  
 Division of Research Programs  
 MEC, RFD, September, 1975



MARYLAND DEPARTMENT OF HEALTH & MENTAL HYGIENE

Population

TABLE 33c

	CALVERT	CHARLES	ST. MARY'S	TRI-COUNTY
July 1, 1973	23,840	55,740	50,620	130,200
July 1, 1974	24,800	58,000	51,400	134,200
July 1, 1975	25,700	60,400	52,100	138,200
July 1, 1976	26,600	62,700	52,800	142,100
July 1, 1977	27,500	65,100	53,600	146,200
July 1, 1978	28,500	67,400	54,400	150,300
July 1, 1979	29,400	69,800	55,100	154,300
July 1, 1980	30,400	72,300	55,900	158,600

Source: Maryland Department of Health & Mental Hygiene,  
November, 1974  
MEC., RFD, August, 1975

The calculation of the future housing stock is based on several factors:

1. The planned population and time period (see table 33),
2. The geographical distribution and time phasing of the three major centers and the related distribution of the projected population (see table 32) ,
3. The assumed continuation of the existing (1973) housing stock along with the current base population including those residing in group quarters,
4. An assumed mix of housing types in the proposed major centers and in the remainder of the County:

Major Centers

- 70% of population in single family detached (includes mobile homes)
- 15% of population in single family attached
- 10% of population in garden apartments (assumed for school enrollment purposes to include 5% of total urban center population as low-income families)
- 5% of population in mid-rise apartments (assumed for school enrollment purposes to include 2% of the total urban center population as low income families)

Remainder of County

- 90% of population in single family detached (includes mobile homes)
- 10% of population in single family attached,

5. An assumed average household size in new construction, by housing type as follows:

- 3.3 persons in single family detached  
single family attached  
and mobile homes
- 2.8 persons in garden apartments  
mid-rise apartments.

The two major steps in projecting future housing stock involved deriving the housing characteristics of the proposed major centers and the remaining areas of the County separately. The housing stock for the three major centers Lexington Park, Leonardtown, and St. Mary's City was assigned to election districts 8, 3, and 1



respectively. Based on the factors 1 through 5 discussed above, housing stock was calculated for the planned growth period assuming a consistent rate of growth within the total allocated population increments for the three election districts. Portions of the existing housing stock were included in the major centers, depending on their location and structural type. For the remaining six election districts, and for the areas within election districts 8, 3, and 1 not included in the major center areas, the potential housing stock was determined in the same way but using the assumed housing mix for areas outside of the major centers.

The incremental housing stock, by individual time period and election district is included in the table entitled "Additional Public/Private School Students generated in Proposed Incremental Growth, by Election District, 1973-2003," included in the Schools section of the Community Facilities Plan. The total projected housing stock is shown in table 35, along with the current characteristics. An assumed vacancy rate of 4% has been incorporated into the projections to estimate total housing stock.

TABLE 34: PROJECTED HOUSING CHARACTERISTICS

<u>Housing Type</u>	<u>1960*</u>	<u>(%)</u>	<u>1970*</u>	<u>(%)</u>	<u>2003**</u>	<u>(%)</u>
Single Family (including two- family or more attached)	9,331	(83%)	11,321	(80%)	28,240	(88%)
					Detached- (24,400)	(76%)
					Attached- ( 3,840)	(12%)
Garden Apt. (including five & family)	1,253	(11%)	827	( 6%)	1,800	( 6%)
Mid-Rise/High- Rise	--	--	--	--	600	( 2%)
Mobile Home	634	( 6%)	1,578	(11%)	(included in single family)	
Seasonal/Vacant	NA		488	( 3%)	1,226	( 4%)
<u>TOTAL D.U.</u>	11,218		14,214		31,866	
Pop.	39,915		47,388		105,000	
Pop/d.u.	3.47		3.33		3.3	
No. of HH	8,915		12,100		30,640	
Pop./HH	4.37		3.92		3.43	
HH/d.u.	0.79		0.85		0.96	

\* Existing

\*\* Projected

### Commercial Land Use

The designation of areas for specialized industrial and retail facilities grows out of a combination of the growth center concept, the potential for economic development as measured by the economic model, the areas presently in commercial use, plus those areas already identified for future industrial expansion. The one major private industrial area is the Steuart Petroleum complex at Piney Point which now encompasses over 1,000 acres, showing potential pressure for expansion. In addition to Piney Point, over 1,000 acres have been zoned for industrial use around the St. Mary's County airport located along Route 235 just north of California, and are presently included in the sewer and water plan for provision of public services within ten years according to market requirements.

The potential for new industrial development is limited. The strongest private industrial sector is the construction industry reflecting the increasing pressures for new residential development. The manufacturing sector is minimal, employing approximately 5% of the employed labor force with over 35% of the manufacturing sector employed in lumber products and transportation equipment. No prediction can be made for a major change in the existing employment pattern since there is no basis on which to make any such prediction. However, policies can be developed which are designed to maximize the potential for new industry to locate in St. Mary's County, and such policies must be developed to help diversify what is in fact becoming a stagnant economy.

Several potential areas for future industrial development exist that must be examined.\* The first is the area around the St. Mary's County Airport. Over 1,000 acres of land around the airport are presently zoned industrial and are scheduled for public sewer and water systems within the next ten years. This location as a possible future industrial employment center maximizes transportation access not only along Route 235 to Washington but also along the new Patuxent River Crossing connecting to the Baltimore access corridor. Industrial development in this area would reinforce the strength of Lexington Park as a major regional center and would also serve to push the Lexington Park development pressures northward along Route 235 away from the noise impact zone of the airport. This concept of shifting the center of activity away from the airport impact zone is the basis for the Lexington Park Area Master Plan, and industrial development in the area around the County Airport coupled with the new bridge crossing would help to achieve this pattern of land development.

\*

These are shown in Figure 24.

The present County airport runway is 3250 feet long and is both paved and lighted. Preliminary planning was begun in July 1975 to extend the runway to 5,000 feet and install instrument approach capabilities. This will enable the airport to accommodate business jets and shuttle aircraft from the Washington/Baltimore area. With overall air traffic control for both military and civil airports delegated to the Naval Air Station, there would be no operational conflict. Given these conditions plus the proposed improvements, the County Airport area offers strong potential for a future industrial area that would be compatible with and complimentary to the overall land use plan.

A second potential industrial development area exists within the undeveloped portions lying inside the airport impact zone around the NATC. Industrial use is one of the few compatible land uses for this area, but certain problems must be addressed to allow this use to be compatible with the overall master plan for the Lexington Park area. Specifically, all access to this area would have to pass through the developed portions of Lexington Park. This access would have to be examined and improved to avoid major traffic congestion. Utilization of this land as an industrial park would compete directly with the potential for similar development around the County Airport. Thus, this area is designated as a secondary industrial park site to be utilized after complete development of the primary site at the County Airport.

The third potential industrial development area involves a possible extension and intensification of the current operations of Steuart Petroleum at Piney Point. This alternative demands very careful evaluations on the part of the County, since Steuart Petroleum has recently acquired additional land around St. George Creek. The potential for expansion of their oil storage facilities into an oil refinery could involve a major conflict with the environment and with the present residential community on Piney Point. The problems with such an expansion are not so much with the possibility of intensifying the employment in the area since the area is presently an employment center with Steuart Petroleum and the Harry Lundeberg School of Seamanship. The major difficulty is the large-scale environmental dangers presented by an active oil refinery coupled with the existing deepwater port which would

require increased capacity for loading and unloading crude and refined oil. In addition, the potential for attracting related Petro- Chemical Industries to the area is both a plus and a minus. Increasing the employment base in the County is certainly desirable but doing so at the expense of the environmental concerns of the area is not desirable. St. George Creek is an important natural oyster bed area and must be protected. And further pollution of the Potomac River must be prevented. If it is technically feasible to assure compatibility of the industrial development with the environment, it is not reasonable to consider potential industrial expansion in the area. But extensive environmental controls must be imposed to ensure that the possible expansion does not adversely affect either the air and water quality or the ecology of the surrounding area. This is a prerequisite for more active industrial area as a result of the positive solution to the environmental conflicts, then access to the area must be improved from both Washington, D.C., and Baltimore. This could be accomplished by an eventual upgrading of Route 249 and connecting it directly to Route 471 to connect through the improved St. Andrews Church Road directly into the Route 235/ Patuxent River Crossing interchange.

The three areas discussed are the major sites for potential industrial land use. In the case of the first two possible sites, the land area can be allocated but the users must be found. To accomplish this will require an extensive marketing process designed to attract new industry to the County. The third alternative site already has a potential user but presents major environmental issues which must be resolved before any expansion should occur. The potential for development in the County does exist, but resolution of the issues that have been identified is essential for that potential to be realized.

#### Retail

An important conclusion of the earlier section evaluating the economic base of the County was that considerable retail activity is lost to areas outside of the County as a result of a lack of effective commercial retail facilities within the County. The first major community shopping facility is presently completed and open in Lexington Park and it contains approximately 180,000 square feet of retail space. This development could capture a considerable amount of retail expenditure presently lost to facilities outside of the County and would help to serve the County's present requirements. However, future retail developments will be marketable as the population of the County doubles over the next thirty years, including all levels from neighborhood to regional.



Neighborhood shopping facilities have been incorporated into the land use plan as part of the Village Center concept, designed to serve a population group of four to five thousand. The major centers are designed in modules of four to five thousand people, each with its own neighborhood shopping facilities as exemplified by the Lexington Park Area Master Plan. The smaller community service centers are also built around the village center, containing the neighborhood shopping facilities. Only the Lexington Park area, with a population level of 40,000 projected for the year 2003 is of sufficient size to support a community shopping center as defined in the section on norms and standards. The center presently is available in Lexington Park can serve as the nucleus for the community shopping facilities. Even though its market area may be more extensive now, the projected population to be served within the next thirty year period will remain virtually constant with an ever-decreasing service radius.

As the population level approaches 100,000, the County will be able to support a new regional shopping facility which should be located somewhere along the major transportation corridor -- Route 235. Several potential locations exist (see Figure 25):

1. Mechanicsville/Charlotte Hall
2. Hollywood
3. California/Lexington Park.

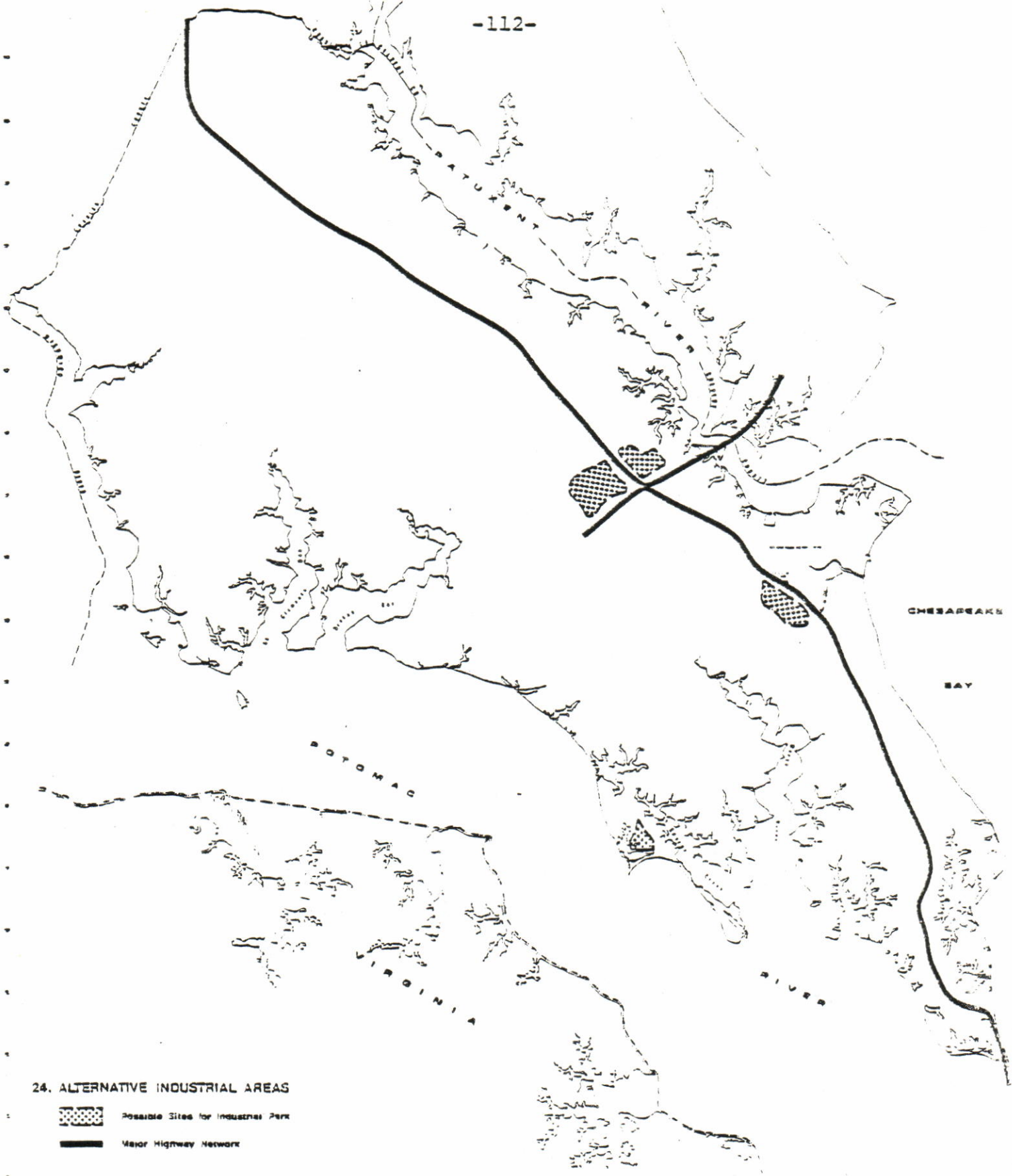
Mechanicsville/Charlotte Hall is located at the head of the main transportation artery. Location of a regional shopping facility in this area would intercept all retail cash flow presently leaving the County through the Route 235 corridor. Location of such a center at this point would maximize the interception role and maximize access to the regional market, but would not be ideally placed to serve the County since it would not be centrally located. Also, a major inhibiting factor to this location is the growth of the St. Charles Communities -- the new city near Waldorf. This new community which will be within fifteen miles of Mechanicsville/Charlotte Hall will compete for regional shopping facilities. The sheer size of St. Charles will place Mechanicsville/Charlotte Hall at a major competitive disadvantage.

Hollywood is a second possibility for a large-scale regional shopping center. Location at this point would provide direct access to both Lexington Park and Leonardtown and is approximately in the center of the Route 235 corridor. Access for the County would be better for this location than for a location at Mechanicsville/Charlotte Hall. The major difficulty with a location at this point is a basic incompatibility with the land use plan. A major consideration of the land use plan is the

limitation of growth along the Route 235 corridor up to Lexington Park to curtail the sprawl development pattern and emphasize a concentrated growth strategy. Location of a major retail center at Hollywood would be incompatible with this growth strategy.

California, in close proximity to the Patuxent River Crossing intersection with Route 235, is a third possible location. The proximity to Lexington Park would reinforce the development of that center as the major urban complex in the County and would also tend to shift the major development pressures away from the airport impact zone. In addition, location at the Patuxent River Crossing would serve to open a potential market within Calvert County. California is located in the eighth election district with the strongest potential for urban growth. The combination of accessibility and growth potential would indicate this location as the most desirable. The impact of a new major highway interchange combined with the proposed industrial park at the St. Mary's County Airport and the new state park presently being acquired southeast of California coupled with a proposed regional shopping facility offers considerable opportunity for creation of the basis for growth of the Lexington Park area. Location at this point would also capitalize on the potential for use of the new interceptor sewer line which is under construction from Lexington Park to the St. Mary's County Airport Industrial Park. Such new development would shift the emphasis from the area immediately around the PNATC and help to relieve the pressures for incompatible land use within the noise impact zone. This concept calling for a new regional center at this major cross-roads is an important element of the Master Plan for the Lexington Park area.

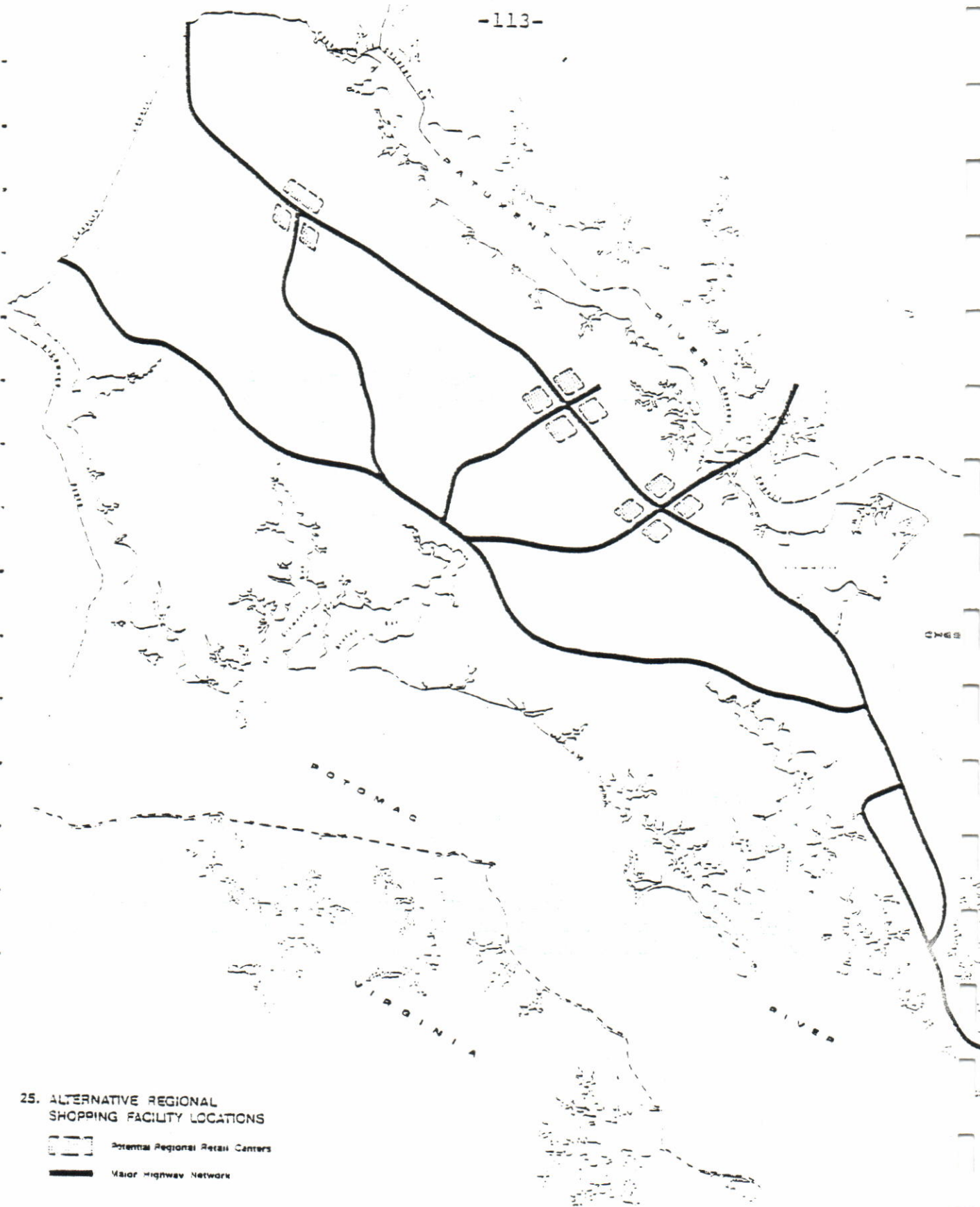
The selection of potential sites for commercial development is closely tied to the growth center concept, reinforcing the creation of the proposed centers. This completes the major elements of the land use plan. The next stage involves the analysis of the Environmental/Natural Resource Issues which are of primary importance to the creation of an effective Comprehensive Plan for St. Mary's County.





24. ALTERNATIVE INDUSTRIAL AREAS

-  Possible Sites for Industrial Park
-  Major Highway Network

ST. MARY'S COUNTY - MARYLAND

25. ALTERNATIVE REGIONAL SHOPPING FACILITY LOCATIONS

-  Potential Regional Retail Centers
-  Major Highway Network

ST. MARY'S COUNTY - MARYLAND

The Sixth Stage - Identifying  
Environmental - Natural Resource  
Issues

Introduction

The people of St. Mary's County have a long tradition of living in harmony with their natural environmental habitat. This compatibility with the environment is strongly evidenced by existing conditions -- large areas of the County remain primarily pristine and undisturbed by many of the contemporary environmental problems that threaten many other parts of the state and the country. This is a heritage and an asset that must be treasured, preserved, and even improved. The citizens of the County are in an unique and enviable position. In many areas of the country, either through ignorance, misinformation, lack of technology, or failure to apply existing technology, the accommodation of the increasing needs and desires of one's children and children's children has spelled environmental degradation and even irreversible disasters. St. Mary's County has other options still open. Her citizens need only look to the experience of others and draw from them, utilizing and implementing existing legal tools and improved scientific technology to preserve the environmental and natural resource assets of the area while assimilating existing and future population.

Development and adoption of a comprehensive land use plan and the accompanying implementation tools and strategies offers the opportunity for creating the mechanisms necessary to both preserve and enhance the environmental heritage of the County. Land use planning has increasingly been proposed and used as a method of environmental control. Although land use planning cannot abate and control a pollution source once it is located and once it is adversely affecting the surrounding natural areas -- land, air, and water -- proper planning can promote environmental quality by placing the many and necessary land uses in their most appropriate and least environmentally destructive location. The traditional comprehensive planning approaches which have historically been based primarily on economic growth and its requirements have been redefined to include and reflect natural environmental values and limitations.

Concerned citizens of St. Mary's County have expressed specific and vital concerns about the environmental issues facing the County. These needs have been listened to and research has been extended to include them:

1. Development pressures on the waterfront - industrial, residential, and recreational.

2. Development pressures on prime agricultural lands.
3. Preservation of areas of special fish, wildlife, and biological habitats.
4. Accommodation of future energy requirements.

The subsequent discussion will briefly outline each problem and issue while the major thoughts and efforts will be devoted to proposed solutions.

## Development Pressures on the Waterfront

### Industrial

Water has always attracted industry, providing it with a ready garbage disposal system. Areas of tidal action are particularly alluring because of the cleansings of the affected basins. The existence of several potential natural deep water harbors, the national "energy crisis", and some current shoreline uses have created real and imagined pressures for potential industrial uses, including a petroleum refinery, petro-chemical industries, and other heavy industrial commerce. Such industry types conjure images of foul smells, stagnant polluted waters, and major noise impacts on neighboring areas. Fear of such proposals for County shoreline uses, as based on past experiences, is well-founded. No one wants to live beside an obnoxious commercial or industrial use.

On the other hand, from our past experience we have been conditioned to enjoy and benefit from the products of these same industries. Whether we enjoy the admission, industry is the source of jobs, and, therefore, indirectly the source of our food and houses plus the many products that make today's life more pleasant. In that sense, industry is both our enemy and friend. To maximize potential benefits - both economically and personally - and to minimize negative environmental effects from any future industrial locations the following steps are proposed for the determination of future industrial operations:

1. Survey and delineate the most desirable industrial sites based on transportation access - existing and potential, ecological factors, and availability of water and sewer. The County can thus guide industrial development to the most appropriate sites by provision of needed public facilities.

2. Adopt a site selection law such as the State of Maine which allows an Environmental Improvement Commission to deny an industrial location proposal based on potential environmental dangers. Such an evaluation capacity necessitates a well-documented and objective environmental study along with reasonable and specific criteria by which to judge any proposal.
  
3. Adoption by the County of stringent air and water effluent standards. Recent regulations ("Prevention of Significant Air Quality Deterioration," Federal Register, Vol. 38, No. 135, July 16, 1973) proposed by the U.S. Environmental Protection Agency under the 1970 Clean Air Act Amendments will establish a mechanism for preventing significant deterioration of air quality in areas where air pollution levels were below national ambient air quality standards in 1972. These will most definitely apply to St. Mary's County given its current clean air quality. Final regulations, when adopted this coming October or November, should provide states and localities guidelines with which to judge the air quality impact of future developments. It will be incumbent on the state of Maryland to adopt and include these regulations in their existing air quality implementation plan. (The 1970 Clean Air Act Amendments required the states to develop and adopt implementation plans for achieving national ambient air quality standards for particulate matter, sulfur oxides, oxides of nitrogen, photochemical oxidants, hydrocarbons, and carbon monoxide). As for water quality, the U.S. Environmental Protection Agency, under the authority of the Federal Water Pollution Control Act Amendments of 1972, will also propose effluent limitations and performance standards for new sources not yet under construction in October. These standards will include such pollution sources as pulp and paper mills, feedlots, petroleum refining, steam electric power plants, and others. If the standards are not sufficient to meet state water quality standards, the states can adjust the federal proposals to meet their needs.
  
4. The County should require buffer zones of trees and/or open space areas to reduce the aesthetic and noise impacts on surrounding land uses. For example, a 75-100' belt of trees at least 45' tall and shrubs placed close to the generating source can reduce noise impacts at least five to eight decibels with a reduction of ten decibels not uncommon. The old adage of "out-of-sight out-of-mind" has proven to have a psychological meaning when applied to industrial locations.

With respect to the existing and potential pressures for future industrial development, including a petroleum refinery and related petrochemical industries, the U.S. Environmental Protection Agency has recently announced a proposed oil pollution prevention regulation. The proposed regulation is required under terms of the Federal Water Pollution Control Act Amendments of 1972. This regulation will apply to owners or operators of non-transportation-related facilities that drill, produce, store, refine, process, transfer, distribute, or consume oil and which, because of their location, could reasonably be expected to discharge oil into surrounding waters. This will affect such industrial operations as oil refineries, industrial users of oil, fuel oil dealers, drillers, and operators of bulk plants. Exempted are facilities which have buried underground storage of 1,000 barrels or less or have aboveground storage of 900 gallons or less of heating oils or motor fuels.

Owners or operators of such facilities which are subject to possible oil spills would be required to prepare and implement oil spill prevention control and countermeasure plans (SPCC Plans) within one year after the regulation becomes effective. These plans will specify operating procedures, equipment, contingency plans, and training programs to prevent oil spills. These plans will have to be reviewed and certified by a registered professional engineer. Owners or operators who fail to comply with the regulations would be liable to a civil penalty of up to \$5,000 for each day that a violation continues.

The proposed regulation also includes guidelines for the preparation of SPCC Plans. While all of these guidelines may not be relevant for any given facility, they do exhibit the form that the SPCC Plan will take and indicate the main operational areas of a facility that the plan should cover. Further developments with respect to the proposed regulation should be monitored carefully for the potential applicability to existing and potential industrial users in the County.



### Residential

The County's shoreline is speckled with small and large housing developments and expansion pressures are continuously increasing. The result has been haphazard placement of housing with no provision for public services including schools, fire stations, sewer and water, and roads. The major portion of the County soils is not suitable for septic tanks and leach fields, and severe water quality problems exist in many of these unwisely developed areas. In general, the population requires an adequate supply of housing, and one cannot argue that a waterfront location would not be a most desirable one. However, if existing methods of development are not altered, shore access will eventually be limited to those few holding riparian rights while overall water quality will be degraded for all. To solve existing water quality problems, overcrowded schools and to retain public access to appropriate beach areas, the County should assume the following policies:

1. Base the approval of residential building permits on the availability of public sewerage and water, adequate schools, and appropriate road construction and maintenance programs.
2. Combine the process of granting building permits with the overall land use plan and the capital improvements program designed to concentrate housing developments as described in the growth center concept while maintaining other areas for essential agriculture and recreational needs. This process would facilitate the provision of adequate sewage treatment facilities, helping to alleviate water pollution problems.
3. Improve subdivision standards and create models for waterfront developments.

### Recreation

Recent surveys of the St. Mary's County public recreation facilities and open space areas have indicated gross inadequacies. The result has been increasing pressures from private interests to develop recreation and second home communities and travel trailer parks. The problems resulting from these types of land uses are similar to those created by haphazard residential development -- water pollution problems, inadequate and crowded roads, and a fast disappearing shoreline. Fortunately, since these forces are only beginning to be felt in the County, several alternatives still remain:

1. As with year-round residential developments, the possibility remains to tie recreation development - both homes and travel trailers - to availability of public sewer and water. Water pollution problems can be alleviated under this process of development controls.
2. Initiate a program of recreation and open space reservations. The State of Maryland, Department of Natural Resources, has identified several shoreline areas of prime recreational importance. These areas should be ranked by priority and an acquisition or reservation program started. Techniques such as official mapping, acquisition of development rights or fee simple title can be used. Such programs could be a County or a joint state-County effort. Landowners who do not desire to see their property faced with outside development pressures can be encouraged to donate their property or use of it to public park use, thereby enjoying the federal tax benefits from such an action. Section 170(a)(1) of the Internal Revenue Code provides for income tax deductions for charitable contributions of any type of valued property interest to a tax-exempt organization. Under Section 170(c)(1), a dedication to a governmental body also qualifies the donor for favorable tax treatment. In addition, federal funding sources for parks and recreation should be tapped. The Department of Housing and Urban Development has several parks programs; the Bureau of Outdoor Recreation, Department of the Interior, manages the Land and Water Conservation Fund; recreation and conservation loans are available from the Department of Agriculture; and the Department of Defense has a beach erosion control program. The National Trust for Historic Preservation should be approached for acquisition of historic sites and their surrounding preservation areas. Under Public Law 566, the U.S. Soil Conservation Service administers a small watershed program in which the federal government can provide up to 50% of the planning and development costs for recreation facilities within designated watershed areas. The newly implemented federal revenue sharing programs offer additional sources of funds which could be spent for public shoreline preservation. With land costs rising at rates of 10% a year in many areas, now is the time to acquire land for future recreation and preservation.
3. St. Mary's County should consider short-term retention of an ombudsman with proven grantsmanship skills to initiate and pursue the above mentioned federal funding opportunities.

Development Pressures on Prime  
Agricultural Land

The primary and most productive agricultural soils are those of the Matapeake-Mattapex-Sassafras Association, characterized by a level to gentle slope, well-drained, silty, loamy, and a permeable soil type. There are no limitations on intensive cropping on 90% of the areas covered by this soil type. The secondary and next most productive agriculture soils are of the Ellston-Keyport Association and the Othello-Mattapex Association. These soil types are nearly level, moderately to poorly drained, moderately permeable and subject to seasonally high water tables. There are no limitations for intensive cropping on 40-50% of these secondary soil types with moderate cropping limitations on the remainder. The location of the best agriculture soils creates yet another conflict with the demands for use of the coastal areas, since the most suitable soils are intensive agricultural uses found along the shoreline and in the northwestern parts of the County.

The close proximity of the excellent agriculture potential of St. Mary's County to the food needs of the urban populations of New York, Baltimore, Washington, and Richmond reinforces the necessity for preserving the existing and potential agricultural areas for their highest and best use -- agriculture. Agriculture has been and should continue as an increasingly important and active economic resource to the County. With the present agricultural trends towards larger farms, extensive and unbroken expanses of agricultural areas must be retained.

A note concerning the timber resources of St. Mary's County is also appropriate. The County presently is nearly 50% forested. The major portions of these are loblolly shortleaf pine, one of the most desirable species of softwoods. Oak, hickory, gum and cypress are found in the northern portion of the County. The timber stands are a real and as yet unrecognized and unappreciated natural resource. The untapped timber resources must also be preserved for the County's present and future well-being.

An additional note of concern is the effect of agricultural operations on water quality from the use of pesticides and fertilizers, and also from the sedimentation caused by run-off. Run-off from agricultural areas has been the causal factor in the ruination of many water bodies. The high nitrogen and phosphorous content of the agricultural run-off contributes to the eutrophication and gradual death of the water and its living organisms. The exotic chemical compounds contained in pesticides build up on the floor of the water body; and,

if strong enough, cause the death of fish, shellfish, and plant organisms. Shellfish, especially oysters, have a tendency to accumulate the poisons in their own bodies which can then be passed on to human consumers in concentrated amounts. Tainted oysters have caused a cessation of harvesting on more than one occasion in Maryland.

To retain and preserve agricultural and forest resources, the County has several alternatives:

1. Recognize, as many other areas, including Prince Georges County, that agriculture and forests can comprise the highest and best economic use of certain land areas. These areas should be surveyed, mapped, and zoned as such.
2. The County agriculture zone should reflect the needs of agriculture and natural forest areas. The existing zone allows any type of development except multifamily homes. This category is clearly too broad, allowing almost any type and extent of development. A zone designated for agricultural/natural resource use should be restricted to that major use.
3. Property tax policies should reflect the actual use not the potential use of the land. Too many farmers in other areas have been taxed out of their farms and lifestyles by taxes based on urban economic concerns rather than rural, agricultural needs.
4. Public facilities - sewer and water and road improvements - should be properly placed to shield these areas from development pressures. A sewerage interceptor traversing prime agricultural land creates development pressures impossible to overcome by any method other than acquisition.
5. The heavy use of fertilizers and pesticides on agricultural and forest lands should be discouraged. More natural methods of soil reinforcement such as composts and land treatment from sewage disposal plants should be explored. Land treatment offers several possibilities to St. Mary's County because of the relatively low population densities and large areas in need of fertilizers. In addition, a strip of undisturbed planted area can be left around plowed areas. The more stable planted area aids in retaining run-off from the more unstable plowed field. Straw, wood chips, and other manufactured matting around an open field can also help retain the soils and keep them from nearby waterways.

P r e s e r v a t i o n   o f   S p e c i a l   F i s h ,  
W i l d l i f e ,   a n d   B i o l o g i c a l   H a b i t a t s

Fish and Wildlife

The Chesapeake Bay is the home of the blue crab, Chesapeake Bay oyster, and the principal spawning ground for the Atlantic rockfish. Crabs, oysters, shrimp and a variety of finfish abound or once did. Natural oyster bars are found in the Patuxent River, the Chesapeake Bay, St. Clements Bay, Breton Bay, St. Mary's River, and elsewhere along the Potomac River side of the County. St. Clements Bay is the spawning ground for the striped bass.

The importance of the fisheries and agriculture sector to the economy of St. Mary's County has already been discussed. In 1960, this sector employed over 20% of the County's total employment, decreasing to 9% in 1970. However, this sector is still one of the County's basic economic sectors.

The Chesapeake Bay and its fish life is severely threatened by the increasing pollution loads from faulty or nonexistent municipal sewage treatment systems, industrial discharges, and run-off sedimentation. St. Mary's County is unfortunately on the receiving end of much of this pollution emanating from upstream on the Potomac and Patuxent Rivers. However, the lower waters surrounding the County are still relatively clean and must be maintained to protect the fishing resources of the County. Enhancement of water quality is the key and the actions proposed for industrial discharges, requirements of sewage treatment systems and run-off controls, if instituted, should provide the necessary protection to the fishing resources. St. Mary's County should and must pressure the other governmental jurisdictions bordering the Bay to institute equally strong pollution control measures and enforcement.

In 1971, the Maryland General Assembly enacted an endangered species bill granting the Maryland Department of Natural Resources power to establish a "program for conservation and restoration" of designated endangered species of fish and wildlife. The Secretary of the Department of Natural Resources is given powers of land acquisition by purchase, donation or otherwise to carry out the intent of the act. The General Assembly also passed, in 1971, a bill to provide for a State Wildlands Preservation System. The Department of Natural Resources will designate state owned wildlands to be devoted to "public purposes of recreational, scenic, scientific, educational, conservation, and historical use." Any private citizen or organization can also propose areas for inclusion in the State system. The Department is also given the power to accept gifts of land or wetlands, make other agreements or purchase scenic easements, wetlands or other lands to be included in the Wildlands system. Eminent Domain cannot be used to acquire land

or rights to it. Such acquisition must be with the consent of the owners.

The State Scenic River System, administered by the Department of Natural Resources, offers an additional handle for controlling certain activities along designated scenic rivers which includes the Patuxent River and its tributaries. The intent of and powers granted by these acts should be utilized to the greatest extent possible by St. Mary's County to protect and preserve their wildlife and fish resources and their scenic areas.

### Wetlands

Wetlands, tidal marshes, or estuaries are names used interchangeably to denote one of the most vital and dynamic units of nature. Wetlands are of integral importance to man, fish, bird, and mammal. These marshy, boggy areas are the spawning and nursery grounds for a large percentage of sealife, nesting and feeding places for a variety of birdlife, and an indispensable part of the food chain where organic matter and nutrients are converted into future food sources of plants and animals. Wetlands also help control flooding by acting like a sponge for unseasonably high waters, moderate local climatic conditions and, fortunately for today's populations, have helped filter out man-made pollutants. Aesthetic values are also part of the wetlands' contributions to man's well-being.

In 1970, the Maryland General Assembly passed a wetlands law which was the beginning of long overdue protection for these vital areas. Although the legislation applies only to salt water wetlands and does not prohibit construction in these areas, it is more protection than provided in most other states. The regulations require the Department of Natural Resources to designate public or state wetlands ("all land under the navigable waters of the State below the mean high tide which is affected by the regular rise and fall of the tide") and private wetlands ("all lands not considered 'State wetlands' bordering on or lying beneath tidal waters which are subject to regular or periodic tidal action and which support aquatic growth"). The major thrust of the legislation is requirement of a permit from the Department of Natural Resources before filling or dredging a channel larger than 60 feet in length, 20 feet wide or 3 feet deep at mean low water on private wetlands. The Western Shore of Maryland has lost about 3,000 acres or 6% of its wetland areas since 1942. The major tidal wetland losses have resulted from housing development while agricultural drainage has been the major cause of inland wetland losses. The increasing shore development pressures

are thus placing wetlands in economic competition with other demands for coastal uses. Wetlands are so vital to our life cycle that rampant destruction of St. Mary's County's wetlands can not be permitted. In addition to the small protection provided by the State Wetlands Legislation, the County can institute other actions and policies:

1. Residential developments should be grouped inland and at a protective distance from the tidal wetlands. This policy is reflected in the growth center concept under which the land use plan has been developed.
2. Boat marinas should be constructed in harbors rather than individual boat docks strung through wetland areas.
3. Wastes should be recycled or disposed of in existing County sanitary landfill areas.
4. Agricultural drainage should be controlled as suggested in the previous sections.
5. Industrial locations should be away from wetland areas in properly prepared sites as proposed in preceding pages.
6. Particularly vital or ecologically fragile wetlands should be included in open space system wildland areas or other designations for permanent preservation.

#### Creation of Environmental Preserves

The land use plan makes strong recommendations for perservation of specific areas which are of prime importance to the overall environmental integrity of St. Mary's County. This recommendation is based in part on a recent report prepared by the Smithsonian Center for Natural Areas, entitled Survey of the Ecologically Important Natural Areas of the Chesapeake Bay Region (Sept., 1973), which presents a detailed analysis identifying and evaluating potential preservation areas throughout the Chesapeake Bay Region including St. Mary's County. A system of evaluating all areas on a comparative basis was developed as part of the report and included the following criteria:

1. Ecosystem types.
2. Endangered or threatened plant or animal species.
3. Range phenomena.

4. Seasonal concentration of animals.
5. Commercial, game, or unusual animal populations.
6. Archeological, paleontological, and geological features.
7. Sites of well-documented scientific research or discovery and records over a period of years.
8. Oldest, largest, or exceptional plant or wildlife species or associations.
9. Size of area.

In general, the survey of natural areas was set up to help identify those areas of land and water which preserve some examples of the natural environment, where natural ecosystem processes operate relatively undisturbed and where biological communities and their interactions can be studied. Major potential uses of such areas include:

1. Aesthetic value and enjoyment.
2. Baseline and long-term monitoring of environmental quality.
3. Study of the structure and function of natural ecosystems.
4. Preservation of germ plasm, reservoirs, gene pools, and endangered species.
5. Educational and training value.
6. Contribution to environmental quality.

Three primary areas have been selected for immediate attention based on the evaluation process. The largest area, located in the northern sector of the County, is the Killpeck Creek - Trent Hall Creek area, which encompasses approximately 2,400 acres including the designated buffer zone. Wildlife species encountered here include an active Bald Eagle's nest, mink, otter, overwintering swan and wood duck, as well as oyster and clam beds. Wetlands in the area include both tidal and freshwater marshes. The second largest area is located on the Potomac side of the County in the Poplar Hill Creek area, covering approximately 1,500 acres. This area contains an important stand of upland mature hardwoods as well as important wildlife including bald eagles and osprey. The third area is again on the Patuxent River around Spring Creek, covering approximately 140 acres. This area contains tidal and



freshwater marshes, special plant species, mink, otter, overwintering swan, nesting wood ducks, oyster and clam beds, and an active bald eagle's nest. The other areas recommended for consideration are indicated on the land use and open space map:

<u>PROPOSED PRESERVATION AREAS</u>	<u>Approximate Area (acres)</u>
St. Mary's River	275
Chaptico Run	475
Cherryfield Point	186
Medley Creek	115
Newtown Neck	725
Cornfield Point Geologic Section	106
Point Look-in	53
Bay Forest Drive	124
Drayden Geologic Section	53

These areas provide a framework for preservation of ecologically important and significant features of the region. Designation of these areas was based on the importance of the various biological, geographical, archeological, paleontological characteristics and was predicated on the objective of preservation and protection of important plant and animal species. Conservation of these areas would be a major contribution to improving environmental quality and maintaining ecological balance, and as such these areas are designated for preservation on the land use plan.

