



2004 Comprehensive Plan Calvert County, Maryland

**Approved and Adopted
December 2004**



**CALVERT COUNTY
PLANNING COMMISSION**

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Prince Frederick, Maryland 20678
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Board of Commissioners
Gerald W. Clark
David F. Hale
Linda L. Kelley
Wilson H. Parran
Susan Shaw

November 24, 2004

Board of County Commissioners
175 Main Street
Prince Frederick, MD 20678

Dear Commissioners:

Transmitted herewith is the Planning Commission's proposed 2004 Comprehensive Plan for your approval and adoption. It includes consideration of all written and oral comments resulting from the public hearing held on October 26, 2004, as well as comments received from County organizations, groups, and individuals during the entire review and rewriting process. We believe that this document embodies the wishes of a vast majority of County citizens.

As you well know, the Comprehensive Plan is the County's overall planning document that lays out the direction for actions by the Board of County Commissioners, all County departments and agencies and all County appointed committees and commissions.

The Planning Commission, at its regular meeting of November 17, 2004, took formal action to approve the proposed revised Comprehensive Plan and forward the Plan to the Board of County Commissioners as required by State law. This action culminates a nearly two-year period of self-examination that reviewed progress in implementing the 1997 Plan and assessing the need for course corrections and additions. This task has required an extensive effort by the Planning and Zoning staff which lead the way. In addition to hundreds of hours of in-house analysis, the process involved many night meetings with liaison groups, civic organizations, and citizens to glean a sweeping perspective of visions for the County's future.

The Planning Commission stands ready to meet with you to discuss all aspects of the Plan if you should desire clarification or amplification of the details contained in the document.

Sincerely,

John R. Ward
John R. Ward,
Chairman

RESOLUTION NO. 03 - 05

PERTAINING TO THE ADOPTION OF THE COMPREHENSIVE PLAN

WHEREAS, pursuant to the authority contained in Article 66B of the Annotated Code of Maryland, the Board of County Commissioners of Calvert County, Maryland has general powers to promulgate and amend comprehensive plans, zoning maps and ordinances; and

WHEREAS, after due notice was published, the Planning Commission and the Board of County Commissioners of Calvert County conducted a joint public hearing on October 26, 2004, at which time the proposed 2004 Comprehensive Plan was discussed and public comments were solicited; and

WHEREAS, after holding the public hearing, the Planning Commission made changes, including updating of information and clarification of issues, and made its final recommendations to the Board of County Commissioners by letter dated November 24, 2004; and

WHEREAS, on December 8, 2004 the Board of County Commissioners requested that the Planning Commission make one additional change for clarification, which change was made by the Planning Commission on December 9, 2004; and

WHEREAS, the Board of County Commissioners met in public session on December 14, 2004 and determined to adopt the Comprehensive Plan.

NOW, THEREFORE, BE IT RESOLVED AND ORDAINED, by the Board of County Commissioners of Calvert County, Maryland, that the 2004 Comprehensive Plan BE and hereby IS adopted as the official Comprehensive Plan for Calvert County, Maryland to replace the 1997 Calvert County Comprehensive Plan, as shown in Exhibit A, attached hereto.

DONE, this 11th day of January, 2005 by the Board of County Commissioners of Calvert County, Maryland, sitting in regular session.

ATTEST:

BOARD OF COUNTY COMMISSIONERS
OF CALVERT COUNTY, MARYLAND

Constance E. Clark
Clerk

David F. Hale
David F. Hale, President

Approved for legal
sufficiency on 1/3/05
by *[Signature]*

Gerald W. Clark
Gerald W. Clark, Vice-President

Emanuel Demedis
County Attorney

Linda L. Kelley
Wilson H. Parran
Wilson H. Parran

Received for Record 1-11-2005
at 3:39 o'clock PM Same day
recorded in Liber KPS No. 22
Folio 1-3 COUNTY COMMISSIONERS
ORDINANCES AND RESOLUTIONS

Susan Shaw
Susan Shaw

Gary P. Smith

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OVERVIEW

Purpose of the Comprehensive Plan

The Comprehensive Plan (Plan) is the official policy document for the County. The Board of County Commissioners, the Planning Commission and County Departments use the Plan as a guide when evaluating proposed projects or changes to the Zoning Ordinance. The State uses the Plan to determine whether or not to provide state funding for a local project (e.g. Rural Legacy, Community Legacy, public infrastructure, Community Development Projects, etc.). Bond rating agencies look at the Plan to see if the County is using resources wisely and in a coordinated fashion. Prospective business owners use the Plan to help them make investment decisions. Residents use the Plan to evaluate how well County government is responding to the goals and objectives written in the Plan.

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 visions and benchmarks are listed below.

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 proposed 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 the 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.

Project Funding

The County's Capital Improvement Program budget reflects the goals established in the Comprehensive Plan and the subordinate plans adopted by the County Commissioners. The CIP schedules projects over a six-year span, based on severity of need, public safety, Commissioners' priorities, and the availability of funding. This plan is updated annually to more accurately reflect current needs and trends. Only those projects planned for implementation in the upcoming fiscal year are actually approved for funding. Each project is tied to a specific reference in the Comprehensive Plan.

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.

- At least 40,000 acres of farm and forestland are preserved.

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

- 35% 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 2008.

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

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

Our highways are safe with only moderate congestion and public transit is readily available. Walking and bicycling are practical alternatives.

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

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

- At least 20% of household and commercial waste is recycled.
- At least 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 (compare with state average of 5,800)

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

- The County provides 30 acres of public access open space per 1,000 residents.
- Increase the graduation rate of Grade 12 from the 2003 rate of 87.76 percent.
- Decrease the drop out rate for Grades 9-12 from the 2003 rate of 2.71 percent.
- Increase the percentage of the population age 25 years and over who are a high school graduate (includes equivalency) or higher (86.9 percent, 2000 Census)

We are stewards of our cultural heritage.

- All students are exposed to a County heritage curriculum.
- A database of County heritage resources is developed and published.

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 \$459 million in 2002 to \$598 million by 2007.
- In-County jobs are increased by 2,700 from 2002 to 2007 (15,607 to 18,307 in-county jobs).
- The number of visitors is increased from 471,321 in 2002 to 573,000 in 2007.

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

- The ratio of debt service to total revenues is not to exceed 9.5%.

COUNTY DATA							
LAND				<p>The map shows Calvert County, Maryland, with arrows pointing to its location on the Eastern Shore. Key locations marked include Washington DC, Dunkirk, Prince Frederick, and Solomons.</p>			
Length	30 miles						
Width	9 miles (at widest point)						
Total Area	220 square miles; 140,000 acres						
Length of Shoreline	101 miles						
Distance from Prince Frederick to D.C.	46 miles						
Distance from Prince Frederick to Baltimore	64 miles						
PEOPLE							
Population & Households							
Year	1970	1980	1990	2000	2010	2020	Projected Build-out
Persons	20,682	34,638	51,372	74,563	91,000	96,000	100,000
Households	5,540	10,731	16,986	25,447	31,967	35,367	37,000
Persons Per Household	3.70	3.21	3.01	2.91	2.85	2.71	2.7
General Demographic Characteristics, 2000							
Male	36,767	49.3%	White, only			62,578	83.9%
Female	37,796	50.7%	Black or African American, only			9,773	13.1%
Under 5	5,077	6.8%	American Indian & Alaska Native, only			220	0.3%
5-19	18,723	25.1%	Asian, only			655	0.9%
20-64	44,136	59.1%	Native Hawaiian & Other Pacific Islander, only			21	--
65+	6,627	8.9%	Some other race, only			368	0.5%
Median age	35.9		Two or more races			948	1.3%
			Owner occupied housing			21,679	85.2%
ECONOMY							
Median Household Income						\$65,945	
Persons below poverty						4.4%	
Persons in civilian labor force						38,786	
Persons in civilian labor force unemployed						1,182 (3.3%)	
Persons in Armed Forces						555	
Mean Travel Time to Work						39.8 Minutes	
GOVERNMENT							
2004 Total Revenues/Expenditures						\$151,643,504	
2004 Real Property Tax Rate						\$2.23 Per \$100 assessed value	

CHAPTER I: LAND

Land Use & Growth Management

Objectives

- 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 and aquaculture region, resource protection area (i.e., "greenbelt"), and retirement community.
- Manage the amount and rate of residential growth.
- Preserve the rural character of the County, its prime farmland, contiguous forests, historic resources, and environmentally sensitive areas.
- Develop town centers as attractive, pleasant, and convenient places to live, work, and shop.
- Direct commercial and industrial uses to appropriate locations; provide necessary infrastructure.
- Direct residential growth to appropriate locations; ensure a wide range of housing opportunities for all incomes and ages; maintain and enhance the quality of residential communities.

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 is anti-sprawl.*
- *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 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 people in 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. Areas like Calvert County that lie at the outer edges of metropolitan areas should be maintained as natural resource protection areas, farming regions, and vacation/recreation /retirement areas. This approach would help to:

- Conserve natural resources.
- Maintain a healthy environment.
- Promote the health and well-being of residents throughout the region.
- Reduce expenditures for public infrastructure.
- Maintain a regional source of agricultural and forest products.

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 ensure the achievement of 1 through 5 above, economic growth is encouraged and

regulatory mechanisms are streamlined.

- 7. Funding mechanisms are addressed to achieve these visions.

Land Use Plan

In order to promote Calvert County as a desirable location for high-technology industries, vacation destination, farming region, resource protection area, and retirement community, Calvert Countians must continue to:

- Manage the amount and rate of residential growth.
- Preserve the rural character of the County, its prime farmland, contiguous forests, historic resources, and environmentally sensitive areas.
- Develop town centers as attractive, pleasant, and convenient places to live, work, and shop.
- Direct commercial and industrial uses to appropriate locations and provide necessary infrastructure.
- Direct residential growth to appropriate locations and ensure a wide range of housing opportunities for all incomes and ages.
- Maintain and enhance the quality of residential communities.

Manage the Amount and Rate of Residential Growth

The number of households in Calvert County increased from 5,540 in 1970 to 25,447 in 2000. During most of that 30-year period, Calvert County was the fastest growing County in the State. Two major objectives in the 1997 Comprehensive Plan were to:

- Establish measurable benchmarks to determine appropriate residential buildout.
- Reduce the rate of residential growth in order to limit highway traffic congestion, maintain good schools, maintain sound fiscal policies, and preserve rural character.

Soon after the adoption of the 1997 Plan, the Planning Commission conducted a thorough analysis of the costs and benefits of reducing buildout. More than 20 different buildout reduction options were developed for public review and comment and a program to reduce buildout to 37,000 households was adopted in

March 1999. The program included a combination of zoning ordinance changes, new funding for land preservation, and incentives which, taken together, reduced buildout by nearly 11,400 households.

In 2003, the Board of Calvert County Commissioners (BOCC) requested a status report on how well the adopted changes were working. At the same time, they reiterated the goal of limiting buildout to 37,000 households. The status report indicated that projected buildout had been reduced from an estimated 54,000 households to 42,600 households. The BOCC asked that additional buildout reduction options be presented to the public for review and comment. A joint public hearing with the Planning Commission was conducted in October 2003 and additional buildout reductions were adopted in December 2003.

A review of the existing Adequate Public Facilities Ordinance (APFO) was conducted in 2000 – 2001 and changes that strengthened the ordinance were adopted by the BOCC in May 2001. The APFO was again reviewed in 2003. Changes to further strengthen the ordinance were adopted in December 2003.

Actions
I-1 Continue to support policies that link the amount and rate of residential growth to County land use objectives, including highway, school, and aquifer capacities. [P&Z]
I-2 Monitor residential growth and evaluate the effectiveness of existing regulations to meet growth management objectives. [P&Z]

Preserve the Rural Character of the County, its Prime Farmland, Contiguous Forests, Historic Resources, and Environmentally Sensitive Areas

Ever since the first Calvert County Comprehensive Plan was adopted in 1966, one of the County’s primary goals has been the preservation of its rural character. In addition, the ability to develop a sustainable economy based upon high technology, heritage, recreation, ecotourism, retirement, leisure, farming, and aquaculture depends first on preserving

prime farmland, contiguous forests, historic resources, and sensitive areas.

In 1999, Calvert County celebrated the enrollment of 20,000 acres of prime farm and forestland in County and State land preservation programs. A goal to preserve an additional 20,000 acres was adopted that year. To help meet the new goal, the County allocated an additional \$2,000,000 per year toward land preservation including an additional \$500,000 added to the Purchase and Retirement (PAR) Fund, \$500,000 in local support for the Maryland Agricultural Land Preservation program, and \$1,000,000 for a new County leveraging program. The County also actively participated in the Maryland Rural Legacy Program. By June 1st, 2004, 22,291 acres had been preserved.

The preservation of historic structures and landscapes has been less successful. Too often, older buildings are bulldozed to accommodate new development and rural landscapes are routinely converted into residential subdivisions. The continued loss of these features threatens to undermine the objective of preserving the rural character of the County and developing heritage and ecotourism. In 2004, the National Trust for Historic Preservation named Southern Maryland tobacco barns as one of America's 11 most endangered places. This designation opened up new possibilities for the preservation of these beautiful and culturally important structures.

Actions

- I-3 Reserve Farm Community and Resource Preservation Districts (Priority Preservation Areas) for farming and natural resource-related uses and direct residential growth away from these areas. [P&Z]
- I-4 Continue to support the goal of permanently preserving a minimum of 40,000 acres of prime farm and forestland through County, State, and federal land preservation programs. [P&Z]
- I-5 Continue to support and strengthen the Purchase and Retirement 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. [P&Z, F&B]

Actions Continued

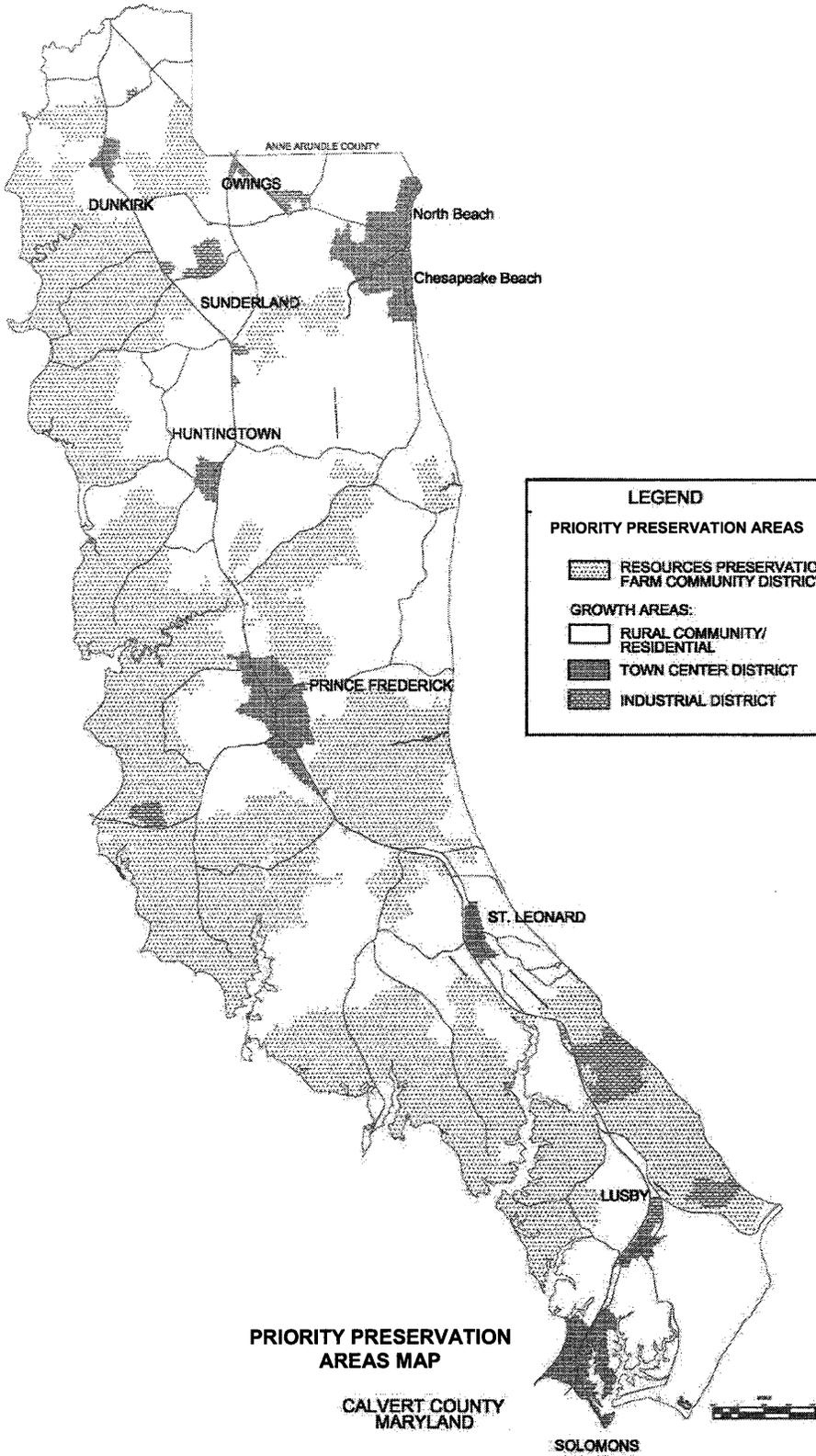
- I-6 Protect the scenic quality of existing rural landscapes and vistas. [P&Z]
- I-7 Work with the Calvert County Tourism Advisory Committee to explore opportunities for developing heritage sites and ecotourism. [P&Z, ED]
- I-8 Continue to support the land preservation efforts of local, State, and national land trusts. [P&Z]
- I-9 Provide local support to the Maryland Agricultural Land Preservation Program and other State and federal agricultural preservation programs. [P&Z]
- I-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, F&B, BOE]
- I-11 Do not increase highway capacity within the Farm Community or Resource Preservation District. [PW]
- I-12 Wherever possible, reduce negative environmental impacts of subdivision roads and make them visually compatible with the rural character of the surrounding area while maintaining road safety. [P&Z, PW]
- I-13 Strengthen regulations and incentives governing the preservation of older structures. [P&Z]

Develop Town Centers as Attractive, Pleasant, and Convenient Places to Live, Work, and Shop

The 1983 Comprehensive Plan called for the creation of town centers in order to accomplish several goals:

- Avoid scattered and/or strip commercial development along MD 2/4.
- Expand the choice of housing options by providing zoning and infrastructure for multifamily development, including low- and moderate-income and elderly housing.
- Reduce dependence on vehicles.
- Reduce growth within agricultural and forest 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, North Beach and Chesapeake Beach followed shortly thereafter.

The 1983 Comprehensive Plan also 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 higher density with the purchase of Transferable Development Rights.

Town centers are the County's primary designated growth areas. Thanks to active citizen participation in the development and implementation of Master Plans, town centers are becoming increasingly attractive and pleasant places to live, work, and shop. As town centers continue to improve, they will help attract the types of commercial uses that generate increased tax revenues and high-quality jobs and provide amenities that attract both visitors and retirees.

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 provision of adequate roads, water, wastewater systems, public transportation, and high-quality internet communication systems, 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 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

- I-14 Continue to promote a broad mix of commercial, office, residential, public, and quasi-public development within town centers. [P&Z]
- I-15 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.
- I-16 Allow both major and minor Town Centers to have community water and sewer.
- I-17 Promote town centers as community cultural and activity centers by locating schools, colleges, recreational, and cultural facilities within or adjacent to town centers. [GS, F&B]
- I-18 Continue to improve the appearance of town centers by emphasizing Town Center Master Plan Capital Improvements Projects and Architectural Review. [P&Z]
- I-19 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]
- I-20 As Master Plans are revised, look for ways to preserve and enhance the unique character of each town center. [P&Z]
- I-21 Consider ways to strengthen regulations regarding derelict buildings. [P&Z]
- I-22 Develop a schedule to review and update Town Center Master Plans. [P&Z]

Additional town center actions are listed in the remaining sections of this chapter.

