

1997 Comprehensive Plan Calvert County, Maryland



Approved and Adopted
1997

Table of Contents

Comprehensive Plan Goal.....	i
Visions.....	ii

Chapter 1: Land

Land Use and Growth Management.....	1
Transportation.....	11
Energy.....	17
Waste Management.....	22
Natural Resources and Sensitive Areas.....	26

Chapter 2: People

Community Interaction.....	36
Health and Social Services.....	41
Housing.....	47
Human Development and Life Long Learning.....	51
Recreation.....	56
Public Safety.....	61
Cultural Heritage.....	66

Chapter 3: Economy..... 70

Chapter 4: Government

Administration.....	78
Finance.....	80
Public Facilities and General Services.....	84
Interjurisdictional Coordination.....	88

Acronym list

A & F	.....	Administration and Finance
BGE	.....	Baltimore Gas & Electric
BOCC	.....	Board of County Commissioners
BOE	.....	Board of Education
CA	.....	County Administrator
CCCC	.....	Community College at Calvert County
CR	.....	Community Resources
ED	.....	Economic Development
GS	.....	General Services
HD	.....	Health Department
P	.....	Personnel
PS	.....	Public Safety
PW	.....	Public Works
P & Z	.....	Planning and Zoning
SCD	.....	Soil Conservation Service
SMECO	.....	Southern Maryland Electric Cooperative

COMPREHENSIVE PLAN GOAL

The goal of the Comprehensive Plan is to maintain and/or improve the overall quality of life for all citizens of Calvert County by

- a. promoting sustainable development,
- b. encouraging a stable and enduring economic base,
- c. providing for safety, health, and education, and
- d. preserving the natural, cultural, and historic assets of Calvert County.

The goal is expressed in a series of 10 visions. Each vision is followed by one or several benchmarks. The benchmarks provide a means of monitoring progress and thereby ensure that the visions become reality. Visions and benchmarks are listed on the following page.

GOAL IMPLEMENTATION

1. Use the Comprehensive Plan as the County's primary guiding policy document.
2. Implement the Plan using the following procedures:
 - a. Department Heads: Prepare annual reports to the Board of County Commissioners on progress implementing assigned action items.
 - b. Planning Commission: Determine whether ordinances or special plans need to be prepared or revised.
 - c. Board of County Commissioners:
 - Appoint committees to investigate and report on specific aspects of the Plan as needed.
 - Maintain a 10-year Capital Improvement Plan which reflects the actions called for in this Plan. Place high priority on providing needed infrastructure in the Town Centers, as called for in Town Center master plans, and identify funding sources to help implement the CIP.
 - Require additional research as needed.
 - Make copies of all reports and actions available to the public.
 - d. Citizens: Remain informed and active participants.

VISIONS

The Comprehensive Plan goal is expressed in the following visions. Each vision is followed by one or several benchmarks. The benchmarks provide a means of monitoring progress and thereby ensure that the visions become reality.

Our landscape is dominated by forests and fields.

- 40,000 acres of farm and forest land are preserved.

Our Town Centers are attractive, convenient, and interesting places to live, work and shop.

- 25 % of all new households are located in Town Centers or immediately around Town Centers.
- One ECTC office park is established in each election district by 2000.

Our wetlands, streams, and forests support thriving plant and animal communities. Our seafood industry is prospering.

- There is a 40% reduction in nutrients entering the Chesapeake Bay and Patuxent River.
- 90 % of existing forest cover is retained.

Our highways are safe with only moderate congestion and public transit is readily available.

Walking and bicycling are practical alternatives.

- A level service of “D” is maintained on MD 2/4 and on Town Center roads.
- A level service of “C” is maintained on County roads and outside Town Centers.

We waste less, consume fewer natural resources, and properly dispose of waste.

- 20% of household and commercial waste is recycled (by 2000).
- 22% of commuters use transit or carpool to work.
- The annual increase in average household energy use is under 3 percent.

Our communities are safe. We care for the well-being of each other.

- County crime incidence is below 4,500 per 100,000 (current statewide average is 5,800).

Our children are well prepared for the future. We are healthy in body, mind, and spirit.

- School enrollment does not exceed Adequate Public Facilities capacity.
- The County provides 30 acres of public access open space per 1,000 residents.

We are stewards of our cultural heritage.

- All students are exposed to a County heritage curriculum.
- A database of County heritage resources is developed (by 2002).

We are building a strong local economy based on renewable resources, high technology, retirement, recreation, and tourism.

- The commercial real property tax base is expanded from \$147 million to \$220 million by 2002.
- 2,700 new in-County jobs for residents are created (by 2002).
- The number of visitors is increased to 250,000 (by 2002).

Our government is efficient, open, and responsive to citizen needs and concerns.

- The ratio of debt service to total revenues is maintained at 6.8%.

COUNTY DATA

LAND (Department of Planning & Zoning; Public Works, 1997)

Length	30 miles	Distance from Prince Frederick to Baltimore	64 miles
Width	9 miles (at widest point)	State Roads	125 miles
Total Area	220 sq. miles; 140,000 acres	County Roads (including subdivision roads)	387 miles
Length of Shoreline	101 miles	Private Roads	116 miles
Distance from Prince Frederick to D.C.	46 miles		

PEOPLE (Maryland Office of Planning, July, 1997)

Year	1970	1980	1990	1995	2000	2005	2010	2015	2020
Persons	20,682	34,638	51,372	63,925	75,000	85,000	95,000	108,800	122,500

ECONOMY (Maryland Office of Planning, December, 1995)

Year	1970	1980	1990	1995	2000	2005	2010	2015	2020
Total Labor Force	7,521	15,564	28,047	35,320	43,312	49,996	56,129	63,296	69,159
Jobs-by-Place-of-Work	6,200	7,000	17,400	20,800	24,000	26,000	27,400	28,300	28,800

MEDIAN HOUSEHOLD INCOME: \$50,900 (Maryland Office of Planning, 1993)

EFFECTIVE BUYING INCOME: \$44,197 (4th largest in State) (Md. Dept. of Business & Economic Development, 1996)

PERCENT POPULATION BELOW POVERTY LEVEL: 5.21% (1990 Census)

EMPLOYMENT RATE: 97.20% (Department of Administration and Finance, 1997)

GOVERNMENT - CALVERT COUNTY FISCAL YEAR 1998 BUDGET (Department of Administration and Finance, 1997)

TOTAL REVENUES: \$101,093,330

EXPENDITURES:

EDUCATION	\$51,020,537	GENERAL GOVERNMENT	\$ 5,281,805
PUBLIC SAFETY	\$10,862,206	ECONOMIC DEVELOPMENT	\$ 613,734
GENERAL SERVICES	\$ 5,931,387	TRANSFERS TO CAPITAL RESERVES	\$ 1,870,620
		CONTINGENCY RESERVE	\$ 450,000
PUBLIC WORKS	\$ 5,820,769	DEBT SERVICE	\$ 6,761,839
COMMUNITY RESOURCES	\$ 5,699,993	MISC	\$ 6,780,440

TOTAL EXPENDITURES: \$101,093,330

REAL PROPERTY TAX RATE : \$2.23 PER \$100 (ASSESSED AT 40%)

PERSONAL INCOME SURTAX: 50% of State personal tax liability

LAND

Land Use & Growth Management

Objectives

- ☞ Establish measurable benchmarks to determine appropriate build-out.
- ☞ As an alternative to functioning primarily as a “bedroom community”, adopt policies that will promote the County as a desirable location for high technology industries, vacation destination, farming region, resource protection area (i.e., “greenbelt”) and retirement community.
- ☞ Reserve Farm Community and Resource Preservation Districts for farming and natural resource related uses; direct residential development away from these districts.
- ☞ Create pleasant and convenient places to live, work and shop within designated development areas.
- ☞ Reduce the potential for traffic congestion through community design.

Sustainability Issues

Sustainable communities meet the needs of current and future County residents in the following ways:

- *the built environment does not conflict with the maintenance of a healthy natural environment;*
- *land use development patterns promote a balanced mix of residential, recreational, commercial and industrial uses;*
- *land use development patterns support the efficient use of tax revenues; and*
- *communities are designed to promote a strong sense of community, promote energy efficiency, reduce dependence upon automobiles, and provide access to the natural environment.*

Is Our Current Development Pattern Sustainable?

The rapid population growth that is occurring in Calvert County is part of a nationwide trend. Many people throughout the United States are moving away from central cities and suburbs to “rural fringe” areas such as Calvert County. The negative impacts of this development pattern on urban areas include increased poverty and crime and underutilized infrastructure. Negative impacts on suburban and rural areas include a lack of infrastructure and increased long distance commuting. Rural areas also experience a severe imbalance between housing and jobs and the rapid loss of farms, forests and wildlife habitat. Air and water pollution created by automobile emissions and the overdevelopment of environmentally sensitive areas impact urban, suburban and rural areas alike.

Toward a More Sustainable Community

A better alternative to the current pattern of development within metropolitan areas is to concentrate on making the cities and existing suburbs good places to live, shop, work and go to school. When additional land is needed to accommodate population growth, it should be developed according to sound principles of community design within or adjacent to existing urban centers. Rural fringe areas like Calvert County should be maintained as natural resource protection areas, farming regions, and vacation/recreation/retirement areas. This approach would help:

- conserve natural resources,
- maintain a healthy environment,
- promote the health and well-being of residents throughout the region,
- reduce expenditures for public infrastructure, and
- maintain a regional source of agricultural produce.

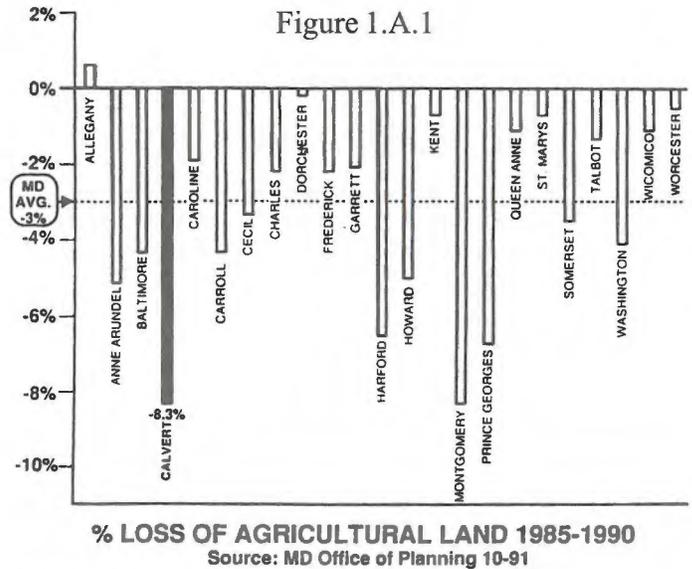
This alternative pattern of growth is supported by the Maryland Economic Growth, Resource Protection and Planning Act of 1992 which identifies the following seven visions:

1. Development is concentrated in suitable areas;
2. Sensitive areas are protected;
3. In rural areas, growth is directed to existing population centers and resource areas are protected;
4. Stewardship of the Chesapeake Bay and the land is a universal ethic;
5. Conservation of resources, including a reduction in resource consumption, is practiced;
6. To assure the achievement of 1 through 5 above, economic growth is encouraged and regulatory mechanisms are streamlined; and
7. Funding mechanisms are addressed to achieve these visions.

Land Use Plan

Calvert County's planning efforts over the last thirty years have been focused toward directing growth to suitable locations, promoting economic growth and practicing stewardship of the Chesapeake Bay and the land. A strong commitment to the implementation of these goals on the part of both the public and the private sector has led to a number of remarkable successes to date (see History of County Planning). There have also been failures; Calvert County leads the State in percent of total acres of farm and forest land converted to residential use.

In the 1983 Comprehensive Plan, two primary goals were identified - to preserve rural character and to promote a strong economy. During the preparation of



Note: See also *Natural Resources and Sensitive Areas*

this update, citizens again endorsed these goals. The concept of directing commercial development to Town Centers also received strong endorsement as did working to find better ways to direct growth away from prime farms, forests, historic and sensitive areas. This 1997 plan, therefore, recommends that the County “stay the course” and continue to pursue these goals.

This 1997 plan further recommends that the County consolidate the goals of preserving rural character and promoting a strong economy and move toward developing a strong local economy based upon the County's rural character. Instead of converting our prime forests and farms into building sites, we can use these resources as the basis for a thriving farming, forestry, recreation and retirement based economy. Instead of compounding the problems of residential sprawl by remaining primarily a bedroom community, we can carve out an important new niche as a vacation and retirement destination. And by retaining our natural resources and taking care to develop attractive Town Centers, we can retain and attract high technology firms and other quality businesses that can produce revenues and jobs in our area. Not least of all, by establishing a clearly defined role for the County within the larger context of the region, we can contribute to a sound regional fiscal policy - one that uses tax dollars efficiently and effectively.

Land Use Implementation Strategy

The County's ability to build a strong economy based upon the protection and maintenance of its rural character will depend largely upon three important factors - the amount, the rate, and the location of future growth. This plan, therefore, recommends a four step implementation strategy based upon these factors.

- Step # 1 Reduce total build-out
- Step # 2 Reduce the rate of residential growth
- Step # 3 Preserve the County's prime farms, forests, historic resources and sensitive areas
- Step # 4 Direct growth to appropriate locations

Public involvement will be needed to determine the degree to which each of these steps is carried out. Citizens will need to evaluate both the short term and the long term impacts of each of these steps on themselves, their families and their communities and decide what role they themselves want to play in determining the future quality of life in this County.

Step # 1 - Reduce Total Build-out

In 1995 there were approximately 23,500 dwelling units in Calvert County. Under 1995 zoning, Calvert County has a theoretical "build-out" capacity of approximately 50,000 dwelling units (Table 1A1) . At the projected rate of growth, which assumes a modest decline over current rates, "build-out" will be reached by 2030. This amount of potential additional growth is not consistent with the goal of developing the County as a vacation destination, farming region, resource protection area and retirement area. Therefore, step #1 in the implementation of the Land Use Element of the Comprehensive Plan is to reduce total build-out. Further analysis will be needed to determine the amount by which build-out should be reduced and will depend, in part, upon decisions relating to the rate and location of future growth.

TABLE 1A1 - PROJECTED BUILD-OUT UNDER 1995 ZONING

Table 1A1 ZONING CATEGORY	DWELLING UNITS AS OF 1995		ADDITIONAL DWELLING UNITS PERMITTED			ADDITIONAL ACRES NEEDED FOR DEVELOPMENT	TOTAL BUILD-OUT UNDER CURRENT ZONING	
			Base ¹	TDR ²	Total			
Town Center 6,700 acres	2700	12%	5000	+1000	6000	0	8,700	17%
Residential 19,000 acres	8500	36%	9000	NA	9000	0	17,500	34%
Resource Preservation District and Farm Community District 54,000 acres	4000 ³	17%	9800	-2800	7000	7500	11,000	21%
Rural Community District 47,000 acres	8300 ⁴	35%	4500	+1800	6300	7000	14,600	28%
TOTAL	23,500⁵	100%	28,300		28,300	14,500	51,800	100%

¹ Base number of dwelling units permitted

² Number of additional dwelling units that need to be transferred in order to meet the county's goal of preserving 20,000 acres of prime farm and forest land through the Calvert County Agricultural Preservation Program.

³ Includes 1200 platted undeveloped lots

⁴ Includes 2400 platted undeveloped lots

⁵ Includes 3600 platted undeveloped lots

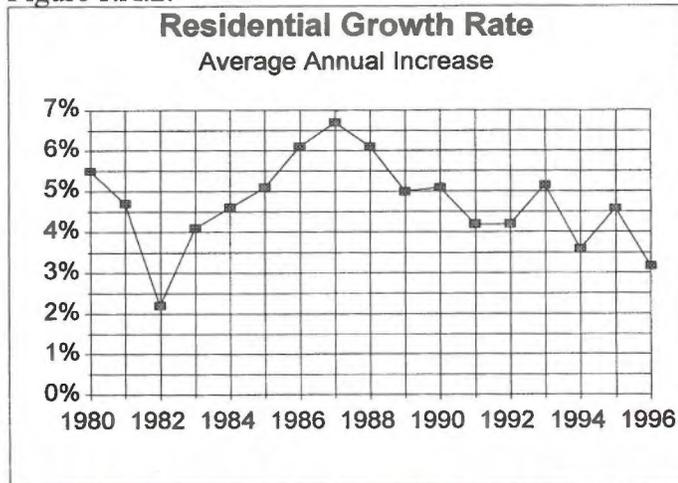
Actions

1. Identify and evaluate options that will reduce build-out. Present options to the public for review and comment. (To be done in 1997).
[P & Z]
2. Amend regulations as needed to implement reductions in build-out. (To be done in 1998).
[P & Z]

Step # 2 - Reduce the Rate of Residential Growth

Calvert County has the highest growth rate in Maryland and has maintained a very rapid rate of growth for over 20 years. Rapid population growth creates an undue financial burden on State and local taxpayers by requiring them to pay for new public facilities (such as schools and roads) while at the same time paying for the operation and maintenance of existing facilities. Step #2 in the implementation of the Land Use Plan is to reduce the rate of residential growth.

Figure 1.A.2.



Actions

1. Continue and consider strengthening the Adequate Public Facilities Regulations. [P & Z]
2. Monitor the impacts of Steps #1 and #3 on the annual rate of growth. [P & Z]

Step # 3 - Preserve prime farms, forests, historic resources and sensitive areas.

Most of the County's prime farms, forests and sensitive areas are located within designated Resource Preservation Districts and Farm Community Districts which together comprise approximately 54,000 acres. Over 12,000 acres of prime farm and forest land had been permanently preserved in the County by 1997. An additional 7,500 acres were enrolled in either the State or the County Agricultural Preservation Program.

Nevertheless, as Table 1A1 illustrates, there is still a potential for an additional 250 subdivisions (7000 lots) within these districts. This amount of additional development is not consistent with the goal of preserving these

important resources. Therefore, Step # 3 in the implementation of the Land Use element of the Comprehensive Plan is to reduce the amount of development that can occur within these districts. At the same time, more action is needed to protect land equity and promote a strong economy based upon renewable resources within these districts.

Actions

1. Reduce the potential number of residential developments within the Resource Preservation District and Farm Community District. [P & Z]
2. Continue to support the goal of permanently preserving a minimum of 20,000 acres of prime farm and forest land through County, state and federal land preservation programs. Adopt a new goal of permanently preserving a total of 40,000 acres within the Resource Preservation District and Farm Community District through a combination of land preservation techniques. [P & Z]
3. Expand the market for Transferable Development Rights and consider methods of expanding the program. [P & Z]
4. Continue to support and strengthen the Purchase and Retirement (PAR) Fund as a means of promoting participation in the Agricultural Preservation Program. Establish a procedure for collecting voluntary contributions to the PAR fund with payment of property tax. Provide local support to the Maryland Agricultural Land Preservation Program and other state and federal agricultural preservation programs. [P & Z]

Actions continued

5. Maintain a strong economic development program to promote agriculture, including the marketing of County-produced farm products.
[ED]
6. Maintain a strong program to promote forestry management including timber harvesting and the maintenance of wildlife habitat protection areas.
[P & Z]
7. Consider permitting supplemental income opportunities on working farms within the Farm Community District and Resource Preservation District to include vacation and tourism related uses. Limit eligibility to tracts that are enrolled as Agricultural Preservation Districts and/or Historic Districts.
[P & Z]
8. Protect the scenic quality of existing rural landscapes and vistas.
[P & Z]
9. Continue to support the land preservation efforts of local, state and national land trusts.
[P & Z]
10. Do not locate public facilities such as sewer or water service areas, schools, and fire and rescue stations within the Farm Community District or the Resource Preservation District.
[PW, PS, A & F, BOE]
11. Do not increase highway capacity within the Farm Community or Resource Preservation District.
[PW]
12. Develop subdivision road standards that are specifically designed to reduce environmental impacts and be visually compatible with the rural character of the surrounding area while maintaining road safety.
[P & Z, PW]
13. Work with landowners to explore alternatives to conventional residential subdivisions. [P & Z]

Step # 4 - Direct Growth to Appropriate Locations

The ability to direct growth away from prime farms, forests and sensitive areas will depend in part upon providing suitable locations for growth in other areas. These areas will need to be attractive, convenient and pleasant. Step #4 in the implementation process is to continue to work toward creating and maintaining appropriate locations for future growth.

In 1995, designated growth areas included Town Centers, R-1 and R-2 Districts, Rural Commercial Districts, Marine Commercial Districts and Light Industrial Districts. Rural Community Districts were designated as low density receiving areas for Transferable Development Rights. The 1983 Comprehensive Plan recommended that towns be established around Town Centers and that single family residential development be directed to towns. Areas within a one mile radius of each Town Center were subsequently rezoned to permit an overall density of one acre per dwelling unit with the purchase of Transferable Development Rights.

Town Centers - The 1983 Comprehensive Plan called for the creation of Town Centers to accomplish several goals;

- to avoid scattered/strip commercial development along MD 2/4,
- to promote business growth by providing infrastructure and enabling businesses to benefit from proximity to each other (agglomeration economies),
- to expand the choice of housing options by providing zoning and infrastructure for multi-family development including low and moderate income and elderly housing,

- to reduce dependence on vehicles, and
- to reduce growth within agricultural areas.

Within less than two years of adoption of the 1983 Comprehensive Plan, the County had defined boundaries and developed new mixed use zoning regulations for seven Town Centers. Upgraded sewer and water systems in Solomons, Prince Frederick and the Twin Beaches followed shortly thereafter. The addition of an Employment Center/Town Center (ECTC) zone in 1993 increased the ability of Town Centers to serve as strong business centers. By 1997, substantial progress had been made toward achievement of identified goals:

- “Spot zoning” along MD 2/4 had ceased. Virtually all new commercial growth had been directed to Town Centers.
- Between 1989 and 1993, general merchandise sales grew 145%.
- Between 1987 and 1995, the commercial real property base grew 126%, from \$60 million to \$136 million.
- 200 units of low income housing and over 475 units of elderly housing had been built in Town Centers.
- Town Centers were beginning to attract middle and high income households, thereby providing an alternative to low density residential sprawl.
- County citizens strongly supported the Town Center concept and saw it as part of an overall strategy to preserve the County’s rural character and promote economic development.

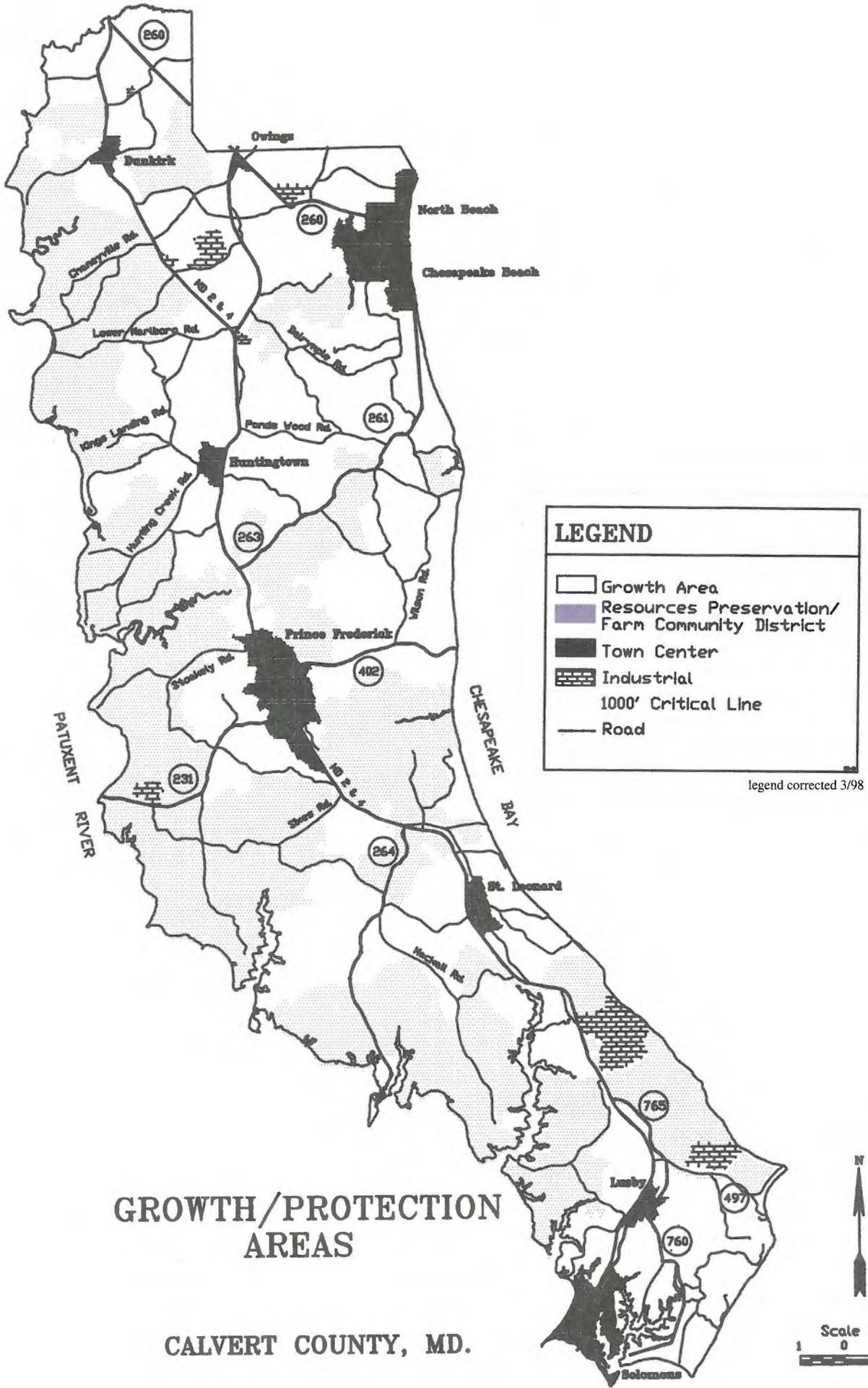
Town Centers are the primary designated growth areas in the County. Thanks to active citizen participation in the development and implementation of Master Plans, Town Centers and surrounding areas are becoming increasingly attractive and pleasant places to live, work and shop.

It is important to continue to promote a broad mix of commercial, office, residential, public and quasi-public development within Town Centers as a means of promoting economic development, creating more local jobs, expanding cultural opportunities, reducing traffic congestion, preventing strip commercial development, providing a full range of housing opportunities and providing convenient access to goods and services for County residents.

The potential impact of large scale (big box) retail uses needs to be assessed. Many communities have experienced severe business displacement when more retail space is built than the local economy can absorb.

The provision of adequate roads, water, wastewater systems and public transportation, together with public amenities such as parks, town squares, trails, sidewalks, bikeways and indoor recreational and cultural facilities, should remain a top priority, in accordance with the master plans for Town Centers.

Emphasis should also be placed on creating a more compact pattern of development that will reduce dependence upon automobiles and enable people to live within convenient proximity to stores, offices and services.



Actions

1. To enable businesses to benefit from proximity to each other, continue to direct commercial growth to Town Centers.
[P & Z]
2. Promote Town Centers as community cultural and activity centers by locating schools, colleges, recreational and cultural facilities within or adjacent to Town Centers.
[GS, A & F]
3. Avoid the potential for strip commercial development along highways using the following policies:
 - a. Do not permit additional commercial development along MD 2/4 outside Town Centers.
 - b. Do not expand existing Town Centers along MD 2/4.
 - c. Do not designate additional Town Centers.
 - d. Do not allow commercial uses to front along MD 2/4 in Huntingtown, St. Leonard or Lusby.
[P & Z]
4. Continue to provide for the construction and maintenance of public infrastructure such as roads, water and sewer in accordance with Town Center master plans.
[PW]
5. Promote strong business growth in Town Centers. Identify impediments to growth in Town Centers and adopt policies to remove them.
[P & Z, ED]
6. To help ensure the efficient utilization of public funds for infrastructure and to promote strong markets for local businesses, continue to require that Employment Districts be located within and/or adjacent to Town Centers.
[P & Z]
7. Continue to improve the appearance of Town Centers by implementing Town Center Master Plan Capital Improvements Projects and Architectural Review.
[P & Z]
8. Review Town Center Master Plans and Zoning Ordinances to look for additional ways to reduce dependence upon automobiles by promoting “pedestrian friendly” site design and increasing pedestrian and bicycle circulation within and between residential, commercial and office uses.
[P & Z, PW]
9. The Planning Commission will, within the year following the adoption of the Comprehensive Plan, identify problems and potentials of large retail stores and develop policies or guidelines to address them; addressing such issues as location, scale, and compatibility of adjacent uses.
[P & Z]
10. Designate North Beach, Chesapeake Beach, Prince Frederick and Solomons as major Town Centers. Designate Dunkirk, Owings, Huntingtown, St. Leonard and Lusby as minor Town Centers.
 - a. Allow both major and minor Town Centers to have community water and sewer.
 - b. Allow multi-family housing (apartments and townhouses) in major Town Centers; do not allow multi-family housing in minor Town Centers except as may be required in Town Center Master Plans.
 - c. Continue to permit a higher residential density with the use of TDRs within a one-mile radius of the perimeter of major Town Centers; permit a higher residential density with the use of TDRs within a one-mile radius of a defined central point within minor Town Centers.

R-1 and R-2 Districts - Most R-1 and R-2 Districts are existing residential communities that were platted prior to the adoption of many of the health and safety regulations that govern the layout and design of newer communities. Consequently, a number of these communities are experiencing problems with sewage disposal, storm water management and roads. While most of these communities are fully developed, a few still have a substantial number of platted, undeveloped lots that are exempt from most current regulations. These lots, totaling 7,300 in 1993, account for nearly 1/3 of the potential future households in the County.