Additional areas for potential recreation use have been proposed and surveyed by the Maryland Department of Natural Resources, Program Planning and Evaluation Section. These areas have been evaluated with respect to potential recreation uses and are described in a report to be released shortly. They are listed in Table 36. The sites are indicated on the open space system plan as potential recreation areas to be evaluated by the County in conjunction with the State Department of Natural Resources for future preservation as recreation areas. Detailed site information and evaluation is available through that state agency. The potential preservation areas and recreational areas are shown in figure 26.

The areas of Critical State Concern Program and the Geographical Areas of Particular Concern - Coastal Zone Management Program are being addressed by the County Land Use Board and Office of Land Use and Development. Nominations will be submitted in late 1976 and continuously thereafter for consideration by the Planning Commission and County Commissioners.

TABLE 35: POTENTIAL SHORELINE ACCESS, RECREATION, AND OPEN SPACE AREAS

<u>Site</u>	<u>Location</u>	<u>Approximate Acreage</u>
1. Queen Tree Landing	On the west shore of the Patuxent River between Cat Creek and Coatigan Run	850 acres
2. St. Cutberth Wharf	On the west shore of the Patuxent River near the town of Hollywood	8 acres
3. Esperanza Pond	West of the Patuxent Naval Air Test Center on the west shore of the Patuxent River	150 acres
4. Green Hold Pond	Immediately west of the Patuxent Naval Air Test Center on the west shore of the Patuxent River	390 acres
5. Pine Hill Run to Tippit Pond	On the Chesapeake Bay immediately south of the Patuxent Naval Air Test Center	2,000 acres
6. Wise Marsh/ Page Pond	On the Chesapeake Bay approximately four miles south of the Patuxent Naval Air Test Center	80 acres
7. Biscoe Pond	On the Chesapeake Bay between Wise Marsh and Biscoe Pond	900 acres
8. Bay Forest Drive	On the Chesapeake Bay, north of St. Jerome Neck	45 acres
9. North of Camp Winslow	On the Chesapeake Bay, north of St. Jerome Neck	200 acres
10. Point-No-Point	On the Chesapeake Bay, on St. Jerome Neck	400 acres
11. Frogs Marsh	The west shore of the St. Mary's River across from Tippity Wichity Island	660 acres

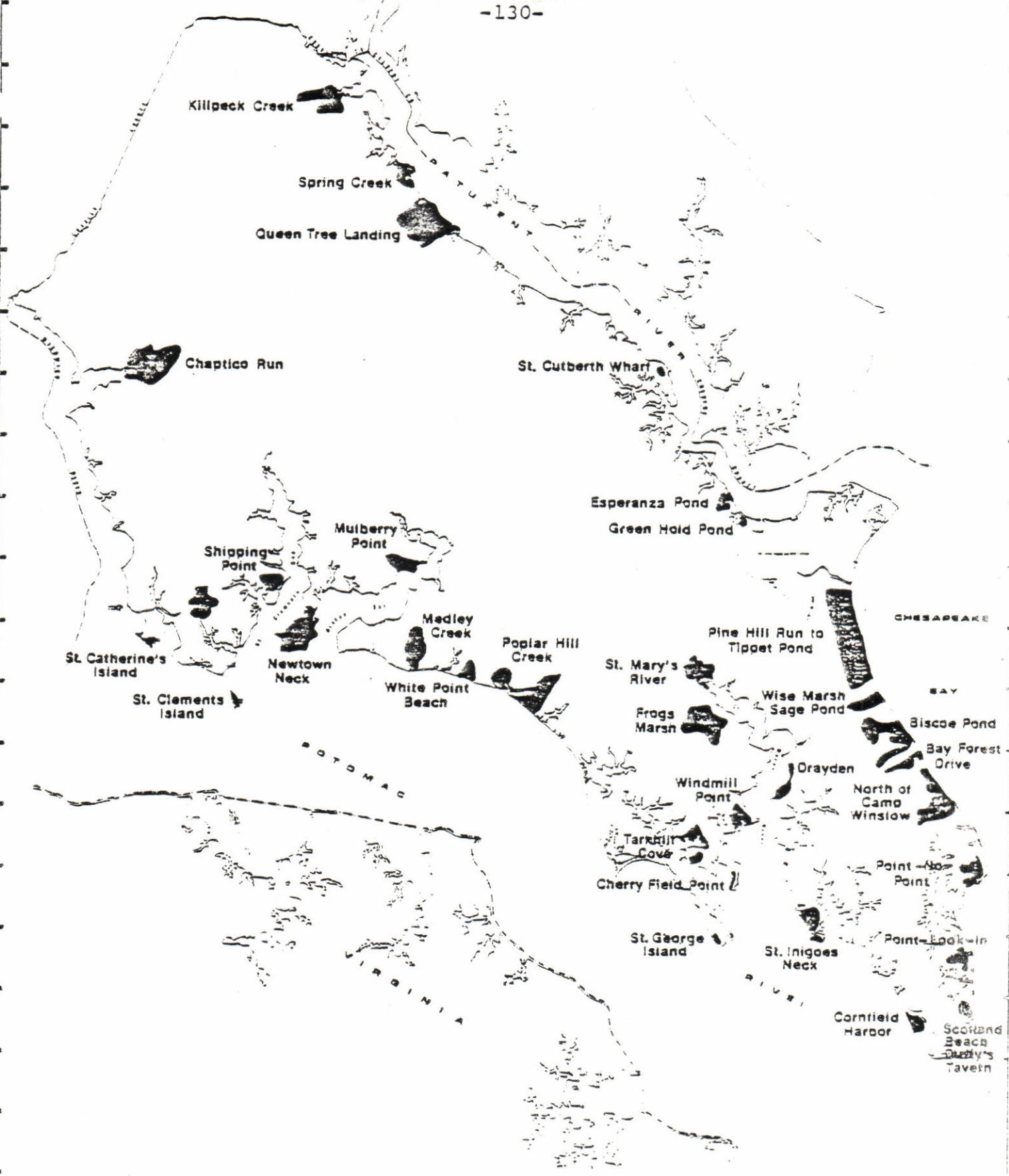
<u>Site</u>	<u>Location</u>	<u>Approximate Acreage</u>
12. Chancelor Point	On the east shore of the St. Mary's River north of St. Inigoes Creek and south of St. Mary's City	90 acres
13. Windmill Point	On the west shore of the St. Mary's River immediately north of Carthagena Creek	450 acres
14. Point Look-In	On the Chesapeake Bay south of St. Jerome Creek on Fresh Pond Neck	350 acres
15. Scotland Beach/Duffy's Tavern	On the Chesapeake Bay approximately two miles north of Point Lookout	80 acres
16. Cornfield Harbor	On the Potomac, approximately two miles northwest of Point Lookout	170 acres
17. St. Inigoes Neck	The Peninsula between the St. Mary's River and Smith Creek, including Webster Field area	1,700 acres
18. Cherryfield Point	The Peninsula between St. George Creek and the St. Mary's River	250 acres
19. Tarkhill Cove	On the east shore of St. George Creek on the north side of Tarkhill Cove	430 acres
20. Poplar Hill Creek	The north shore of the Potomac River between Blake Creek and Belvedere Creek and including the shoreline of Poplar Hill Creek	700 acres
21. White Point Beach	The north shore of the Potomac River immediately east of White Point Beach	160 acres
22. St. George Island	The shoreline of the Potomac on the southwest corner of St. George Island which is located at the confluence of the St. Mary's River	60 acres

<u>Site</u>	<u>Location</u>	<u>Approximate Acreage</u>
23. Mulberry Point	The west shore of Breton Bay about one mile south of Leonardtown	360 acres
24. Newtown Neck Proving Ground	On the east shore of Newtown Neck at the mouth of Breton Bay	280 acres
25. Shipping Point	On the west shore of St. Clements Bay between Neck Creek and Deep Creek	190 acres
26. St. Clement's Island	In the Potomac River off-shore from Colton Point	50 acres
27. St. Catherine's Island	The Potomac River at the mouth of St. Catherine's Sound, south of White's Neck	60 acres

Accommodation of Future Energy Needs

Rumors concerning state location of a power generating facility in St. Mary's County have been recently circulated. Our research has shown:

1. The State of Maryland, through the Department of Natural Resources, does have the power and legislative authority granted by the 1971 Power Plant Siting Law to study and acquire sites to accommodate the future energy needs for the State of Maryland.
2. The Act establishes a surcharge per kilowatt hour of electric energy currently generated within the state to be placed in an Environmental Trust Fund to be used for environmental research for potential electric power plant site evaluation and related environmental and land use considerations as well as for actual site acquisition.



# ST. MARY'S COUNTY - MARYLAND

## 26. POTENTIAL RECREATION & OPEN SPACE AREAS

(Maryland Dept. of Natural Resources Dr. Apr. 1973 Nature Conservancy Sept. 1973)



SCALE 1:50,000

DATE 1973

3. Use of sites acquired by the Department of Natural Resources are exempt from local zoning ordinances and do not require approval in any way by local authorities.
4. The act contains a strong environmental mandate and requires an extensive and intensive environmental analysis for any potential sites even considered by the Department of Natural Resources.

In view of the ultimate strength of the state body in these issues, it would be important for St. Mary's County to make immediate contact with the appropriate and responsible persons within the Department of Natural Resources to open communications. Although the County has no legal power under the Power Plant Siting Act, early cooperation and exchange of information would be of benefit. The County, armed with a well-developed comprehensive plan, could guide the state agency toward more mutually agreeable sites, if any are planned for St. Mary's County. The Department of Natural Resources, on the other hand, could assist the County in environmental evaluations.

Some 1,000 acres, known as the Elms Property, located South-East of Lexington Park has been acquired by the State of Maryland as a potential Power Plant site.

In 1975, a committee was formed by the Board of County Commissioners to evaluate and propose interim uses for the property. Because of severe limitations by the State, soil conditions, and health regulations, few proposed uses other than forestry, agricultural and possibly recreation have materialized.

Waterfront Protection Zone

The waterfront areas and shoreline of St. Mary's County are one of its primary assets and should be subjected to careful development controls. This area will be subjected to considerable development pressure in the future and care must be exercised to prevent damage to the natural features and beauty of the area and for the protection of the economic base derived from these areas.

St. Mary's County has approximately 135 miles of shoreline excluding county boundary streams which would add 96 miles to this total. This shoreline is broken down as follows:

1. Potomac River . . . . . 35 miles
2. Patuxent River . . . . . 22.7
3. St. Clements Bay . . . . . 11.4
4. Breton Bay. . . . . 15.1
5. St. Mary's River . . . . . 19.9
6. Cheasapeake Bay . . . . . 22.7 miles.

The Potomac River is a natural habitat for soft and hard shell clam, striped bass, bass spawning and nursery areas, and oyster beds. The Patuxent River is a habitat for soft and hard shell clams and bass. It is also a spawning and nursery area for bass. The St. Mary's River contains oyster beds and seeding areas, soft and hard shell clam habitats. Breton Bay, St. Clement's Bay, and the Wicomico River contain clam, oyster, and bass habitats. Life cycles in these habitats are in danger of disruption from sedimentation and pollution resulting from agricultural, urban, and industrial development.\* Similar conditions exist in the many creeks and tributaries which feed these major bodies of water.

In addition to the many miles of shoreline, inland areas adjacent to the shoreline consist of prime agricultural lands and wooded areas. Tributaries feeding the main bodies of water are characterized by marshes and wetlands, flood plain areas, and scenic stream courses. Important in their own right, these areas also contribute to the quality of nearby waterways and are worthy of careful control.

The waterfront areas of St. Mary's County are unique and a prime asset of the County, State, and Region. Because of the natural

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\* Allen Organization; A Comprehensive Park and Recreation Plan for St. Mary's County, Maryland, June 1973.

beauty of the waterfront areas and the extensive shorelines, these areas will be desirable locations for a variety of urban uses. The creation of a Waterfront Protection Zone is intended to allow development in a manner that is consistent with the natural environment and which will not have detrimental impacts.

#### Existing Land Use

Existing land use within the Waterfront Protection Zone is indicative of future development pressures which may gravitate to the area. Examination of the data compiled during the existing land use inventory reveals that the waterfront areas of St. Mary's County are characterized by numerous second home residential areas which are changing into permanent residential complexes, commercial marinas scattered along the shoreline with primary locations at sheltered coves and creeks, large industrial facilities (Steuart Petroleum), scattered subdivision lots, and prime agricultural lands. Although the waterfront areas are still basically undeveloped, increasing demand for waterfront locations will make these areas prime targets for urbanization.

#### Environmental Concerns.

The development that has occurred in the waterfront areas has begun to exhibit environmental problems. Although these environmental concerns are not widespread, they are forerunners of a broader range of environmental impacts that may occur with uncontrolled and scattered development.

Residential areas, originally developed for second homes on small lots are beginning to experience pollution problems due to the lack of central sewer and water systems. Development in areas such as St. Clements Shores, Wicomico Shores, Millpoint Shores, Longview Beach, Breton Bay, Society Hill, Colton Neck, St. George Island, Tall Timbers, Golden Beach and Town Creek are of sufficient size that public water and sewer systems are becoming necessary to prevent pollution of adjacent waters. Although not as evident as the larger developments, scattered developments of 10-12 lots along waterfront areas have a cumulative potential for causing pollution and environmental concerns.

The future development of marinas, public launching areas and water access points must also be carefully planned and monitored to avoid detrimental effects from pollution, dredging and destruction of shellfish.

Runoff from agricultural uses constitutes still another environmental concern. Fertilizer and animal wastes that find their way into the watercourses of the County can be as detrimental as human pollution problems.



Fortunately, the magnitude of environmental impact in the County is not widespread when compared to other areas. St. Mary's County is, to some extent, a victim of environmental inaction on the part of other jurisdictions along the waterways such as the Potomac and Patuxent Rivers. These rivers flow from the metropolitan areas and have been subjected to much abuse by the time they reach the County area. However, rivers such as the St. Mary's or the Wicomico and major creeks or bays in the County are under the primary control of the County. Wise use of these waterways and their inland boundaries will determine the future quality of the County.

Areas of environmental concern can be summarized as follows:

1. Wetlands and Marshes
2. Streams, streamcourses and flood plains
3. Erosion and sedimentation
4. Water quality and the protection of shellfish
5. Effluent
6. Protection of slopes and wooded areas
7. Vegetation
8. Dredging
9. Flood protection
10. Shoreline modification.

#### Purpose of Zone

The purpose of the Waterfront Protection Zone is to allow development and protect the environment. Generally, areas that are better suited for conservation should be preserved because of their natural value or because they present serious problems for development. Even if the engineering and economic costs of these problems could be overcome, it would usually be at a significant cost to the environment. Areas considered better for development can usually be developed without risk of significant environmental damage. The purpose, then, is to balance development with the environment and prevent the use of unsuitable locations for development.

General Goals for the Waterfront Protection Zone

1. To allow the development of low density residential, selected commercial and industrial expansion and agricultural activities in a manner that is not detrimental to the natural environment.
2. To maintain and improve the water quality of the rivers, streams and bays so that shellfishing, fishing and water-oriented economic activities will not be curtailed.
3. To preserve the vegetation, natural features and stream courses adjacent to the waterfront areas.
4. To prevent significant problems of erosion, sedimentation and drainage.
5. To protect public and private investments from flood and flood damage.
6. To assure appropriate land use design in harmony with the environmental and natural features of the area.
7. To protect and maintain prime agricultural areas.
8. To allow development in areas that are suitable for development by virtue of their natural features and so preserve areas through private action that are naturally unsuitable for development.

DEVELOPMENT POLICIES

Any development proposed for the Waterfront Protection Zone shall be subject to the following development policies. Appropriate review mechanisms and implementation procedures shall be developed in the zoning ordinance and other ordinances of the County to implement these development policies.

Policies for Stream Valleys and Drainage Courses

Definition: Stream valleys consist of the watercourse and flood plain which serve as the natural reservoir and channel for water runoff from the land and the side slopes of the flood plain running with the stream from its origin to point of confluence with a larger body of water.

1. Development shall not take place within stream valleys and drainage courses.

2. Floodplain maps and delineation of stream valleys should be undertaken in the Waterfront Protection Zone and utilized as a guide in the review of development proposals.
3. Vegetation should be maintained on the slopes of stream valleys to prevent erosion and sedimentation.
4. All structures should be setback at least fifty (50) feet from the edge of the stream or tributary.

#### Policies for Shoreline Waters

Definition: These are waters which have the capability of supporting shellfish harvesting, clams and oyster beds.

1. No dredging should be performed in these waters except for approved maintenance dredging on existing public navigation channels.
2. Stringent water run-off controls should be imposed on development adjacent to these waters and all developers of land contiguous to these waters should attempt to contain on site, all wastes generated by development (including agriculture) in order to prevent degradation of water quality.
3. Oysters and clam beds, marine grass beds which serve as important habitats for marine organisms and spawning should not be modified.

#### Policies for Flood Zone

Definition: The flood zone consists of lands between the shoreline and the 100 year flood line. It is the area subject to flooding by storm driven tides on a statistical probability of once every 100 years.

1. Any development in the flood zone which would unnecessarily jeopardize public health, safety or welfare should be prevented. Examples include sewage treatment plants, industrial holding ponds or other potential polluting facilities.
2. All residential construction in a flood zone should have ground floor elevations above the level subject to flooding by the statistical 100 year flood.

3. All high intensity development in the flood zone should be serviced by central sewer systems.

#### Policies for the Wetlands

Definition: Wetlands consist of those land areas which are covered with water for periods sufficient to support aquatic or semi-aquatic vegetation.

1. Wetlands shall be given the highest level of protection to minimize the alteration of their natural features and purposes.
2. No construction shall be permitted within wetlands excepting for the purposes of providing public access within carefully restricted area for nature study or other passive recreational uses.
3. No platting shall be permitted within wetlands excepting for the purposes of providing public access within carefully restricted areas for nature study or other passive recreational uses.
4. Continuous effort shall be exerted on other public agencies to assure that they administer adequately their regulatory powers on the use of the wetlands.

#### Policies for Flood Plains

Definition: Flood plains are lands lying along drainage courses that are subject to flooding on a regular basis. These areas usually contain mixed alluvial soils, poorly drained soil and natural vegetation that is adapted to fluctuating levels.

1. Development in flood plains should be prevented.
2. Natural vegetation in flood plains should be preserved to the maximum degree possible to prevent erosion, retard run-off and prevent sedimentation.
3. Any structures erected in the flood plain should be designed for free flow of water.
4. There should be no open storage of fertilizers, chemicals, or other polluting materials in flood plains.
5. All activities in the flood plain should consider their potential detrimental effects on water quality and downstream resources.

Policies for the Areas of Steep Slopes

Definition: Areas of steep slopes consist of those areas where the prevailing slopes are in excess of 15% (1 1/2 feet vertical rise to 10 feet horizontal distance) and slope stability is questionable.

1. Areas of steep slopes shall be given the highest level of protection to minimize the alteration of their natural features and purposes.
2. No construction shall be permitted within the areas of steep slopes except as permitted under special permit procedures and meeting strict engineering standards for construction and erosion control, and certified for safety by a certified civil engineer.
3. No stripping of vegetation, excavation, filling, grading, or terracing shall be permitted within areas of steep slopes, excepting as such activities are undertaken for the sole purpose of stabilizing slopes which have been rendered unstable, or as permitted in number 2.
4. Modification of the natural drainage pattern within areas of steep slopes shall be carefully controlled as to minimize problems of erosion and sedimentation.
5. A program shall be undertaken for stabilizing slopes which have been rendered unstable.

Policies for the Plateau Area

Definition: The plateau area consists of the relatively flat uplands which extend from the upper limits of the steep slopes around the Waterfront Protection Area.

1. Undeveloped areas of the plateau shall be devoted predominantly to residential uses.
2. Innovative forms of residential development, such as cluster development, shall be encouraged in order to protect environmentally sensitive areas for public and private open space and to achieve appropriate design.
3. Development shall be undertaken in such a way as to minimize the threat to the stability of the steep slope area, and designed to be in harmony with the scenic features of the waterfront area.

4. Stripping of vegetation, grading, and filling shall be carefully controlled so that these activities are kept within desirable limits.
5. Tree planting and revegetation shall be encouraged in conjunction with development so as to prevent erosion and sedimentation, maintain slope stability, and enhance the wooded quality of the waterfront area.
6. The natural drainage pattern shall be preserved where feasible, and where the pattern must be modified, it shall be modified in such a way as to minimize adverse effects.
7. No storm water shall be allowed to flow into the steep slope area except at controlled discharge points.
8. No new development which discharges sewage effluent shall be permitted unless it is served by public sewers.

#### Policies for Shoreline Modification

Definition: Shoreline modification is any development activity which changes the natural features, appearance or contours of the shoreline.

1. Any dredging and filling which is necessary to the public interest should be in accord with an overall plan and environmental impact statement approved by Federal, State and County agencies. All other dredging and filling should be prohibited.
2. Any port or pier facilities should be designed in a fashion that requires minimum maintenance and water scouring action should be utilized if possible to prevent formation of salt traps which require continuous maintenance dredging.
3. All port facilities should have modern and approved oil spill equipment and the capability to employ these on short notice.
4. Commercial shoreline activities should be restricted to those activities that require a waterfront location. Non-water dependent commercial activities should be located inland.
5. Parking facilities for commercial water dependent activities should be designed to prevent concentrated run-off from paved areas from entering adjacent water bodies. Storm sewers, ditches or other drainage systems should not empty directly into open waters. Holding basins should be created to allow settling of suspended matter and gradual release into open water.

### Policies for Marina Location and Design

Definition: Marinas are facilities which provide boat launching and storage, boating supplies and services for small pleasure craft.

1. Marinas should be located in areas where maximum physical advantages exist and where least dredging and maintenance will be required.
2. Marina construction should avoid destruction of marsh areas, shellfish beds, and submerged grasses where possible.
3. Turning basins and navigation channels should be designed to prevent long term degradation of water quality. Deadend of deep channels without adequate flushing should be avoided.
4. Marinas should be equipped with sewage collection systems for servicing of pleasure craft.

### Policies for Bulkheads

Definition: Bulkheads are retaining structures utilized to stabilize a shoreline or make it more accessible.

1. Bulkheads should be constructed at an established bulk-head line or landward of the mean high water mark.
2. Bulkhead construction should avoid sharp angle turns that may collect trash or cause flushing problems.

### Policies for Dredging and Filling

Defintion: Alteration of the natural shoreline by addition of fill and removal of material to raise adjacent land to usable elevations.

1. Wherever possible, dredging or filling should be prevented.
2. Residential developments that are feasible only through dredging or filling should be prevented.
3. Dredging for navigational access should be carefully planned to prevent unnecessary channels.
4. Turbidity control mechanisms should be used to protect water quality in adjacent areas.

PLAN FOR DESIGNATION OF AREAS OF CRITICAL STATE CONCERN

In 1974 State Legislative action, effective July 1, 1974, added to Article 66B of the Maryland Annotated Code a requirement that The County Comprehensive Plan include an element describing "recommendations for the determination, identification, and designation of areas within the county which are of critical state concern." Although countless hours were spent by the legislature in attempts to define and establish guidelines for designation of "areas of critical state concern," the State Land Use Bill as enacted did not include either definitions or guidelines.

Since the County recommendations for, and subsequent state designation of areas of critical state concern may have significant impact on county development patterns, the County recommendations should be made only after thorough study, deliberations, public hearings and formal action by the Board of County Commissioners.

The following procedures should comply with the requirements of State law and enable the County to exercise due process in the development of its recommendations:

1. Establish a County Land Use Board with the specific function and responsibility of preparing recommendations for designation of areas of critical state concern.
2. Provide that the County Land Use Board follow the established state guidelines for selection of county areas of critical concern.
3. Provide that the County Land Use Board prepare its recommendations in coordination with other County agencies.
4. Provide that recommendations of the County Land Use Board be presented, after review and comment by the Planning Commission, to the Board of County Commissioners for public hearing.
5. Provide that after public hearing the Board of County Commissioners prepare a finding of facts and on such basis transmit its recommendations to the Department of State Planning.
6. Upon designation of areas of critical state concern by the Department of State Planning, provide that appropriate County maps be posted and that management tools for implementation of local and state controls be developed and proposed for adoption.



The Seventh Stage - Formulating the  
Land Use Plan and a Strategy for  
Implementation

Introduction

Four basic building blocks for the land use plan have now been analyzed:

1. Natural features and characteristics of the County and resource and environmental issues,
2. Existing land uses and existing social and demographic characteristics,
3. Economic conditions and projections for economic growth,
4. Concepts of growth or no-growth.

These four elements have been combined into three subsequent levels of analysis:

1. Delineation of the sectors of the County,
2. Projections of population growth through the early part of the twenty-first century,
3. Designation of alternative strategies for distribution of growth.

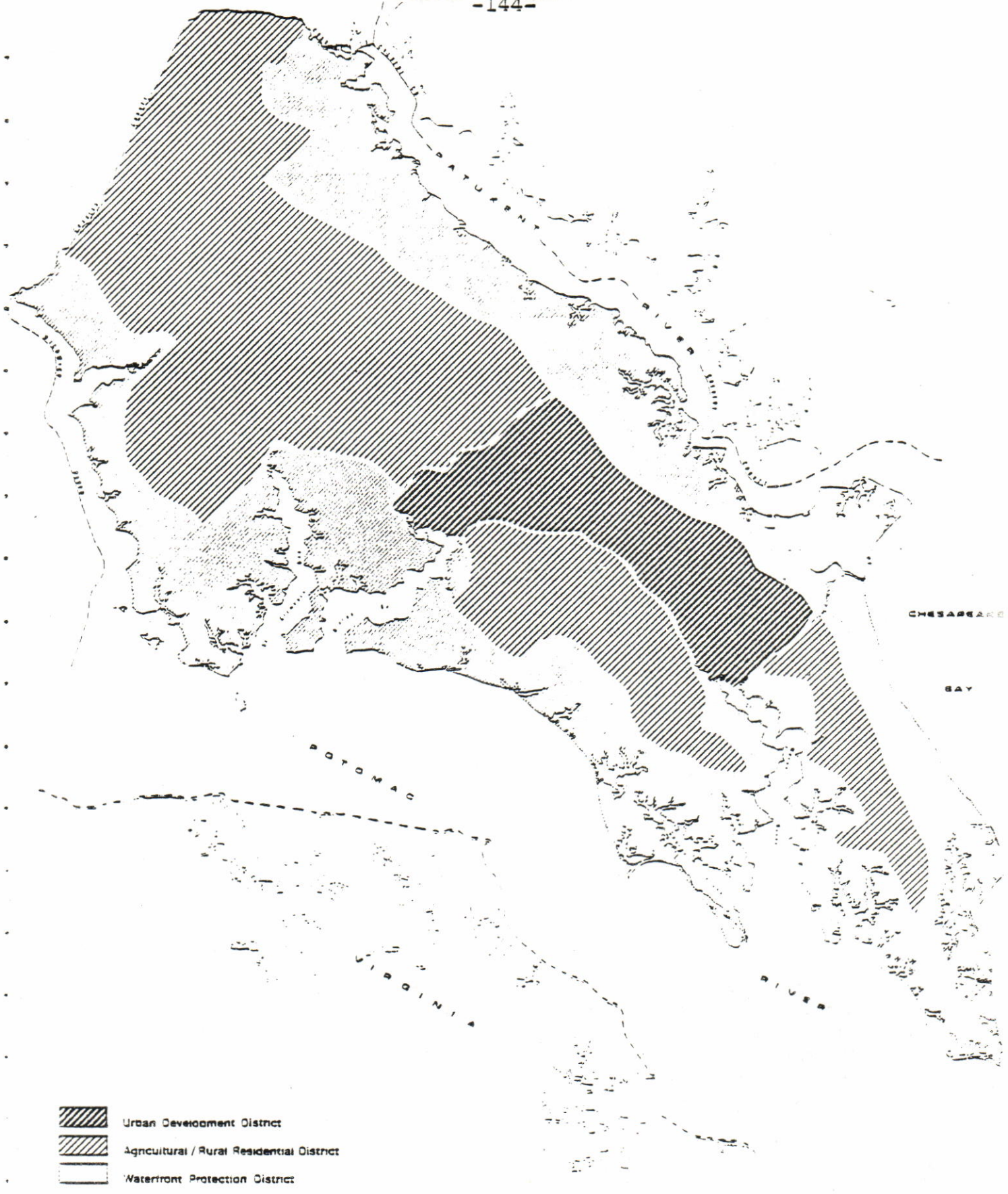
The next step involved the distribution of the projected population growth into proposed growth centers, community service centers, and more rural low density residential areas. The analysis process is therefore summarized in the following pages, leading to the formation of a comprehensive land use plan.

Having discussed the first three levels of the analysis process, several conclusions are evident which bring all the elements together into the land use plan:

1. The waterfront areas must be programmed for protection and preservation as well as for high quality and desirable development.
2. It is important and desirable to concentrate growth incentives in the Lexington Park and Leonardtown areas along with ample room for future expansion.
3. In less densely populated areas and areas of lower level provision of public infrastructure, it is necessary to limit future growth and redirect such pressures into those areas designated for concentrated growth, thereby preserving agricultural, forest, and related activities.

Combining these overall conclusions with those concerning the distribution of future population growth discussed in the section on "Designation of Activity Centers," leads to a Concept Plan for the County which encompasses three general districts (see Figure 27). These districts include the Agricultural/Rural Residential District, the Waterfront Protection District, and the Urban District. These three districts are a synthesis of the sectors delineated in Stage One and the projections of future growth, and they are based on the patterns of existing land use and the natural features of the County. These three generalized districts will serve as the basic framework for the implementation strategy. The more detailed description of the actual land uses is shown in the Comprehensive Land Use Plan (Figure 28), and in the open and recreation plan (Figure 29), which reflects the conclusions generated by each of the steps in the staged analysis.

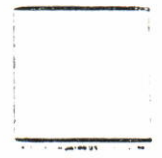
The three major districts are shown--Waterfront Protection District, the Agricultural/Rural Residential District, and the Urban District. The Waterfront Protection District includes the proposal for expanded self-sufficient residential villages along the waterfront as discussed in the section describing the designation of activity centers and the distribution of the projected population (The Fifth Stage--Designation of Activity Centers). The community service centers are shown as proposed at Hollywood, Ridge, Valley Lee, Clements, Chaptico, Avenue, New Market, and Charlotte Hall. The major centers of Lexington Park and Leonardtown are shown as a special master-planned center as previously discussed. St. Mary's City, along with the proposed buffer zone, is also shown as a special master-planned center as previously discussed. Added to the land use plan are the proposed recreation and natural wildlife preservation areas as discussed in the section on the Environmental/Natural Resources Issues, and as shown in Figure 29. Figure 29 summarizes all the recreation and open space/preservation proposals, including existing State and County parks, proposed water impoundment and catchment areas, potential recreation areas, and proposed preservation areas as well as existing local facilities.

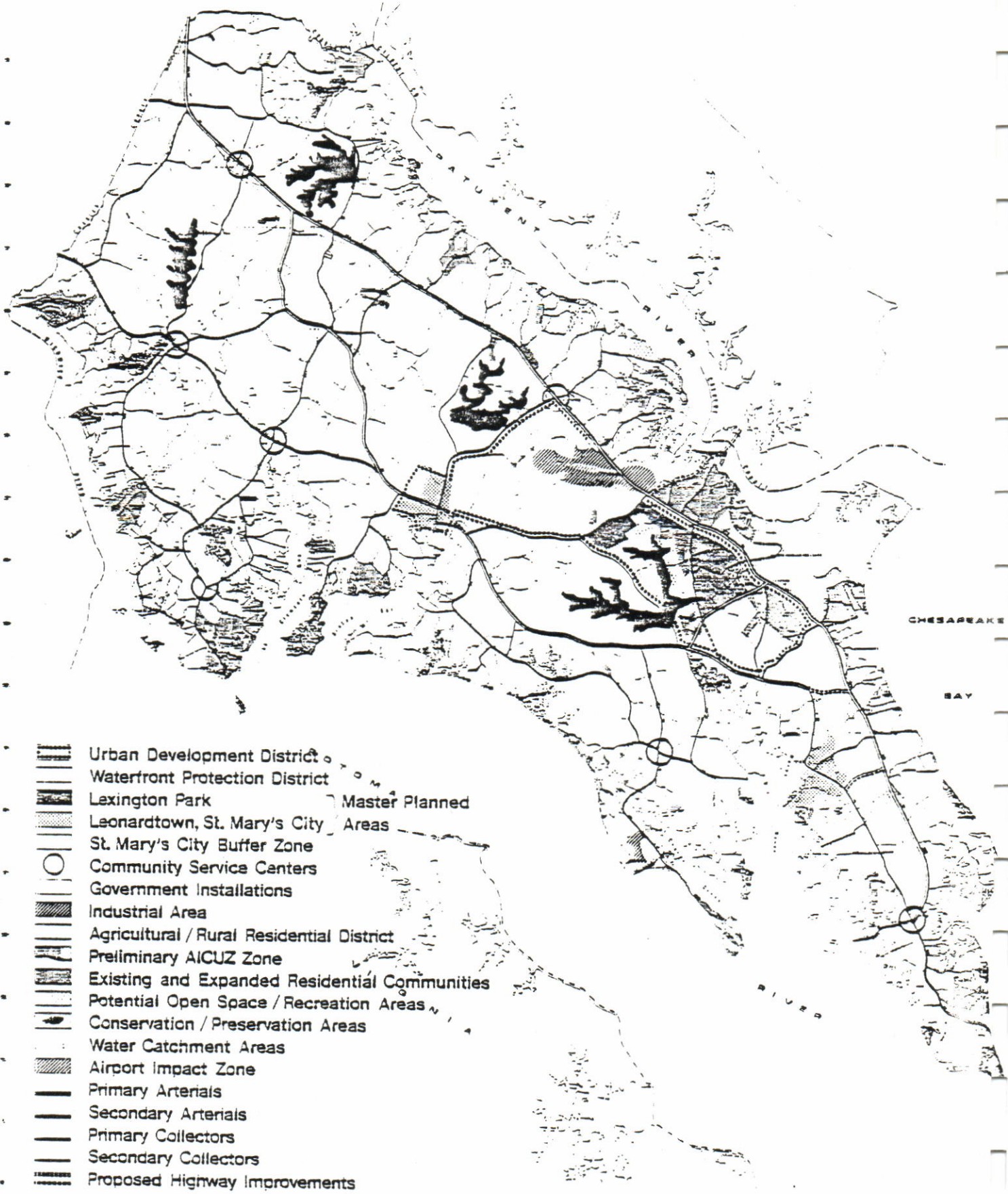


-  Urban Development District
-  Agricultural / Rural Residential District
-  Waterfront Protection District

# ST. MARY'S COUNTY - MARYLAND

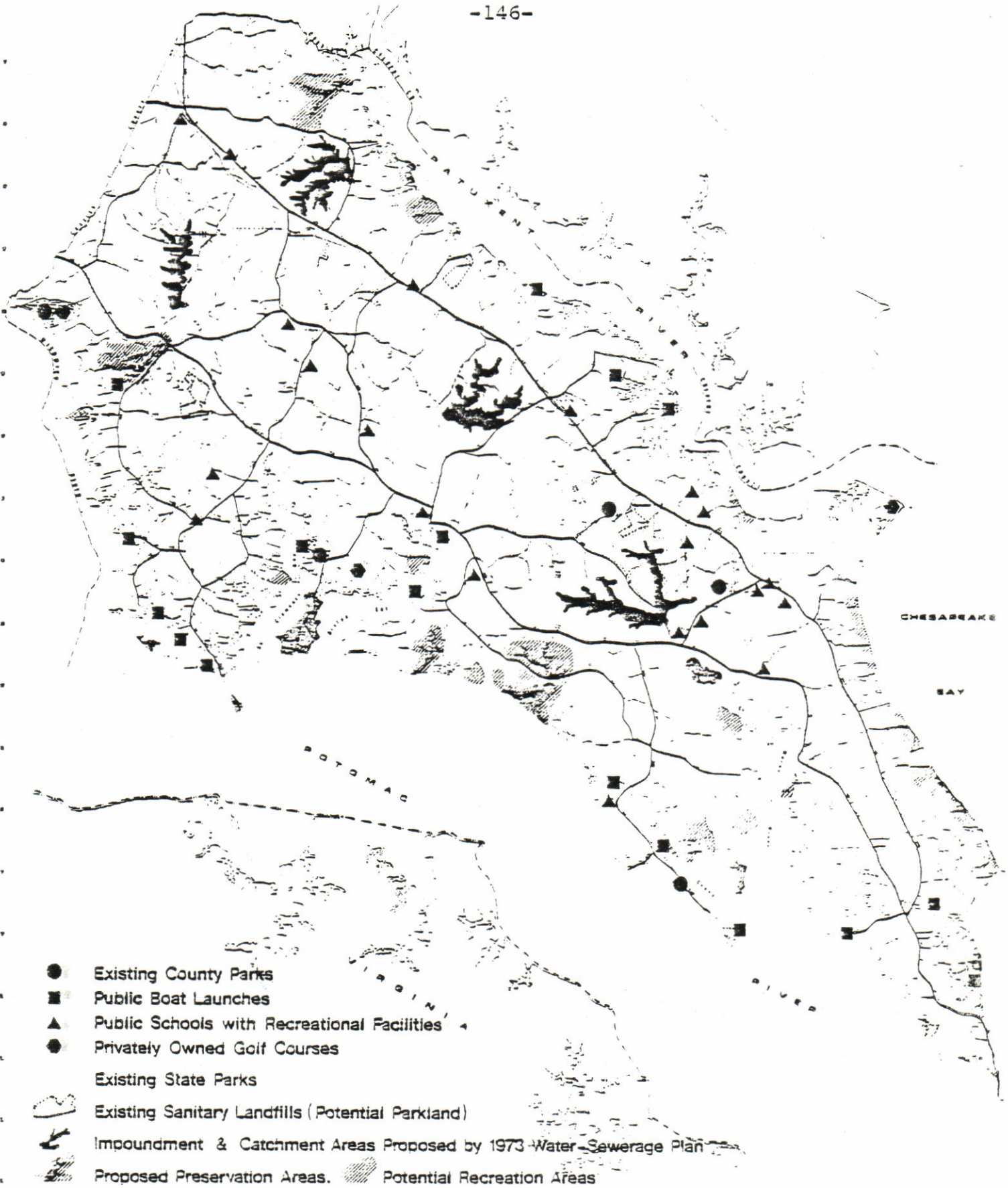
## 27. CONCEPT PLAN





# ST. MARY'S COUNTY - MARYLAND

## 28. COMPREHENSIVE LAND USE PLAN



# ST. MARY'S COUNTY - MARYLAND

## 29. OPEN SPACE AND RECREATION

The Comprehensive Land Use Plan and the Open Space and Recreation Plan are the summation of all the elements discussed in the staged process. However, it is important as a next step to discuss in detail the characteristics of land uses with respect to each of the three designated districts.

#### Waterfront Protection District

The purpose of the Waterfront Protection District is to ensure compatibility of any proposed development with the overriding objective of environmental protection along the shoreline of St. Mary's County. This district includes designation of areas for conservation and preservation because of their natural value and because of limited or non-existent development potential. The primary objective is to effectively balance development opportunities with the environment and to prevent the use of unsuitable locations for development.

The special areas of environmental concern are as follows:

1. Wetlands and marshes.
2. Special wildlife habitats.
3. Streams, streamcourses, and flood plains.
4. Erosion and sedimentation.
5. Water quality and the protection of shellfish.
6. Effluent.
7. Protection of slopes and wooded areas.
8. Vegetation.
9. Dredging.
10. Flood protection.
11. Shoreline modification.

The following generalized environmental criteria serve as the basis for all proposed development:

1. Prevent or minimize air and water pollution.
  - . Control location of point and area pollution sources.
  - . Utilize the form and design of cities to decrease the potential causes of pollution.
  - . Plan transportation systems to minimize travel and therefore fuel consumption.

2. Reduce threats to life and property through recognition of natural environmental conditions:
  - . Flood Plains.
  - . Areas of Excessive slope.
  - . Location of major fault lines.
  - . Marshes and wetlands.
3. Preserve and protect soil and mineral resources by prevention of:
  - . Clearcutting.
  - . Excessive use of pesticides.
  - . Construction on prime and/or productive agricultural land.
  - . Wasteful use of resources.
4. Protect unique and fragile environments.
  - . Wetlands.
  - . Natural wildlife habitats.
  - . Historic areas.

The Waterfront Protection District will allow the following land use activities:

1. Conservation and preservation/open space and recreation areas.
2. Residential use according to special environmental and design criteria as described in the Comprehensive Plan (an environmental RDZ of PUD) with specified maximum densities for both gross and net acreage for any proposed development.
3. Agricultural use with special pollution control measures.
4. Other special uses, such as marine commercial, subject to the development policies delineated in the Comprehensive Plan.

General goals for the Waterfront Protection District are as follows:

1. To allow the development of low density residential, selected commercial and industrial expansion and agricultural activities in a manner that is compatible with and enhances the natural environment.
2. To maintain and improve the water quality of the rivers, streams, and bays so that shellfishing, fishing and water-oriented economic activities will not be curtailed.
3. To preserve the vegetation, natural features and stream courses adjacent to the waterfront areas.
4. To prevent significant problems of erosion, sedimentation and drainage.
5. To protect public and private investments from flood and flood damage.
6. To assure appropriate land use design in harmony with the environmental and natural features of the area.
7. To protect and maintain prime and/or productive agricultural areas.
8. To allow development in areas that are suitable for development by virtue of their natural features and so preserve areas through private action that are naturally unsuitable for development.