Direct Commercial and Industrial Uses to Appropriate Locations and Provide Necessary Infrastructure

Commercial uses include industries, offices, services, retail, wholesale, marine-related businesses, farming, and forestry. Providing appropriate locations for these uses will not only help ensure that they have the infrastructure they need, but will also help to reduce the potential for conflicts and negative impacts that

can be associated with some commercial uses. Design standards can further help minimize these conflicts and negative impacts, allowing for more mixed-use development that can enhance quality of life as well as economic opportunity.

Commercial Uses in Town Centers

Town centers are the primary locations for most commercial uses except for farming and forestry. They promote business growth by providing infrastructure and enabling businesses to benefit from proximity to each other (agglomeration economies). They also promote business growth by providing attractive, mixed-use settings where offices, stores, restaurants, and homes are all within close proximity to each other. The strategy of directing commercial growth to town centers has been in effect since the adoption of the town center concept in the 1983 Comprehensive Plan. It has proven to be highly effective as a means of developing strong business growth.

Actions

- I-23 Continue to direct commercial growth to town centers. [P&Z]
- I-24 Continue to provide for the construction and maintenance of public infrastructure to support business growth such as roads, water and sewer, and high-quality communication systems in accordance with town center master plans. [PW]
- I-25 Promote strong business growth in town centers. Identify and implement ways to improve growth in town centers. [P&Z]
- I-26 Major town centers are to serve as regional centers, providing goods and services that attract visitors from the entire County and/or from outside the County (as in tourism). Minor town centers are to serve as local convenience centers unless individual town center master plans determine otherwise. [P&Z, BOCC]

Commercial Uses in Employment Centers

Employment Centers/Town Centers (EC/TCs) were established in 1992 in order to provide space specifically for targeted industries, such as high-

technology firms and research industries. The intent is to restrict retail and service uses in these districts in order to reserve adequate and flexible space for high-revenue-generating uses that provide high-quality jobs for County residents. In order to provide these types of uses with needed infrastructure, the County has a long-standing policy of only allowing EC/TC Districts to be located adjacent to town centers. That policy should be continued.

Actions

- I-27 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]
- I-28 Restrict retail and services uses in the Employment Center/Town Center District in order to reserve the EC/TC District for targeted businesses. Look for additional ways to encourage and promote these types of uses within the EC/TC District. [P&Z]
- I-29 Develop a long-range Infrastructure Plan for the EC/TC District. [P&Z]
- I-30 Maintain an inventory of EC/TC land. [P&Z]

Strip Commercial Development

One of the primary reasons for developing the town center concept in 1983 was to prevent any further “strip commercial development” along Calvert County’s highways. This type of development contributes to traffic congestion, increases the potential for highway traffic accidents, reduces the drawing power of commercial uses by preventing them from benefiting from proximity to other commercial uses, reduces the ability of government to provide needed infrastructure, and detracts from the visual beauty of the countryside.

Several commercial uses already existed in scattered locations along roadways before the town center concept was adopted. These uses are currently zoned as Rural Commercial (RC) Districts. Some of these districts are already developed for commercial use and many of them continue to be owned and managed by

local business people who provide valuable services to the community. At the same time, many of these sites have substantial redevelopment and expansion potential, which can undermine the town center concept and contribute to traffic congestion and highway traffic accidents. Regulations are needed to help ensure that these commercial uses maintain their existing small scale, rural character, and/or are phased out over time.

It is also imperative that the County continues to avoid creating new opportunities for strip commercial development along highways, except in existing, designated areas within existing town centers.

Actions

- I-31 Avoid the potential for strip commercial development along highways by using the following policies [P&Z, ED]:
 - a. Do not permit additional commercial development along highways outside town centers.
 - b. Do not expand existing town centers along MD 2, MD 4, or MD 2/4. In addition, do not expand Huntingtown, St. Leonard, or Lusby across MD 2/4 or Owings across MD 2.
 - c. Do not designate additional town centers.
 - d. Do not allow commercial uses to have direct access onto MD 2/4 in Huntingtown, St. Leonard, or Lusby.
 - e. Prohibit the expansion of rural commercial districts.
 - f. Evaluate existing regulations governing rural commercial uses and make changes as needed to ensure that they maintain their existing small-scale rural character.
 - g. Require that rural commercial properties meet the same site design and architectural design standards that are required for businesses that locate within the nearest town centers.
 - h. Develop a plan for phasing out some or all RC districts.

Commercial Uses in the Rural District

Very few commercial uses are permitted in the Rural District (RUR) and several of those that are permitted

have created conflicts in the past. A thorough review of commercial uses within the RUR District is needed.

As a general policy guide, commercial uses in the Farm Community and Resource Preservation Overlay Districts (FCDs and RPDs) within the RUR District should be limited to uses that support, complement, and promote farming, forestry, heritage, and ecotourism. Commercial uses in the Rural Community District should be more strictly limited to help avoid drawing traffic onto rural roads and creating conflicts with existing residential communities.

Actions

- I-32 Maintain a strong economic development program to promote agriculture and aquaculture, including the marketing of County-produced farm and fishing products. [ED]
- I-33 Maintain a strong program to promote forestry management, including timber harvesting and the maintenance of wildlife habitat protection areas. [P&Z]
- I-34 Consider permitting low-impact supplemental income opportunities within the Farm Community and Resource Preservation District that support, complement, and promote farming and heritage/ecotourism. [P&Z]
- I-35 Limit commercial uses in the Rural Community District to help avoid traffic congestion and conflicts with existing residential communities. [P&Z]

Commercial and Industrial Uses in Industrial Districts

Industrial Districts (I-1) are intended to provide areas in the County that are suitable for light industrial uses free from other uses which might affect such development.

Actions

- I-36 Maintain an inventory of Light Industrial (I-1) land. Periodically evaluate the need for additional I-1 land as part of a comprehensive rezoning process. [P&Z, ED]
- I-37 Allow EC/TC uses and restrictions in I-1 Districts when adjacent to town centers. [P&Z]

Commercial Uses in Marine Commercial Districts

Marine Commercial (MC) 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

- I-38 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]
- I-39 Allow maximum utilization of areas zoned Marine Commercial (MC) without causing significant adverse effects on aquatic resources, visual aesthetics, or neighboring residential uses (e.g., outdoor lighting projecting onto residential property.) [P&Z]
- I-40 To enhance tourism and guard against environmental degradation, conduct a study of County waterways, including issues related to derelict or sunken boats, mooring buoys, commercial boat sewage pumpout into sewer systems, outdoor lighting, unsightly vessels, boat lifts, and Molly's Leg. [P&Z]
- I-41 Request enabling legislation for the County to take control of its waterways in town centers. [P&Z]

Direct Residential Growth to Appropriate Locations; Ensure a Wide Range of Housing Opportunities for All Incomes and Ages; Maintain and Enhance the Quality of Residential Communities

Residential Land Use Patterns

Residential development has followed several different patterns throughout the history of Calvert County. Until the early 20th Century, most people lived and worked on farms. The small towns of North Beach, Chesapeake Beach, Prince Frederick, and Solomons were exceptions.

Until the late 1960s and early 1970s, most newcomers tended to settle in small-lot communities along the Chesapeake Bay. Most of these communities were created prior to the adoption of zoning in 1967 and had originally been designed for seasonal use only. In the 1970s, large-lot residential subdivisions began to replace farms, becoming the dominant residential land use pattern in the County. Only during the last decade have significant numbers of households settled in town centers.

By 2002, 42% of all households were located in small-lot communities created prior to the adoption of zoning in 1967, 43% lived in subdivisions in the RUR District, and 15% lived in town centers.

Each of these residential land use patterns presents challenges:

- *Residential Development in Town Centers and Areas within a One-Mile Radius of Town Centers*

Town centers and the area within a one-mile radius of town centers are the County's primary residential growth areas. It is important to evaluate current development standards to ensure that these areas develop efficiently and that they provide the kinds of amenities that are associated with good towns. These include sidewalks, bikeways, parks, pedestrian access to stores, offices, places of worship, libraries and schools, a low crime rate, good public services, and building and community design that serves a wide range of ages, interests, and incomes.

Actions

- I-42 Continue to permit a higher residential density with the use of Transferable Development Rights (TDRs) within a one-mile radius of the perimeter of North Beach, Chesapeake Beach, Prince Frederick, and Solomons; continue to permit a higher residential density with the use of TDRs within a one-mile radius of a defined central point within Dunkirk, Owings, Huntingtown, St. Leonard, and Lusby. [P&Z]
- I-43 Allow multi-family housing (apartment and townhouses) in major Town Centers; do not allow multi-family housing in minor Town Centers except as may be permitted in Town Center Master Plans. [P&Z]

Actions Continued

- I-44 Work with area residents and builders to establish new design standards for residential neighborhoods within a one-mile radius of town centers. Connect residential neighborhoods to town centers by way of non-arterial roads, bikeways, and sidewalks. [P&Z, PW]
- I-45 Identify and require or encourage amenities that will help retain and attract retirees. [P&Z]
- I-46 Conduct a study to determine why retirees choose to move out of the County and look for ways to encourage them to stay. Include a cost/benefit analysis. (Complete by 2005). [P&Z]

• *Residential Development in R-1 and R-2 Districts*

The challenge in small-lot communities, all of which are zoned R-1 or R-2, is that they were developed before many of the health and safety regulations that govern the layout and design of newer communities were adopted. Consequently, a number of these communities are experiencing problems with sewage disposal, stormwater management, and roads. Residents in these communities have also expressed concerns about the need for more than one road entrance in case of emergency and the need for more recreational facilities. The BOCC appointed a Private Infrastructure Advisory Committee to look into issues specifically related to these communities and to make recommendations to the BOCC.

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 4,100 in 2002 account for nearly one-quarter of the potential future households in the County. Efforts to address these issues are underway.

Approximately 1,300 acres of undeveloped land in scattered locations throughout the countryside are zoned R-1 and R-2. All were zoned in the late 1960s and early 1970s on the basis of criteria that are no longer consistent with the policy to direct higher-density residential growth to designated growth areas. Actions were taken in 1999 to encourage owners to

enroll these lands into land preservation programs or to serve as receiving areas for TDRs.

Actions

- I-47 Continue to work with existing small-lot communities to resolve issues specifically related to these communities. [P&Z, CR, PW, PS]
- I-48 To address health and safety issues in small-lot communities platted before the adoption of current regulations, look for ways to reduce the number of dwelling units that can be developed within these communities. [P&Z]

• *Residential Development in the RUR District*

Residential development within the RUR District has always come into conflict with the long-standing goal of preserving land for farming, forestry, and wildlife habitat. Over the years, the County has adopted a number of programs to try to minimize both the number and the impact of residential subdivisions in the RUR District while still trying to protect landowner equity. These programs include large lot zoning, critical area regulations, clustering, the TDR program, and several State and County purchase of development rights (PDR) programs.

The creation in 1992 of three overlay districts within the RUR District (Farm Community District, Resource Preservation District, and Rural Community District) was intended to help resolve some of the issues related to this development pattern. Farm Community and Resource Preservation Districts were identified as the County's prime preservation areas while the Rural Community District was identified as a receiving area (along with town centers and R1 and R2 Districts) for development rights transferred from Farm Community and Resource Preservation Districts.

Actions

- I-49 Continue to look for ways to direct residential growth away from Farm Community and Resource Preservation Districts. [P&Z]
- I-50 Give priority to farming (such as "right to farm" regulations), forestry, wildlife habitat

Actions Continued

protection, and heritage/ecotourism within Farm Community and Resource Preservation Districts. [P&Z]

I-51 Continue to look for ways to minimize potential negative impacts (such as traffic, trespassing, destruction of older buildings, and visual changes to the landscape) within Farm Community and Resource Preservation Districts. [P&Z]

daily life—parks, shopping, social, and institutional centers—into the pattern of residential living

- *Allow multiple trip purposes to be served with a single trip through mixed-use development and pedestrian-oriented design*
- *Allow for alternatives to the single-occupant vehicle to serve commuting travel*
- *Allow alternatives to the automobile to serve everyday travel needs, such as walking, bicycling, and public transit.*

Transportation

Objectives

- Stage the development of the transportation system to complement the overall development of the County.
- Maintain MD Routes 4 and 2/4 as the main transportation corridor, providing for safe and efficient travel.
- Maintain and improve the arterial and nonarterial highway systems to provide for safe and efficient travel.
- Improve and expand existing public transit services to capture the highest ridership possible.
- Promote transportation alternatives such as public transit, carpools, vanpools, bicycling, and walking.
- Develop a sustainable program for financing transportation construction and improvement.
- Continue a countywide transportation planning program that is integrated with State and regional planning programs.

Sustainability Issues

A sustainable transportation system provides 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 modes to serve travel demand. 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*

Trends In Transportation

Traffic volumes in Calvert County, especially on MD Routes 4 and 2/4, have more than doubled in recent decades. The traffic problem is most evident in Prince Frederick where a high level of automobile commuting has combined with highway-oriented commercial development to cause recurring, morning and evening, traffic congestion. Traffic signals at the entry to Prince Frederick back up the flow of traffic and increase travel delays, fuel consumption, and air pollution.

In 2000, according to the U.S. Census, about 61 percent of employed County residents, or 22,760 persons, commuted to jobs outside of the County. The commute for one-quarter of the County labor force exceeded one hour. Nearly 78 percent of commuters drove alone to work, 16 percent carpooled, about 4 percent worked at home, and only about 2 percent used public transit, walked, or bicycled to work. The County's low-density residential pattern and continued residential growth mean that these travel patterns and behaviors will continue and that congestion on the County's main highway will worsen. Indeed, the distribution of workplaces in southern Maryland has become more dispersed over the last decade, meaning that downtown Washington, D.C., the traditional destination for commuter bus services, represents a smaller proportion of workplace destinations. Over the long term, as job destinations disperse, it becomes more difficult and costly to expand commuter bus service. Therefore, expansions in commuter bus service will likely be limited to routes serving the Suitland Metro Center in Washington D.C. and perhaps Lexington Park in St. Mary's County.

Changes in the distribution of commuting patterns and the regional nature of travel suggest that the Thomas Johnson Bridge, which connects the County to Lexington Park, may need to be expanded. The County, region, and State must study the long-term land use and traffic implications of adding a new span to the bridge before the option is pursued. All alternatives studied should include priority for public transit.

The County looks to the level of service (LOS) on MD Routes 4 and 2/4 as one indicator of the impact of development on the quality of life in Calvert County. Maintaining an adequate LOS during peak periods, might serve as a benchmark for measuring how well the County is managing growth and development. LOS has worsened on MD 2/4 and severe congestion may be expected on MD 2/4 in the Prince Frederick area. LOS in Prince Frederick is no longer adequate and, absent major improvements in Prince Frederick, severe daily congestion and delays will persist.

To help resolve congestion in Prince Frederick, Calvert County planned a loop road system around the town center, two overpasses and an underpass, and the widening of MD 2/4. The County has made significant progress toward implementing the Prince Frederick Loop Road, including committing funds to engineering and construction. The projects in Prince Frederick will improve conditions for the future, provided that County growth does not significantly exceed 37,000 dwelling units.

Indeed, preventing severe congestion on MD Routes 4 and 2/4 over the long term will prove more costly and difficult as residential growth continues. To date, the County's use of zoning and its purchase of development rights to reduce residential buildout have proved the most effective step taken to addressing traffic on MD 2/4. The impacts of these decisions will be seen in future years. Still, more road construction will be needed if the County seeks to maintain an adequate LOS on MD Routes 4 and 2/4 over the long term.

Arterial Highways

Arterial highways such as MD Routes 2, 4, 2/4, 231, and 260 serve fast and heavy traffic between urban centers. Direct access to property along arterial

highways should be managed so that overall highway capacity can be preserved for through traffic.

The County considers the gradual conversion of MD Routes 4 and 2/4 into a controlled access expressway as key to resolving future traffic congestion. Making that conversion requires primarily four efforts:

- It is the policy of Calvert County that new access points to MD Routes 4 and 2/4 shall not be allowed.
- Development plan review in which new highway access is coordinated and the rights-of-way of future service roads and overpasses are reserved.
- The purchase of rights-of-way for new overpasses along MD Routes 4 and 2/4.
- Traffic engineering and town planning solutions that minimize new traffic signals.
- Highway construction including widening, overpasses, the upgrade of the older sections of MD Routes 4 and 2/4 that were retained when the highway was dualized, and the addition of acceleration and deceleration lanes and shoulders where needed.

Highway construction is the most expensive of the four actions required. To date, the County has relied on the State to fund needed improvements on the State highway system. To meet and expedite its highest priority transportation needs, the County may have to consider using local revenues in combination with State resources.

Actions

I-52 Continue to implement measures to maintain the safety and efficiency of travel:

- a. Reduce existing and prohibit future direct property access, especially to MD Routes 4 and 2/4.
- b. Require parallel connecting roads along MD Routes 4 and 2/4 during the development/subdivision process with the long-term goal of having all driveways served by connecting roads. [P&Z]

I-53 Continue to adopt and update a County transportation plan, including an arterial highway system element. [P&Z]

I-54 Promote the preparation and regular update of

Actions Continued

a regional transportation system plan based upon and designed to serve the land use development goals of Calvert County and the other units of government in the Southern Maryland region. [P&Z]

I-55 Develop a funding strategy to expedite the planning and construction of needed projects on the State highway system in Calvert County. [P&Z, F&B]

Non Arterial Roads

Collector and local roads, such as subdivision streets, are also important components of the County’s overall transportation system. This is especially true of collector roads. These roads, which are generally County-owned and maintained, collect traffic from local roads and convey it to the arterial highways. In town centers, collector and local roads provide for local circulation and access to businesses.

Many of the non arterial roads in Calvert County were meant to be farm-to-market routes. The builders of these roads did not intend them to carry heavy traffic volumes. Under such conditions, they present safety and maintenance problems. Upgrading rural roads to modern design standards is costly and often makes rural lands more accessible to urban development. Major renovations to old County roads can cost up to \$1 million per mile.

Priority should be given to upgrading those roads that serve town centers. Roads that serve rural and natural areas generally have lower traffic volumes and do not warrant the same design improvements required of those serving growth areas. By coordinating road improvements with land development goals, the County can keep its road construction costs lower and support new growth where it is expected.

Each of the town center master plans proposes road construction projects. In most cases, implementation of these projects would help manage access onto MD Routes 4 and 2/4 and provide a framework for higher density residential and commercial development. In some cases, these improvements are needed to resolve

existing traffic congestion. In 1995, the County began constructing the Prince Frederick Loop Road. The first section, between MD 231 and West Dares Beach Road, is open to traffic. The County is implementing the other sections now according to a construction schedule it adopted.

Financing road improvements is a challenge. The County studied options for raising revenue for new road construction and has opted to use a combination of new development excise tax revenues, the sale of bonds, and general fund revenues.

Road maintenance is also costly and the County relies on gasoline tax revenues, which are transferred to the County, for this purpose. However, these funds cannot be used in Calvert County’s private communities, which are home to a large number of County residents.