Approximately 1,300 acres of undeveloped land outside existing residential communities and the Critical Area are zoned R-1 and R-2. All were zoned in the late 1960's and early 1970's on the basis of criteria that may or may not continue to be valid today.

Rural Community Districts - The purpose of the Rural Community District is to serve as a rural receiving area for lots that are being transferred from prime farm and forest land under the Calvert County Agricultural Preservation Program. The ability to preserve prime farms, forests, historic resources and sensitive areas will depend, in part, upon the successful implementation of this program. Creating a stronger market for development rights will help ensure its success. The area within a one-mile radius of Town Centers within this district offers opportunities to increase the use of Transferable Development Rights. Proximity to stores, services and cultural/recreational facilities within nearby Town Centers also offers opportunities to design "pedestrian friendly" communities that are attractive to retirees. Additional options for increasing the market for Transferable Development Rights and promoting the County as a retirement area should be explored.

Actions

1. Work with existing communities that contain large numbers of platted undeveloped lots to determine whether or not the health and safety needs of existing and future residents within these communities can be met. If not, develop policies to address health and safety issues, including, if necessary, approaches to reduce the number of platted lots that can be developed.
[CR, PW, PS]
2. Establish criteria for evaluating existing undeveloped R-1 and R-2 land to determine whether permitted residential densities should be increased or decreased.
[P & Z]
3. In areas that are deemed appropriate for higher densities, increase the use of Transferable Development Rights.
[P & Z]

Actions

1. Work with area residents and builders to establish new design standards for residential neighborhoods within a one-mile radius of Town Centers.
 - a. Increase the use of Transferable Development Rights within these neighborhoods.
 - b. Connect residential neighborhoods to Town Centers by way of non-arterial roads, bikeways and sidewalks.
[P & Z, PW]
 - c. Identify and require or encourage amenities that will help attract retirees.
[P & Z]
 - d. While the predominant use should be single family detached residential serving the same market that is currently being served

within rural subdivisions, designate up to 10% of all units for low and moderate income households.
[P & Z, CR]

2. Explore additional ways to increase the market for Transferable Development Rights.
[P & Z]
3. Explore ways to promote communities that are attractive to retirees.
[P & Z]

Rural Commercial Districts - Several areas outside the Town Centers are zoned as Rural Commercial Districts. With few exceptions, these districts are already developed for commercial use.

Actions

1. Continue to restrict the expansion of existing commercial zones outside Town Centers.
[P & Z, ED]
2. Do not permit any additional commercial development along highways outside Town Centers. [P & Z, ED]

Marine Commercial Districts - Marine Commercial Districts provide locations adjoining waterways for businesses which supply and cater to marine activities and needs. These include: boat service and repair facilities, boat docks, marine equipment stores, wholesale and retail fish and shellfish sales, hotels, motels, restaurants and cocktail lounges. Calvert's commercial waterfront is one of the County's main tourism attractions. The County needs to be proactive in facilitating its proper and effective use.

Actions

1. Monitor the amount of marine zoning needed and the best locations in terms of the following factors: water depths, erosion potential, water quality and critical navigation areas.
[P & Z, ED]
2. Allow maximum utilization of areas zoned Marine Commercial without causing significant adverse effects on aquatic resources, visual aesthetics, or neighboring residential uses (i.e., outdoor lighting projecting onto residential property.)
[P & Z]
3. Conduct a study of County waterways to include issues related to Molly's Leg, derelict/sunken boats, mooring buoys, commercial boat sewage pump-out into sewer systems, outdoor lighting, unsightly vessels and boat lifts.
[P & Z]
4. Request enabling legislation for the County to take control of its waterways in Town Centers.
[P & Z]

Light Industrial Districts - Industrial Districts are intended to provide areas in the County which are suitable for light industrial uses free from other uses which might affect such development.

Actions

1. Maintain an inventory of I-1 and ECTC land. Periodically evaluate the need for additional I-1 and ECTC land as part of a comprehensive rezoning process.
[P & Z, ED]
2. Allow ECTC uses and restrictions in I-1 Districts when adjacent to Town Centers.
[P & Z]

Transportation

Objectives:

- ☞ Stage development of the transportation system to complement the overall development of the County.
- ☞ Maintain MD 2/4 as the main transportation corridor, providing for safe and efficient travel.
- ☞ Maintain and improve the arterial and non-arterial street and highway systems in the County to provide for safe and efficient travel.
- ☞ Maintain and improve existing public transit services to provide for safe and efficient travel.
- ☞ Encourage transportation alternatives such as public transit, carpools, vanpools, bicycling, and walking which are energy-efficient and reduce dependency on automobiles.
- ☞ Develop a County-wide comprehensive transportation planning program that is integrated with State and regional planning programs.

Sustainability Issues:

A sustainable transportation system can provide an overall framework for good urban and rural development. However, its success will necessarily depend upon the settlement pattern. The land use settlement pattern determines the amount and spatial distribution of travel as well as the ability of various transportation modes to serve that travel. Sustainable communities promote energy efficient, safe, and convenient travel patterns because they:

- *allow for shorter and fewer automobile trips by integrating land use activities that*

complement daily life—parks, basic shopping, and social and institutional centers—into the framework of residential development;

- *allow multiple trip purposes to be served with a single trip through mixed-use development and pedestrian oriented site design;*
- *allow alternatives to the single-occupant vehicle to effectively serve peak-period commuting travel; and*
- *allow alternatives to the automobile to serve everyday travel needs.*

Trends in Transportation

Traffic volumes at many points on the highway system in Calvert County, including MD 2/4, have more than doubled during the recent decade. As a result, a number of traffic signals have been installed and safety and capacity improvements made. Traffic congestion on MD 2/4 in Prince Frederick now frequently occurs during the peak travel periods.

In 1990 according to the U.S. Census, 57 percent of employed County residents, or over 13,000 persons, commuted to jobs outside of Calvert County. The average commute time, the longest of any county in Maryland, exceeded 35 minutes and the commute for nearly one-fifth of the County workforce exceeded one hour. About 73 percent of the workforce drove alone, 21 percent carpooled, and 6 percent worked at home, used public transit, walked, or bicycled to work.

Development trends since 1990 indicate that these travel behaviors will continue and that traffic congestion on MD 2/4 will become a problem. It is appropriate then that the level of service on MD 2/4 be an indicator of the impact of growth on the quality of life in Calvert County. Maintaining an adequate level of service--stable traffic flows, albeit at reduced speed, during peak periods--might serve as a benchmark for measuring how well the County is managing growth and development¹.

¹ Highway congestion can be measured in terms of Level of Service (LOS), ranging from LOS "A" to LOS "F". Highways operating at an adequate level of service, as described below, are assigned a LOS "D". These carry high densities of vehicles at stable rates of flow during the weekday peak period. Freedom to maneuver is restricted and speeds are reduced at LOS "D". Minor highway incidents at this level of service can cause severe traffic congestion.

To help ensure that MD 2/4 continues to provide an adequate level of service through 2010, a number of improvements are needed, including: the Prince Frederick Collector Road System, the widening of MD 2/4 in Prince Frederick, and the construction of an interchange at MD 4 and MD 260. Beyond 2010, if the County continues to grow as forecast, preventing severe congestion on MD 2/4 will prove increasingly costly and more difficult.

Figure 1.B.1 shows the costs of improving MD 2/4 so that it can maintain a LOS “D” through 2030--the year County build-out is anticipated to be reached. The improvements listed are in addition to those needed to ensure that the road network owned by Calvert County can serve anticipated growth. The cost of these County improvements can be expected to range between \$110 and \$130 million between 1997 and 2030. Additional costs can be expected to be incurred by Calvert County in maintaining existing and future transportation infrastructure and in continuing to provide public transit services. Between 1996 and 2030 the County will need to spend about \$56 million (1996 dollars) to resurface roads built to serve the forecast County buildout, while maintaining roads and bridges that exist today.

Arterial Highways

Arterial highways, such as MD 2, 4, 2/4, 231, and 260, are intended to serve fast or heavy traffic between major urban centers. Typically, direct access to property along arterial highways is controlled so that overall highway capacity can be better utilized.

Gradually converting MD 2/4 into a controlled access expressway is among the improvements considered key to resolving future transportation problems in the County. (See Figure 1.B.2.)

Actions

1. Continue to implement interim measures to maintain the safety and efficiency of arterial highways:
 - a. Reduce existing and prohibit future direct property access wherever possible. [PW, P & Z]
 - b. Require parallel connecting roads along MD 2/4 during the development/subdivision process with the long-term goal of having all driveways served by connecting roads. [P & Z]
2. Develop a long-term approach to improving the safety and efficiency of the arterial highway system, which should include measures to reduce congestion and eliminate as many existing access points as possible. [P & Z]
3. Promote the preparation and regular update of a regional transportation system plan based upon and designed to serve the land use development objectives of County and local governments within the region, including Calvert County. [P & Z]
4. Prepare and regularly update a long-range transportation system plan, including an arterial highway system maintenance and improvement element. [P & Z]

Figure 1.B.1.
CONCEPTUAL IMPROVEMENTS REQUIRED TO MD 2/4 TO MAINTAIN ADEQUATE LEVELS OF SERVICE IN LIGHT OF FORECAST GROWTH IN CALVERT COUNTY

Time	Improvement
By 2010	Prince Frederick Collector Road System Widen 2/4 in Prince Frederick Interchange MD 4 at MD 260 Access Control on MD 2/4
2010 cost subtotal	\$60 - \$70 million
By 2020	Prince Frederick Overpasses ¹ Widen MD 2/4: Prince Frederick to MD 2 Widen MD 2/4: Prince Frederick to MD 264 Huntingtown Overpass Dunkirk (Ward Road) Overpass Access Control on MD 2/4
2020 cost subtotal	\$40 - \$50 million
By 2030	Prince Frederick Bypass St. Leonard (Ball Road) Overpass Access Control and Construction Widen MD 2/4: MD 2 to North County Line Widen MD 2/4: MD 264 to South County Line
2030 cost subtotal	\$190 - \$200 million
Total Estimated Cost	\$290 - \$320 million

Source: Calvert County Department of Planning and Zoning.

1. Overpass planned as part of the Prince Frederick Collector Road System: north of Stoakley Road, north of existing Prince Frederick Rescue Squad, and at Steeple Chase Drive.

Figure 1.B.2.
General Characteristics and Design of Arterial Highways

Facility Type	No. of Lanes	Design Considerations		Design Capacity* (Vehicles per Day)
		Access Control	Intersections	
Standard Divided Arterial	Four	Partial	At Grade	35,000
	Six	Partial	At Grade	45,000
Expressway	Four	Partial-Full	Some Grade Separated	38,750 to 58,750
	Six	Partial-Full	Some Grade Separated	60,000 to 80,000
Rural Freeway	Four	Full	All Grade Separated	62,500
	Six	Full	All Grade Separated	95,000

* Level of Service "D"

Source: Calvert County Department of Planning and Zoning.

Non-arterial Roadways

While the arterial highway system is most important in terms of County-wide and regional travel, collector and land access roads such as subdivision streets are an important component of the County's overall transportation system. This is especially true of collector roadways which collect traffic from land access streets and convey it to arterial highways. In urban areas, these roads form the local traffic circulation system and are essential to good economic development.

Many of the rural non-arterial roadways in the County were designed primarily as farm-to-market routes. They were not intended to accommodate high volumes of automobile traffic and, under such conditions, may present significant safety and maintenance problems. Upgrading many rural roads to modern design standards would prove costly and make valuable rural conservation lands more accessible to urban development. Major renovations of old County roads typically exceed \$1,000,000 per mile.

Priority should be given to upgrading non-arterial roads which serve designated growth areas. Roads that serve rural conservation lands and natural areas and have low traffic volumes do not warrant the same design improvements required of those roads serving designated growth areas. By coordinating improvements of the County roadways with land use development objectives, overall construction and maintenance costs can be kept lower. Where the need for road improvements is made necessary by new development, the County could impose road impact fees to defray construction costs.

The construction of new collector and land access roads has been proposed in the Town Center master plans. Construction of these roads would, among other things, help to control access onto MD 2/4 and provide a framework for planned residential and commercial development. In 1995, the County began the construction of one such road, connecting MD 231 and West Dares Beach Road.

Actions

1. Maintain an annual program to renovate roadway sections and intersections. This includes widening roads, adding shoulders, removing dangerous curves, adding bridges, correcting poor sight distance, and adding turning lanes. Prioritize renovations based on traffic counts, proximity and service to designated growth areas, and overall capability of roadway.
[PW]
2. Continue the five-year plan for resurfacing. Prioritize resurfacing based on traffic counts, existing structural condition of paving, and skid resistance of existing surface.
[PW]
3. Continue systematic road maintenance and timely snow removal. Prioritize maintenance based on need and quantities per total length of roadway/section.
[PW]
4. Amend County road requirements to allow safe rural roads that are not over-designed and the provision of sidewalks where needed.
[PW, P & Z]
5. Consider road impact fees to help finance the roadway improvements made necessary by new development.
[P & Z, A & F]
6. Construct new roads as identified in Town Center master plans with the participation of the private sector when such roads are required to serve private development projects. [PW, P & Z]
7. Prepare and regularly update a long-range transportation system plan including a non-arterial street and highway maintenance and improvement element.
[P & Z]
8. Prepare traffic circulation studies and plans as needed for Town Centers in particular.
[P & Z]

Public Transit

Good transportation planning requires that highway and public transit facilities and services be planned together. The potential for future cost-effective transit service can be precluded by unwise highway system and land use development; even though the need for transit may exist. In turn, available highway capacity can be more fully utilized when a highly accessible and efficient transit system is in place. Two levels of public transit service are currently operating in Calvert County, rapid and local.

Rapid transit is intended to facilitate relatively fast travel along heavily traveled corridors and between major activity centers in an urbanizing region. Rapid transit service can be provided by commuter rail, light rail, and by buses operating in mixed highway traffic or over exclusive rights-of-way. The rail options require high urban population densities, strong land use controls, and relatively poor highway service to operate effectively. Rail options are not practical within Calvert County in the foreseeable future. However, commuter bus service is provided by the Maryland Mass Transit Administration between points in the northern section of the County and the Washington, D.C. metropolitan area only.

The local transit service is operated by the County. The fixed-route service operates between the major town centers and makes stops at shopping centers. The County also operates demand responsive transit routes, providing service to the elderly and disabled in the Prince Frederick Town Center and environs.

Waterborne ferry service is a form of public transit with particular potential for Calvert County. The potential of waterborne ferry service must be kept viable. Any waterborne ferry service must be properly planned and integrated into the road-based transportation system and land use pattern.

Actions

1. Provide adequate commuter parking lots at key locations throughout the County. Encourage shared use of parking lots. [P & Z]
2. Expand and improve existing rapid and local levels of transit service as necessary. [PS]
3. Expand and improve demand responsive transportation services for the elderly and handicapped as necessary. [PS]
4. Promote the preparation and regular update of a regional transportation system plan based upon and designed to serve the land use development objectives of county and local governments within the region, including Calvert County. [PS]
5. Prepare transit development plans serving Town Centers as necessary. [PS]
6. Prepare and regularly update a long-range transportation system plan, including a public transit system maintenance and improvement element. [PS]

Transportation System Management

Building extra highway capacity--new highway lanes, expanded intersections, and new roadways--is very costly. Efforts must be directed at making the most efficient use of existing transportation facilities before building new capacity. Addressing transportation problems through the construction of new highway capacity alone can prove exceedingly wasteful.

Transportation system management refers to a series of non-capital intensive improvements designed to achieve both short and long-range transportation objectives. Such objectives may include; making efficient use of existing roads before committing to new projects, encouraging the use of buses, vanpools, and carpools; reducing vehicle use and traffic congestion; effecting motor fuel savings and reducing motor vehicle emissions; and helping to modify travel demand, patterns and behaviors. Transportation system management measures with the potential for application in Calvert County include:

- traffic engineering techniques including traffic signal synchronization, the proper placement of driveways, and the placement of exclusive turn lanes or roundabout intersections and other traffic control devices;
- area wide transit, carpool, and vanpool promotion, including the proper placement of commuter parking lots and evaluation of transit alternatives; and
- Town Center and sub-area land use planning and site design.

The comprehensive plan recognizes that well planned community development and good site design can help reduce reliance on automobiles, reduce the number and length of automobile trips and time spent in travel, and promote bicycle use and walking as alternatives to automobile use. Contemporary community development has been dominated by the need to effectively accommodate automobile travel. As described in the land use section, the comprehensive plan envisions a

reversal of contemporary development patterns. The plan envisions development patterns that foster the use of alternatives to automobile travel for many trip purposes.

Actions

1. Continue to monitor traffic conditions and assess the potential on non-capital intensive measures to resolve transportation problems, including the role of intelligent transportation systems technology. [P& Z, PW]
2. Enhance opportunities for walking and bicycle use in designated growth areas. [P& Z, PW]
3. Establish bicycle and pedestrian routes to connect residential, commercial, employment, educational, and open space areas, as feasible. [P& Z]
4. Provide or require sidewalks in established commercial areas of Town Centers. [P& Z]
5. Provide adequate commuter parking lots at key locations throughout the County. Encourage shared use of parking lots. [P& Z, PW]
6. Prepare and regularly update a long-range transportation plan including a transportation system management element. [P& Z, PW]

Energy

OBJECTIVES:

- ☞ Develop policies, procedures, and practices that promote energy conservation and efficient use of energy resources.
- ☞ Use alternative energy sources when economically feasible and compatible with the environment.
- ☞ Consider energy efficiency during site selection, site design, and building design for residential, commercial, and institutional developments.
- ☞ Reduce both residential and commercial average annual increase of energy consumption.
- ☞ Reduce the County government's energy consumption.
- ☞ Plan for the County's future energy needs.

SUSTAINABILITY ISSUES:

Sustainable communities meet the needs of current and future County residents in the following ways:

- *renewable energy sources are used,*
- *energy sources used do not adversely impact the environment,*
- *energy consumption is reduced, and*
- *energy efficient land use patterns promote economic and social activities that are less dependent on automobiles.*

There has been a growing awareness that most of the world's resources are limited and that we should be reducing our consumption and reusing and recycling whatever possible. This ethic applies not only to physical objects, like paper, but also to the less tangible objects, like energy.

Energy Plants

Two major energy plants are located within Calvert County, the Baltimore Gas and Electric (BGE) Calvert Cliffs Nuclear Power Plant and the Columbia Liquid Natural Gas (LNG) Plant. The BGE Nuclear Power Plant is the County's most significant source of revenue, although it supplies little electricity directly to Calvert County. One issue that must be resolved at the federal level is the long-term storage of spent nuclear fuel. The Columbia LNG Plant is connected to a national network of gas lines. The plant liquifies gas in the summer for use in the winter when demand peaks.

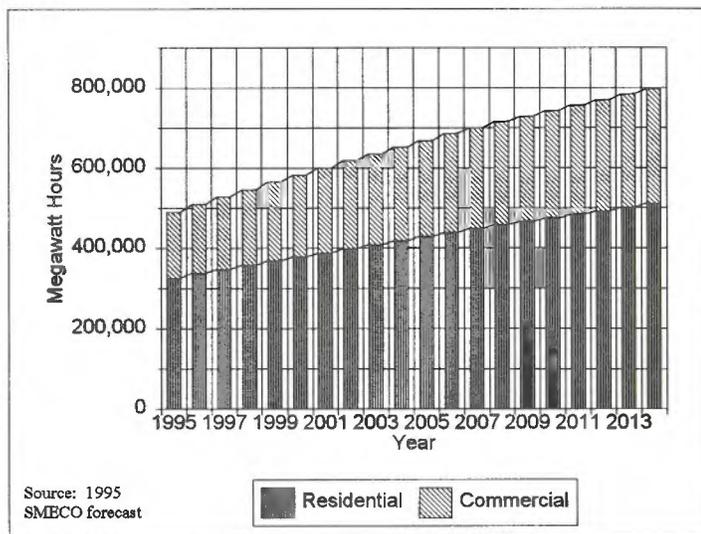
County Energy Use Trends

Calvert County's energy use has been increasing due to population growth and higher per capita use. Southern Maryland Electric Power Cooperative (SMECO) supplies approximately 80 percent of all residential and commercial electricity while BGE supplies the rest. Calvert County's electric energy consumption peaks in the winter, unlike neighboring St. Mary's and Charles Counties. The reasons for Calvert's winter peak are uncertain, but it is beneficial because demand is spread throughout the year.

SMECO's sale of energy to homes increased from 139 megawatt hours in 1984 to 296 megawatt hours in 1993, an average annual increase of nine percent. While much of this increase was due to residential growth, SMECO figures show that electrical consumption per residence increased from 12,200 to 15,800 kilowatt hours over the same time period, an average annual increase of three percent. SMECO expects sales to residential customers to increase to 509 megawatt hours by the year 2014 (see Figure 1.C.1). Sales to commercial customers are expected to increase from 164 megawatt hours in 1995 to 287 megawatt hours in 2014.

SMECO's commercial energy sales increased from 66 million kilowatt hours in 1984 to 144 million kilowatt hours in 1993, an average annual increase of nine percent. SMECO expects sales to commercial customers to increase to 204 million kilowatt hour by 2000, a 209 percent increase from 1984.

Figure 1.C.1. Projected Energy Use



In order to provide utility service in the future, new or expanded utility corridors will need to be identified. Utility corridor planning can reduce the number of new corridors, thereby providing more cost effective service, reducing impacts on neighboring uses, reducing tree removal, and providing known locations for future electromagnetic fields. While scientific evidence is not conclusive about the public health effects of electromagnetic radiation, policy-based approaches advocate prudent avoidance, “limiting exposures which can be avoided with small investments of money and effort” (American Planning Association, 1991).

Lighting

Of all electricity sold in the U.S., lighting accounts for 20-25 percent. The nation’s demand for electricity could be cut by more than 10 percent if energy-efficient lighting were used (EPA 1993). New lighting technology, such as compact fluorescent lighting, can reduce energy consumption and at the same time save money. The initial cost of installing energy efficient technology should be compared to the life-cycle cost (operating cost times lamp life plus purchase price) of energy efficient equipment versus standard equipment. The County government is using solar energy to

power the outdoor safety lights at two solid waste compactor sites. Although the initial cost was higher, the solar energy system paid for itself in two years, and there is no monthly electric bill. In addition to cost savings, reducing energy used for lighting also reduces environmental impacts; every kilowatt hour of lighting electricity not used prevents emissions of 1.5 pounds of carbon dioxide, 5.8 grams of sulfur dioxide, and 2.5 grams of nitrogen oxides.

Calvert County is a rural county, and residents desire to maintain its rural character. Seeing the stars is one of the pleasures of living in the country. Urban dwellers often marvel at the number and brightness of stars that can be seen in rural areas. As the population and number of structures increase, there is the potential for Calvert Countians to lose this connection to the stars from light pollution. Lighting can be used effectively without over lighting an area. Some types of street and security lights, such as high pressure sodium lamps, use less energy and produce more light. Lighting can be used to minimize shadows around buildings and parking areas. “Lighting on buildings, under trees and shrubs can be used effectively to illuminate the surroundings, while not blinding pedestrians and residents.” (Community Forestry Network 1994).

Cost Savings

The average American household spends more than \$1,000 per year to operate appliances and heating and cooling equipment in the home (U.S. Department of Energy 1993). Of all residential electricity use, refrigerators typically consume 20 percent, about 1,200 kilowatt hours per year (EPA 1993). Research and development of energy efficient refrigerators are expected to reduce consumption by two-thirds, to only 400 kilowatt hours per year. Other cost savings can be achieved by the choice of fuel used to heat and cool homes, for example, propane gas and geo-thermal.

Saving energy reduces operating expenses, thus resulting in more disposable income. The money saved from energy operating expenses can be used for other priorities. “Energy efficiency requires an investment in insulation, efficient light bulbs, solar water heaters, double-pane windows, and other

technologies, as well as new skills and services. Hometown businesses can offer these products or services and benefit from increased demand. If such products and services are unavailable locally, entrepreneurs can create new jobs and businesses by meeting the demand. All these effects combine to free up money for other community priorities and make the whole community more prosperous” (American Planning Association 1993). For example, Osage, Iowa, a small municipality of 3,800, implemented a variety of energy efficient programs which created the equivalent of 60 new jobs. The \$1.2 million which leaked out of the community to pay energy bills now stays in the community, generating more local wealth.

Energy Conservation Programs

Energy efficiency is important in several ways; not only does it save money, it reduces environmental impacts and defers the need to build new power plants. SMECO offers several energy conservation programs. The PowerSaver Home Program targets new home construction. Energy efficient technologies are incorporated during construction: insulation, windows, doors, heating and cooling systems. SMECO provides a rebate which reduces the initial costs. Benefits to the homeowner, in addition to the rebate, are reduced energy use and reduced energy bills (over homes built to standard codes) and improved comfort levels as a result of reduced heat loss and drafts. Owners of existing homes are encouraged to install higher efficiency electric heating and cooling equipment through the PowerSelect Program. Participating homeowners are eligible to receive rebates on equipment they purchase.

Energy efficiency is being made available to low income households through a partnership between SMECO and the Southern Maryland Tri-County Community Action Committee. The first phase of the EnergyWise Program focuses on energy audits and weatherizing. Measures offered include compact fluorescent bulbs, weather stripping, electric water heater wraps, pipe insulation, low-flow shower heads, and flow restricting faucet aerators. Heating and cooling bills could be reduced by 30 percent and water use reduced by 40 percent. The second phase of the program will expand the benefits.

The State of Maryland offers a financing program to businesses for energy conservation and generation projects. The program is offered through the Maryland Energy Financing Administration.

In addition to ways to reduce consumption, reusing materials can aid in efficient use of energy. A waste to energy plant is one way to produce energy while reducing the amount of waste that goes to the landfill. Waste to energy is discussed further in the Waste Management section.

Site Planning and Building Design

Before we became reliant on heating and cooling equipment, buildings were constructed to take advantage of breezes and the seasonal path of the sun. Within the County’s older shore communities, many of the houses are comfortable even in the summer due to windows that take advantage of breezes off the water and shading from mature trees. Today, building designers often ignore natural rhythms and rely totally on mechanical systems to heat and cool buildings, systems which are more expensive to own and operate. One of the primary ways to build in harmony with the natural environment is to be cognizant of the sun. Use of natural lighting and reduction of artificial lighting reduces energy needed for lighting and reduces air-conditioning needed to cool buildings from heat generated by lights.

Site planning and building design can promote energy efficiency through the use of appropriate vegetation and building materials. For instance, properly planted trees can typically reduce energy used for cooling individual buildings by up to 35 percent (EPA 1992). Another way to reduce air-conditioning is by using white or light colored surfaces for external walls and roofs; energy use may be decreased by 20 to 30 percent.

Orientation of Buildings and Streets

Working with natural forces through passive solar heating and cooling can keep temperatures comfortable and reduce energy consumption. Street orientation relates directly to how much sunlight or shade a building receives. If streets are oriented with

forethought, buildings can be shaded in the summer and receive sunlight in the winter due to the sun's varying angle and height through the seasons. Streets oriented to the cardinal points (north, south, east, and west) receive very little shade during the summer: in the morning and afternoon the north-south streets are shadowed, yet they receive the full force of the sun at mid-day. During the winter almost all the streets are shadowed, thus the buildings are colder and require greater amounts of fuel to heat them. In contrast, streets oriented diagonal to the cardinal points (northeast, southeast, southwest, and northwest), take advantage of the sun's position. In the summer, shadows are cast most of the day, and in the winter more sunlight is cast on the streets. Streets and buildings oriented in this manner can reduce the need for mechanical equipment to heat or cool the buildings.

Land Use and Automobiles

Calvert County's geography and development patterns have created an automobile-dependent community. Nationwide, automobile dependence has intensified since World War II. Creation of the interstate highway network, decentralization of the cities, high home ownership, and the increase of two-income households are examples of trends which have intensified automobile use. The high percentage of County residents who commute out of the County for work and the long duration of their commutes combine to create high consumption of gasoline. Thus, land use—the location of homes, jobs, shopping, and recreation—affects energy consumption.

High automobile use is a concern from an energy standpoint as well as from an environmental standpoint. By directing development to the Town Centers and promoting a mixture of land uses (residential, commercial, recreational, and institutional), the length of daily trips and the number of trips can be reduced. Promoting use of park and ride lots and buses are two more ways to reduce gas consumption. Given the County's peninsular shape and its previous patterns of scattered subdivisions, methods should be explored to reduce the impact of travel.

Gasoline-powered vehicles negatively impact the environment by creating air pollution and continue the United States's foreign oil dependence. Methods which can reduce negative impacts include vehicles powered by alternative fuels such as natural gas, electric, or solar. Improvements in these technologies have been made, and greater improvements may result in the next years. Natural gas for vehicles is an attractive alternative to gasoline since natural gas emissions of carbon monoxide are significantly reduced along with other emissions which produce ozone and other green house gases.