Agricultural/Rural Residential Districts:

These areas are designated for primarily agricultural and rural residential use as distinguished and protected from urban development. The agricultural district shall include activities or uses as characterized by the cultivation of crops, orchards, forage, and forestry; farming activities or uses related to animal husbandry, and game and fish propagation; services and other uses accessory to the above activities including but not limited to living quarters or dwellings, storage facilities, processing facilities, and roadside stands for the sale of products grown on the premises; and open area recreational facilities. These districts may include areas which are not used for, or which are not suited to, agricultural and ancillary activities by reason of topography, soils, and other related characteristics. This zone will also include criteria for the prevention of further environmental pollution caused by agricultural operations; including but not limited to control of the use of various chemicals (pesticides, insecticides, herbicides) which eventually find their way into the surface and ground water area of the surrounding region; run-off from agricultural lands which intensifies



sedimentation problems and water pollution problems, including problems generated by presence of animal waste in run-off. In addition to agricultural and accessory uses, the following special uses are also to be permitted:

- . Religious institutions.
- . Home occupations and professional offices.
- . One-family dwellings at a specified maximum density with opportunities for special planned residential communities at low density subject to requirements for a master plan and site plan review in addition to general district evaluation criteria.
- . Public uses subject to site-plan approval.
- . Wayside Stands.
- . Other special uses as approved.

Community service centers shall be developed according to a special zone to be included within the agricultural/rural district which will be subject to review according to an appropriate set of evaluative criteria, including but not limited to:

- . Site-plan review/design review.
- . Market studies.
- . Economic viability.
- . Environmental criteria.

#### Urban District

Includes master planned areas suitable for higher density residential and commercial development according to an approved master plan:

Plus area of lower density for future expansion according to design and development plans specified in a new "Urban" Development Zone" - a larger-scale PUD.

Includes major developed areas plus reserve of land sufficient to accommodate urban growth projected by the Comprehensive Plan.

The Urban District will primarily be defined as the area bounded by the triangle of Hollywood, Lexington Park, and Leonardtown. The major concentration of development would be in the Lexington Park area, projected to reach a population on the order of 40,000 sometime shortly after the turn of the century. The Urban District would accommodate residential development and retail/commercial to satisfy the market demand. Special zones related to airports will provide for agricultural and industrial use according to available market. Agricultural use will be included in areas within the District not yet subject to development pressures.

Site-Plan review will be required for larger developments as part of the design and development program in the district not only in those areas for which master planning is currently proceeding.

Included as an allowable use in the Urban District will be a larger parcel Planned Community Development. All such projects will be subject to complete design and site plan review in return for density and use bonuses. The uses within the district may be of any type - residential, commercial, industrial, or a mixture of uses. However, the major use must conform to the master plan use designated for the area. Part of the process of design review will involve the preparation by the planning commission of a description of the types of development and design standards which will serve as the guide for evaluation.

#### Land Use Categories

The second level of land use designations will be functional use areas which will be allowed in one or more Districts at varying degrees of intensity. Each functional use area will include a set of standards and evaluative criteria which will be added to the set of standards and evaluative criteria applicable for the District in which the functional use area will be allowed. These functional use areas will include but not be limited to the following:

1. Agriculture
2. Residential
3. Commercial
4. Industrial
5. Public and Open Space.

The third level will involve the designation of specific land use categories as sub-components of the Functional Land Use Areas. The detailed analysis of the specific land use categories and the inter-relationships among the resulting three levels of the implementation programs is the central focus of the next stage in the preparation of an overall St. Mary's County Zoning Ordinance.

Agriculture / Rural Residential District

Agriculture

1. Agriculture, including activities or uses characterized by the cultivation of crops, orchards, forage, and forestry.
2. Farming activities or uses related to animal husbandry and game and fish propagation.
3. Services and other uses accessory to the above activities, including but not limited to living quarters or dwellings, storage facilities, and roadside stands for sale of products grown on the premises.

Residential

1. Low density rural residential subject to availability of sewer and water as well as all other County regulations with minimum lot size as specified in the "Schedule of Lot Dimensions, Yard Requirements, Coverage, and Density" of the Zoning Ordinance of St. Mary's County, Maryland.
2. Planned Residential Communities I -- a higher density planned residential development subject to stringent environmental and design standards, including but not limited to the following:
  - a. Connection to public water and sewer.
  - b. adequate road capacities.
  - c. adequate provision of public infrastructure.
  - d. minimum development parcel size of 550 acres (either as independent or in combination with contiguous parcels).
  - e. subject to the environmental criteria pertaining to the district as a whole.
  - f. preservation of designated natural areas.
  - g. maximum provision of open space according to the housing type used in the development.

- h. approval by the planning commission based on these and other designated criteria, including site plan review.
  - i. subject to the following density limits:
    - . maximum overall gross density = 2.0 d.u./acre
    - . maximum net density on a given site of townhouse development = 10.0 d.u./acre
    - . maximum net density on a given site of single family detached units = 3.0 d.u./acre
  - j. must be directly related to existing or concurrently developing community service centers as designated on the Comprehensive Plan for provision of necessary neighborhood commercial facilities.
3. Planned Residential Communities II, within one mile radius of Community Service Centers -- a medium density planned residential development subject to stringent environmental and design standards, including but not limited to the following:
- a. adequate sewer and water capabilities meeting all applicable standards.
  - b. adequate road capacities.
  - c. adequate provision of public infrastructure.
  - d. minimum development parcel size of 50 acres (either as independent or in combination with contiguous parcels).
  - e. subject to the environmental criteria pertaining to the district as a whole.
  - f. preservation of designated natural areas.
  - g. maximum provision of open space according to the housing type used in the development.
  - h. approval by the planning commission based on these and other designated criteria, including site plan review, elements of which will be delineated in the zoning ordinance.
  - i. subject to the following density limits:
    - . maximum overall gross density = 0.5 d.u./acre

- . Maximum net density on a given site of town-house development allowable only with connection to public water and sewer = 10.0 d.u./acre
- j. must be located within one mile radius areas of designated community service centers as delineated on the Comprehensive Plan for provision of necessary neighborhood commercial facilities.

Commercial

1. Existing highway commercial.
2. Community service centers and Commercial-Limited (CL) category as prescribed by the Comprehensive Plan, or as developed pursuant to a proposed planned residential community.

Industrial

Only as a conditional use in designated industrial park areas subject to strict environmental control, performance standards, and site plan review as will be defined in the zoning ordinance.

Public and Open Space

1. Schools and other public facilities related to community service centers.
2. Parks and recreation/open space areas.
3. Water impoundment areas.

Waterfront Protection District

Agriculture

1. Agriculture and related uses as described in the Agricultural/Rural Residential District.
2. All agriculture and related uses subject to the added environmental criteria of the Waterfront Protection District.

Residential

1. Low density residential subject to environmental and design criteria with minimum lot size as specified in the "Schedule of Lot Dimensions, Yard Requirements, Coverage, and Density" of the Zoning Ordinance of St. Mary's County, Maryland.
2. Planned Waterfront Residential Communities I - a higher density planned residential development subject to stringent environmental and design standards, including but not limited to the following:

- a. connection to public water and sewer.
  - b. adequate road capacities.
  - c. adequate provision of public infrastructure.
  - d. minimum development parcel size of 350 acres (either as independent or in combination with contiguous parcel).
  - e. subject to the environmental criteria pertaining to the district as a whole.
  - f. preservation of designated natural areas.
  - g. maximum provision of open space according to the housing type used in the development.
  - h. maintenance of public access to waterfront areas as a percentage of available waterfront.
  - i. approval by the planning commission based on these and other designated criteria, including site plan review, elements of which will be delineated in the zoning ordinance.
  - j. subject to the following density limits:
    - . maximum overall gross density = 3.5 d.u./acre
    - . maximum net density on a given site for townhouse development = 10.0 d.u./acre
    - . maximum net density on a given site for mid-rise apartments = 15.0 d.u./acre
    - . maximum net density on a given site for single family detached units = 4.0 d.u./acre
3. Planned Residential Waterfront Communities II within one mile radius of Community Service Centers -- a medium density planned residential development subject to stringent environmental and design standards, including but not limited to the following:
- a. adequate sewer and water capabilities meeting all applicable standards.
  - b. adequate road capacities.

- c. adequate provision of public infrastructure.
- d. minimum development parcel size of 50 acres (either as independent or in combination with contiguous parcels).
- e. subject to the environmental criteria pertaining to the district as a whole.
- f. preservation of designated natural areas.
- g. maximum provision of open space according to the housing type used in the development.
- h. approval by the planning commission based on these and other designated criteria, including site plan review, elements of which will be delineated in the zoning ordinance.
- i. subject to the following density limits:
  - . maximum overall gross density = 0.5 d.u./acre
  - . maximum net density on a given site of townhouse development allowable only with connection to public water and sewer = 10.0 d.u./acre
- j. must be located within one mile radius areas of designated community service centers as delineated on the Comprehensive Plan for provision of necessary neighborhood commercial facilities.
- k. maintenance of public access to waterfront areas where appropriate as a percentage of available waterfront.

Commercial

1. Community service center and Commercial-Limited (CL) category as delineated by the Comprehensive Plan.
2. Marine Commercial/Marinas subject to environmental and design review.
3. Village centers/Neighborhood Commercial in Planned Waterfront Communities.
4. Other water-oriented commercial activities subject to appropriate environmental criteria.

Industrial

1. Water related industrial use subject to the most stringent environmental criteria as described in the general discussion of the Waterfront Protection District.

Public and Open Space

1. Conservation and preservation/open space areas (including water impoundment areas) as designated by the Comprehensive Plan.
2. Park and recreation areas.
3. Other public use areas including existing military installations.

Urban District

Agriculture

1. Interim agriculture, forest, and related uses as described in the Agricultural/Rural Residential District.

Residential

1. Residential uses in Master Planned Urban Centers:

- a. maximum single family detached density in net d.u./acre = 4.0 d.u./acre
- b. allowable densities for hybrid housing = 4.0 - 15.0 d.u./acre
- c. allowable densities for townhouses = 10.0 d.u./acre
- d. allowable densities for garden apartments = 15.0 d.u./acre
- e. allowable densities for mid-rise (only in areas designated by the Comprehensive Plan - a conditional use subject to the approval of the planning commission based on the Master Plan for Lexington Park and Leonardtown) = 30.0 d.u./acre



2. Residential uses in Urban Expansion Areas as designated by the Comprehensive Plan.
  - a. Low density residential subject to availability of sewer and water as well as all other County regulations with minimum lot size as specified in the "Schedule of Lot Dimensions, Yard Requirements, Coverage, and Density" of the Zoning Ordinance of St. Mary's County, Maryland".
  - b. Planned Residential Communities - a higher density planned residential development subject to stringent environmental and design standards, including but not limited to the following:
    - . connection to public water and sewer
    - . adequate road capacities
    - . adequate provision of public infrastructure
    - . minimum development parcel size of 250 acres to create a continuous fabric of village centers (either as independent or in combination with contiguous parcels)
    - . subject to the environmental criteria pertaining to the district as a whole
    - . preservation of designated natural areas or water catchment areas
    - . maximum provision of open space according to the housing type used in the development
    - . approval of the planning commission based on these and other designated criteria, including site plan review
    - . maximum overall gross density = 5.0 d.u./acre
    - . maximum net densities as follows:

single family detached	= 4.0	d.u./acre
hybrid housing	= 4.0 - 15.0	d.u./acre
townhouses	=	10.0 d.u./acre
garden apartments	=	15.0 d.u./acre
Mid-Rise		30.0 d.u./acre
    - . commercial use allowable in the form of Village Center/ Neighborhood Commercial

Commercial

1. All appropriate commercial activities from previous districts with the addition of commercial office and community level commercial and regional level commercial activities as described in the attached norms and standards.

Industrial

1. In areas designated for industrial parks by the Comprehensive Plan.
2. All industrial uses are subject to site plan review, performance standards, and environmental criteria.

Public and Open Space

1. Park and recreation.
2. School and related uses.
3. Water impoundment areas.
4. Forest and related uses.
5. Conservation areas.
6. Government installations.

## AIRCRAFT IMPACT DISTRICTS

In the consideration of future proposed land uses in areas affected by aircraft installations, the policy of the County Commissioners and the Planning Commission shall be as follows:

(1) Except in those areas for which zoning districts have otherwise been previously established, those areas designated as CNR-ZONE 2 and Considerable Accident Potential shall be limited to the following uses:

- (a) Industrial
- (b) Commercial
- (c) Residential (No greater than one dwelling unit per acre)
- (d) Open Space and Recreational Uses (other than Spectator Sports)

The aforesaid policy as to land use shall in no way affect existing zoning districts or the rights and duties of the owners thereof, their successors and assigns.

(2) There shall be a Buffer Zone which shall extend 1,000 feet beyond and around the designated CNR-ZONE 2 which may permit, Agricultural, Industrial, Commercial, and/or Residential at a gross density not to exceed two (2) dwelling units per acre. Within the Buffer, the Planning Commission shall encourage lower densities adjacent to the CNR-ZONE 2 line and higher densities near the outer perimeter of the Buffer Zone. The aforesaid Buffer Zone policy shall in no way affect existing zoning districts or the rights and duties of the owners thereof, their successors and assigns.

(3) That any change in the aforesaid policy shall be based on the validity and evaluation of data and other evidence submitted by the owner or party in interest in the subject property, demonstrating satisfactorily why the proposed land use should not apply.

(4) In evaluating specific proposed land uses under this Resolution the criteria of adequate transportation, provision of water and sewer, and adjacent land uses shall be studied in discerning the zoning district of any specific parcel within the designated area. Considerations involving smoke emission and light emission shall be considered in evaluating all industrial land uses.

See the St. Mary's County Zoning Ordinance, Article XXI for implementing regulations.

TABLE 36

INTERIOR DAY-NIGHT SOUND LEVEL (dBA) CRITERIA  
FOR VARIOUS LAND USES

<u>Land Use</u>	Acceptability	
	<u>Average (dBA)</u>	<u>Marginal (dBA)</u>
Residential (Low density, rural, suburban)	35	45
Residential (urban)	40	45
Residential (temporary)	40	45
Schools, Hospitals, Religious	30	45
Offices	40	50
Commercial	45	55
Industrial	65	75
Recreational	50	50

RURAL SERVICE CENTERS

Purpose

The purpose of the Rural Service Center is as follows:

1. To provide sufficient land areas in appropriate locations for commercial, residential, agricultural service facilities, and for public and semi-public facilities in the light of their respective inter-relationships and environmental needs in order to meet the needs of all citizens in the rural portions of the County.
2. To encourage the proper development and protection of all our natural resources.
3. To encourage the healthful and convenient distribution of population, and other activities, protect agricultural areas from undue intrusion of commercial and residential development.
4. To appropriately accommodate in zoning the existing scattered Rural Commercial areas and enhance the operation and expansion of these facilities.
5. To encourage the most desirable and appropriate use of land, to minimize the adverse impact of one land use upon another, and to provide for the gradual amelioration of undesirable conditions.
6. To encourage the location of additional agricultural service establishments in recognized Rural Service Centers in order that the development of scattered commercial sites may be avoided.

Land Use Policies

Rural Service Centers are defined as those areas in the County located at strategic intersections that contain at least three (3) commercial establishments and are historically and economically significant to the rural population of the County. Some of these areas are Chaptico, Helen, Morganza, Loveville, Clements, Colton, Avenue, California, Compton, Callaway, Piney Point, Tall Timbers, Park Hall, Great Mills, Budd's Creek, Oakville, Golden Beach, Abell, Dameron, and St. Inigoes.

Rural Service Centers provide for the integration of limited commercial activity with rural residential and agricultural development.

PART III: SUPPORTING COMPONENTS OF THE COMPREHENSIVE PLAN

SUPPORTING COMPONENTS OF THE COMPREHENSIVE PLAN

T r a n s p o r t a t i o n

Existing Conditions

The transportation system in St. Mary's County has historical, geographic and economic origins. Throughout tidewater Maryland and Virginia, transportation in the colonial era was mainly by water. Cargo and passenger boats sailed the estuaries and bays separating the many peninsulas that reach into the Chesapeake Bay. Water transportation continued to be the major mode until the 1870's as the developing county road system was often impassible. Highway quality improved after World War I and in addition a government railroad line was built in the late 1930's from Prince George's County to the U.S. Naval Station at Lexington Park. Private and military airfields were constructed at a later date.

Highway movement is now well established as the major mode for moving people and goods within and through St. Mary's County. Existing transportation facilities reflect the peninsular character of this historic county and the simultaneous need to maintain effective connection with communities inland up the peninsula including the Washington and Baltimore metropolitan areas. The regional connection has become increasingly important as employment has concentrated in fewer locations and the automobile has become financially accessible to most family groups. The bus is still a relatively minor mode.

Transportation facilities will continue to be a basic supporting system for land use planning and development in St. Mary's County. They have permanent importance in determining the future character and detailed patterning of growth in the county.

This section reviews the existing highway system and other transportation modes.

Existing Highways

Highways are the principal means of interaction within and between the different communities and sub-areas of the County. Transportation in St. Mary's County is almost entirely highway oriented.

This section describes the present classification systems (functional and administrative), levels of service (capacity and accidents), motor vehicle registration, and present highway programming.



## Classification Systems.

Highways in St. Mary's County are classifiable either by functional or official administrative category. A functional classification system is based on the type of service and the degree of land access a highway provides. Each functional type is defined by a set of design standards. Highways serving long distance trips have higher standards than those which carry short distance trips at lower speeds. Functional classification indicates the standards to which a highway should be built or improved and normally sets up design criteria by which the adequacy of an existing highway can be evaluated.

An administrative classification system is normally based on funding program categories. Each grouping within the administrative system refers to a separate highway program. Highways of the highest functional type -- principal arterial -- are also generally in the highest administrative category -- Interstate or State Primary. Highways at the lower end of the functional system -- local roads -- usually coincide with those at the lower end of the administrative system -- county highways.

### The Functional Classification System

The State Highway Administration of Maryland has functionally classified all state highways within an eight-level system. Highways are assigned within the system according to the character of service which they are expected to provide over the next twenty years. This depends in part on the population of the area served, and is subject to change.

The following eight functional categories are defined by the State Highway Administration. Detailed standards have been established for each functional type, which include road function, land access function, type of access control, design speed, land and shoulder widths, minimum right-of-way, number of lanes, maximum grade, and bridge clear widths.

1. Principal Arterial -- Highways which lie in interstate and inter-regional travel corridors. They provide a continuous and inter-connected network of highways serving (a) all urban areas with an estimated future population of 50,000 or greater and (b) most urban areas with an estimated future population of 25,000 or more. Both estimates include 20-year population projections. Principal arterials serve interstate and long distance intra-state travel desires.

- 2 & 3. Major Arterial -- Highways which serve regional travel corridors and provide a continuous network of highways complementing the principal arterials. They directly serve urban areas with an estimated future population of 5,000 or more. Major arterials serve intra-state and inter-county travel desires. Access into Type 2 is fully or partially controlled. There is no access control in Type 3.
4. Intermediate Arterial -- Highways which support major arterials in serving regional travel corridors. They directly serve urban areas with estimated future populations of 1,000 or more. Intermediate arterials are generally continuous and serve inter-county and inter-city travel desires.
5. Minor Arterial -- Highways which serve intra-regional travel corridors and directly link small communities and/or recreation centers not otherwise served by higher arterial highways. They are continuous in rural areas only and serve in urban areas as stub ends of the arterial system. Minor arterials serve intra-county and inter-community travel desires.
6. Major Collector -- Highways which occupy county or city corridors, serving communities, shopping areas, schools, parks, recreation centers, and cluster developments not already served by arterial highways. They collect traffic from local streets and channel it into the arterial system. Major collectors serve intra-county and inter-community travel desires.
7. Minor Collector -- Highways which collect traffic from local roads and bring developed areas within a reasonable distance of a major collector or minor arterial highway. They are spaced at intervals consistent with population density. Minor collectors serve local traffic generators and intra-community travel desires.
8. Local -- Highways which provide direct land access at a trip end.

The present functional classification of highways in St. Mary's County is shown in figure 30. With two exceptions the classification stated by the consultant coincides with that proposed by the State Highway Administration. State Route 5 south of Route 235 has been downgraded in classification from an intermediate arterial (as classified by the State) to a minor arterial. State Route 6 east of Routes 5 and 235 has been upgraded in classification from a local road (as classified by the State) to a minor collector.

## The Administrative Classification System

The four levels of the State's Administrative Classification System are Interstate, State Primary, State Secondary, and County. This corresponds to the funding program groupings (figure 30).

1. Interstate -- Highways which have been federally designated as part of the nationwide 42,500 mile system of Interstate highways. There are no Interstate highways in St. Mary's County. The Capital Beltway (I-495) encircling Washington, D.C. is the nearest example.
2. State Primary -- Highways which serve important interstate and intra-state connections. There are three State Primary highways in St. Mary's County -- Routes 5, 235, and 246.
3. State Secondary -- Highways which link towns and communities within the county or provide access to centers not served by the primary system. All other State-numbered highways in St. Mary's County which are not on the primary system are a part of the secondary system.
4. County -- A system officially designated by the County, totalling 401 miles, which is comprised primarily of collector and local streets. Construction and maintenance of these roads is funded by the County.

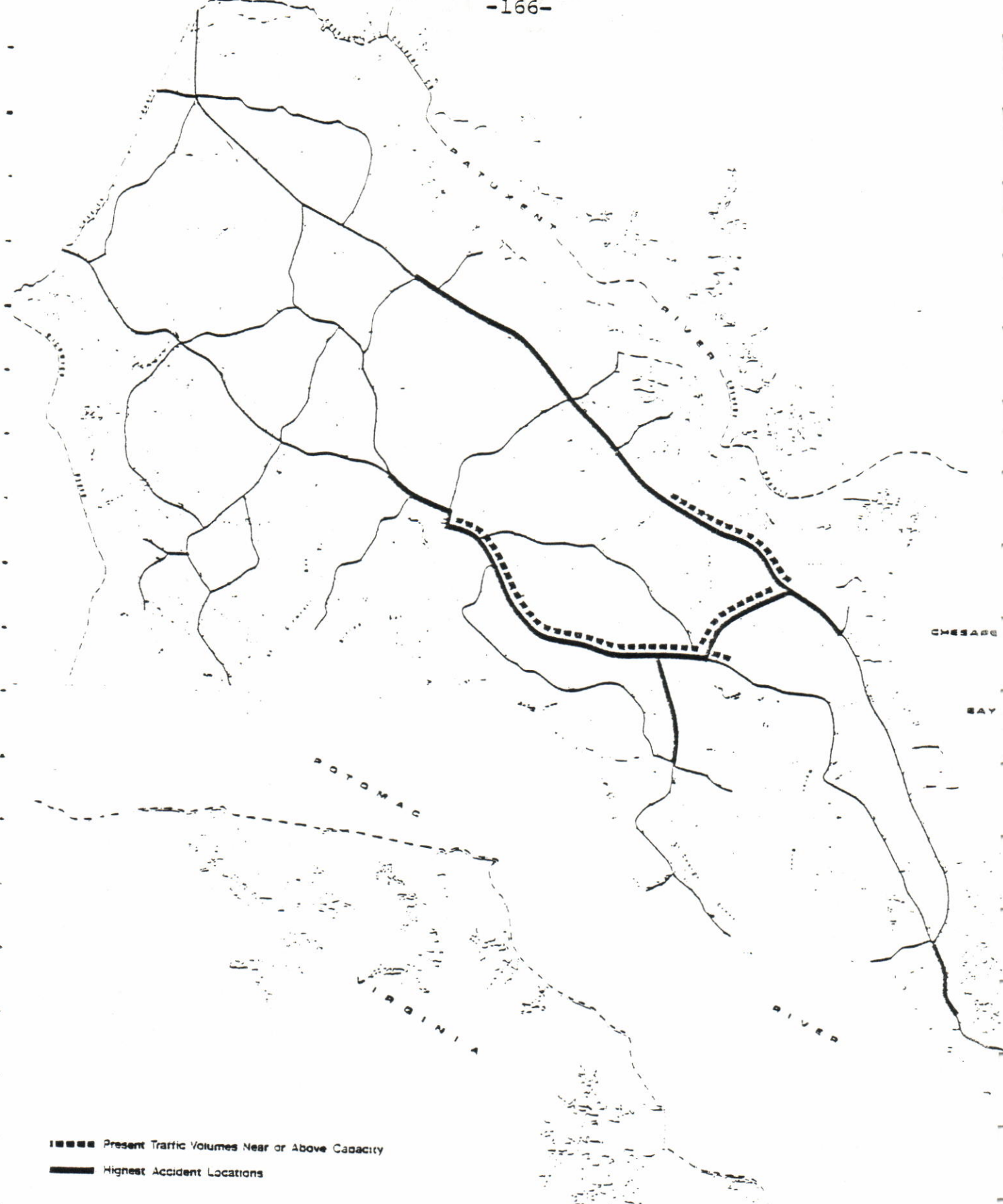
## Level of Service

The adequacy of the existing highway system can be evaluated by capacity and accident criteria (figure 31). Capacity measures the adequacy of existing lanes to carry existing and projected traffic volumes. Accident rates indicate operating deficiencies arising from both route capacity and highway design. Discrepancies between existing right-of-way widths and the official right-of-way standards for each functional type are also indicators of highway adequacy. Future widening within the existing right-of-way limits will increase future capacity.

## Capacity

The capacity of a highway depends on the number of traffic lanes, width of lanes, grades, truck volumes, and (for two-lane highways only) the percentage of road which has adequate passing sight distance. On flat two-lane highways with unlimited passing sight distance, twelve-foot lane widths, and no truck





----- Present Traffic Volumes Near or Above Capacity  
———— Highest Accident Locations

# ST. MARY'S COUNTY - MARYLAND

31. LEVEL OF SERVICE - 1973

traffic, the design capacity is approximately 1,400 vehicles per hour. This condition is known as Level of Service C.<sup>1</sup> It defines a service level with minor congestion of short duration during peak hours. The ultimate capacity of a two-lane highway is 2,000 vehicles per hour and is known as Level of Service E.<sup>1</sup> It is characterized by heavy congestion during peak hours, with major delays which are considered intolerable by most drivers.

The only three highways in St. Mary's County which now have traffic volumes even approaching the design capacity of the road are Routes 235, 246, and 5. Route 235 actually has a capacity deficiency in the two-lane portion between Route 246 and St. Andrew's Church Road north of Lexington Park. Current widening of this section to four lanes will eliminate the deficiency. Route 246 between Lexington Park and Route 5 is operating close to capacity only along the two-lane sections. However, the four-lane sections do have traffic operations problems related to the many driveways and signalized intersections. Much of the peak hour traffic is generated by the Patuxent Naval Air Test Center. The only sections of Route 5 which are close to capacity are between Leonardtown and Route 246, with particular emphasis on the Great Mills area and the Route 246 intersection.

#### Accidents

Accidents on a particular section of highway indicate one or more types of inadequacy in capacity or highway design. Accidents are measured alternatively in terms of absolute number of incidents or in average rates per million vehicle miles. The first approach would be used to describe locations (e.g., signalized intersections) with a significant number of accidents but low accident rates. The latter is normally used to describe locations (e.g., rural highway sections) where the number of accidents is relatively low, but the rate is high.

Current (1973) average Statewide accident measures for Maryland are 1.9 accidents per mile or 2.7 accidents per million vehicle miles. These measures, and actual major accident locations or sections, vary from year to year. Therefore, a particular location or section of highway cannot be assumed to be a long term high accident location unless, in any given year, both evaluation criteria (the number of accidents per mile and the number of accidents per vehicle mile) are considerably higher than the statewide level. To be statistically significant, the accident rate for a given section of highway should officially be at least double the statewide accident rate for that type of highway.

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<sup>1</sup>As defined by the Highway Research Board and recognized by the Maryland State Highway Administration.

Based on these criteria, the highest accident locations in St. Mary's County in 1972<sup>1</sup> were as follows:

1. Route 246 in Lexington Park between Route 235 and Saratoga Drive. Most specifically, the intersection with Shangrila Drive -- 52 accidents, or a rate of 68.4 accidents per mile.
2. Route 235 from Route 246 to St. Andrew's Church Road.
3. Route 235 from Route 712 to Route 246.
4. Route 5 within the city limits of Leonardtown.
5. Route 246 from Route 5 to Saratoga Drive -- 12.9 accidents per mile.
6. Route 5 from Leonardtown east to Route 246.
7. Route 5 from Leonardtown west to Route 234.
8. Route 249 from Route 5 to Route 244.
9. Route 5 south of Route 235 near Ridge.
10. Route 235 from St. Andrew's Church Road to Route 247.

In summary, Route 246 is a high accident route throughout its length with the primary trouble spots located in Lexington Park and especially at the intersection with Shangrila Drive. Maryland Route 235 in Lexington Park is also the location of a large number of accidents. The accident rate on Route 235 is high between Route 712 and Route 247, a distance of nearly 17 miles, and is excessive between Route 246 and St. Andrew's Church Road.

State Route 5, focused primarily around Leonardtown and south of Ridge, is a further trouble spot.

#### Motor Vehicle Registration

The number of motor vehicles registered in St. Mary's County has more than doubled in the last twenty years, paralleling the growth in population, car ownership, vehicle travel, and traffic volumes. The number of registered vehicles in St. Mary's County has increased from 8,637 in 1954 to 12,747 in 1963 and 19,553 in 1972. At the same time, the number of county residents per registered automobile dropped from 3.4 in 1960 to 2.5 in 1970.

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<sup>1</sup>Based on 1972 accident data for St. Mary's County obtained from the State Highway Administration.

This rate will probably continue to decrease and may reach a rate of 2.0 by 1990, in which case there will be approximately 38,000 motor vehicles registered in the County that year -- twice the number registered in 1970. By the same token, the number of vehicular miles of travel and the actual traffic volumes on highways in St. Mary's County will probably both double between 1970 and 1990.

#### Highway Programming

The State Highway Administration has established five year capital expenditure programs for both state primary and state secondary highways. This plan is revised and updated each year. Its application in St. Mary's County is shown in figure 32.

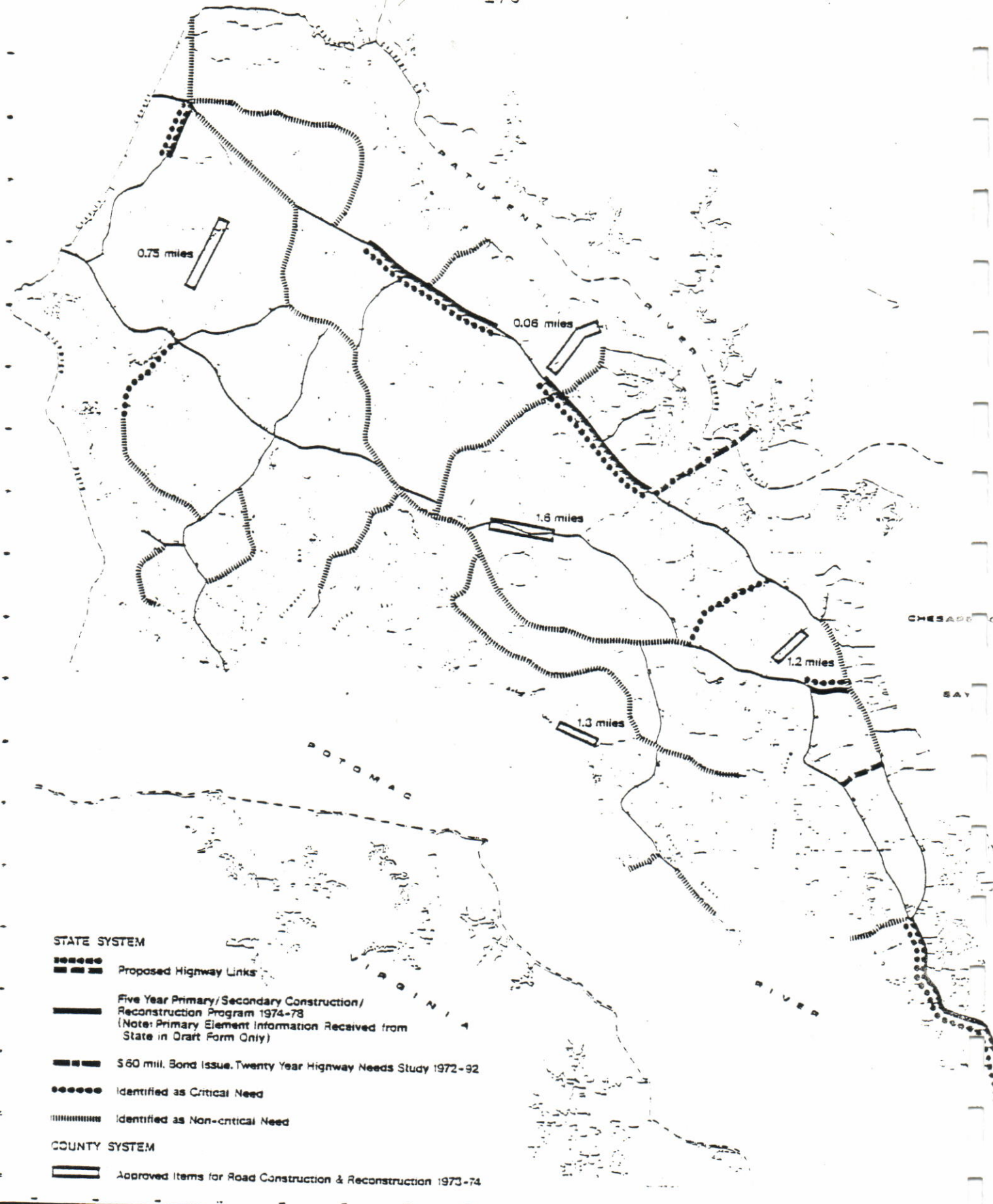
The five-year primary program in St. Mary's County for 1976 through 1981 consists of five projects along Route 235, involving the widening of existing two-lane sections to four lanes. The whole of Route 235 north from Lexington Park to the Charles County line will be widened to four lanes by 1981.

The current five-year secondary program for 1976 through 1981 lists the following four projects in St. Mary's County; (1) Route 5 south of Route 235 is programmed for widening and resurfacing; (2) reconstruction of Route 236 south of Route 5 and relocation of the Routes 5/236 intersection; (3) construction of a new Patuxent River Bridge; (4) construction of a new road connecting Maryland Route 235 to the new Patuxent River Bridge.

The State Highway Administration also has developed a twenty year highway needs plan which is revised annually. Highway needs are classified as either "critical" or "non-critical". Most of the "critical" sections in the 1973-92 plan are along Route 235 and are also in the current five-year primary program. All four of the projects listed in the secondary program are also included in the twenty-year highway needs program as critical items. Projects not included in the current five-year primary or secondary programs, but listed as critical elements in the twenty-year plan are as follows:

1. Route 246 -- widening from two lanes to four lanes from Route 5 to Route 235.
2. Route 238 -- reconstruction of the present two-lane highway from Route 234 south for approximately three miles.





# ST. MARY'S COUNTY - MARYLAND

## 32. CURRENT HIGHWAY PLANNING

Many local projects are listed on the non-critical portion of the twenty-year plan. They include widening of Route 5 to a four-lane facility from Route 234 to Route 246, and construction of a Route 5 bypass around Leonardtown. Reconstruction is projected for all of Routes 243, 244, 252, 470, 498, and 520, and for portions of Routes 238 and 249. Route 245 is to be widened to four lanes.

#### Other Transportation Modes

Although the automobile is the typical form of personal transportation in St. Mary's County, some other transportation forms do exist. Transportation by bus, rail, air, and water is described below.

##### Bus

One local bus company, Atwoods Transportation Lines, and one transcontinental line, Greyhound Lines, operate in and through St. Mary's County. The combined daily schedule for 1973 comprises six trips in each direction on a Washington-Waldorf-Lexington Park route. Two of the trips in each direction are made by way of Leonardtown.

St. Mary's County, like many other semi-rural communities, does not now provide the essential ingredients for frequent and extensive bus service -- continuing daily use by an adequate level of income producing passengers. Driving conditions and parking problems in St. Mary's County are not sufficiently unacceptable to force people to sacrifice the personal convenience of a private automobile. St. Mary's County also does not yet have a high level of commuters to and from the Washington metropolitan area. Nevertheless, bus service is a necessary although minor link for inter-county and intra-county travel. The bus lines represent the only means of public land transportation for a St. Mary's County resident who does not own or cannot drive a private automobile, and they are the only means of public transportation which presently exist in St. Mary's County.

##### Rail

Railroad service no longer exists in St. Mary's County. The one defunct railroad line was constructed in the 1930's from Washington to the Patuxent Naval Air Test Center, paralleling

Route 235 and Route 5, and connecting to the Penn Central tracks at Brandywine in Prince George's County. The right-of-way has been purchased by the County and maintained, even though the track has been removed and the bed modified at some locations. It is the intention of the County to preserve most of the old railroad right-of-way for possible eventual use as a revived rail transportation line or as a lineal park and buffer area adjoining Route 235. Feasibility studies should be undertaken by the County to identify possible alternatives.

#### Air

There are several small general aviation type airports in St. Mary's County, but no scheduled airline flights depart from any of them. Local airline passengers use Washington National Airport, Dulles International Airport, or Baltimore Friendship Airport.

St. Mary's County Airport, located five miles north of Lexington Park, was opened in 1970. It is County-owned and is the only publicly-owned airport in St. Mary's. The Federal Aviation Administration estimates there are now approximately 27,000 operations annually from the County airport, of which two-thirds are local in nature. The airport has a hard-surfaced runway, 3,250 feet long, which is lighted for night time operations.

The five private airfields are Piney Point Airport near Piney Point, Park Hall Airport near Park Hall, Chandler near Ridge, Chesley Field near Charlotte Hall, and Hampton at Leonardtown. All of these airports have turf runways between 1,800 and 3,000 feet in length. They are usable by light, general aviation airplanes only and the number of operations is small in each case.

The military airfield at Patuxent Naval Air Test Center is the busiest airport in the County in terms of number of flight operations. It has long hard-surfaced runways with complete lighting and instrumentation. The orientation of runways and the twenty-four hour usage will have a major continuing influence on the surrounding land uses and the future development of the Lexington Park area. The office of the Chief of Naval Operations has recently defined and mapped an Air Installation Compatible Use Zone (AICUZ) from the present main runway extending to the southwest into Lexington Park, with the recommendation that all future development within the AICUZ zone should be regulated to achieve compatible uses and building sizes. A discussion of the appropriate compatible land uses and the strategy for achieving those uses comprises a major portion of the separate report on the Lexington Park Master Plan.

The question of controlling future peripheral land development applies also to the other local airports, particularly the St. Mary's County Airport. Public regulation of all such development appears very desirable.

#### Water

Water transportation in St. Mary's is limited to recreational boating by private owners from the many marinas along the County's shoreline, small scale commercial activity related to the fishing and shell fish industry of the Chesapeake Bay, and private bulk transport. There are no public or privately operated passenger carrying services.

There are also no public bulk or general cargo terminals located in the County to serve ocean-going vessels. Recently, there has been considerable public discussion on the desirability of encouraging or permitting new facilities of this type, and private proposals have been made along these lines. The opposing arguments against such development emphasize preservation of the natural environment and the present unspoiled character of St. Mary's County.

#### Plan

The transportation plan for St. Mary's County is presented in the context of both short and long-range time frames. Proposed highway design standards are attached. The Short-Range plan is an immediate action program to alleviate transportation deficiencies which either exist or are foreseeable through the year 1980. Levels of service will be equal to Level C or better on all highways of the County, if the plan is achieved. Particular attention is given to improvement of those highways which now include the major accident locations in the County. The Long-Range plan addresses probable transportation requirements beyond that date, related to the land use plan for the County and projected development levels in the Washington and Baltimore metropolitan areas. The planning horizon for this Long-Range plan is thirty years or the year 2003.