Actions

I-56 Maintain the program to renovate road sections and intersections. This includes widening roads, adding shoulders, removing dangerous curves, replacing bridges, correcting poor sight distance, and adding turning lanes and roundabouts. Prioritize improvements based on traffic counts and proximity and service to town centers. [PW]

I-57 Continue the program for resurfacing. Prioritize resurfacing based on traffic counts, structural condition of paving, and skid resistance of existing surfaces. [PW]

I-58 Continue systematic road maintenance and timely snow removal. Prioritize maintenance based on need per total length of roadway/section. [PW]

I-59 If amendments are made in federal and/or State standards, amend the County road design requirements to allow for safe roads that are not over designed. [PW, P&Z]

I-60 Develop a Countywide policy for building and maintaining sidewalks and bicycle ways at the time of new road construction. [P&Z, PW]

I-61 Construct new roads as called for in the County Transportation Plan and as identified in the adopted town center master plans. Ensure that environmental impacts, including stormwater impacts, are taken into

Actions Continued

consideration in road design and are properly managed during road construction. [PW]

I-62 Continue to adopt and update a County transportation plan, including a nonarterial road system element. [P&Z]

I-63 Prepare traffic circulation studies and transportation plans as needed for town centers. [P&Z, PW]

I-64 Continue to retrofit existing roads with sidewalks, especially within town centers and connect communities within a one-mile radius of town centers by an internal network of sidewalks and roads. [PW]

I-65 Develop an approach to fund road maintenance in existing private communities. [F&B, PW]

Public Transit

Good transportation planning requires that highway and transit facilities be planned together. Highway capacity can be optimized when a highly accessible and efficient transit system is in place.

Rapid transit is intended to facilitate fast movement along heavily traveled corridors, such as MD 2/4. Rapid transit can be provided by commuter rail, light rail, and by buses operating in mixed traffic or over exclusive rights-of-way. The rail options require high urban population densities to justify their costs and to operate successfully. This condition is not likely in Calvert County: County planning policy promotes a rural development pattern with relatively small urban concentrations (town centers). However, commuter bus service is provided successfully by the Maryland Transit Administration to Washington D.C. and it is continually expanded. The County and Maryland Transit Administration continue to cooperate to expand transit service to other areas where high concentrations of jobs are located, such as Lexington Park in St. Mary's County.

The County operates two levels of local transit service. A fixed route service is operated between town centers. A demand-responsive service provides service to the elderly and disabled in the Prince Frederick Town Center and environs.

Waterborne commuter ferry service is a form of transit with potential for Calvert County especially as the southern part of the County becomes more economically integrated with Lexington Park. The potential must be kept viable. Any ferry service should be properly planned and integrated into the overall transportation system and land use pattern.

The County Transportation Plan recommends an overall framework for public transit service that should continue to be implemented by Calvert County. Specifically, it calls for the creation of local transit service areas in the major town centers and for express bus service between those centers. The plan also recommends expansion of commuter bus service and the park and ride lots that serve carpool, vanpool, and commuter bus ridership.

Actions

I-66 Provide adequate commuter parking lots at key locations throughout the County. Encourage the shared use of parking lots. [P&Z]

I-67 Expand and improve bus service as recommended in the County's Transportation Plan which recommends a significant improvement in the accessibility and convenience of fixed route transit service throughout the County. [CR]

I-68 Expand and improve demand-responsive transit services. [CR]

I-69 Promote the preparation and regular update of a regional transportation system plan based upon and designed to serve the land use development goals of Calvert County and the other units of government in the Southern Maryland region. [P&Z]

I-70 Prepare local transit development plans based on town centers as needed. [CR, P&Z]

I-71 Update the County transportation plan, including a public transit element. [P&W]

Transportation System Management

Building added highway capacity is expensive. Efforts must be directed to making the most efficient use of existing roads before building new capacity. Addressing transportation problems through

constructing new highways alone can prove exceedingly wasteful.

Transportation system management (TSM) uses non-capital-intensive improvements to achieve objectives such as: optimizing existing roads; encouraging the use of buses, vanpools, and carpools; reducing vehicle use and traffic congestion; effecting motor fuel savings and reducing emissions; and helping to modify travel demand and patterns. TSM measures with potential in Calvert County include:

- Traffic engineering techniques such as traffic signal synchronization, the proper placement of driveways, and exclusive turning lanes and roundabouts at intersections.
- The promotion and marketing of area-wide transit, carpools, and vanpools including expanded carpool lots.
- Town center and community land use planning and site design aimed at minimizing the need for travel by car.

Actions

- I-72 Continue to monitor traffic conditions and assess the potential for technological solutions to traffic problems. [PW]
- I-73 Enhance opportunities for walking and bicycling in town centers. [P&Z, PW]
- I-74 Establish bicycle routes to connect residential, commercial, employment, educational, and open space areas as feasible [P&Z]
- I-75 Provide or require sidewalks in established and newly developing commercial areas of town centers. [PW, P&Z]
- I-76 Provide adequate commuter lots at key locations throughout Calvert County, especially in town centers as part of coordinated land development plans. Such commuter lots may then become future transit stations. [P&Z, PW]
- I-77 Continue to update the County transportation plan, including a Transportation System Management element. [P&Z]

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.
- Encourage 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.*
- *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, such as paper, but also to the less tangible objects, such as energy.

Energy Facilities

Two major energy plants are located within Calvert County: the Calvert Cliffs Nuclear Power Plant and the Dominion Cove Point Liquefied Natural Gas (LNG) facility. The Calvert Cliffs Nuclear Power Plant is the County's most significant source of revenue, although it supplies little electricity directly to Calvert County. In March 2000, Calvert Cliffs Nuclear Power Plant became the first plant in the United States to earn 20-year extensions of its operating licenses from the U.S. Nuclear Regulatory Commission. One issue that affects

the County, but that must be resolved at the Federal level, is the long-term storage of spent nuclear fuel.

The Dominion Cove Point LNG facility was reactivated in July 2003 and receives LNG via ships that come from various producing basins throughout the world. This facility is the largest LNG import facility in the United States and is the County's second largest source of revenue.

County Trends in Energy Use

Calvert County's energy use has been increasing, due to population growth and higher per capita use. Southern Maryland Electric Cooperative (SMECO) supplies approximately 80% of all residential and commercial electricity while Constellation Energy 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.

demand for energy, SMECO constructed a new substation in Mutual, purchased sites in Huntingtown and Prince Frederick, and is securing a site in Dunkirk.

The State of Maryland passed the Electric Customer Choice and Competition Act of 1999. The Act allows customers to choose their power supplier (generator). Companies other than the local utility company may provide electricity, including environmentally friendly power such as solar, wind, and geothermal. Local utility companies continue to deliver power and maintain their distribution systems. The Maryland deregulation began in July 2000. Customer choice was available to SMECO customers in November 2001.

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

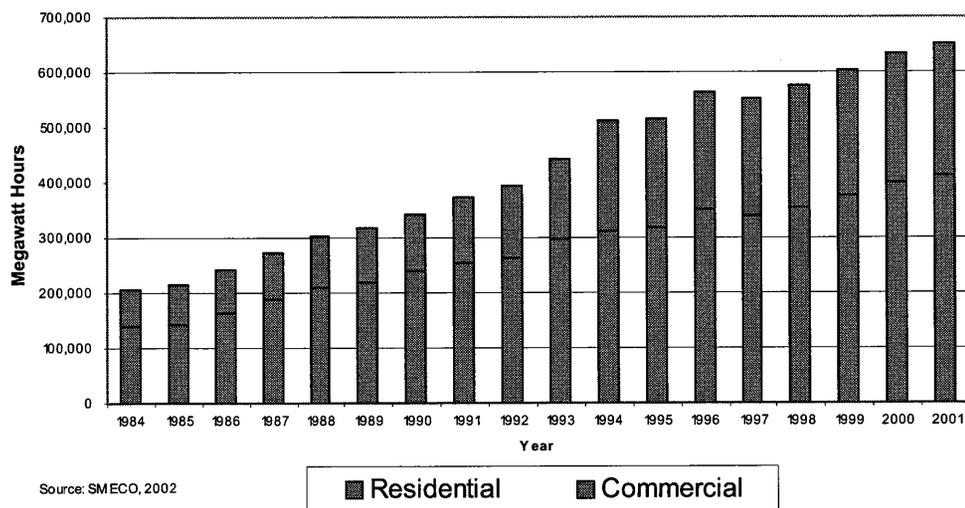


Figure I-A Energy Sales 1984-2001, Southern Maryland Electric Cooperative

SMECO's sale of energy to residences increased from 139,651 megawatt hours in 1984 to 411,698 megawatt hours in 2001, (see Figure I-A). While much of this increase was due to residential growth, SMECO figures show that electrical consumption per residence increased from 12,200 to 16,900 kilowatt hours from 1984 to 2001. SMECO's commercial energy sales increased from 66,000 megawatt hours in 1984 to 239,000 megawatt hours in 2001. Due to increased

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 25% to 30% of energy in commercial buildings (EPA 2001) and 5% to 10% for a typical home (SMECO Energy Tips, 2002). The nation's demand

for electricity could be cut by more than 10% if energy-efficient lighting were used (EPA2001). New lighting technology, such as compact fluorescent lighting and lighting emitting diodes (LEDs), 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 three 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.

While Calvert County is fortunate to have the Arthur Storer Planetarium, a unique science and cultural facility available to students and visitors, it is not a substitute for seeing real stars in the night sky, which 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 character of Calvert County takes on more suburban qualities, residents express the desire to maintain aspects of its rural character. 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 overlighting 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). The County Commissioners created a Lighting Task Force in 2002 to research outdoor lighting issues and to make recommendations for regulations to address light pollution.

Cost Savings

The average amount an American single-family household spent on all energy use was \$1,492 in 1997 (U.S. Department of Energy 2001). The national percentage of household energy to run electric air conditioning and appliances was about 31% in 1997. In comparison, the amount was 46% for households in the South Atlantic (Delaware, Maryland, Washington, D.C, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida). The warmer climate contributes to the higher percentage of energy

consumption for these uses. Cost savings can be achieved by the choice of appliances and the choice of fuel used to heat and cool homes, for example, propane gas and geothermal. Heat pumps, especially ground-source, "are far more 'efficient' at converting electricity into usable heat because the electricity is used to move heat, not generate it." There are two types of ground-source heat pumps, closed-loop and open-loop systems. Closed-loop systems are the most common and preferred. Open-loop systems are less preferred and should be discouraged, due to risks of contaminating the water source or inadequately recharging the aquifer. (Department of Energy 2003)

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. Home energy monitoring kits are available for loan through the Southern Maryland Public Libraries. The Energy Star Home Program is a program offered by SMECO and the U.S. Environmental Protection Agency that targets new home construction. "An Energy Star Home is built to use 30% less energy (for heating, cooling, and water heating) than a home built to the standards of the current national Model Energy Code." (SMECO 2003) Benefits to the homeowner are reduced energy use and reduced energy bills compared to homes built to standard codes. More details about this and other energy conservation programs are available from SMECO, 888-440-3311 or www.smeco.com.

Energy assistance is available to low-income citizens through the Maryland Energy Assistance Program and the Electric Universal Service Program, administered by the Maryland Department of Human Services, Office of Home Energy Programs. Weatherization and energy-efficiency measures are available. The Southern Maryland Tri-County Community Action Committee is the local contact for the program.

The State of Maryland offers a financing program to businesses for energy conservation and generation projects. The program is offered through the Maryland Energy Administration. The State offers a Green Building Tax Credit, free energy assessments for

manufacturers, the Community Energy Loan Program, and tax incentives through Maryland Clean Energy Incentive Act.

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. The waste-to-energy concept 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 that 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 75% and heating energy consumption by 30% (U.S. Department of Energy 2003). 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 40% (Center for Building Science News 1994).

“Green or sustainable building is the notion of designing, constructing, operating and maintaining buildings and landscapes in a manner that minimizes environmental impacts. It incorporates energy efficiency, water conservation, waste minimization, pollution prevention, resource efficient materials and indoor environmental quality into all phases of a

building's life...conventional building practices tend to consume enormous amounts of nonrenewable natural resources and raw materials, generate excessive waste, overbuild and disrupt natural hydrology and degrade natural ecosystems and wildlife habitat. All of this adversely impacts Maryland's communities, tributaries, watersheds and the Bay.” (Maryland Department of Natural Resources) Some green buildings have living roof structures –plant-covered roofs. The benefits of living roofs include reduced energy consumption and prevention of stormwater runoff. Green building techniques are being advocated by many organizations and governments, including the American Institute of Architects Committee on the Environment, the National Association of Home Builders, the Chesapeake Bay Foundation, the U.S. Department of Energy, the State of Maryland, and the City of Austin, Texas. Some local governments provide technical assistance, offer incentives, and/or require development projects to meet green codes.

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 midday. 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 that 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 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. Refer to the Transportation Section for more discussion of this topic.

Gasoline-powered vehicles negatively impact the environment by creating air pollution and continue the United States foreign-oil dependence. Methods that can reduce negative impacts include vehicles powered by alternative fuels, such as natural gas, bio-diesel, hydrogen, electric, hybrid electric, or solar. Improvements in these technologies have been made and greater improvements may result in the coming 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 that produce ozone and other greenhouse gases. SMECO is using bio-diesel vehicles, and the County government and the Board of Education have a small fleet of propane forklifts. In 2000, the State of Maryland began allowing an excise tax exemption for electric and hybrid vehicles through the Maryland Clean Energy Incentive Act. The County purchases vehicles through a low-bid procurement

process. In order for the County to consider purchasing energy-efficient vehicles, the procurement process may need to be modified to account for environmental impact costs and fuel savings over the lifecycle of the vehicle.

Actions

- I-78 Reduce travel-related energy consumption by promoting compact mixed-use development in town centers. [P&Z, ED]
- I-79 Encourage telecommuting and flexible working schedules for employees to conserve energy used for transportation. [CA, ED]
- I-80 Encourage energy conservation through the County Transportation Plan (commuter parking lots, public transit service, commuter bus service, car and van pooling, and bicycle and pedestrian pathways). [P&Z, PS, F&B, PW]
- I-81 Consider converting a portion of the County vehicle fleet to alternative fuels based upon economic and environmental feasibility. [PW, PS]
- I-82 Conduct an assessment of the County government's energy use and seek ways to improve energy efficiency. [GS]
- I-83 Review the local building code for areas where greater energy efficiency could be promoted. [P&Z, GS]
- I-84 Promote education of energy-conserving techniques, including demonstration projects of energy-saving techniques, to the public, to school students, and to those who design local communities. [Constellation Energy, SMECO, P&Z, GS]
- I-85 Consider requirements and/or incentives for energy-efficient developments. [P&Z, PW]
- I-86 Consider using solar energy, natural gas, and geothermal energy for County facilities and consider promoting their use as alternative sources of energy. [GS, PW]
- I-87 Discourage light pollution. Enact regulations and incentives to minimize light pollution. [BOCC, P&Z, GS]
- I-88 Consider building orientation during site design to take advantage of solar energy and reduce the need for artificial heating and cooling. [P&Z, PW]

Actions Continued

- I-89 Plan for future utility needs by identifying areas for future and expanded distribution lines. Consider utility corridor planning. [P&Z]
- I-90 Promote and participate in Federal, State, and utility-sponsored energy efficiency programs. [P&Z, GS, PS]
- I-91 Encourage utilities to expand energy conservation programs. [CR]
- I-92 Encourage tree planting around homes to reduce heating and cooling. [P&Z]
- I-93 Consider elements of environmental and energy efficient design (“green” building) in appropriate County codes. [P&Z]

Waste Management

Objectives

- Ensure the safe and environmentally sound disposal of solid waste, wastewater, and hazardous waste generated in Calvert County.
- Reduce nutrient pollution from sewage treatment facilities and septic systems.
- 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 consumption 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 avoided where possible, reduced, reused, recycled, or disposed of in a way that will not pollute drinking

water, subsurface groundwater, 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 is 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.

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 by 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 32% of the County waste stream in 2002, exceeding by more than two-fold the State goal of 15%. The recycling rate in Calvert County in 1994 was 17%. The sharp increase in recycling in 2002 was due to increased citizen and especially business participation and the recycling of large amounts of yard waste from tornado damage. The County should continue to 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 is disposed of with the household waste.

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. But problems associated with landfills for land-clearing debris, such as traffic, noise, visual blight and proximity to residences still pose problems.

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).

Another method of solid waste disposal is to convert waste to energy through combustion. This process combusts much of the waste stream and produces usable energy, but causes air pollution. In addition, energy can be captured from the County's existing landfills. As garbage decomposes in landfills, methane is created which can be captured and burned to produce heat or electricity.

- Actions**
- I-94 Increase recycling (measured as a percentage of waste stream) and consider mandatory recycling, where and when long-term benefits result. Explore increasing the types of waste stream items that can be recycled. [PW]
 - I-95 Encourage franchised curbside collection and recycling. [PW]
 - I-96 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]

- Actions Continued**
- I-97 Work jointly with local businesses on source reduction (e.g., decrease packaging), reuse, and recycling. [PW]
 - I-98 Provide public education on source reduction, reuse, and recycling of solid waste materials. [PW]
 - I-99 Explore the feasibility and environmental acceptability of a waste-to-energy plant in the Southern Maryland Region. [PW]
 - I-100 Increase enforcement of anti-littering regulations and increase fines. [PS]
 - I-101 Develop guidelines on how to dispose of stable wastes in a sustainable, non-polluting manner. [SCD, P&Z, PS, Extension Service]

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 onsite sewage disposal 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. In Maryland, Calvert County has the highest percentage of sewage being disposed of into septic systems. The Maryland Department of Planning has estimated that septic systems contribute 25% of the non-point nitrogen pollution in Calvert County. Septic systems only remove about one-half of the nitrogen and release 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 are chambered to prevent

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. Since 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.

Allowing shared wastewater systems in cluster subdivisions could preserve more open space. The current requirements for septic recovery areas dictate that lots are 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. However, the use of shared wastewater systems should not allow increased housing density, which could work against the County's growth control objectives.

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 forestland or cropland 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 intention to reduce growth and the growth rate, the provision of new community sewerage service should not allow an increase in residential density. 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.

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Actions

- I-102 Continue to show preference for land application of wastewater effluent and explore other beneficial ways of reusing wastewater. [PW, P&Z]
 - I-103 Develop incentives for the use of nitrogen-removing technologies for new, replacement, and existing septic systems and for shared facilities to reduce nutrient pollution of our waterways. [HD, PW, P&Z]
 - I-104 Consider mandatory nitrogen-removing septic systems near sensitive areas. [CR]
 - I-105 For existing problem areas (failing septic systems), search for funding and means to correct the problem. This could include installation of a shared or community wastewater system, composting toilets or gray-water systems. [HD, PW, P&Z]
 - I-106 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]
 - I-107 Explore the feasibility, including cost-effectiveness, of allowing shared septic or wastewater treatment facilities with nitrogen removal and land disposal in clustered subdivisions without increasing overall housing density. [HD, PW, P&Z]
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Actions Continued

- I-108 Explore an educational or mandatory program to have septic tanks pumped out on a regular basis (every 3 to 5 years). [CR]
- I-109 Provide public education on water conservation to reduce demands on our aquifers and reduce demands for wastewater disposal. [PW]
- I-110 Plan for expansion of the Prince Frederick Wastewater Treatment Plant. [PW]

Hazardous Waste

Hazardous waste, if improperly disposed of, is a threat to the health and safety of Calvert County citizens and the environment. Industry, commerce, farming, and homeowners generate hazardous waste. When these toxic materials enter our soils and waterways, they also enter the food chain. This can reduce the productivity of 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 the use of 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. The County currently accepts used motor oil and antifreeze, paints, herbicides, pesticides and other household hazardous waste at green box sites and the County landfill.

Commercial, Industrial, and Agricultural Hazardous Waste Disposal.

Federal and State regulations control the use and disposal of hazardous wastes. These wastes are not allowed in the County Landfill. Nuclear waste from the Calvert Cliffs Nuclear Power Plant is currently stored onsite because a federal repository is not yet available.

Leachate Treatment. The liquid that accumulates at the bottom of lined landfills, leachate, is considered a hazardous waste and is treated at an appropriate

wastewater treatment plant. Currently, the leachate from the Appeal Landfill is treated at the Solomons Wastewater Treatment Plant.