ACTIONS:

1. Reduce travel-related energy consumption by promoting compact mixed-use development in Town Centers. [P & Z, ED]
2. Encourage telecommuting and flexible working schedules for employees to conserve energy used for transportation. [CA, ED]
3. Encourage energy conservation through the County Transportation Plan (commuter parking lots, public transit service, commuter bus service, car & van pooling, and bicycle and pedestrian pathways). [P & Z, PS, A & F, PW]
4. Consider converting the County vehicle fleet to alternative fuels. [PW, PS]
5. Conduct an assessment of the County government's energy use and seek ways to improve energy efficiency. [GS]
6. Review the local building code for areas where greater energy efficiency could be promoted. [PW, GS]
7. Promote education of energy-conserving techniques, including demonstration projects of energy-saving techniques, to the public, to school students, and to those who design our communities. [BG&E, SMECO, P & Z, GS]
8. Consider giving recognition awards to the most energy efficient developments. [P & Z, PW]
9. Consider using solar energy, natural gas and geothermal energy for County facilities and consider promoting their use as alternative sources of energy. [GS, PW]
10. Discourage light pollution. [P & Z, GS]
11. Consider building orientation during site design to take advantage of solar energy and reduce the need for artificial heating and cooling. [P & Z, PW]
12. Plan for future utility needs by identifying areas for future and expanded distribution lines. Consider utility corridor planning. [P & Z]
13. Promote and participate in federal, state, and utility-sponsored energy efficiency programs. [P & Z, GS, PS]
14. Encourage utilities to expand energy conservation programs. [CR]
15. Encourage tree planting around homes to reduce heating and cooling. [P & Z, ES]

Waste Management

Objectives:

- ☞ Ensure the safe and environmentally sound disposal of solid waste, waste water and hazardous waste generated in Calvert County.
- ☞ Promote conservation of resources, e.g. solid waste source reduction, reuse and recycling of waste and water conservation.
- ☞ Investigate efficiency and effectiveness of regional approaches to waste management.
- ☞ Allow for sewage treatment facilities for Town Centers.
- ☞ Identify and require correction of malfunctioning septic systems.

Sustainability issues:

Sustainable communities conserve natural resources, reduce consumption, reuse products and recycle. Their citizens look at the long-term consequences of consumptive practices to ensure that natural resources are not depleted nor degraded and, thus, are available for use by future generations. Waste is disposed of in ways that have the least environmental impact and are fiscally responsible. Toxic waste is reduced, reused, recycled or disposed of in a way that will not pollute drinking water, subsurface ground water, surface water, air or land.

Calvert County will ensure the safe and environmentally sound disposal of solid waste, wastewater and hazardous waste generated in Calvert County by providing adequate and efficient facilities and programs for disposal. In addition, the County will promote conservation of resources, e.g. solid waste source reduction, reuse and recycling and water conservation. Such conservation will extend the useful life of County waste disposal facilities and groundwater supplies, reduce environmental impacts, and reduce waste disposal costs.

Solid Waste

Landfill Disposal Needs. A state of the art, double-lined landfill designed to protect the environment was opened in Appeal in 1993. In 1997, in order to head off the major cost of expanding the landfill, the County entered into a 20 year agreement with an independent private contractor to build and operate a solid waste transfer station at the Lusby landfill site. Waste will be transferred out of the County, thereby extending the life of the landfill for many years. Also, in FY 1997, the County capped the landfill in Barstow at a total cost of \$4,477,000.

Household-waste. Household-waste collection including recycling is currently provided at the compactor sites, Appeal Landfill, or by private haulers. The most successful recycling programs are achieved using curbside collection of waste and recyclables. Franchising curbside collection with recycling is an alternative approach that could be used in Calvert County.

Recycling Program. Calvert County citizens and businesses recycled 17% of the County waste stream in 1994, exceeding the State goal of 15%. The County should increase recycling to lengthen the life of the landfill, reduce the cost of waste management, reduce the use of our natural resources and reduce the potential threat that domestic waste poses to the environment.

Yard and Land Clearing Waste. Citizens are encouraged to compost their own yard waste such as grass clippings, leaves and twigs. Most yard waste that reaches the landfill is composted. A small percentage does get landfilled.

Land-clearing debris such as tree stumps are not allowed to be disposed of at the County Landfill; thus most are disposed of at private landfills which accept land-clearing debris. An increasing amount of this material is being ground into mulch, reused and recycled.

Construction Waste. Much of this material is accepted at the landfill. However, to save space and extend the life of the landfill, more of it should be recycled or converted to mulch. There are no landfills in Calvert County that accept rubble (broken concrete, bricks, asphalt, etc).

Actions:

1. Increase recycling (measured as a percentage of waste stream) and consider mandatory recycling, where and when cost effective. Explore increasing the types of waste stream items that can be recycled.
[PW]
2. Encourage franchised curbside collection and recycling.
[PW]
3. Adopt a policy that ensures that the majority of land-clearing debris, yard waste and construction waste is converted to mulch or is in other ways recycled or reused rather than landfilled.
[PW]
4. Work jointly with local businesses on source reduction (e.g. decrease packaging), reuse and recycling.
[PW]
5. Provide public education on source reduction, reuse and recycling of solid waste materials.
[PW]

Wastewater

Wastewater is all liquid, non-hazardous waste produced by residential, commercial, industrial and institutional uses. It mostly consists of human waste disposed of through community, shared or individual sewer systems. Most of the domestic waste in Calvert County is disposed of in individual sewer systems (septic systems). The greatest threats from wastewater disposal are nutrient pollution (nitrogen and phosphorus) and disease transmittal. Nutrient pollution has been linked to the decline of living resources in the Chesapeake Bay.

Septic Systems. Relative to other counties in Maryland, Calvert County has the highest percentage of sewage being disposed of into septic systems. The

Maryland Office of Planning has estimated that septic systems are a significant source of nitrogen pollution in rural counties including Calvert County. The septic system only removes about one-half of the nitrogen and releases the effluent to the soil below the vegetated layers. It is estimated that about 8 lbs. of nitrogen per person per year is released to the environment. Recently, nitrogen-removing septic systems have been developed which could greatly reduce the discharge of nitrogen from septic system wastewater disposal.

To protect the environment from malfunctioning septic systems, the County requires that all new and replacement septic tanks be chambered which prevents overflow to the environment if the tank fails. On existing lots, there is an additional requirement that sufficient and appropriate space be provided on the lot for one primary and two secondary drainage fields. These requirements have been in place since January, 1993. Homeowners are encouraged to pump out their septic tanks every three to five years.

Septage Treatment. Septage is all wastewater and sludge collected from septic systems. Prior to May, 1995, most septage in Calvert County was disposed of on farmland without much oversight. Since May, 1995, all septage must be disposed of at a County approved septage treatment facility, currently at the Solomons Wastewater Treatment Plant, or on land that has received a State permit for such disposal.

Shared Wastewater Facilities. Shared wastewater facilities are systems that serve more than one lot or parcel in subdivisions. Shared facilities can also be used to serve areas of any size that are experiencing septic failures.

More open space could be preserved and greater treatment of wastewater could be accomplished by allowing shared wastewater systems in cluster subdivisions. The current requirements for septic recovery areas dictate that lots be larger than the minimum lot size allowed. Thus, lots consume more area than necessary. With shared facilities, more nutrients can be removed and less land consumed.

Community Wastewater Systems. Community wastewater systems are defined as any public wastewater system that treats waste from more than one lot or parcel. Three Town Centers have large wastewater treatment plants to support the existing populations and allow growth in these areas. Treatment is slow-rate land application for Prince Frederick, biological-nutrient removal followed by rapid infiltration land application for Solomons and biological nutrient removal treatment with discharge into the Chesapeake Bay for Chesapeake Beach and North Beach.

Wastewater Policy. Slow-rate, land application of treated wastewater is the preferred method of wastewater disposal in the County and is the most sustainable. The effluent is sprayed onto either forest land or crop land planted with certain grasses. Vegetation takes up the nutrients and then is harvested. The nutrients are thus recycled rather than discharged into waterways where they would have adverse impacts on aquatic resources. In addition, the shallow water aquifers are recharged in the area of the application. The disadvantages of land application are costs and land consumption.

In light of the County's rapid growth rate, the provision of new community sewerage service should not allow an increase in residential density unless that increase requires the purchase of Transferable Development Rights. When providing community wastewater treatment to correct an existing problem, such as failing septic systems, no increase in density will be allowed based upon provision of the sewerage system.

Actions:

1. Continue to show preference for land application of wastewater effluent.
[PW, P & Z]
2. Encourage the use of nitrogen removing technologies for septic systems and shared facilities to reduce nutrient pollution of our waterways.
[HD, PW, P & Z]
3. For existing problem areas (failing septic systems), search for funding and means to correct the problem. This could include installation of a community wastewater system, composting toilets or gray-water systems.
[HD, PW, P & Z]
4. Permit water and sewer in all Town Centers when needed to support environmental health and/or support County identified economic development goals, when and if cost effective and economically feasible.
[P & Z, PW]
5. Explore the feasibility, including cost effectiveness, of allowing shared septic or wastewater treatment facilities with land disposal in clustered subdivisions.
[HD, PW, P & Z]
6. Provide public education on water conservation to reduce demands on our aquifers and reduce demands for wastewater disposal.
[PW]

Hazardous Waste

Hazardous waste, if improperly disposed of, is a threat to the health and safety of Calvert County citizens and the environment. Hazardous waste is generated by industry, commerce, farming and by homeowners. When these toxic materials enter our soils and waterways, they also enter the food chains. This can reduce the productivity of the soils and have negative impacts on wildlife and fisheries. Hazardous waste disposal is currently regulated by the State.

Household Hazardous Waste Collection.

Educating the public on alternatives to using household products that create hazardous waste can reduce these substances. Household hazardous waste collection can reduce the potential of these toxic substances being disposed of in the County Landfill or at other inappropriate places.

Commercial, Industrial and Agricultural Hazardous Waste Disposal.

Federal and state regulations control the use and disposal of hazardous wastes. These wastes are not allowed to be disposed of in the County Landfill. Nuclear waste from the Calvert Cliffs Nuclear Power Plant is currently stored on-site since a federal repository has not yet been created.

Leachate Treatment.

The liquid that accumulates at the bottom of lined landfills, leachate, is considered a hazardous waste and will be treated at an appropriate wastewater treatment plant. Currently, the leachate from the Appeal Landfill is treated at the Solomons Wastewater Treatment Plant.

Actions:

1. Explore funding opportunities to support an annual Hazardous Household Waste Collection Day.
[PS]
2. Continue to press Congress to site and build a nuclear waste repository. Require nuclear waste be moved from the County to the federal repository.
[P & Z, PS]
3. Compile information on state and federal requirements and regulations relative to use and disposal of hazardous materials.
[P & Z, PS, PW]
4. Provide public education on use of safe alternatives to toxic compounds.
[PS, PW]
5. Continue to provide guidance and training to farmers and homeowners through the Soil Conservation District and University of Maryland Extension Service on the proper use and disposal of toxic compounds and application of fertilizers, pesticides and herbicides.
[CR]

Natural Resources and Sensitive Areas

Objectives

- ☞ Encourage preservation, protection and conservation of natural resources.
- ☞ Establish a comprehensive approach to environmental planning with special emphasis on watershed planning.
- ☞ Protect environmental features which will help ensure continuance of a healthy and pleasant place to live for current residents and future generations.
- ☞ Protect environmentally sensitive areas (wetlands, floodplains, wetland and water way buffers, steep slopes) from development impacts to provide: sufficient habitat to maintain our current diversity of fauna and flora; protection of habitat and individuals of rare, threatened or endangered species; nutrient removal; and flood control.
- ☞ Preserve stream valleys to maintain their important natural functions and to provide greenways throughout the County.
- ☞ Practice community planning and site design that conserves energy, protects natural resources and minimizes impacts on the landscape.
- ☞ Encourage restoration of lost and/or damaged natural environmental features.
- ☞ Foster greater public awareness, education, and support of environmental concerns.
- ☞ Accomplish a 40% reduction from 1985 levels in nutrients entering the Chesapeake Bay and Patuxent River by the year 2000.

Sustainability issues:

“A healthy ecosystem and natural environment are the foundation of all that we do. The natural environment, our life support system, is the basis for a healthy world, healthy economy, healthy society, and a healthy quality of life” - Citizen Planners of Ventura County. Policies that promote a sustainable environment include the following:

- *Environmentally sensitive areas (wetlands, floodplains, wetland and waterway buffers, steep slopes), large tracts of forested land and wildlife corridors are preserved or restored for the beneficial functions they provide: habitat for fauna and flora, nutrient and sediment retention and removal, flood control, recreation, etc. Sufficient sensitive areas should be preserved such that our current diversity of fauna and flora are maintained;*
- *Solid waste, wastewater and hazardous waste are disposed of safely, relative to public health and in environmentally sound ways so that groundwater and surface water quality remain viable for fisheries and useful to humans in terms of consumption, irrigation, and recreation;*
- *Natural resources, such as groundwater, surface water, forests and fisheries are used conservatively and in non-polluting ways so that they will be available for future generations;*
- *Pollutants to the environment (air, water, land) are kept to levels below which they might have significant impacts on human health and the health of natural living resources and ecosystems;*
- *True-cost pricing is established as the basis of economic viability. In true cost-pricing, long-term economic gains and preservation of the quality of life are valued above short-term profits. The value of natural capital and natural services should be evaluated in any determination of cost/benefit analysis. Long-term impacts on environmental and social issues must be considered as part of an economic analysis.*
- *Measures are taken to abate existing pollution problems.*

Watershed Planning

A watershed is all the land area that drains into the same water body (e.g. creek, river, bay). As the water quality of any waterway is dependent on the activities and land uses in its watershed, the watershed is the geographical unit that must be addressed when looking at water quality issues.

The watershed approach is comprehensive. Natural resources (e.g. wetlands, creeks, forest, and rare, threatened and endangered species habitat), land preservation, cumulative impacts, water quality, impact minimization and mitigation, water supply, flood management and stormwater management can be studied and solutions applied holistically.

In addition, citizens participate in the development of the watershed plan, and thus the plan addresses local issues and the solutions proposed are developed with citizen input. As the plan is also reviewed and agreed upon by local, state and federal permitting agencies, the solutions will have up-front multi-jurisdictional support.

In 1995 there were two watershed management plans being developed in Calvert County, the Hunting Creek Watershed Management Plan and the Parkers Creek Watershed Management Plan. Each watershed has a watershed task force working on developing the plan in cooperation with local, state and federal agencies.

Actions

1. Complete watershed management plans for the major tributaries in the County.
[P & Z]
2. Update watershed plans every five years or sooner, if necessary.
[P & Z]

Natural Resources

Natural resources are those actual and potential forms of wealth supplied by nature. This wealth can be measured by the value of the products supplied and by the services they provide. For example, a tree as lumber will have a given market value, but a tree also provides the services of producing oxygen, moderating temperatures, providing habitat, controlling flood waters and stormwater, reducing pollution, and stabilizing the soil. Often our natural resources are considered only as products to be exploited without regard to the value of the services they provide. It is often the case that the value of their service is much greater than their value as products. To ensure their availability to future generations, care must be taken not to decimate our non-renewable natural resources and to conserve the renewable ones. Conservation management, preservation and regulatory protection are some of the means by which our natural resources are protected for future generations.

Ground Water

Calvert County is situated over a favorable geological formation of groundwater resources. Four major aquifers (the Piney Point, Nanjemoy, Aquia, and Magothy) supply nearly all of the County's potable water. These four aquifers are protected from surface water contamination by clay-confining layers.

The recharge areas are located in Prince George's and Anne Arundel Counties, but it takes thousands of years for that water to reach the aquifers beneath Calvert County. Contamination of surface waters or near surface ground waters would not threaten the water quality of these aquifers. The major threat to ground water quality in Calvert County is deep wells, especially abandoned ones. These wells penetrate the confining layers and provide a direct potential conduit for pollutants to enter the deep aquifers.

Ground Water (Continued)

Actions

1. Develop and implement a wellhead protection plan including identification, grouting and sealing of abandoned wells. [CR, P & Z]
2. Continue to support groundwater studies so predictions can be made as to future groundwater supplies. [P & Z, CR]
3. Continue demand modification (reduction in water usage per capita) by requiring water conservation devices and providing public education on water conservation. [CR, PW]
4. Reduce public costs of new water facilities by reducing demand. Design new water facilities to provide reasonable excess capacity to meet future expansion needs and coordinate water facility expansion and development with population growth. [PW]

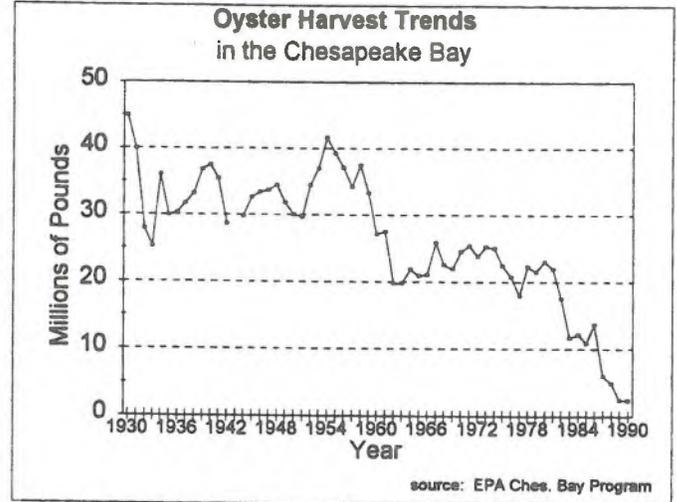
Surface Water

Surface water includes creeks, streams, rivers, lakes, ponds and bays. These aquatic resources are used for a variety of purposes including industrial, commercial (including fisheries), agricultural, and recreational activities. The health of the Chesapeake Bay and its tributaries declined in the mid 1900's. This is evident in the serious declines in living resources. Oysters (Figure 1.E.1), finfish, submerged aquatic vegetation, and crabs all showed serious declines in their populations.

In the 1990's, the phosphorous ban and improvements in point source pollution, especially from sewage treatment plants in the Patuxent River, improved water quality in the waters around Calvert County. However, in the face of a rapidly increasing population, the trend toward improving water quality could be reversed. It is important to reduce point source and nonpoint source

pollution Bay-wide in the future if we are to continue to make progress in improving water quality.

Figure 1.E.1.



The Chesapeake Bay Agreement (between Maryland, Pennsylvania, Virginia and Washington, D.C.) calls for a 40% reduction, over 1985 levels, in nitrogen and phosphorous entering the Bay by the year 2000. The 40% level was arrived at after extensive research. It is projected, that if nutrients could be reduced to this level, much of the Bay's previous biological productivity would be restored. To achieve this goal, the State of Maryland has initiated a tributaries strategy program in which the 40% reduction is addressed on a watershed basis. Calvert County is in the Patuxent and the Lower Western Shore basins. For each basin, potential strategies have been presented for meeting the 40% reductions and Tributary Strategy Implementation Teams have been appointed to monitor and promote the implementation of the strategies.

Research used to develop the tributary strategies and results from the Patuxent Watershed Demonstration Project have indicated some potential sources of surface water pollution for Calvert County. These include nitrogen pollution from functioning and malfunctioning septic systems; nitrogen and phosphorous in runoff from construction sites, farms, lawns, and impervious surfaces; and nitrogen from atmospheric deposition. Additionally, overboard disposal of septage from boats is a direct but diffuse source of pollution (nutrients and potential pathogens).

Wastewater Residential development in Calvert County is primarily served by septic systems. As septic systems discharge below the surface vegetative cover, little nitrogen is removed. On the other hand, phosphorous which adheres to soil particles is removed by the septic system process. Calvert County, the smallest county in Maryland in terms of area, has the greatest percentage of households on septic systems. Thus nitrogen from functioning and failing septic systems is an important contributor to the total nitrogen load.

The three major Town Center areas in Calvert County are served by community wastewater systems. There is a preference in Calvert County for land application of wastewater (see Waste Management section). Two of the three Town Center wastewater systems use land application, the third uses tertiary treatment. The County has made a serious commitment to using environmentally sound wastewater treatment methods in its public sewerage treatment plants.

Development Sediment from an improperly controlled development site can impact up to five or six miles of a stream or river, and the impacts can last up to a decade. Suspended sediment transports nitrogen and phosphorous, clogs aquatic animal feeding mechanisms, smothers fish eggs and other benthic animals, and reduces visibility of prey to finfish populations. Proper sediment and erosion control are very important to preserving the health of our aquatic ecosystems.

Farming Farming also contributes to sediment and nutrient pollution. Controlling sediment and nutrient pollution on farms is currently a voluntary program, administered through the Calvert County Soil Conservation District (CSCD). Via this program, farm “Water Quality and Soil Conservation Plans” and “Nutrient Management Plans” are written, cost sharing incentives to install appropriate best management practices recommended in the plan are offered and technical help is made available. Due to a lack of funding, not all agriculturally assessed properties have current farm plans. The reason for this low percentage is the lack of funding to the CSCD to hire farm planners. Increasing the percent of farms with current farm plans

to over 90% could greatly improve surface water quality in the County.

Home Sites Runoff from home sites is a significant source of nutrients, sediment and other forms of pollution. Over fertilization of lawns, use of pesticides, pet wastes, car washing, improper disposal of domestic hazardous waste and runoff from roof tops and driveways (impervious surfaces) result in pollution of our waterways. Often the homeowners are not aware that they are a significant source of the problem.

Atmospheric Deposition Another significant source of nitrogen is atmospheric deposition estimated to contribute about 25% of the total nitrogen load. The nitric compounds are produced mainly by automobiles and coal or fuel-oil burning power plants. Calvert County has the highest per capita commuting mileage in the State. This means that on a per capita basis, Calvert County citizens are significant contributors to the air pollution problem. In addition, Calvert County relies heavily for its energy needs (for other than transportation) on coal or oil burning power plants.

Water Quality Monitoring. The success of our fisheries and other aquatic resources are dependent on good water quality. Thus it is necessary that the water quality of our waterways be measured to recognize problem areas and estimate the success of our actions. Federal, state and County government, as well as citizen monitoring programs are being conducted in the County.

Ground Water (continued)

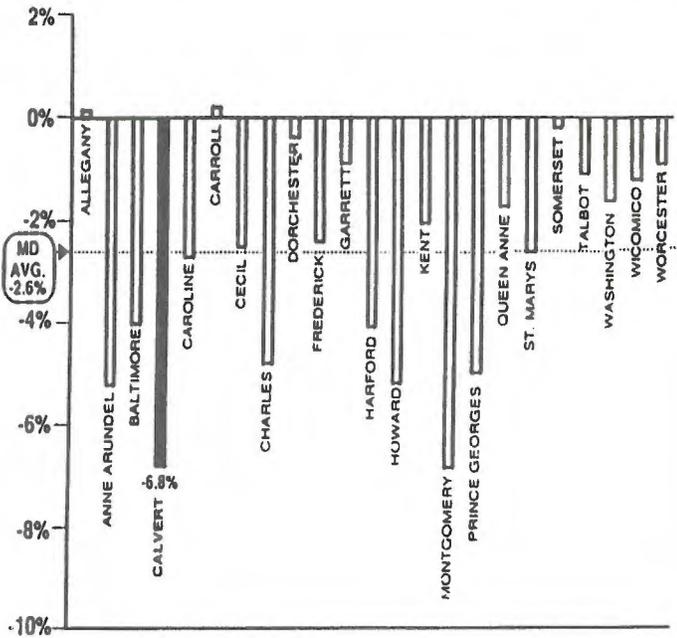
Actions

1. Encourage alternative technologies and approaches to reduce nutrient pollution; for example, nitrogen removing septic systems and avoiding the use of nitrogen-rich materials for ice and snow removal.
[CR, GS]
2. Develop and maintain Soil Conservation and Water Quality Plans on all farms and seek funding from local, state, and federal governments to support farm planning activities of the Calvert Soil Conservation District.
[SCD]
3. Develop stormwater management plans for the major and minor Town Centers and technically assist communities in existing small lot subdivisions with creation of their own stormwater management plans.
[PW]
4. Improve enforcement of existing sediment control, stormwater management, and Critical Areas regulations.
[PW, P & Z]
5. Assure that all commercial marinas have septage pumpout stations.
[P & Z]
6. Use growth management techniques to direct a greater proportion of growth to Town Centers or other areas where community wastewater facilities are available.
[P & Z]
7. Develop an environmental education program for the adult population of Calvert County to complement the CHESPAX environmental education program for children.
[BOE, GS]
8. Promote the use of cleaner sources of energy, such as solar, natural gas and nuclear as opposed to coal and fuel-oil sources.
[PW, GS, P & Z]
9. Seek ways to correct existing areas of septic failures and explore measures to avoid future septic problems in existing small lot subdivisions.
[CR, PW]
10. Maintain a policy of preference for land application of wastewater effluent.
[PW, P & Z]
11. Provide water quality monitoring or support citizen monitoring of waterways. If water quality is poor or becomes poor, investigate problem and solutions.
[P & Z]

Forests

Forest once covered more than 95% of the Chesapeake Bay watershed. Today less than 60% remains. For the first time this century, the percentage of forest lands in the watershed is declining. Some forests are cleared for farming, but development is the greatest threat. Although forest covers over 57% of Calvert County, between 1985 and 1990 Calvert County had the highest percentages of forest loss in the State, 6.8% (see Figure 1.E.2).

Figure 1.E.2. % Loss of Forest Land 1985-1990



Source: MD Office of Planning, 10-91

Forest cover is the most natural and least polluting land use, and forest cover adjacent to streams (riparian forests) is essential to preserving water quality. Forests absorb nitrogen in both surface and shallow ground water, trap phosphorous-laden sediment and remove other pollutants resulting from adjacent land uses and from atmospheric deposition. In addition to pollution prevention, forests provide important habitat for wildlife, induce groundwater recharge and minimize flooding. Riparian forests provide organic matter, such as leaf litter, which serves as the basis of the food chain for aquatic species. The riparian forest canopy provides shade, which is critical for moderating stream temperature, and the roots of the trees stabilize the structure of the stream banks and protect against erosion.

Actions

1. Map forest resources and track forest loss and gain. [P & Z]
2. Replace 100% of forest loss outside the Critical Area and Town Centers. [P & Z]
3. Preserve and restore riparian forests. [P & Z, SCD]
4. Maintain large tracts of forest in the rural areas. [P & Z]
5. Maintain or establish habitat corridors between large tracts of forest and between urban areas and adjoining forested areas. [P & Z]
6. Support land preservation that protects forested areas (e.g. local land trusts, County land trusts, easement programs, Forest Stewardship Program). [P & Z]
7. Assure reforestation of timber harvest areas when development is not proposed. [P & Z]

Minerals

The primary mineral resources found in Calvert County are sand and gravel, used mainly in the construction industry. Most of the sand and gravel is found in the higher, interior portions of the County, but supplementary amounts occur in the lowland terraces bordering the Patuxent River. With the rapid growth rate the county is experiencing, there is the potential that these valuable resources will be covered over by development.

Ceramic clay suitable for face brick or structural tile is available in the Marlboro Clay, a relatively thin but persistent layer found at shallow depths in the northwestern part of the County. A further clay resource having a potential for lightweight aggregate

occurs in the St. Mary's Formation in southern Calvert County. Extraction of other minerals, including small amounts of phosphorite, glauconite and, in northern Calvert, impure diatomite, is not economically feasible at the present time.

- Actions**
1. Identify and map significant mineral resources. [P & Z]
 2. Encourage extraction of mineral resources outside of sensitive areas before the establishment of permanent uses on the mineral deposit site. [P & Z]
 3. Develop procedures and guidelines to ensure mineral extraction in an environmentally safe manner and to provide for reclamation of sites after completion of operations. [P & Z, PW]
 4. Encourage the restoration of existing abandoned mineral extraction areas and require restoration at the time of development. [P & Z]

Clean Air

Calvert County has been included as part of the Washington, D.C. non-attainment area for air quality. A non-attainment area means that air pollution levels are often unhealthy for County citizens. Calvert County has also been participating in the "Regional Air Management Subcommittee" to address the requirements of the federal "Clean Air Act".

Motor vehicle emissions are a significant source of air pollution in the Washington metropolitan area. During the summer of 1990, motor vehicles emitted about 252 tons of volatile organic compounds per day, 262 tons of nitrogen oxides per day and 2,059 tons of carbon monoxide per day. Emissions from motor vehicle trips originating in Calvert County have been estimated to comprise just over one percent of these regional totals. The County's share of the regional air quality prob-

lem may increase if existing travel behavior continues or accelerates. In 1990, the average travel time to work for a Calvert County resident exceeded 35 minutes (longest for the State); with about 57 percent of the County work force commuting to jobs outside of the County.

- Actions**
1. Explore the option of using natural gas powered County vehicles. [PW, P & Z]
 2. Develop County policies to move away from a reliance on power generated by coal and fuel oil and toward energy generated by less polluting methods such as natural gas and solar. [GS, PW, P & Z]
 3. Promote car-pooling, public transit, pedestrian and bicycle modes of transportation and land use planning that would decrease automobile travel. [P & Z, PS]
 4. Increase employment opportunities in the County for residents. [ED]

Fisheries

In the early 1900's, Calvert County's economy was primarily based on agriculture and fisheries. The abundant fisheries resources in Calvert County have been reduced significantly since the early 1900's due to reduction in stocks from poor water quality (see Surface Water section above), over-fishing and poor fisheries management. The fisheries industry in Calvert County has experienced a similar drastic decline. Water quality in the Patuxent River has been improving and the State has become more proactive in fisheries management. If water quality continues to improve and the fisheries are properly managed, then fisheries stocks should increase to sustainable levels of fish and shellfish populations and fisheries production.