#### Short-Range Transportation Plan: 1973-1980

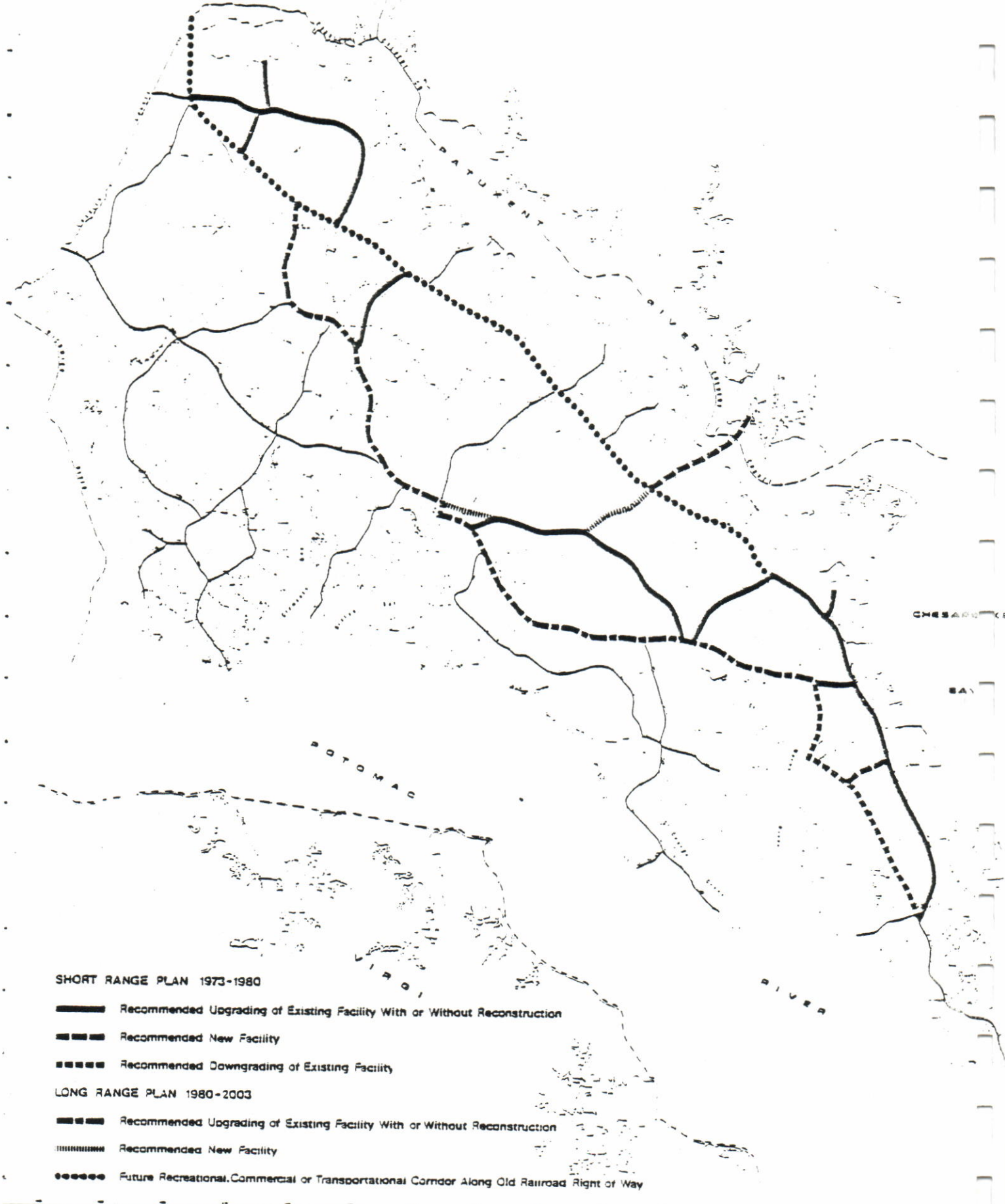
The Short-Range Transportation Plan reflects the proposed functional classification system. There appears to be no need for any new major highways before 1980. Any short-range increase in highway travel demands can be accommodated by improvements to existing highways.

The proposed future (1980) functional system of highways in St. Mary's County (see Figure 33) is based on the existing (1973) functional classification system defined earlier, modified where appropriate to accommodate planned growth in the County for the 1973-1980 period. Actual road improvements will occur as a response to identified or anticipated capacity or accident problems.

1. Route 246. Due to planned development along this road, and because of its importance as a cross-county highway, the proposed classification has been upgraded from minor arterial in 1973 to intermediate arterial by 1980. Improvement of this road is listed as "critical" on the State's 20-year needs program, although no work is scheduled on the State's five-year plan. The 20-year plan specifies an eventual need to widen and reconstruct this road to a four-lane cross-section. Traffic engineering improvements are required in the shorter range, to improve capacity and reduce accidents especially in the Lexington Park area.
2. Spur Connections between Routes 5 and 235 north and south of St. Mary's City. The State's five-year plan includes construction of a new two-lane spur route as an intermediate arterial highway connecting Routes 5 and 235 south of St. Mary's City. This road would also form the southern link in what would essentially become a St. Mary's City bypass.
3. Patuxent River Bridge Approaches and Connecting Road to Route 235. The Patuxent River Bridge is presently under construction at Town Point. Both the bridge and its approaches are funded through a Supplemental Bond Issue Program. Connection of the bridge to Route 235 is not programmed in the five-year plan, but is listed in the "critical" portion of the 20-year plan. It is desirable that this road should be constructed as part of the Short-Range plan and connected to an improvement of St. Andrew's Church as a continuous arterial highway connection between the new bridge and Leonardtown.
4. Route 235 South of Lexington Park. Route 235 from Route 246 to Route 5 at Ridge is upgraded from its present status of minor arterial to an intermediate arterial by 1980. No improvements on this section of road are now programmed in the five year plan, but widening of Route 235 to a four-lane divided facility from Route 712 to the proposed spur road to Route 5 is listed in the non-critical portion of the 20-year plan.

5. Route 5 South of Park Hall Road. It is proposed that the functional classification of Route 5 between Park Hall Road (Maryland 489) and Route 235 be downgraded from minor arterial to major collection over the short-range planning period. The arterial route from Leonardtown to the southern end of the County will, therefore, eventually be by way of Route 5, Route 489, Route 235, and then Route 5 again between Ridge and Point Lookout. No improvements on this section of road are now included in either the State's five-year plan or the 20-year needs study program.
6. Route 6 East of Route 235. The Route 6 loop east of Route 235 is proposed for upgrading from minor collector to major collector. The entire loop is proposed for reconstruction on the present two-lane facility in the State's 20-year plan. No improvements are mentioned in the State's five-year plan.
7. Route 247 from Route 5 to Route 235. This road is upgraded in functional classification to a major collector route. To improvements are now proposed for this road by the State.
8. Route 712. Route 712 is functionally upgraded to major collector in light of the increased importance of this road as a southern entrance to the Patuxent Naval Air Station. This will become particularly important after the County's improvement of Hermanville Road is completed.
9. Route 471. With the future development of the State's regional park facility southwest of Lexington Park, Route 471 will become increasingly important as a park access road. Route 471 is therefore classified as a minor collector under the future functional classification plan. No improvements are now programmed for this highway.
10. County Road Reclassification. Two county highways are reclassified to minor collectors in the future (1980) functional plan. They will form a continuous collector connection from Route 6 and from Golden Beach Road to the Chaptico/Mechanicsville Road, a major collector. The roads reclassified are All Faith Church Road between Route 6 and Golden Beach Road and Lockers Hill Road from Route 6 to Route 5. The alignment of Lockers Hill Road and Chaptico/Mechanicsville Road should eventually be made to coincide, thereby eliminating turning conflicts on Route 5.

As part of the short range transportation plan, appropriate land use controls should be developed for application in development areas peripheral to all public and private airports in the County.



# ST. MARY'S COUNTY - MARYLAND

## 33. TRANSPORTATION PLAN

Long-Range Highway Plan: Post 1980

The development of a Long-Range Highway Plan (see Figure 33) to serve the transportation needs of St. Mary's County beyond 1980 recognizes the need to serve the three proposed urban centers at Lexington Park, Leonardtown, and St. Mary's City, in addition to existing development and future development outside these centers. Roads related to growth of the St. Mary's City center will not be required to any significant degree until after the center's commencement year of 1980. The ultimate recommended functional highway system is shown in Figure 34.

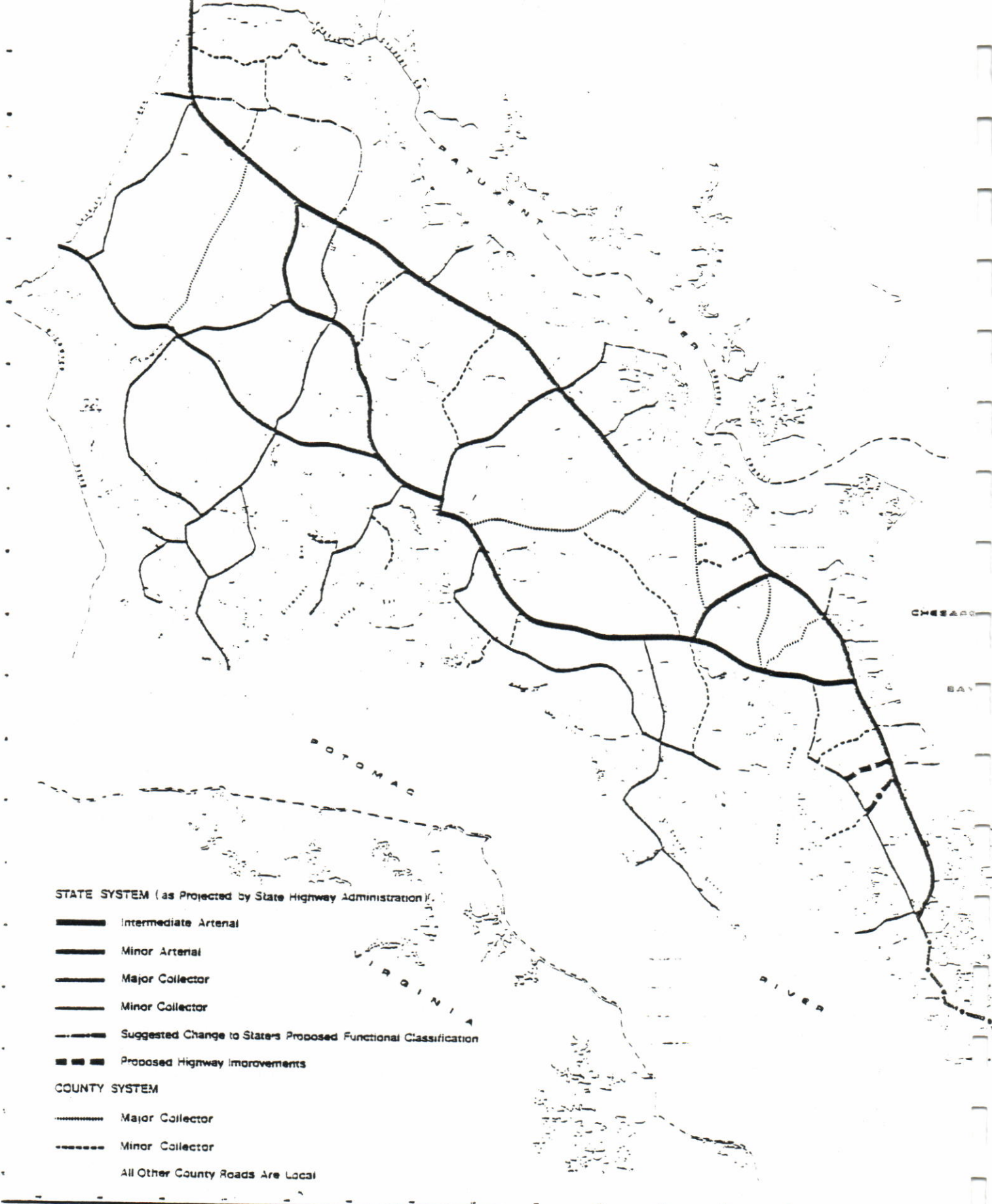
All of the growth centers are already served by intermediate arterial highways. The Route 5-Route 235 Corridor already connects the northern end of the County to Lexington Park. This will eventually connect directly to St. Mary's City, by way of the proposed spur route between Route 5 and Route 235. The combination of Route 5 and Route 236 will link Leonardtown to both Lexington Park and St. Mary's City.

The long-range potential for another cross county arterial highway is now very real, given the construction of the Patuxent River Bridge crossing and its approaches. The County already plans to improve St. Andrew's Church Road in the near future, and eventually connect this improved facility to a new road linking with the new bridge. As the traffic movement linking Calvert County with Route 235 via the bridge will have regional travel importance, the new facility will probably justify an arterial classification at least as far south as Route 235. The continuation of this corridor via St. Andrews Church Road to Leonardtown may also justify arterial status. This additional cross-county link would also serve to relieve the present heavy dependence on Route 246.

As part of the State's current (1973-1978) five-year program, all of the remaining two-lane sections on Route 235 north of Lexington Park will be widened to four lanes. These improvements combined with firm control on access and the proposed widening of Route 235 between Route 712 and St. Mary's City, should be adequate to serve the future traffic needs of the North County-Lexington Park-St. Mary's City corridor. Widening and traffic engineering work, with appropriate access control will probably be required in the future at some major intersections along this corridor, particularly in the Lexington Park area.

It is recommended that service roads and reverse frontage concepts should be given strong considerations for application





# ST. MARY'S COUNTY - MARYLAND

## 34. FUTURE FUNCTIONAL HIGHWAY SYSTEM

by the County as part of all future development along this major highway. These techniques will help prevent the proliferation of driveways and individual access points which would intensify traffic hazards and adversely affect its arterial function.

Within the long-range planning period, Route 5 from Route 235 near Mechanicsville to Park Hall south of Lexington Park will need to be widened to four lanes. The section that appears in most immediate need of widening is between Leonardtown and the Route 246 intersection, including the proposed Leonardtown bypass. Although the State now lists the widening of this section as non-critical in its twenty-year plan, the need for this improvement will become more manifest as the planned growth centers in the southern portion of the County develop, especially after 1980. As with Route 235, strong control of access will be needed in order to preserve the arterial character of this highway.

North-south travel in St. Mary's County will be adequately served for the foreseeable future by Routes 5 and 235. They provide direct connections between the major growth centers in the County and are consistent with proposed land uses. Both of these highways are intermediate arterial highways and their increased capacities after widening should be adequate to satisfy future regional travel demands. At one time it was proposed to construct a major multi-lane, limited access highway through the center of St. Mary's County, as an extension of the proposed southeast freeway now serving the Washington metropolitan area. As originally conceived, this facility would have connected with or possibly have been a part of the interstate highway system. This proposed project has apparently now been abandoned and it does not appear on the State's twenty-year needs study highway plan. Because there appears to be sufficient alternative capacity for travel along this north-south corridor, this major highway concept is also not included in this long-range transportation plan.

In considering the future long-range role of non-highway transportation modes in St. Mary's County, it is recommended that the existing railroad right-of-way paralleling the Route 5-235 corridor be preserved in linear form to the maximum degree possible for future recreational, commercial, or transportation use. Alternative connecting sections should be secured to replace locations where right-of-way has already been or is legally committed to other uses. The Washington Metro line is currently proposed to extend to Brandywine in Prince George's County and may be eventually extended as far as Waldorf in Charles County. In long-range terms, it may be feasible to ultimately connect a transportation facility (either highway or rail) from St. Mary's County to the Waldorf area along this railroad right-of-way. Further study should be undertaken to identify alternative options.

## COMMUNITY FACILITIES

### Introduction

This section discusses existing, programmed and planned facilities in St. Mary's County. Community facilities and services include schools, parks and open space, fire and police protection, health and welfare facilities and services, and libraries. They are generally provided and/or maintained by a public agency, although private companies, institutions, and service organizations also contribute in limited instances. Each facility represents varying public investments in land, structures and operating costs. Certain activities including primarily the parks system are land oriented, while others such as police and fire protection are mainly service functions with only limited land holdings. The pattern of activity locations and service areas in St. Mary's - ranging from specific people-oriented community facilities such as the local library to the diffuse and impersonal network of public utility systems - varies considerably. It is desirable that given this multiplicity of institutional forms, activity locations, and service areas, programs should be coordinated whenever and wherever appropriate, to benefit local residents and user groups.

The role of community facilities as significant determinants on both the location and density of future growth should be recognized. It is very desirable that the governing body of St. Mary's County together with its ancillary departments and agencies administer a program of improvements and additions to community facilities which reflects and supports local planning objectives for future development of the county as a whole.

Each physical facility can be described basically in terms of its location within the community, adequacy of site, local accessibility, and spatial relationship with other functionally related structures. Individual buildings each have a particular physical condition, design quality, and capacity relative to present and projected use. The total program for each community service has a particular operational and fiscal structure, planning base, manner and level of performance, development program, and functional role in the county infrastructure. Each community facility is discussed in these terms in the following sections of this report. They are illustrated in the accompanying maps.

## SCHOOLS

### A. Operational and Fiscal Structure

The provision for education in St. Mary's County is primarily through the St. Mary's County Public School System, administered by the Board of Education of St. Mary's County, and funded from a combination of County, State and Federal sources: In addition, private education is provided on a self supporting fee-paying basis by a variety of secular and religious organizations.

The Board of Education is the official County education agency of the Maryland Public School System. Its members are appointed by the Governor. A proposed six year construction program for St. Mary's schools is annually submitted by the Board first to the Board of County Commissioners for its consideration and approval and then to the Interagency Committee for Public School Construction for funding approval.

In common with other local jurisdictions, financial appropriations for school purposes are the leading financial commitment made by St. Mary's County. 41.5 percent of the County's approved expenditures in fiscal year 1975-1976 will be for the County school system. If capital outlays and debt service are disregarded, this commitment increases to 51.4 percent of County outlays. All but \$499,058 of a total appropriation of \$6,299,916 for the County Board of Education's 1975-1976 budget represents County financing for the St. Mary's public school system. A further \$10,223,123 (i.e. over 67.5 percent of the County's total) to fully finance the school system's current operating expenditures will be from State and Federal aid and other non-county sources. The County Board of Education employed approximately 1,360 persons in the school system in the 1974-1975 school year, including 680 professionals. This makes it the second largest employer in the County.

The parochial school system is operated and administered by the Catholic Archdiocese of Washington, the largest of the private educational agencies. It has particular significance in St. Mary's County, both for the historic origins of Catholic settlement in the area, and because of the high percentage of County school children who have always attended parochial schools. Prior to 1940, a majority of grade school students were educated in parochial schools. This figure has declined steadily to 44.8 percent in 1950, 38.3 percent in 1960 and 18 percent in 1974. An unspecified number of Catholic high school students actually lived in the two adjoining Counties of Calvert and Charles. The expense for parochial school is carried within

the system, either by pupil fees, parish contributions, or diocesan subsidy. A limited exception is the provision of Federal funding of certain specified supplemental services and ancillary facilities. Other private schools are funded by a similar variety of sources.

B. Present Planning Base

The present school system divides the ongoing school age population into the three traditional phases of elementary (K-5), middle (6-8), and high school (9-12), each with a separate system of service areas and school facilities. Standards are established by the State Board of Education. Present planning to meet future school needs in St. Mary's County is based on a combination of several factors as they are projected to interact over the years ahead. Estimates are made of the contribution effect of each factor on the future school population and a total projection is made of future enrollment and space needs; a normal basis for school planning. As actual trends depart from the assumptions made, so actual student enrollment departs correspondingly from the school population projected ahead in the base year. Factors now considered in determining future public school population in St. Mary's County include:

1. The rate of absolute population increase. This data not available from our office.
2. The future birth rate in St. Mary's County. This data not available from our office.
3. The future level of Federal activity in St. Mary's County. In 1974 43% of the County's public school population was Federally connected. The overall total has held at a relatively steady level in recent years. Present planning assumes any change in the future status of any Federal facility - a decision that would be made in Washington - will have a major effect on the future public school population of the county. This is particularly true of the largest facility and the County's leading employer - the Patuxent River Naval Air Station.
4. The level of pupil transfer between private and public schools in the County-1974, nearly 1/5 of all students through High School level attended private educational institutions, mainly parochial schools administered by the Catholic Archdiocese of Washington. Although enrollments are said to be holding steady in this system, despite rising costs and higher salary needs, there are no present

plans for expansion. Moreover, any increase in pupil fee schedules might deter some enrollments and thereby shift some students into the publically funded school system. While allowance for this possibility is included in current projections, it is highly unpredictable.

Within the context of total projected need, individual facilities are planned, located and administered in accordance with the Constitutional and Statutory provisions and Code of Bylaws, by the Maryland State Board of Education.

C. Functioning of Existing Systems

1. Public Schools

The St. Mary's County public school system in 1974-1975 consisted of 17 standard Elementary, 4 Middle Schools, and 2 High Schools, a Special Education School and a new Vocational-Technical Center. 11,807 students were enrolled in the system at the beginning of the 1974-1975 school year not including the 192 special educational students, and not duplicate counting the students who attend the Technical College. The table lists the capacity and 1974-1975 enrollment of each school. As the table indicates, and accepting stated capacities, there was considerable over-crowding during the 1974-1975 school year in both the High Schools. There was some overcrowding at one of the Middle schools and minor overcrowding at 4 of 17 Elementary schools. The net space deficits were 742 (High Schools) and 118 (Middle Schools) respectively, a total of 860 spaces.

In addition to the 17 full service elementary schools, Green Holly School (for special education) students was opened for the 1973-1974 school year. An additional elementary school may be built on the same site at a later date. The Leonardtown Middle School, which shared space with the Leonardtown Elementary School was converted to full elementary use during the 1975-1976 school year. The Banneker Elementary School has been reduced by one classroom due to recent renovations. Ridge Elementary School will increase with the addition of 2 classrooms (1975-1976). Oakville Elementary School will be expanded to a capacity of 500 students for the 1976-1977 school year.

The four Middle Schools include Leonardtown, which for some time has shared a common site with Leonardtown Elementary School. Concurrent with the conversion of this building entirely to elementary use, a new Leonardtown Middle

School opened in 1975, on some thirty acres of the Technical Center tract. An additional fifty acres of the same site is planned for the New Leonardtown High School. Finally additions and renovations to both Esperanza and Margaret Brent will be completed during 1976.

Complimenting the basic Elementary-Middle-High School structure, is the St. Mary's County Technical Center near Leonardtown, with capacity for 215 students. Course offerings include horticulture, appliance repair, automotive mechanics, electronic and maritime occupations. Plans provide for the expansion of the Technical Center facility by 1977. New offerings would include welding, plumbing and pipe fitting, and sheet metal fabrication. Secondary school students who elect training in one of these areas are transported from their schools to the Center for approximately three periods of training daily. An extensive evening program is available for adult participation. School support facilities - Administration and Maintenance - are located in Leonardtown and Loveville. Maintenance work for the whole system is based at the Loveville location.

In addition to their basic educational function, schools in St. Mary's County also contribute a large proportion of the County's public open space land for active recreational purposes, available outside normal school or organized recreational hours. In addition, the school buildings serve a variety of community needs, including meeting rooms for civic and other organizations. This multi-purpose role of the school system considerably extends its utility beyond the educational function.

## 2. Private Schools

In addition to the St. Mary's County school system, approximately 2,650 pupils were enrolled in private schools for the 1974-1975 school year. A junior nautical school is conducted by the Xaverian Brothers. The Catholic Archdiocese of Washington operates six Elementary and two High Schools in the County. The high schools also enroll students from adjoining counties. There was a total enrollment of 2,387 students in these parochial schools at the beginning of the 1974-1975 school year. As noted above, there are no present plans for further expansion of this system.

Table 37: (Revised)

PUBLIC SCHOOL CAPACITY AND ENROLLMENT IN ST. MARY'S COUNTY, 1974-1975

School Type and Name	Year First Occupied	Physical Condition*	Sept., 1974 Enrollment	Capacity**	No. of Students Over (+) Under (-) Capacity
<u>Secondary</u>					
Chopticon	1964	good	1577	1175	+402
Great Mills	1945	good/fair	1540	1200	+340
<u>Middle</u>					
Esperanza	1960	good	715	750	- 35
Leonardtwn	1954	good	480	275	+205
Margaret Brent	1931	good/poor	827	875	- 48
Spring Ridge	1974	excellent	896	900	- 4
<u>Elementary</u>					
Banneker	1951	good	410***	450	- 40
Bethune	1961	good	106	120	- 14
Carver	1958	good	242	315	- 73
Dynard	1964	good	276	285	- 9
Frank Knox	1944	good	454	420	+ 34
Great Mills	1935	good	168	180	- 12
Greenview Knolls	1965	excellent	508	525	- 17
Hollywood	1951	fair	199	180	+ 19
Leonardtwn	1954	good	329	360	- 31
Lexington Park	1953	good	384	435	- 51
Mechanicsville	1951	good	411	375	+ 36
Oakville	1966	excellent	275	210	+ 65
Park Hall	1964	excellent	361	465	-104
Piney Point	1952	good	419	510	- 91
Ridge	1956	good	219	150	+ 69
Town Creek	1958	good	300	330	- 30
White Marsh	1956	good	300	315	- 15
<u>Special Education</u>					
Green Holly	1973	excellent	192	200	- 8

\* Physical condition evaluation by County Board of Education

\*\* Based on 30 pupils per classroom for kindergarten and elementary, 15 pupils per classroom for special education, 25 pupils per teaching station and 12 pupils per classroom for special education in middle and high schools.

\*\*\* Enrollments for all elementary schools except Dynard, Great Mills, and Oakville include kindergarten students in addition to grades 1-5. For purposes of relating enrollment to capacity, kindergarten students are counted by the County Board of Education as 0.5 student, each are included in the enrollment column as such. There was an actual total of 984 kindergarten students in 14 elementary schools in the September 1974 enrollment



3. Higher Education

The only higher educational institution within the County is St. Mary's College of Maryland, a State-supported co-educational, four year liberal arts college located at St. Mary's City, with an enrollment of about 1,100 students. In addition, approximately 200 students are enrolled on a part-time basis. There are nearly fifty accredited institutions of higher education including the seven major universities-American, Catholic, Georgetown, George Washington, Howard, John Hopkins, and Maryland available at a distance of 50 to one hundred miles.

D. Current Planning

Planning for private and higher education does not envision significant change. Planning for the public sector of the system is related to the factors described earlier - projected rate of absolute population increase, projected County birth-rates, assumed level of future economic activity and afterstudy and assumed levels of pupil transfers between private and public Schools in the County.

With due consideration given to these factors, the Board of Education of St. Mary's County has made projections of enrollment by grade for the six year period 1976-1982. They form the basis for the Board's present construction program, presented annually to the County Commissioners. An increase of 5 percent of enrolled students (kindergarten through 12th grades) is projected with increases at all levels except kindergarten. This minor projected increase in enrollment over this span of time is subject to revision if present trends undergo changes.

In addition to the programmed short-ranged improvements, the Board of Education proposes, if warranted by future enrollment trends, to locate new elementary schools in the 8th, 5th, 4th, and 1st election districts. These proposed schools have no approved funding status at this time. Some modest expansion to the Hollywood, Mechanicsville, Town Creek, and White Marsh Elementary Schools are proposed and approved for planning in order to increase the support facilities for improving the educational program.

A variety of limited renovation efforts in existing elementary schools are also planned for the 1977-1980 period.

Charlotte Hall School is a private, non-sectarian coeducational school for grades 5-12. It is located in Charlotte Hall and is commonly called by its original name of Charlotte Hall Military Academy. It is one of the oldest educational institutions in the U.S., dating back to 1774.

3. Higher Education.

The only higher educational institution within the County is St. Mary's College of Maryland in St. Mary's City, a state-supported coeducational, four-year liberal arts college with an enrollment of about 900. In addition, approximately 100 students are enrolled on a part-time basis. The area is also served by the numerous colleges and universities in the Washington and Baltimore areas. There are nearly fifty accredited institutions of higher education including the seven major universities - American, Catholic, Georgetown, George Washington, Howard, Johns Hopkins and Maryland.

D. Current Planning

Planning for private and higher education is not significant at this time. Long range planning for the public sector of the system is related to the factors described earlier - projected rate of absolute population increase, projected County birth-rates, assumed level of future Federal activity, and assumed levels of pupil transfer between private and public schools in the County.

Giving consideration to these factors, the Board of Education of St. Mary's County has made projections of enrollment by grade for the five year period 1973-78. They form the basis for the Board's present construction program which is presented annually to the County Commissioners. An increase in 11% of enrolled students (kindergarten through 12th grade) is projected with increases at all levels except kindergarten.

In addition to the programmed short-range improvements noted earlier, the Board of Education also proposes that a new elementary school will be constructed and opened in the Eighth District (Lexington Park) for the 1976-77 school year. Two further new schools are proposed for 1978 and 1979, the first also in the Eighth District and the second in the Fourth District. These latter proposals have no approved status at this time.

A variety of limited renovation efforts in existing elementary schools are planned for the 1977-79 period.

E. Functional Role of Schools in the County Infrastructure

The County school system is by far the most expensive item in the county infrastructure funded directly from county income. Given the fact that almost half the county's current spending is for schools needs - a clear indicator of the relative importance of education in the County's future - it is necessary that school planning and programming be based on accurate forecasting correctly related to the County's future development. It is also operationally desirable that the necessary "course corrections" be applied at the earliest possible moment, if population forecasts or development patterns alter from those originally assumed. School programming and construction should continue to have a close timing and site relationship with new residential development, together with necessary modernization, expansion or replacement of older schools. Elementary schools are particularly critical in their locational needs. All schools serve a variety of purposes - educational, recreational and civic - and each one depends on a close physical relationship with the adjoining community. The cost of providing an efficient bus transportation system for students is reduced by efficient placing of schools with respect to student residences.

In addition to the rising public school population and needed student capacity, actual space need and the cost of providing such space will be directly affected by any changes in standards for provision of public school educational programs. These will include better equipment, a wider range of special facilities, alternative arrangement of space, different instructional techniques and changing class size. Further expenditures will be necessary to combat the inevitable physical deterioration of older schools and keep them up to reasonable standard. On the financing side, variations will probably occur in the various levels of available funding from Federal, State and local sources.

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 BOARD OF EDUCATION OF ST. MARY'S COUNTY  
 Felix Johnson Educational Center  
 20 Tulagi Place  
 Lexington Park, Maryland 20653

ENROLLMENT - September 30, 1975

TABLE 37a

ELEMENTARY SCHOOLS	KA	KP	1	2	3	4	5	Sp.	1-5	School
								Ed.	Total	Total
Banneker	27	54	77	67	69	65	77	9	355	445
Bethune	--	--	50	59	--	--	--	6	109	115
Carver	19	20	47	48	32	37	44	6	208	253
Dynard	49	27	--	--	65	79	55	9	199	284
Frank Knox	27	25	70	72	69	56	81	--	348	400
Great Mills	30	--	42	32	21	28	22	--	145	175
Green Holly	--	--	--	--	--	--	--	169	--	169
Greenview Knolls	27	50	81	82	76	81	95	6	415	498
Hollywood	23	--	26	24	37	34	39	--	160	183
Leonardtwn	28	27	59	50	59	55	59	5	282	342
Lexington Park	55	42	91	64	69	50	67	7	341	445
Mechanicsville	42	26	54	52	54	58	53	17	271	356
Oakville	24	25	59	51	41	49	58	--	258	307
Park Hall	55	20	53	64	52	52	49	6	270	351
Piney Point	51	30	71	77	73	70	76	--	367	448
Ridge	20	21	36	27	36	34	39	--	172	213
Town Creek	26	28	50	55	48	61	49	--	263	317
White Marsh	33	24	66	67	64	64	56	10	317	384
<b>TOTALS</b>	<b>536</b>	<b>419</b>	<b>932</b>	<b>891</b>	<b>865</b>	<b>873</b>	<b>919</b>	<b>250</b>	<b>4480</b>	<b>5685</b>
MIDDLE SCHOOLS	6	7	8	Sp. 6-8		School				
				Ed.	Total	Total				
Esperanza	257	231	232	3	720	723				
Leonardtwn	240	223	200	17	663	680				
Margaret Brent	278	241	223	14	742	756				
Spring Ridge	279	293	268	6	840	846				
<b>TOTALS</b>	<b>1054</b>	<b>988</b>	<b>923</b>	<b>40</b>	<b>2965</b>	<b>3005</b>				
HIGH SCHOOLS	9	10	11	12	Sp. 9-12		School			
					Ed.	Total	Total			
Chopticon	505	436	342	321	26	1604	1630			
Great Mills	477	457	338	313	--	1585	1585			
<b>TOTALS</b>	<b>982</b>	<b>893</b>	<b>680</b>	<b>643</b>	<b>26</b>	<b>3189</b>	<b>3215</b>			

TOTALS K-12

Kindergarten	955
Elementary Regular	4480
Elementary Special	250
Secondary Regular	6154
Secondary Special	66
<b>TOTAL</b>	<b>11,905</b>

OFFICIAL ENROLLMENTS  
 From September 30  
 Pupil Attendance Report

SCHOOL PLANS

Generation of School Children by Housing Type

The generation rates of school-age children among various types of development have been analyzed and compared for Montgomery, Prince George, Charles and St. Mary's Counties. School-age children generally formed a higher percentage of total population in the counties outside the metropolitan area. Thirty percent of the 1972 population of St. Mary's County were of school age. The actual pupil-generation rates for individual housing types have been established in detail by Prince George's County. These rates appear to be also correct for current development in St. Mary's County.

Pupil generation rates for each type of household were applied to the total projected households in each category, from single family to Mid-rise. Garden apartments and mid-rise units with low and moderate income families may be expected to produce higher student yield ratios, and therefore, they are calculated separately. Fifty percent of the garden apartments and forty percent of the mid-rise units - a total seven percent of proposed units in the three growth centers, and 3.7% of all units in the county - are assumed to be occupied by low or moderate income families by 2003. They are treated in this way for student generation purposes only.

Table 38:

STUDENT GENERATION RATES BY HOUSING TYPE

	Single Family Detached (SFD)	Single Family Attached (SFA)	Garden Apts. (GA)	Mid- Rise (MR)	Garden Apts. Low and Moderate Income (GA-L)	Mid-Rise Moderate (MR-L)
Total pupil yield ratio (PYR)	1.44	0.92	0.50	0.09	1.44	1.44
% of pupil yield in:						
Elementary	55.56%	54.35%	54.00%	55.56%	55.56%	55.56%
Middle	23.61%	23.91%	24.00%	22.22%	23.61%	23.61%
High	20.83%	21.74%	22.00%	22.22%	20.83%	20.83%

Obtained by empiric observation of present housing stock and student generation relationships in Prince George's County, Maryland.

It is assumed that over the planning period (1973-2003) the relative number of school age children produced by varying types of housing units will remain constant (e.g., garden apartments will continue to produce fewer school age children than single family detached dwellings). It is recognized that school children generated by individual housing types may in fact change over time, but this is essentially unpredictable.

Number of School Children

As a result of applying these pupil generation rates to the projected Housing Mixes for each election district and each time period - 1973-80, 1980-90, 1990-2000, 2000 - 2003, totals of additional school-age children by school type were obtained. They are summarized in the following table.

TABLE 39:

ADDITIONAL PUBLIC/PRIVATE SCHOOL STUDENTS GENERATED BY PROPOSED INCREMENTAL GROWTH, BY ELECTION DISTRICT, 1972-2003

Election District Number	1972-1990 Hsg. Stock Increments	Incremental Private/Public School Students 1972-1990			1990-1990 Hsg. Stock Increments			Incremental Private/Public School Students 1990-1990			1990-2000 Hsg. Stock Increments	Incremental Private/Public School Students 1990-2000			2000-2003 Hsg. Stock Increments	Incremental Private/Public School Students 2000-2003		
		Elem.	Middle	High	Elem.	Middle	High	Elem.	Middle	High		Elem.	Middle	High		Elem.	Middle	High
1	246 SFD	198	84	74	543	424	184	183	782	625	266	234	281	224	96	84		
	27 SFA	12	6	4	97	49	21	19	129	70	31	28	31	23	11	10		
	GA				31	9	4	3	43	12	5	5	18	4	2	2		
	HR				18	2	0	0	25	1	0	0	10	1	0	0		
	GA(L)				30	24	10	9	42	34	14	12	18	13	5	5		
	HR(L)				12	10	4	2	15	14	5	3	6	5	2	2		
		211	90	82	528	423	227		757	322	284		272	116	103			
2	148 SFD	118	50	44	327	261	111	98	327	261	111	98	82	66	28	25		
	18 SFA	8	4	4	36	17	8	8	37	17	8	8	9	4	2	2		
	GA																	
	HR																	
	GA(L)																	
	HR(L)																	
		126	54	48		278	119	106		278	119	106		70	30	27		
3	332 SFD	228	98	85	411	349	140	123	524	427	181	160	227	190	81	71		
	32 SFA	26	11	10	92	46	21	19	114	59	28	24	48	24	11	9		
	17 GA	5	2	2	32	9	4	4	38	10	4	4	19	6	2	2		
	11 HR	1	0	0	16	1	0	0	24	1	0	0	11	1	0	0		
	17 GA(L)	14	5	5	32	26	11	9	35	20	12	11	19	15	7	5		
	7 HR(L)	4	2	2	12	10	4	3	18	10	5	4	7	4	2	2		
		274	116	104		411	180	159		540	228	202		242	103	89		
4	146 SFD	117	50	44	373	213	93	82	382	306	120	114	164	131	56	48		
	15 SFA	7	4	4	30	14	6	6	42	21	9	8	18	9	4	4		
	GA																	
	HR																	
	GA(L)																	
	HR(L)																	
		124	54	48		232	99	88		327	129	122		140	60	53		
5	230 SFD	142	61	54	178	142	60	53	109	87	37	32	53	44	19	17		
	24 SFA	11	5	4	21	11	5	4	12	5	2	2	6	2	2			
	GA																	
	HR																	
	GA(L)																	
	HR(L)																	
		154	66	58		153	65	57		92	39	24		46	21	19		
6	107 SFD	86	36	32	135	108	46	40	109	85	40	36	27	21	9	8		
	12 SFA	6	3	3	13	7	3	3	12	6	3	3	3	1	1			
	GA																	
	HR																	
	GA(L)																	
	HR(L)																	
		92	39	35		115	49	43		101	43	39		32	13	9		
7	199 SFD	139	68	60	954	523	222	196	927	741	315	278	328	262	111	98		
	22 SFA	11	5	5	73	37	18	14	103	52	23	21	26	18	8	7		
	GA																	
	HR																	
	GA(L)																	
	HR(L)																	
		170	72	65		560	238	210		793	338	299		280	119	105		
8	704 SFD	542	239	211	1272	1017	432	382	2057	1645	699	617	700	569	236	209		
	178 SFA	91	39	36	373	126	60	53	441	220	97	88	150	75	32	30		
	60 GA	18	7	7	107	19	12	12	173	47	21	19	46	12	8	8		
	26 HR	3	0	0	46	4	1	1	104	5	2	2	15	2	0	0		
	60 GA(L)	47	20	18	107	96	38	32	173	128	59	52	46	37	16	14		
	24 HR(L)	19	9	7	41	22	14	12	69	35	22	21	24	12	6	7		
		728	312	279		1203	498	435		1110	501	439		725	296	283		
9	3 SFD	4	2	1	12	10	5	3	21	17	7	6	8	5	2	2		
	0 SFA	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0		
	GA																	
	HR																	
	GA(L)																	
	HR(L)																	
		4	2	1		11	5	3		18	7	6		5	2	2		

\* Assumed 2500 persons in group quarters 1972-2003 will generate no school age children.

Obtained by applying student generation rates by housing type to incremental projected housing stock, by election district.

KEY: SFD - Single family detached  
 SFA - Single family attached  
 GA - Garden apartments  
 HR - Mid-rise  
 GA(L) - Garden apartments occupied by low and moderate income families  
 HR(L) - Mid-rise occupied by low and moderate income families

TABLE 40:

Based upon recent trends in St. Mary's County, it was assumed that approximately 15% of school-age children would attend private schools in 1980. It was also assumed that this figure will drop to ten percent by 1990 and remain at that level for the remainder of the planning period. Any variation from these levels in practice will raise or lower the total of public school students by the same amount. A total of 19,534 additional public school students are generated by projected development in the plan between 1973 and 2003.

PUBLIC SCHOOL STUDENTS GENERATED IN PROPOSED INCREMENTAL GROWTH BY ELECTION DISTRICT, 1973-2003

ED #	1973-1980			1980-1990			1990-2000			2000-2003			Total 1973-2003		
	El.	Mid.	Hi.	El.	Mid.	Hi.	El.	Mid.	Hi.	El.	Mid.	Hi.	El.	Mid.	Hi.
1	179	77	68	475	201	177	681	290	256	245	104	93	1580	672	594
2	107	46	41	250	107	95	250	107	95	63	27	24	670	287	255
3	236	99	88	370	162	142	486	205	183	213	93	80	1310	559	493
4	105	46	41	46	84	74	275	117	103	118	50	45	544	297	263
5	131	56	54	138	59	51	83	35	31	41	18	16	393	168	152
6	78	33	30	104	45	39	91	39	36	20	9	8	293	126	113
7	145	62	55	504	215	189	714	305	270	252	108	95	1615	690	609
8	627	266	237	1174	500	445	1899	811	719	604	269	238	4303	1846	1639
9	3	2	1	10	5	3	16	6	5	5	3	3	34	16	12
TOTALS	1611	637	615	3071	1378	1215	4495	1915	1698	1566	681	602	10,743	4661	4130

Assumptions: Present percentage of private school students will drop to fifteen percent by 1980, and ten percent by 1990, 2000, and 2003.

Relation of Additional Projected Public School Students to Current and Planned School System<sup>1</sup>

Replacement Needs, 1973-2003 - As an initial step in projecting future school need the following recommendations are made for gradual replacement of the older and smaller schools in the existing public school system. They are based on the experience of other replacement programs in similar jurisdictions.

1. Size

It is desirable that all schools less than 60% of the officially adopted design capacities approved by the

<sup>1</sup>Source of information on current and planned school system: School Facilities Master Plan, Board of Education of St. Mary's County, 1973.



Board of Education (9/12/72) should be replaced between 1980 and 1990 by schools of standard design size. Official design capacities are 500, 900 and 1200 for Elementary, Middle and High Schools respectively.

Two elementary schools - Bethune, and Hollywood - are the only schools affected. No Middle or High Schools fall below sixty percent of adopted design capacity.