Actions

- I-111 Continue to collect hazardous household waste at the compactor sites and Appeal Landfill. [PW]
- I-112 Continue to press Congress to site and build a nuclear waste repository. Require that nuclear waste be moved from the County to the federal repository. [BOCC]
- I-113 Provide public education on use of safe alternatives to toxic compounds. [PS, PW]
- I-114 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 that 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
 - 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 2008.

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 nonpolluting ways so that they will be available for future generations.*
- *Pollutants to the environment 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 should 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.

There are two watershed management plans being developed in Calvert County, the Hunting Creek Watershed Management Plan and the Parkers Creek Watershed Management Plan. A watershed task force has worked on developing the plan in cooperation with local, State, and federal agencies.

Action

I-115 Complete watershed management plans for the major tributaries in the County. [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 nonrenewable 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.

Groundwater

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. A fifth deeper aquifer, the Patapsco, is being explored for additional groundwater resources. Initial findings in Calvert County by the Maryland Geological Survey (MGS) are promising.

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 groundwaters would not threaten the water quality of these aquifers. The major threat to groundwater 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.

The Aquia aquifer is receiving the greatest demand in Calvert County. Future water levels for the Aquia projected to 2025 for several areas of Calvert County are shown in Figure I-B (data from MGS, 2000). The MGS report looked at three scenarios of the effect of water usage on the Aquia and Piney Point-Nanjemoy aquifer water levels from 1999 to 2025. Scenario 1 used Calvert County's population projections based on decreased buildout (102,000 in 2025), Scenario 2 used Maryland Department of Planning (MDP) population projections (137,000 in 2025). Scenario 3, used the MDP population projections but assumed by 2025 that 20% of pumpage is from a fifth aquifer, the Patapsco (not part of the original study).

The Maryland Department of the Environment does not permit increased usage of groundwater from a particular aquifer if the aquifer is at or below the management level. When an aquifer is at 80% of its capacity it is considered at its management level. For North Beach, Chesapeake Beach, and Prince Frederick, the projected water levels in the Aquia in 2025 are well above the management level for all three scenarios (see Figure I-B). For the Chesapeake Ranch Estates (CRE) and Solomons, however, the water levels of the Aquia approach or exceed, respectively, the management level under scenario 2.F. In these two southern areas of the County, the Aquia water levels are above the management level under scenarios 1 and 3. The water levels in the Piney Point-Nanjemoy aquifer were always well above the management level for all three scenarios.

The results indicate the importance of the 50% reduction in future density that the County adopted in 1999 and the importance of directing future large users of water to the deeper Patapsco aquifer. The results of the MGS water supplies study of the deeper Patapsco aquifer in Southern Maryland will be very important to our future water planning efforts. A combination of Scenarios 1 and 3 could be important in maintaining groundwater supplies adequate to serve the Solomons and Lusby areas in the future. The accuracy of the

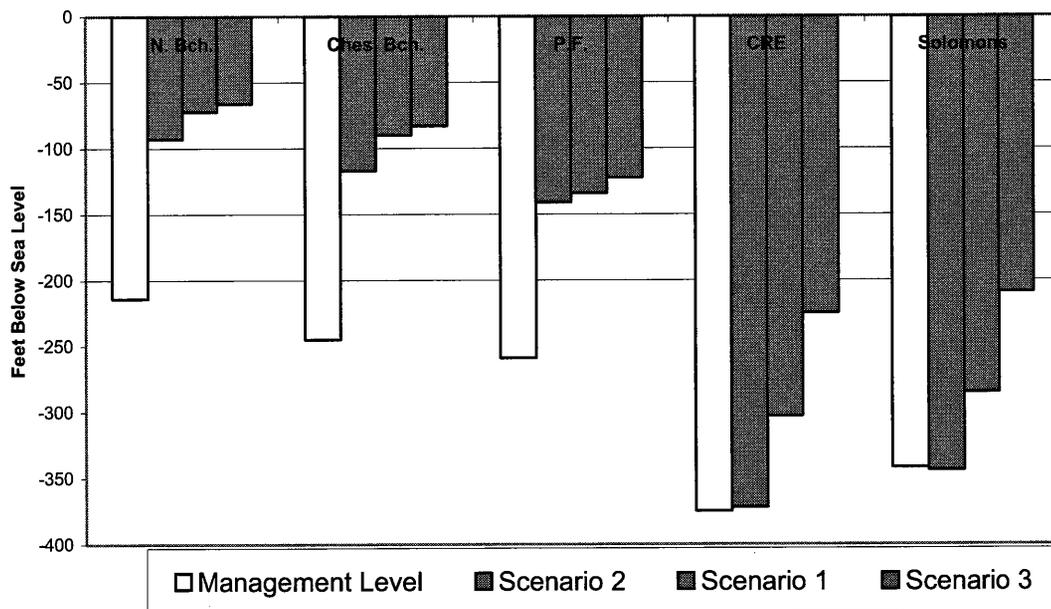
Lexington Park water usage projections is also important as pumpage in this area affects the water supply in Solomons and CRE. Subsidence in Southern Calvert County from groundwater removal is a potential problem in some areas.

Water conservation is also important in maintaining an adequate supply of groundwater. The County currently requires water conservation devices and provides public education on water conservation. New water facilities are designed to provide reasonable excess capacity to meet future expansion needs and to coordinate water facility expansion and development with population growth.

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 to late 1900s. This is evident in the serious declines in living resources. Oysters, crabs, and submerged aquatic vegetation all showed serious declines in their populations.

In the 1990s, 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

Figure I-B Simulated Aquia Water Levels in 2025 At Major Production Wells



important to reduce point source and non-point source pollution Baywide in the future if we are to continue to make progress in improving water quality.

The new Chesapeake Bay Agreement (named Chesapeake 2000 or C2K) between Maryland, Pennsylvania, Virginia, and Washington, D.C calls for a 40% reduction, over 1985 levels, in nitrogen and phosphorous entering the Bay. The 40% level was arrived at after extensive research.

Actions

- I-116 Require that abandoned wells be reported on subdivision preliminary plans and site plans and require that abandoned wells be sealed. [P&Z, HD].
- I-117 Continue to support groundwater studies so that predictions can be made as to future groundwater supplies. [P&Z, CR]

Surface Water

Surface water includes creeks, streams, rivers, lakes, ponds, and bays. These aquatic resources are used for

It is projected that, if nutrients could be reduced to this level, much of the Bay's previous biological productivity would be restored. In addition to reducing nutrients, C2K includes commitments to:

- Increase the numbers of oysters tenfold
- Expand bay grass beds and wetlands
- Remove the Bay from the impaired waters list
- Enhance cooperation with local governments
- Reduce harmful sprawl development by 30 percent
- Preserve from development 20 percent of the watershed's land area
- Provide for government agencies to "lead by example" when taking further actions to clean the bay.

To achieve this goal, the State of Maryland has established a tributaries strategy program in which the 40% reduction in nutrients and other parameters is addressed on a watershed basis. Calvert County is in the Patuxent and the Lower Western Shore basins. For each basin, Tributary Strategy Implementation Teams have been appointed to monitor and promote the implementation of the strategies.

Research used to develop the tributary strategies 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. In addition, overboard disposal of septage from boats is a direct but diffuse source of pollution (nutrients and potential pathogens).

The Chesapeake Bay Critical Area includes all land within 1,000 feet of the mean high tide line of tidal water or tidal wetlands. State law recognizes that the land immediately surrounding the Bay and its tributaries has the greatest potential to affect water quality and wildlife habitat vital for our crabs, oysters, herons and waterfowl. The purpose of the Critical Area Program is to mitigate the damaging impact of water pollution and loss of natural habitat, while also accommodating the County's future growth. The Program was adopted by Calvert County in 1988 in response to legislation passed by the State of Maryland. The Chesapeake Bay Critical Area Commission reviews and approves Calvert County's local Critical Area Program, including changes to ordinances, regulations, and maps.

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 mostly 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. MDP estimates that septic systems contribute 25% of the non-point source nitrogen load in Calvert County. In the Solomons Harbor Watershed, including Mill, St. John's, and Back Creeks, the percentage of nitrogen loading from septic systems is even greater and represents the greatest source of nitrogen loading in this watershed.

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. In May 2004, the State of Maryland adopted the Bay Restoration Fund which is to be used to upgrade public wastewater treatment facilities and failing septic systems, particularly within the Critical Area. The source of funding is an annual fee collected from wastewater treatment plan users and septic system owners.

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 and stormwater management are very important to preserving the health of our aquatic ecosystems. Recently adopted stormwater management regulations give incentives to use low-impact development techniques, such as rain gardens and bioretention, that greatly reduce runoff by keeping water onsite. Also, so not to create additional nitrogen pollution, nitrogen-rich materials are not used by the County for ice and snow removal on County roads.

Farming

Farming also contributes to sediment and nutrient pollution. There are currently 1303 agricultural parcels in the County. Controlling sediment and nutrient

pollution on farms is currently a voluntary program, administered through the Calvert County Soil Conservation District (SCD). Via this program, farm "Water Quality and Soil Conservation 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 State funding, not all agriculturally assessed properties have current farm plans. The reason for this is the lack of funding from the Maryland Department of Agriculture to the SCD to hire farm planners and technicians. Increasing the percent of farms with current farm plans could improve surface water quality in the County. Nutrient management plans are now required on all farms in the County. These plans are prepared by the University of Maryland Cooperative Extension Service or by private vendors who have been licensed by the Maryland Department of Agriculture.

Home Sites

Runoff from home sites is a significant source of nutrients, sediment, and other forms of pollution. Overfertilization of lawns, use of pesticides, pet wastes, car washing, improper disposal of domestic hazardous waste and runoff from rooftops 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. A landscape model developed by the University of Maryland, Institute of Ecological Economics estimated that atmospheric deposition was the dominant source of nitrogen loading in the

Hunting Creek Watershed. The 2000 Census Stated that, "61 percent of employed County residents, or over 22,760 persons, commuted to jobs outside the County...The commute for one-quarter of the County labor force exceeded one hour."

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.

- Actions**
- I-118 Move toward alternative technologies and approaches to reduce nutrient pollution; for example, nitrogen removing septic systems. [CR, GS, HD, P&Z]
 - I-119 Continue to avoid the use of nitrogen-rich materials for ice and snow removal. [GS, PW]
 - I-120 Develop and maintain Soil Conservation and Water Quality Plans on three-quarters of all farms and seek funding from local, State, and federal governments to support farm-planning activities of the Calvert Soil Conservation District. [SCD]
 - I-121 Provide technical assistance to communities in existing subdivisions with retrofit or repair of stormwater management facilities. [PW]
 - I-122 Improve enforcement of existing sediment control, stormwater management, and Critical Areas regulations. [PW, P&Z]
 - I-123 Ensure that all commercial marinas and community piers with more than 10 slips have septage pumpout stations. [P&Z]
 - I-124 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]
 - I-125 Develop environmental education materials such as brochures, flyers, and an environmental site on the County web page. [BOE, GS, TS, P&Z, University of Maryland Center for Environmental Studies]

Actions Continued

- I-126 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]
- I-127 Seek ways to correct existing areas of septic failures and explore measures to avoid future septic problems in existing small-lot subdivisions. [CR, PW]
- I-128 Maintain a policy of preference for land application of wastewater effluent. [PW, P&Z]
- I-129 Provide water quality monitoring or support citizen monitoring of waterways. If water quality is or becomes poor, investigate the problem and find solutions. [P&Z]
- I-130 Consider encouraging retention of storm water and sediment onsite using such low-impact development techniques as grassed swales, bio-retention, and green roofs. [PW]

Forests

Forest once covered more than 95% of the Chesapeake Bay watershed. Today less than 60% remains. For the first time in one hundred years, the percentage of forestlands in the watershed is declining. Some forests are cleared for farming, but development is the greatest threat.

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 groundwater, 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 stream banks and protect against erosion. In addition to all of these other benefits, forests are a renewal resource that can play an important role in developing and maintaining a sustainable economy.

Forest interior (forest more than 100 meters from a forest edge) provides important habitat to many species. Many species of birds can only reproduce in forest interior habitats. These are known as forest interior dwelling birds and some examples are: scarlet tanager, barred owl, pileated woodpecker, and whippoorwill.

Forest covers 81,781 acres or 58% of land use in Calvert County. Forest interior represents 37% of forest cover or 22% of the County land area. Forty-four percent of the estimated forest interior habitat is currently protected, 56% is thus threatened by development.

A model was used to determine the impact of land use decisions on potential forest interior habitat in Calvert County. Regulatory approaches can only protect an additional 11% of forest interior habitat and, therefore, in addition to regulatory approaches, land preservation measures must be pursued to achieve a higher level of protection.

Actions

- I-131 Map forest resources and track forest loss and gain. [P&Z]
- I-132 Replace 100% of forest loss outside the Critical Area and town centers. [P&Z]
- I-133 Preserve and restore riparian forests. [P&Z, SCD]
- I-134 Maintain large tracts of forest and especially forest interior in the rural areas. [P&Z]
- I-135 Maintain or establish habitat corridors between large tracts of forest and between urban areas and adjoining forested areas. [P&Z]
- I-136 Support land preservation that protects forested areas (e.g., local land trusts, County land trusts, easement programs, Forest Stewardship Program). [P&Z]
- I-137 Adopt a map of the forest interior in Calvert County to guide the Planning Commission in subdivision and site plan review. [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. The County should encourage extraction of mineral resources outside of sensitive areas before the establishment of permanent uses on the mineral deposit site.

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

- I-138 Require that significant mineral resources be shown on subdivision preliminary plans and on site plans. [P&Z]
- I-139 Make State maps of mineral resources in Calvert County available to the public. [P&Z]

Air Quality

Calvert County has been included as part of the Washington, D.C. severe nonattainment area for air quality. A nonattainment area means that air pollution levels are often unhealthy for County citizens. Calvert County has also been participating in the "Metropolitan Washington Air Quality Committee (MWAQC)" 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. 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 problem may increase if existing travel behavior continues or accelerates. In 2000, the average travel time to work for a Calvert

County resident exceeded 39 minutes (longest for the State), with about 60 percent of the County work force commuting to jobs outside of the County.

The other significant source of air pollution is fossil fuel-burning power plants. Air pollution reaches Calvert County from as far away as the Ohio valley. The fossil fuel burning power plant closest to Calvert County is Chalk Point located just across the Patuxent River from the mouth of Hunting Creek. A landscape model of nitrogen loading to Hunting Creek indicated that atmospheric deposition was the greatest source of nitrogen pollution.

A study by the Harvard school of medicine identified a serious public health problem caused by the fine-particulate pollution generated from five fossil-fuel plants within 50 miles of Washington, D.C. Fine-particulates, one-seventh of the width of a human hair, are formed when sulfur dioxide and nitrogen oxide gases react down wind from the power plant stacks. The researchers hypothesize that the health hazard could be greatly reduced by the installation of readily available pollution controls that effectively cut sulfur dioxide and nitrogen oxide emissions.

MWAQC data indicated that air quality in the Washington metropolitan area improved from 1986 to 1995 but then remained about the same through 2002.

Actions

- I-140 Promote car-pooling, public transit, pedestrian, and bicycle modes of transportation and land use planning that would decrease automobile travel. [P&Z, PS]
- I-141 Increase employment opportunities in the County for residents. [ED]
- I-142 Work with the Tri-County Council of Southern Maryland to take the necessary political steps to reduce emissions from the Chalk Point and Morgantown power plants. [BOCC]
- I-143 Reestablish the air quality monitoring station in Prince Frederick and encourage establishing additional sites in the County in the near future. [BOCC]

Fisheries

In the early 1900s, 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 1900s due to reduction in stocks from poor water quality (see Surface Water section above), overfishing, 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. The State established a fishing moratorium on striped bass between 1985 and 1990. Since 1990, the striped bass spawning index has increased dramatically. If water quality continues to improve and the fisheries are properly managed, then fisheries and shellfisheries should increase to a sustainable level.

Actions

- I-144 Maintain and improve surface water quality by taking the actions listed in the Surface Water, Forest, and Clean Air sections above.
- I-145 Support effective fisheries management efforts that are fair and equitable to both watermen and sport fishermen. [P&Z]
- I-146 Support aquaculture that is practiced in an environmentally sensitive manner. [P&Z, ED]

Sensitive Areas

Sensitive areas include wetlands, waterways, vernal pools, 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

- I-147 Address actions in Surface Water Section.
- I-148 Establish greenways systems along stream valleys to preserve as much of these low lands as possible. [P&Z]
- I-149 Require and maintain sufficient buffers from all perennial and intermittent streams to provide environmental protection. [P&Z]
- I-150 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

- I-151 Maintain strong regulations restricting impacts on wetlands. [P&Z]
- I-152 Restore or create wetlands in disturbed areas. [P&Z, PW, SCD]
- I-153 Examine the effectiveness of 50 ft. buffers and alter buffer requirements, if the study so indicates. [P&Z]
- I-154 Establish or re-establish forested wetland buffers where possible and feasible. [P&Z, SCD]
- I-155 Develop substantial monetary penalties for the unauthorized destruction of 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 rainwater 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. The Zoning Ordinance, Subdivision Regulations, and the Flood Management Ordinance regulate development in the 100 yr. flood plain.

Actions

- I-156 Continue to direct housing and other development out of the flood plain. [P&Z]
- I-157 For development in the flood plain, ensure that construction practices minimize damage to property and the environment during flooding. [P&Z]
- I-158 Require vegetation in flood plains to remain with the exception of removing vegetation for access and stormwater management. [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

- I-159 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]
- I-160 Revise site planning criteria to encourage use of natural features of a site and discourage grading of steep slopes. [P&Z, PW]
- I-161 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 worldwide 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

- I-162 Work with the State to map rare, threatened, and endangered species outside the Critical Area and develop protective measures. [P&Z]
- I-163 Protect from shore erosion control those areas of Calvert Cliffs that have significant Puritan tiger beetle populations. [P&Z]
- I-164 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: overfertilization 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

- I-165 Maintain, support, and improve the environmental education programs for school-aged children. [BOE]
- I-166 Develop environmental education programs for adults and families. [P&Z, GS, CR]

CHAPTER II: PEOPLE

Community Interaction

Objectives

- Cultivate and nurture a sense of community.
- Support efforts and implement practices that encourage positive interaction among citizens. Engage them in the life of the community.
- Encourage programs that accommodate diversity.
- Encourage an ethic that recognizes the importance of strong communities, strong families, and effective ways to deal with conflict.
- Encourage efforts that engage youth to participate in creating and maintaining good communities.

Sustainability Issues

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 all 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.*
- *Teach the values of good stewardship of natural and cultural resources to ensure a healthy legacy to future generations.*

Discussion

"To settle in a place is to accept the responsibility for creating it."—*Mircea Eliade, 20th century 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 and what it means to participate in creating and maintaining good community.

What is a "Good Community"?

A good community possesses 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.

Community entails fellowship and things held in common. 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.

Levels of Community

There are at least three kinds, or levels, of communities. 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 of us as County citizens and, in doing so, recognize the shared responsibility for meeting our challenges.

Second is community at the local level, which could include town centers, tied to a particular place, such as a town or road, subdivision, neighborhood, creek, 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 of which draw 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 programs, prevention programs, health programs,

community resources, and law enforcement, among others. 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 can not 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 creating their community for good, for bad, or for indifference. This vision of community will serve us 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 Comprehensive 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 in the communities themselves. This philosophy may require a change of thinking for some individuals and communities. People can and must find themselves empowered 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 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 in preparing their community report cards.

For building community and reaching commuters, 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. Agendas of commission hearings, meetings, and other events have been added to the Calvert County website. The County website can serve as a key point of entry for citizens to learn about Calvert County and to connect with County government.