Actions

1. Maintain and improve surface water quality by taking the actions listed in the Surface Water, Forest and Clean Air sections above.
2. Support effective fisheries management efforts that are fair and equitable to both watermen and sport fishermen. [P & Z]
3. Support aquaculture that is practiced in an environmentally sensitive manner. [P & Z, ED]

Sensitive Areas

Sensitive areas include wetlands, waterways, flood plains, steep slopes, cliffs and habitat for rare, threatened and endangered species. These areas are very sensitive to the impacts of development and are generally unsuitable for development. In addition, wetlands, waterways and flood plains filter pollutants and provide natural flood control, stormwater management, and habitat for wildlife including rare, threatened and endangered species. The costs of providing these functions should be considered and mitigated when impacts to these areas are proposed. Most importantly, these areas should be preserved and conserved to the greatest extent possible.

Streams and Their Buffers

Streams are conduits to lowlands, rivers and the Chesapeake Bay. They provide habitat for many aquatic organisms including areas for fish spawning and feeding. They also provide drinking water for wildlife and a means of transport for organic materials which support aquatic species. At the same time, streams provide a direct pathway for pollutants to move downstream into our rivers and the Chesapeake Bay. These pollutants, including sediment, nutrients and toxic waste, can cause serious damage to aquatic ecosystems and the fisheries production within them. Forest and wetland buffers adjacent to streams serve the important function of removing pollutants before they enter the stream. They

also provide excellent habitat and habitat corridors for wildlife.

Actions

1. Address actions in “Surface Water” section.
2. Establish greenways system along stream valleys to preserve as much of these low lands as possible. [P & Z]
3. Maintain sufficient buffers around streams to provide environmental protection. [P & Z]
4. Reforest stream buffers wherever possible. [P & Z, SCD]

Wetlands

Wetlands are lands where water is the dominant factor determining the nature of soil development and the types of plant and animal communities. These are generally low lands covered with shallow water, sometimes temporarily or intermittently. Wetlands include both fresh and saline areas and are referred to by such common names as fresh and salt water marshes, swamps, wet meadows and bogs.

Wetlands provide flood and water storage, pollution control, wildlife habitat and a major food supply for aquatic organisms, migratory waterfowl and other wildlife. It is estimated that Maryland has already lost about one-half of its wetlands to date. The State has set a goal of “no net loss” of wetlands.

Actions

1. Maintain strong regulations restricting impacts on wetlands. [P & Z]
2. Restore or create wetlands in disturbed areas. [P & Z, PW]
3. Examine the effectiveness of 50 ft. buffers and alter buffer requirements, if the study so indicates. [P & Z]
4. Establish or re-establish forested wetland buffers where possible and feasible. [P & Z, SCD]
5. Consider zoning nontidal wetlands as wetlands. [P & Z]

Flood Plains

Flood plains are generally low lying areas that are inundated with water (flooded), either due to high seas and sea level or excessive amounts of rain-water runoff. The 100 yr. flood plain is that area that would be flooded by a storm that would be expected to occur once every 100 years. Most of the flood plain areas in Calvert County consist of wooded wetlands, while some areas are farmland, residential, commercial or Town Center. The wooded wetlands serve as natural flood management devices, remove pollutants and provide wildlife habitat. Development in the 100 yr. flood plain is regulated by the Zoning Ordinance, Subdivision Regulations and the Flood Management Ordinance.

Actions

1. Continue to direct housing and other development out of the flood plain.
[P & Z]
2. For development in the flood plain, ensure that construction practices minimize damage to property and the environment during flooding.
[P & Z]

Steep Slopes and Highly Erodible Soils

Most of the steep slopes in Calvert County are covered and stabilized by forest cover. Loss of this vegetative cover can result in severe erosion, landslides, loss of fertile topsoil, filling in of waterways, flooding and a decrease in water quality. Preservation of severe slopes adjacent to waterways is especially important because of the potential harm to water quality and aquatic habitat. Steep slopes are also areas of both plant and animal diversity. These steep slope areas are, therefore, generally unsuitable for development.

Actions

1. Review Subdivision Regulations, Zoning Ordinance and the Sediment Control Ordinance concerning development, grading and alteration of natural vegetation on areas with severe slopes.
[P & Z, PW]
2. Revise site planning criteria to encourage use of natural features of a site and discourage grading of steep slopes.
[P & Z, PW]
3. Develop regulations to address development on steep slopes of existing lots and parcels.
[P & Z, PW, SCD]

Wildlife Habitat and Habitat for Rare, Threatened and Endangered Species

Due to the large areas of the County still in forest and wetland, there is an abundance and wide diversity of wildlife. The rapid conversion of forest to developed land destroys or significantly alters valuable wildlife habitat resulting in a reduction of wildlife resources. The adoption of the mandatory subdivision cluster regulations has done much to reduce the impacts of residential development on wildlife habitat. The County should preserve sufficient amounts of sensitive land to maintain its current diversity of wildlife and plant life.

Calvert County is also home to several rare, threatened and endangered species such as the Bald Eagle and the Puritan tiger beetle. The protection and conservation of these species is of global concern. Over the last 600 million years, the natural rate of extinction has been about one species per year. The current rate of extinction world-wide is at least 1000 species per year. It is important that Calvert County do its part to protect the rare, threatened and endangered species found within its boundaries. Protection of indigenous populations of rare, threatened and endangered species and their habitats contributes to the maintenance of biological diversity which is essential to the continuance of healthy ecosystems upon which the human species depends.

Actions

1. Work with the State to map rare, threatened and endangered species outside the Critical Area and develop protective measures.
[P & Z]
2. Protect from shore erosion control those areas of Calvert Cliffs which have significant Puritan tiger beetle populations.
[P & Z]
3. Develop methods to protect the habitats of rare, threatened and endangered species. Take steps to increase their numbers if possible.
[P & Z]

Environmental Education

As the population and accompanying development in the County increases, the amount of pollution caused by non-point runoff from individual home sites will increase. Many of the impacts originating from this type of runoff could be avoided or at least minimized. Pollution from individual home sites results from many activities including: over-fertilization of lawns, pesticide application, house painting, running of lawn mowers, and use of septic systems, especially malfunctioning ones. Public education on the impact of citizen activities on the environment and what citizens can do to avoid these impacts is an important protection measure for our environment.

Actions

1. Maintain, support and improve the environmental education programs for school aged children.
[BOE]
2. Develop environmental education programs for adults and families.
[P & Z, GS, CR]

People

Community Interaction

Objectives:

- ☞ Cultivate and nurture a sense of community.
- ☞ Support efforts and implement practices which encourage positive interaction among citizens and engage them in the life of the community.
- ☞ Encourage programs that celebrate diversity.
- ☞ Encourage an ethic that recognizes the importance of strong communities, strong families of all kinds, and effective ways to deal with conflict.

Sustainable communities:

Sustainable communities recognize the interrelatedness of all of their citizens, and depend on the citizens to stay involved in the life of the community. They adopt policies which:

- *engage the creative participation of citizens to responsibly meet the challenges that communities face;*
- *promote positive interaction among all citizens;*
- *incorporate, value, and celebrate cultural and ethnic diversity;*
- *actively include new residents in the life of the community; and*
- *teach the values of good stewardship of natural and cultural resources to ensure a healthy legacy to future generations.*

“To settle in a place is to accept the responsibility for creating it.”— paraphrase after Mircea Eliade, philosopher.

Whether we are aware of it or not, we influence our surroundings in every way. We can choose to

accept responsibility for the impact we have on the places where we settle and, in doing so, consciously direct our actions to the common good. Sustainability issues, addressed by every section of this plan, have a particular importance in this discussion of what it means to be a community, what it means to participate in creating and maintaining good community.

What is a “good community”?

Ideally, a good community is a set of social relationships that nurtures individuals and families. A good community promotes healthy personal and family development and honors the concerns and relationships of other individuals and families in the places, activities, and civic life they share.

The word ‘community’ is derived from a Latin word for ‘common’ and does not have a single meaning. Community entails fellowship and things held in common. What people might identify as “things in common” with others will certainly vary. Our plan must allow for diversity of definitions and expressions of community. The plan must also be flexible enough to accommodate change that real, dynamic communities will experience. There are at least three kinds, or levels, of communities.

Levels of community: First of these levels is community at the County level. Calvert County has a unique identity that has been shaped by the long history of human interaction with its distinctive landscapes. It is important to foster a sense of community on the County level. All residents are invited and encouraged to identify with the community of Calvert County, to find personal relevance for the issues that face all County citizens and, in doing so, recognize the shared responsibility for meeting our challenges.

Second is community at the local level, tied to a more particular sense of place, such as a town or road, subdivision, neighborhood, creek, hill, and so on. It is reasonable to expect that most people will more easily find things in common with people who have chosen to live in the same location. It is also possible that there

will be more opportunities to interact with people living nearby.

Third is the community of common interest or activity. This kind of community is not necessarily tied to geography. These communities include social and athletic clubs, service organizations, churches, all drawing their membership from people who intentionally get involved in them.

Community issues: Numerous governmental agencies and offices deal daily with issues of community: substance abuse and prevention programs, health programs, community resources, and law enforcement. All of these programs, offices and agencies are concerned with community. The experiences of some of these programs have led to insightful understanding about communities in general.

The list of programs mentioned have a problem-driven approach to community, yet increasingly, they share a vision of community that can help produce healthy, functioning communities. At the base of this vision is the recognition that communities, like virtually all aspects of society, are systems. That means that issues perceived as problems in a community cannot be isolated as though they have an existence apart from the community in which they appear. All aspects of any community are interdependent and linked, just as the people are linked in building their community for good, for bad, or for indifference. This vision of community will serve well in helping to create community on a County level, in assisting community development on a local level, and in fostering community among persons not bound by geography.

Role of government: The plan envisions a specific relationship of government to community. The government may assist communities in identifying resources to help them build and increase the health and functioning of their communities. Government, however, should not be seen as providing the solutions to the problem. The locus of decision-making and problem-solving must be the communities themselves. This philosophy may require a change of thinking for some individuals and communities. People can and must find themselves em-

powered to identify and address the concerns that they face as individuals, as families, and as communities.

Tools for Building Community

The County government could provide guidance for community members to develop partnerships among local government, business, and schools to support families of all kinds. Intergenerational interaction answers diverse needs while providing opportunities for building nurturing relationships in a community. For example, the proximity of Patuxent and Appeal Schools, the Southern Community Center, and Southern Pines senior housing, offers a unique opportunity to coordinate intergenerational activities and programs to the benefit of all parties involved in those institutions.

Communities can be encouraged to assess their own needs toward the end of devising community-specific ways of achieving solutions and building good community. The County could provide examples of assessment strategies for possible implementation at the local level. A "community report card" is a possible approach for community self-assessment. The report card would provide a baseline measure of attributes the community has identified as central to a good community. Specific strategies could be devised to enhance strengths and address problem areas. Improvement or decline could then be tracked using this approach. The Department of Planning and Zoning would assist communities by developing a sample community report card.

For building community, the County could provide outreach communications. Calvert County already makes good use of cable broadcast which should be continued and perhaps expanded to include more information. Another simple means would be posting major community events at the entry points into Calvert County. A community computer bulletin board, including agendas of commission hearings and meetings, could be added to networked information systems already being designed for the region.

Examples that Work

- The Interagency Council on Early Childhood Learning is a broad-based community partnership. The council begins from the understanding that community and family problems are most effectively addressed by focussing on the youngest members, to raise a healthier next generation. There are other groups that also focus on children and families identified at risk; this effort entails cooperation and coordination among many agencies.
- The Calvert Alliance Against Substance Abuse, and Neighborhood Watch, are programs that approach communities holistically. Communities typically call these groups in when communities identify a problem. The problem becomes the point of entry into a community-building process. The community members then engage in the work to begin to define their own issues and direction.
- East John Youth Center, run by the Lusby United Methodist Charge, serves over 100 children daily through its summer programs and provides supervision and guidance after school for doing homework, talking and sharing. The Center requires children it serves to participate in some kind of community service or educational activity.
- St. Leonard Polling House Park and Garden of Remembrance is the focal point of the town of St. Leonard. Citizens dedicated themselves to creating a place that ties past and future together in an ongoing celebration of heritage and community.
- St. John's Chapel project is a revisitation of Lower Marlboro history. Lower Marlboro residents have combined efforts with numerous church groups, a scout troop, the African American Heritage Project, and Jefferson Patterson Park and Museum to locate and interview members of the African American community that was once centered on the St. Johns school and chapel site on Johns Chapel Road. The goal is to understand the relationship between the local communities.
- *Persistence, Perseverance, and Progress* is an exhibit sponsored by Calvert County and Jefferson Patterson Park and Museum, funded by the Maryland Humanities Council with support from the National Endowment for the Humanities. The exhibit tells the history of African American education in the County from the Civil War to integration. In its first years of touring the County schools it will be accompanied and introduced by retired teachers who served in the African American schools before integration. The teachers will enable students today to better visualize and make local connections to important lessons in history.
- A number of annual events celebrate different unique aspects of Calvert County life. The Calvert County Fair has promoted appreciation for the County's agricultural heritage and has provided a showcase for its producers for 110 years. Children's Day at the Farm, sponsored by the Calvert County Heritage Committee and Jefferson Patterson Park and Museum, allows children to participate in and learn more about traditional farming practices. Patuxent River Appreciation Days (PRAD) in Solomons celebrates the traditional livelihoods that depend on the river. Artsfest at Annmarie Garden provides an opportunity for the County community to meet and enjoy the work of artists, artisans, and performers in a gracious wooded setting. African American Family Community Day is a lively and educational celebration of traditions, folkways, food, and arts held for four years at Jefferson Patterson Park and Museum.
- The North Beach Home and Garden Club's annual tour, the Calvert County Garden Club's tours, and ongoing volunteer beautification activities foster a sense of community and pride.
- The Department of Community Resources, in partnership with Calvert Memorial Hospital, has developed a comprehensive interagency community resource directory in a format that will allow the information to be kept up-to-date.

These programs and projects involve partnerships among individuals, organizations, and private, as well as public agencies. The issues they address have been identified from within the communities they serve. They share the goal of positive, inclusive strengthening of community.

Actions:

1. Consider increasing the use of schools as community centers; include multiple uses in designing new schools.
[P & Z, BOE, CR]
2. Encourage cultural celebrations at the neighborhood, community and County level, particularly those that bring together diverse groups.
[BOCC, ED]
3. Promote heritage and local history projects in the schools; in-service instruction in local history and heritage for teachers.
[BOE, GS]
4. Sponsor school and community programs which promote civic responsibility and teach effective means for conflict resolution.
[BOE, CR]
5. Assist communities by drafting a community report card for use by communities.
[P & Z]

6. Encourage the use of volunteers to provide community programs and services which are not feasible for the County to provide.
[All Depts.]
7. Develop community project and service awards and provide “seed money” for such projects.
[CR]
8. Encourage strategies to make it easier for communities to provide recreation and community facilities without an overwhelming insurance burden.
[A & F, GS]
9. Encourage employers to increase programs that allow parents more time with children, such as telecommuting, or job-sharing.
[BOCC]
10. Encourage local communities to institute a welcome wagon.
[CR, ED]
11. Encourage family oriented programs.
[CR, BOE, GS]

Community Report Card
How Does Your Community Rate?

Good communities don't just happen. They require residents who respect others, are willing to serve in programs and take on projects to prevent crime, promote community values, and provide opportunities for human growth and development.

Problems can occur in any community. Prevention and effective ways of dealing with problems are key to maintaining healthy, safe places to live. The following is a rating system which might be applied to your community.

Section I: Community Socialization	
A. Strategies for conflict resolution	
1. Does your community have a regular forum to socialize and discuss problems?	
(a) If so, what percentage of community participates?	
2. Does your community have a neighborhoodwatch or other community policing program?	
(a) If so, what percentage of community participates?	

Health & Social Services

Objectives:

- ☞ Promote accessible and quality health and social services in the County.
- ☞ Promote wellness programs, such as fitness classes, nutrition, check ups, and education.
- ☞ Promote programs, services and policies that nurture strong, healthy families and individuals.
- ☞ Provide effective intervention in cases of domestic abuse, violence, or illegal activities.

Sustainability Issues:

Sustainable communities are proactive in creating a healthy community environment and in dealing with health and social problems. Residents strive for physical fitness and personal growth, avoid illegal and habit forming substances, and teach their young to do the same. Communities and county governments supplement care, when necessary, for their residents, guide and inform residents and strive to make conditions conducive for building strong healthy families whose members respect the rights of others.

Health Trends:

In 1994, Calvert Memorial Hospital commissioned a task force to conduct a community health assessment. As part of this assessment, researchers compared the hospital's patient data with other Maryland hospitals (see table 2.B.1). As a result of the analysis, the Hospital has selected four hospital diagnoses with disproportionally high rates of admissions for further analysis: breast cancer, prostate cancer, back and neck procedures, and mental diseases and disorders. This effort might lead to special programs to reduce occurrences and provide early detection and treatment.

The Maryland Department of Health and Mental Hygiene conducted a behavioral risk study in six geographic regions between 1989 and 1991. In that study, 68.4% of those surveyed in Southern Maryland admitted to an inactive lifestyle (the second highest

percentage in Maryland). Southern Maryland also had the highest percentage of smokers and the highest percentage of chronic drinkers. Alcohol purchases per capita are the highest in the state. Illnesses brought on by smoking, chronic drinking, or physical inactivity can lead to employee absenteeism, higher health care costs, and lower quality of life.

Health trend studies such as these help health care professionals assess the extent of health problems, take effective courses of action, and disseminate information to the general public.

One national trend, which also applies to County residents, is the increasing percentage of working families not having health care benefits. Between 1991 and 1993, the number of uninsured children in the country rose by 1.6 million. Local data is not available. However, during the preparation of the Community Health Assessment, participants noted a similar trend in the County and indicated that even those eligible for Medical Assistance go without services.

Table 2.B.1.

CALVERT'S TOP 15 REASONS FOR HOSPITALIZATION
Compared to Other Maryland Hospitals (1992 data)

DIAGNOSIS (Patient's primary reason for hospitalization)	CMH RANK	MD RANK
Normal newborns	1	2
Vaginal delivery	2	1
Psychoses	3	5
Angina pectoris	4	6
Heart failure and shock	5	3
Cesarean section without complications	6	8
* Chronic obstructive pulmonary disease	7	12
Chest pain	8	11
** Neonates with other significant problems	9	4
Uterine / adnexa procedures	10	13
Simple pneumonia age greater than 17 without complications	11	9
* Back and neck procedures without complications	12	20
Esophagitis, gastroenteritis, digestive disorders age greater than 17 with complications	13	14
Cerebrovascular disorders	14	10
* Tonsillectomy and/or adnoidectomy only Age 0-17	15	76
* 3 of CMH's conditions significantly higher than Maryland's top 15		
** 1 of CMH's conditions significantly lower than the state		

As this Plan is being drafted, there is great uncertainty as to the type and level of health insurance coverage which will be available to many County residents. The outcome of national debates on national health care on one side and reductions in federal spending for health care on the other will have a significant impact on both providers and users of our health care system.

Public Health Services

The local Health Department is the public entity that is responsible for integrating, coordinating and assuring that all basic public health services are not only available but also effective in maintaining public health. These services include but are not limited to communicable disease prevention (such as tuberculosis and AIDS), food inspections, and child healthcare (healthy start home visits and school health). Specialty clinical programs such as family planning and maternity need to be publicly funded if the private sector is unable to provide adequate service.

The State of Maryland and Calvert County have both financially supported the local Health Department. As of 1997, there was concern over the future level of State support, particularly given changes in federal legislation. It is in the interest of all levels of government that preventative care is available, that communicable diseases are stopped to the extent possible, and vendors prepare food safely.

Preventive Health Services

Preventive health services are those services delivered to individuals to promote optimum physical and mental well-being, including protection from the development of disease and ill health. The Health Department is responsible for preventive health activities for a large segment of our population. Services are provided from its central offices located adjacent to the hospital in Prince Frederick. The hospital also conducts numerous "wellness programs", such as nutrition counseling, fitness assessments, and health screening.

A "Wellness Directory" has been prepared which includes all services provided in the County. It has been made available at a number of community service

locations. All residents should be aware of this directory. Those who work out of the County may not have access to preventive health care, since most public health care services are offered during normal working hours.

Over the next 20 years, the fastest growing age group in the County is projected to be those over age 60. The Office on Aging offers fellowship, services and programs for the elderly living throughout the County at the three senior centers. Services and programs include health screening, nutrition, counseling, classes, and physical fitness.

A survey by the American Association of Retired Persons in 1992 showed that over 86% of all elderly would prefer to continue to live in their own homes, rather than in special elderly care facilities. Preventive care services can extend the time one can stay at home. Currently, the County provides some in-home assistance, meals, and transportation to services and programs.

Other options will be needed for many elderly who will not be able to stay in their homes or are in need of day care. In 1995, two assisted care homes were operating in the County, housing five residents each. Also as of 1995, Calvert Memorial Hospital was licensed for sub-acute care on one of its floors for those who are ready to be discharged, but are not ready to live without assistance. The County began operating an adult day care facility in 1992 and has proven the need for such a facility. A second one began operating in 1996.

Diagnostic and Acute Treatment

The County's only hospital, Calvert Memorial Hospital has 157 licensed beds, including short-term, in-patient facilities for psychiatric care. In 1995, the hospital was staffed by over 130 active and consulting physicians.

The hospital is located in Prince Frederick, as are most physicians' offices. However, since Calvert County is long and narrow, the distance to these facilities from certain areas of the County is over 20 miles. In 1997, the hospital constructed a 30,000 sq. ft. satellite facility

with physicians' offices, outpatient care, and a women's wellness center in Dunkirk. The hospital plans to construct a similar 20,000 sq. ft. facility in the southern end of the County.

In 1997, the County was also served by two nursing homes-the Calvert County Nursing Center (149 beds) adjacent to the hospital and the Solomons Nursing Center (87 beds) in Solomons. The combined facilities represent a 78% increase over the number of beds available in 1983. The Solomons Facility also includes the Hermitage, a limited care facility with 38 beds, for those who can live more independently.

Nursing home care is the most expensive form of long-term care, and many of the costs are paid for by the State. The State, therefore, regulates the number of beds which can be built by region as a form of cost containment. It is uncertain whether or not there will be an adequate supply of nursing home beds in the future.

Social Issues

As this plan was being prepared, citizens raised a number of social concerns including crime, lack of respect for self and for the rights of others, and disintegration of the family. In particular, both citizens and County agency representatives expressed concerns about County youth.

In its 1994 Fact Sheets, the Maryland Kids Count Partnership gave the County an overall 5th highest rating of 13 bench marks for the 23 counties (see table 2.B.2.). However, two categories are cause for concern. Teen violent death was the 16th worst in the State and juvenile violent crime arrest rate was the 11th worst in the State. Further, the juvenile violent crime arrest rate had more than doubled since the 1990 report.

In all societies, most burglaries, robberies, and assaults are perpetrated by adolescents and young adults. Critical to crime rates are parenting and child care philosophies. Child rearing is difficult in what is becoming a "normless society" where traditional standards of behavior are changing or disappearing. While parents are primarily responsible for their

children, everyone's welfare is affected by the proper socialization of each child.

Table 2.B.2.
14 BENCHMARKS FOR COUNTY'S CHILDREN

	Number	Rate	Current Year	State Rank
Economic Well-Being				
Children in Poverty	934	6.5%	(1989)	7
Paying Child Support Cases	1,080	56.3%	(1995)	13
Births to Teens	344	7.9%	(1990-94)	8
Good Health				
Low Birthweight Infants (weighing less than 5.5 lbs.)	221	5.1%	(1990-94)	2
Infant Mortality Rate (per 1,000 live births)	19	4.4	(1990-94)	2
Children Screened for Lead Poisoning	145	3.0%	(1994)	23
Safety				
Child Death Rate (ages 1-14, per 100,000 children)	8	16.0	(1990-93)	2
Teen Violent Death Rate (ages 15-19, per 100,000 teens)	13	87.8	(1990-93)	18
Indicated Child Abuse and Neglect Rate (per 1,000 children)	76	4.5	(1994)	4
Violence Related Suspension Rate (per 1,000 children)	320	25	(1994-95)	5
Juvenile Violent Crime Arrest Rate (ages 10-17, per 10,000)	32	43.7	(1994)	15
Preparing for Adulthood				
Third Grade Reading *		43.8%	(1995)	3
On-Time Graduation Rate		87.5%	(1995)	6
High School Program Completion **		60.2%	(1995)	5

* Percent of students scoring satisfactory or above in Maryland School Performance Assessment Program test
 ** Percent of students meeting minimal requirements for the University of Maryland System
 COUNTY RANK: 1= best 24= worse

Prepared by: THE MARYLAND KIDS COUNT PARTNERSHIP

As Calvert County evolves from a traditional agrarian society with close knit small communities to a more contemporary suburban community, community organizations become a vital forum for articulating community values and standards of behaviors. Schools, churches, service clubs, and community groups are essential partners with local government to provide a positive, healthy environment for raising our young people and promote social order. Happiness and good health are rooted in communities which have a sense of security, a sense of well being, mutual respect, and concern for our neighbors. A "sense of community" must be nurtured. Residents must be willing to talk, share concerns, assess needs, and work for the common good.

In a book entitled "What Works in Preventing Rural Violence: Strategies, Risk Factors, and Assessment Tools", published by the Amherst H. Wilder

Foundation, the authors Monsey et al recommend that communities periodically prepare community report cards on the health of their communities, and then seek to use the report cards as a basis to work for improvements. The report cards might include community crime statistics, recreation facility analyses, proximity to services, and existence of community groups and activities, along with specific methods of prevention, detection, and intervention concerning criminal activity.

Prevention

In 1994, the average cost to incarcerate one person per year in the County detention facility was nearly \$20,000. According to Monsey et al, the estimated total public and private costs associated with an assault in 1994 were \$16,500 (including police and court costs, lost wages, medical treatment, counseling, prison time etc.). Costs associated with a robbery were \$19,200 and the costs associated with a rape were \$54,100. If prevention programs were effective, then they could be much less costly to society, as a whole, than incarceration, not even considering the human costs of broken families, broken dreams and lost potential.

One of the greatest threats to society is alcohol and drug abuse. According to the 1994 report by the American Bar Association Special Committee on the Drug Crisis, illicit drugs and alcohol are implicated in at least 75% of the nation's homicides, suicides, assaults, rapes, and child molestations. Nearly 80% of those entering prison have a history of alcohol abuse and/or illicit drug use. The report estimated that for every dollar spent on prevention and treatment, \$11 can be saved in future health care costs alone.

In the school system, there needs to be programs to promote self-esteem, to identify methods of avoiding physical conflict, to identify and report child abuse, and to say "no" to drugs. Churches are a source for teaching moral behavior, self-esteem, and proper social behavior.

County and neighborhood recreation programs, arts programs, and service clubs provide useful outlets for youthful energies and for building self-esteem as do jobs for youth in the community, such as cutting grass, routine maintenance, and baby sitting. Young people and the entire community benefit if adults are proactive in providing constructive activities.

Parenting programs and discussion groups can be an effective way of helping parents to set boundaries for their children. Schools, churches, and businesses can provide classes, videos, or discussion sessions on parenting. At community meetings, parents can discuss suggested standards of behavior for children.

Many of the programs mentioned above are already in effect. Residents need to determine whether or not their communities provide these social, recreational and educational outlets within reasonable proximity to their communities.

Detection

Often the first signs of dysfunctional behavior (i.e. drug abuse or child abuse) show up during the school years. Counselors and specialists in the schools are needed to identify signs of dysfunctional behavior. Training programs and educational materials need to be available for parents to detect alcohol and drug abuse.

Dysfunctional behavior also shows up in communities. Neighborhood crime-watch organizations can stop crime at its earliest stages. Community policing allows police to make routine contact with community groups. Obviously, government has a major role in detection of criminal dysfunctional behavior. However, community members are often the first to know that there is a problem and should be sure that authorities are notified.

Calvert Alliance Against Substance Abuse, the Sheriff's Office, and the school system were providing many of these types of training, education, and crime watch programs in 1995. Residents need to determine whether detection programs are in place in their communities.

Intervention

Once a problem is identified, specialists are needed for counseling, education and supervision. County programs existing in 1997 included:

- Drunk Drivers Monitor Program
- Short term in-patient facilities for psychiatric care
- Treatment Facility
- Abused Persons Program
- Substance Abuse Program
- Mental Health Clinic
- Foster Home Program
- Protective Services Program
- Adoption Program
- Jail Substance Abuse Program
- Project “ECHO”
- Safe Harbor Shelter

During preparation of the Plan, County judges raised concern that those in the criminal justice system could “fall through the cracks” — that recidivism occurs because individuals are not provided all the services available. Programs should be monitored to see if they are effective and efficient and that clients who need services are receiving the services. Standardization and computerization of forms used by the various social services agencies could help simplify the process. Where appropriate, information systems should be shared by agencies to help assure that those who need services receive them.

Private nonprofit groups, such as Alcoholics Anonymous, have also played a significant intervention role and should be encouraged. In 1995, an Oxford House, which provides private housing for recovering addicts, was operating in the County. Such facilities are often needed to transition recovering addicts back into society.

During the preparation of the Plan, concern was raised that there was no detoxification facility in the County. To provide proper treatment, the County should assure that residents have access to proper detoxification facilities.