2. Age

All elementary schools more than forty years old, and Middle and High schools more than sixty years old, should desirably be phased out in the appropriate time period and replaced by new schools of approved design capacity. Nine elementary schools - Banneker, Frank Knox, Great Mills, Leonardtown, Lexington Park, Mechanicsville, Piney Point, Town Creek and White Marsh - were built prior to 1963 and are recommended for replacement at the appropriate time. Margaret Brent is the only Middle school built prior to 1943. All existing high schools should remain throughout the planning period.

Replacement schedules are as follows:

A. Elementary Schools

School	Size (S) or Age (A)	Replacement Period	Net Change in Capacity(1)
Banneker	A	1990-2000	+125
Bethune	S	1980-1990	+375
Frank Knox	A	1980-1990	+100
Great Mills	A	1980-1990	+325
Hollywood	S	1980-1990	+275
Leonardtown	A	1990-2000	-75
Lexington Park	A	1990-2000	+100
Mechanicsville	A	1990-2000	+125
Piney Point	A	1990-2000	+ 0
Ridge	A	1990-2000	+175
Town Creek	A	1990-2000	+175
White Marsh	A	1990-2000	+200

(1) Assuming 500 place capacity for all new elementary schools.

B. Middle Schools

School	Size (S) Age (A)	or	Replacement Period	Net Change in Capacity (1)
Margaret Brent	A		1990-2000	+14

(1) Assuming 900 place capacity for new Middle Schools.

C. High Schools - No replacements in planning period.

Future changes in total net capacity, due to proposed replacements only, are as follows:

	Elementary	Middle	High
1973-1980	+325	0	0
1980-1990	+750	0	0
1990-2000	+825	+14	0
2000-2003	0	0	0

TABLE 41:

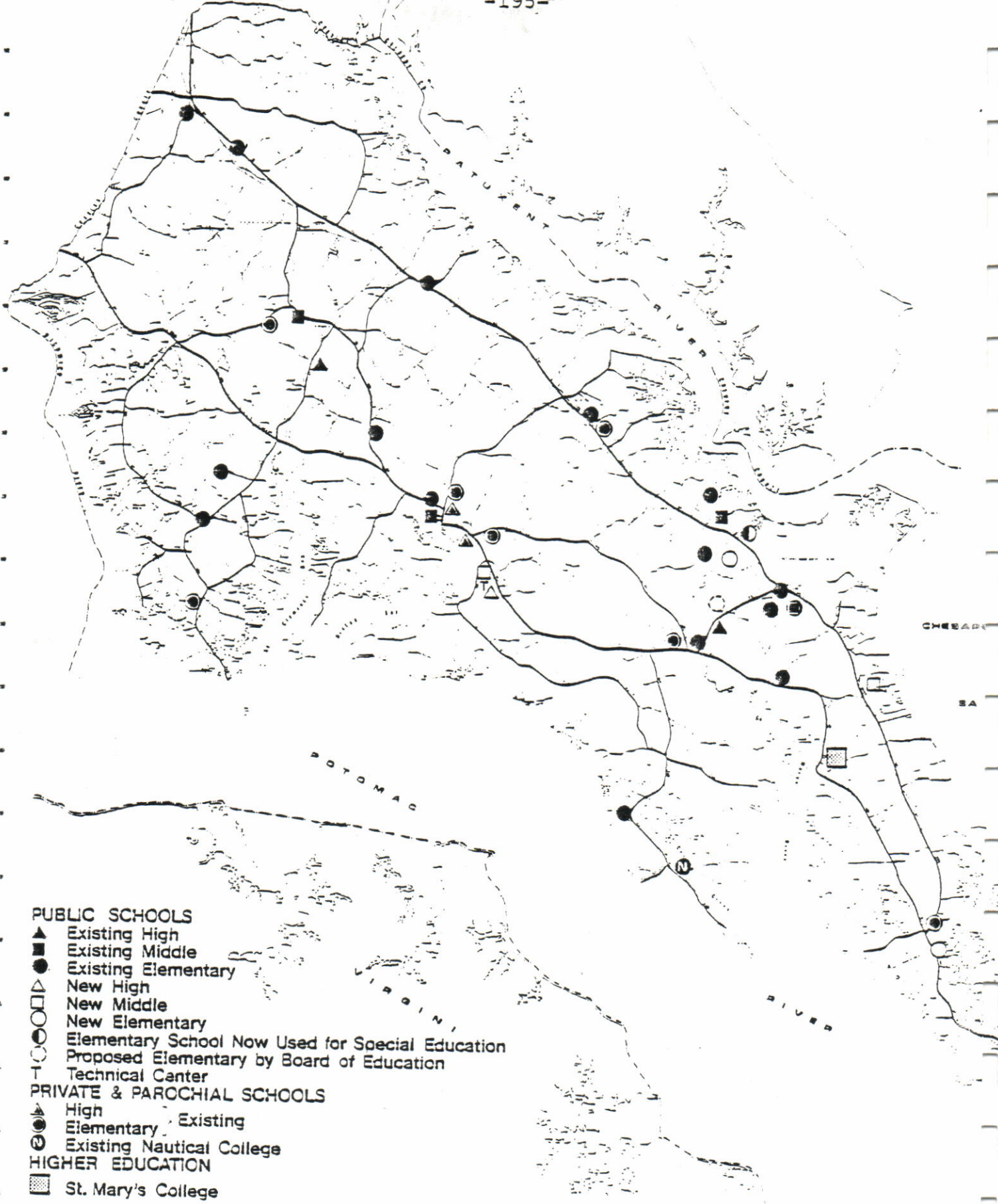
1975-1980 Planning Period -- The relationship between projected capacities and enrollments for 1980, and enrollments projected in the land-use plan for 1980, 1990, 2000, and 2003, are summarized in the following table.

	Elementary	Middle	High
1980 Capacity of all schools (1)	6,365	3,450	3,600
1980 Projected Enrollment (1)	5,729	3,125	3,444

**Projected Enrollments from Proposed Land-Use Plan**

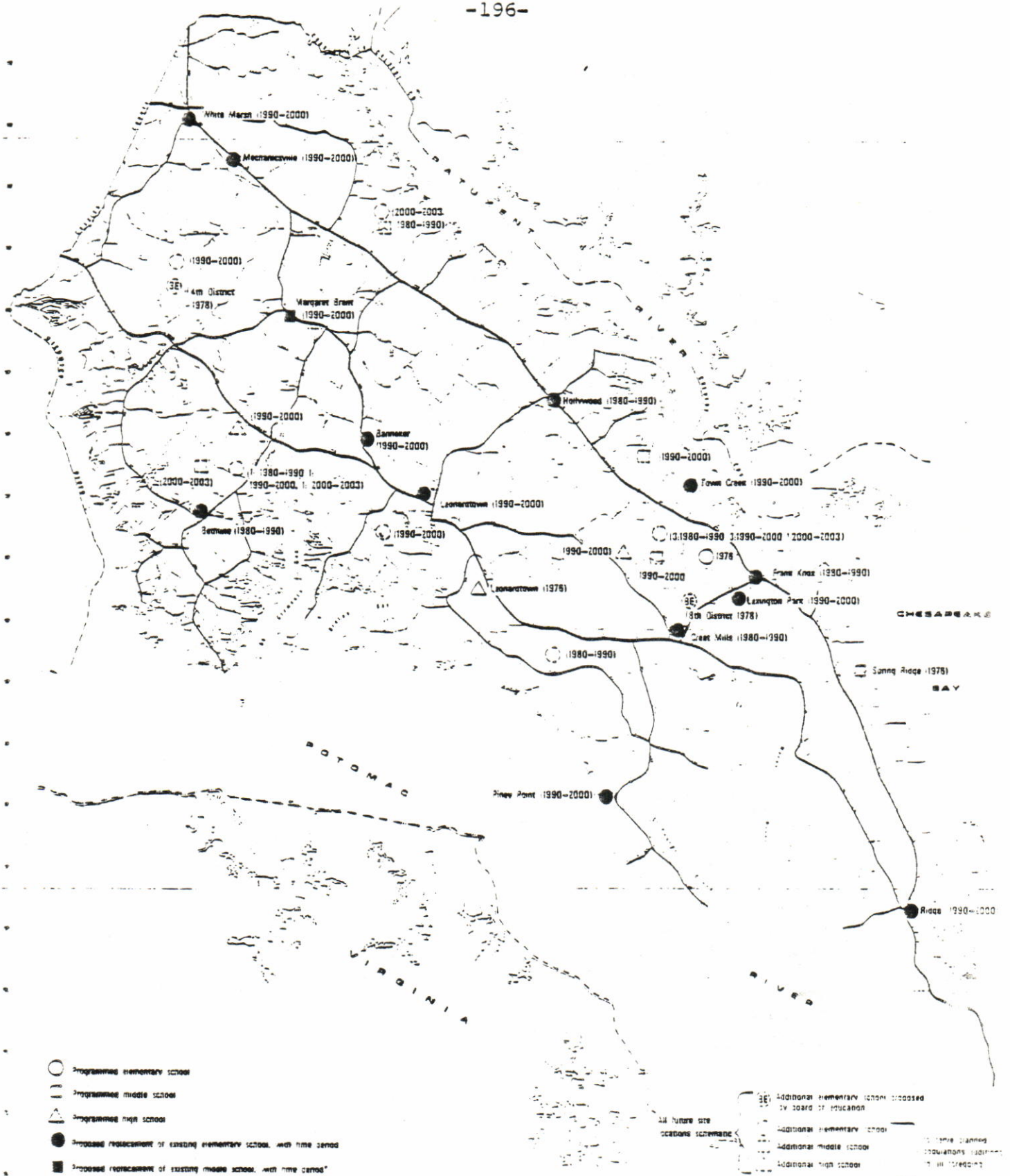
1980	7,246	3,330	3,504
1990	10,317	4,708	4,719
2000	14,812	6,623	6,417
2003	16,378	7,304	7,019

1. Source: St. Mary's Board of Education (includes existing, projected and planned facilities. 2. Not including special education students at Green Holly School and Bethune Special Education.



# ST. MARY'S COUNTY - MARYLAND

## 35. SCHOOL SYSTEM



# ST. MARY'S COUNTY - MARYLAND

## 36. FUTURE SCHOOL NEED 1973-2003

Not including existing public schools planned for continued use 1973-2003.  
Private and parochial schools not included.

Comparison of (i) the projected total capacity of all levels of school in 1978; (ii) the total enrollments now projected by the Board of Education for 1978; and (iii) total students generated by the proposed land-use plan for 1980, show that no further additional school facilities need be built through 1980 to accomodate the plan. This assumes:

- a) Completion of present programmed elementary school modifications (including major additions at Leonardtown), renovation of Carver School for elementary use, and implementation of the Board of Education's long-range proposals for three new schools in the 8th District (2) and 4th District (1). A further additional capacity of 325 places may be provided if Great Mills, built in 1935, is rebuilt to a capacity of 500 during the period 1973-1980
- b) Completion and opening of Spring Ridge, and expansion of Leonardtown Middle Schools, as now programmed.
- c) Completion of the planned Leonardtown High School by 1975, consistent with the present schedule. Further capacity would be gained from currently planned but unspecific additions at Chopticon and Great Mills.

Existing school area boundaries should be redrawn as necessary to accommodate the total need in optional manner.

1980-2003 Planning Period - Projected total public school enrollments, by school type, are shown in the previous table for years 1980, 1990, 2000 and 2003. Projections for individual school types are as follows:

Elementary - Projected enrollments will rise from 7246 in 1980 to 16,378 in 2003. The capacity of all Elementary schools is scheduled to be 7640 in 1978. This may be increased to 7965 in 1980, 8215 in 1990, and 9040 in 2000, given the proposed replacement schedule. The additional needed places must be found through new construction, and is equivalent to sixteen schools, each of 500 design capacity. A possible phased geographical allocation of these facilities, related to serving areas of maximum student generation and to minimizing average travel distances, is as follows:

- 1980-1990 - New elementary schools in Election Districts 1, 2 (or 3), 7, and 8 (3 schools).
- 1990-2000 - Election Districts 1,3,4,7, and 8 (3 schools).
- 2000-2003 - Election Districts 5 (or 6), 7 and 8.

Middle - Projected enrollments will rise from 3330 in 1980 to 7304 in 2003. The capacity of all middle schools is scheduled to be 3423 in 1978. This will increase slightly to 3437 in 2000, given the proposed replacement schedule. The additional need is equal to 4 or 5 schools. A possible geographical allocation of these schools over time, given the need to serve the phased development contained in the land-use plan is as follows:

1980-1990: Election district 5 (or 6).  
1990-2000: Election district 6 (or 8).  
2000-2003: Election district 7.

High - Projected enrollments will rise from 3504 in 1980 to 7019 in 2003. The capacity of all high schools is scheduled to be 4796 in 1978. This assumes that construction of the presently proposed school in the 6th District will occur prior to 1978. The additional need through 2003 is equivalent to two further high schools. Optimally, it appears that one should be in the 8th District, the other in either District 4 or 7.

#### Summary of Future Public School Need

A total of sixteen elementary schools are forecast for the period 1978-2003, each accommodating 500 pupils--the current St. Mary's County design standard. Although the majority of children will reside within one mile of the school, longer school commuting is inevitable in rural areas outside the population centers.

The four or five Middle schools required in the same period are predicated upon maintaining the present approved 800 student design capacity. They will complete an even geographical placement pattern throughout the County, with denser siting in the Leonardtown and Lexington Park areas.

Two further high schools will be needed in the 25 year period 1978-2003. This is additional to the present proposal for a new school in the 6th District. Because of their larger space requirements and service areas, high schools are located outside, but adjacent to, the main population centers.

#### School Performance Indicators

In order to monitor the effectiveness of school planning and performance, a continuous evaluation process should be maintained. The basic elements in the system - number of schools, level of accessibility and cost structure - can be measured and inter-related in terms of identifiable sub-variables, as follows:

- Quantity: Total number of students by type.  
Total personnel required.  
Acres of land required, and number of individual sites.
- Efficiency: Utilization of existing capacities.  
Number of schools required, by type.
- Density: Population in and out of primary service areas.  
Distribution areas of enrollment growth by existing school districts.  
Assessed value per pupil.
- Accessibility: Number of students within 20 minute walking distance.
- Cost: Total Capital Costs.  
Annual operational costs: total, per pupil and per capita.
- Other: Multi-purpose opportunities, measured in terms of population and accessibility.

The implications of taking alternative courses of action in the ongoing public school program can be evaluated comparatively in terms of those indicators which have most direct relevance.

<sup>1</sup>  
PARKS AND OPEN SPACE

A. Operational and Fiscal Structure

\*St. Mary's residents are able to utilize a variety of public and private park and open space land both in and out of the County. They are provided through a variety of agencies, groups and institutions.

\*Local County and municipal parks are the responsibility of the County Commissioners. The system is administered by the Recreation and Parks Board and their appointed Director of Recreation and Parks. The County Board of Education has a major role by virtue of the large contribution made to the county's open space system by the out-of-hours public usage of recreational areas adjoining the county's public schools. This arrangement is the result of cooperative agreement between the two agencies. County government is involved in a third way by dedication for public use of waterfront sites at the termination of many county roads.

The State of Maryland presently owns, administers and finances the greatest acreage of open space land for public use in St. Mary's County. Although State parks are regional serving, they are equally available to County residents for neighborhood and community park purposes. State parks within the County are a significant asset and represent a comparatively low level of investment by County taxpayers.

The National Park Service is not at this time involved in this area and there are no federally owned parks in the County.

\*Privately provided open space and recreational facilities have a variety of forms and are maintained with both profit and non-profit objectives. The degree of availability to the general public also varies considerably. The range of alternative forms is typified by the commercial marina, the institutional camping area, the membership-only golf club, and the public fishing pier.

Each one of these various elements of the total open space and recreational system within the county is obtained, administered and financed in a different manner, by a different governmental or community group.

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1 Much factual information used in this section was obtained from: "A Comprehensive Park and Recreation Plan for St. Mary's County, Maryland" Allen Organization, Bennington, Vermont, 1973.



\*In addition to formally provided open space sites, St. Mary's County is also rich in scenery and landscape that provide a significant visual open space experience to the traveller. The average motorist who visits the County typically feels a strong sense of the natural environment without necessarily visiting more than one or two of the formal parks. This situation will not, however, continue into the future unless a full range of techniques to conserve the visual aspects of the environment are applied in addition to a formal public/private open space and recreational program.

B. Present Planning Base

\*The provision of many open space and recreational facilities in St. Mary's County is frequently related more to a particular financial, environmental or community value based on the qualities of a particular site, rather than to a comprehensive open space plan. For example - commercial marinas are built strictly to meet a financially viable demand, Point Lookout Park is a unique geographical location with strong historic significance for Maryland, and Institutional camping sites are acquired to fulfill the programs of their various memberships. Any planning standards in these cases are particular in scope and not directly usable as bases for developing a County-wide open space recreational program. There will probably be further future instances of similarly specific facilities that do not fit any countywide system of standards. These may include the occasional provision of a golf course as the major buying feature in recreational or large lot subdivisions, the inclusion of tot-lots, pools and tennis courts in all types of new residential areas, and additional public access to portions of the shore line.

\*Unlike the private suppliers of open space and recreation, County and State agencies plan with a responsibility to acknowledge recommended standards, or more accurately, guidelines. Some of the other non-State or County facilities are included in their calculations. The standards normally referenced are those proposed in 1967\* by the National Recreation and Park Association, based on a division of park types into those which are Regional, District, Community, Neighborhood or Block serving. Each type has a unit of measurement which is in all cases a proposed desirable acreage per 1000 resident persons, as follows:

Block and Neighborhood parks five acres, Community and District Parks 20.0 acres, Regional Parks 65.0 acres. The relationship of existing facilities to the stated standards is defined in the next section. It should be

\*Outdoor Recreation Space Standards. National Recreation & Park Association, 1967

continually recognized that "standards" or guidelines may vary with the agency or Association that is responsible for their formulation, and are frequently revised.

C. Functioning of the Existing System

St. Mary's County benefits considerably from its peninsular character and until recent years relatively low level of development. Approximately two-thirds of the county is still tree cover, and only 9% is classified as developed. Thirty percent of the county has been classified by the U. S. Soil Conservation Service as having value only for recreation and open space development.

Inventory of Present Facilities

Approximately 2,500 acres of public park and recreation land in St. Mary's County include 24 acres of County Parks, 427 acres of public school land, and approximately 2,000 acres in State Recreation areas. They are summarized in the following TABLE 42:

EXISTING PUBLIC PARKS AND OPEN SPACE AREAS SERVING  
ST. MARY'S COUNTY, NOVEMBER 1973

TYPE OF HOLDING	NAME	ACREAGE	FACILITIES <sup>1</sup>
County and Municipal	St. Clement's Shore	10	G.Q.
	St. Andrew's Estates	4	B.N.Q.
	Nicolet Park	7	M.Q.
	Piney Point Boat Launching	2	D.
	Wicomico Boat Launching	1	D.
		<u>24 acres</u>	
Public Schools <sup>2</sup>	Banneker	75	H.N.Q.
	Bethune	3	B.L.N.
	Brent	12	G.H.I.Q.
	Carver	20	A.H.N.
	Chopticon	40	A.G.H.T.
	Dynard	11	I.L.N.Q.
	Esperanza	14	G.H.Q.
	Great Mills Elementary	4	N.Q.
	Great Mills High	40	A.B.G.H.M.N. P.Q.S.T.
	Greenview Knoll	7	G.L.N.Q.
	Hollywood	6	B.I.N.Q.
Knox	5	B.G.H.N.Q.S.	
Leonardtwn	13	A.B.G.H.Q.S.	
Lexington Park	11	I.L.N.Q.	

	Mechanicsville	7	B.I.L.N.Q.
	Oakville	15	L.Q.
	Park Hall	32	H.I.
	Piney Point	14	L.Q.
	Ridge	11	B.L.N.Q.
	Technical Center and Proposed Middle School	75	O.Q. <sup>3</sup>
	Town Creek	7	B.L.M.N.Q.
	White Marsh	5	I.N.
		<u>427 acres</u>	
State Parks	Point Lookout	513	C.E.F.J.M.
	Greenwell <sup>4</sup>	173	N.R.
	St. Clement's Island	40	-
	St. Mary's River		C.F.M.R.
	Watershed Park	1,250 (approx) <sup>5</sup>	
		<u>2,000 acres (approx)</u>	
Total all Parks		2,500 acres (approx) in- cluding 1,177 of exact acreage.	

- <sup>1</sup>
- |                      |                       |
|----------------------|-----------------------|
| A. Baseball          | K. Hunting            |
| B. Basketball        | L. Multi-purpose room |
| C. Boating           | M. Picnicking         |
| D. Boat Launch       | N. Play apparatus     |
| E. Camping           | O. Recreation room    |
| F. Fishing           | P. Soccer             |
| G. Football          | Q. Softball           |
| H. Gym               | R. Swimming           |
| I. Hard Surface Area | S. Tennis             |
| J. Hiking            | T. Track              |

<sup>2</sup>Gross school acreage is adjusted to indicate the approximate amount of land available for outdoor recreation.

<sup>3</sup>To be built

<sup>4</sup>To be developed as a park for the handicapped.

<sup>5</sup>Final design not determined. Will be in two parts:  
(1) 1,000 acres including a 300 acre lake; (2) 250 acres for a fish and wildlife area.

In addition there are five state parks in Charles and Calvert Counties that partially serve the needs of St. Mary's residents. These are Calvert Cliffs (982 acres), Cedarville (340 acres), Cedarville State Forest (3,232 acres), Doncaster (1,485 acres), and Smallwood (399 acres). All are within fifty miles of Leonardtown and all have hiking facilities. Play apparatus, picnicking, fishing, camping and hunting are available at one or more locations.

In addition to the public boat launching facilities at Piney Point and Wicomico owned by the County, there are 18 other public landings along the St. Mary's shoreline. They are generally sites where a County road ends at the water's edge. They are dedicated by county government for public use. Nine of these include fishing/boat piers, seven have boat launch ramps, and three have neither. One facility has both a pier and a ramp. A recent review of these facilities<sup>1</sup> has determined, based on local survey and interview, that parking and sanitary facilities are inadequate at every site and that refuse removal is inadequate at 14 of the sites. However, policing is judged adequate at all sites and there are at this time no other nuisance problems.

Private land from which county residents directly benefit include three 18-hole golf courses at Wicomico shores Yacht and Country Club, the Breton Bay Country Club and the Patuxent River Naval Air Station. Other specialized recreational needs are met at the several privately owned historic sightseeing locations in the County. Semi-public and institutional camping grounds meet specialized recreational needs, normally for temporary visitors with an appropriate membership. In addition, there is an undetermined acreage of open space which is built into and forms an integral part of the many residential complexes and subdivisions. This open space acreage, wholly private, is among the most intensively used in practice.

Commercial recreational facilities are mainly oriented to water activities. Eight commercial marinas along the county shoreline were listed by the Southern Maryland Marine Trade Association in mid 1973.

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<sup>1</sup> Problems Associated with Public Landings - A Report to the Maryland General Assembly in response to Joint Resolution No. 14 of the 1972 Session; Maryland Dept. of Natural Resources, Program Planning & Evaluation Section; January 1973.

In addition to the many formal public and private facilities, the open, semi-rural character of the County, with numerous stream valleys, wooded areas, open fields and historic sites, together with the long, 400 miles scenic shoreline, provide an exceptional setting and a continuous passive open space experience for both resident and visitors. This major asset is largely unquantifiable as an element of the County's open space and recreational inventory.

Existing Levels of Service

1973 levels of service for public park and recreation land in St. Mary's County were assessed, based on the existing standards described above. These standards do not incorporate public launchings (other than the two designated as County park holdings), private sites, commercial facilities, or accessible facilities outside the county, nor do they include a factor for the high scenic quality of much of the County's landscape. They are summarized in the following Table 44.

TABLE 43:

## LEVELS OF SERVICE FOR PARKS AND SCHOOL RECREATION LAND IN ST. MARY'S COUNTY, 1973

	Agency Standard	EXISTING Park Acres	School Acres	Total Acres	1973 Pop.	Acreage Needed to meet Standard 1973	Surplus (+) or Deficit (-) 1973	1973 Level of Service
Block & Neighborhood	5.0 acres/ 1000	24 <sup>1</sup>	197 <sup>2</sup>	221	51,455	257	-36	4.3 acres/ 1000
Community & District	20.0 acres/ 1000	-	230 <sup>4</sup>	230	"	1029	-799	4.5 acres/ 1000
Total Local Parks and Recreation	25.0 acres/ 1000	24	427	451	"	1286	-835	8.8 acres/ 1000
Regional (St. Mary's Only)	65.0 acres/ 1000	2000 <sup>5</sup>	-	2000	"	3344	-1344	40.0 acres/ 1000
Total Parks	90.0 acres/ 1000	2024	427	2451	51,455 <sup>4</sup>	4630	-2179	48.8 acres/ 1000

<sup>1</sup>Comprises the 5 sites in County and Municipal ownership.

<sup>2</sup>Consists of all available school acreage other than the four large sites at Chopticon and Great Mills High Schools, Banneker Elementary and the Technical Center/proposed Middle School site.

<sup>3</sup>Estimate based on known population of 47,388 in 1970.

<sup>4</sup>Consists of the four school sites noted under 2 above.

<sup>5</sup>Comprises 4 State parks - 3 existing (726 acres) and the proposed St. Mary's River Watershed Park of approximately 1,250 acres. Does not include an additional 6,438 acres of regional serving State parks located in Charles and Calvert Counties.

Given today's public parks holdings and assuming the current stated standards, Block/Neighborhood park provision in 1973 is 86% of desired. Community/District park provision is 22% of desired, and regional park provision within the County is now 60% of statistical need. However, Regional park deficiencies can be discounted if other accessible regional sites outside the County are included.

#### Current Planning

Present planning for open space and recreational needs is occurring at both County and State levels.

#### County Planning

A total of \$271,627 for County recreational and park purposes (including \$78,747 carry over and \$192,880 for acquisition and development) has been approved by the St. Mary's County Commissioners for FY 1973-74. Much of the additional acquisition and development will be at existing sites spread throughout the County.

The County's Park and Recreation consultant is completing a revised comprehensive Park and Recreation Plan for St. Mary's.<sup>1</sup> It makes an extensive series of recommendations for additional, expanded and improved public park and recreation sites in the County. Various of these proposals were included in previous plans. Among the major proposals made by the County's Park consultant are the following:

- Long term lease and development for active recreational use of a 30 acre tract adjoining Charlotte Hall Military Academy.
- Acquisition and development of a district park at Trent Hall.
- Development of the 40 acres adjoining Chopticon High School.
- Development of a District Park at St. Clements Island and Colton Point, with ferry connection.
- Acquisition and development of a district park on the 44 acre Graves property fronting on Route 235.

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<sup>1</sup> A Comprehensive Park and Recreation Plan for St. Mary's County, Maryland. Allen Organization, Bennington, Vermont; 1973

- Development of the 75 acre site adjoining Banneker Elementary School for active recreational uses.
- Acquisition of a 5-acre site on Breton Bay to be developed as a boat launching facility.
- Development of the 75 acre site adjoining the technical center and proposed Middle School near Leonardtown.
- Acquisition and development of a 500 acre District Park on Newton Neck.
- Acquisition and development of a 5-10 acre Patuxent River Waterfront Park.
- Acquisition of a 10-15 acre tract in Lexington Park and construction of a County recreation center.
- Expansion and development of the existing Nicolet Park.
- Acquisition and development of additional acreage at several other existing schools including Green Holly, Greenview, Park Hall, Spring Ridge, etc.
- Acquisition and development of a neighborhood Park in the area of Lexington Manor.
- Development for active recreation of portions of the new St. Mary's River Park.
- Acquisition of land at several locations suitable for boat launchings, with development of facilities.
- Dedication of the 25 mile long right-of-way of the abandoned Brandywine and Cedar Point Railway for park purposes.
- Preservation of the St. Clement's Creek, McIntosh Run and St. Mary's river valleys.

The proposed plan discusses means for acquisition and development, and alternative revenue producing facilities. It is not related to any projected geographical pattern of future land use in St. Mary's and will ultimately require a phased capital improvement program. The Park and Recreation Plan will require eventual approval, - which may include amendment - by the County Commissioners.

Any extension or expansion of the County's public school system will also directly affect the availability of public park and recreation land. Present school planning is discussed previously.



State Planning

A total of \$18,000,000 has been allocated by the State of Maryland to St. Mary's County for land acquisition and improvement during the Fiscal Year 1973-74 under the terms of Program Open Space. This money will be used mainly for St. Mary's City land acquisition, Point Lookout State Park and St. Mary's River Watershed Park. The latter is now being acquired, and will effectively double the public park acreage in St. Mary's County. \$19,125 will be used to provide 75% financing for the development of two park sites in built up areas - Carver Heights Playground and Town Creek Park, both in the Lexington Park area. A sum of \$54,950 will finance acquisition of land for Laurel Grove Park adjoining Route 235.

The State Department of Natural Resources has recently reviewed shoreline areas throughout the Chesapeake Bay.<sup>1</sup> Additional private shoreline areas in St. Mary's that are still undeveloped have been identified and evaluated for their potential capability to meet public recreation, open space or water access needs. Three of these locations - Point Look In, and areas north of Camp Winslow and at Bay Forest Drive - are stated to offer outstanding potential for both beach swimming and camping, and also high potential for picnicking. A location between Pine Hill and Tippet Pond is judged outstanding for camping and to have high potential for pier fishing, picnicking, beach swimming and as a natural area. Additional sites with high potential are related to boat launching (8 further locations), pier fishing (3 locations) picnicking (11 locations), beach swimming (2 locations), camping (3 locations), and as a natural area (4 locations).

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1 Chesapeake Bay: Inventory of Potential Shoreline Access, Recreation and Open Space Areas; Maryland Department of Natural Resources, Program Planning and Evaluation Section; April, 1973. (Draft)

The State has also proposed<sup>1</sup> that improvements might be made at existing public landings in St. Mary's County. This could include site expansion, clarification of public title, surfacing of parking areas, site clearance, and improved facilities.

#### Public/Private Planning

A planning concept now under consideration would involve both public and private participation. This is the preservation and development of St. Mary's City, Maryland's first<sup>2</sup> capital, as a combined historic and recreational site. The exact form that this will take has still to be determined.

In addition to specific county, state and public/private planning for parks, some aspects of the various plans for environmental maintenance would also effectively result in preservation of open space. These include programs for conservation of wetlands, shorelines, flood plains and other areas of outstanding ecological merit.

#### D. Functional Role of Parks in the County Infrastructure

The park and recreation system in St. Mary's County is the responsibility of many separate agencies and groups with funding from State, County and private sources. The geographical relationship between development areas and public open space sites varies widely. On the one hand, school sites and the recreational areas adjoining them are placed in locations that closely mirror the density and patterning of existing or programmed residential growth. As school sites constitute 95% of local public open space, local parks are a very efficient element in the County infrastructure. As they are funded locally there is a close relationship between cost and benefit for the local resident.

State Parks are in general sited at unique locations not necessarily related to population. They are both people serving and environmentally important. As they are not funded locally they have only an indirect cost/benefit relationship to the County infrastructure.

- 
- 1 Problems Associated with Public Landings Report to Maryland General Assembly. Ibid.
  - 2 Based in part on the following report: St. Mary's City - Plan for the preservation and development of Maryland's First Capital; Robert L. Plavnick, for St. Mary's City Commission, with the assistance of the Maryland State Department of Planning, March, 1970.

## PARK AND OPEN SPACE PLAN

### Generation of Park Need

Further development of the full range of park, open space and recreational facilities that now occur in St. Mary's County is only partially a county function and is only partially related to the exact needs of the growing resident population. The relationship of projected residential growth to planned park need falls into three major groupings, as follows:

#### 1. Minimum relationship

This includes conservation and preservation of environmentally valuable sites, e.g., shoreline, wetlands, flood plains, and wildlife habitats. Most of these features have been identified and documented in recent state, county and private studies. Unique historical locations and structures, e.g. St. Mary's City, have the same fundamental status. Although population growth in the County will intensify pressures to adversely modify these areas, there is no dependent relationship between the amount of population growth and an exact acreage that should be conserved or preserved. The desired objectives of conservation and preservation should be encouraged through a variety of ongoing public and private techniques including state and county regulation of development, securing public access, and land acquisition programs by groups such as the Nature Conservancy.

#### 2. Moderate Relationship

This covers a range of specialized features including public boat landings and fishing piers, commercial marinas, institutional camping sites, tot-lots and pools in residential subdivisions, and both publicly available and private golf courses. Each of these facilities can be considered to meet part of a quantifiable demand for a specialized activity in the county or the region. For example, it is theoretically desirable that there be one golf course per each 25,000 people. However, they are all dependent either on the availability of unique shore line sites for public use or private profit and nonprofit development programs.

Although they should all be publicly encouraged (commercial marinas being a possible exception) they are not elements of the county's park planning program.

3. Maximum relationship

The quantitative need for Regional, District, Community, Neighborhood and Block Parks is related to the residential population served.

In a rural county, such as St. Mary's, the actual need will be less urgent because of the continuous open space experience enjoyed by each resident. The standards recommended in the 1973 Park and Recreation Plan<sup>1</sup> are those proposed in 1967 by the National Recreation Association.<sup>2</sup>

Park standards are both quantitative and qualitative. It is assumed that all parks will be eventually developed for active recreational use, to the degree which is appropriate. They are administered by the County through the Recreation and Parks Board and the Board of Education, and in the case of regional parks, by the State through the combined efforts of the Maryland Department of State Planning, the Maryland State Planning Commission and the Maryland Department of Natural Resources. The projected incremental need for facilities that have a maximum relationship to population growth is described below.

Future Park Provision

The statistical requirement for Block, Neighborhood, Community and District Parks, based on planned population growth is contained in the following Table 45:

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1 A Comprehensive Park and Recreation Plan for St. Mary's County: Allen Organization, 1973 (Proposal).

2 These standards appear to be generous. Other more recently developed guidelines for similarly classified parks state needs which are 50% or less of those given here.

TABLE 4:

CALCULATED PARK NEED PER ELECTION DISTRICT BY TIME PERIOD, 1978-2003,  
Based on State Standards

			<u>Park Need, by time period, in acres</u>				
Election District	Park Type	1973	1973	1980	1990	2000	2003
		Park System					
1	B/N	11	22	27	37	50	55
	C/D	0	75	108	146	200	220
2	B/N	16	19	22	28	34	35
	C/D	0	76	86	110	134	140
3	B/N	23	31	37	47	59	65
	C/D	190	128	150	188	238	260
4	B/N	13	12	15	20	27	30
	C/D	0	49	60	80	108	120
5	B/N	10	20	24	27	29	30
	C/D	0	83	95	108	116	120
6	B/N	21	31	33	35	37	38
	C/D	0	125	130	140	148	150
7	B/N	14	16	20	32	49	55
	C/D	0	65	80	128	196	220
8	B/N	111	103	120	150	199	215
	C/D	40	420	480	600	794	860
9	B/N	0	2	2	2	3	3
	C/D	0	7	7	8	9	10
All ED's	B/N	219	256	300	378	487	526
	C/D	230 <sup>1</sup>	1039	1196	1508	1943	2100
	R	2000	3344	3887	4901	6316	6825

B/N - Block and Neighborhood - 5 ac. per 1000 people  
 C/D - Community and District - 20 ac. per 1000 people  
 R - Regional - 65 ac. per 1000 people (calculated on basis of total County need)

<sup>1</sup>Not including an additional 6438 acres of regional serving parks located in Charles and Calvert Counties.

Entries obtained by applying standards to incremental population levels of the land use plan.

The present park supply fails to meet the calculated need for 1973 in every respect, except for Block/Neighborhood type acreage in election districts 4 and 8, and Community/District acreage in election district 3. In the latter case the facilities are shared by adjoining election districts. Although regional parks in St. Mary's do not meet calculated need, there are additional regional parks in adjoining counties that make up the deficiency.

In 2003, assuming no additions to the present park system, there will be net deficiencies amounting to 307 acres of Block/Neighborhood type parks, 1870 acres of Community/District Parks and 4825 acres of Regional Parks. Again, existing regional parks in adjoining counties can be considered to make up the deficit, although residential populations of the full Tri-County region will as a whole be inadequately served by the total regional park system in 2003. The wide range of non-park facilities, including both the County's generally rural landscape and including the many shoreline marinas, ramps, piers, etc., will help to alleviate the future regional park need.

Relation of Additional Projected Park Needs to the Planned Park System

The 1973 proposed Comprehensive Park and Recreation Plan<sup>1</sup> recommends 47 separate improvements or additions to the present park system. Twenty-nine of these are improvements to existing public park holdings - 5 county and municipal parks, 22 Public School recreational areas, and 2 State Parks. The additional proposed parks are as follows:

- 1 : 10 acre Neighborhood Park  
District Park of unspecified acreage  
(approximately 100 acres)
- 2 : 1 acre and 1 5-acre special facility
- 3 : 1  $\frac{1}{4}$ -acre and 1 5-acre special facility
- 4 : -----

---

<sup>1</sup>Ibid

- 5 : 30-acre Neighborhood Park  
District Park of unspecified acreage  
(assumed approximately 100 acres)
- 6 : 44-acre District Park
- 7 : -----
- 8 : 1 0.8-acre, 1 10-acre and 1 15-acre special  
facility. 15-acre Neighborhood Park; 30-acre  
Community Park
- 9 : -----

In addition, proposals are made in the County's proposed park and recreation plan to preserve the 25 mile length of the abandoned Brandywine and Cedar Point railway as a special linear park facility, and to preserve the St. Clement's Creek, McIntosh Run and St. Mary's River stream valleys. Public acquisition would be one of several possible techniques. If special facilities are counted as Neighborhood Parks for comparative purposes, the Allen plan proposes an additional 67 acres of Block/Neighborhood Parks, and an additional 274 acres of Community and District Parks. These additions would increase the total public park holdings to 286 acres of Block and Neighborhood, and 304 acres of Community and District Parks. The former would just be adequate for the County's 1980 needs, the latter is already insufficient for 1973, in each case as related to the stated standards. The proposed additions are geographically well dispersed throughout the County as they relate to the patterning of the existing park system and areas of future growth.

Given the County's fiscal limitations on direct funding of new park acquisitions and the desirability of meeting stated standards, it is clear that heavy emphasis should be given in the years ahead toward encouraging external State and Federal agencies, and private non-profit groups, in establishing parks and open space areas in the County. At the same time those other open space and recreational activities and regulatory devices which in themselves have only a minimum or moderate relationship to projected residential growth, should be encouraged or enforced as appropriate. The County's own park program should concentrate on serving the future needs of the three growth centers - Leonardtown, Lexington Park, and from 1980 onwards - St. Mary's.

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-10	40 24   27   29	
0	100 95   108   116	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-13	13 15   20   27	
0	0 60   80   108	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-21	37 33   35   37	
0	169 130   140   148	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-117	144 120   150   199	
0	450 480   600   794	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-14	16 20   32   49	
0	55 80   128   196	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-23	28 37   47   59	
0	190 190   150   188   238	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-16	17 22   28   34	
0	0 88   110   134	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-0	2 2   2   3	
0	7 7   8   9	

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-11	31 27   37   50	
0	100 108   146   200	

**1** Section district

- Conservation and preservation of environmentally sensitive sites, unique historical locations and structures. Available public and private techniques to be joined.
- Potential improvements and water catchment areas. Appropriate development controls to be joined.
- Regional parks
- Future conversion of existing sanitary facilities to local care.

EXISTING	ALREADY PLANNED	NEED	Public care
	'80   '90   2000	'80   '90   2000	
EN-*	* * * *	* * * *	Block and neighborhood
0	* * * *	* * * *	Community and district

\* Not shown individually

County parks, public boat launches, public schools with recreational facilities, private golf courses, shopping, commercial and institutional recreational uses not shown

# ST. MARY'S COUNTY - MARYLAND

## 37. FUTURE PARK AND OPEN SPACE NEEDS 1973-2003

EXISTING	ALREADY PLANNED	NEED
	'80   '90   2000	'80   '90   2000
EN-*	* * * *	* * * *
0	* * * *	* * * *



Unlike schools, parks and open space can often be provided in advance of development. If funding is available, this is both the cheapest and most efficient way to build an adequate and well designed system.

#### Park Performance Indicators

The major variables should be monitored to ensure that open space and recreational systems remain responsive to need. As population increases in the primary service areas, the acreage per 1000 persons will fall for all levels of park. The cost of the system include, in addition to basic land costs, the opportunity for maintenance cost efficiencies through regulation of size and dispersion of parks, developer contributions, site planning and development costs, and potential opportunities for multiple facility use.

## CIVIL DEFENSE

### A. Operational and Fiscal Structure

Civil Defense in St. Mary's County includes a number of separate and distinct services which function on a continuing basis and are coordinated to meet emergency needs by the County's Office of Civil Defense. The various services are capable of providing a mobile force related to fire protection, legal enforcement and road transportation. Individual State and County agencies, and private organizations have separate responsibilities in these different areas. They include the State Police, State Marine Police and State Roads Commission, the County Sheriff's Department, Leonardtown Police Department, Volunteer Fire Companies and Rescue Squads, and military service at the Patuxent River Naval Air Station. Each of these elements is financed separately through appropriate funding sources.

### B. Present Planning Base

Civil Defense services in St. Mary's are planned individually and are responsive to current and immediate needs. Each service is based on varying standards and criteria developed in the particular field.