Examples that work:

- The Calvert County Family Network (CCFN) is a broad-based community partnership. The CCFN begins from the understanding that community and family problems are most effectively addressed through a prevention model, ideally focusing on collaborative efforts to build and maintain strong communities that support families as they raise their children. The CCFN works to facilitate collaboration among many partners who work with children and families identified at risk, including the regular

collection of data that shows strengths and challenges in services. There are other groups that also focus on issues of interest for families and children, building on the collaboration model described above.

- The Calvert Alliance Against Substance Abuse (CAASA), 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 must 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 more than one hundred 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.
- Not to Strive, But to Excel is an exhibit funded by the Institute for Museum and Library Services. The exhibit tells the history of African-American education in Southern Maryland from the Civil War to integration. In its first years of touring venues in Southern Maryland, it was introduced by retired teachers who served in the African-American schools before integration. The teachers enable students today to better visualize and make local connections to important lessons in history. The culminating exhibit will coincide with Calvert County's 350th anniversary in 2004.
- A number of annual events celebrate unique aspects of Calvert County life. For example, the Calvert County Fair has promoted the County's agricultural heritage for many years. The Calvert County Farm Tour furthers appreciation

of local agriculture. Children's Day at the Farm, sponsored by the Calvert County Commissioners and Jefferson Patterson Park and Museum allows children to learn about traditional farm life. Patuxent River Appreciation Days (PRAD) celebrates the traditional livelihoods that depend on the river. Artsfest at Annmarie Garden provides an opportunity for people to meet and enjoy the work of artists, artisans, and performers in a unique cultural setting. African American Family Community Day is a lively and educational celebration of tradition, history, food, and arts held annually 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, is developing a comprehensive interagency community resource directory in a web-based 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 exist to address have been identified from within the communities they serve. They share the goal of positive, inclusive, strengthening of community.

Actions

- II-1 Consider increasing the use of schools as community centers; include multiple uses in designing new schools. [P&Z, BOE, CR]
- II-2 Encourage cultural celebrations at the neighborhood, community, and County level, particularly those that bring together diverse groups. [BOCC, ED]
- II-3 Continue to incorporate heritage and local history projects in the school curriculum, provide in-service instruction in local history and heritage for teachers. [BOE, P&Z, GS]

Actions Continued

- II-4 Sponsor school and community programs that promote civic responsibility and teach effective means for conflict resolution. [BOE, CR]
- II-5 Assist communities in writing and using community report cards. Hold a community workshop to devise a report card and test it, as a pilot project. [P&Z, CR]
- II-6 Encourage the use of volunteers to provide community programs and services that are not feasible for the County to provide. [All Departments]
- II-7 Develop community project and service awards and provide "seed money" for such projects. [CR]
- II-8 Encourage strategies to make it easier for communities to provide recreation and community facilities without an overwhelming insurance burden. [F&B, GS]
- II-9 Encourage employers to increase programs that allow parents more time with children, such as telecommuting, or job-sharing. [BOCC]
- II-10 Encourage family-oriented programs. [CR, BOE, GS]
- II-11 Advertise Calvert County's website to encourage people to use it to learn about County programs and services. [CR, TS]

Health & Social Services

Objectives

- Promote accessible and quality health and social services in the County.
- Promote wellness programs, such as fitness classes, nutrition, checkups, 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.
- Encourage community support of positive youth development activities that help prevent youth from engaging in high-risk behaviors.
- Promote strategies that encourage adults to model positive, healthy lifestyles.

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 2001, the Calvert County Health Department commissioned a community health assessment. As part of this assessment, researchers compared the hospital's patient data with other Maryland hospitals. Calvert's cancer rate is slightly lower than the state's. Concerning the top 15 leading causes of death in Maryland, Calvert had a lower death rate than the state in all but four categories: Chronic obstructive pulmonary disease, accidents, nephritis and nephrosis (kidney ailments), and Alzheimer's disease. Motor vehicle fatalities were particularly high (20 deaths per 100,000 in Calvert compared to 12 deaths per 100,000 in Maryland)

In addition to statistical comparisons, the researchers conducted seven focus groups on a wide range of health issues, including access to health services, maternal and child health, staying healthy and quality of life, and populations at risk.

As a result of the analysis, the Calvert County Community Health Improvement Roundtable selected five priorities to address over the next five years:

- Adolescent Health including alcohol, tobacco, and drug usage; mental health, teen pregnancy, juvenile crime, and after-school programs
- Elderly Care and End-of-Life Services
- Health Information including education and access to emergency and acute advice; topics to be considered include tobacco usage, sexually transmitted diseases, and women's health
- Pediatric Dental Care including preventive care
- Recruitment and Retention of Primary Care Providers.

One national trend, which also applies to County residents, is the increasing percentage of working adults without health care benefits. Part-time, seasonal, and temporary employment traditionally does not provide health care coverage, and small businesses and self-employed workers struggle to afford the yearly increased cost of premiums.

Health care coverage has improved for children with the establishment of the Maryland Children's Health Insurance Program (MCHIPS), which enrolls children whose family's income is above the eligibility for Medical Assistance (MA) (up to 300% above the state poverty level). Calvert County children from low-income families (MA eligible) are not able to access dental care, reflecting a statewide trend that has been driven by minimal MA reimbursement rates, lack of dentist participation in the MA program, and geographic distance from affordable clinics.

Public Health Services

The local Health Department is the public entity that is responsible for integrating, coordinating, and ensuring 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, promoting and encouraging healthy behaviors, preventing epidemics and the spread of disease, ensuring the quality and accessibility of health services, protecting against environmental hazards, and preparing for and responding to terrorism and natural disasters.

The State of Maryland and Calvert County have both financially supported the local Health Department. It is in the interest of all levels of government that preventive 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 is available at a number of community service locations. All residents should be aware of this directory.

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.

Most 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 2003, four senior assisted care homes were operating in the County, housing a total of eighteen residents. Currently, two adult day care programs are operating in the County to meet the growing needs of seniors and their families.

Diagnostic and Acute Treatment

The County's only hospital, Calvert Memorial Hospital, has 100 inpatient beds and 18 subacute beds on the Transitional Care Unit (TCU) on the 4th Floor. In 2002, the hospital was staffed by 111 active staff and 77 consulting staff. 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 more than 20 miles. In 1997, the hospital constructed a 25,000 sq. ft. satellite facility with physicians' offices, outpatient care, and a women's

wellness center in Dunkirk. The hospital opened a similar facility in Solomons in 1999 and a third facility in North Beach in 2002.

In 2003, the County was also served by three nursing homes - the Calvert County Nursing Center (149 beds) adjacent to the hospital, the Solomons Nursing Center (87 beds), and Asbury Solomons Health Care Center (42 beds).

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 that 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

Citizens have 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 2002 Fact Sheets, the Maryland Kids Count Partnership gave the County an overall 5th highest rating of 16 bench marks for the 23 counties (see Table II-A). However, two categories are cause for concern. Child death (ages 1-14) was the 18th in the State and juvenile violent crime arrest rate was the 14th in the State.

In all societies, most burglaries, robberies, and assaults are perpetrated by adolescents and young adults. Critical to crime rates are parenting and childcare 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.

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 2002, the average cost to incarcerate one person per year in the County detention facility was \$25,090. 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 could be saved in future health care costs alone.

In the school system, programs are needed that promote positive values, help identify methods of avoiding physical conflict, identify and report child abuse, and

Table II-A CALVERT COUNTY FACTSHEET Maryland's 2004 Kids Count									
FACTSHEET	THEN			NOW			TREND	RANK	
	NO.	RATE/ PERCENT	BASE YR.	NO.	RATE/ PERCENT	CURRENT YR.			
Babies Born Healthy									
Low Birth Weight (weighing less than 5.5 lbs.)	75	8.3%	(1995)	62	6.1%	(2002)	Better	1	
Infant Mortality (per 1,000 live births)	24	5.3	(1993-1997)	26	5.3	(1998-2002)	Same	4	
Early Prenatal Care	688	79.8%	(1990)	817	83.6%	(2002)	Better	18	
Healthy Children									
Binge Drinking		26.0%	(1992)		23.9%	(2002)	Better	14	
Child Death Rate (ages 1-14, per 100,000 children)	15	19.8	(1993-1997)	16	18.7	(1998-2002)	Better	9	
Injury Rate (ages 0-19, per 10,000 children)	51	25.3	(1995)	29	15.1	(2001)	Better	4	
Children Entering School Ready to Learn									
Kindergarten Readiness		63.0%	(2002-2003)		60.0%	(2003-2004)	Worse	11	
Children Successful in School									
3 rd Grade Reading*					60.6%	(2003)	N/A	2	
Violence-Related Suspension (per 1,000 students)	208	18.2	(1992-1993)	657	39.5	(2001-2002)	Worse	8	
Absence from School		9.1%	(1993)		6.3%	(2003)	Better	3	
Children Completing School									
On-Time Graduation		88.5%	(1995-1996)		87.8%	(2002-2003)	Worse	10	
High School Program Completion**		47.2%	(1991)		57.9%	(2003)	Better	7	
Children Safe in Their Families and Communities									
Teen Violent Death Rate (ages 15-19, per 100,000 teens)	12	56.4	(1993-1997)	8	24.0	(1998-2002)	Better	2	
Child Abuse and Neglect (per 1,000 children)	111	7.5	(1990)	69	3.1	(2002)	Lower	4	
Juvenile Non-Violent Crime Arrest Rate (ages 10-17, per 10,000)	107	172.0	(1990)	197	186.2	(2001)	Worse	14	
Juvenile Violent Crime Arrest Rate (ages 10-17, per 10,000)	12	19.3	(1990)	48	45.4	(2001)	Worse	13	
Stable and Economically Independent Families									
Child Poverty	980	6.8%	(1989)	1,475	6.7%	(2000)	Same	4	
Child Support	1,111	51.0%	(1993)	2,245	93.7%	(2003)	Better	4	
Birth to Teens (ages 15-19, per 1,000 female teens)	85	40.9	(1995)	83	27.2	(2002)	Better	8	
*Percent of students scoring proficient on the Maryland School Assessment									
**Percent of students meeting minimal requirements for the University of Maryland System									
County Rank: 1=Best; 24=Worst									

empower young people to resist alcohol, tobacco, and other 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. CAASA, the Sheriff's Office, the Health Department, and the school system were providing many of these types of training, education, and crime watch programs in 2003. Residents need to determine whether detection programs are in place in their communities.

- *Intervention*

When a problem is identified, specialists are needed for counseling, education, and supervision. County programs existing in 2003 included:

- Drunk Drivers Monitor Program
- Short-term in-patient facilities for psychiatric care
- Treatment Facility
- Crisis Intervention Center
- Substance Abuse Program
- Mental Health Clinic
- Foster Home Program
- Protective Services Program
- Adoption Program
- Jail Substance Abuse Program
- Project ECHO
- Safe Harbor Shelter
- Adolescent Psych Day Treatment Program
- Neighborhood Youth Panels
- SpotLight on Schools
- Family Coordination Center
- Department of Juvenile Services
- Tri-County Youth Services Bureau
- Boys and Girls Clubs.

During preparation of the Plan, concerns were raised that those in the criminal justice system can "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 ensure that those who need services receive them.

In October 2002, the County's first predelinquency intervention center was funded. This center will be a key point of contact for families in the County.

Private nonprofit groups, such as Alcoholics Anonymous, have also played a significant intervention role and should be encouraged.

- *Elder Care and End-of-Life Services*

According to the 2001 Calvert County Community Health Assessment “Between now and 2020, Calvert County’s population of adults 60 years old and older is expected to grow from 9,377 to 26,616 for an increase of approximately 190 percent, making it the fastest growing senior population in the state... About 70 percent of this growth is projected to occur in the next decade.” Seniors have different interests, housing needs, and health care needs than young families with children. Calvert’s Senior Centers, Office on Aging Senior Services, public transportation, and health care facilities are very important for the quality of life of many seniors. The Health Department provides adult evaluation reviews, develops care plans, and coordinates services to the population considered at risk of institutionalization.

The need for high-quality end-of-life care in Calvert County is currently being well-addressed by Calvert Hospice, the County’s only licensed hospice agency. Hospice care is delivered in the residence of the person, whether that is a private home, assisted living, or long-term care facility. However, there is a segment of the Hospice-appropriate population for whom care at home is too demanding or problematic for the family and for whom institutional placement is either not possible or not desired. A Hospice residence would address that need.

Actions

- II-12 Support the Family Network in its work to coordinate services that target children, youth, and families. [CR]
- II-13 Encourage periodic monitoring of County health trends by health care providers and request that the providers develop recommendations to improve health. [CR]
- II-14 Maintain a central source of information concerning available health and social programs. Use public access TV to present wellness programs. [CR]
- II-15 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]

Actions Continued

- II-16 Investigate the need for and economic feasibility of operating multi-agency additional facilities in community centers. [CR]
- II-17 Encourage affordable programs that allow the physically and mentally handicapped to stay in their homes and have adequate care and access to services and programs. [CR]
- II-18 Encourage a school health program that provides the services of therapists, nurses, counselors, and psychologists. [CR, BOE]
- II-19 Investigate the need for and ability to develop a standardized data form for clients. Where appropriate, protecting confidentiality, share data among the agencies. [CR]
- II-20 Encourage businesses to adopt pro-family policies, such as "flex time," and to incorporate parenting training during lunch breaks. [CR, ED]
- II-21 Encourage the development of supervised teen activities and/or special after-school programs in communities. [CR]
- II-22 Develop family resource centers, including classes, support groups, information, library, and reference hotline. [CR]
- II-23 Expand mental health programs for adolescents. [CR]
- II-24 Implement a plan to address smoking prevalence, illegal drug use, and chronic drinking of alcoholic beverages. [CR, CA]
- II-25 Encourage the establishment of additional or expanded assisted-living facilities and nursing homes and the related services to meet current and projected needs. [CR]
- II-26 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 the number of elderly. [CR]
- II-27 Continue and expand the crisis intervention hotline. [CR]
- II-28 Consider the creation and use of a “211” telephone system to provide health and social services to County residents. [CR]
- II-29 Encourage the development of a Calvert Hospice residence. [CR]

Actions Continued

- II-30 Encourage the development of a long-term care and supportive services plan for Calvert County senior citizens. [CR]
- II-31 In collaboration with the Department of Social Services, support an Adult Protective Services Program to prevent elder abuse, neglect, and exploitation. [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 recreational 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.*
- *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. Eighty-six percent of all occupied homes in 2000 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

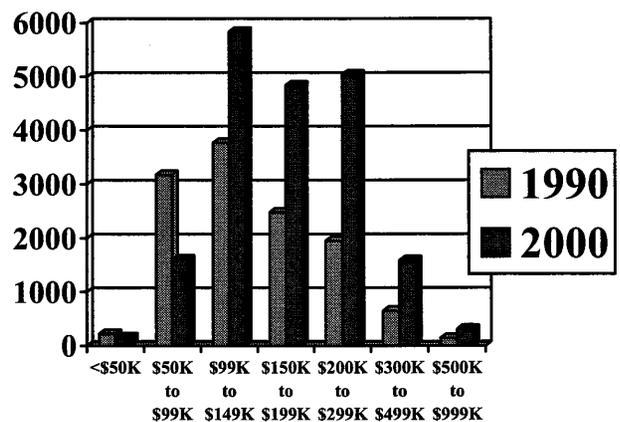
concerns about the current housing stock and development patterns:

- Most housing is out of reach for low-income families and for young people just out of school.
- 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 stormwater management facilities. Large-lot development consumes farmland and forestland, and negatively affects the rural character of the County.
- 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 large homes and lots.

Housing Costs

The term, "Affordable Housing" has been defined as housing available for rent or purchase to low- or moderate-income families at up to 30% of their income.

Figure II-A Distribution of House Values



Low income is below 50% of the median income. Moderate income is between 50% and 80% of median income. Median income in Calvert County was approximately \$75,250 for a family of four in 2003. In the 1990s, the moderate-income housing market demand has been met by the private sector, largely due to the availability of inexpensive lots in older

subdivisions. That has dried up in the last few years, as property values have escalated.

The low-income housing market has not been fully met (see Figure II-A). New subdivisions tend to target families within a very narrow middle-to-upper-income range. In 2003, the average sale price for a home was \$262,736. Only 3% sold for less than \$100,000 and 20% were for less than \$160,000. Most homes sell for 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 2000 census reported 393 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 2003, a total of 345 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 2000, 88.7% of the housing was single-family-detached, 8.8% of the housing was single-family-attached (i.e., townhouse, duplex and triplex), or multifamily (apartment and condominium), and 2.5% was manufactured homes. After 1985, the types of housing in major town centers began to change with the provision of, or upgrading of, community sewer systems. Multifamily and townhouse projects have occurred in Solomons, Prince Frederick, Chesapeake Beach, and North Beach.

The majority of all new housing in the next 30 years will be single-family-detached. Of the remaining 8,400 units to be built in the County, based upon current zoning, only 2,000 to 4,000 are projected to be built in the town centers, where community water and sewer allow 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 recreational 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 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 the aging to remain 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.

Since the adoption of the 1997 Plan, two new elderly housing projects have been added: Town Center Apartments in North Beach (49 units) and Chapline in Prince Frederick (60 units, with another 40 to be constructed).

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.

In the 1980s and 1990s, federal funding for housing was 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 be need for local financial support and/or dedication of land. In 2000, the Board of County Commissioners created the Affordable Housing Loan Fund, which currently has \$1,424,529. A loan committee has been established to implement the fund. The money is to be loaned for the following purposes: Providing indoor plumbing, providing low-interest loans for families, and providing loans to affordable housing agencies for affordable housing projects.

Even prior to the creation of the loan fund, significant progress was 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 2000 census, 137 (0.5%) 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. With the Loan Fund, the County should have an effective tool for reducing the number even further and building new houses for County families needing public assistance to obtain housing.

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. The Affordable Housing Policy Committee has been looking into inclusionary zoning.

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. Ever 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 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 allows up to four-unit apartment clusters, which have the appearance of a single home.

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

Actions

- II-32 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]
- II-33 Facilitate the development of a variety of housing types in town centers by:
- Continuing to allow small clusters of multiple dwelling units (with the appearance of a single dwelling unit) in town centers in accordance with Master Plans,
 - Encouraging the development of low-maintenance, easy-access homes for the elderly so that they can remain in communities longer, if they so choose,
 - Encouraging the development of assisted living group homes for seniors,
 - Encouraging upper- and middle-income housing as an alternative to development in the countryside,
 - Encouraging apartments over businesses. [P&Z, CR]
- II-34 Maintain a public/private housing trust fund to be used for low-interest loans or grants for affordable housing. [CR]
- II-35 Provide needed infrastructure in town centers to provide opportunities for housing development in accordance with Master Plans. [F&B, PW]
- II-36 Encourage training seminars to show how to manage finances to own or rent housing. [CR]
- II-37 Encourage public-private partnerships and/or developer-nonprofit partnerships for the development of affordable housing, elderly housing, or upgrading of substandard housing. [CR]
- II-38 Consider the adoption of inclusionary zoning as a tool to provide affordable housing. [CR, P&Z]
- II-39 Consider legislative actions that will provide tax incentives for retirees to live in Calvert County. [F&B]
- II-40 Develop incentives for new senior housing to be constructed and require covenants to

Actions Continued

- ensure that such housing continues to be occupied by seniors. [P&Z]
- II-41 Promote age-restricted (senior or 55+) housing in Town Centers by reducing the full requirements of the school Adequate Public Facilities regulations, school excise taxes, and/or TDR purchases. [P&Z]
- II-42 Avoid concentrating subsidized housing. Rather, facilitate affordable housing in all areas. [CR, P&Z]

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, the business community, and local human service agencies.
- Support efforts to address the diverse learning needs of students in their local communities.
- Prepare students for jobs.
- Assist young adults in making the transition from graduation to the working world.
- Assist adults who are making career transitions.
- Enhance residents' access to library resources.
- Encourage 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*
- *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.