Actions

1. Create a committee of social service providers, educators, and police officers to analyze the effectiveness of social services programs and to make recommendations as to how they might be operated more efficiently and effectively.
[CR]
2. Encourage periodic monitoring of County health trends by health care providers and request that the providers develop recommendations to improve health.
[CR]
3. Maintain a central source of information concerning health and social programs which are available. Use public access T.V. to present wellness programs.
[CR]
4. Encourage or require health and social services providers to operate at times convenient to those who are unable to make appointments during normal operating hours.
[CR]
5. Investigate the need for and economic feasibility of operating additional satellite facilities in community centers.
[CR]
6. Encourage affordable programs that allow the physically handicapped to stay in their homes and have adequate care and access to services and programs.
[CR]
7. Encourage a school health program which provides the services of therapists, nurses, counselors, and psychologists.
[CR , BOE]
8. Investigate the need for and ability to develop a standardized data form for clients. Where appropriate, protecting confidentiality, share data among the agencies.
[CR]
9. Encourage businesses to adopt pro-family policies, such as “flex time,” and to incorporate parenting training during lunch breaks.
[CR , ED]
10. Encourage the establishment of transitional houses and detox facilities for County residents with substance abuse problems.
[CR, CA]
11. Encourage the development of supervised teen activities and/or special after-school programs in communities.
[CR]
12. Develop family resource centers, including classes, support groups, information, library and reference hotline.
[CR]
13. Expand mental health programs for adolescents.
[CR]
14. Implement a plan to address smoking prevalence, illegal drug use, and chronic drinking of alcoholic beverages.
[CR, CA]
15. Encourage the establishment of additional or expanded assisted living facilities and nursing homes and the related services to meet current and projected needs.
[CR]
16. Continue to evaluate the necessary support for senior citizens in their homes and evaluate the need to expand the senior centers to meet the anticipated increase in elderly.
[CR]
17. Establish a crisis intervention hotline.
[CR]
18. Periodically update the Community Development Plan to address facility needs for health and social services programs.
[CR]

Housing

Objectives:

- ☞ Encourage the availability of a variety of housing types to serve different age groups, family sizes, and incomes of Calvert County residents.
- ☞ Locate new housing in or near Town Centers, near services and recreation opportunities.
- ☞ Encourage a mix of family income ranges and a variety of housing types within new communities.
- ☞ Encourage the upgrading of substandard housing through public and private actions.

Sustainability Issues:

Sustainable communities meet the needs of county residents in the following ways:

- *housing is designed and oriented to promote safety, a “sense of community,” energy efficiency and easy access to jobs, services, and recreation;*
- *an adequate percentage of homes are affordable; and*
- *housing is located away from incompatible uses.*

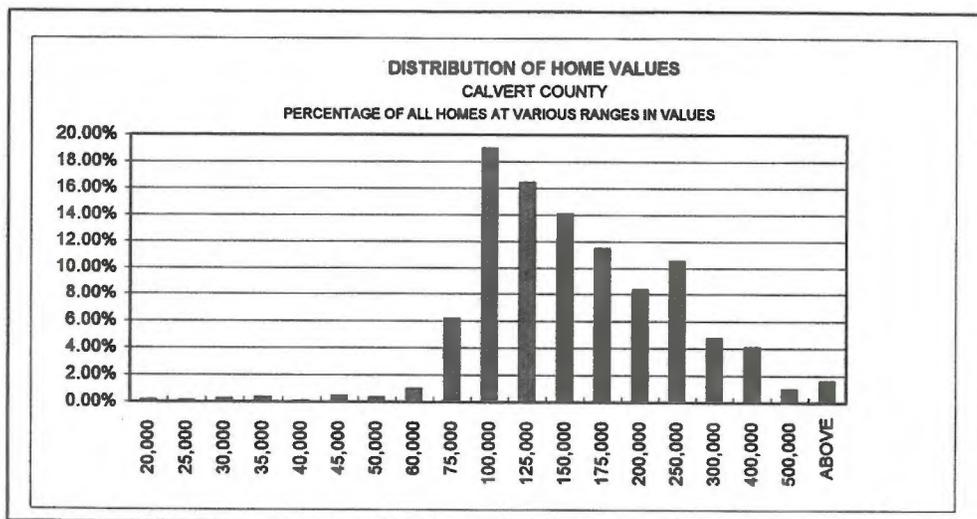
Citizen Concerns About Housing

For many people, Calvert County represents the “American Dream” — home ownership in safe, attractive residential communities. In 1990, 85% of all homes were owned by the occupant, one of the highest percentages in the State. Over the last 25 years, Calvert County has witnessed rapid residential growth as families have been drawn to its rural character, good schools, low tax rates, and low crime rates.

Most houses are relatively new and the housing market is strong. However, during preparation of this Plan, citizens raised the following concerns about the current housing stock and development patterns:

- Most housing is out of reach for low income families and for young people just out of school due, in part, to the lack of variety of housing types.
- Most of the new housing has been in old subdivisions recorded before zoning or on large lots in rural areas, despite the objectives of the 1983 Comprehensive Plan which called for directing growth to Town Centers. Most of the old subdivisions have substandard roads and lack storm water management facilities. Large lot development consumes farmland, forestland, and negatively affects the rural character of the County.

Fig. 2.C.1.



● Most of the County’s housing stock is not designed to allow older residents to remain in the home when no longer able to live independently or care for a large home and lot.

Housing Costs

“Affordable Housing” has been defined as housing which could be rented or purchased by low or moderate income families. Low income is below 50% of the median income. Moderate income is between 50% and 80% of median income. Median income was approximately \$54,000 for a family of four in 1995. Over the last seven years, the moderate income housing market demand has been met by the private sector, largely due to the availability of inexpensive lots in older subdivisions.

The low income housing market has not been fully met (see figure 2.C.1). New subdivisions tend to target families within a very narrow middle to upper income range. Even in the older communities, which have a much wider range of housing prices, homes in 1995 started at \$70,000 to \$100,000, which is more than low income families can afford to pay. One consequence is that some existing households are overcrowded, as families “double up” with relatives. The 1990 census reported 434 households with more than one person per room, which the census defines as overcrowded. The lack of low income housing may also contribute to homelessness. In 1996, a total of 328 families received some type of County homeless service.

Variety of Housing Types

Calvert’s housing stock typifies that of most rural counties in that nearly all of the housing is single family detached homes. In 1995, 91% of the housing was single family detached, 2% of the housing was single family attached (i.e. townhouse, duplexes and triplexes), 3% was multifamily (apartments and condominiums), and 4% was mobile homes. Between 1985 and 1995, the types of housing in major Town Centers began to change with the provision of or upgrading of community sewer systems. Over 300 multifamily units and over 300 townhouses were built over that period.

The majority of all new housing in the next 30 years will be single family detached. Of the remaining 28,000 units to be built in the County based on current zoning, only 6,000 are projected to be built in the town centers, where community water and sewer allows for attached dwellings and apartments.

County Development Patterns

The County’s pattern of development has been characterized as “sprawl” in that the houses are scattered throughout the countryside. When houses are located away from services and public transportation, families are more automobile dependent. Each worker in a family needs a vehicle. According to national studies, the average family spends \$5,000 per year in automobile payments and operating and maintenance costs. Each \$1,000 that could be reduced from automobile expenses would cover the monthly payments on \$10,000 of a house loan. Proximity to jobs, services and public transportation could reduce automotive costs.

The County’s pattern of development also isolates residents from recreation opportunities. Public transportation is limited and many young people are too far from conveniences to walk or bicycle. Most old roads have no shoulders and are not suited for bicycling.

Another common housing pattern in Calvert County is the separation of income classes. Nationwide, many experts have recommended that affordable housing be blended with a wide range of housing values rather than concentrating low income housing into “projects.” Many of the older communities do have a mix of housing values. Most newer communities are for narrow income ranges.

Housing for the Elderly

In 1990, the County’s population over 60 years of age was 12% of the County total. By the year 2020, the population over age 60 is projected to comprise 21% of the total. According to a 1992 survey by the American Association of Retired Persons (AARP), 84% of the elderly would like to stay in their home and never move and 80% would prefer living in a neighborhood with

people of all ages. However, the nationwide pattern of sprawl development is not conducive for aging in the home. A majority of those surveyed expressed a need to live near a grocery store, a drug store, a doctor's office, and a hospital. Proximity to such services becomes even more important for those who are not able to drive. There are several options to accommodate the elderly:

- Construct senior housing complexes with services provided, such as Asbury Solomons Island.
- Build new low maintenance housing close to services to house all age groups.
- Provide services to existing elderly housing located in scattered sites.
- Encourage community responsibility for its elderly population.

Local Low Income Housing Programs

Two organizations in the County have had a significant impact on creation of new affordable housing and renovation of existing housing: the Housing Authority and Southern Maryland Tri-County Community Action, Inc.(SMTCCA). Both organizations make use of federal and state funding sources to build affordable housing. They have been supported by the Board of County Commissioners which has contributed land on several occasions. Between 1985 and 1997, over 400 affordable family units and 182 affordable elderly units were developed using local, state, and federal funding sources. Plans for another 180 affordable family units are under development.

In the 1980's and 1990's, federal funding for housing has been reduced significantly. Most state funding has been tied to local matching commitments. If affordable housing by nonprofit groups is to be a continued success, there will need to be local financial support and/or dedication of land.

Significant progress has been made in renovating substandard housing. Both the Housing Authority and SMTCCA operate housing renovation programs. "Christmas in April" organizes volunteers to repair owner occupied units for elderly or disadvantaged County residents. According to the 1990 census, 317

(2%) dwelling units lacked complete plumbing facilities, out of a total of 18,974 dwelling units, as compared to the 1970 census, which revealed that 1,486 (18.7%) of the housing units lacked complete plumbing facilities.

Low Income Housing Solutions

Most affordable housing solutions not involving heavy public subsidy are geared toward reducing or eliminating land costs. One method is to require a percentage of lots in a subdivision to be for low and moderate income families, which is known as "inclusionary zoning." Inclusionary zoning has worked well in Montgomery County, Maryland for moderate income residents where the projects are on community water and sewer. Density bonuses allow the developer to charge only the cost of the unit (and not the land) to the new occupant. In Calvert County, only the major Town Centers are served by community water and sewer. Beyond the Town Centers, environmental constraints often prevent a developer from being eligible for higher density.

Another method of providing low cost housing is accessory apartments on single family lots. These units are affordable and often serve as "starter" homes for young people or as "granny flats" for parents. Since the Zoning Ordinance was amended in 1984 to allow accessory apartments, the County has seen them used extensively to provide housing for elderly parents. Young people, however, and/or low income families have had difficulty making use of the technique, due in part, to the type of loan programs available. Lending institutions require repayment of the loans for accessory apartments in ten years rather than the normal term of a loan for a house of 20 to 30 years. Short term loans make the monthly payments too high for low income families.

A third method of providing low-cost housing is to amend zoning regulations to allow new types of housing in Town Centers on single family lots. For example, the County could consider allowing up to four unit apartment clusters, which have the appearance of one single home.

Finally, education in home finances can help many low income families become eligible for a home. The Housing Authority, Southern Maryland Tri-County Community Action, Inc., the Cooperative Extension Service and Department of Social Services have begun to offer personal finance classes to low income families so that they might be able to own or rent a house.

Actions:

1. Encourage the use of accessory apartments and encourage lenders to extend loan payment schedules. Also facilitate the use of State loan programs for accessory apartments.
[CR, P & Z]
2. Encourage a variety of housing types in Town Centers by:
 - a. allowing small clusters of multiple dwelling units (with the appearance of a single dwelling unit) in Town Centers in accordance with Master Plans;
 - b. encouraging the development of low maintenance, easy access homes for the elderly so that they can remain in communities longer if they so choose;
 - c. encouraging the development of senior assisted group homes; and
 - d. encouraging upper and middle income housing as an alternative to development in the countryside.[P & Z, CR]
3. Consider the establishment of a public/private housing trust fund to be used for low interest loans or grants for affordable housing.
[CR]
4. Provide needed infrastructure in Town Centers to provide opportunities for housing development in accordance with master plans.
[A & F, PW]
5. Encourage training seminars to show how to manage finances to own or rent housing.
[CR]
6. Encourage public-private partnerships and/or developer-nonprofit partnerships for the development of affordable housing, elderly housing, or upgrading of substandard housing.
[CR]
7. Monitor the housing market to determine if there is a need for “moderate income” housing—then consider zoning techniques to provide such housing when there is not an adequate supply.
[CR, P & Z]
8. Consider legislative actions that will provide tax incentives for retirees to live in Calvert County.
[A & F]

Human Development and Life Long Learning

OBJECTIVES:

- ☞ Conduct long-term planning for school facilities.
- ☞ Co-locate schools with other public services to provide efficient community facilities and services at appropriate locations.
- ☞ Consider accelerating land acquisition for school sites to secure preferred locations.
- ☞ Construct public school facilities to accommodate the County's population growth.
- ☞ Provide quality educational opportunities for County residents.
- ☞ Promote partnerships between schools and the business community.
- ☞ Prepare students for jobs.
- ☞ Assist young adults in making the transition from graduation to the working world.
- ☞ Enhance residents' access to library resources.
- ☞ Encourage adult literacy.
- ☞ Promote mutual respect and appreciation among all cultures.

SUSTAINABILITY ISSUES:

Sustainable communities meet the needs of County residents in the following ways:

- *provide educational opportunities to citizens throughout their lives;*
- *encourage acceptance of diverse cultures; and*
- *provide access to information so that citizens can make informed decisions.*

People have the capability and desire to learn new skills and to broaden their horizons throughout their lives. Education is a continual process; it does not cease upon graduating from the twelfth grade. Many older citizens desire to remain active by learning new skills and devoting time to community projects. Unlike

years past when people had single careers, today people have many different careers; thus, continuing education plays a greater role.

A primary goal of the Comprehensive Plan is to create a sense of community. Schools are important in creating a sense of community. Many activities, such as civic organization meetings and recreation classes, occur there. Schools are often the heart of a community.

The Board of Education has adopted a Vision for the Year 2000 as an overall policy. The Board of Education has the authority and responsibility for student education. The County government funds approximately 63% of the Board of Education's operating budget.

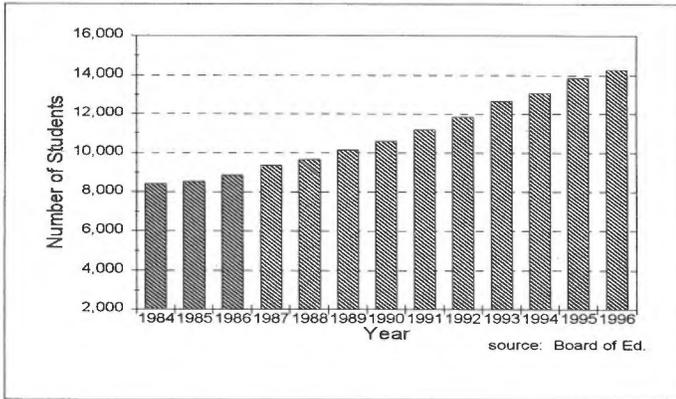
Technology

Technology is providing greater opportunities for students of all ages. Advances in audio, video, and computer technology have created distance learning. Unlike television courses in the past, distance learning allows students and teachers to interact miles apart through audio, video, and computer links. A greater variety of courses may be offered through distance learning. For instance, a teacher could conduct German classes for all three high schools while based at one. In addition to expanding course offerings, distance-learning may reduce the amount of commuting to educational facilities outside the County, such as the University of Maryland College Park.

Enrollment

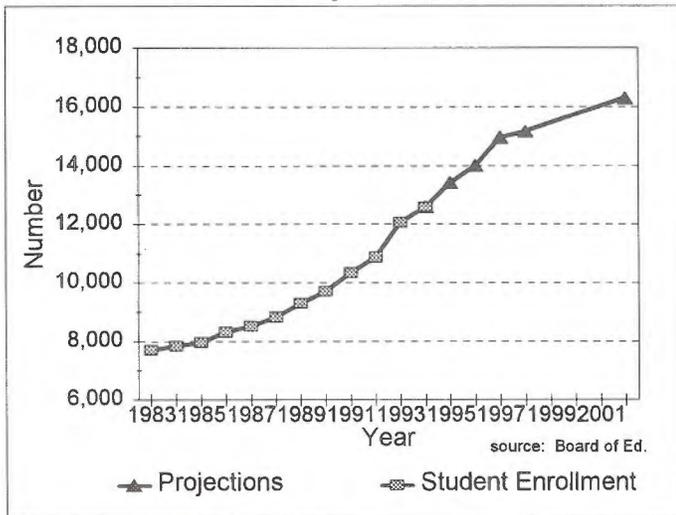
Calvert County's total student enrollment for private and public schools increased from 8,431 in 1984 to 14,260 in 1996, an average annual increase of 4.5 percent (see Figure 2.D.1). In 1984, there were 7,916 public school students. By 1996, the number grew to 13,367, an increase of 69 percent. In 1984, there were 515 students enrolled in private schools, comprising six percent of the County's total student enrollment. By 1996, the enrollment had increased to 893, six percent of the County total.

Figure 2.D.1. School Enrollment



In the near term, enrollment in public schools is expected to increase from 12,594 in 1994 to 16,236 in 2003 (see Figure 2.D.2).

Figure 2.D.2
Public School Enrollment Projection to 2003



School Facilities

As of the Fall of 1997, Calvert County had 18 schools: 11 elementary schools, four middle schools, and three high schools. A new high school opened in January 1996 to serve students in the southern end of the County. Between 1997 and 2000, one new elementary school and two new middle schools are planned to open.

Historically, the number of schools in Calvert County has been much greater than the current number of 18. In 1871, there were 23 schools. By 1882, there were 38 schools. The number of schools in Calvert peaked in 1901 at 57. The schools were much smaller then and

students walked to school. Most of these schools were one-room schoolhouses. The numbers reflect the fact that schools served a smaller geographic community.

Although student enrollment is currently increasing, the future need for schools may not be as great, so school location and design become important considerations, if the schools are adapted to other uses. Some former one-room schools have been converted to other uses, including residences, some are no longer standing, and others are deteriorating. Several former schools have been adapted to new uses. Central School has been converted to an abused persons' shelter. Island Creek School is now a Head Start Center. Broomes Island School is a community center. The One-Room Schoolhouse on Broomes Island Road is a museum, and Brooks High School is the Board of Education's administrative office.

Major portions of State and County funds are devoted to education. Between 1996 and 2000, local funding for public school projects will constitute more than 50 percent of the County's overall capital budget. Over the next five years, 1996 to 2001, the Calvert County Board of Education's projections for capital expenditures total more than \$50 million. More than half the total is to build five new schools.

Under current zoning, the County's buildout is projected to be about 52,000 dwelling units. While the County's population is expected to consist of a greater percentage of people 60 years and over, the number of young people 19 years and under is still expected to double between 1990 and 2020. To meet this demand, it will be necessary to construct 15 new schools (eight elementary, four middle, and three high schools), assuming new schools have a 110% capacity of 825 elementary students, 990 middle school students, and 1,815 high school students (See Table 2.D.1.).

Figure 2.D.2. Build-out

52,000 Dwelling Units 29,500 Students	Elementary School	Middle School	High School	Total
New Schools Needed	8	4	3	15
Cost, County Share	\$37 million	\$26 million	\$50 million	\$110 million

In the interim, it is projected that there will be 36,000 total dwelling units by 2010, resulting in an estimated student enrollment of 20,500. To accommodate these students, it will be necessary to construct six new schools (three elementary, two middle, and one high school) at a cost of \$40 million. By 2020, 12 new schools (seven elementary, three middle, and two high, including the six needed by 2010) will be necessary to accommodate the projected number of students at a cost of \$82 million. By 2020, it is projected there will be 48,000 dwelling units with an estimated student enrollment of 27,400.

The County's share of new school construction includes 100% of land acquisition, architectural and engineering design, and equipment costs, and approximately 45% of construction costs. The County's projected share (in 1996 dollars) for the fifteen additional schools that will be needed at build-out is \$109 million. Impact fees levied on new dwelling units will pay for approximately 70%, or \$79.5 million, of total County costs. For the 15 schools, County government will have to pay the remainder, \$30.5 million. These figures assume that the State will continue funding 55 percent of construction costs. If the State does not, then the County will have to contribute even more. These figures also assume that future schools will be approximately the same size as existing schools.

One aspect of school facilities also relates to transportation. Students' cars require school parking spaces and also add to the increasing traffic. Limiting the number of students who drive to school would reduce the need for parking spaces and the amount of traffic.

The County government and the Board of Education must work together to provide quality educational opportunities in the most efficient, cost-effective way possible. All strategies should be considered in this endeavor. Calvert County schools have been known for their quality education. This quality should be maintained and improved; the education of our young people should remain a primary focus.

Strategies to reduce costs and provide quality education may include the following:

- reconfiguring grades (for example, limiting senior high to grades 10, 11, and 12)
- expanding vocational-technical training
- expanding opportunities for senior high school students to enroll in Community College classes
- requiring attendance three out of four quarters
- building smaller neighborhood schools for younger students ("mini school" concept)
- co-locating new schools with existing schools
- providing early graduation opportunities
- encouraging more active participation of high school students in the community college

Strategies should be researched and publicly debated before a fourth high school becomes necessary. Providing quality education includes ensuring students master the required skills and knowledge. Students should not graduate to the next grade if they have not met these requisites.

Partnerships with the Business Community

The Center for Business and Industry, an innovative business education center, opened in 1996. The Center is a program of the Charles County Community College that will serve the three counties of Southern Maryland. Students and business professionals will have access to advanced information technology, such as distance learning, business support services, teleconferencing and satellite link-ups, to create new and efficient business structures. County businesses have supported the Center through donations.

Businesses are also assisting with the education of secondary public school students through service-learning. Schools are building partnerships with community-based organizations, neighborhood schools, and area businesses to facilitate their service-learning projects.

Adult Literacy

Between 1980 and 1990, the percentage of Calvert County citizens who were high school graduates or had higher education increased from 67 percent to 79 percent. While the education attainment of many County residents has increased, illiteracy is still a problem.

Based upon national statistics, approximately 8,000 County adults are considered functionally illiterate: they cannot perform basic reading, writing, or math. An additional 9,300 adults have limited skills to perform these tasks, but their skill level does not allow them to compete in the job market. In addition to the importance of literacy to individuals, it is also important to families. Children whose primary care giver is illiterate are twice as likely to be illiterate. All literacy programs are seeking ways to build a stronger learning environment at home in order to increase literacy of all age groups.

Calvert County is addressing adult literacy problems in several ways. The Literacy Council was established in 1983 and provides one-on-one tutoring. Other opportunities to increase adult literacy and education are through programs provided by the Board of Education: Adult Basic Education, General Education, GED, External Diploma Program, and Even Start (a family centered program). All but the General Education Program are funded through grants and are free to participants. The Head Start Program also offers opportunities to increase adult literacy and education.

Young Children and Families

There is a growing understanding that school readiness requires increased family literacy and the support of collaborating community agencies. The Calvert County Early Childhood/Family Development Interagency Council is an advocacy group whose mission is “to empower families to pursue continued learning, self sufficiency, independence, and growing awareness of community services. This group also supports programs of adult literacy, parenting skills, and early childhood education within the framework of community and interagency collaboration” (mission statement of the Interagency Council). The League of Women Voters in September 1996 issued the report, “Children at Risk: A Wake-Up Call for Calvert County!” The report set forth specific things that need to be done to address children’s services.

Community College

The Community College at Calvert County, a branch of the Charles County Community College, provides comprehensive community college services to the

residents of Calvert County. The college offers high-quality transfer and occupational programs and continuing education courses for specialized training and enrichment. Associate degrees are available in Science, Applied Science, and Arts. Certificates, letters of recognition, and continuing education programs are also offered.

The Community College at Calvert was established in the Fall of 1980 with an enrollment of 254 students. In the Fall of 1996 enrollment was 1,018. Of these students, 15.7 percent were full-time and 84.3 percent part-time. The following is the age distribution of students for Fall 1996:

<u>Age</u>	<u>Number</u>	<u>Percentage</u>
17 and under	48	4.7%
18 - 21 years	408	40.1%
22 - 29 years	188	18.5%
30 - 39 years	207	20.3%
40 - 59 years	146	14.3%
60 and over	20	2.0%
Unknown	1	0.1%

When the Community College first began, classes were conducted at Calvert High School and Calvert Vocational-Technical Center in Prince Frederick. In 1985 the Community College was relocated to Broomes Island Road in the former Calvert Christian School. A permanent site for the college is being sought.

The County government (County Commissioners, Planning Commission, and Department of Planning and Zoning) and the Community College Planning Council need to work together to develop a vision for the Community College and select a site. The vision would encompass the role of the Community College, types of facilities (such as an indoor sports complex or a cultural arts center), physical plan, and location.

Southern Maryland Higher Education Center

The Southern Maryland Higher Education Center (SMHEC) was created by the Maryland General Assembly in 1994. Established to provide enhanced access to higher education and support for economic development in the Southern Maryland Region, the Center was initially positioned to meet the graduate

Recreation

Objectives

- ☞ Develop a network of recreational sites and facilities based on the unique natural, cultural and historical features of the County.
- ☞ Provide public access to the Patuxent River and the Chesapeake Bay.
- ☞ Ensure that a wide selection of public recreational facilities and programs are provided to meet the interests and needs of all ages, incomes and abilities.
- ☞ Provide safe access to parks and recreational facilities including, where feasible, pedestrian and bicycle access.

Sustainability Issues

Sustainable communities recognize that access to public recreational open space and to a variety of recreational opportunities promotes physical and mental health as well as positive social interaction. To help ensure that these objectives are met, sustainable communities:

- *establish standards by which the adequacy of public recreation can be measured;*
- *maintain an ongoing public participation procedure for identifying community recreational needs;*
- *work to ensure that all members of the community have access to recreational resources; and*
- *develop partnerships between public, private and non-profit organizations to foster a wide range of recreational opportunities.*

The Role of Recreation in Community Life

Recreation provides one of the major avenues by which residents can enjoy social interaction and begin to establish ties to the community. In this regard, the provision of adequate recreational space and facilities

is not simply a matter of providing for leisure time activities, but an essential part of maintaining public health, safety and welfare.

Commercial enterprises account for nearly 450 acres of recreational space including marinas in Solomons, Flag Harbor, Chesapeake Beach and Broomes Island, the BG&E Visitors' Center, golf courses and campsites.

Non-profit and quasi-public organizations provide more than 1100 acres of recreational open space including hiking and cross-country skiing trails, two museums (Chesapeake Railroad Museum and Port Republic School House), the East-John Youth Center, one of the northernmost stands of Bald Cypress (adjacent to Battle Creek Nature Center), the Fairgrounds and Christ Child Society Camp. The American Chestnut Land Trust alone accounts for nearly 800 of the total 1100 acres.

Public Recreation

Prior to 1970, there was virtually no public recreation in Calvert County. Nevertheless, residents enjoyed a wide range of recreational opportunities provided through informal networks of family and friends. Boating, fishing, hunting, hiking, and camping were readily available. In addition, many private landowners provided playing fields for team sports. Today, there is much less privately owned open space available. Many newer residents have no access to County natural areas other than public parks.

Some of the County's public parks provide opportunities to gain a greater understanding and appreciation for the County's historic ties to the water and land through programs and activities sponsored at these sites. Others focus on providing active recreation, including a variety of team sports. These sites play an important role in promoting public health and well-being and fostering strong ties to the community through sports, art and social interaction.

Recreation Provided by the State - There are three major State-owned parks in the County: Calvert Cliffs State Park provides access to the 15 million year old

Miocene fossil deposits, Jefferson Patterson Park focuses primarily on archaeological research and education, and King’s Landing Park provides nature trails, an equestrian area and access to the Patuxent River. Three boat ramps (Hallowing Point, Solomons, and Kellam’s Marina) have also been provided by the State. In all, the State provided over 3070 acres of recreational open space in the County in 1995.

Recreation Provided by the County - To help ensure a balanced mix of recreational opportunities, Calvert County provided recreational sites and facilities at the County-wide, community, neighborhood and Town Center level.

County-wide parks include Annmarie Garden on St. John, donated to the County by Mr. and Mrs. Francis Koenig as a center for the arts, Battle Creek Nature Center which focuses on natural ecology, the Bennett O. Hughes Memorial Tree Farm, donated to the County by Mrs. Bennett O. Hughes as a forestry management area and hunting reserve, the nationally recognized Calvert Marine Museum, and Flag Ponds Nature Park and Breezy Point Park both providing magnificent beaches along the Chesapeake Bay.

Community sites include the Dunkirk Park, Hallowing Point Park and Cove Point Park; school recreation areas; local ballfields including the St. Leonard Park donated by former County Commissioner Garner (Pete) Grover and Marley Run Park; the Calvert County Library; several community centers including Calvert Pines Senior Citizen Center, Southern Community Center and the Northeast Community Center; and Hutchins Fishing Pond.

Neighborhood sites include Nan’s Cove Pier, the Old Broome’s Island School and recreation areas within subdivisions.

Town Center parks include the boardwalks and waterfront parks at North Beach, Chesapeake Beach and Solomons; the King property located in Prince Frederick, donated by Mr. Boyd King; and the Courthouse Green in Prince Frederick.

Table 2.E.1. lists the number of acres in County-provided recreation.

Table 2E1 TOTAL NUMBER OF ACRES IN PUBLIC RECREATION PROVIDED BY COUNTY & MUNICIPALITIES as of 7/97	ACRES
COUNTY-WIDE RECREATION	1088
COMMUNITY RECREATION	476
NEIGHBORHOOD & TOWN CENTER	438
TOTAL	2000 (rounded)

Determining Future Recreational Acreage Needs

The State of Maryland has adopted a state-wide goal of providing 80 acres of recreational open space for every 1000 citizens. Thirty of the 80 acres per 1000 are to be provided by counties. For the last 10 years, the County has adopted this standard as a measure of adequate recreational space. Table 2.E.2. below shows the number of acres that need to be acquired by the County to meet the recommended standard.