The Maryland State Police Department and the Marine Police Department have established standards for the provision of police personnel and construction of facilities. The service provided to St. Mary's County is a local application of that level of service. The recommended national average is 2 -2.5 police personnel per 1000 residents. Both County and municipal police forces as provided are required to primarily serve as local criminal investigation forces, to deal with disturbances and to coordinate with the State Police agencies.

Rescue services are a developed response to the current level of needs. Ambulance equipment is required to meet the minimum standards imposed by the State Department of Health. Although Rescue Squads are independent organizations not associated with the volunteer fire companies, they coordinate their call responses as required.

Although fire services in St. Mary's are provided on a voluntary basis, they reflect detailed standards established by the American Insurance Association (AIA). These standards include maximum travel distance to areas requiring differing levels of water flow (high value and residential districts), site location and size, type of apparatus, qualification of officers and firefighters, and the adequacy of the fire alarm system. In addition to effectiveness of individual response the adequacy of the St. Mary's fire service is ultimately reflected in the fire insurance rates paid by all individual property owners in the County. These are

based on the AIA's evaluation of St. Mary's total capacity to cope with fire hazards. It is thus the financial interest of both the County and the individual citizen to maintain a high standard of fire protection.

#### Functioning of the Existing Civil Defense System

A total of 17,704 incidents of all types were handled in 1974, almost doubling the total of five years previously. Almost one-third of all incidents occurred in the 8th District (Lexington Park). Over one-quarter were in the 3rd District (Leonardtown).

The relative percentages of the total incidents handled by the various agencies in 1974 are indicated in the following table, together with the increase (+) or decrease (-) over the previous year, both as a percentage and in absolute incidents handled.

The relative numerical dominance of police activity is apparent, amounting to 84.6% of all incidents in 1974. Rescue activity was 12.7%, vehicle and animal surveillance amounted to 10.5%, while fire protection involved 5.2% of all incidents. These percentages do not imply a scale of relative importance.

The individual services function as follows:

#### 1. Law Enforcement.

Law Enforcement agencies in St. Mary's County include the State Police, the County Sheriff's Office, the Leonardtown Police Office and the Maryland Marine Police.

The State Police have thirty-one officers assigned to the area and maintain an office in Leonardtown. Six patrol areas are maintained and the 9,045 calls in 1974 related to criminal investigation (26.0%), accidents (13.6%), disturbances (10.7%), motor vehicles and traffic (18.4%), miscellaneous (16.0%), disturbances (10.7%), assistance to other police departments (4.9%), and patrol checks (10.4%).

The County has a Sheriff, twenty-four full-time deputies, two secretaries and four jailers. The Sheriff is also warden of the jail. The Sheriff's Department has separate responsibilities from the State Police. They do not normally respond to accidents and have only limited involvement with motor vehicles and traffic. The latter made up 5.0% of all response calls in 1974. Criminal investigation amounted to 31.9% of all Sheriff's calls in 1974. Other involvements were related to disturbances (17.7%), assistance to other police departments (11.5%), miscellaneous (10.6%), and patrol checks (3.3%).

TABLE 45:

Agency	Percent of all incidents handled in 1974	Increase(+) or decrease(-) over previous year	
		As percent-age total incidents	In absolute incidents
Local Fire Companies	4.2%	+8.9	+78
County Fire Marshall	1.0%	+6.8	+58
Maryland Marine Police	1.3%	+0.9	+ 6
Maryland State Roads	2.1%	-1.2	-86
Tow Trucks	4.0%	-1.0	-71
Rescue	12.7%	+9.1	+202
Maryland State Police	50.0%	+9.9	+500
County Sheriff	32.0%	+9.0	+108
Leonardtwn Police Dept.	1.3%	-15.0	+ 2
Humane Society	4.4%	+7.2	+249

The Leonardtown Police Office has two patrolmen, one metermaid and one policewoman. An office is maintained in the Leonardtown Commissioners Office. On-call assistance is provided by the State Police and the County Sheriff's Department.

2. Rescue Activity

The county is serviced by seven volunteer rescue squads located in the Third, Second, Sixth and Seventh Districts, and at Mechanicsville, Lexington Park and Ridge. Most of the rescue squads are independent organizations not associated with the volunteer fire departments. Each squad has at least one ambulance, twelve serving the county overall. There are approximately 178 active members.

In 1974, Lexington Park answered 33.2% of all calls. Nearly 49.8% of all calls were sick calls, the remaining being assistance of injured persons (19.2%), auto accidents (13.7%), emergency transportation (7.0%), routine transportation (6.7%), maternity (1.3%), and other (2.3%).

Ambulance service is dispatched from a full-time communications center in Leonardtown.

3. Road, Vehicle and Animal Surveillance

Call-in and on-the-spot requests to county agencies and the Maryland State Roads Commission for commercial tow truck service or emergency road treatment resulted in 1,338 incidents during 1974. The local Humane Society dealt with 885 calls in the same period.

4. Fire Protection

St. Mary's County is served by seven volunteer companies - Leonardtown, Mechanicsville, Lexington Park, Ridge, Hollywood, 7th District (Avenue) and 2nd District (Valley Lee). There are approximately 310 volunteer firemen. The Lexington Park (Bay District Company) answered 31% of the 745 individual calls in 1974. An additional military company forms part of the Patuxent River Naval Air Station.

Equipment consists of:

	Pumpers			Tanker Cap.	Ladder Truck	Brush Unit
	1000	GPM 750	500			
Hollywood		2		2000		2
Leonardtwn	2	2		2000		2
Mechanicsville		1	1	2000		2
Ridge		1	2	1200		2
2nd District		2	1	2000		2
7th District		2	1	1800		1
Bay District	3	1	1	2000	1	1
	5	11	6		1	12

Fire service is dispatched from a full-time communications center in Leonardtown. The Patuxent River Company provided support to the county on a reciprocal basis. This arrangement also exists between companies within the county through a mutual aid fire fighting plan.

Compared to the rest of the county, there is a present fire service inadequacy in the northern Wicomico Shore area, including Chaptico. Improved service would be beneficial in improving or sustaining the present AIA rating for individual insurance purposes.

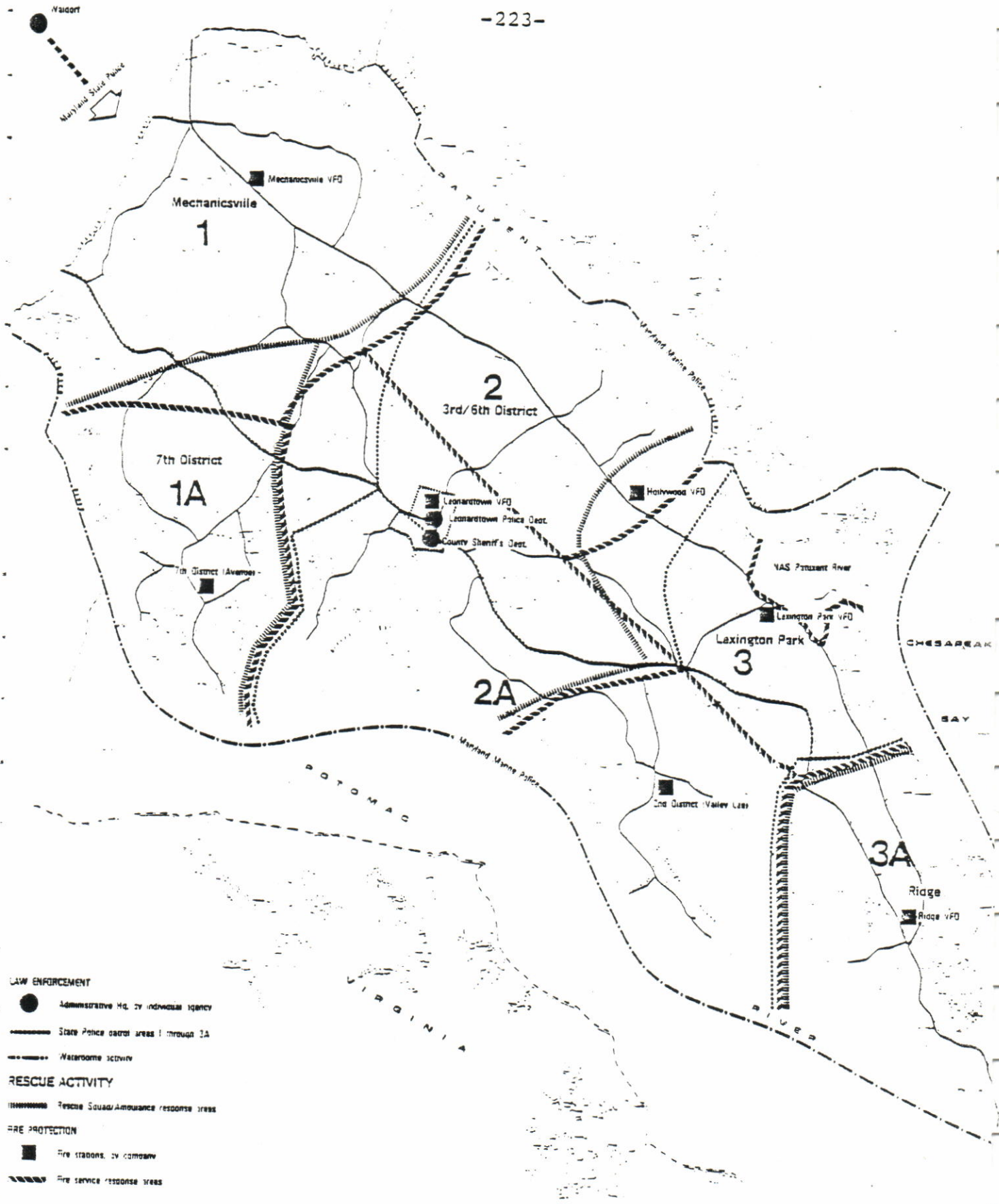
#### Current Planning

Financial commitments have been made for a number of additional facilities. There has been only very limited long range planning beyond these immediate or short range needs.

Construction of a police barracks in the county is tentatively scheduled for 1980. Funding of rescue service has been approved by the County Commissioners for 1975-1976 as follows:

Second District	\$6000
Ridge	\$6000
Lexington Park	\$12000
Third District	\$4000
Sixth District	\$4000
Seventh District	\$6000
Mechanicsville	\$6000

Each fire company has been allotted \$9500 for 1975-1976, in addition to \$54000 in the Lexington Park fire tax fund.



# ST. MARY'S COUNTY - MARYLAND

33. EXISTING CIVIL DEFENCE SYSTEM

E. Functional Role of Civil Defense Service in County Government

Civil Defense, in its various forms, is an essential activity within any jurisdiction. Although an overview is maintained by the St. Mary's County Office of Civil Defense, the various services will continue to be provided in an essentially separate manner by various county and state agencies, private and volunteer groups.

The exact location and placing of police, fire and rescue services relative to areas of potential need is important. Compared to sewer and transportation services, however, the level of availability of police, fire and rescue services is not a strong factor in determining the locations of future growth.



## CIVIL DEFENSE PLAN

### Generation of Civil Defense Need

#### Law Enforcement

Overall planning for law enforcement activities in St. Mary's must recognize the functional and legal allocations of coverage between the State Police, the County Sheriff's office, the Leonardtown police force and the Maryland Marine police. It is also not possible to accurately predict how the social and economic characteristics of the future population will be related to the concentration, dispersion, density and mixing of future growth according to the land use plan.

The total manpower need for all law enforcement agencies can be estimated using the empiric standard of 1.75 personnel per 1000 persons.

#### Rescue Activity and Fire Protection

Although these are separate functions, they can be planned as components of a response to the same overall need. The basic common standards<sup>2</sup> necessary to effectively meet incident and insurance needs indicate a desirable coverage radius of three miles in urban and semi-urban areas and ten miles in rural areas. This will be keyed into the existing system, the patterns and densities of present and future growth, and the phasing of development.

#### Road, Vehicle and Animal Surveillance

These are peripheral activities undertaken by a variety of agencies and departments. They are not susceptible to an independent planning projection and are not considered further.

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<sup>1</sup> Source: International City Managers Association -  
The figure of 1.75 personnel per 1000  
persons represents the median number of  
full-time Police Dept. personnel for com-  
munities in US with populations 50,000-100,000-

<sup>2</sup> Source: Municipal Fire Administration - ICMA, 1967

## Future Civil Defense Provision

### Law Enforcement

Applying the stated standards, need for total uniformed personnel in St. Mary's County will be 104 in 1980, 132 in 1990, 270 in 2000 and 184 in 2003, compared to approximately 70 personnel serving in all aspects of law enforcement for the County in 1973.

### Rescue Activity

Given the proposed pattern of the future growth centers of varying sizes, several local community growth centers dispersed throughout the county, shoreline subdivisions around the coast, and rural populations throughout the rest of the country, the following service needs can be seen:

1973-1980 - The present time service need in ED #4 (the Chaptico area) will intensify and a new facility will be needed. Service in Lexington Park and Leonardtown should be supplemented to accomodate the projected population increases.

1980-1990 - Fire and Rescue service should be supplemented or extended in the areas of the commencing urban growth center at St. Mary's. Service provision should again increase to match the growing development centers in Lexington Park and Leonardtown. The 7th District will also experience substantial further growth and the existing units will require expansion. Service levels in all other parts of the County should be reviewed, given the fifty percent increase in County population growth that will occur 1973-1990.

1990-2000 - This will be the decade of maximum future development. New facilities may be needed in the three election districts containing growth centers (#1,3 and 8). Election Districts 5 and 7 will continue to develop rapidly and may also require an additional unit.

Relation of Additional Projected Civil Defense Need to  
the Current and Planned Civil Defense System

The presently planned State police barracks for which funds have been appropriated will provide an in-county base for the additional needed state police. Twenty-five officers or forty percent of existing law enforcement or personnel serving the County are State Police. If this proportional relationship continues, there will be a need for fifteen additional personnel by 1980, thirty by 1990, forty-five by 2000 and fifty by 2003. The new facility should be designed with these long-term needs in mind.

The County Sheriff's department will require expansion in the same proportion from the existing total of twenty-three personnel, including secretarial and jail staff. This indicates a doubling of present staff and facilities by 1985 and a similar increment by 2003. The Leonardtown police force should be doubled in the planning period. The Maryland Marine Police should increase patrol as need develops.

Civil Defense Performance Indicators

As with other Community facilities, civil defense planning should be continuously evaluated. The capital facility requirement - acreage, site and personnel - can be measured and evaluated in the following terms:

- Efficiency: Law Enforcement - number of stations and patrols to provide 3, 5, and 10 mile response distance.
- Fire and Rescue - ability to meet American Insurance Association standards (fire) and to serve incident need (rescue).
- Density: Dwelling units per square mile, by housing type.  
Number of high value concentrations.
- Accessibility: Effective size of service areas given satisfactory station unit and patrol locations.
- Cost: Per capita capital costs.  
Operating costs.

Alternative ways of meeting the stated Civil defense needs can be compared with reference to these basic variables.

## HEALTH

### A. Operational and Fiscal Structure

A comprehensive program of health services is a necessary part of any system of community facilities designed to serve a given population. Health-oriented facilities are provided to St. Mary's County by a variety of public, semi-public and private agencies, and groups. Each facility represents a particular organizational response to a unique health or social need. The public role is both to contribute substantially to this overall effort and to monitor the total range of facilities and services. The basic objectives of a public health department are normally to maintain standards, to identify existing deficiencies, articulate future needs, and achieve administrative and organizational efficiencies. The St. Mary's County Department of Health and Mental Hygiene is typical in this respect. Organizationally, it is divided into six divisions - Public Health Nursing, Environmental Health, Physical Therapy, Occupational Therapy, Mental Health and Fiscal Administration - and is administered under the County Health officer, appointed jointly by the Maryland State Board of Health and the County Board of Health. The latter is a three-member committee established and appointed by the County Commissioners. In addition to the qualified personnel who staff the various public health facilities, there is a broad range of private practicing physicians and dentists, voluntary health agencies, other official and non-official groups, and civic groups supporting Health Department programs. Each of these non-public groups contribute independently to meeting the overall objective of providing a full range of health and ancillary social facilities.

The public health program in St. Mary's County is funded by a combination of state (two-thirds) and county (one-third) funds. Additional grants for certain activities are obtained from State sources on a matching 3 to 1 state to county basis. The approved County budget for 1973-74 included a gross sum of \$701,269 from county funds and \$405,760 from federal and matching state funds. A further \$89,000 was approved from county funds for mosquito control, ambulance squads and supplementary salaries for certain hospital and nursing home personnel.

B. Present Planning Base

The public health program in St. Mary's County reaches many diverse groups beyond those already capable of handling their health needs through the traditional fee-paying arrangement. It is a complex task to define user group characteristics for every facet of the Health Department's many programs and services. As an example, the various regulatory and guidance services performed by the sanitarians in the environmental health service reach individual and corporate home builders, swimming pool owners, the shellfish and food processing industries, schools and day care centers, eating and drinking establishments, farmers, civic groups, and others. The major sectors of the population that clearly benefit from direct health care programs include the 8% of county households earning less than \$3,000 per annum and thus (according to one definition) living below the poverty level. Those with particularly heavy or specialized needs, irrespective of income level, are also major beneficiaries. These include the elderly, the convalescing, and those with major and/or continuing health problems.

The titles and unit measures for definition of standards and performance in the health field are many. Each particular activity is related to a specialized concern. Many are established by nationwide or state agencies. They include required range of uses, bed provision, and performance indices.

Despite the extensive language for definition of standards in the health field, there are nevertheless very few clear and unmistakable unit measures. In particular, there is no generally agreed method for translating the variety of individual program requirements into total standard space needs. In common with most other jurisdictions, those standards and criteria that do exist in St. Mary's are generally discrete. Standards for the provision of physical facilities are less often available than service standards. Whether facility or service, they are essentially those arising from the technical needs of the individual health activities, and are normally established and are subject to review by nationwide or state agencies. For example, hospitals are accredited by the Joint Commission of Accreditation of Hospitals, a nationwide voluntary agency. Other standards are promulgated by the federal government. The federal Hill-

Burton (Hospital Survey and Construction) program<sup>1</sup> has established a number of construction standards as a basis for organizing grants to states and localities for the construction of health facilities. Hill-Burton standards constitute minimum requirements for construction and equipment, and apply to all projects for which federal assistance is requested. They are considered necessary to ensure properly planned and well constructed medical facilities which can be efficiently maintained and operated to furnish adequate services. In addition, various other hospitalization insurance programs have had an effect on health service standards through their financing requirements.

The standards of most immediate relevance in St. Mary's relate to health administration buildings, public health centers, hospitals, mental health centers, and nursing homes. They are all detailed and technical in nature.

The following are among the more important for land use planning purposes:

1. A formula has been devised by professionals in the health field to illustrate the basic relationship between present population and present hospital bed needs. Although it has no official status, it is normally used as a first step in assessing present and future bed needs. It always needs considerable qualification and modification.

Present bed needs = (Present in-patient days/1,000)

X (Present population/1,000)

(Desired occupancy rate, normally 85%)

X (Number of days per year, 365)

This is sometimes simplified to a standard of 800 patient days per 1,000 population.

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<sup>1</sup>The original Hill-Burton program established by the Hospital Survey and Construction Act (1946) authorized grants to states for surveying needs and developing state plans for the construction of hospitals and health centers, and to assist in constructing and equipping needed public and voluntary non-profit general, mental, TB, and chronic disease hospitals, and public health centers. It has been substantially modified by a number of amendments and related new acts. The latest amendments (1970) extended the program through June 30, 1973, authorized specific grant totals for construction and modernization of various health facilities, and provided additional programs.

Calculation of present bed needs according to the formula requires that information be available or assumptions made for the following:

-Desirable hospital occupancy rates, present in-patient days based on an adequate average length of stay, and the level of service to be provided in terms of the number of types of beds per 1,000 population.

-The present levels of in/out "migration" to and from St. Mary's County for hospital care. Population served is a derived total calculated from the overlapping catchment areas of hospitals in contiguous areas.

Hospitals (i.e., bed totals) are the only health facilities for which a formula has been developed as a common basis for defining future need.

2. Professional Accreditation.

The Joint Commission on Accreditation of Hospitals, a voluntary agency pledged to raise hospital standards, also provides an overview on the range and quality of facilities and services. Accreditation (and thus federal funding eligibility) is impaired if satisfactory standards are not maintained. The St. Mary's County Hospital has been accredited since December 1972. The County Nursing Home was accredited in 1966.

C. Functioning of the Existing System

1. Inventory of Present Facilities.

Health facilities in the St. Mary's County area include two public health centers, the County hospital (capacity 82 beds), a full day care and developmental center for the mentally retarded, an activity center for the mentally retarded, and a county nursing home of 32 Skilled and 14 intermediary care beds. All are located in Leonardtown except for one public health center in Lexington Park, which also contains the day care developmental center. A few hospital patients come from other jurisdictions and by the same token some St. Mary's residents normally attend military hospitals or community and proprietary hospitals in other jurisdictions. Also, although the St. Mary's Hospital provides a full range of medical services, there are still a number of referrals by private physicians and the Health Department clinics to

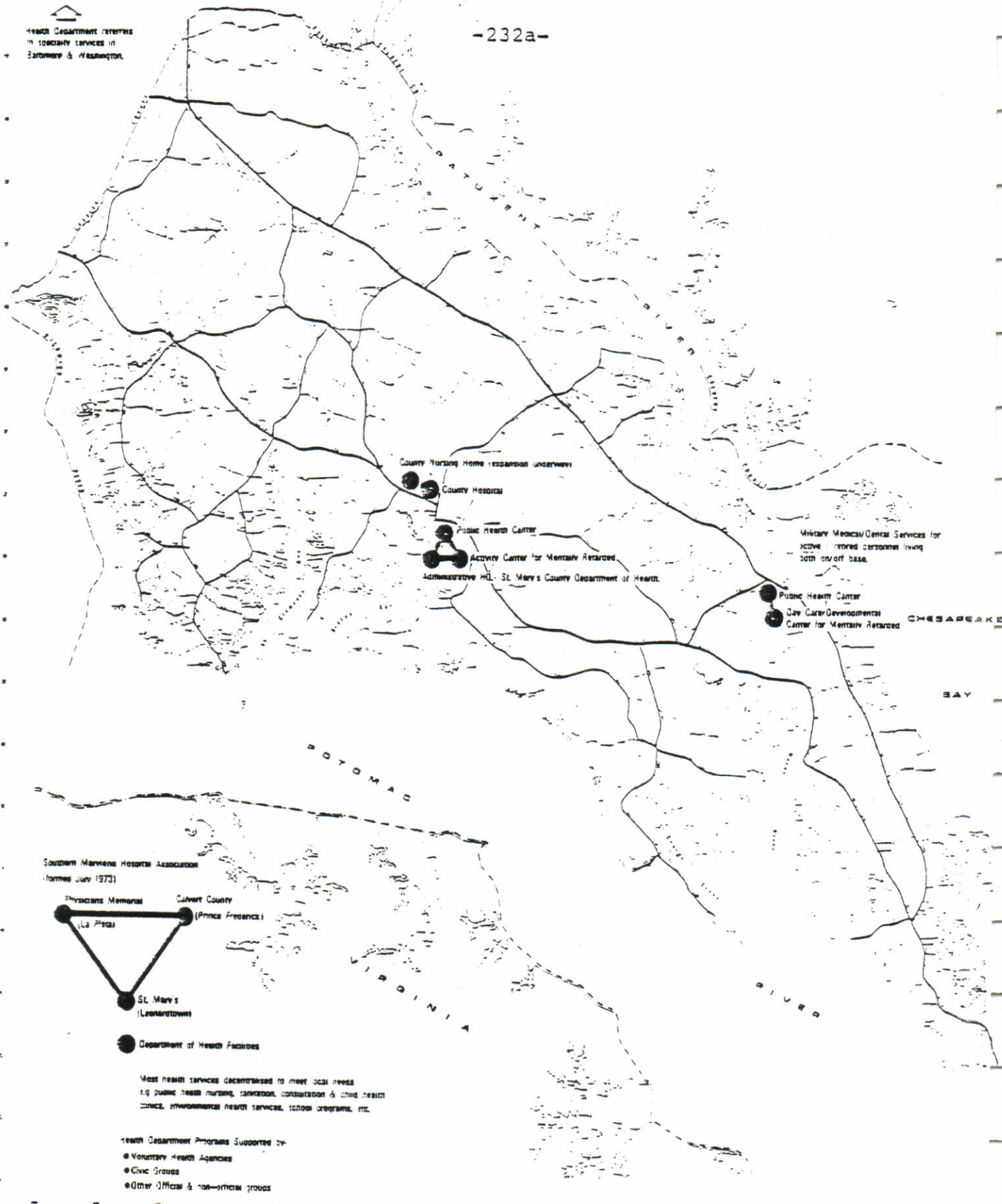
specialty services in the Baltimore and Washington areas. The Health Department mainly utilizes the services of the University of Maryland Hospital and the Johns Hopkins Hospital in Baltimore.

Operational efficiencies will be obtained through the formation of the Southern Maryland Hospital Association in July 1973. The three hospitals of the tri-county area - St. Mary's, Physicians Memorial (in La Plata) and Calvert County - have formed an informal association to review policies, purchases, and personnel in order to maximize use of resources through a mutually cooperative effort.

A number of further specific services are provided. These include:

- specialist consultation clinics held mainly at the two health centers;
- child health clinics conducted at seven different locations throughout the county;
- environmental health services which are broad in scope and reach out to many sectors of the local community;
- communicable disease programs organized in the areas of tuberculosis, venereal disease, and general communicable disease control, ranging geographically through all the physical health facilities in St. Mary's and including appropriate field contact and referral both in and out of the county;
- preventive medical services, with programs for dental needs, maternal health, family planning, infant and child health, crippled children's services, and mental health. These services also reach out geographically through the county and its environs and include an extensive effort in the schools;
- physical therapy programs performed in homes, clinics, nursing homes, schools and the county hospital;
- home health services, which are conducted by public health nurses and result mainly from referrals by the hospital, nursing home and Department of Social Services;





# ST. MARY'S COUNTY - MARYLAND

## 39. EXISTING HEALTH FACILITIES

-nutrition services, essentially an information and guidance service.

2. Existing Levels of Service

In comparing the previously stated standards and criteria with the existing (1973) situation in St. Mary's County it is apparent that most facilities and services meet these standards, in part because they were both conceived by health professionals and are administered by health professionals. There is thus a common understanding of what the system needs have to be for effective and adequate functioning. This purpose is reinforced by the spurs of accreditation and federal funding requirements, also originating with and administered by health professionals. Because many of the facilities serve the whole county, locational criteria relative to user needs are simple, with geographical or service centrality the fundamental requirement. This condition appears to be met in all cases.

Application of the main quantitative standard - the formula for hospital bed needs is summarized in the table below.

-1973 levels of service for hospital bed needs in St. Mary's County were calculated based on two alternate standards: 1.5 beds per 1000 population and 2.5 beds per 1000. These are not intended to represent the only options but cover the typical range normally quoted for local hospitals, in areas similar to St. Mary's. In 1972 the existing numbers of beds per 1000 population in St. Mary's County was 1.5. The higher ratio of 2.5 beds per 1000 population is often stated by health professionals to be a closer representation of total needs.

TABLE 46: 1973 LEVELS OF SERVICE: HOSPITAL FACILITIES

Beds/1000 Pop. standard		St. Mary's Co. 1973 Population (approximate)	Hospital Occupancy Rate	=	1973 General Hospital Bed Requirements	1973 <sup>1</sup> Hosp. Beds	- or - Standard
1.5/1000	X	50,000	X $\frac{100}{85}$	=	38	75	-13
2.5/1000	X	50,000	X $\frac{100}{85}$	=	142	75	-67

<sup>1</sup>This total represents only beds at the County hospital and does not include facilities located at the various military bases in the county, serving active and retired military personnel.

The simplified formula of 800 patient days per 1000 population indicates a 1973 need for 127 hospital beds, or a deficiency of 52.

Identification of present deficiencies in the health field is essentially subjective, mainly because there are no absolute or commonly accepted definitions of what constitutes a minimum/adequate/desirable health system in any given community. Most individual health needs can ultimately be met, in or out of the county, although travelling time and/or financial expense may be considered personally excessive in individual cases, depending on the location or income of the individual patient or his family.

As a comparatively small jurisdiction, St. Mary's cannot be expected to economically provide the same range of facilities that are common in metropolitan areas such as a full mental health center, training and nursing schools, drug abuse and rehabilitation centers. At the same time, every effort should continue in order to provide for all health needs, either directly in the county, given available funding, or by collaboration arrangements with other localities.

Federal installations in St. Mary's County, primarily the Patuxent River Naval Air Station, are largely self sufficient for major health care needs. Military medical and dental services are available to all personnel living both on and off base, whether active or retired. The functional overlap between local and military health delivery systems makes calculation of future local health service needs subject to a degree of uncertainty.

D. Current Planning

The present program of the St. Mary's County Health Department includes the following:

- Expansion of the hospital to include new laboratory, x-ray and out-patient facilities has been approved. A three-bed intensive care unit will be in operation by September 1973.
- An expansion program for the nursing home by addition of 20 further beds is now underway.

-Initial planning of a care home for the elderly has been undertaken, to contain 30 personal care beds and 90 residential units. Site and funding approval have still to be obtained.

-Continuation and incremental improvement of all other existing facilities and programs oriented toward a total health care capability for St. Mary's County.

Assumed population growth for the county, upon which health planning for St. Mary's County is based, is that projected by the Tri-County Council of Southern Maryland.

E. Functional Role of Health Services in the County Infrastructure

Health services in St. Mary's County presently represent a balance between empirical need and fiscal capacity. Empirical need is either determined on a county wide or local basis. The former includes, for example, residential care for the elderly, all specialist services, and mental health. In these fields the present concentration of population and government in Lexington Park and Leonardtown is a strong influence on present and presumably future site location. The latter case of geographic dispersal includes the distinctive spatial arrangements and health needs of the public school system, day care and child health needs, and the diverse needs for supervisory inspection by environmental health services. In these instances the essential needs are met in on-the-spot locations throughout the county.

Health services are not now used as a land development planning tool. They support existing population plus a limited extension into a future time frame, and are provided to the limit compatible with the County's total budget.

HEALTH PLAN

Generation of Need for Health Facilities

As described previously, the total health program is a complex mix of facilities and services at either fixed or movable locations throughout the County. The need to maintain defined levels of health care and standards of service will always encourage a close relationship between health planning and the current and projected population levels.

Due to lack of specific data on projected trends in the many individual health fields, it is not possible to project the entire program. For example, it is not possible to estimate a long range demand for long-term or nursing home beds, because of the difficulty of assessing the number of persons who will be over age 65, unpredictable future attitudes to public nursing homes, and the uncertain role of the federally-attached population. In other communities the number of required hospital beds has traditionally been the base from which all other health facility and service needs have been extrapolated. Projection of hospital bed needs is as follows.

Future Hospital Bed Provision

Present bed needs are either 13, 52 or 67 places, depending on whether the desired standard is 1.5 beds, 800 patient days, or 2.5 beds per 1000 population. Applying those three standards to the population increments of the land use plan gives the following future needs.

Alternative Standards <sup>1</sup>	1980	1990	2000	2003
	County bed needs additional to 1973 level			
1.5 beds per 1000 population	30	59	96	110
800 patient days per 1000 pop.	89	133	194	215
2.5 beds per 1000 population	95	139	201	221

- 1 Actual age composition of the future population will indicate one standard as the most appropriate.
- 2 Assuming continuation of the 75 hospital beds existing at St. Mary's Hospital in 1973. Not including facilities located at the various military bases in the country, serving active and retired military personnel.

Relation of Additional Projected Hospital Bed needs to  
Current and Planned Facilities

Additional place needs range from 30 to 95 in 1980, 59 to 139 in 1990, 96 to 201 in 2000 and 110 to 221 in 2003, depending on the standard chosen. The additional 1980 need is 40% to 127% of current capacity. The additional 2003 need is 147% to 296% of the current bed total.

This need should be met either by additions to the St. Mary's County Hospital (not necessarily at the present facility in Leonardtown), or by extended use of facilities in either the Washington or Baltimore Metropolitan areas, or the remaining Tri-County area through the Southern Maryland Hospital Association.

Health Performance Indicators

As discussed earlier and above, health performance indicators are many. They are continually considered in designing each aspect of the health system. The central facility - the County Hospital - is already established on a single central site. There are no viable alternative geographic systems, such as occur for example in educational planning.

LIBRARIES

A. Operational and Fiscal Structure

St. Mary's public libraries, with those of Charles and Calvert Counties, form the Southern Maryland Library Association, a system operative since 1950. The SMLA is a cooperative system with reciprocal borrowing on request. Expanded service, professional staff skills and economies of scale are other advantages of the cooperative approach.

Funding for the St. Mary's share of total system cost is approved annually by the County Commissioners. The total appropriation of FY 1973-74 for County libraries is set at \$102,623.

B. Present Planning Base

The libraries in St. Mary's are part of a regionally planned system. The Southern Maryland Library Association uses the standards of the American Library Association as ongoing planning guidelines. The Central Library at La Plata serves as the main resource and reference center for the system, as well as performing management coordinating functions for all other libraries.

Titles and unit measures developed by the A.L.I. relate to the various types of library facility, their respective service areas, populations served, registration and circulation levels, size of collection, site location, site size and facility size.

The provision of library facilities within St. Mary's County is a part of this regional scale consideration. The two libraries in St. Mary's are community-level facilities. They have basic collections and offer library service at local level. Specialist and bookmobile services reach residents with particular needs or access problems.

C. Functioning of the Existing System

St. Mary's County is presently served by the St. Mary's Memorial Library in Leonardtown, by the Lexington Park Branch and by bookmobile service to rural areas. The Lodestar service has been established to provide library service to the handicapped, bedridden, non-readers, and other disadvantaged groups.

The Lexington Park Library was opened in 1968 and was designed to hold an ultimate collection of 50,000 volumes. The headquarters in Leonardtown is located in Tudor Hall, an old Georgian mansion recently restored and renovated under a matching grant from HUD at a total cost of about \$195,000. It houses 35,000 volumes.

Materials available at the beginning of FY 1972-73 through St. Mary's County libraries included 54,519 books (61% adult, 39% juvenile) and 1,558 non-book items. The latter comprised pamphlets, periodicals, records, slides, tapes and other audio-visual materials. There were, as of the same date, a total of 135,666 books throughout the full Tri-County system.

In mid 1972 there were 10,144 adult and 4,824 juvenile registered borrowers in St. Mary's County. This represents 32.5% of the total county population. During FY 1971-72, 105,760 patrons in St. Mary's borrowed a total of 182,248 items.

The St. Mary's County libraries are members of the Tri-County Resource Center and draw on the materials in all the libraries in the three counties of Calvert, Charles and St. Mary's. To further accelerate the provision of materials, the three counties in the Southern Maryland Regional Library Association are served by a daily connecting delivery service which also travels to Enoch Pratt Library in Baltimore to pick-up and return materials borrowed on interlibrary loan. The Enoch Pratt Free Library with a collection of over two million volumes acts as a State Resource Center for all public libraries in the state. To make materials more readily accessible, all libraries are linked to each other and to Enoch Pratt by a teletype network.

The bookmobile operates from the Leonardtown library and serves nearly all areas of the County. There are seventy-two regular stops on a bi-weekly basis. It is hoped to expand the service to cover remaining areas of the County in the near future.

The libraries in St. Mary's County, aside from their main function, also make multi-purpose rooms available to the general public for group meetings on a no charge basis.



D. Current Planning

Although there are no specific plans to increase the number of libraries in St. Mary's, an ongoing trend to higher proportionate registration is evident in recent years. Each registered borrower averaged 3.57 books annually, equivalent to 1.16 books per county resident. Both these statistics have intensified in the last few years. Lexington Park branch library is now the most heavily patronized facility of the six libraries and three bookmobile services in the SMLA system. 76,956 individual patrons used the library in 1972, borrowing 120,711 library items. These figures represent respectively 34% and 27% of the equivalent totals for the entire system. Leonardtown library served 9% of total patrons and provided 9% of circulation, while bookmobile service in St. Mary's County made up almost 4% and 5% of circulation, respectively.

E. Functional Role of Libraries in the St. Mary's County Infrastructure

Because of the regional organization and wide service area of the present library system, there will not be a close relationship between the siting of libraries and the geographical patterning of future growth in the county. In common with other specialized county services, the library system will continue to be focused on fixed facilities in the major population centers, with additional selective flexibility provided through an expanded and carefully routed bookmobile service.

LIBRARIES PLAN

Generation of Library Need

Library planning for St. Mary's County should be seen in the context of the County's membership in the regionally planned Southern Maryland Library Association.

The future need for library provision calculated below is based upon the projected population of St. Mary's County only. It uses standards for space requirements based upon data reported by the American Library Association. It is desirable that a population of between 35,000 and 100,000 have access to a stock amounting to between 2.5 and 2.75 volumes per capita. Libraries should ideally be provided in St. Mary's at a level of 0.5 - 0.6 square feet of library floor space per resident. It is desirable that between 0.25 and 0.3 square feet of the total be provided on the first floor and that there should be provided approximately three seats per 100 population.

Future Library Provision

The present system of local community libraries based on the regional center at La Plata should continue to be supplemented by appropriate bookmobile and other specialized facilities and services.

Based on the population increments of the land use plan, and applying the stated standards, future incremental library needs are as follows:

TABLE 47:

NEED FOR ADDITIONAL LIBRARY FLOOR SPACE AND VOLUMES TO SERVE INCREMENTAL POPULATION 1973-2003

	1973-80	1980-90	1990-2000	2000-03
Sq. ft. of additional library floor space (to nearest 1000 sq. ft.) <sup>1</sup>	5,000	9,000	13,000	5,000
Additional volume need (to nearest 1000) <sup>2</sup>	23,000	43,000	60,000	21,000

1 Standard of 0.6 square feet per capita.

2 Standard of 2.75 volumes per capita.

Relation of Additional Projected Library Needs to the Current and Planned Library System

The figures indicate a need for two new libraries during the planning period, equivalent in size to the average of the

present facilities at Leonardtown and Lexington Park. To best serve the growing population needs the proper locations appear to be (i) a facility in the northern part of the County in the 1980's. The Mechanicsville/Charlotte Hall area best serves the total residential need; (ii) a facility in the southern area of the county during the 1990's, either as a further facility in Lexington Park or further south in Great Mills or St. Mary's City.

The additional volumes will be supplied both by increasing the stock in the regional system, and by increasing the rate of circulation between member jurisdictions.

#### Library Performance Indicators

Planning for provision of additional library facilities should continually review the projected need, the service population, and the desirability of being within a fifteen minute driving time for urban residents and a thirty minute trip for persons living in rural areas. The comparative efficiency and low cost of bookmobile service in areas of low density will remain a moderating factor.

## WATER AND SEWERAGE SYSTEMS<sub>1</sub>

### Water and Sewer Planning

Comprehensive Water and Sewer Planning is the functional organizational responsibility of the Director, Land Use and Development with technical advise and assistance of the County Health Department and the St. Mary's County Metropolitan Commission (SMCMC).

The Comprehensive Water and Sewerage Plan is updated annually and requires the approval of the County Commissioners and the Environmental Health Administration, Department of Health and Mental Hygiene.

Administration and operational coordination of construction to include construction planning, and operation and maintenance of central water and sewage facilities through the county.

### WATER SUPPLY

#### A. Operational Structure

An essential element in any populated area is the availability of an adequate water supply of acceptable quality. The estimated average annual per capita consumption is now approximately 100 gallons per day in St. Mary's County. Over one-half of the County's water users use local on-site wells. The remaining supply comes through a substantial number of small private systems scattered in individual communities and subdivisions, in-addition to the Leonardtown and Lexington Park public systems and other supply systems of the various military and State installations.

#### B. Fiscal Structure

Fiscal structure reflects this diverse make-up, each system being responsive to the terms of its own organizational framework. A variety of financing procedures are followed.

- 
1. See 1976 Edition, St. Mary's County Comprehensive Water and Sewerage Plan. Prepared by a committee formed by Director, Office of Land Use and Development (Chairman), Chief Environmental Hygiene, St. Mary's County Health Department, and Chief Engineer, St. Mary's County Metropolitan Commission, members.

C. Functioning of the Existing System

Most of the water used in St. Mary's for domestic and industrial use consumption is ground water. Supplies are substantial; the potential yield exceeds 100 mgd and present use is less than six mgd. Surface water is a very minor source of the total supply.

As the various public water systems are not interconnected to other supply sources, the contamination of a primary source would be serious for the users of that particular system. Inadequate pressure for fire fighting purposes is another potential problem as the level of use grows and as higher buildings are constructed. This may be reflected in higher fire insurance rates.

Water rates may be raised to meet demand from new development and the application of stricter water quality standards. Capital requirements and operating expense will tend to increase disproportionately.

Water quality standards have been developed by the U.S. Public Health Service, and they are known as the Public Health Service Drinking Standards. They were recently revised to a more stringent level and now include requirements for trace metals. Future procedure may also include routine testing for viruses. Drinking water of high quality is uniformly expected by the public, measured by the indices of potability, color, odor, taste, and fluoridation for tooth protection.

Ground water resources appear adequate for any foreseeable level of development for the County in the years ahead. In the absence of any new direction, improvements will probably take the form of modernization and selective expansion of existing systems, possibly with institutional and/or organizational change.