Youth Education

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 (BOE) has adopted a vision for the success of the Calvert County Public School System as an overall policy encompassing people, systems, standards, practices, and outcomes to ensure success for every student. The Board of Education has the authority and responsibility for student education. The Calvert County Public Schools ranked second in Maryland on both the Maryland State Performance Assessment Program and California Test of Basic Skills results for school year 2001-2002. The County government funds approximately 61% of the BOE 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 four 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. Modern, up-to-date computer labs are in operation in every public elementary, middle, and high school, as well as individual classrooms. More than 6,000 computers are currently in operation in the public schools (2002).

Enrollment

Calvert County's total student enrollment for private and public primary and secondary schools continues to increase. Student enrollment is shown in Table II-B. Between 1996 and 2001, the average annual increase for public and private enrollment was 3.6%. The percentage of average annual increase was 4.1% between 1984 and 1996. A growing number of families in the County are choosing to home-school their children. For the school year, 2002-2003, there were 457 students from 251 families being home-schooled. Parents are required to meet with the BOE staff twice a year to review the student's curriculum, textbooks, and progress.

Table II-B Public and Private Enrollment

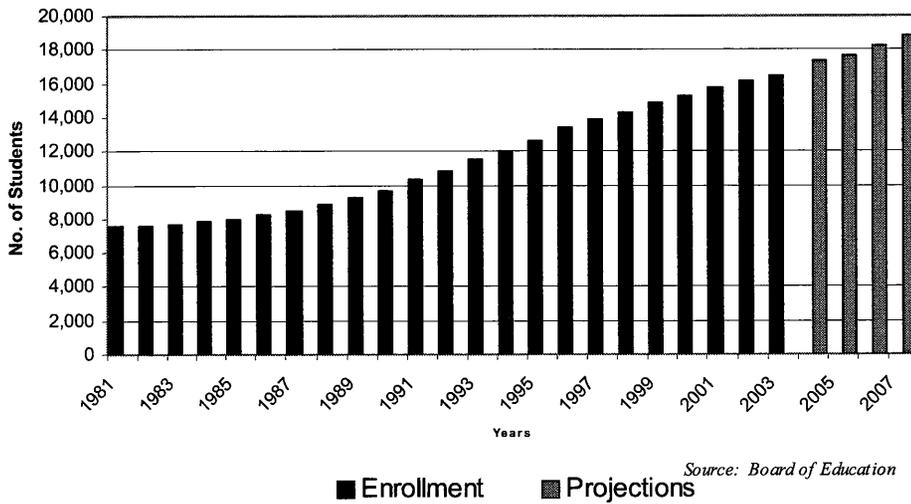
	1984	1996	2001
Public	7,916	13,367	16,292
Private	515	893	1,365
Total	8,431	14,260	17,657

In the near term, enrollment in public schools is expected to increase from 16,358 in Fall 2002 to 18,818 in Fall 2007 (see Figure II-B).

School Facilities

As of the fall of 2002, Calvert County had 22 public schools: 12 elementary schools, six middle schools, and four high schools. Huntingtown High School opened in the Fall of 2004 to serve students in the north-central area of the County. In addition, between 2003 and 2007, one new elementary school is to be constructed, Calvert Middle School is to be relocated and expanded, and the Calvert Career Center is to be renovated and expanded.

Figure II-B Public School Enrollments 1981 to 2003 and Projections to 2007



Although student enrollment is currently increasing, the future need for schools may not be as great, so school location and design become important considerations, should the schools be adapted to other uses. Some former schools have been converted to other uses.

Major portions of State and County funds are devoted to education. Local funding for public school projects consistently constitutes more than 50 percent of the County's overall capital budget. Over the next six years, 2004-2009, BOE projections for capital expenditures total more than \$108 million, reflecting both local and state contributions.

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 expected to increase from 23,800 in 2000 to 25,835 in 2020, according to the Maryland Department of Planning (2002). To meet this demand, it will be necessary to construct six new schools (five elementary and one high school), assuming new schools have a 100% capacity of 675 elementary students, 810 middle school students, and 1,340 high school students (See Table II-C). However, a fifth

Table II-C Number of Schools Needed at Buildout

37,000 Dwelling Units 22,000 Students	Elementary Schools	Middle Schools	High Schools	Total Schools
New Schools Needed	5	0	1	6

high school may not be needed, if the County government reduces the number of dwelling units to 37,000 at buildout and pursues other strategies listed below. The student enrollment is projected to be 22,000 for a buildout of 37,000 dwelling units (Calvert County Planning & Zoning Department, 2001).

In the interim, it is projected that there will be 31,500 total dwelling units by 2010, resulting in an estimated student enrollment of 18,800. To accommodate these students, it will be necessary to

construct three new elementary schools at a cost of \$43.5 million of eligible new construction costs (in 2003 dollars). By 2020, it is projected there will be 35,800 dwelling units with an estimated student enrollment of 21,400. By 2020, six new schools (five elementary and possibly one high school), including the three needed by 2010, will be necessary to accommodate the projected number of students at a cost of \$112 million.

The County's share of new school construction includes 100% of land acquisition, architectural and engineering design, and equipment costs, and approximately 45% of eligible construction costs and 100% of ineligible construction costs. The State funds approximately 55% of eligible new construction costs. The County's projected share (in 2003 dollars) for the six additional schools that will be needed at buildout is \$50 million. This figure does not include land acquisition, design, or equipment costs. Excise taxes levied on new dwelling units will pay for some of the County's costs. This figure assumes that the State will continue funding 55% of eligible 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.

Schools also need to be maintained and eventually

renovated. This is becoming a significant capital cost as schools continue to age. The BOE has proposed to completely renovate Calvert High School and Northern High School in the next few years.

One aspect of school facilities also relates to transportation. Students' cars require school parking spaces and add to the 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 BOE 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 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 are being researched and will be publicly debated so as to forestall the need for a fifth high school. Providing quality education includes ensuring that students master the required skills and knowledge. Students should not be promoted to the next grade if they have not met these requisites.

Partnerships with the Business Community

Since 1986, the Economic and Community Development Institute, College of Southern Maryland has worked with hundreds of Southern Maryland clients to provide a broad spectrum of management and workforce training programs and

business development services. The Center for Corporate Training designs, develops, and implements performance improvement solutions for a variety of clients. The Small Business Development Center helps new firms develop a business plan, acquire capital or loans, obtain certification, and receive the necessary business education to start and run a successful small business. The Entrepreneur and Leadership Center operates and manages business incubators in Calvert and Charles Counties that guide business startups and early-stage firms into becoming sustainable companies. For 20 years, experts from the Maryland Center for Environmental Training (MCET) have partnered with the State's operators and other environmental professionals to improve compliance, optimize plant operations, and prevent pollution. Most recently, MCET developed and delivered health and safety programs through a partnership with the Maryland Occupational Health and Safety Administration.

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.

Literacy

Between 1980 and 2000, the percentage of Calvert County citizens who were high school graduates or had higher education increased from 67% to 87%. However, in 2000, 13% of persons 25 years-and-older did not have a high school diploma, including 3.1% who had less than a 9th grade education. While the education attainment of many County residents has increased, illiteracy is still a problem. The National Institute for Literacy estimated that 14% of Calvert County residents age 16 or over, function at the lowest literacy level, below fifth grade (1992 National Adult Literacy Survey data with the 1990 Census data).

According to the 2000 Census, there were 2,894 people in Calvert County who spoke English "less than very well".

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. The Calvert Library has increased Storytime offerings to children from birth to five. Evening Storytimes, Summer Reading Clubs, Family Book Discussions, and special workshops provide free opportunities for family enrichment.

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 BOE: Adult Basic Education, GED, External Diploma Program, and Even Start (a family-centered program). Most programs are free to participants. There is a fee for the External Diploma Program. The Head Start Program also offers opportunities to increase adult literacy and education. The Calvert Library has built a special collection that is helpful to many adult Calvert Countians who need to gain or improve their reading skills.

Children and Families

Calvert County's percentage of population under the age of 18 was 29.6% in the 2000 Census, higher than the state average of 25.6%. Calvert County ranked first in the State in the 2000 Census for the highest percentage of households with population under age 18 (2000 Census Data, provided by Annie E. Casey Foundation, 2003).

It is important for communities to create an atmosphere of support and opportunities for positive youth development. There is a growing understanding that school readiness requires increased family literacy and the support of collaborating community agencies. The Calvert County Interagency Council on Children and Families 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 Interagency Council is comprised of approximately 70 member agencies and organizations that meet monthly for the purpose of networking and collaboration to ensure community awareness and access to services and to avoid duplication of services.

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 tasks that need to be done to address children's needs. One result was the creation of the Calvert Crusade of Children (CCC), a nonprofit group focused on "increasing volunteer and financial resources dedicated to programs for children and youth and on building community awareness of youth issues." The County Commissioners designated CCC to spearhead General Colin Powell's America's Promise – The Alliance for Youth, a national initiative calling for families and communities to come together to give all children the support they need to succeed. The County Commissioners also enabled CCC to develop www.calvertkids.net, an easy-to-use family guide to local events and information, through Calvert County Family Network (CCFN) funding.

The Board of County Commissioners established the CCFN, formerly called the Local Management Board, in 1997. The mission of the Network is to assess the quality, effectiveness, and availability of human services to children, youth, and families of Calvert County. The CCFN is focusing on three result areas: children enter school ready to learn, children safe in their families and communities, and communities that support family life. The CCFN supports local agencies that work with children and families through grants, data gathering, training, and stressing the need for collaboration and nonduplication of services.

Higher Education

College of Southern Maryland (CSM)

The College of Southern Maryland is a regionally accredited institution that delivers quality programs

and services to more than 60% of Southern Maryland residents who attend higher education institutions. An open-door, public institution, the CSM works closely with a diverse student population regardless of past academic performance. The CSM received state recognition in June 2003 for being the Maryland community college with the highest four-year graduation/transfer rate for the entering class of 1998, at 40.4%. CSM also ranks first in the State for its three-year graduation/transfer rate, and third in the State for two-year graduation/transfer rate.

The Prince Frederick Campus is located on Broomes Island Road, with a new campus under construction on 75 acres at Route 231 and Williams Road, one mile west of Prince Frederick. This new facility is designed for 1,500 students. It will have 17 classrooms and several specialized rooms for art, science, nursing, and computer science with state-of-the-art technology, as well as enhanced testing abilities and advisement, more learning resources, and larger student activity areas. Enrollment at the Prince Frederick Campus has been steadily growing, with 1,267 students enrolled at the campus for the fall of 2002.

The college offers 38 programs leading to a letter of recognition, 28 programs leading to a certificate, 19 programs leading to an Associate Degree in Applied Sciences, 21 programs leading to an Associate of Arts Degree, one program leading to an Associate of Arts Degree in Teaching (Elementary Education), and four programs leading to an Associate of Science Degree. Due to a continuing high demand for flexible programs, CSM has added 13 online programs, including five associate degrees, five certificates, and three letters of recognition. There are three Distance Learning Programs, which combine web-based courses with telecourses (taped), where students can earn credits for three degrees. Weekend College at the Waldorf Center for Higher Education provides an accelerated way for busy adults to complete associate's degrees by combining weekend and Web-based courses. Bachelor's degree partnerships, developed with University of Maryland University College (UMUC), Johns Hopkins University, Towson

University, University of Maryland School of Nursing, University of Baltimore, and Bowie State University allow students to earn their bachelor's degrees locally.

CSM also plays a major role with the business community through its Economic and Community Development Institute by providing the tools, programs, and networking opportunities to bring them to the next level. CSM's newest training center in Lexington Park signals CSM's continued commitment to deliver convenient, relevant training and resources to the business community. Training in Oracle, Access, Quickbooks, Management and Development courses, and many others are held throughout the year at this location.

Southern Maryland Higher Education Center

The Southern Maryland Higher Education Center (SMHEC) was created by the Maryland General Assembly in 1994 to serve the graduate education needs of the Southern Maryland professional workforce. The Center opened in the fall of 1995 and currently offers 52 master's degrees onsite by nine universities. Degree programs are offered in fields of engineering, education, management, information systems, social work, and nursing. Theology will be offered beginning in Fall 2004. Calvert County residents make up approximately 24% of the 2,200 students enrolled in the Center's courses.

Calvert County government should coordinate with the other Southern Maryland counties, the state government, and the Maryland Higher Education Commission to ensure the SMHEC has the resources to continue meeting the growing high-technology education needs of the region.

Libraries

Libraries also create a sense of community. The Calvert Library is a place where the public may kindle their imagination, locate information, and discover inspiration. The library provides services and materials for life-long learning. All ages are served, from the very youngest to the very oldest, in our community. Lives are enriched through story times, special events for children, teen events, and

programs for adults. Customers borrow materials for educational and entertainment purposes. Materials include books, audio books, videos, music CDs, and DVDs. Computers connect the public to databases and the Internet.

Children from birth through age five attend story times that stimulate the imagination with a variety of activities, including books, songs, and crafts. Children are introduced to stories, vocabulary, and the joy of reading. Story time is a positive step toward children’s entering school ready to learn. Older children attend special events to learn about different countries, build a gingerbread house, or celebrate Harry Potter. Teens gather at the library for special movie nights and game nights. Entertaining family programs are presented as part of the Performing Arts Series.

The County library system includes the main library in Prince Frederick, three branches, and an outreach service. Fairview Branch is located in Owings, Southern in Lusby, and Twin Beaches in Chesapeake Beach. The outreach service visits licensed day cares, institutions, and people who can’t get to the library. Currently, planning is underway for a new main library. It will relocate from its Duke Street location to a new facility in a commercial center at the intersection of MD 2/4 and Stoakley Road. Both Southern and Twin Beaches facilities are in the capital budget to be replaced.

Calvert Library shares a database of materials with Charles and St. Mary’s Counties. Items not available in Southern Maryland are available through interlibrary loan from other Maryland counties. The library catalog is available on the Internet. Customers may access catalog information, review their current borrowing record, place holds, and renew items from home or business. The library subscribes to databases that customers may use to find reliable information on many topics, including health, magazines, and literature. Trained information professionals are available in the library, by phone, or by internet, to link people to information resources.

Actions

- II-43 Use technology, such as web-based and telecourse distance learning, to improve educational opportunities and to support life-long learning. [BOE, CR, CSM]
- II-44 Continue involvement of County agencies in the early childhood and family development councils and organizations. [CR]
- II-45 Work with the business community and service providers to identify and to provide job training to meet local employment needs. [BOE, CR, ED, CSM]
- II-46 Continue offering adult computer literacy training courses in the County. [BOE, CR, GS, CSM]
- II-47 Analyze the need for additional or expanded community centers and activities for County residents of all ages. [P&Z, CR, GS]
- II-48 Locate schools, colleges, recreational, and cultural facilities within or adjacent to town centers. [P&Z, BOE]
- II-49 Identify and purchase school sites in order to secure preferred locations. [P&Z, BOE]
- II-50 Explore ways to reduce the need and the cost of constructing new schools. [P&Z, BOE]
- II-51 Locate and design schools to accommodate community needs and to maximize their flexibility for both education and future reuse. [BOE, P&Z, GS]
- II-52 Expand program offerings at the College of Southern Maryland. [CSM]
- II-53 Consider supporting the continued development and operation of the Southern Maryland Higher Education Center. [BOCC]
- II-54 Maintain library facilities and services to serve a growing population. [CR]
- II-55 Continue to maintain schools and renovate older ones as needed. [BOE, BOCC]

Recreation

Objectives

- Develop a network of recreational sites and facilities, including hiker/biker and horseback riding trails, 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 and, to a lesser degree, visitors to the County have access to recreational resources.
- Develop partnerships between public, private, and nonprofit 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 Calvert Cliffs Visitors' Center; and golf courses.

Nonprofit and quasi-public organizations provide 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), and the Fairgrounds. The American Chestnut Land Trust (ACLT) owns 814 acres and manages an additional 2171 acres within the Parkers Creek watershed, providing more than 15 miles of trails open to the public.

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 more than 3070 acres of recreational open space in the County in 2000.

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

Countywide 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, and the nationally-recognized Calvert Marine Museum. Flag Ponds Nature Park and Breezy Point Park both provide magnificent beaches along the Chesapeake Bay. Since 1997, the County has acquired the Biscoe Gray Reserve, a beautiful farm that will be open to the public for horseback riding, canoe/kayaking and hiking, and Chesapeake Hills Golf Course, a site that will not only provide recreation for County residents but also help attract businesses to the proposed business park in Lusby.

Community sites include the Dunkirk District 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 Library; several community centers including Calvert Pines Senior Citizen Center, Southern Community Center and the Northeast Community Center; and Hutchins Fishing Pond. In 2002, the County Parks & Recreation program developed a strategy to provide more ballfields through a combination of lease agreements, land acquisition, and development of existing school fields.

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 boat ramp and fishing pier in Solomons, Boyd and Margaret Shields King Memorial Park located in Prince Frederick, donated by Mr. Boyd King; the Courthouse Green in Prince Frederick, the Dowell House in St. Leonard, and Linden, an in-town farm in Prince Frederick that will be used as a cultural center and headquarters for the Calvert County Historical Society.

Determining Future Recreational Acreage Needs

The State of Maryland has adopted a statewide 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 II-E on the next page shows the number of acres that need to be acquired by the County to meet the recommended standard.

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, and were used to develop the standards listed under "Actions" listed below.

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 to 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.

Table II-D: Number of Acres in County-Provided Recreation

<i>TOTAL NUMBER OF ACRES IN PUBLIC RECREATION PROVIDED BY THE COUNTY AND MUNICIPALITIES AS OF 9/ 2002*</i>	
<i>Countywide Recreation</i>	1560
<i>Community Recreation</i>	498
<i>Town Center & Neighborhood</i>	48
TOTAL RECREATION PROVIDED BY COUNTY	2106

** Since 1997, the County has acquired or developed a total of 397 additional acres of land for public recreation (Biscoe Gray Reserve, Chesapeake Hills Golf Course, Annmarie Gardens addition, Hallowing Point Park addition (lease), New Fairgrounds (1-acre ballfield) and 7 acres of the Old Fairgrounds. Recreation areas in subdivisions, which used to be included in the acreage count, are no longer included because they are not open to the public.*

Table II-E Recreational Acreage Needs		<i>Number of Acres the County should be providing (according to recommended standard)</i>	<i>Number of Acres the County is currently providing (as of September, 2002)</i>	<i>Number of acres the County needs to acquire to meet recommended standard</i>
<i>Projected Population</i>				
2000	75,380 (census)			
2002	77,500	2325	2106	219
2010	86,600	2598	2106	492
2020	95,600	2868	2106	762

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 Countywide parks by way of greenways, they will serve as "gateways" to County parks, providing a selection of supporting services.

Actions

- II-56 Update the Land Preservation and Recreation Plan as required by State law.
- II-57 Continue the established standard of providing 30 acres of recreational open space per 1000 population.
 - a. Give priority to preserving and acquiring key Countywide natural, cultural, and historic sites while they are still available. Land banking is highly encouraged for this purpose.

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 serving town centers (especially after-school programs). Emphasize family-oriented activities and increase programs and activities for all ages.

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 (Prince Frederick, North Beach, Chesapeake Beach, and Solomons) 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
- An indoor community center capable of providing a range of activities for all age groups.

In addition, the County needs a total of three public outdoor swimming pools in or near our major town centers (to serve the northern, middle, and southern parts of the County) and one public indoor swimming pool in or near Prince Frederick. The Kings Landing pool will need to be replaced. The water park in Chesapeake Beach, while a very popular recreational amenity, should not count as one of the required swimming pools.

c. Connect Countywide 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.