Table 2E2 FUTURE RECREATIONAL ACREAGE NEEDS	RECOMMENDED STANDARD 30 ACRES PER 1000 PROVIDED BY COUNTY	ACREAGE PROVIDED BY COUNTY AS OF JULY, 1997	ADDITIONAL ACREAGE NEEDED
PROJECTED POPULATION			
1997 - 68,000	2040	2000	40
2000 75,000	2250		250
2010 95,000	2850		850
Build-out 150,000	4500		2500

* Acreage includes 393 acres of subdivision recreation not open to the general public and 140 acres owned and managed by the American Chestnut Land Trust which was acquired with assistance from the Calvert County Revolving Loan Fund. The Revolving Loan Fund provides assistance to non-profit organizations that provide recreation to the general public.

Determining Future Facility Needs

A number of studies have been completed during the last several years that can be used to help identify future recreational needs. In addition, there are national and state standards that can be used as guides to future decision-making. These studies and standards are summarized in the Land Preservation and Recreation Plan, available at the Department of Planning and Zoning. Tables 2.E.3. and 2.E.4. below list future acreage and facility needs based on these studies and standards.

Table 2E3 TYPES OF ACREAGE TO BE ACQUIRED	ACTIVITIES
NATURAL/CULTURAL/ HISTORIC SITES & GREENWAYS PRIORITY: WATER ACCESS	hiking, biking, horseback riding, canoeing, swimming at beach, fishing, education, sight-seeing
TOWN CENTER SITES (in or near Town Centers)	team sports, strolling, jogging, biking, arts & crafts, fitness classes, festivals, celebrations, sitting in the park, education, sight-seeing
AMOUNT OF ACREAGE TO BE ACQUIRED	250 acres by 2000
Table 2E4 TYPES OF FACILITIES TO BE DEVELOPED	ACTIVITIES
PLAY FIELDS*	team sports
SWIMMING POOLS One pool in each election district 1st Priority: 3rd District-completed 2nd Priority: 1st District 3rd Priority: 2nd District	recreation, lessons, competition swimming & diving, physical therapy
INDOOR SPORTS COMPLEX & POOL IN/NEAR PRINCE FREDERICK	swimming, basketball, aerobics, wrestling, weight training, arts & crafts, racquetball, handball,sauna/whirlpool, gymnastics

*The number of existing fields far exceeds NRPA standards. Need for additional fields to be determined.

Developing a Recreation Action Plan

The amount and variety of future recreational needs and demands require a comprehensive recreation strategy that brings existing and future recreational sites and facilities into an interconnected recreation network, capable of serving a full spectrum of ages, interests and abilities. This comprehensive approach helps ensure that dollars are spent efficiently and that sites are utilized effectively. A recreation strategy enables the County to focus on creating a set of recreational amenities that not only service local recreation needs but contribute toward promoting a sound economy, as well. In particular, a good recreation strategy focuses toward those qualities that are unique to Calvert County - its waterways and shorelines, its farms and forests and its people.

Action Plan - A major objective of the Action Plan is to establish a series of recreation and public open space sites, primarily along the Chesapeake Bay and Patuxent River, each designed to highlight a distinctive feature of Calvert County's history, culture and geography.

These primary sites are to be linked to Town Centers and to each other by a series of greenways. Types of greenways will vary widely. Some will be designated scenic roadways, with or without adjacent bikeways. Others will be off-road trails for horseback riding, bicycling, hiking or a combination of two or more. Still others will be waterway corridors, providing opportunities for boating from one destination to another. Finally, there will be wildlife and scenic corridors.

The Town Centers are to serve as focal points for community based recreation. Recreational sites and facilities will not only help shape and define the character of Town Centers, but they will also help attract new residents to towns instead of out into the countryside. They will also make recreation more accessible to more people, particularly young people and the elderly who may not have convenient access to cars. Because Town Centers are linked to County-wide parks by way of greenways, they will serve as "gateways" to County parks, providing a selection of supporting services.

Actions

1. Update the Land Preservation and Recreation Plan every three years.
2. Continue the established standard of providing 30 acres of recreational open space per 1000 population.
 - a. Give priority over the next five years to preserving and acquiring key County-wide natural, cultural and historic sites while they are still available.

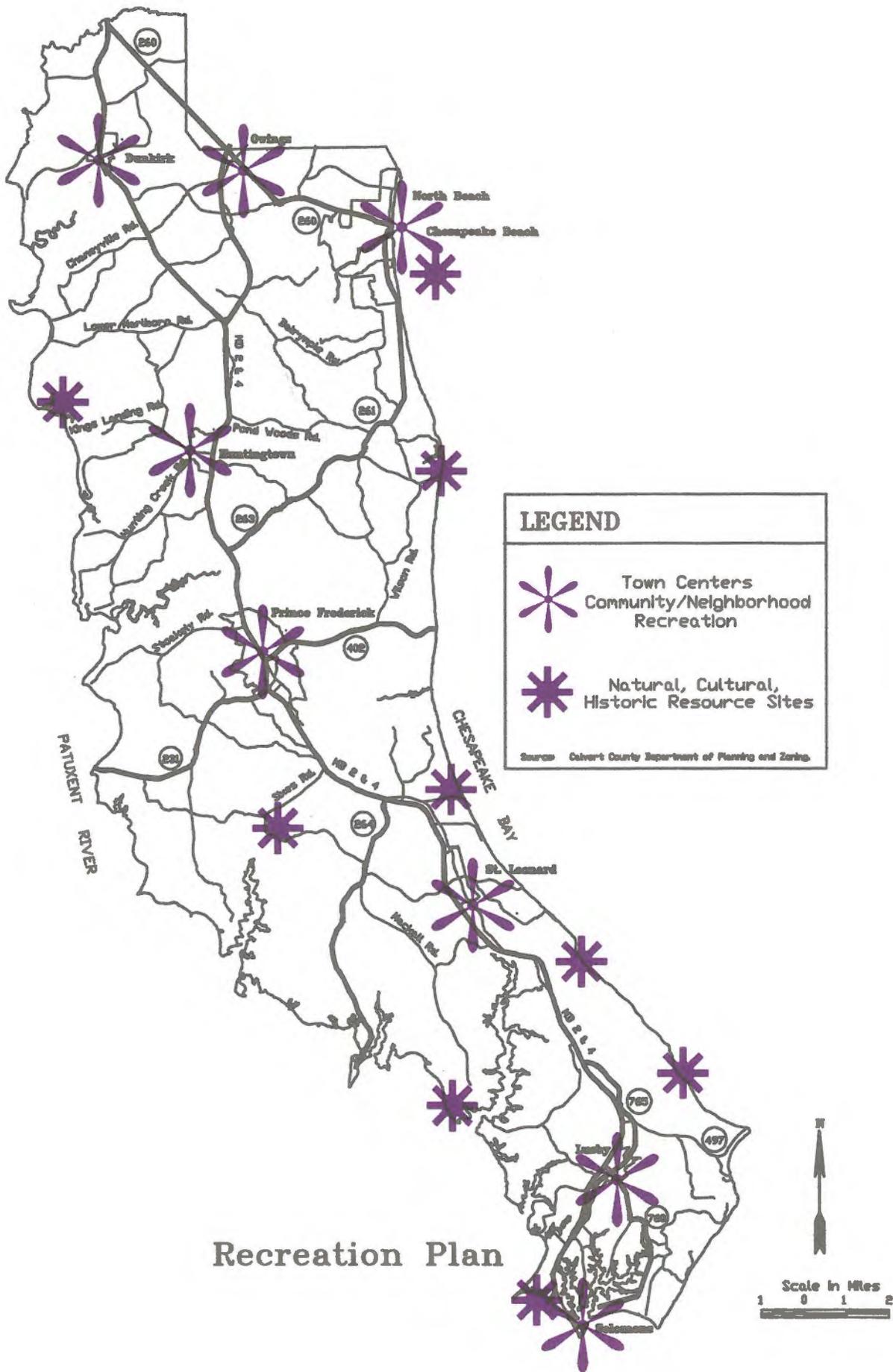
Standard: Sites should provide access to the water, provide part of a greenway trail system and/or provide access to a unique natural, historic or cultural feature and be capable of connecting with a Town Center and/or existing or proposed park site by way of an existing or potential trail system. Priority should be given to sites specifically identified in the Land Preservation and Recreation Plan. Additional and/or substitute projects should be evaluated on a case by case basis by the Board of County Commissioners.
 - b. Develop a full range of recreational sites and facilities in or near Town Centers. Emphasize family oriented activities and activities for children.

Standard: Each Town Center should be capable of serving as a major focal point and recreation center for residents of the town and their surrounding areas. Major Town Centers should serve residents within their districts, and in some cases, the entire County. Each Town Center should have:

 - a town park or “village green”,
 - an in-town trail and bikeway system that connects to extended greenways,
 - an outdoor public facility designed primarily for active team sports, and
 - an indoor community center capable of providing a range of activities for all age groups.

In addition, each major Town Center should include an indoor sports complex with swimming pool. Consider that one complex be large enough to provide space for large scale uses such as school graduation ceremonies.
 - c. Connect County-wide parks to each other and to Town Centers by way of public greenways. Ensure that greenways do not go through private property without the express permission of the property owner.

Standard: Each Town Center should be connected to at least one key natural area/historic park by a trail system.
3. Continue to require on-site neighborhood recreational facilities in townhouse and multi-family developments and in single family detached neighborhoods of 50 or more houses. Require recreation fees for all new houses, and use fees to provide recreational sites and facilities at convenient locations to those who paid the fees.
4. Expand recreational opportunities by establishing an intergovernmental review procedure for the design or renovation of all new public buildings including schools, colleges, and community centers to help promote effective and efficient multiple-use of these facilities.
5. Develop and maintain interjurisdictional partnerships to promote recreational networks.
[A & F, ED, GS, P & Z (all of the above)]



Public Safety

Objectives

- ☛ Maintain the existing high level of service by providing essential equipment and professional training for emergency personnel.
- ☛ Ensure the coordination of efforts and services between state and local governments and between local government departments and divisions in developing effective public safety programs and strategies.
- ☛ Plan the expansion of public safety services and facilities to coincide with projected population growth and identified needs.
- ☛ Review and update public safety plans as needed.
- ☛ Promote public participation in and awareness of public safety plans and programs.

Sustainability Issues

Sustainable communities are based upon mutual trust; residents treat each other with honesty and respect and deal with conflicts reasonably and without violence.

Law enforcement officials and emergency service providers maintain high standards of professional conduct and efficiency.

Law Enforcement

Police protection is provided by the Sheriff's Office and the Maryland State Police, both centrally located in Prince Frederick. The municipalities of North Beach and Chesapeake Beach provide protection within their jurisdictions through contracts with the Sheriff's Office.

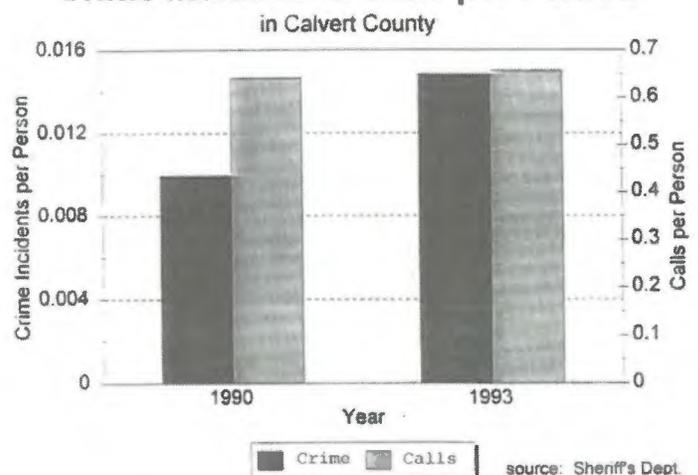
The Sheriff's Office has four major divisions: Civil Process/Court Security; Patrol Division, Criminal

Investigations, and Correctional Services (the Calvert County Detention Center).

The Detention Center/Treatment Facility is charged with maintaining custody and control of all inmates committed, whether sentenced or unsentenced. The original Detention Center opened in 1978 with a rated capacity of 92 inmates. Because of overcrowding, an addition was completed in January, 1992, increasing the capacity to 172. The alcohol/drug treatment facility was completed in January, 1992 and has a rated capacity of 40. It is contracted out to a private enterprise.

The Board of County Commissioners and the Calvert County Board of Education jointly fund the Resident Trooper Program which is a contract service with the Maryland State Police. The Resident Trooper is assigned to the Board of Education and the position's primary function is to work with the school system on a daily basis. The County also maintains a Community Service program which provides a constructive alternative to incarceration and/or fines in appropriate situations.

Crime Incidents & Calls per Person



2F1 Figure Crime Incidents and Calls per Person

Calvert County has the second lowest crime rate in the State. Law enforcement officials do not take credit for the low rate of crime; instead they credit a long-standing tradition of shared customs and values that places a

premium on fostering honesty and trustworthiness among its citizens.

But law enforcement officials are in a position to see early warning signs that may represent the beginning of a break-down in that tradition. While the values of honesty and trustworthiness still appear to be there, the ability and willingness on the part of parents to pass those values on to the next generation appear to be weakening. Law enforcement officials are observing that too many parents are failing to spend enough time with their children and are leaving them unsupervised too often.

Law enforcement officials are also finding that many people who move to Calvert County are not getting to know their new neighbors or the families of their children's friends. This lessens the ability of members of the community to work together to develop clear rules of behavior for their children. It also lessens the sense of responsibility to one's community and one's family that is such an effective deterrent to crime. Many parents are also failing to teach their children appropriate ways of dealing with conflict and even simple good manners.

Most crimes (67%) are associated with alcohol and other drugs and law enforcement officials are seeing a substantial increase in drug and alcohol abuse. The number of DWI arrests has actually declined in recent years, due largely to changes in the law and improved education. However, there has been a substantial increase in drug and alcohol related crime, particularly domestic violence.

Finally, there has been a substantial increase in crimes committed by people who do not live in Calvert County, suggesting that it will not be enough to simply continue to move away from crime-ridden areas. The root causes of crime will need to be addressed at the State and national levels as well as locally.

Actions

1. Focus primary attention on crime prevention. [PS]
2. Provide a forum through cable television, community groups, schools, newspapers and places of worship for citizens to work toward developing a community consensus on civic responsibility. [CR, P]
3. Encourage schools, churches and other organizations to provide supervised after-school and summer programs for children. Alert parents to the need to provide supervision for their children. [CR]
4. Encourage neighborhood crime prevention programs, including community policing. Include opportunities for parents to get to know each other and to discuss issues of common concern. [P S, CR]
5. Support school efforts to provide direct assistance to high school students in acquiring job skills and employment. [BOE]
6. Maintain a strong, on-going drug and alcohol abuse prevention program; encourage the State to provide adequate drug treatment facilities and programs throughout the State. [CR]
7. Update the Law Enforcement and Corrections Needs Study as needed. [PS]
8. Improve the coordination of efforts and services at the state and local level. Many effective programs are already in place, but need coordination. [CR]
9. Promote flexible work schedules and coordination between work hours and school hours to help families take care of their children. [P, CR]

Animal Control

The Animal Control Division enforces the Animal Ordinance and leash laws where applicable. It helps ensure the humane treatment of animals and protects the safety of citizens where animals are involved. The division was staffed with three animal wardens in 1995.

The two biggest problems reported by the Animal Control Division in recent years are the high incidence of rabies in Calvert County and a substantial increase in the number of abandoned pets. There are also more conflicts between farmers and pet owners and between pets and wildlife. All of these factors indicate a need for more public education on the responsibilities of pet ownership in a rural community as well as the potential problems of encounters with wildlife. As the population continues to grow, the County will need to continue to monitor the need for an animal shelter in Calvert County.

.....

Actions

.....

1. Provide for adequate animal shelter facilities as needed. [PS]
 2. Keep current the Calvert County Regulation of Dogs and Cats. [PS]
 3. Provide more public information on the problems associated with keeping pets in rural areas and how to deal with the high incidence of rabies. [PS]
-

Emergency Management

The Emergency Management Division is responsible for developing and maintaining an ongoing program of mitigation, preparedness, response and recovery in the event of an extraordinary emergency including any manmade, natural, war time, terrorist, or technological disaster.

The division is responsible for the following emergency operating plans: Radiological Emergency Plan (REP): The purpose of this plan is to coordinate

and implement an immediate, effective and comprehensive County and State response to a radiological emergency at the Calvert Cliffs Nuclear Power Plant.

Emergency Operating Plan (EOP): This is a comprehensive plan covering the response to any emergency, major disaster or enemy action which occurs in Calvert County. It is a directive to the County government to prepare for and execute emergency tasks to ensure maximum survival of the population and property in the event of an emergency or disaster.

Cove Point Liquid Natural Gas Receiving Terminal Emergency Plan: This plan provides for the protection of plant personnel and the general public and for the prevention of property damages resulting from an incident at the terminal.

Cove Point-Loudoun Pipeline Emergency Plan: This plan provides information and guidance for operating personnel in preparing procedures in response to any pipeline emergency involving company facilities.

BG&E Calvert Cliffs Nuclear Power Plant Emergency Response Plan: This plan consists of an Emergency Response Plan and an off-site Emergency plan to protect plant personnel and the general public in the event of accident at the plant.

All plans, except those that would affect the security of operations or facilities, are available for review in the Emergency Operating Center (EOC) of the Courthouse and the Calvert County Library.

Actions

1. Increase public awareness and knowledge of disasters affecting the County so that appropriate actions may be taken by citizens, businesses and industry to reduce loss of life and property. [PS]
2. Maintain an adequate Emergency Management office and EOC staff and resources. [PS]
3. Maintain all disaster and emergency plans in a current status; implement new plans as needed to address safety hazards and population growth. [PS]

Fire-Rescue-EMS

The function of the Division of Fire, Rescue and Emergency Medical Services is to reduce the loss of life and property in the event of an emergency. The immediate availability of these emergency services is vital to any community.

In 1995 there were fire-rescue-EMS stations located in Huntingtown, Dunkirk, North Beach, St. Leonard, Solomons (two) and Prince Frederick (two). The County also has an Advanced Life Support Unit and a Rescue Dive Team.

The number of calls for fire-rescue-EMS services increased from 3964 in 1987 to 5715 in 1993. Greater public awareness and prevention programs helped decrease the number of fire-related calls while the number of calls for medical services increased, due largely to an increase in population.

All of the fire-rescue-EMS services are staffed by volunteers - a fact that represents a major commitment to the community on the part of the volunteers and substantial savings to the taxpayer. As the population continues to increase, however, the number of people willing or able to volunteer, or to remain volunteers for an extended period, continues to decrease.

Actions

1. Review for adequacy the County Fire-Rescue-Emergency Medical Services Master Plan. At minimum the plan should include:
 - a) an annually updated inventory and evaluation of all existing equipment together with a maintenance and replacement program.
 - b) an evaluation of the need for career personnel to augment the existing volunteer program, together with a program of recommended incentives to help strengthen the volunteer program.
 - c) a statement of projected future need based upon population growth [PS]
2. Continue to monitor response times and periodically evaluate the need for additional stations. [PS]
3. Support the goal of concentrating population in designated areas as a means of limiting the need for (and consequently the additional cost of) additional stations. [PS]

Control Center

The Control Center is the central communications facility and Emergency 911 answering point for all police and fire-rescue-EMS services, including the Maryland Marine Police, Coast Guard, Maryland State Police Aviation Division, Baltimore Gas and Electric Emergency Systems and the Maryland Emergency Management National Warning System. The Center is manned 24 hours a day, 365 days a year. The number of calls increased from 27012 in 1987 to 37419 in 1993. The central issue for this division is the ability to meet the emergency communication needs of a rapidly growing population both effectively and efficiently. An 800 mgh. communication system that will integrate police, fire-rescue-EMS, local government operations and communications was approved in 1996 and will be completed by 1998.

Actions

1. Periodically inventory and evaluate all existing equipment, and recommend a program of maintenance and replacement, as needed.
[PS]
2. Periodically inventory the need for additional services to meet the needs of a growing population.
[PS]
3. Educate the public on the appropriate use of emergency communication services to help avoid overusing the system. Provide information on where to go for emergency and non-emergency services.
[PS]

Cultural Heritage

Objectives:

- ☞ Exercise stewardship of our cultural resources.
- ☞ Celebrate cultural heritage as a means of creating and nurturing a sense of local identity.
- ☞ Recognize the role that our geographical setting, the land and the water, has played in our cultural heritage. Support initiatives that emphasize stewardship of the environment, protect open space and provide public access to water.
- ☞ Support and encourage programs that focus on local history, cultural geography, and folklife.

Sustainability Issues:

Sustainable communities value cultural heritage as a primary means of developing and maintaining a sense of identity, a sense of place. Cultural heritage cannot be abstracted from its physical setting. Cultural heritage is more than the structures built by earlier generations. It is also the way of life—the craft, the traditions, the art, the music and the stories—of the people who have given Calvert County its identity and who have in turn been shaped by this place. Sustainable communities will ensure that the past is not erased from the landscape, and will:

- *identify, protect and interpret the buildings, places, and archaeological sites that signify the heritage of the community;*
- *document and conserve Calvert County ways of life, the memory of the people; and*
- *develop heritage resources as cultural capital to connect the past to the future.*

People have lived in Calvert County for thousands of years. All the activities that people have pursued to make a life here—hunting in the woods, trapping in the marshes, cultivating the land, fishing the waters—have left an imprint on the environment. These ways of life were shaped by the setting. The cultural heritage of Calvert County is completely bound to its land and water. Farmsteads and communities developed in coherent relationship to the local resources on which they depended.

Archaeological remains tell of the earliest inhabitants, Native Americans, who trapped and fished, hunted and harvested here for over 10,000 years before Europeans settled in Southern Maryland. Calvert County was founded in the 17th century. Early attempts to create towns in Calvert County were mostly unsuccessful, owing to the settlers' preference for more dispersed farms and their reliance on transportation by water. These land use choices made centuries ago are still readable in the landscape where towns have developed relatively recently. The early towns—including Calverton and Warrington—might be recoverable by archaeology.

Cultural Landscapes

A sustainable commitment to a vision of Calvert County's past would recognize that the environment and the people are inseparable. There is no County landscape that is not a cultural landscape.

1. Some of the *roads* we travel daily may have begun as trails, connecting water to uplands, traversing the land from Indian village to village. Some roads mark the paths from barns to wharves where hogsheads of tobacco were loaded onto boats bound for faraway ports. Many roads are still called by the names of those who lived at the end of them: Hance, Scaggs, Christianna Parran. Some roads, such as Sawmill or John's Chapel, are witnesses to ways of life that have virtually vanished from the landscape.

2. *Churches* connect modern people to communities that defined social life in the past. Churches provided fellowship and mutual aid, and the network that eased migration after the Civil War, as well as providing education and other community benefits.

3. *Barns*, particularly tobacco barns, convey rural life in Calvert County in ways that few other objects can. Their various, distinctive shapes quietly speak volumes about continuity from one generation to another on the land. The elders among barns tell their age by the number of sheds that have been added around their central structures, and by the horizontal rived siding that is occasionally apparent in a gable end. The ways in which barns were constructed, and the materials from which they were built, offer an opportunity to look back, not only to crafts that are not practiced much anymore, but sometimes to species of wood that are no longer plentiful around us. Massive chestnut, poplar, and oak sills still ably support some of the barns that have stood since before the Civil War. Many are still used in agriculture; the many that are not are threatened by neglect and demolition.

4. *Boats, landings, lighthouses, shipyards and seafood packing houses* stitch the land to the water at numerous places along Calvert County's long shoreline. Sailing vessels and, later, steamboats were the principal historic means of transportation for people and products into and out of Calvert County. Tobacco was hauled by ox-cart to the wharves to be loaded onto vessels that carried goods into the County. Many of the landings are known. Some are near public access points on the Patuxent, such as at Lower Marlboro, and on the Bay near Breezy Point. Many are in disrepair, such as the cannery and dock at Sollers Wharf. The possible remains of wharves on St. Leonard Creek were identified in a 1994 underwater archaeological reconnaissance survey.

The Denton Seafood plant is still functioning and there are other working waterside installations. The Cove Point Lighthouse, icon of Calvert's maritime links, is protected by historic designations. In Solomons, the Lore Oyster House and the Drum Point Lighthouse are protected by Historic District designations. The 1899 bug-eye, *Wm. B. Tennison*, still cruises Solomons Harbor from the Calvert Marine Museum. The *Tennison* is listed on the National Register.

These resources remind us of our continued dependence on the water that surrounds us. The public is able to

visit, to learn from and to enjoy most of these places, not only because they have been restored, but because they are in active museum interpretation programs. These buildings and boats communicate continuity with the past and enrich the experience Solomons offers to people in the present. Other communities in the County have maritime cultural resources that could be similarly protected and developed.

Barns, houses, landings, and other historic structures need not be irrelevant, rotting reminders of the past, but could be adapted to new uses. Where they are situated in developable land, they might become centerpieces in open space. The interior spaces could be used for community activities, or even for storage. There are some good examples of adaptive reuse in the County. The Visitors Center at BGE Calvert Cliffs Nuclear Plant has used one tobacco barn for interpretive exhibits, and has protected and preserved two others on the landscape. The new Museum Services Center houses the programs of Jefferson Patterson Park and Museum in the converted 1932 farm manager's complex. The buildings retain their original form and have been sensitively fitted for their new roles. The farm structures still offer a sense of rural life and inspire those who work in the high-tech facilities they house. The Old Field Inn, a Calvert County Historic District, and the Penwick House are historic homes that have been successfully adapted as restaurants. Historic schools in Prince Frederick, Broome's Island, Island Creek, and Randle Cliff now serve their communities in new roles.

Historic preservation has long been concerned with the finest examples of high-style architecture. Calvert County recognized in its earlier plan that, in addition to excellent examples of rare structures, such as Middleham Chapel, Cedar Hill, and Christ Church, it is also important to protect structures that represent the way most people lived. To that end, the County has designated the Polling House at St. Leonard and a log smoke house, among others, as Historic Districts.

It is important to intensify this effort to identify and protect such "vernacular" architecture and sites. The County files on structures over fifty years old speak of a "typical Calvert County farmhouse". The "typical"

farmhouse is becoming harder to find. Calvert County continues to lose its historic resources at an alarming rate. The County, through the Historic District Commission and the Historic Preservation Specialist program, seeks to ensure that all structures over 50 years old are at least minimally documented before they are permitted to be torn down. The Historic District Commission has taken up the charge of the earlier Comprehensive Plan, and in 1995, authorized an historic context study which will enable the County to target threatened resources for proactive preservation. This effort is to ensure that the structures themselves will survive on the landscape and not just in reminders—the slides, photos and notes in a file drawer comprising a catalog of what has been destroyed.

Historic buildings may serve as focal points for growing and developing communities. St. Leonard has used its polling house in this way. Every Town Center in the County has at least one historic site that could focus the development of a coherent visual identity and a useable connection to a real past.

Cultural Capital

To be effective stewards of our heritage, we must educate our citizens about the nature and value of our cultural resources in order that we may see opportunities in those resources, rather than see them as obstacles to development. Heritage resources can be thought of as “cultural capital”. They can be developed as focal points for tourism promotion with a double benefit: the resources are conserved along with local identity, and they help the community generate needed income. The way that maritime history has been woven into Solomons as a tourist destination may serve as an example. Celebrating heritage is also an obvious means to develop regional heritage and tourism programs that will enrich Southern Maryland as a whole. Cultural heritage can be an organizing principle for sustainability and can integrate well with other initiatives and plans such as recreation, economic development, transportation, community interaction . . . virtually all the sections of the present plan.

Cultural heritage is not just the archaeology, buildings and landscapes around us in which we can read our past. We recognize it also in the cultural activities that today create an inheritable resource, shaping us and our future—in the arts, in the teaching of traditional skills and in our relationship to the land. We may encourage that recognition by promoting

the human stories associated with our heritage themes through the development and support of attempts to document local cultural heritage—through oral history projects and interpretive exhibits. The act of documentation, alone, is insufficient. The wealth of information recovered from such projects must be available to the public. The upcoming 350th anniversary in 2004 of the founding of Calvert County will provide an excellent opportunity to both document our cultural heritage and make it available to the public.

Calvert County has the opportunity to commit to maintaining an archive to safely store the product of those projects. Calvert Marine Museum possesses a Folklife Archive, begun by Paula Johnson in the early 1980s for recording the experiences of people working in the water trades on the Patuxent. In 1995, the oral histories documenting Calvert County tobacco culture, the taped interviews from the project to develop an exhibit on African-American education, and the Cypress Swamp history project were added to it. The Folklife Archive deserves support, as larger holdings are acquired. It is important to support efforts to make the information in the archive accessible through indexing projects, computerized inventory, and linked databases so that the information collected through these various cultural documentation projects is a useable resource.

The visual and performing arts are significant ways to recreate cultural heritage in each generation. Communities committed to conserving heritage will attend to the arts practiced in the present. That may be accomplished by supporting programs in schools, by encouraging and supporting arts organizations, and by providing venues for arts performance and exhibit that no local, independent body is able to provide on its own. Some communities have addressed this issue by establishing cultural arts centers in public facilities—for example, an arts/performance and administrative center housed on a community college campus.

While others are invited to visit and celebrate Calvert heritage, the *object* of cultural heritage—its substance and form—must be identified from within the community itself. The *objective* is to build community and deepen the sense of place. This gives the experience of life in Calvert a distinctive, proud shape. Thoughtful conservation and celebration of our heritage resources will allow us to maintain a sense of the uniqueness of Calvert County, and to sustain the identity of this special place where past and present, land and water are woven together.