EXISTING SEWERAGE SYSTEM

A. Operational Structure

Sewerage treatment in the County is handled through a variety of arrangements: sanitary districts, municipal sewage treatment plants, private utility sewage treatment plants, and individual lot septic tanks. The St. Mary's County Metropolitan Commission achieves overall coordination of the various parts of the total system and for preparation of local sewer planning studies.

The particular character of St. Mary's County - many small watersheds draining into tidal waters - is reflected in the general pattern of physically separated systems serving localized areas within the eight major individual drainage basins. At this point in time it appears unlikely that the County will require a regional or full county system. Nevertheless future planned development in St. Mary's County will benefit at several points from grouping of two or more of the existing community systems into a single unified system, and consolidation of treatment facilities.

B. Fiscal Structure

The entire service system is intended to be self-financing with the necessary revenues being provided mainly from basic developer charges, front foot benefit charges, connection fees, service charges and other sources. This approach is comparable to the financing of water supply in the County. Although it ensures that public expenditures for sewerage service to serve the County are minimal, it carries the risk that development will be permitted irrespective of basic public policies on growth in order for the County to recoup its own expenditures.

C. Functioning of the Existing System

A substantial amount of existing County development in St. Mary's County still uses individual on-lot sewerage disposal system. Much of the residential development both within and outside the main population centers has been based on septic tanks or cesspools.

Central sewerage systems mainly serve the communities of Lexington Park and Leonardtown. Other smaller scale sewage systems do exist.

Many limitations in the present sewerage systems are apparent. Existing treatment plants are often inadequate to handle flows from further development. Rapid growth in newer subdivisions often results in an extensive net of on-lot septic tanks that may pollute locally drawn water supplies in the near future. Soil conditions in many locations are unsuitable for subsurface (i.e., septic tank or cesspool) systems in any new development that may be permitted to occur.

The efficiency of sewerage systems in St. Mary's County also affects the County's involuntary contribution to the total water pollution problem of Chesapeake Bay. Domestic sewage is the biggest of several pollution sources in the Bay - the others include industrial and agricultural wastes, storm run-off, combined sewer discharge, and marine transportation. The total discharge

will continue to increase proportionately to population growth, possibly accelerated by an increase in the rate of waste generation per capita. Although St. Mary's is a relatively minor contributor to Bay pollution in the total context of over twenty jurisdictions which include the City and County of Baltimore, and both Prince Georges and Montgomery Counties - the County does have responsibilities to participate in reducing their own waste water flows and thus the level of water pollution in the Bay. As a major beneficiary from the shellfish industry, it is certainly to the County's economic advantage to foster this approach.

## WATER AND SEWER CONSIDERATIONS

### Scope and Purposes

The maintenance of an environment free of serious hazards to public health is essential to the well being of any area. Two of the most essential factors in maintaining such an environment are adequate and readily available supplies of potable water and the satisfactory collection and disposal of waste waters.

In areas undergoing progressive degrees of urbanization these needs cannot generally be met by the independent action of individual house-owners. Consequently, water and sewerage are planned, constructed, and operated on a municipal, public, or investor-owned, rather than an individual basis. Even relatively small communities customarily require water and sewerage facilities of considerable engineering complexity, the construction of which necessitates relatively large financial expenditures.

In general, each community in St. Mary's County served by substantial water distribution and sewerage collection facilities has planned and constructed these facilities to serve its individual needs. Many service areas do not extend beyond community boundaries.

There are often valid reasons why further water or sewer system development should be designed to serve more than one community. This does not necessarily require integration of entire systems, but may take the form of a single treatment plant to treat water or sewerage for several communities, each with its own water distribution or sewerage collection system. On the other hand, local conditions may be such that water and sewer development, including both treatment and distribution totally within community boundaries, continues to be the most economical and desirable arrangement.

The main purpose of the water and sewer plan is to coordinate plans with other elements of the long-range comprehensive county plan.

As stated in Article 43 of the Maryland State Code, "The objectives of the County Plan are to guide the development of the water supply and sewerage systems to be consistent with County comprehensive planning, and to be used as a tool in implementation of the County development policy so that an ample supply of water may be collected, treated, and delivered to points of use, and so that wastewater may be collected and delivered to points best suited for waste treatment and disposed of or reused so as to minimize adverse effects or legitimate water uses in a most effective manner."



# GROUND WATER RESOURCES

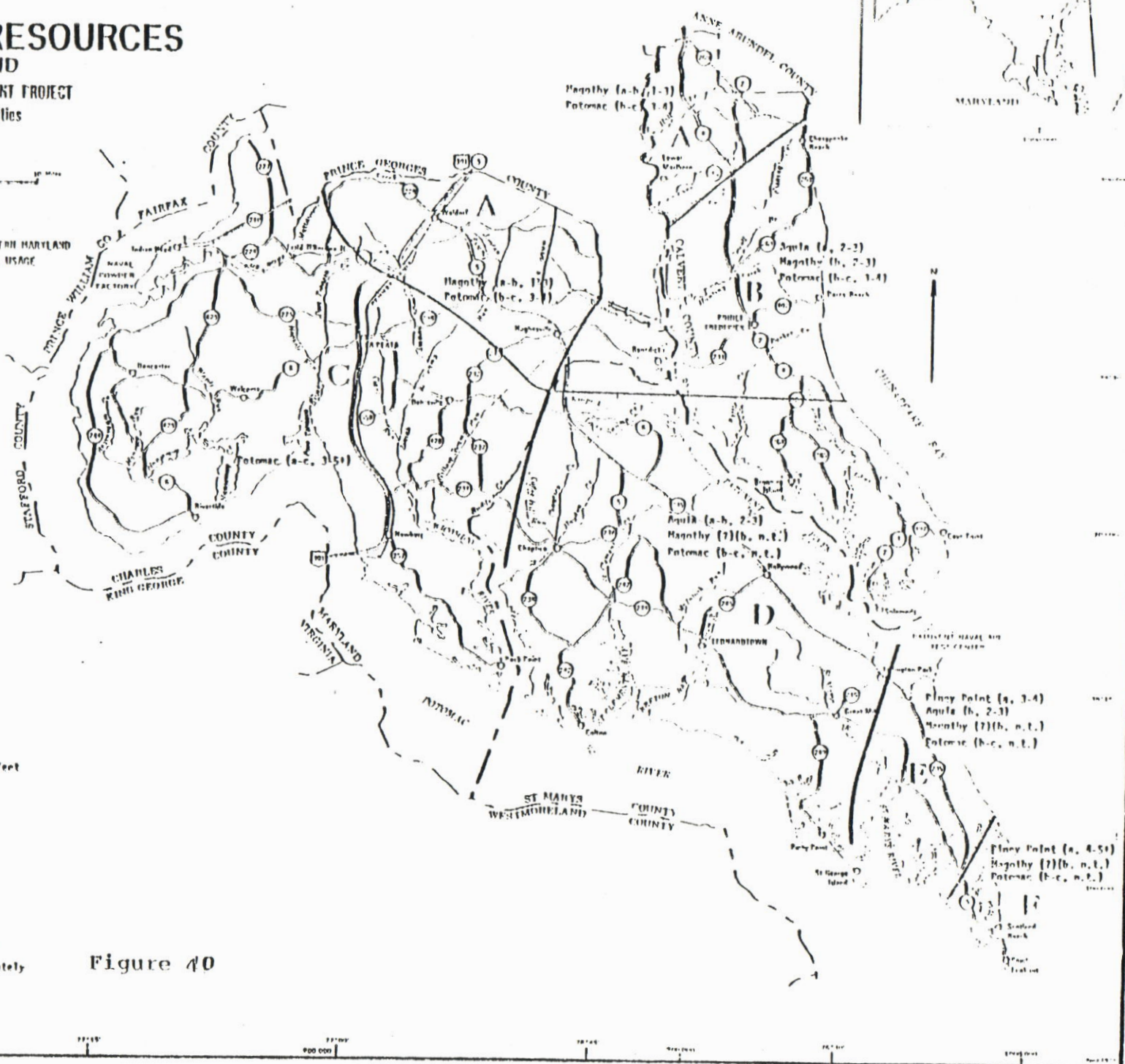
## SOUTHERN MARYLAND

### RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

#### Charles, Calvert, and St. Marys Counties



AVAILABILITY OF GROUNDWATER AQUIFERS IN SOUTHERN MARYLAND  
FOR MUNICIPAL, COMMERCIAL, OR INDUSTRIAL USAGE



#### LEGEND

Area Boundaries —————

Estimated Depth of Wells  
 a - 250 to 500 feet  
 b - 501 to 1,000 feet  
 c - greater than 1,000 feet

Estimated Number of Wells Needed to  
 Yield 1,500 gallons per minute  
 1 - one well  
 2 - two wells  
 3 - three wells  
 4 - four wells  
 5+ - five or more wells  
 n.t. - not tested adequately

Figure 40

Data Source: Maryland Geological Survey  
 Thematic maps prepared by  
 Maryland state staff, 1973

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# GENERAL SOIL MAP

## SOUTHERN MARYLAND

### RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

Charles, Calvert, and St. Marys Counties

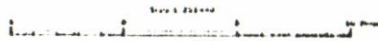
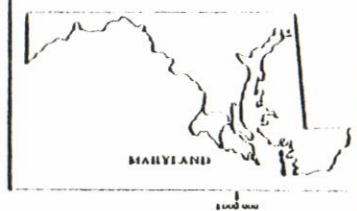
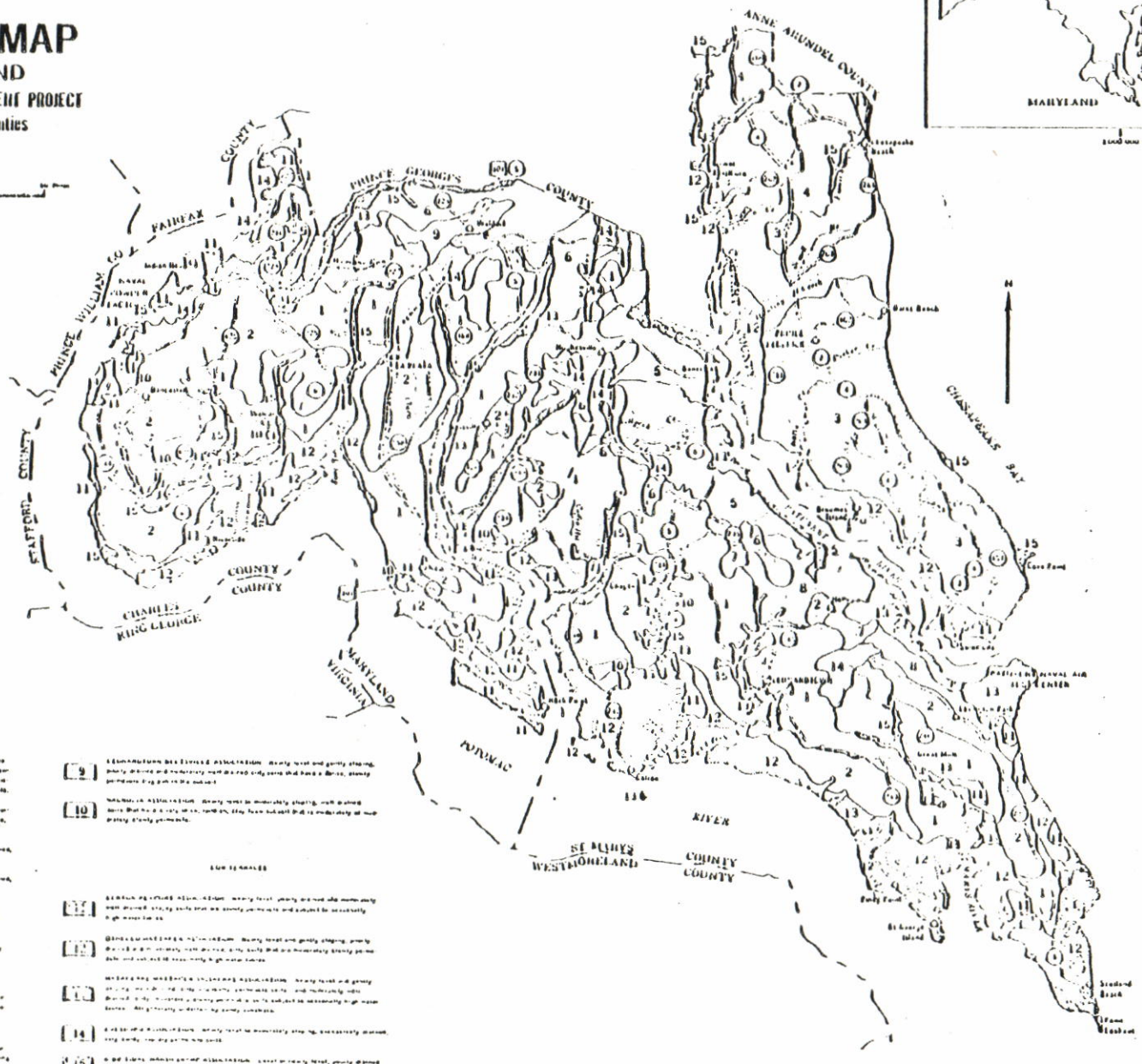


Figure 41.



- 1** Soil is a heavy, clayey, silty loam. It is very hard and sticky when wet. It is a poor grower of crops. It is a very poor soil for pasture and for timber. It is a very poor soil for all uses.
- 2** Soil is a heavy, clayey, silty loam. It is very hard and sticky when wet. It is a poor grower of crops. It is a very poor soil for pasture and for timber. It is a very poor soil for all uses.
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- 14** Soil is a heavy, clayey, silty loam. It is very hard and sticky when wet. It is a poor grower of crops. It is a very poor soil for pasture and for timber. It is a very poor soil for all uses.
- 15** Soil is a heavy, clayey, silty loam. It is very hard and sticky when wet. It is a poor grower of crops. It is a very poor soil for pasture and for timber. It is a very poor soil for all uses.

Sources:

- (i) Aquifers. Map entitled - 'Groundwater Resources in Southern Maryland.' From the report, "The Southern Maryland Resource Conservation and Development Plan," prepared by the Soil Conservation Service, US Department of Agriculture, 1973.
  - (ii) Soil and Drainage Characteristics. Map entitled - 'General Soil Map, Southern Maryland' from report cited under (i) above.
  - (iii) Topography. Refer to the standard USGS sheets for St. Mary's County.
  - (iv) Ground Cover Refer to land-use maps in this report and map entitled, 'Forest Resources' from report cited under (i) above.
  - (v) Surface Water Patterns. See reference under (iii) above. There are now no areas of standing waters or impoundments in the County.
- (b) A Map or Table showing water quality criteria in the County. See following discussion:

Monitoring procedures are conducted at State, Regional and County levels. They relate to the state's comprehensive program of water pollution control, and include water quality standards for all waterways, regional and lower basin water pollution control plans, a State construction grants program for treatment facilities, and a water quality enforcement and monitoring program.

The County Health Department enforces regulations regarding individual septic systems, public sewage systems, and other sources of bacteriological contamination, and also enforces pollution orders.

The proposed long term plan for evaluation of water quality in St. Mary's County and Southern Maryland as a whole has been described as follows:

"Each proposed point source pollutant discharge to state waters is subjected to a point-of-discharge evaluation (PODE). This evaluation, performed by Water Resource Administration, is a predictive tool utilizing historically accepted sanitary engineering principles to assess the impact of point sources on the waters of the State. Required

# FOREST RESOURCES SOUTHERN MARYLAND

RESOURCE CONSERVATION AND DEVELOPMENT PROJECT  
Charles, Calvert, and St. Marys Counties

Figure 17.

LEGEND

Forest Cover



Primary Saw Mills



Secondary Saw Mills



Concentration yards



State Forests



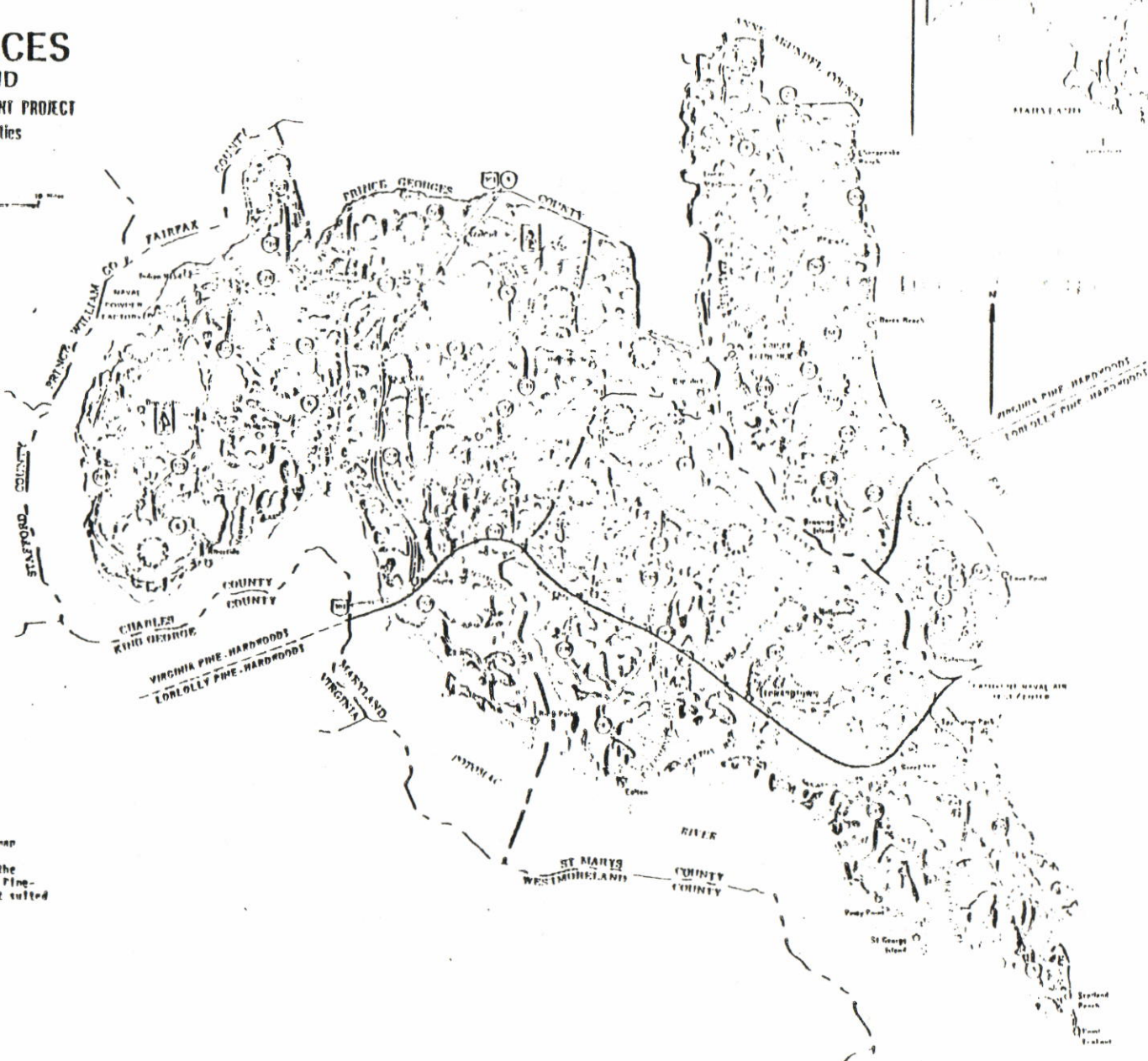
Region Line



Note: Portable & Custom mills not shown on map

North of the region lines represents the area best suited for growing Virginia Pine-Hardwoods. South of this line is best suited for Loblolly Pine-Hardwoods.

Data Source: Maryland Forest Service, DNR



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Thematic maps prepared by  
Maryland state staff, 1973

for this evaluation are such items as historical water quality data, long term flow measurements, geophysical features, waste discharge characteristics, and applicable water quality criteria and use designations. This evaluation incorporates a factor of safety sufficiently high to assure a reasonable amount of unused waste receiving capacity adequate to account for anticipated economic and demographic growth over a 20 year period and an additional unused capacity reflecting the precision and validity of the methods. Each evaluation made will be subject to field verification. The evaluation process will address both fresh water and tidal flow systems. Fresh water flow systems will be evaluated using variations of the well-known Streeter-Phelps equation.

Variations will range from the graphical solution method to solution using the digital computer.

Tidal flow systems, being the more difficult, will be subjected to a variety of documented techniques. Variations will range from applying data developed in similar hydrologic systems in reasonable proximity to the discharge under review, to requiring the conducting of dispersion studies at the site. Where dispersion studies will be necessary, a trackable substance will be introduced and traced for a prescribed period of time. This method, in addition to being used to assess domestic discharges, will find application as well in assessing the impact of thermal discharges on waters of the State. This, then, is the basis on which loading allocations to individual discharges will be made. As situations develop which require multiple discharge evaluations, more sophisticated modeling will be used. Capability presently exists to use sophisticated modeling on both fresh and tidal water systems".<sup>1</sup>

## 2. Demographic

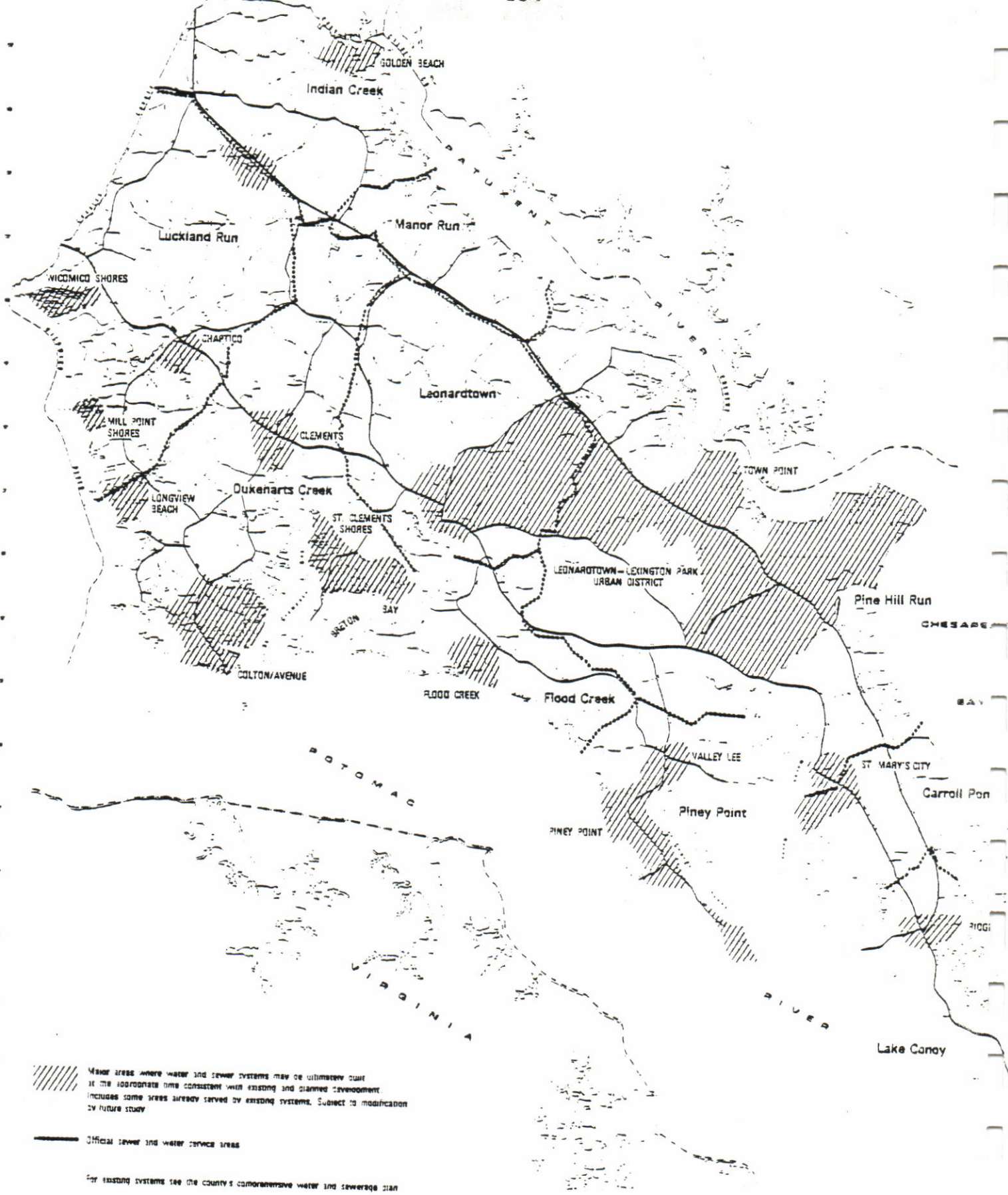
- (a) General maps showing present and projected population distribution and density.  
(See Figures 22 and 23).

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1. Source: Report cited under (a)(i) above, pp. 77-78

3. Land-Use

- (a) See land-use inventory and zoning maps.
- (b) See St. Mary's County Zoning Ordinance and Subdivision Regulations.
- (c) See St. Mary's County Comprehensive Water and Sewer Plan.



# ST. MARY'S COUNTY - MARYLAND

## 43. FUTURE NEED FOR WATER & SEWER SERVICE

BASED ON PROPOSED LAND USE PLAN

## ENVIRONMENTAL MAINTENANCE

Although not strictly a public service, environmental maintenance is a public responsibility and is included here as an important aspect of future planning in St. Mary's.

Since the early 1960's there has been concern at all levels of government and by concerned citizens to conserve the qualities of a natural environment. There has been a growing conviction that this is a valid public responsibility. There is a clear role for local governments, including St. Mary's County, in both implementing Federal, State and Regional legislation, and in developing local ordinances to meet particular local problems. In St. Mary's these include conservation of major environmental assets in the Bay shoreline and coastal wetlands. The remainder of this section outlines the position of the county in the major environmental areas of air, noise and water pollution, sedimentation control, and conservation of the wetlands, shore lines and flood plains.

### Air Pollution

Air pollution in the County is still a comparatively localized and minor problem, resulting largely from occasional heavy road traffic and local oil-fired heating systems. Five identified air pollution problems were investigated by the County's Environmental Health Section in 1972, a decline from the previous two years.



Air pollution standards and enforcement procedures are established at Federal and State level. They will ultimately limit harmful emissions from industry, incineration and automobiles. Federal powers are centered on the Council of Environmental Quality, the Environmental Protection Agency and the 1970 Clean Air Act. State legislation and responsibilities are administered by the Division of Air Quality Control which is part of the Environmental Health Services Branch of the Department of Health and Mental Hygiene.

The levels of air pollution in St. Mary's County should be continuously monitored and all appropriate local State and Federal standards should be enforced. Existing problems should be identified and violators prosecuted to the maximum degree possible under the provisions of the various existing laws and ordinances. All submissions for rezoning or development plan approval should identify the number, type and extent of all possible pollution sources proposed to be constructed within the project. The Environmental Protection Agency now requires states to consider the long range air pollution impact of all proposed shopping centers, sports stadiums and other traffic generating facilities, within their component jurisdictions.

#### Noise Pollution

Excessive noise can result from either moving or fixed point sources. There is now very little regulation of the former in any area of the County, although the Federal Aviation Administration is currently defining existing and projected future noise contours around major airports for informational purposes. There are several existing ordinances affecting St. Mary's County that restrict point source noise levels. Under the Walsh-Healey Public Contracts Act any company doing more than \$10,000 worth of business with the U. S. Government must limit noise in plants, factories, buildings or surroundings, or under other working conditions. Under Public Law 91-54 noise pollution on construction sites is limited to stated levels. Individual legal actions can be brought to remove a noise nuisance on several grounds.

In St. Mary's County excessive noise is only an existing or foreseeable problem in the vicinity of the local airports. This is particularly acute around the Patuxent River Naval Air Station where the recently defined AICUZ noise contours identify adjoining areas of Lexington Park where specialized land use regulation is needed to meet the needs of the Navy's flying program and to protect existing local residents from noise inconvenience.

### Water Pollution

The pollution of local rivers and of Chesapeake Bay is a problem that can only be improved by public regulation and requirement. Water pollution results from any combination of domestic sewage, industrial and agricultural wastes, storm runoff and combined sewer discharge. With respect to the Bay, it can also be caused by marine transportation and boating.

St. Mary's County Department of Health's Division of Environmental Health investigates or tests issues related to local water pollution, including new septic tanks, percolation tests, new wells, and samples and inspections of public water.

Water quality standards have been established by the State of Maryland. Major revisions lending greater emphasis to the quality of effluents have been recently introduced by the Water Resources Administration of the Department of Natural Resources. The quality of the waters which receive effluents are covered by previous legislation. These changes bring Maryland in line with the 1972 Federal Water Pollution Control Act. In addition, standards for ground water quality are included for the first time. There are at this time no Federal standards for ground water quality.

The new state regulations also classify states waters in order to afford protection for water contact recreation and aquatic life, and to protect shellfish propagation and harvesting in Chesapeake Bay. They identify and describe anti-degradation, assimilative capacity, best practicable control technology and public participation as principles of water pollution control in Maryland.

This regulatory framework at state and federal levels may be made the basis for further reducing the level of pollution in the waters within and bordering the County. Ground water standards should be maintained by protection of major water aquifer recharge areas and limiting the density of residential development. Stream quality should be maintained by controlling effluent. Bay quality should be raised by defining major water planning areas<sup>1</sup> and addressing the many sources of effluent that enter the Bay.

### Sedimentation Control

Land is the basic resource of St. Mary's County. If the natural land surface is modified by stripping, excavating or land filling, this resource is partially lost.

<sup>1</sup> See proposal in proposed Comprehensive Regional Plan for the Tri-County Region of Southern Maryland, May 1973.

The County's Sedimentation Control Ordinance (1971) places limitations on all aspects of the clearing and grading of natural surfaces in order to minimize loss of the natural soil cover. A state level of control introduced through the Sediment Control Act also provides authority for enforcement of sedimentation controls.

#### Wetlands Conservation

In common with the other tidewater counties, St. Mary's is bordered by extensive areas of natural wetlands. They have several beneficial functions including nutrient recycling which helps to clean polluted water, provision of nursery areas for aquatic species that are important living resources of the Bay, serving as a wildlife habitat, and acting as buffers in protecting inland areas and shorelines against storm tides and waves.

They are officially defined as land subject to periodic tidal action and which support aquatic growth. They are both State and privately owned.

In recent years their natural status in the Bay Region has been endangered in several ways, all the result of their potential for other uses and a lack of understanding of and appreciation for the natural functions they perform. There has been an undervaluation of their present value to the local jurisdictions compared to the possible economic benefits of projects that would damage or destroy them. Shoreline subdivisions and recreational marinas have been the main example. Although their intrinsic value is starting to be recognized, the difficulty of placing a price tag on the services they perform is an obstacle in countering the economic pressures that threaten them.

The 1973 State Wetlands Law established by separate order wetland boundaries for St. Mary's County and rules and regulations governing development within them. Detailed maps are on file in the County's land record office. Dumping, dredging and excavation are prohibited together with any action which destroys the natural vegetation or modified tidal flow. The law is administered by the Maryland Department of Natural Resources. The wetlands are an important element in identification of the county's future shoreline zones.

#### Shoreline Conservation

Erosion on the Bay side of the St. Mary's shoreline averages between 0.28 and 0.34 acres per mile per year. 190,000 tons of silt per annum now empties into the Bay from the Patuxent River. Over 600 acres of land were lost to the County by

erosion between 1845 and 1942. This was the highest rate of all the western Bay shore counties.

Coastal erosion causes loss of property to individuals and loss of valuable shore and wetland habitat. The public is also required to bear at least part of the cost of erecting shore protection structures, since there are both state and federal cost-sharing programs for such construction. The County Commissioners allocated \$50,000 for seawall protection in 1973-74.

As with wetlands, shoreline erosion is compounded by construction of residential development and recreational marinas. With most of the shoreline in private ownerships this presents problems of equity with respect to apportioning costs among individual owners of the shoreline and with respect to public benefit accruing from the protection of private land.

The costs of shoreline protection are very high. In addition, to fully protect the shore, methods must be applied uniformly to an entire stretch of beach. It is therefore important that future land use decisions in St. Mary's County approving development of coastal land should include provisions to retain the essential character of the shoreline and prevent further shoreline erosion.

#### Flood Plains

Flood plains are by definition subject to periodic flooding. They are broadly defined by alluvial soils laid down during past inundations. Buildings can normally only be safely built upon them if specific engineering works such as dikes or levees are constructed to obviate the problem of impeding flow. Because of their minimal water table and the pollution danger they are also unsuitable for sub-soil sewage disposal facilities.

Flood plains in St. Mary's County should be protected from these potential hazards by effective regulation including a flood plain ordinance. It is recommended that compensating density credit be applied to portions of developing residential tracts other than those lying in an officially determined flood plain.

#### Conserving Areas of Outstanding Ecological Merit

In addition to the preservation of wetlands, shoreline and floodplain areas, there are additional areas of specific ecological merit. These include rare plant and animal habitats. The Nature Conservancy is currently identifying areas of particular ecological merit within St. Mary's, with the objective of recommending an appropriate conservation program, including acquisition by the Conservancy itself.

## SOLID WASTE DISPOSAL<sup>1</sup>

### A. Operational and Fiscal Structure

Local responsibility for solid waste disposal in St. Mary's County lies with various county agencies and officials. There are two exceptions. The Town of Leonardtown contracts for refuse collection services and the Patuxent Naval Air Test Center collects on-base wastes and operates its own landfill.

Within St. Mary's County, the County Health Officer enforces all State public health laws and directs the County Sanitarian in his resolution of complaints on littering and dumping. Enforcement of solid waste laws and regulations is made by both the Sanitarian and the State Board of Health. The Metropolitan Commission is authorized to operate a solid waste system in the county. The County Commissioners are empowered to acquire and operate a tract of land for disposal of refuse and garbage. The Commissioners also constitute the County Board of Health. Other county departments license haulers, establish new sites, disburse funds, and administer solid waste and litter laws.

State and Federal overview and regulatory authority is provided by the State Department of Health and Mental Hygiene, the Maryland Environmental Service and the Federal Environmental Protection Agency.

Public financing of collection of solid waste in St. Mary's is limited solely to collection from county buildings. All other financing is by individual agreement with commercial handlers. Leonardtown budgeted \$35,000 for collection in 1972-73. Financing of the landfill facilities amounted to a budget of \$55,443 in 1971-72 and \$96,786 for 1972-73.

### B. Functioning of the Existing System

Six private collectors presently serve the county. Each pays the county \$100 annually for a dumping permit. Sixty percent of county householders haul their own

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1. Factual information in this section is drawn from the following: Solid Waste Management Plan for St. Mary's County, Maryland, Henningson, Durham, and Richardson, Inc., January 1973.

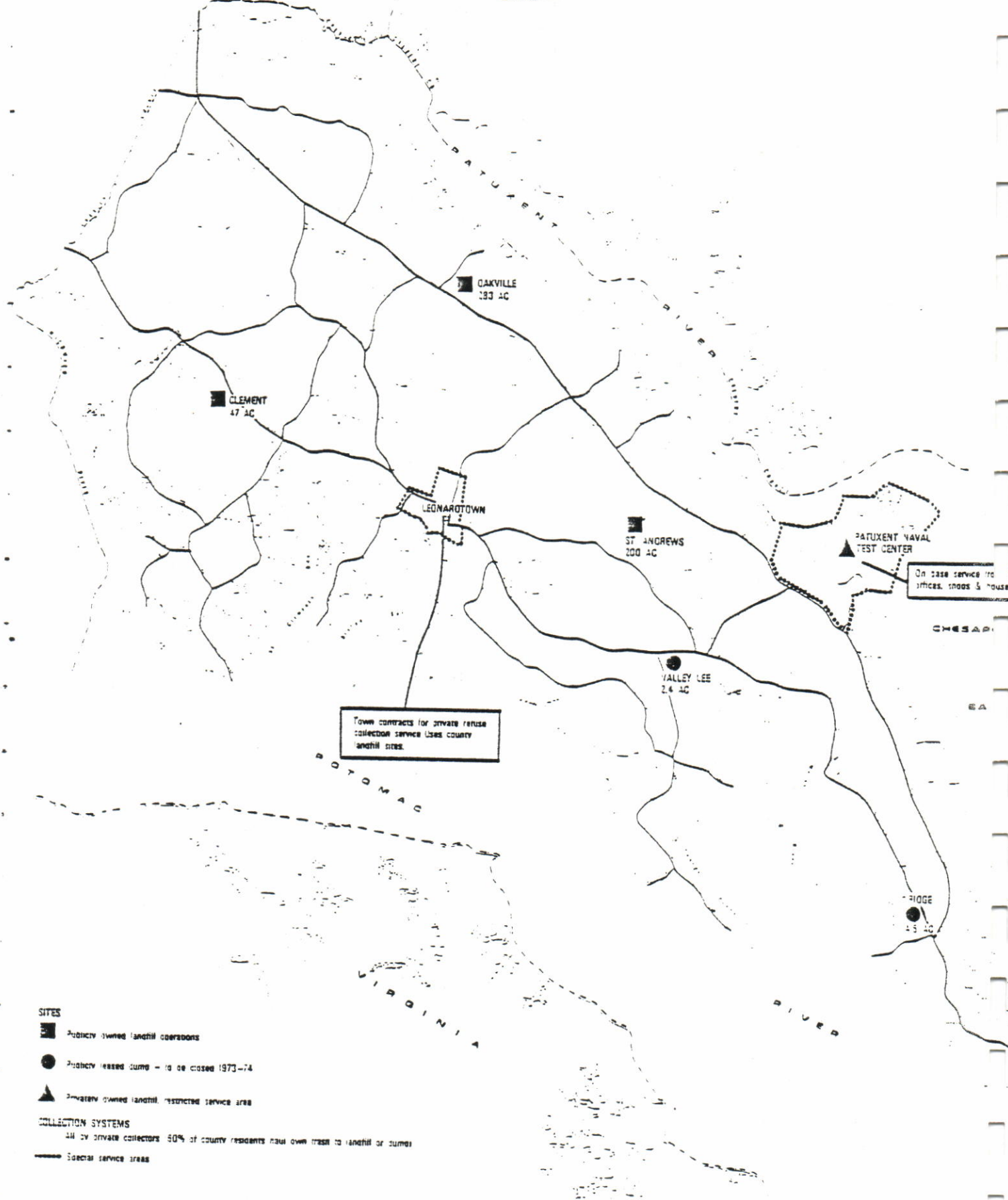
waste to the dump. Twice-weekly municipal service is provided in the Leonardtown area at a cost of \$10 per quarter, and in the County for \$12 per quarter.

There are now three publicly-owned state and county approved landfills in use in St. Mary's -- Oakville (283 acres), Clement (47 acres) and St. Andrews (221 acres). Twenty-one acres of the St. Andrew's site will be closed at an early date. Further small dumps to serve the southern end of the county are located on leased sites at Valley Lee (2.4 acres) and Ridge (4.5 acres). The Patuxent Naval Test Center Landfill is an on-base sanitary landfill which receives waste from offices, shops and the 809 households affiliated with the base.

A properly managed sanitary landfill operation in St. Mary's County must meet the conditions of Ordinance 71-4, or any amendment to or replacement thereof. This includes definition of commercial operations, acceptable trash, other acceptable items, refuse not acceptable and operating rules at the sites. The ordinance also requires that refuse be carried in closed or covered trucks constructed so that trash cannot fall or blow onto the highways.

The major landfills are staffed with adequate equipment and personnel and refuse is covered frequently. Neither of the two smaller dumps is attended and refuse has not been covered daily. The Valley Lee site will be closed up by mid-1976. Both dumps are unsanitary, a potential health hazard, and are negative influences on the surrounding neighborhoods. As State law now prohibits open dumping, both the Valley Lee and Ridge sites will be closed in the near future. Alternative procedures are being considered by the County for these areas.

Approximately 55,000 tons of solid waste were generated and received within the County in 1972. About half of this was domestic waste, one-third commercial, with the remainder from construction, industrial, and government sources. The present acreage available at the three landfill sites (530 acres) appears to be more than adequate for present and projected needs -- it has been estimated that some 90 acres of land will be needed between now and 1985, assuming compaction of refuse to an average depth of 10 feet and the Tri-County Council's current population projections for St. Mary's.



# ST. MARY'S COUNTY - MARYLAND

EXISTING SOLID WASTE DISPOSAL FACILITIES

C. Current Planning

St. Mary's County does not at this time have an approved comprehensive plan for solid waste disposal which meets Maryland State standards. The approved plan is prepared in accordance with Section 387, Article 43 of the Maryland Health Laws.

Present plans to expand and improve service include the following:<sup>1</sup>

- Closure of the Valley Lee Dump in 1973 and Ridge Dump in 1974, consistent with State law.
- Provision of substitute service either: (1) by provision of open containers at a few designated transfer stations, with truck collection and transfer to the landfill site; or (2) by locating "green" boxes throughout the county at points more than five miles from a landfill site, each box serving the needs of 15-20 persons, and transferable to a landfill site.
- A comprehensive proposed plan of action for meeting present problems, future solid waste requirements, and stated objectives. It stresses the importance of viewing solid wastes "as a public utility which requires planning and management in the same manner as water and sewerage systems."<sup>2</sup>

The elements of the proposed plan presented by the County's solid waste consultant include:

- Establishing managerial responsibilities for solid waste management.
- Developing an improved format for disposal and collection, including the closures and substitute service noted above.