II-58 Continue to require onsite neighborhood recreational facilities in townhouse and multifamily developments and in single-family detached neighborhoods of 50 or more houses. Require recreation fees

Actions Continued

collected through the excise tax for all new houses, and use fees to provide recreational sites and facilities at convenient locations to those who paid the fees.

II-59 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.

II-60 Develop and maintain interjurisdictional partnerships to promote recreational networks. [F&B, 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. By 2002, the facility had reached capacity. 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 BOCC and the BOE jointly fund the Resident Trooper Program, which is a contract service with the Maryland State Police. The Resident Trooper is assigned to the BOE 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.

Calvert County has the third 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.

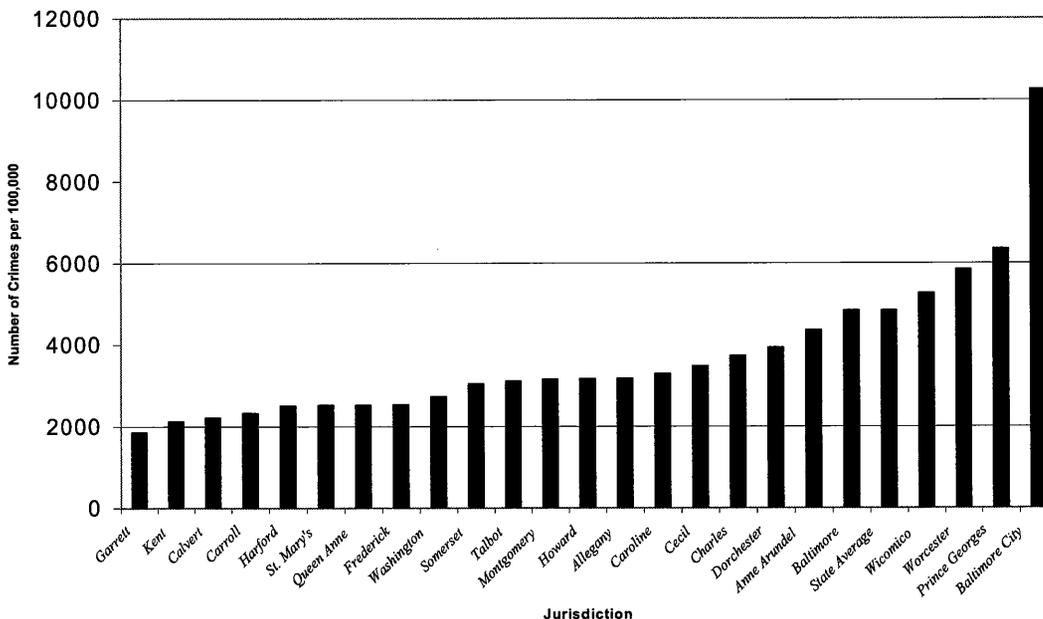
But law enforcement officials are in a position to see early warning signs that may represent the beginning of a breakdown in that tradition. While the values of honesty and trustworthiness still appear to be there, the ability and willingness on the part of parents to pass those values on to the next 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. This problem has worsened since the last update of the Comprehensive Plan. Too many children are being left alone after school. Transportation for after school activities has been cut. Parents are often not aware of programs that are available to help with child-rearing issues.

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 and this situation continues to worsen. 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.

Figure II-C Crime Rates in Maryland Jurisdictions



The number of DWI arrests has increased in recent years. This may be due to improved enforcement. 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

- II-61 Focus primary attention on crime prevention. [PS]
- II-62 Ensure that adequate space is provided at the Detention Center. [PS, BOCC]
- II-63 Increase the use of cable television, community groups, schools, newspapers, and places of worship to inform citizens of the availability of community programs that can help provide after school supervision and/or social services. [CR]
- II-64 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]
- II-65 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. [PS, CR]
- II-66 Support school efforts to provide direct assistance to high school students in acquiring job skills and employment. [BOE]
- II-67 Maintain a strong, ongoing drug and alcohol abuse prevention program; encourage the State to provide adequate drug treatment facilities and programs throughout the State. [CR]
- II-68 Improve the coordination of efforts and services at the state and local level. Many effective programs are already in place, but need coordination. [CR]

Actions Continued

- II-69 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. The Division helps to ensure the humane treatment of animals and protects the safety of citizens where animals are involved. In 1995, the division was staffed with three animal wardens.

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

- II-70 Provide for adequate animal shelter facilities as needed. [PS]
- II-71 Keep current the Calvert County Regulation of Dogs and Cats. [PS]
- II-72 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. Since 1997, an emergency telephone

automated system has been installed and is up and running. In addition, the nuclear power plant, formerly BG&E and now Constellation Nuclear, installed a completely new outdoor warning system as part of its relicensing agreement. The new system was placed in service December 1, 2003.

The division is responsible for the following emergency operating plans:

Emergency Operating Plan (EOP): This is a comprehensive plan covering the response to any emergency, major disaster, or enemy action that 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. A chapter on terrorism was added to the plan.

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.

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.

Calvert Cliffs Nuclear Power Plant Emergency Response Plan: This plan consists of an Emergency Response Plan and an offsite 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 Operations Center (EOC) of the Courthouse and the Calvert Library.

Actions

- II-73 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]
- II-74 Maintain an adequate Emergency Management office and Emergency Operations Center staff and resources. [PS]
- II-75 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 (EMS) 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 2002 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 5715 in 1993 to 16,223 in 2003. 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. A new house-numbering ordinance was adopted in 2002, designed to help ensure that homeowners had their addresses displayed in front of their houses, making it easier for rescue personnel to find them. In addition, a "make the right call" program was implemented to help citizens know who to call in an emergency, thereby cutting down on the number of calls going to 911.

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.

The County Fire-Rescue-Emergency Medical Services Master Plan was updated in July 2000. The plan includes 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 and c) a statement of projected future need based upon population growth. In 2003, the Fire-Rescue-EMS Division added a Recruitment and Retention Specialist to their team.

Actions

- II-76 Continue to implement and review for adequacy the County Fire-Rescue-Emergency Medical Services Master Plan. [PS]
- II-77 Continue to monitor response times and periodically evaluate the need for additional stations and personnel. [PS]
- II-78 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 mission of the Calvert Control Center is to serve and protect the citizens of Calvert County, visitors to our County, and emergency responders. The Calvert Control Center provides high-quality, responsive technical support to the many radio, computer, and special electronic systems used by Calvert County government and its Public Safety agencies. The Control Center operates a state-of-the-art, combined Police, Fire and EMS, Emergency Communications Center, which serves to receive emergency calls to 911 and dispatch the appropriate response agencies to provide assistance. The center coordinates via radio communication, all law enforcement, fire, rescue, and emergency medical functions, from minor incidents up to and including disaster situations.

In 1987, the Control Center dispatched a total of 27,012 calls for service for police, fire, and EMS. By 2002, the Control Center dispatched in excess of 94,000 calls for service for these agencies - a phenomenal increase in 15 years.

Actions

- II-79 Continuously inventory and evaluate all existing radio equipment and analyze the need for additional equipment or enhancements to the system or its infrastructure. [PS]
- II-80 Continuously analyze the functionality of our computer-aided-dispatch system and software. Work toward enhancement or replacement of this system to reduce duplication of efforts throughout the Public Safety Department. [PS]
- II-81 Evaluate space needs for the expansion of operations, equipment, and employees. [PS]
- II-82 Continuously analyze the functionality of the 911 telephone equipment and infrastructure. [PS]

Traffic Safety

There has been an average of more than 1,000 reported traffic crashes per year between 2000 and 2002 in Calvert County. Of these, nearly 500 crashes per year involved injuries and nine involved fatalities, with an average of ten fatalities per year. The number of fatalities increased sharply in 2003, but overall, fatalities per capita have actually declined. This downward trend can be seen throughout Maryland and the United States and is generally attributed to a greater use of seatbelts, improved driver awareness and an overall lower rate of driving while intoxicated.

During the same 2000-2002 time frame, Calvert County typically averaged slightly more than 1.3% of the State's total vehicle miles traveled. Certain Calvert County crashes occurred more frequently than others, those crashes involved motorcyclists (1.7% total crashes, 1.7% injury crashes and 3.0% fatal crashes); young drivers (1.6% total crashes 1.9% injury crashes, and 2.2% fatal crashes) and impaired drivers (1.4% total crashes, 1.7% of injury crashes and 2.1% of fatal crashes).

Young people aged 16 to 20 years old were listed as the at-fault driver more often than any other age group (28% of all crashes) in the County; however this group accounts for only 8% (November '03) of the County's licensed drivers. The majority of at-fault intoxicated drivers were found in the 16 to 20 year age group as well (17%) with 35-39 year old drivers at 16.4%.

Traffic safety can be enhanced through roadway and community design, both of which are addressed more fully in the Transportation Section of this Plan. However, to help ensure that traffic safety issues and circumstances unique to or concentrated in a local area are addressed, the State Highway Administration has designated a Local Highway Safety Coordinator for each of Maryland's 23 counties and Baltimore City. In Calvert County, the coordinator works with members of the Calvert County Traffic Safety Council to identify traffic safety issues and problems, develop appropriate countermeasures, and implement or advocate solutions.

As Calvert County's population steadily increases and the number of County-maintained roadways expand, grant funding for enforcement and education will continue. Another viable solution would be the development of a neighborhood traffic-calming program, with appropriate staffing. These programs have proven invaluable in many other jurisdictions in the Washington Metropolitan area and would allow law enforcement resources to be directed more appropriately than to radar enforcement on local roadways.

- Actions**
- II-83 Continue to support the Traffic Safety Council's educational programs through matching funds and in-kind contributions. [PW, PS]
 - II-84 Consider developing a neighborhood traffic-calming program. [PS].
 - II-85 Maintain adequate traffic patrol staffing. [PS]

Heritage

Objectives

- Exercise stewardship of our cultural, historical, and natural heritage resources.
- Celebrate 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 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 heritage as a primary means of developing and maintaining a sense of identity, a sense of place. Heritage can not 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.*
- *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 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 more than 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. Archaeological studies in Prince Frederick at Chapline Place have recovered the remains of an 18th century plantation. The report for the project is on the County web site. Our archaeological heritage is at risk from development. The County is studying ways to ensure that archaeological resources are considered Countywide before grading or construction begins on projects that might affect significant sites.

Cultural Landscapes

A sustainable commitment to a vision of Calvert County's past would recognize that the environment and the people are inseparable. Every County landscape is a cultural landscape.

1. Some of the roads we travel daily began 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. The oldest 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, 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. The National Trust for Historic Preservation has placed Southern Maryland Tobacco Barns on its list of most endangered historic resources in the country. The five counties in the region applied for the listing, which is expected to draw attention to barns. The counties anticipate generating sufficient interest to craft new and better strategies to assist farmers in maintaining and restoring tobacco barns, and to find new non-tobacco uses for them.

4. Boats, landings, lighthouses, shipyards and seafood packinghouses 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 dock at Sollers Wharf. The possible remains of wharves on St. Leonard Creek were identified in a 1994 underwater archaeological reconnaissance survey. 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 bugeye, 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 also 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 mere 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 Calvert Cliffs Nuclear Plant has used one tobacco barn for interpretive exhibits, and has protected and preserved two others on the landscape. The Museum Services Center houses 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 businesses. Historic schools in Prince Frederick, Broome's Island, Island Creek, Fairview, 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 farmhouses, among others, as Historic Districts.

It is important to intensify the effort to identify and

protect such "vernacular" architecture and sites. More than 1300 County properties have been added to the Maryland Inventory of Historic Properties. 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 more than 50 years old are at least minimally documented before they are permitted to be torn down.

The Historic District Commission took the charge of the earlier Comprehensive Plan, and in 1995, authorized an historic context study, which has enabled the County to target threatened resources for proactive preservation. To date, 70 properties are designated Calvert County Historic Districts. Since 1997 the Historic District Commission has completed projects and publications on historic schools, public meeting places, steamboat wharves, and has continued to update the existing survey of historic sites and has collected numerous oral histories.

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 historic and natural 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. 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.

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 teaching 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 350th anniversary in 2004 of the founding of Calvert County provides an excellent opportunity to both document our cultural heritage and make it available to the public.

Calvert County has committed to maintaining archives 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. Oral histories and photographs documenting Calvert County tobacco culture, African-American education, the Cypress Swamp history project, the steamboat wharf study, and other projects have been added to it. Oral histories generated by Historic District Commission projects are added as the projects are completed. Copies of the material are also shared with the new archive at the Calvert County Historical Society at Linden. The Calvert County Heritage Committee has produced a Guide to Record Collections in Calvert County which is also available online. It is important to support efforts to make the information in the archives 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 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 makes the experience of life in Calvert distinctive. 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

- II-86 Promote the documentation and celebration of Calvert County’s heritage. [P&Z, ED, BOE, GS]
- II-87 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]
- II-88 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]
- II-89 Provide archaeological assessment to indicate potential for archaeological sites, for all development projects of more than five lots. Where important archaeological sites may be affected, require professional investigation to determine site limits, integrity, and significance. [P&Z]
- II-90 Encourage the development of a community volunteer program to repair old buildings, including barns. [P&Z]
- II-91 Continue the annual Historic Preservation Awards program. [P&Z]

Actions Continued

- II-92 Promote adaptive reuse of historic structures and landscapes. [P&Z, ED]
- II-93 Establish an inventory of historic and/or scenic roads and plan for their protection. [P&Z, BOCC]
- II-94 Continue preservation of sites and structures through the designation of Historic Districts; encourage the designation of multiproperty districts. [P&Z, BOCC]
- II-95 Work with agricultural, environmental, and land trust organizations to promote consideration of historical and archaeological resources in open space, or protection through easements or other preservation strategies. [P&Z]
- II-96 Support the Folklife Archive at Calvert Marine Museum as a central repository for local cultural documentation projects; initiate an effort to make the information in the archive accessible through indexing projects, computerized inventory, and linked databases. [GS, P&Z, BOE]
- II-97 Encourage programs that ensure the survival of traditional skills - such as teaching young people about the water trades and agriculture. [GS, BOE]
- II-98 Develop a logo and promotional literature for directing visitors to cultural heritage sites. [P&Z, ED]
- II-99 Encourage the continuity of local place names in new development. [P&Z, ED]
- II-100 Consider creating a cultural arts center in a centrally located public facility. [ED, GS]
- II-101 Affirm the Southern Maryland Heritage Area Management Plan as a strategy to implement heritage education, interpretation, preservation, and promotion goals of the Calvert County Comprehensive Plan. [BOCC, ED]
- II-102 Promote protection of tobacco barns and consider alternative uses that would encourage owners to maintain and restore them. [P&Z]

CHAPTER III: ECONOMY

Objectives

- Work with the private sector to provide employment opportunities for Calvert County residents, increase the commercial tax base, and increase the number of visitors to the County. In generating new business opportunities, continue to remain sensitive to the environment and responsive to community interests.
- Broaden Calvert County's economy by strengthening the existing business base and attracting businesses that utilize the County's well-educated labor force.
- Improve opportunities for visitors and tourism, retirement, leisure, and agriculture and aquaculture industries.
- Foster an economy based upon technology, administrative services, nonpolluting manufacturing, heritage/recreational/nature tourism, 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. A sustainable community meets the needs of Calvert County residents in the following ways:

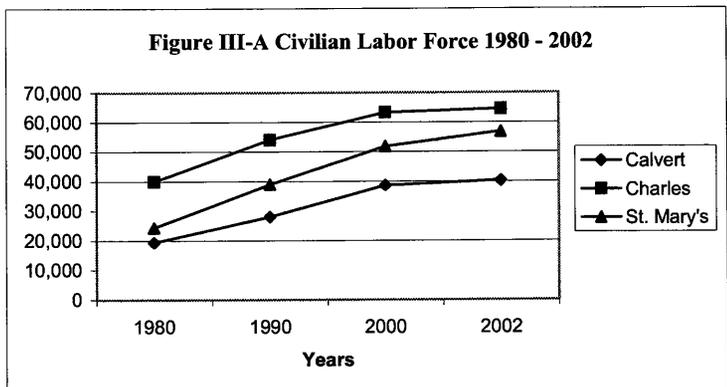
- Residential and commercial growth are balanced.
- A reasonable rate of diversified economic growth is encouraged and sustained to provide jobs for residents, increase incomes, and expand the tax base.
- The economy is diversified to ensure a wide variety of job choices for County residents as well as to 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.
- 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 over 300 years, the County's economy relied on the natural resources associated with agriculture and aquaculture. The Patuxent River and Chesapeake Bay yielded abundant seafood supplies and agriculture relied heavily on tobacco, the primary crop and source of revenue. Early in the 20th century, tourism and recreation began to play an important role 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, overnight accommodations, shops, visitor attractions, and restaurants.

During the late 1960s, the County's population growth began to accelerate as people moved out of the Washington, D.C. metropolitan area. The County's economy began to shift to an economy geared toward commuters. Trade and services expanded, as did the government and the construction sectors.

During the early 1970s, 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. However, during this same time period new, major facilities were constructed that added significantly to the fiscal well-being of the County: Calvert Cliffs Nuclear Power Plant, Liquid Natural Gas Plant at Cove Point, Calvert Memorial Hospital, and Thomas Johnson Bridge. These additions began to help change the face of Calvert's economy and work force.



During the 1980s and 1990s Calvert's economy continued to expand. The County saw an increase in its population from 21,000 in 1970 to 78,800 in 2002. The types of businesses that located within Calvert's borders begin to evolve into larger, more technical-oriented companies. The expansion of the business base at the Calvert County Industrial Park and the continued growth of the business base Countywide are significant indicators of strength as a viable business community.

Labor Force and Employment

Calvert County continues to expand its labor force and continues to have the smallest labor force in Southern Maryland. In December 1992, the civilian labor force in Calvert County was 30,991 with an unemployment rate of 5.5 percent. By December of 2002, the labor force had grown by 30+ percent to 40,358, yet the unemployment rate declined to 2.3 percent. In comparison for the same time period, St. Mary's County civilian labor force increased 46 percent and Charles County increased 13 percent. The strong demand for workers in the County, as well in as the Washington Region, has more than accommodated the increase in the labor force.

Between 1992 and 2002 "At Place Wage and Salary Employment" in Calvert County grew by 6,900 jobs or almost 57 percent. During this same time period, overall Maryland employment rose almost 19 percent and Southern Maryland increased almost 44 percent.

incomparable. Therefore, for the remainder of this analysis, comparisons will be between 2001 and 2002.

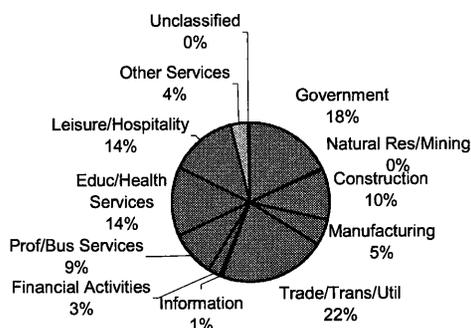
NAICS categories are broken down into three major categories of private sector jobs: goods-producing, service-providing, and unclassified. The goods-producing sector, which includes natural resources and mining, construction, and manufacturing, saw an increase in jobs of more than 5 percent between 2001 and 2002. The service-providing sector includes trade, transportation, and utilities; information; financial activities; professional and business services; education and health services; leisure and hospitality; and other services. This sector showed the largest increase in jobs – 6 percent between 2001 and 2002. The unclassified sector saw a decrease of 36 jobs or almost minus (-54) percent in the same period.