Actions

1. Promote the documentation and celebration of Calvert County's cultural heritage.
[P & Z, ED, BOE, GS]
2. Explore methods to ensure identification of cultural resources on a site before development, and to ensure that new construction is compatible with neighboring historic areas.
[P & Z]
3. Ensure adequate support of programs for the documentation of threatened sites and structures and for the publicizing of strategies and incentives that would encourage preservation of threatened resources.
[P & Z]
4. Encourage the development of a community volunteer program to repair old buildings, including barns.
[P & Z]
5. Continue the annual Historic Preservation Awards program.
[P & Z]
6. Promote adaptive reuse of historic structures and landscapes.
[P & Z, ED]
7. Establish an inventory of historic/scenic roads and plan for their protection.
[P & Z, BOCC]
8. Continue preservation of sites and structures through the designation of Historic Districts; encourage the designation of multi-property districts.
[P & Z, BOCC]
9. Work with agricultural, environmental, and land trust organizations to promote consideration of historical/archaeological resources in open space, or protection through easements or other preservation strategies.
[P & Z]
10. Consider designating a central source—a position or office—to coordinate heritage activities in Calvert County. This action would help ensure the tracking of projects, archiving of data, and compatibility of data or other storage formats to make the information accessible.
[P & Z, ED, BOE, GS]
11. Support the Folklife Archive at Calvert Marine Museum as a central repository for local cultural documentation projects; initiate effort to make the information in the archive accessible through indexing projects, computerized inventory, and linked databases.
[GS, P & Z, BOE]
12. Encourage programs that ensure the survival of traditional skills - such as teaching young people about the water trades and agriculture.
[GS, BOE]
13. Develop logo and promotional literature for directing visitors to cultural heritage sites.
[P & Z, ED]
14. Encourage the continuity of local place names in new development.
[P & Z, ED]
15. Consider creating a cultural arts center in a centrally-located public facility.
[ED, GS]
16. Make preparations for the 350th year celebration of the establishment of Calvert County. [BOCC]

ECONOMY

Objectives:

- ☞ Broaden and strengthen Calvert County's economy by attracting and retaining businesses which utilize the County's labor force (e.g., high tech) as well as improving opportunities for visitor, retirement, leisure and agriculture/aquaculture industries.
- ☞ Diversify the employment base consistent with social and environmental objectives as a means of increasing employment, incomes and the County's tax base.
- ☞ Foster an economy based upon high technology, heritage/recreational/ecotourism, retirement, leisure, farming, and aquaculture.
- ☞ Ensure the provision of high quality public facilities and services throughout the County, with an emphasis on those areas intended for business development.

Sustainability Issues:

Sustainable economic development is necessary in order to ensure the long term viability of the community. Economic development which is not sustainable may bring early benefits, but inevitably will undermine the favorable conditions which lead to those benefits, for example, a community which relies primarily upon one resource, such as the nuclear utility industry.

A sustainable community meets the needs of Calvert County residents in the following ways:

- *residential and commercial growth are balanced;*
- *a reasonable rate of diversified economic growth is encouraged and sustained to provide jobs for residents, increase incomes, and expand the tax base;*

- *the economy is diversified to assure a wide variety of job choices for County residents as well as insulate against cyclical swings in various sectors of the economy;*
- *economic development is supported by coordinating land development policies and the provision of public services; and*
- *new growth is accommodated in a manner respecting the environmental, fiscal, and social resources and needs of the County.*

History

Calvert County's economy has changed significantly in recent decades. For 300 years, the County's economy relied on the natural resources associated with fishing and farming. The Patuxent River and Chesapeake Bay yielded abundant seafood. Farming has relied on tobacco, which has been the primary crop and source of revenue. Early in the Twentieth Century, tourism and recreation began to play an important part in the County's economy when the towns of North Beach and Chesapeake Beach were developed. Solomons and areas along the Patuxent River emerged as places for fishing, marinas, and restaurants.

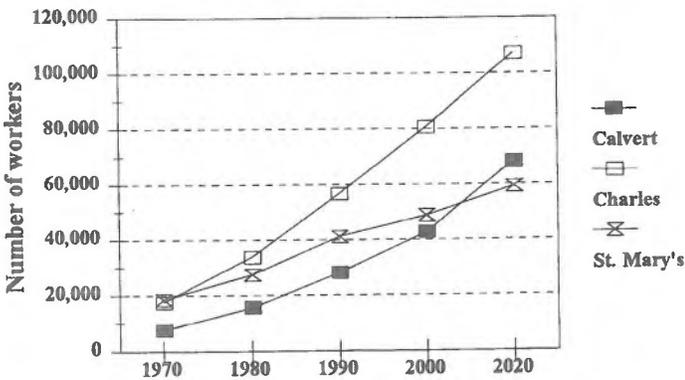
During the 1960's, the County's population growth began to accelerate as people moved out of the Washington Metropolitan Area. The County's economy shifted from one based on fishing and farming to one based on services for a commuter oriented society. Trade and services expanded and so did government and the construction sector.

During the early 1970's, the County's labor force numbered 5,800 workers and was not highly skilled. A substantial amount of retail trade and industrial activity was seasonal. Out-migration of younger workers and commuting to jobs outside the County, especially from the northern portion, were common. Unemployment had been considerably higher than the State or national rates. In this decade, major facilities were constructed: Calvert Cliffs Nuclear Power Plant, Columbia Liquid Natural Gas Plant, Calvert Memorial Hospital, and Thomas Johnson Bridge.

Labor Force and Job Trends

The County's labor force increased 80% from 15,570 persons in 1980 to 28,050 in 1990 (see Figure 3.A.) During the same period the County's overall population increased 48% from 34,638 to 51,372. Much of the increase in labor force has been the result of immigration of people who move to Calvert County yet work outside the County. In 1990 approximately 57 percent of workers commuted out of the County to work. The labor force is projected to increase to 42,640 by the year 2000 and to 68,230 by 2020. The County's labor force growth will out-pace the rate of job creation so that more people will have to travel out of the County to work.

Figure 3.A. Labor Force Growth, 1970-2020



Source: Bureau of Economic Analysis. Labor force is the population between 16 and 65 working or looking for work.

Calvert County has a highly skilled and professional labor force. The educational attainment of residents increased between 1980 and 1990. In 1980, 18 percent of the adults 25 years and over had less than a 9th grade education. This percentage decreased to 6 percent in 1990. The percentage of those who had high school degrees or higher education increased from 65 percent in 1980 to 79 percent in 1990.

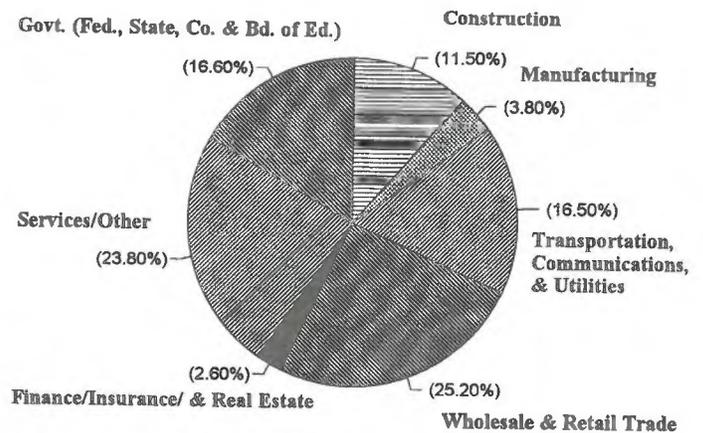
Approximately 17,500 jobs were located in Calvert County in 1990. The number of jobs more than doubled between 1980 and 1990, nearly twice the rate of job creation in Charles and St. Mary's Counties. Residents held approximately 77 percent of the jobs in Calvert County in 1990, a high percentage compared to

other Maryland counties. Job growth in the County is projected to continue at a rapid pace. Jobs are expected to increase from 17,500 in 1990 to 27,300 in 2020; however, if current trends are not modified, most of the job growth will be in lower paying sectors.

Calvert County showed the largest employment gains in the entire State of Maryland from 1989 to 1992. The number of private sector businesses in the County increased from 892 in 1989 to 1,109 in 1992, an increase of 24 percent. During this same time, private sector employers added 2,916 new jobs to the County. After factoring out statistical reporting changes for Baltimore Gas & Electric, Calvert County showed an average annual increase of 10 percent.

Most jobs in Calvert County are in services, retail trade, construction and utilities. Wholesale and retail trade comprised 25.2% of the County employment base, while services (including hotels and lodging places) constituted 23.8% (see Figure 3.B.).

Figure 3.B. Calvert County Employment Base, 1992



Source: MD Dept. of Economic & Employment Development

In 1980 there were 11 manufacturing firms in Calvert. By 1994, this number had increased to 39, an average annual increase of 10 percent (see Figure 3.C.).

Figure 3.C. Manufacturing Firms, 1980-1994

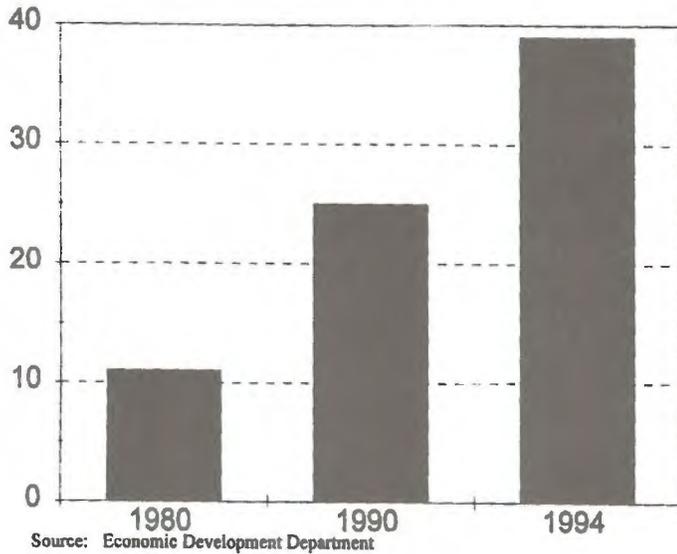
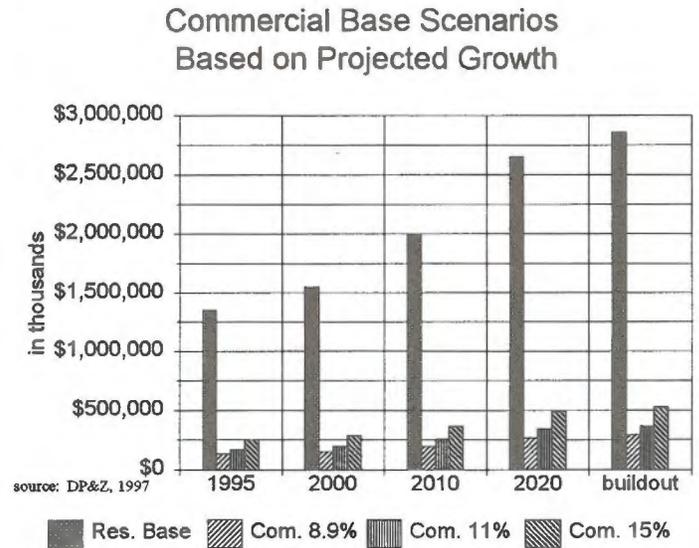


Figure 3.D. Impact of Travel on Calvert County, 1992



Tax Base

Calvert's total commercial base is 44 percent of the total assessable base. The per capita assessable base is the second highest of all Maryland counties. However, not counting utilities, the County's real property tax base is overwhelmingly residential, comprising 87.2 percent of the County's real property assessable base, while only 8.9 percent was commercial in 1995. The average commercial base as a percentage of the real property total base for Maryland counties and Baltimore City is 20.5 percent. While urban counties tend to have a higher commercial base percentage than rural counties, Calvert County's commercial tax base is the lowest in the State. Between 1990 and 1995, Calvert's percentage increased by 0.41 percent at a time when 19 out of 24 of the jurisdiction percentages declined. The Calvert County Economic Development Commission identified as a long range goal raising the commercial assessable real property tax base to 15 percent of the total assessable base. In 1996, the Economic Development Commission recommended increasing this tax base to 11 percent by June 2003 (see Figure 3.D.).

A healthy commercial and industrial revenue base is needed to offset the service costs of residential development. While the number of manufacturing firms has increased and the amount of the commercial base has increased, the overall percentage of commercial to total assessable base has not; residential growth has outstripped commercial growth. Since residential development costs more in public services than in revenues generated, this type of development contributes to the fiscal problems facing the County.

Tourism

Calvert County has many natural and cultural resources which appeal to both residents and tourists. Calvert's history as a recreation destination began at the turn of the century with the establishment of North Beach and Chesapeake Beach. The impact of the travel/visitor industry on the County's economy is significant. In 1992, visitors to Calvert County spent \$32.09 million. Local tax receipts totaled \$2.35 million (see Table 3.A.). In 1995, the visitor industry employed 1,636 workers in Calvert County, an increase of 5.4% over 1994.

Table 3.A.

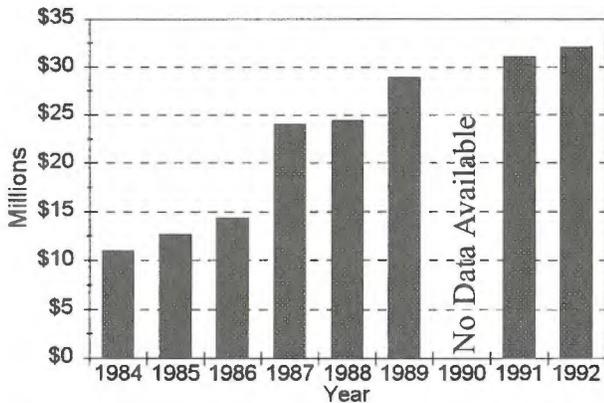
Expenditures	\$32.09	millions
Payroll	\$7.41	millions
State Tax Receipts	\$1.23	millions
Local Tax Receipts	\$2.35	millions

Source: U.S. Travel Data Center

Total travel expenditures increased from about \$11 million in 1984 to \$32 million in 1988 (see Figure 3.E.)

Figure 3.E. Travel Expenditures, 1988 to 1992

**Travel Expenditures
in Calvert County**



SOURCE: U.S. Travel Data Center Note: Holiday Inn opened in 1987.

Protecting Calvert County's natural and cultural resources is vital for tourism. Many tourists specifically visit to see natural attractions such as the fossil bearing Calvert Cliffs, the Cypress Swamp, and boating and fishing opportunities. They also visit man-made attractions, the two largest draws being the Calvert Marine Museum and the Calvert Cliffs Nuclear Power Plant. With Calvert's attractive waterways and shorelines, public access to the water is important both from a recreational and tourist standpoint.

It is important to protect natural and cultural resources not only for tourism, but also for attracting and retaining businesses. While factors such as business climate and location are the keys in business location decisions, quality of life can be an important contributing factor.

Agriculture and Fisheries

Agriculture has played a significant role in the County's history but, as in the rest of Southern Maryland, agriculture is no longer the primary economic sector. Calvert's economy was primarily based upon agriculture until the mid-1970's when Calvert Cliffs Nuclear Power Plant was built. According to the most recent U.S. Agricultural Census in 1992, the total market value of Calvert County agricultural products sold was \$6.4 million. Of the 400 farms in the County in 1992, 196 were operated by full time farmers. In 1987, there were 464 farms of which 242 were operated by full-time farmers. According to the Maryland Department of Agriculture, in 1995 the value of agriculture crops sold in Calvert County had increased by 30% from 1992 to a value of \$8.2 million. This figure includes only field crops and does not include greenhouse, timber, livestock and fruit sales.

Tobacco has been Calvert's primary crop. While there is a need to diversify away from tobacco, farmers in recent years have been reluctant to do so since tobacco's markets have remained steady, and to switch to crops with which they have no experience increases the potential for failure.

While a variety of crops can be grown in Calvert County, farmers need incentives and assistance to try new crops. Many programs currently exist through the Federal Department of Agriculture and the Maryland Department of Agriculture. Since Calvert County's farms are relatively small, an average of 93 acres in 1992, they are well suited for these strategies.

The preservation of farmland is important to maintaining Calvert County's quality of life. The County government has taken steps to help preserve farming and farmland through the Transferable Development Rights program, the Purchase and Retirement Fund, and the Farmers' Market in Prince Frederick. Nationwide, sprawl development is consuming agricultural land at approximately three million acres a year. Once farmland is converted to other uses, primarily residential subdivisions, it is effectively lost forever.

Calvert's seafood industry grew significantly during the turn of the century. During the 1890s, there were almost 900 oyster tongs operating in Calvert County waters. In 1901, Calvert ranked eighth in fishery production among Maryland's 16 tidal counties. Over the latter half of this century, the water quality of the Chesapeake Bay and its tributaries declined significantly. Bay-wide, oyster harvests have reached an all time low and actual numbers of oysters are estimated to be one percent of the historical population.

Town Centers

The Town Centers and incorporated municipalities are the focus of the County's commercial and employment activities. Prince Frederick is the seat of County government and is the logical location for governmental, educational and legal services. Prince Frederick's other attraction is the Calvert Memorial Hospital; many private medical professionals have offices in Prince Frederick. Being located in the center of the County, Prince Frederick also functions as a regional retail center.

Solomons' unique geography, location on the water, and historic atmosphere makes it well-suited as a recreation destination. With the Patuxent River Naval Air Warfare Center just across the river, Solomons' location and amenities are well suited for attracting high technology defense contractors to locate in the Solomons area. Additionally, Solomons will continue to be an attractive location for retired persons to locate, both in communities designed for retired persons as well as in existing neighborhoods.

Dunkirk has the potential to be the County's major employment center due to its location in the populous northern portion of the County with good access to Washington DC as well as proximity to the area's airports and metropolitan centers. Dunkirk currently serves as a retail and services center and significant growth in this area is anticipated.

The incorporated towns of North Beach and Chesapeake Beach are experiencing a resurgence in tourism and the development of small businesses. Strong economies in the two municipalities will

reinforce the County's economy. The County's economic development plans and efforts must coordinate with and reinforce those of the two municipalities.

Infrastructure

Infrastructure is needed to support the County's economy. Infrastructure includes roads and bridges, water and sewer, electricity, natural gas, communications, and the education system.

Transportation. MD 2/4 is the County's primary connection to the Greater Washington Metropolitan Area and is critical for moving workers and goods. MD 4 provides access north to Interstates 495 and 95. If MD 2/4 becomes significantly congested, there would be negative impacts on businesses that are in or serve the County. Calvert also has an interest in ensuring that roads in neighboring counties do not become congested. To the extent that roads are improved in Charles and St. Mary's Counties thereby allowing a freer flow of people and goods, Calvert will benefit.

Calvert County relies on air and water transportation facilities in other jurisdictions. Three major commercial airports (Washington National, Baltimore/Washington International, and Dulles International) are located from 45 to 72 miles away. The closest public airport is located in St. Mary's County, 25 miles south of Prince Frederick, but this facility is small and does not offer commercial service. The Port of Baltimore is one of the nation's largest seaports and is located 57 miles north of Prince Frederick.

A Tri-County regional airport would help attract large, high-tech businesses to the area. The previous airport study should be revisited and expanded to include the Tri-County area. The potential development of a Tri-County regional airport should be explored.

Electricity. Business and industry today not only are dependent on a reliable supply of reasonably priced electricity, but are more and more dependent on the power being "clean", that is, free of surges or voltage drops, and virtually uninterrupted. Even basic manufacturing firms, because of their ever increasing

use of computerized equipment, are as dependent on their power supply as their high technology counterparts.

Water and Sewer. Public water and sewer are necessary for many business and/or industrial activities and are desirable in all areas designed to have high concentrations of commercial activity. Public water and sewer services are currently available in Prince Frederick, Solomons, and the municipalities of North Beach and Chesapeake Beach and in the Calvert County Industrial Park.

Communications. In addition to the traditional utilities like electricity and gas, there is advanced infrastructure, such as fiber-optic networks and digital switching telecommunication services, which will be more important over the next 20 years. Access to information is as fundamental now as access to energy sources was in the industrial revolution. In addition to traditional print formats, a tremendous amount of information is accessible in digital format and in data bases available through computer networks. By encouraging advanced infrastructure, Calvert can link businesses to technology resources which may increase both their and the County's competitive edge.

Education. Our County schools and the Community College are infrastructure in the sense that they educate and train residents. A highly skilled work force is necessary for encouraging high-tech businesses to locate in the County. Partnerships between the business community and the schools can strengthen the County's economy. Refer to the Human Development and Life Long Learning section for more discussion.

Industrial and Commercial Sites

To maximize economic development opportunities, adequate acreage of properly zoned land must be provided so that businesses have a reasonable selection of sites. Current industrial zoning totals 2,234 acres with two major industries, Baltimore Gas & Electric and Columbia Liquid Natural Gas, owning 1,486, or 66% of these acres, most of which are buffer and will not be developed. The remaining 748 acres includes 57 acres of the Calvert County Industrial Park, which are

the only industrially zoned acres served by public water and sewer.

In the late 1980s, there was a severe depletion of vacant industrial land due primarily to the residential development of industrially zoned land and an increased level of industrial development. From 1980 to 1989, industrial development increased from 131 acres to 230 acres, an average growth rate of 6.5 percent. In order to create an adequate inventory of land suitable for development, the County, in 1993, established 1,040 acres of "Employment Center/Town Center" zoning which is an area where mixed-use commercial, light manufacturing, warehousing and research and development companies can develop. To date, no development has taken place in EC/TC zones. In addition to the EC/TC zoning, there are 4,122 acres zoned Town Center, which allows commercial development.

Economic Development Policies

The following Economic Development policies should be used to guide County departments and agencies in implementing and attaining the economic development goals of the County.

Provide for adequate amounts of land for business development in appropriate locations in Town Centers/ECTCs and seek to provide flexibility in zoning regulations as applied to business development. The geography of the County and the surrounding region and the development marketplace dictate that Calvert County have three major employment centers: Solomons in the south, Prince Frederick in the central, and Dunkirk in the north. These centers require a full complement of high quality public services in order to attract the high quality business desired for future development. The amount of land zoned for business must be sufficient to ensure that businesses are provided with a variety of location opportunities. This also allows the marketplace, not an insufficient amount of land, to determine land prices.

Work to retain and expand local firms when such expansion is consistent with the goals and policies of

this plan. Assisting local firms to grow is cost effective and helps to ensure stability in the local economy.

Provide the incentives needed to be competitive and attract businesses compatible with the overall objectives of this plan. Incentives may include loans, tax reductions, changes in taxing policies within State designated Priority Funding Areas, grants, infrastructure, and/or training or retraining for workers. Work with the development community to create incentives that will reward quality development that enhances public areas and spaces.

Expand business attraction efforts by making selected improvements in public services and facilities, where appropriate. In addition to traditional business attraction efforts, the County should actively seek non-traditional and emerging development opportunities. Both traditional and non-traditional development may require timely public investment in support facilities, infrastructure, services and flexibility in zoning and land use issues. The County should work to assure that support facilities, infrastructure and other public services such as police and fire services, will be available to assist in attracting business. This includes facilities critical to technology firms, but not necessarily controlled by the County, such as fiber optic communications systems. The County should work with its legislative delegation and state and federal regulators to assure that the County is not at a disadvantage with its neighbors and competitors in receiving these facilities.

Encourage business development where it is most accessible to employees, customers, and suppliers. Minimize costs and maximize the efficiency of public services and facilities. A combination of flexible development policies and incentives for preferred development should be used to help make Town Centers desirable places for businesses to locate. The County should encourage business development which utilizes available public services to the fullest, thereby reducing the cost to current users, as well as minimizing the need for additional facilities. The County should discourage development outside Town Centers/ECTCs

where public services cannot be provided in a cost effective manner.

The County's education system should provide general education, vocational and technical training and retraining to meet the skill requirements for existing and future job trends. The future of the Washington/Baltimore region appears to be inexorably tied to technology based businesses, especially those oriented to information management and life sciences. The region continues to experience increases in the number and size of technical and science businesses. In turn, this creates a need for more technical training and skills education at high school and college levels. Programs for training and upgrading the theoretical and applied knowledge base and understanding of technology and science-based business will help provide a labor force capable of filling future job opportunities. Such training will help improve the attractiveness of the County to those types of businesses, increase employment opportunities for residents, and raise their incomes.

Ensure business community input into the business development efforts of the County Staff. The County has established the Economic Development Commission to advise the County Commissioners on economic development policies. The input and involvement of the Commission in the development of economic policies for Calvert County is important and should be continued.

Work with traditional agriculture and fisheries businesses to ensure, to the extent possible, that their industries continue to thrive in Calvert County. In cooperation with state, federal and private interests the County will assist these traditional industries to seek new markets and alternative approaches to future efforts.

Actions

1. Create a five-year strategic plan for economic development and tourism consistent with the Comprehensive Plan.

Broaden and strengthen Calvert County's economy by targeting high technology businesses, agriculture, aquaculture, regional office space and the tourist industry, as well as targeting opportunities for retirement and leisure.

Review annually the strategic plan and adopt an annual action plan that forms the economic development work program for each year.

Ensure that both the five-year strategic plan and the annual work plans contain specific actions to be achieved and measures of performance so that success can be readily ascertained.

[ED]

2. Develop, implement and periodically assess effectiveness of incentives to attract and retain target businesses.

Facilitate development of one Town Center/ECTC office park in each election district by 2000. [ED]

3. Review periodically and assess cost and regulatory barriers to businesses locating or expanding in Calvert County and include efforts to reduce costs and barriers.

Maintain a fast-track permitting process for targeted businesses.

Review County regulations that are not consistent with adopted goals and objectives and amend as appropriate.

[P & Z, ED]

4. Permit water and sewer in all Town Centers when needed to support environmental health and/or to support targeted economic development when and if cost effective and economically feasible.

[ED, PW]

5. Review periodically and assess the operating structure of economic development and tourism to determine if it could be enhanced by adopting alternative structures or operating methods.

[ED]

6. Work to enhance partnerships with all public and private sector groups interested in economic and tourism development.

[ED]

7. Provide information that will help businesses decide about locating or expanding in Calvert County.

Maintain an updated County site inventory.

Conduct a County wage, labor availability and labor quality survey.

Conduct a labor force survey to verify characteristics of residents living in the County, but working outside the County.

[ED]

8. The Planning Commission will, within the year following the adoption of the Comprehensive Plan, identify problems and potentials of large retail stores and develop policies or guidelines to address them; addressing such issues as location, scale, and compatibility of adjacent uses.

[P & Z]

9. Encourage and promote the development of industries which do not significantly contribute to environmental degradation.

[ED]

10. Consider requesting changes to taxing policies in Priority Funding Areas (as approved by the state) to encourage investment in Town Centers. [A & F, ED, P & Z]

GOVERNMENT

Administration

Objectives:

- ☞ Maintain a strong public participation program in government decisions.
- ☞ Maintain present budget procedures and keep citizens informed of significant trends and information.
- ☞ Streamline permitting processes and periodically review regulations to eliminate unnecessary restrictions and duplications.
- ☞ Provide efficient, courteous services to the citizens .
- ☞ Periodically review County government structure to ensure that it is the most effective for the current situation and make sure information is readily accessible and understandable to the public.

Sustainability Issues:

Sustainable communities provide effective and efficient government to maintain and/or improve the quality of life of residents in the following ways:

- *County government evaluates trends and provides the leadership to deal with problems and challenges.*
- *County government services are timely, effective and designed to implement the Comprehensive Plan.*
- *As the County changes, quality of life is maintained or enhanced within the abilities of the local government to effect change.*

Effective Government

If it is effective, government represents the will of an informed public. For the public to be “informed”, several actions must take place. First, someone, typically the government and/or the press, must monitor trends pertaining

to the County, region, and state. That information would include crime, education, land use, revenues, expenditures, etc. Secondly someone must relay that information to the citizens. Finally, the citizens must have suitable avenues to receive that information, be able to evaluate it, and communicate their reactions to the government. Many counties employ a Public Information Officer to prepare and relay current information to facilitate citizen participation.

In addition to strong citizen participation, effective government is influenced by the form of government and the quality of management. The form of government can have an impact on effective communication and proper governmental response. In Maryland, the rules governing the functions and operating procedures of a County Commissioner form of government are determined by State law. These laws are made by the Maryland General Assembly. The Board of County Commissioners serves as the administrative branch. The legislative delegation, through the Maryland General Assembly, serves as the legislative branch. With this form of government, the legislative delegation has more influence over County decision making. New legislation is submitted annually to the General Assembly.

The State law governing the functions and administration of a County Commissioner form of government can be found in Article 25 of the Annotated Code of Maryland. Laws pertaining specifically to Calvert County can be found in the Code of Public Local Laws of Calvert County and in the resolutions of ordinances passed by the Board of County Commissioners.

Good management is reflected in the quality of service, compliance with legal and ethical requirements, and preparation for changes in service needs. Good managers properly train new and existing employees for completion of tasks and communication with the general public. Ethics are enforced. Periodic studies are conducted to ensure that staff and facilities reflect service needs and salary market conditions. An ombudsman, an appointed public official who investigates activities of government agencies, can help to ensure that citizens receive quality service.

Efficient Government

If it is efficient, government only performs the services best conducted by a governmental body. Other services are conducted by volunteers or the private sector. Thousands of tasks are performed by volunteers daily in the schools, libraries, fire and rescue squads, museums, recreation

programs, counseling programs, senior centers, etc. Such volunteer service not only helps to reduce government costs, it also helps to build a strong sense of community.

In some cases, it is not feasible to use volunteers, including when there are not enough volunteers, when service coverage must be guaranteed, or when volunteers do not have the expertise to perform the task. Wherever possible, volunteers, however, should be considered to perform services.