- 
1. Source: Ibid. Full Title: Solid Waste Management Plan for St. Mary's County, Maryland - A Plan for Management of Solid Waste Collection, Disposal and Litter Control for the Period 1974 to 1985; Henningson, Durham, and Richardson, Inc., January 1973.
  2. Ibid., page IV-3.



- Establishing procedures for dealing with junk cars.
- Introducing an anti-litter program.
- Replacing the existing Ordinance 71-4 with a fuller version to include storage of refuse, and regulation of private as well as county landfills.
- Updating the plan every three years.
- Financing the system from a variety of sources, including general obligation bonds, direct loans, general tax funds, dumping fees, etc.

As the solid waste disposal needs of St. Mary's County grow it will become necessary to develop standards related to the number of private collectors, their service areas and the changes they make in order to ensure efficient operation, eliminate unnecessary duplication, and provide maximum service to the public.

D. Generation of Need for Solid Waste Disposal Facilities

Future land needs for disposal of all solid wastes generated in the County are calculable, based on projected populations over time. Based on other experiences, each 10,000 persons generate approximately thirty tons of solid waste daily or nearly 11,000 tons annually. This figure contains a factored contribution for the average daily total of non-residential solid-wastes generated per 10,000 persons. Assuming compaction of refuse to a depth of ten feet, as has been the practice in St. Mary's, daily and annual land needs will be as follows:

<u>TABLE 48:</u>	<u>Population</u>	<u>Tons Annually</u>	<u>Acres Annually</u>	<u>Additional 10% Land Unusable</u>	<u>Total Land Needs</u>
1980	59,800	65,500	7.1	0.7	7.8
1990	75,400	82,600	8.9	0.9	9.8
2000	97,175	106,400	11.5	1.1	12.6
2003	105,000	115,000	12.2	1.2	13.4

This projection assumes a continuation of present generation rates throughout the planning period.

Accumulating annual acreage needs and taking 1973 as base year, there will be a need for 53 acres of landfill site by 1980, 134 acres by 1990, 237 acres by 2000, and 273 acres by 2003.

E. Relation of Additional Projected Solid Waste Disposal Need to the Current and Planned System

The present basic technique of sanitary landfilling, transfer to remote fills, and incineration for volume reduction is the only economical, technically proven option available to St. Mary's County at this time.

The present acreage available at the three landfill sites (520 acres) is fully adequate for projected need through 2003. Approximately 52 percent of the sites will be used by that time to meet the needs of the proposed land-use plan.

F. Solid Waste Disposal Performance Indicators

As there will be little need to evaluate alternative additional solid waste disposal sites in the County during the next 30 years, identification of performance measures for qualitative and quantitative comparisons of further sites is moot. At the same time the feasibility of newer and potentially more efficient methods for disposal of solid wastes, including recycling, baling and hauling by truck and train should be continually explored, as they become economically and technically feasible. Considerable efficiencies may also be gained in the long term by considering participation in wider regional solutions in which individual jurisdictions collaborate for their mutual benefit.

## UTILITIES

Facilities related to communications and power -- electricity, postal and telephone services (natural gas is not available in the county) -- are similar in service and organizational form. They can be effectively provided to serve any pattern of growth deemed desirable by the County's governing body and are both the domain of private companies. They should nevertheless be responsive to the ultimate policy control and locational prerogative of the County Commissioners.

Because of their supportive and private character, the future electricity and telephone networks are implicit in the selection of a land-use plan, and specific technical standards are implicit in the effective functioning of the system. Specific functional plans for these services are not included in the proposed plan. Operational descriptions of the three systems follow.

### A. Electricity

Electric power is provided to the area by the Southern Maryland Electric Cooperative, Inc., which also serves parts of Calvert, Charles and Prince Georges Counties. The cooperative's transmission line network is carried over four 69,000 volt lines.

Additional augmenting capacity is provided initially by the Potomac Electric Power Company, a part of the Pennsylvania, New Jersey, and Maryland utility grid network. The amount of power available at any particular place in the system is flexible, and adequate power is made available on demand in practically any part of the county or state. The sub-stations and distribution facilities for the area have reserve capacity for present loads and the versatility of the system will allow expansion for future load growth.

Location of transmission lines and power plants is often a controversial matter. Any site or corridor selected should strike a balance between protection of the natural environment, and the functional need for power. In accordance with the requirements of the National Environmental Policy Act of 1969, and the guidelines of the Council on Environmental Quality and the Rural Electrification Administration, an environmental analysis for a proposed 230 KV transmission line between Ryceville and Lexington Park was conducted in early

1973.<sup>1</sup> The line is stated to be necessary to meet presently projected power needs and is proposed to be fully operational by 1984.

B. Postal Facilities

St. Mary's County is served by twenty-nine post offices strategically located throughout the County. There are three first class offices, three second class offices, nineteen third class offices, and four fourth class offices. Leonardtown is a class I facility with eleven employees and has postal revenue of more than \$120,000 annually.

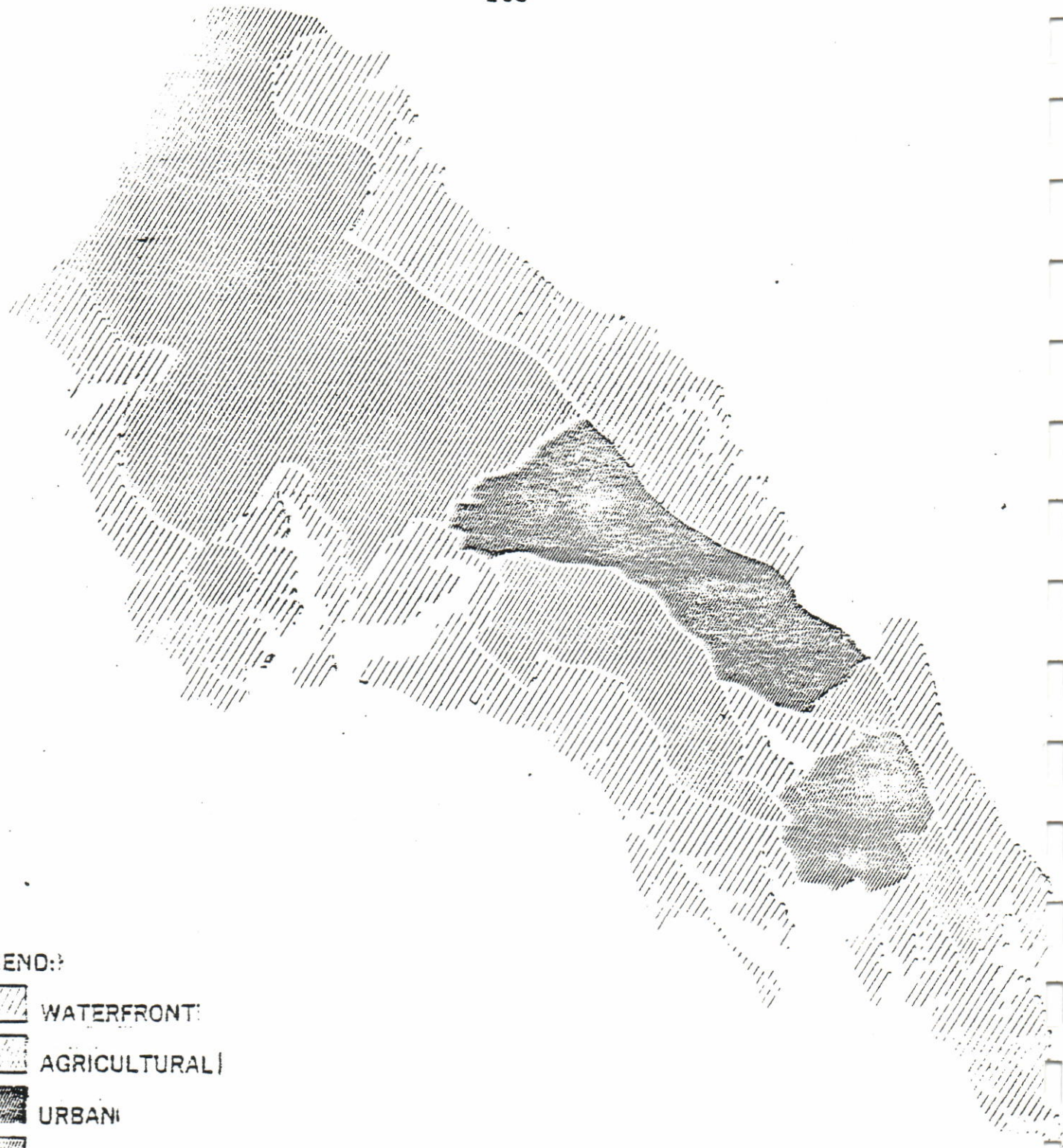
C. Telephone Service

Telephone Service in St. Mary's County is provided by the Chesapeake and Potomac Telephone Company of Maryland, a subsidiary of the American Telephone and Telegraph Company. The schedule for rates is determined by the Maryland Public Service Commission. There are eight exchanges that provide dial service and nationwide long distance dialing to subscribers in the area.






Business office and operator assistance services are located in Leonardtown with six other central offices, providing dial service to other locations throughout the County. Due to growth in the area two central offices, the business office and service center facilities have been enlarged since 1971. Currently the Hollywood central office has an addition under construction.

To meet continued high long distance calling volumes, a buried cable ("T" carrier program) has been started with completion in 1974 at a cost of approximately \$1 million. The expansion program includes modernization of existing equipment, gradual replacement of aerial cable with more underground cable, and connections to new electronic switching systems.

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1. Environmental Analysis for 230 KV Transmission Line--  
Ryceville to Lexington Park; Booth and Associates, Inc.  
for Southern Maryland Cooperative, Inc., March 1973.



LEGEND:

-  WATERFRONT
-  AGRICULTURAL
-  URBAN
-  HISTORIC
-  MILITARY

ST. MARY'S COUNTY, MARYLAND

45.

COMPREHENSIVE PLAN AREAS

APPENDIX A: SUMMARY OF POPULATION ESTIMATES

POPULATION - 1960 and 1970

St. Mary's County

1960	Total			White			Non-White		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	5,938	2,988	2,950	4,723	2,391	2,332	1,215	597	618
% of Total	15.3	7.7	7.6	12.1	6.1	6.0	3.2	1.6	1.6
5-19	12,574	6,670	5,904	9,933	5,326	4,607	2,641	1,344	1,297
% of Total	32.3	17.1	15.2	25.5	13.7	11.8	6.8	3.4	3.4
20-64	18,675	10,342	8,333	15,655	8,767	6,888	3,020	1,575	1,445
% of Total	48.0	26.6	21.4	40.2	22.5	17.7	7.8	4.1	3.7
65 and Over	1,728	849	879	1,361	671	690	367	178	189
% of Total	4.4	2.2	2.2	3.5	1.7	1.8	.9	.5	.4
Totals	38,915	20,849	18,066	31,672	17,155	14,517	7,243	3,694	3,549
% of Total	100.0	53.6	46.4	81.3	44.0	37.3	18.7	9.5	9.1
1970									
0-4	5,469	2,790	2,679	4,373	2,255	2,118	1,096	535	561
% of Total	11.5	5.9	5.6	9.2	4.8	4.4	2.3	1.1	1.2
5-19	15,645	8,026	7,619	12,129	6,288	5,841	3,516	1,738	1,778
% of Total	33.0	16.9	16.1	25.6	13.3	12.3	7.4	3.6	3.8
20-64	23,934	13,186	10,748	20,355	11,371	8,984	3,579	1,815	1,764
% of Total	50.5	27.8	22.7	43.0	24.0	19.0	7.5	3.8	3.7
65 and Over	2,340	1,902	1,248	1,901	864	1,037	439	228	211
% of Total	5.0	2.3	2.7	4.0	1.8	2.2	1.0	.5	.5
Totals	47,388	25,094	22,294	38,758	20,778	17,980	8,630	4,316	4,314
% of Total	100.0	52.9	47.1	81.8	43.9	37.9	18.2	9.0	9.2
% Change from 1960	21.8	20.4	23.4	22.4	21.1	23.8	19.2	16.8	21.6

MARYLAND DEPARTMENT OF STATE PLANNING

Population Forecasts

	CALVERT		CHARLES		ST. MARY'S		TRI-COUNTY	
1970	20,682	%Δ 14.7	47,678	%Δ 26.4	47,388	%Δ 11.9	115,748	%Δ 18.6
1975	23,720	12.2	60,260	8.0	53,350	7.3	137,330	8.5
1980	26,620	9.4	65,100	19.6	57,250	13.3	148,970	15.4
1985	29,120	13.4	77,880	15.3	64,840	12.6	171,840	14.0
1990	33,030		89,790		73,020		195,840	

Source: Maryland Department of State Planning  
 Division of Research Programs  
 MEC, RFD, September, 1975



MARYLAND DEPARTMENT OF HEALTH & MENTAL HYGIENE

Population

	CALVERT	CHARLES	ST. MARY'S	TRI-COUNTY
July 1, 1973	23,840	55,740	50,620	130,200
July 1, 1974	24,800	58,000	51,400	134,200
July 1, 1975	25,700	60,400	52,100	138,200
July 1, 1976	26,600	62,700	52,800	142,100
July 1, 1977	27,500	65,100	53,600	146,200
July 1, 1978	28,500	67,400	54,400	150,300
July 1, 1979	29,400	69,800	55,100	154,300
July 1, 1980	30,400	72,300	55,900	158,600

Source: Maryland Department of Health & Mental Hygiene,  
November, 1974  
MEC., RFD, August, 1975

POPULATION ESTIMATES

Year	Total Population	People in Households	Buildings Permits/6	Est. Net Added D.U. <sup>2</sup>	Total D.U. (Gen. & Net)	Est. Pop. in New Hshd.	Population in Hshd.	Pop. in Group Qtr.	Est. Total Population <sup>1</sup>	Annual % Change
1960 <sup>4</sup>	38,915	36,004	292/35	301	8,915	816	36,094	2,911	38,915	
1961			241/35	249	9,216	661	36,820	2,905	39,725	2.1
1962			273/36	287	9,465	761	37,481	2,900	40,381	1.6
1963			243/35	260	9,752	704	38,244	2,891	41,135	1.9
1964			251/35	264	10,012	719	38,948	2,886	41,834	1.7
1965			287/36	310	10,276	827	39,667	2,881	42,548	1.7
1966			287/35	290	10,586	788	40,494	2,876	43,370	1.9
1967			304/35	332	10,876	915	41,282	2,871	44,151	1.8
1968			438/36	450	11,208	1,215	42,197	2,862	45,059	2.0
1969			401/35	413	11,658	1,125	43,112	2,857	46,269	2.7
1970 <sup>4</sup>	47,388	44,537	336	316	12,071	873	44,537	2,851	47,388	2.4
1971			353	327	12,387	915	45,410	2,463	47,873	1.0
1972			531	481	12,714	1,356	46,325	2,075	48,400	1.1
1973			749	706	13,195	1,986	47,681	2,075	49,756	2.8
1974			696	649	13,901	1,828	49,664	2,075	51,739	4.0
1975					14,550		51,492	2,075	53,567	3.5
1976										
1977										
1978										
1979										
1980										

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF ECONOMIC ANALYSIS

St. Mary's County

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 8,533 divided by change in number of occupied dwelling units 3,156, equals 2.704 people/new dwelling unit.
2. Change in occupied households 2,803, divided by permits issued from 1960 to 1970 3,008, equals .932 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data; group quarters in 1972 reflects data from base headquarters.
5. Estimated 12 month figure based on a 7 month period as no total was available for this year.
6. These figures represent estimated annual increases in the number of trailers in Election District VIII which would not be included in residential building permits.

Note: These county totals are the sums of the election district estimates. The ratios in footnotes 1 and 2 represent weighted averages of the ratios used in each election district.

Source: Tri-County Council staff estimate.

Year	Total Population	People in Households	Building Permits	Est. Net Added D.U. 2	Total D.U. (Gen. & Net)	Est. Pop. In New Hshd.	Population in Hshd.	Pop. in Group Qtr.	Est. Total Population	Annual % Change
1960 <sup>4</sup>	3,496	3,377	29	24	847	51	3,377	119	3,496	
1961			25	22	871	47	3,428	140	3,568	2.1
1962			33 <sup>5.</sup>	28	893	60	3,475	160	3,635	1.9
1963			39	34	921	72	3,535	181	3,716	2.2
1964			20	17	955	36	3,607	202	3,809	2.5
1965			22	19	972	41	3,643	222	3,865	1.5
1966			26	22	991	47	3,684	243	3,927	1.6
1967			15	13	1,013	28	3,731	264	3,995	1.7
1968			41	35	1,026	75	3,759	285	4,044	1.2
1969			32	28	1,061	59	3,834	305	4,139	2.3
1970 <sup>4</sup>	4,219	3,893	34	29	1,089	62	3,893	326	4,219	1.9
1971			24	21	1,118	45	3,955	326	4,281	1.5
1972			24	21	1,139	45	4,000	326	4,326	1.1
1973			29	25	1,160	53	4,045	326	4,371	1.0
1974			45	39	1,185	83	4,098	326	4,424	1.2
1975					1,224		4,181	326	4,507	1.9
1976										
1977										
1978										
1979										
1980										

DISTRICT 1  
 DEPARTMENT OF  
 PLANNING AND  
 COMMUNITY DEVELOPMENT

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 516 divided by change in number of occupied dwelling units 242 , equals 2.132 people/new dwelling unit.
2. Change in occupied households 242 , divided by permits issued from 1960 to 1970 281 , equals .861 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 19 permits for a 7 month period as no total for the year was available.

Source: Tri-County Council staff estimate.



St. Mary's County  
Election District II & IX

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 487 divided by change in number of occupied dwelling units 245, equals 1.990 people/new dwelling unit.
2. Change in occupied households 245, divided by permits issued from 1960 to 1970, 280, equals .875 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 21 permits for a 7 month period as no total for the year was available.

Source: Tri-County Council staff estimate.





St. Mary's County  
Election District III

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 810 divided by change in number of occupied dwelling units 334, equals 2.425 people/new dwelling units.
2. Change in occupied households 334, divided by permits issued from 1960 to 1970, 405, equals .825 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 22 permits for a 7 month period as no total for the year was available.

Source: Tri-County Council staff estimate.



FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 319 divided by change in number of occupied dwelling units 116, equals 2.750 people/new dwelling unit.
2. Change in occupied households 116, divided by permits issued from 1960 to 1970 186, equals .624 new units for each building permit.
3. Total estimated population is equal to population in households based on building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 13 permits for a 7 month period as no total count was available.

Source: Tri-County Council staff estimate.

Year	Total Population	People in Households	Building Permits	Est. D.U. Added D.U. <sup>2</sup>	Total D.U. (Cen. & Net)	Est. Pop. In Household	Population In Held	Pop. in Group Qtr	Est. Total Population	Annual % Change
1960	[ 2,481 ]	[ 2,475 ]	58	41	[ 551 ]	131	[ 2,475 ]	[ 6 ]	[ 2,481 ]	
1961			40	28	592	90	2,606	6	2,612	5.3
1962			22 <sup>5</sup>	16	620	51	2,696	7	2,704	3.5
1963			32	23	636	74	2,747	7	2,754	1.9
1964			30	27	659	87	2,821	7	2,828	2.7
1965			24	17	686	54	2,900	8	2,916	3.1
1966			23	16	703	51	2,962	8	2,970	1.9
1967			27	19	719	61	3,013	8	3,021	1.7
1968			40	29	730	93	3,074	8	3,082	2.0
1969			48	34	767	109	3,167	9	3,176	3.0
1970 <sup>4</sup>	[ 3,285 ]	[ 3,276 ]	38	27	[ 801 ]	87	[ 3,276 ]	9	[ 3,285 ]	3.4
1971			57	40	828	128	3,363	9	3,372	2.6
1972			148	105	868	316	3,491	9	3,500	3.8
1973			176	125	973	400	3,827	9	3,836	9.6
1974			153	109	1,098	349	4,227	9	4,236	10.4
1975					1,207		4,576	9	4,585	8.2
1976										
1977										
1978										
1979										
1980										

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St. Mary's County  
Election District V,

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 801 divided by change in number of occupied dwelling units 250, equals 3.204 people/new dwelling unit.
2. Change in occupied households 250, divided by permits issued from 1960 to 1970 352, equals .710 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census Data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 13 permits for a 7 month period as no total for the year was available.

Source: Tri-County Council staff estimate.

Year	Total Population	People in Households	Building Permits	Est. Net Added D.U. <sup>2</sup>	Total D.U. (Cen. & Net)	Est. Pop. In Newshhd	Population In Hshd.	Pop. in Group Qtr.	Est. Total Population	Annual % Change
1960 <sup>4</sup>	[3,841]	[3,028]	45	52	[929]	159	[1,028]	[13]	[3,041]	
1961			33	30	901	116	3,907	15	4,002	4.2
1962			43 <sup>5</sup>	50	1,019	153	4,101	17	4,120	2.9
1963			36	42	1,069	120	4,256	18	4,274	3.7
1964			30	44	1,111	135	4,304	20	4,404	3.0
1965			35	41	1,155	125	4,519	22	4,541	3.1
1966			36	42	1,196	120	4,644	24	4,668	2.8
1967			40	47	1,238	144	4,772	26	4,798	2.0
1968			48	56	1,285	171	4,916	27	4,943	3.0
1969			46	54	1,341	165	5,087	29	5,116	3.5
1970 <sup>4</sup>	[5,203]	[5,252]	73	85	[1,395]	260	[5,252]	[31]	[5,203]	3.3
1971			76	89	1,400	272	5,512	31	5,543	4.9
1972			90	114	1,569	340	5,704	31	5,815	4.9
1973			103	120	1,683	367	6,132	31	6,163	6.0
1974			132	154	1,803	471	6,499	31	6,530	6.0
1975					1,957		6,970	31	7,001	7.2
1976										
1977										
1978										
1979										
1980										

REPORT BY  
 DATE

St. Mary's County  
Election District VI

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 1,424 divided by change in number of occupied dwelling units 466, equals 3.056 people/new dwelling unit.
2. Change in occupied households 466, divided by permits issued from 1960 to 1970 400, equals 1.165 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 25 permits for a 7 month period as no total count was available for this year.

Source: Tri-County Council staff estimate.

Year	Total Population	People in Households	Building Permits	Est. Net Added D.U. <sup>2</sup>	Total D.U. (Cen. & Net)	Est. Pop. in New Hshd.	Population in Hshd.	Pop. in Group Qtr.	Est. Total Population	Annual % Change
1960 <sup>A</sup>	2,392	2,379	13	9	594	29	2,379	13	2,392	
1961			16	11	603	35	2,400	12	2,420	1.2
1962			24 <sup>5.</sup>	16	614	51	2,443	12	2,455	1.4
1963			23	16	630	51	2,494	11	2,505	2.0
1964			21	14	646	45	2,545	11	2,556	2.0
1965			17	11	660	35	2,590	10	2,600	1.7
1966			40	27	671	06	2,625	9	2,634	1.3
1967			40	27	690	06	2,711	9	2,720	3.1
1968			41	20	725	09	2,797	8	2,805	3.1
1969			39	26	753	03	2,806	8	2,824	3.2
1970 <sup>A</sup>	2,976	2,969	32	22	779	70	2,969	7	2,976	2.0
1971			33	22	801	70	3,039	7	3,046	2.4
1972			23	16	823	51	3,109	7	3,116	2.1
1973			50	34	839	100	3,160	7	3,167	1.6
1974			35	24	873	77	3,260	7	3,275	3.4
1975					897		3,345	7	3,352	2.4
1976										
1977										
1978										
1979										
1980										

U.S. DEPARTMENT OF COMMERCE  
 BUREAU OF ECONOMIC ANALYSIS



St. Mary's County  
Election District VII

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 590 divided by change in number of occupied dwelling units 185, equals 3.189 people/new dwelling unit.
2. Change in occupied households 185, divided by permits issued from 1960 to 1970 274, equals .675 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are Census data.
5. Estimated 12 month figure based on 14 permits for a 7 month period as no total for the year was available.

Source: Tri-County Council staff estimate.



St. Mary's County  
Election District VIII

FOOTNOTES

1. Based upon Census data for 1960 and 1970 and annual estimates for non-Census years estimated by annual building permit additions. Population in households change from 1960 to 1970, 3,586 divided by change in number of occupied dwelling units 1,318, equals 2.721 people/new dwelling unit.
2. Change in occupied households 965, divided by permits issued from 1960 to 1970 830, equals 1.163 new units for each building permit.
3. Total estimated population is equal to population in households based upon building permits, plus population in group quarters based on straight-line average of Census data. Group quarters population held constant after 1970 due to lack of additional information.
4. Blocked figures are census data; group quarters in 1972 from base headquarters.
5. Estimated 12 month figure based on 32 permits for a 7 month period as no total count was available for this year.
6. These figures are the estimated annual increase in the number of trailers in this area for 1960 to 1970 (485 units in 1960, 838 units in 1970) which would not be included in residential building permits.

Source: Tri-County Council staff estimate.

APPENDIX A: SUMMARY OF NORMS AND STANDARDS ANALYSIS

A. POLICE SERVICES - PUBLIC SAFETY

Minimum standards for the provision of local government police and public services do not exist in statistical form. Statistics are available describing the related factors of per capita expenditures for police services as a function of city size. The following data serves to highlight existing experience in the specified categorizations.

1. City Expenditures for Police Department Salaries and Wages  
(ICMA, Municipal Police Administration, 1971)

<u>Classification</u>	<u>No. of Reporting Cities</u>	<u>Pop. of Reporting Cities (000's)</u>	<u>Per Capita Salaries and Wages</u>
Total, all cities	1,187	64,305	\$ 18.95
Population Group:			
Over 500,000	17	17,501	29.75
250,000 - 500,000	19	6,400	18.40
100,000 - 250,000	66	9,701	15.71
50,000 - 100,000	153	10,473	14.98
25,000 - 50,000	311	10,736	13.69
10,000 - 25,000	621	9,494	13.06

2. City Expenditures for Police Department Capital Outlay

<u>Classification</u>	<u>No. of Reporting Cities</u>	<u>Per Capita Outlay</u>
Total, all cities	1,087	\$ .92
Population Group:		
Over 500,000	16	1.08
250,000 - 500,000	18	1.19
100,000 - 250,000	62	.80
50,000 - 100,000	144	.76
25,000 - 50,000	277	.78
10,000 - 25,000	570	.91

3. Median Number of Full-Time Police Department Personnel (Uniformed and Civilian) Per 1,000 Population

<u>Classification</u>	<u>No. of Reporting Cities</u>	<u>Median (Uniformed &amp; Civilian)</u>	<u>Median (Uniformed Only)</u>
Total, all cities	1,447	1.70	1.50
Population Group:			
Over 500,000	25	2.89	2.30
250,000 - 500,000	23	2.02	1.76
100,000 - 250,000	85	1.89	1.56
50,000 - 100,000	195	1.73	1.51
25,000 - 50,000	358	1.62	1.43
10,000 - 25,000	761	1.68	1.50

B. FIRE PROTECTION SERVICES

Standards for fire protection services are varied according to the specific purpose for which they are prepared. A brief summary of some of the relevant criteria includes the classification of different kinds of fire companies and the required strengths of each and the relationship prescribed between community size (in population) and number and kind of companies required.

(Source: Municipal Fire Administration, ICMA, 1967)

1. Required Strength of Fire Companies - High Value Districts (First Alarm Responses)

<u>Fire Company Type</u>	<u>Required Personnel</u>
Pumper Companies	7
Hose Companies	6
Aerial Ladder Companies	7
Service Ladder Companies	3
Pumper Ladder Companies	10

2. Number and Kind of Fire Companies and Size of Community

<u>Size of Community</u>	<u>No. and Kind of Fire Company</u>
to 10,000 population	No regulation
10,000 - 30,000	2 pumper companies
30,000 - 70,000	4 pumper and 4 truck companies
70,000 - 200,000	3 pumper and 4 truck companies
200,000 +	16 pumper and 3 truck companies

3. City Expenditure for Fire Department Salaries and Wages (Civilian & Uniformed)

<u>Classification</u>	<u>No. of Reporting Cities</u>	<u>Pop. of Reporting Cities (000's)</u>	<u>Per Capita Salaries &amp; Wages</u>
Total, all cities	1,056	69,562	\$ 14.46
Population Group:			
Over 500,000	19	26,391	17.34
250,000 - 500,000	17	5,735	15.57
100,000 - 250,000	64	9,518	14.07
50,000 - 100,000	146	9,977	13.81
25,000 - 50,000	278	9,687	11.91
10,000 - 25,000	532	8,254	8.67

4. City Expenditures for Fire Department Capital Outlay

<u>Classification</u>	<u>No. of Reporting Cities</u>	<u>Per Capita Outlay</u>
Total, all cities	900	\$ .84
Population Group:		
Over 500,000	18	.76
250,000 - 500,000	17	.58
100,000 - 250,000	61	.59
50,000 - 100,000	138	1.05
25,000 - 50,000	236	.79
10,000 - 25,000	430	1.39

5. Number of Full-Time Fire Department Personnel (Uniformed & Civilian) Per 1,000 Population

<u>Classification</u>	<u>No. of Reporting Cities</u>	<u>Median</u>
Total, all cities	1,211	1.43
Population Group:		
Over 500,000	26	1.72
250,000 - 500,000	23	1.69
100,000 - 250,000	82	1.67
50,000 - 100,000	184	1.55
25,000 - 50,000	321	1.50
10,000 - 25,000	575	1.29

6. Water Supply (National Board of Fire Underwriters - NBFU - Standard for Achieving Class 3 or Lower)

- a. System should be able to deliver at all times the required flow for a period up to ten (10) hours during a period of five (5) days maximum consumption. Required flow in gallons per minute is given by the following formula:

$$Q = 1020 \sqrt{P} (1 - 0.01 \sqrt{P})$$

Where Q = flow in gallons per minute

P = Population in 1,000's

- b. Minimum water main size = 6".
- c. Fire hydrants located within 500 feet of every structure and no more than 1,000 feet apart.

C. EDUCATION

The attached chart is a compilation of physical, conventional norms and standards for educational planning. Each number in the suggested ranges has an application in implementing different educational philosophies. Actual numbers are derived from local economies and educational philosophy. Commonly used values for pupils per school are as follows:

<u>1. Type of School</u>	<u>Pupils/School</u>
Kindergarten and elementary	300
Junior High	1200
High School	1800

2. Pupil Yield Ratios - Experience from Prince George's County

	<u>Single Family Detached</u>	<u>Single Family Attached</u>	<u>Garden Apt.</u>	<u>Mid-Rise High-Rise</u>	<u>Lower Income Garden Apt.</u>	<u>Mid-Rise High-Rise</u>	<u>Total</u>
Pupil Yield Ratio *	1.44	.92	.50	.09	1.44	1.44	
% of Total Pupil Yield	52%	16%	5%	1%	16%	10%	100%
% of Pupil Yield in Elementary	55.56%	54.35%	54.00%	55.70%	55.56%	55.56%	
% of Pupil Yield in Jr.High	23.61%	23.91%	23.98%	22.15%	23.61%	23.61%	
% of Pupil Yield in High School	20.83%	21.74%	22.02%	22.15%	20.83%	20.83%	
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

\* Prince George's County Board of Education, 1971



COMPILED PHYSICAL STANDARDS FOR PUBLIC SCHOOL PLANNING

TYPE OF SCHOOL	GRADES	SERVICE MILES	RADIUS TIME	SITE AREA IN ACRES	PUPILS PER SCHOOL	CLASS SIZE
DAY CARE	AGES: 3 - 5	1/4	15 M.			5 - 15
KINDERGARTEN	K	1/4 - 1/2	15 M.	3 to 15 acres plus 1 acre for each hundred pupils of ultimate enrollment	180 - 600	20 - 25
ELEMENTARY	1 - 6	1/4 - 3/4	20 M - 1 hr			25 - 30
JUNIOR HIGH	7 - 9	3/4 - 2	20 M - 1 hr	5 to 40 acres plus 1 acre for each hundred pupils of ultimate enrollment	500 - 1800	30
SENIOR HIGH	10 - 12	1 - 2	20 M - 1 hr	10 to 50 acres plus 1 acre for each hundred pupils of ultimate enrollment	600 - 6000	30

The extremely wide range of norms proposed by educational consultants indicates that schools have been considered in very general terms without specific attitudes of community planning. References for this chart include:

- . Council of Educational Facility Planners - Guide for Planning Educational Facilities  
September 1969, Columbus, Ohio
- . Engelhardt, N.L. & N.L. Engelhardt, Trand Stanton Legget - School Planning and Building Handbook,  
F. W. Dodge Corporation: New York City, 1956.
- . Boles, Harold - Step by Step to Better School Facilities  
New York City: Holt, Reinhardt and Winston, 1965.
- . Engelhardt, N.L. - Complete Guide for Planning New Schools  
Parker Publishing Co.: West Nyack, N.Y., 1970.
- . Castaldi, Basel - Creative Planning of Educational Facilities  
Rand McNally & Co.: Chicago, 1969.

D. PARK AND RECREATION PLANNING STANDARDS

(Source: National Recreation and Park Association)

Standards for various levels of park and recreation areas are summarized in the following table:

Park Standards by Type and Population Served

<u>Classification</u>	<u>Acres/ 1000 People</u>	<u>Size Range</u>	<u>Population Served</u>	<u>Service Area</u>
Playlots	N.A.	2500 sq.ft. to 1 acre	500- 2,500	Sub-neighborhood
Vest Pocket Parks	N.A.	2500 sq.ft. to 1 acre	500- 2,500	Sub-neighborhood
Neighborhood Parks	2.5	Min.5 acres Up to 20 acres	2,000-10,000	1/4-1/2 mile
District Parks	2.5	20-100 acres	10,000-50,000	1/2-3 miles
Large Urban Parks	5.0	100+ acres	One for each 50,000	Within 1/2 hr. driving time
Regional Parks	20.0	250+ acres	Serves entire pop. in smaller communities; should be dis- tributed through- out larger metro areas	Within 1 hr. driving time
Special Areas & Facilities	N.A.	Includes parkways, beaches, plazas, historical sites, flood plains, downtown malls, and small parks, tree lawns, etc. No standard is applicable.		

By Percentage of Area: The National Recreation and Park Association recommends that a minimum of 25% of new towns, planned unit developments, and large subdivisions be devoted to park and recreation lands and open space.

E. HOUSING

Minimum standards for lot sizes and dwelling units have been established by this office for different types of dwelling units. A range of possible densities, based on these minimum standards for lot sizes are proposed for each type of dwelling unit.

<u>1. Form of Ownership</u>	<u>Housing Type</u>	<u>Density (DU's) Net Acre</u>
Absolute	Detached	0.20 - 6
	Attached (Townhouse)	13 - 28
	Hybrids (Duplexes, etc.)	6 - 13
Condominium	Attached (Townhouse)	13 - 28
	Walk-Up	15 - 40
	High-Rise	60 +
Cooperative	High-Rise	60 +

2. Appropriate Dwelling Types as a Function of Design

	<u>Single-Family</u>		<u>Multi-Family</u>	
	<u>Freestanding or Detached</u>	<u>Attached or Townhouses</u>	<u>Walk-Up or Garden Apt.</u>	<u>High-Rise 3-14 Floors</u>
Lot Area	5 acres to 7500 sq. ft.	3240 to 1200 sq. ft.	5 Acres and Up	5 Acres and Up
Density DU's Net Acre	0.20 - 5.6	13 - 28	15 - 20	40 (with 10 Storied Structure)
Ownership	Absolute	Absolute	Condominium	Condominium or Cooperative

F. PUBLIC LIBRARY SYSTEMS

Standards for the provision of public library services exist in statistical terms and also as descriptive directives, with the most up-to-date standards set by the American Library Association (1962 - 1967). A three-level library system can be classified as follows:

1. Regional: A large comprehensive service branch used in larger cities. The regional branch also serves smaller branches.
2. Community: A major library unit serving a population of not less than 55,000 with a full professional and clerical staff. Some smaller community branches serve 25,000 to 50,000.
3. Book Mobile: A library on wheels that services scattered populations and districts remove from schools.
4. Experience Formulas for Library Size and Costs:

<u>Popu- lation Size</u>	<u>Book Stock- Volumes per Capita</u>	<u>No. of Seats per 1,000 Popu- lation</u>	<u>Circulation Volumes per Capita</u>	<u>Total Sq. Ft. per Capita</u>	<u>Desirable 1st Floor Sq. Ft. per Capita</u>	<u>1961 Fair Estimated Cost per Capita</u>
Under 10,000	3 1/2 - 5	10	10	.7 - .8	.5 - .7	15
10,000- 35,000	2 3/4 - 3	5	9.5	.6 - .65	.4 - .45	12
35,000- 100,000	2 1/2 - 2 3/4	3	9	.5 - .6	.25 - .3	10
100,000- 200,000	1 3/4 - 2	2	8	.4 - .5	.15 - .2	9
200,000- 500,000	1 1/2 - 1 1/4	1 1/2	7	.35 - .4	.1 - .125	7
500,000 and Up	1 - 1 1/2	1	6.5	.3	.06 - .08	6

Source: Joseph L. Wheeler and Herbert Goldhor,  
Practical Administration of Public Libraries  
(New York: Harper and Row, 1962, p. 554)

1) Without furnishings (add 15%) or air conditioning (add 10%).

5. Guidelines for Determining Minimum Space Requirements:

GUIDELINES FOR DETERMINING MINIMUM SPACE REQUIREMENTS

Population Served	Size of Book Collection	Shelving Space <sup>1)</sup>		Amount of Floor Space	Reader Space	Staff Work Space	Est. Add'l Space Needed	Total Floor Space
		Linear Feet of Shelving <sup>2)</sup>	Linear ft.					
Under 2,499	10,000 vol	1,300		1,000 sq ft	Min 400 sq ft for 13 seats at 30 sq ft per reader space	300 sq ft	300 sq ft	2,300 sq ft
2,500-4,999	10,000 vol plus 3 bks per capita for pop. over 3,500	1,300 Add 1 ft of shelving for every 3 bks over 10,000		1,000 sq ft Add 1 sq ft for every 10 bks over 10,000	Min 500 sq ft for 16 seats. Add 5 seats per M over 3,500 pop. served at 30 sq ft per reader space	300 sq ft	700 sq ft	2,500 sq ft or 0.7sq ft per capita, whichever is greater
5,000-9,999	15,000 vol plus 2 bks per capita for pop. over 5,000	1,375 Add 1 ft of shelving for every 3 bks over 15,000		1,500 sq ft Add 1 sq ft for every 10 bks over 15,000	Min 700 sq ft for 23 seats. Add 4 seats per M over 5,000 pop. served at 30 sq ft per reader space	500 sq ft. Add 150 sq ft for each full time staff member over 3	1,000 sq ft	3,500 sq ft or 0.7sq ft per capita, whichever is greater
10,000 - 24,999	20,000 vol plus 2 bks per capita for pop. over 10,000	2,500 Add 1 ft of shelving for every 3 bks over 20,000		2,000 sq ft Add 1 sq ft for every 10 bks over 15,000	Min 1,200 sq ft for 40 seats. Add 4 seats per M over 10,000 pop. served at 30 sq ft per reader space	1,000 sq ft Add 150 sq ft for each full time staff member over 7	1,300 sq ft	7,000 sq ft
25,000 - 49,999	50,000 vol plus 2 bks per capita for pop. over 25,000	5,300 Add 1 ft of shelving for every 3 bks over 50,000		5,000 sq ft Add 1 sq ft for every 10 bks over 50,000	Min 2,450 sq ft for 73 seats. Add 3 seats per M over 25,000 pop. served at 30 sq ft per reader space	1,500 sq ft Add 150 sq ft for each full time staff member over 13	3,250 sq ft	13,000 sq ft or 0.5 sq ft per capita, whichever is greater

Source: American Library Association, Subcommittee on Standards for Small Libraries, Public Library Association, Interim standards for small public libraries: Guidelines Toward Achieving the Goals of Public Library Service (Chicago: The Association, 1962), p. 15. This brief 16-page report is based on standards set forth in AIA's, Public Library Service: A Guide to Evaluation with Minimum Standards. It is intended to provide interim standards for libraries serving populations of less than 50,000 until these libraries can meet the standards of AIA's Public Library Service.

- 1) Libraries in systems need only to provide shelving for basic collection plus number of books on loan from resource center at any one time.
- 2) A standard library shelf equals 3 linear feet.
- 3) Space for circulation desk, heating and cooling equipment, multipurpose room, stairways, janitors' supplies, toilets, etc., as required by community needs and the program of library services.

G. SEWER

1. The best estimate for projection of sewerage disposal needs is approximately 100 gallons per day per capita. This figure has been used to project sewerage capacities for both the Charles County and St. Mary's County comprehensive sewer plans.
2. The following chart relates the economic justification of public sewerage service with various population densities. The chart does not necessarily reflect the justification of public sewerage service from a health standpoint, since this must be determined based on local conditions and local health standards.

<u>Population Density Per Square Mile</u>	<u>Equivalent Lot Size</u>	<u>Service Economic Justification</u>
Over 5,000 persons	Less than 1/2 acre	Public sewerage is justified
2,500-5,000 pers.	1/2-1 acre	Public sewerage is normally justified
1,000-2,500 pers.	1-2 acres	Public sewerage is not normally justified
Less than 1,000 pers.	Over 2 acres	Public sewerage is rarely justified

Source: Environmental Health Planning Guide, Public Health Service, U.S. Dept. of Health, Education, and Welfare, 1962.