If volunteers are not an option for a new or existing task, another approach that should be pursued is privatization of services. If the County hires a private firm to perform tasks, operating costs can be cheaper and government building space can be reduced. Factors to be considered concerning privatization are:

- cost,
- proper accountability and adequate quality, and
- assistance to the local economy.

Actions

1. Appoint periodically committees, as needed, to review County services.
[CA]
2. Maintain a high standard of customer service and ethics among County employees.
[P]
3. Consider opportunities for privatizing County services, provided that:
 - a. they are cost effective and there is competition,
 - b. they are provide quality service and accountability, and
 - c. they are phased in and announced in advance so that local businesses have the opportunity to compete.
[CA]
4. Conduct periodic analysis of County government space needs, pay scales and positions to determine if they are in line with market conditions.
[CA]
5. Develop/maintain good directional signage for County facilities.
[GS]
6. Provide current information concerning the organization of County government including the functions and procedures of Departments, Boards, and Commissions. Seek ways to distribute copies, particularly to new residents.
[CA]
7. Review periodically County rules, regulations, and practices for elimination, combination, or clarification.
[CA]
8. Evaluate periodically the County computer system and make use of the new technology when it results in improved service.
[CA]
9. Among equally qualified applicants, give priority to hiring County residents.
[P]
10. Use the internet as one means of providing information to the public.
[ALL DEPARTMENTS]

Finance

Objectives:

- ☞ Ensure new development pays its fair share of the costs associated with growth.
- ☞ Continue to make the budgetary process readily accessible to the public.
- ☞ Maintain sound fiscal policies concerning public money investment, taxation, debt limits, and fund reserves.
- ☞ Encourage the diversification and growth of businesses to broaden the tax base.

Sustainability Issues:

Sustainable communities recognize long term fiscal trends and adopt policies which:

- *balance growth with the ability to provide services to maintain the quality of life;*
- *recognize the relationship between good fiscal health and good land use and economic development policies;*
- *meet the needs of current generations without overburdening future generations; and*
- *include citizen input in the budget decisions.*

Fiscal Trends

In 1997, Calvert County had the third lowest property tax rate on the western shore of Maryland and the seventh lowest in the State (out of 23 counties). Since 1975, the County has benefited from substantial revenues from the Baltimore Gas and Electric (BGE)

Power Plant in Lusby. In FY 1997, BGE paid over \$19,500,000 in local taxes, the equivalent of revenues from 142 Calvert Industrial Parks or 102 Fox Run Shopping Centers. Because of the plant, the County had the second highest per capita assessed personal property value in the State in FY 1997. Having such a large corporate taxpayer helps to keep the tax rate lower, but creates a dependency on one company.

Several revenue trends should concern residents. First, BGE revenues are expected to decrease as the plant depreciates. If the plant were to go “off line” when its license expires in the year 2016 and it is not relicensed by the Nuclear Regulatory Commission, the County would stand to lose a significant percentage of its revenues. According to the Assessment Office, if the plant were to cease operating today, the tax rate would have to be increased from \$2.23 to \$3.30 to make up for the revenue loss. For the average home (worth \$150,000), that would amount to a tax increase of \$642 per year.

A second trend is that state revenues to the County declined dramatically in the early 1990’s, with a cumulative loss between 1992 and 1995 of over \$12,000,000. As a result, costs were shifted to the County.

Finally, due to the recession in the early 1990’s, both real property assessments and corporate and personal property assessments did not grow as in the previous decade. Annual growth in real property assessments declined from 15.4% in 1993 to 3.7% in 1997. For the first time in over a decade, many homes actually declined in value and, on average, home values remained the same. Most of the 3.7% increase was due to new construction.

Corporate and personal property assessment changes fluctuated widely in the early 1990’s, and have been heavily influenced by whether or not BGE makes improvements to its facility. Without improvements, the facility will depreciate and assessed value will decrease, resulting in less tax revenue.

Expenditures - Capital Costs

Between 1970 and 1996, Calvert County was one of the fastest growing counties in the State, averaging over 4% residential growth per year during that period (compared to less than 1% for the State). For counties experiencing no growth or slow growth, citizens need only maintain facilities or build new facilities as desired. As Calvert's population has more than tripled since 1970, the County has had to build many new facilities just to maintain the same level of service.

Capital costs are expenditures to finance new facilities and large equipment. The greatest capital cost the County has faced has been school construction. In 1995, Calvert County had the highest student per dwelling ratio in the state. Between 1988 and 1996, the County constructed or funded the construction of seven schools. When all are completed, the total cost for capital construction, renovation, and major maintenance of schools will exceed \$66,500,000 over that period.

Finally, new detention facilities, fire and rescue stations, roads, water and sewer systems, recreational facilities, etc. have added another \$100,000,000 in capital expenditures over the last ten years.

So that new residents pay their fair share of the cost associated with growth, the County has imposed impact fees for schools, solid waste, and recreation facilities. The County has established "enterprise funds" for water and sewer and solid waste, which do not use funds from the County's operating budget. The school impact fees have generated over \$20,000,000 since the fees were adopted in 1988.

Expenditures - Operating Costs

Operating costs, which are used to pay for services, can be affected by inflation, number of citizens served, level of State support and level of services. While inflation slowed between 1985 and 1995, it still represented an increase of 40% (based on the Consumer Price Index) in the Washington metropolitan area. Over that same period, population growth in Calvert has been very high, accounting for a 57% increase. As mentioned

previously, State support to the County for many services decreased by \$12,000,000 between 1992 and 1995. Finally, new State laws have mandated new County programs and demands for services have also increased local costs.

County operating costs increased an average of 8.9% per year between 1988 and 1995. Board of Education operating costs rose an average of 10% per year for the same period. Increases include the staffing of four new schools. Using the current taxing rates, the County's operating budget is expected to exceed revenues around FY 2000, sooner if the state makes further cuts in funding directed to local governments.

Sound Governmental Fiscal Policies

Over the years, Calvert County has adopted several sound fiscal approaches, including maintaining limits on debt and maintaining an unreserved fund balance. Bond rating agencies have upgraded the County's bond rating twice in the past four years, a reflection of responsible fiscal decision making. In the next decade, other steps will be needed to contain government costs and reduce the costs of growth, in order to maintain fiscal health.

Limits on Debt

Most local governments borrow money for major capital projects, thus reducing fluctuations in annual budgets and passing part of the construction costs to all new residents who will be using the facilities. Local governments can, however, get into significant financial trouble if the annual debt costs are too high, particularly if the anticipated growth does not occur. Experts recommend that limits be set as to annual debt costs as a percentage of annual revenues depending on a government's financial situation and prospects. In the 1991, Calvert County set a limit of 6.8% of current revenue and is dedicated to staying within that limit.

Unreserved Fund Balance

Another sound fiscal policy is the maintenance of an unreserved fund balance, which can be used to meet unexpected budget demands. Each year, Calvert County develops a budget based on anticipated revenues and

expenditures. However, it is not always possible to anticipate decreases in revenue or increases in expenditures due to:

- national or regional recessions or a drop in revenue by one major source,
- unanticipated changes in the tax and spending policies of federal and state governments,
- imposition of mandates by federal and state governments,
- natural disasters, or
- court decisions arising from law suits.

With an unreserved fund balance, a local government can maintain the orderly provision of services to residents should one of these situations occur. Bond rating agencies also look at whether a local government has an unreserved fund balance, since the balance helps secure a government's ability to pay debt in times of economic uncertainty. The stronger the bond rating the lower the interest rate when a government borrows money.

Containing Government Costs

In light of revenue trends in the early 1990's, it appears that County revenues will grow approximately 4% per year, which is half the rate of growth of operating costs between 1988 and 1995. There are several steps that could be considered to contain costs:

- slowing residential growth since costs typically exceed revenues,
- reducing level of services,
- encouraging retirees to remain in or move to the County since they place fewer demands on schools,
- encouraging volunteerism in lieu of expecting government to provide all services,
- implementing new user fees where appropriate,

- privatizing services (i.e. contracting services to private firms) - see discussion in *Administration*
- implementing energy conservation (see *Energy, Public Facilities and Services*)
- identifying new funding services such as front footage assessment, a transfer tax, and State Rural Legacy Funds, and
- requiring a fiscal analysis prior to providing financial assistance to any commercial or residential project.

The Cost of Sprawl

Sprawl development results in decreasing investment in urban areas and increasing costs for rural developing areas. The Bank of America, a major lending institution, has endorsed a study stating that sprawl development is not a financially sound land use pattern. According to the study, sprawl affects taxpayers in a variety of ways, including:

- the cost of building and maintaining roads and other major infrastructure to serve distant suburbs,
- the cost of dealing with social problems that remain in the older urban communities when the middle class moves out, and
- the cost of solving environmental problems in the newly developed areas.

Businesses are affected by sprawl in the following ways:

- adverse impacts on the region's business climate, due to congestion and reduction in the quality of life,
- a geographical mismatch between workers and jobs, leading to lower worker productivity and higher labor costs (due to long commuting times and inability of some workers to get to where jobs are), and

- abandoned investments in older communities which become economically uncompetitive.

New residents who commute long distances are affected in the following ways:

- the cost of automobiles,
- lost time commuting to work and other destination,
- auto exhaust pollution, and
- rises in tax rates to provide and maintain new facilities and services.

Calvert County needs to make sure that new development pays its fair share. Otherwise, existing residents have to subsidize the costs of growth.

Expand Commercial Tax Base

The County needs to explore ways to build its commercial base to help balance the costs of residential growth. A County-wide effort to encourage more commercial/industrial development is needed so that diversity in the tax base can be achieved. At the same time, more cost-effective residential development patterns need to be explored.

Actions:

1. Maintain a budget system which allows adequate time for public review before a budget must be adopted.
[CA, A & F]
2. Maintain a ratio of debt service to total revenues in accordance with sound business principles.
[CA, A & F]
3. Periodically review investment practices and policies and ensure funds are monitored.
[A & F]

4. Maintain a sufficient unreserved fund balance as a means of maintaining strong credit ratings and dealing with lower than expected revenues from income sources.
[CA, A & F]
5. Adopt policies which discourage sprawl development.
[P & Z]
6. Encourage retirees to remain in or move to the County.
[ED, P & Z]
7. Develop and maintain cost containment measures to ensure revenues meet expenditures
[CA, A & F]
8. Maintain fiscal policies that require new development to pay its fair share of the costs of new facilities and environmental impacts.
[A & F, P & Z]
9. Explore ways to expand the commercial tax base (see Economic Development).
[ED]
10. Consider non-traditional funding sources to pay for the implementation of Town Center Master Plans and to preserve identified preservation areas.
[A&F]
11. Require a fiscal analysis to be prepared prior to providing financial assistance to any commercial or residential project.
[A&F, ED, P&Z]
12. Develop long term revenue/budget scenarios, including one without the revenues from an operating BGE Power Plant. Evaluate ways to deal with long term revenue shortfalls.
[A&F]

Public Facilities and General Services

Objectives:

- ☞ Provide public facilities to support planned growth.
- ☞ Ensure that new public buildings and grounds are built with multiple public uses in mind.
- ☞ Ensure that public facilities are energy/cost efficient, and easy to maintain.
- ☞ Whenever appropriate, locate public buildings in Town Centers.
- ☞ Provide and/or plan the development of infrastructure, such as roads, water and sewer, sidewalks, etc., to enable designated towns to develop.

Sustainability Issues:

Sustainable communities are dependent on good public facilities, including buildings, parks, and infrastructure (water, sewer, stormwater management, roads, and sidewalks). Sustainable communities provide public facilities and services in the following ways:

- *Public facilities and services are located in the Town Centers, if the use is appropriate for a town center.*
- *Public buildings are designed to accommodate a variety of uses.*
- *Public buildings are energy efficient and easy to maintain.*

- *Needed public improvements (i.e. water, sewer, and stormwater management) are planned and installed in areas where growth is to occur.*

Public Building Locations

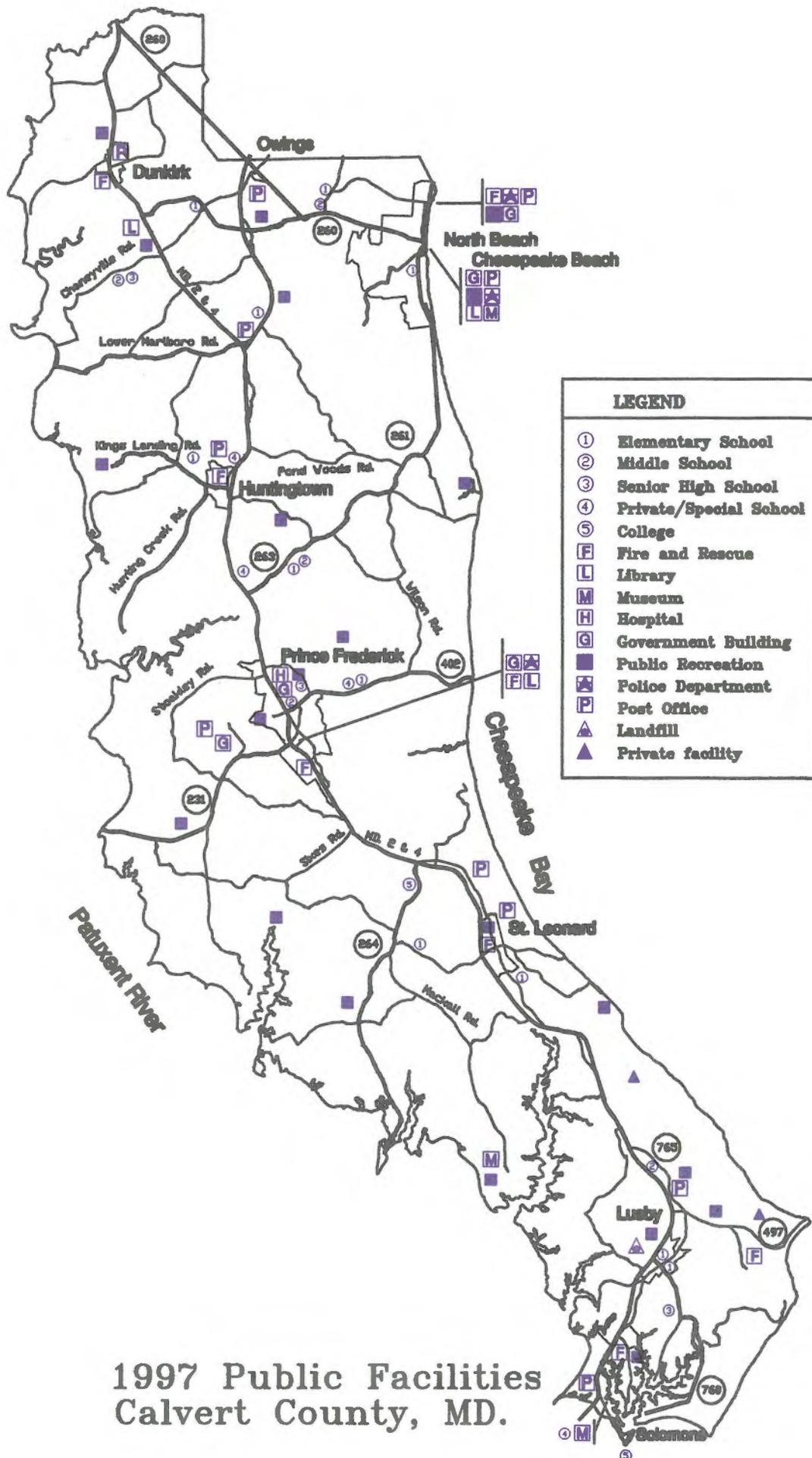
Public buildings help to create and define a town. They can establish a town's identity (i.e. the courthouse in Prince Frederick). Public buildings such as post offices, libraries, schools, clinics, and courthouses are frequent destinations and businesses often locate near these facilities to benefit from traffic they generate. Residents of towns also benefit from having public facilities and services within walking or bicycling distance, particularly those who are unable to drive.

In the last 40 years, many public buildings have been located in rural areas, away from Town Centers. With our reliance on the automobile for all transportation, public facilities have been directed toward the centers of service areas, rather than in Town Centers. While zoning regulations have required businesses to be in Town Centers, public facilities have been exempt from such requirement. Rural sites are less expensive to acquire, but can be more expensive in the long run, considering transportation costs and lost revenue for businesses.

Public Building Functions

Traditionally, public buildings were designed with one public use in mind (e.g. a library, post office or a school). In recent years, efforts have been made to build multi-purpose buildings such as Southern Community Center, which houses a library, senior center, counseling services, recreation center, etc. Also, the public schools have allowed the County Parks and Recreation Division to set up programs in the schools when they are not in session. Multi-purpose use of public buildings makes sense for many reasons, including:

- a reduction in overall County space needs, when compared with creation of separate facilities;
- a reduction in parking;
- one stop access to governmental services; and
- the opportunity for family members to attend different public functions/services while sharing modes of transportation.



1997 Public Facilities
Calvert County, MD.

Some County services need only office or meeting room space from which to operate. If it is cost effective to do so, such services should be located in multi-purpose space in all designated Town Centers. Consideration should be given to providing evening hours to serve those who commute and cannot use the services during working hours.

Other County services function best if centralized. For example, the courts system, along with the State's Attorney, the Sheriff's office, parole officers, etc., need to be located together to maximize efficiency. These uses should remain in Prince Frederick.

Public Buildings and Grounds Maintenance

After a new public building is completed, it must be maintained, along with the landscaping, heating and cooling equipment, paper goods, etc. As each building has been erected, there has been no attempt at standardizing the equipment. If several public buildings used the same heating equipment, then the County would be able to make bulk purchases of filters and other often replaced or disposable items. In addition, the local, public or private maintenance workers could be trained to do periodic maintenance or make repairs rather than having to hire specialists.

Landscaping must be designed and installed with maintenance in mind, with preference to indigenous materials and those that don't require frequent watering.

Community Water and Sewer

Whether or not community water and sewer exists has a significant impact on land use patterns. If they are allowed in rural areas, then those rural areas will develop. On the other hand, if Town Centers do not have water and/or sewer, then buildings will not be effectively concentrated, as called for in the Land Use Section.

Town Centers should have community water systems, so as to reduce the number of wells drilled into the aquifers. Each well site (particularly abandoned wells) represents an opportunity for pollution of the aquifers. Properly managed community wells, therefore, are preferred when economically feasible.

Designated Town Centers should be considered for community sewer systems. If properly designed, a community sewer system can have less impact on the environment than the equivalent number of septic systems, if nitrogen and phosphorus are removed during treatment. In the development of new systems and the expansion of existing systems, careful consideration should be given to the use of new technologies and alternative solutions, particularly those that reduce the impact on the environment.

During the preparation of this plan, many concerns were raised about whether or not community sewer systems would be needed for older communities recorded prior to the adoption of County zoning. In 1993, the Board of County Commissioners took steps to assure that all new construction will be on lots that can accommodate on-site septic fields. In deciding whether or not a system is appropriate for older dwelling units, the following will be considered:

- Are alternative technologies available that would not require construction of a system?
- What are the minimum number and location of lots that would have to be served?
- Can the cost be born by those benefitting from the system?

Regional Stormwater Systems

Changing land use from open land (which can absorb water) to developed land with impervious surfaces, such as asphalt, concrete, and roofs, increases stormwater runoff, which can cause stream sedimentation and erode stream banks. Increased stormwater runoff poses a direct threat to personal property when flooding results from seasonal rainfall and storm events.

State law requires that stormwater runoff be addressed during the development of a project. Typically, the stormwater devices are installed on site and require maintenance and inspections to ensure that they are still fully functional. There are several advantages to

developing regional stormwater management facilities verses individual (on site) systems, including lower construction costs, lower maintenance costs, and fewer inspections.

Most communities were designed before stormwater management was required. Many have stormwater management problem areas. Typically, these communities have no designated drainage swales or retention areas. State law allows the County to establish stormwater management districts, and it allows for a system for collection and allocation of money to solve the problems.

Timing of Infrastructure Improvements

To achieve the pedestrian-oriented Town Center called for in the Land Use section, infrastructure is needed. A grid pattern of streets is needed to provide opportunities for business and residential development, away from major highways. Water and sewer are needed to provide the concentration of buildings necessary to make pedestrian access feasible. Sidewalks and bikeways are needed to make such alternate transportation safe.

It is much cheaper to acquire sites and rights-of-way before most of a Town Center develops. Regional stormwater management facilities are often more effective and cheaper to maintain for all parties than individual on- site systems, but need to be planned before much development occurs.

Actions:

1. Be proactive in the development of infrastructure in Town Centers as called for in Town Center master plans.
[AF, GS]
2. Permit water and sewer in all Town Centers when needed to support environmental health and/or to support County identified economic development goals, when and if cost effective and economically feasible.
[PW]
3. Locate new public buildings in Towns Centers, wherever appropriate, consistent with the requirements of the Town Center plans.
[AF, GS]
4. Periodically conduct energy efficiency studies on public buildings and make cost effective improvements. Consider service of buildings with natural gas, if practical.
[GS]
5. Encourage or require architects of new public buildings to standardize equipment whenever feasible, and to consider the costs of maintenance, replacement and energy efficiency when designing new facilities.
[GS, PW]
6. Identify problem stormwater and drainage areas.
[PW]
7. Encourage communities with substantial stormwater management problems to petition for establishment and implementation of stormwater management districts.
[PW]
8. Evaluate the use of regional/shared stormwater management systems, on a case-by-case basis.
[PW, P & Z]
9. Require that County and State agencies review plans for any new public buildings to help promote efficient multi-use.
[A & F, PW, GS]
10. Consider using solar energy as a supplemental energy source (e.g. at the compactor sites).
[A & F, PW]
11. Consider function, aesthetics, and energy efficiency during site selection, site design and building design.
[A & F, PW]

Interjurisdictional Coordination

Objectives:

- ☞ Ensure coordination and cooperation between Calvert County government and other public agencies, quasi-public agencies, and elected officials.
- ☞ Make intergovernmental cooperation an integral part of planning by developing close working relationships between agencies.
- ☞ Work with the towns of North Beach and Chesapeake Beach, as well as the Tri-County Council of Southern Maryland, Anne Arundel and Prince George’s Counties, to achieve consensus on regional issues and policies.
- ☞ Encourage long-term consistency between the towns’ and the County’s plans.

Sustainability Issues:

Sustainable communities have timely interjurisdictional coordination that enables them to identify and resolve issues at the earliest possible stage when they are usually easiest to address and manage, including growth management, environmental protection, and economic development strategies.

Need for Coordination

Calvert County’s relatively small size and location next to the metropolitan areas of Washington and Annapolis make examination of our regional context extremely important. We are part of a dynamic regional economy, transportation network, agricultural land base, and natural resource system. We are influenced by the decisions of neighboring jurisdictions and we, in turn, influence our neighbors and the region.

The impediments to regional cooperation often lie in the

inability of local governments to overcome short-term interests to achieve long-term solutions. There is a tendency in county governments to create an attitude better suited for competition than cooperation.

The Calvert County Board of County Commissioners (BOCC) is not alone in making laws and policies that affect us. In addition to all the Federal and State legislators and agencies there are regional, local public, and quasi-public agencies not under the supervision of the BOCC. All of the laws and policies should be working in support of collective goals, which should be reflected in this Plan.

This Plan reflects our attitude toward interaction with our neighbors and all public and quasi-public agencies. The actions of the Plan are sensitive to the need to involve all parties in addressing interjurisdictional issues; thus helping all parties work toward common goals.

Coordination Opportunities/Needs

The following is a list of some of the agencies that operate and/or have regulatory control within Calvert County:

Federal	State	Other
Army Corps of Engineers	State Highway Admin*	Board of Ed.*
Coast Guard	Dept. of Natural Resources*	Liquor Board
Env. Protection Agency	Dept. of Environment	University of Md.*
Fed. Emer. Mgmt Agency	Critical Area Commission	
Fed. Com. Commission	Dept. of Social Services	
Department of Defense*	Dept. of Health & Mental Hygiene	
	State Board of Education	
	Dept. of Housing and Community Development	

* Agencies with facilities in Calvert County

Some of the important issues that these agencies need to consider with relation to their effect on the County:

1. access and public transportation availability;
2. police and fire protection;
3. protection of sensitive areas;
4. proximity to and support of Town Centers;
5. consistency with County goals and objectives.

The Comprehensive Plan's land use actions direct growth to areas where it can be most efficiently and economically served with existing public services and facilities. Town Centers will accommodate growth which would otherwise occur as scattered suburban development in the rural areas. The ongoing implementation of growth areas and non-growth areas will require much more than a regulatory process on the part of the County. Implementation will require a high degree of coordination and cooperation among all officials in County, State, federal, and special purpose agencies.

Existing Coordination Efforts:

Staff level coordination exists among many organizations. In addition, the following formal plans and oversight groups help to coordinate efforts:

1. Patuxent River Policy Plan
2. Maryland Office of Planning Clearinghouse
3. CHESPAX
4. Tri-County Council for Southern Maryland
5. Northeast Sector Plan
6. Jefferson Patterson Park and Museum Technical Planning Committee
7. Calvert Alliance Against Substance Abuse
8. Local Management Board

Actions

1. Maintain close cooperation with all government agencies in establishing consistent, effective decisions relating to issues such as an improved environment, a better business climate, and higher quality of life. Place special attention on the expansion of the Patuxent Naval Air Station.
[EDC]
2. Continue coordination of transportation planning and program with all appropriate State and regional agencies.
[P & Z, PW]
3. Minimize potential land use conflicts between incorporated towns and the County through coordination and development referrals, including the following:
 - a. review and approve proposed developments which are adjacent to or near town borders,
 - b. continue to coordinate capital improvement programs,
 - c. share staff and facilities where such sharing will improve public service capabilities and will avoid duplication of services and waste.
[P & Z]
4. Cooperate with adjoining counties and regional agencies to ensure that zoning and subdivision regulations permit compatible development along boundaries and the Patuxent River.
[P & Z]
5. Support State policies that concentrate growth in designated growth centers and policies that protect farm areas.
[P & Z]
6. Continue regular communication between agency counterparts in local, regional, and State governments.
[All Depts.]

A History Of County Planning

First Comprehensive Plan Calvert County's first Comprehensive Plan was adopted in 1967. A central focus of the plan was to retain the rural character of the County. Utilizing one of the few planning tools available at the time, the County adopted large lot (3 acre) zoning in an effort to minimize the impact of residential development on nearby farm operations and direct growth toward growth areas that were already developed.

Pleasant Peninsula Plan In 1974, the County adopted its first update to the Comprehensive Plan. Often referred to as the Pleasant Peninsula Plan, this document emphasized the need to protect the natural environment, maintain the County's rural lifestyle and limit the demand for public services. A primary goal was to promote "slow growth". Minimum lot sizes in rural areas were increased from three acres to five acres in a further effort to discourage development in these areas. This plan set a standard for encouraging strong public participation in the planning process that has been maintained ever since.

Farm Preservation Programs By the late 1970's, Calvert Countians recognized that while large lot zoning effectively reduced the number of households located within rural areas, it destroyed prime farm and forest land by taking it out of production permanently. To address this concern, Calvert led the State and much of the country in adopting the use of Transferable Development Rights (TDRs) to protect prime farms and forest land. The law enabled owners of prime land to sell their development rights on the open market. Shortly after the County adopted its Transferable Development Rights program, the State adopted a Purchase and Retirement Program (PAR) program. This allowed property owners of prime land to sell their development rights to the State. In 1993, the County adopted its own PAR fund to supplement the TDR program.

The combined voluntary use of County and State farm preservation programs had preserved over 10,000 acres of prime farm and forest land by 1995. This represented 50% of the 20,000 acres targeted for protection by the Calvert County Agriculture Preservation Board when the County's Agriculture Preservation Program began in 1978.

1983 Comprehensive Plan The County updated its Comprehensive Plan in response to two seemingly contradictory public mandates: to "protect rural character" and to "promote economic development". The primary means of fulfilling this mandate was to establish a series of Town Centers for the purpose of directing both commercial and higher density residential growth away from farms, environmentally sensitive areas and highways and toward areas that could be provided with adequate infrastructure and services.

Environmental Regulations During the 1980's, the County instituted strong conservation techniques to protect wetlands, flood plains and steep slopes. In 1989, the State mandated the establishment of a Critical Area within 1000 feet of the County's waterways. The allowable density within most of this area was reduced to 20 acres per dwelling unit. The Forestry Management Act, adopted in 1993 and designed to protect large contiguous forested areas, was also mandated by the State.

Adequate Public Facilities In 1988, the County adopted adequate facilities regulations to help ensure that schools and roads would be able to accommodate the rapid growth. During the early 1990's, this ordinance effectively stopped the approval of most new subdivisions until new schools could be built. An impact fee was imposed on all new development to help pay for new school construction.

Mandatory Clustering In 1992, large lot zoning again came under intense public review. Despite strong efforts and considerable success at preserving prime farms and forests, the County was leading the State in the amount of farm and forest land being converted to residential use. To address the problem, the County adopted mandatory clustering together with the designation of three sub-zoning categories: 1) Farm Communities, 2) Resource Protection Districts and 3) Rural Communities. This new provision required that lots be clustered onto 50% of any given parcel within a Rural Community and 20% of any given parcel within a Farm Community or Resource Protection District. Design standards were included to protect productive fields, forests and scenic vistas.

Employment Districts Also in 1993, a new zoning category called "Employment District" was adopted. Employment Districts were designated for non-retail related uses and were required to be adjacent to Town Centers in order to avoid commercial sprawl.