Not reflected in the totals are the County's traditional industries of farming, forestry, and fishing. According to 2001 Maryland Department of Planning data, the most recent available, farm employment totaled 426, including 355 proprietors. "Forestry, fishing, related activities, and other" added 123 jobs for a total of 549 jobs in the traditional industries. These job totals have shown annual declines in recent history.

Tax Base

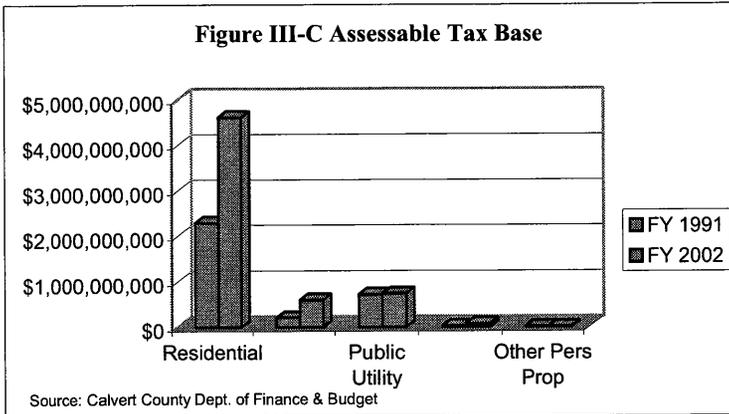
Calvert County continues to have an assessable tax base heavily dependent on residential real property and public utilities. Between FY 1991 and FY 2002, the Total Assessable Base increased by 85 percent. In both percentage terms and in real dollars, Constellation Energy's Calvert Cliffs Nuclear Power Plant remains the single largest taxpayer. The residential real property assessable base has grown from almost \$2.3 billion in FY 1991 to \$4.6 billion in FY 2002, increasing from 70 percent of the total tax base to 76+ percent. The commercial real property assessable base has grown from \$210.7 million in FY 1991 to more than \$595 million in FY 2002, increasing from 6.5 percent of the total tax base to almost 10 percent. During the same time frame, the Public Utilities assessable base share dropped from 22 percent to slightly more than 12 percent while the Other Personal Property base decreased from 0.3 percent to 0.2 percent.

Figure III-B Employment Base 2002



Source: Maryland Dept. of Labor, Licensing & Regulation, Office of Labor Market Analysis and Information

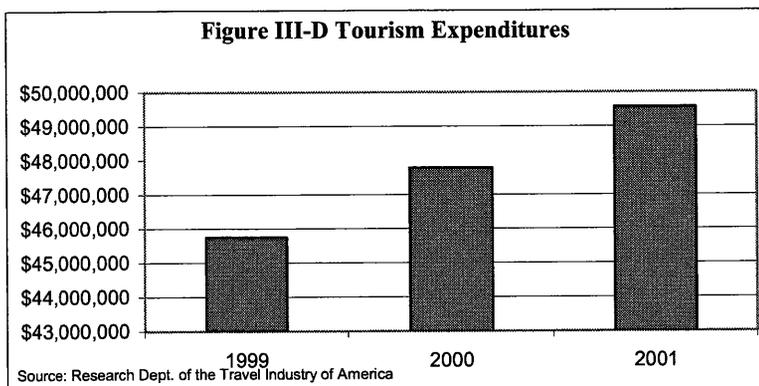
Please note that, in 2001, the Maryland Department of Labor, Licensing and Regulation changed their private industry sector categories from SIC to NAICS categories. Due to this change, data prior to 2001 is



The trend would appear to be that the major share of future costs for services will be borne by the residential taxpayer because the commercial tax base has not grown enough to offset the growth of the residential base. The effects of the Public Utility tax reform, due to electric deregulation, could further compound this trend. During this same period, the cost of operating the County government also increased significantly. While some of the percentage increases seem large, the County has budgeted conservatively and provides modest levels of governmental services when compared to other Maryland jurisdictions.

Tourism

Tourism continues to be one of the leading components of Calvert County's economy. The increasing amount of leisure time available to the workforce, enhanced tourism efforts by the State and County, and the wide variety of accommodations and visitor attractions lead to Calvert's quality of life. The Board of County Commissioners encourages tourism as a serious component of its economic program.



Visitors: Fairview and Solomons Visitor Centers reported having 26,738 visitors in FY 2003. These were part of the 402,527 visitors logged at fourteen key visitor

sites throughout the County. The counts at the Visitor Centers are up 12 percent from FY 1994. The number of overall visitors to the key visitor sites was up more than 152 percent for the same period.

There is no absolutely accurate method of counting visitors to the County because many visit more than one site and some locations do not count their visitors. Some of the additional methods of determining the visitor industry's impact on the economy follow:

1. State Sales Taxes are levied on hotels, motels, bed & breakfast inns, cottages, apartments, restaurants, nightclubs, lunchrooms, delis, general merchandise, recreation and amusement places, gasoline service stations, and automobile/bus/truck rentals. Although this money is not returned to the counties, these figures do indicate activity in the visitor industry. Between 2001 and 2002, state sales tax collected in Calvert County from hotels increased almost 11 percent, restaurants increased 6+ percent, shopping and amusements increased almost 13 percent and transportation increased almost 7 percent.
2. Tourism jobs are on the rise in Calvert County. The Calvert County Department of Economic Development commissioned a study from the Regional Economic Studies Institute at Towson State University. These figures include only private sector jobs based on eight designated SIC industries. This survey did not include marinas, retail, or government agencies. This study shows an increase in tourism jobs of almost 4 percent from 1999 to 2001 in Calvert County.
3. Tourism expenditure figures are estimates of the impact of the domestic traveler spending in Calvert County. U.S. residents traveling in Calvert County include both in-state and out-of-state visitors traveling away from home overnight and staying in paid accommodations, or on trips 100 miles or more away from home. Tourism expenditures increased 8 percent from 1999 to 2001. Consequently, the estimates understate the impact of all visitors to Calvert

County because they do not include the daytripper to the County. The figures include travel spending for public transportation, auto transportation, lodging, food service, entertainment and recreation, and general retail trade. This study was prepared for the Maryland Office of Tourism Development by the Research Department of the Travel Industry America.

Boating: Calvert County has the largest charter boat fleet on the Chesapeake Bay. With 143 miles of shoreline, Calvert County is a favorite destination for boaters. The County has 2,281 boat slips in 16 commercial marinas and additional private slips in community marinas and individual residences throughout the County. It is difficult to quantify the economic impact of boating in Calvert County.

The University of Maryland, College Park and the Sea Grant Extension Program periodically conduct an economic impact analysis on the boating industry. This economic impact model of the Maryland recreational boating industry was designed to update information to determine the impact recreational boater expenditures have on Maryland's economy in terms of employment, income, and economic output. Calvert County is on the list of top counties in Maryland for Recreational Boating Expenditures with a total of \$34 million.

Southern Maryland Heritage Area Tourism Management Plan

The Southern Maryland Travel & Tourism Committee has taken the lead with the Southern Maryland Heritage Area Partnership to develop the Southern Maryland Heritage Area Tourism Management Plan (SMHATMP). The Maryland Heritage Areas Authority (MHAA) authorized the "recognition" of the Southern Maryland Heritage Area Plan and provided a matching grant for the development of the SMHATMP that has led to Southern Maryland being "certified" as a State of Maryland Heritage Area. The BOCC issued a resolution that approved and authorized the submittal of a management plan for the certification of the Southern

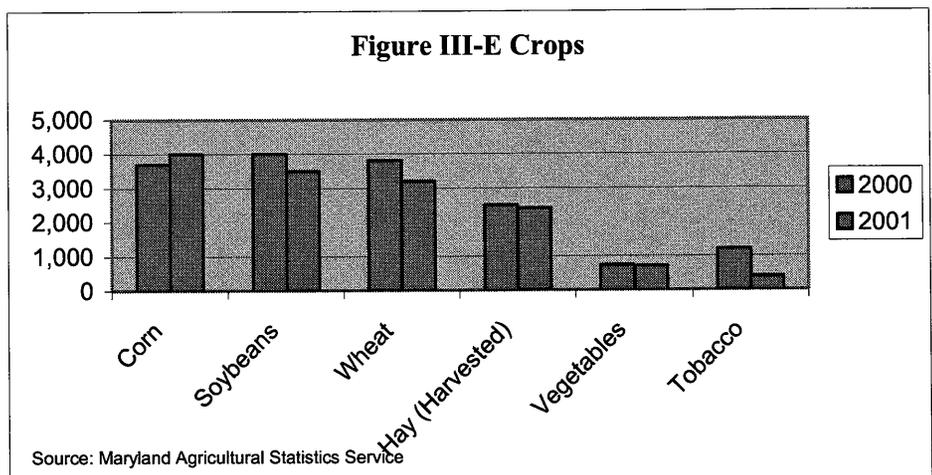
Maryland Heritage Area as a Certified Maryland Heritage Area.

Agriculture

The total land area of Calvert County is 137,725 acres, and farms comprise 32,500 acres, or 24 percent of the total. The major crops for Calvert County are corn, soybeans, wheat, hay, vegetables, and tobacco. Calvert County remains the second largest tobacco producer in Maryland, trailing only St. Mary's County. Initial interest in the "Tobacco Buyout Program" by Calvert tobacco producers has been high and will certainly affect future tobacco production figures. The "Program" has a 10-year lifecycle, and finding viable and economically sustainable substitutes for the tobacco crop will be a particular challenge facing agriculture interests in Calvert and throughout Southern Maryland.

2001 showed decreases in the acreage planted or harvested for all crops except corn, which increased 8 percent. This was a big change from 2000 when increases were seen in all crops but vegetables and tobacco. Tobacco saw a marked decrease of almost 67 percent while notable decreases were seen in soybeans with almost 13 percent and wheat decreasing by almost 16 percent.

Calvert County recently created the Calvert Country Market to provide an avenue for the farming and aquaculture community to sell products. In addition, this market provides a venue for the agriculture and aquaculture community to market alternative crops as called for by the recent Tobacco Buyout Program through



the State of Maryland. The Market has the potential to serve the entire agricultural and aquaculture community.

For information on Calvert County agriculture, please visit www.calvertag.com. For information on the Calvert Country Market, please visit www.calvertcountrymarket.com.

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, the Solomons and Lusby Town Centers, which have the necessary infrastructure in place, are well-suited for attracting high-technology defense contractors. In addition, Solomons will continue to be an attractive location for retired persons to locate, both in planned retirement communities and in existing neighborhoods.

Lusby is emerging as a place for high-technology development. Infrastructure improvements throughout the town, the revitalization of Chesapeake Hills Golf Course, and the planned technology business campus will assist in the development of this town center. Lusby's proximity to the Patuxent River Naval Air Station will also prove to be an asset in the town's development.

The town centers of Huntingtown, Owings, and Dunkirk are not currently served by some forms of public infrastructure. Dunkirk, however, has the potential to be one of the County's major employment centers due to its proximity to Washington, D.C. and the area's airports, interstate highways, and metropolitan centers. Dunkirk currently serves as a retail and services center and significant commercial growth in this area is anticipated.

The incorporated towns of North Beach and Chesapeake Beach are experiencing 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:

- **Roads:** 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. As MD 2/4 becomes increasingly congested, there will be a negative impact 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.

Air & Water: Calvert County relies on air and water transportation facilities in other jurisdictions, including three major commercial airports – Reagan National, Baltimore-Washington International, and Dulles International. The closest public airport is located in St. Mary's County, 25 miles south of Prince Frederick. The Port of Baltimore is one of the nation's largest seaports and is located 57 miles north of Prince Frederick.

Electricity: Business and industry are dependent on a reliable supply of reasonably priced electricity and 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. It is critical to the advancement of economic development in the County to work with local and national power suppliers and monitor deregulation issues to ensure the effective supply of electricity to the business and residential community.

Water and Sewer: Public water and sewer are necessary for many business and/or industrial activities and can be desirable in all town centers and industrial properties where commercial development is encouraged. Public water and sewer services are currently available in Prince Frederick, Solomons, Lusby, and the municipalities of North Beach and Chesapeake Beach and at the Calvert County Industrial Park.

Communications: An advanced communications infrastructure is encouraged to link businesses and technology to provide Calvert County with a competitive edge. Serious consideration should be given to strengthening the infrastructure network within Calvert County. Advanced infrastructure, including fiber optic networks and digital switching telecommunication services and cellular services is extremely important for business development over the next 20 years. Improvements to these networks are encouraged to ensure the ability to attract technology employment opportunities to the County.

Education: County schools, the College of Southern Maryland, and other institutions of higher education are a significant asset in the County's infrastructure. A highly skilled work force is necessary for encouraging technology- and service-oriented business to locate in the County. Partnerships between the business community and the schools strengthen the County's economy.

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, Calvert Cliff's Nuclear Power Plant and Cove Point LNG, owning 1,486, or 66 percent of these acres, most of which are buffer and cannot be developed. The remaining 748 acres includes 227 acres of the Calvert County Industrial Park, which is nearly fully developed. The Calvert Industrial Park is the only industrial property in the County served by public water and sewer. Consideration should be given to the expansion of existing industrial sites. Consideration should also be given to provide adequate infrastructure to support development.

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 (EC/TC) 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 and EC/TCs 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 has 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 nontraditional and emerging development opportunities. Both traditional and nontraditional development may require timely public investment in support facilities, infrastructure, services, and flexibility in zoning and land use issues. The County should work to ensure 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 the legislative delegation and state and federal regulators to ensure 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 that 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 business development outside town centers and EC/TCs 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, of which Calvert County is a part, 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 to 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. The County also has the ability to tap into the strength and resources of the Economic Development Authority, which is responsible for economic development projects Countywide. The input and expertise of this Board is important and extremely useful for all economic development projects.
- Work with agricultural and fisheries businesses to ensure 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

- III-1 Create a five-year strategic plan for economic development and tourism consistent with the Comprehensive Plan. [ED]
- III-2 Broaden and strengthen Calvert County's economy by targeting high-technology businesses, agriculture, forestry, aquaculture, small-scale high-end retail, regional office space, and the tourism industry, as well as targeting opportunities for retirement and leisure. [ED]
- III-3 Review annually the strategic plan and adopt an annual action plan that forms the economic development work program for each year. [ED]
- III-4 Ensure that both the five-year strategic plan and the annual work plans contain specific actions to be achieved and measure of performance so that success can be readily ascertained. [ED]
- III-5 Develop, implement, and periodically assess the effectiveness of incentives to attract and retain target businesses. [ED]
- III-6 Facilitate development of one office park in each election district in either a town center or Employment Center/Town Center District by 2008. [ED]
- III-7 Review periodically and assess cost and regulatory barriers to businesses locating or expanding in Calvert County and include efforts to reduce costs and barriers. [P&Z,ED]
- III-8 Maintain a fast-track permitting process for targeted businesses. [P&Z]
- III-9 Review County regulations that are not consistent with adopted goals and objectives and amend as appropriate. [P&Z]
- III-10 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. [PW, P&Z]
- III-11 Work to enhance partnerships with all public and private sector groups interested in economic and tourism development. [ED]

Actions Continued

- III-12 Provide information that will help businesses decide about locating or expanding in Calvert County. [ED]
- III-13 Maintain an updated County inventory of available commercial property. [ED]
- III-14 Maintain an online presence of tools and resources for County businesses and businesses looking to locate in the County. [ED]
- III-15 Conduct a County wage, labor availability, and labor quality survey. [ED]
- III-16 Encourage and promote the development of industries that do not significantly contribute to environmental degradation. [ED]
- III-17 Consider requesting changes to taxing policies in Priority Funding Areas (as approved by the state) to encourage investment in town centers. [BOCC]
- III-18 Periodically revisit County regulations for large retail commercial buildings to address traffic, appearance, environmental impact, and their effect on the local economy. [PC]

CHAPTER IV: GOVERNMENT Administration

Objectives

- Maintain a strong public participation program in government decisions.
- Improve 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. Make sure that information is readily accessible and understandable to the public through more use of the internet.

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. Second, 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. The internet is a valuable tool for this purpose.

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. The Maryland General Assembly makes these laws. The Board of County Commissioners (BOCC) 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 BOCC.

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.

Government organization is also a factor in effective delivery of services to the public.

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 may be less expensive and government building space can be reduced. Factors to be considered concerning privatization are:

- Cost
- Proper accountability and adequate quality
- Assistance to the local economy.

Actions

- IV-1 Periodically appoint committees, as needed, to review County services. [CA]
- IV-2 Maintain a high standard of customer service and ethics among County employees. [P]
- IV-3 Consider opportunities for privatizing County services, provided that:
 - a. They are cost-effective, and there is competition;
 - b. Performance standards are met; and
 - c. They are phased in and announced in advance so that local businesses have the opportunity to compete. [CA]
- IV-4 Conduct periodic analysis of County government space needs, pay scales, and positions to determine if they are in line with market conditions. [CA]
- IV-5 Develop and maintain good directional signage for County facilities. [GS]
- IV-6 Provide current information concerning the

Actions Continued

- organization of County government, including the functions and procedures of Departments, Boards, and Commissions. Seek ways to distribute copies, particularly to new residents. [CA]
- IV-7 Periodically review County rules, regulations, and practices for elimination, combination, or clarification. [CA]
- IV-8 Periodically evaluate the County computer system and make use of new technology when it results in improved service. [CA, TS]
- IV-9 Among equally qualified applicants, give priority to hiring County residents. [P]
- IV-10 Use the internet as one means of providing information to the public. [All Departments]
- IV-11 Periodically review government organization to ensure that it is structured to provide the best service to the public. [BOCC]

Finance

Objectives

- Ensure that 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.
- Ensure that the citizens of Calvert County share the cost of services in a fair, equitable, and rational manner.
- Maintain financial models for long-range financial planning, including long-term financial forecasting model, 6-year capital improvements program, and the debt affordability model.

Sustainability Issues

Sustainable communities recognize long-term fiscal trends and adopt policies to:

- *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*
- *Include citizen input in budget decisions.*

Fiscal Trends

Calvert County enjoys a very strong financial position with relatively low debt and low tax rates. In FY 2003, Calvert County had the 4th lowest real property tax rate and the sixth lowest income tax rate in the State. This allows a comfortable level of flexibility in the County's ability to increase revenue as needed from a variety of sources. After several years of unprecedented growth in income tax receipts, the most recent increase dropped to 5.4% (FY 2003 over FY 2002). The County's fund balance at the end of FY 2003 reflects a total of \$43.5 million.

Calvert County's two main revenue sources are real property and income tax. Real property reassessments were virtually flat through the mid-1990s. There were several years when new construction was the only increase in this revenue source. Recent valuations however, are showing average annual increases of approximately 6% reflecting a surge in the real property values. Income tax receipts powered our economy over the past 5 years. In FY 1997, income tax revenues totaled \$23.6 million; in FY 2003 \$40.2 million, an increase of more than 70%, or more than 9% per year. FY 2004 receipts, however, are expected to be about \$42.9 million.

The third largest revenue source for the County is utility taxes. Since 1975, the County has benefited from substantial revenues from the Calvert Cliffs Nuclear Power Plant (CCNPP) in Lusby. During the 1980s the CCNPP public utility tax payment represented more than one-third of the County's total revenue. In FY 2003, this payment accounts for approximately 7.5% of the County's revenue. Electric deregulation has had a profound impact on revenues received from this source. In FY 2000, CCNPP paid \$21.1 million in public utility taxes. In FY 2003 this payment has been reduced to \$12.7 million, a reduction of \$8.4 million. To offset a portion of this

loss, the State has provided a grant to the County of \$6.1 million. The agreement was to fund this grant and then perform a "look back" analysis to see if further assistance is necessary. Should the State not fund this grant, the Commissioners would either have to cut expenditures or find a way to replace this revenue.

Even after tax reform, CCNPP remains the County's largest taxpayer and one of the largest employers. Having such a large corporate taxpayer has helped the County maintain the same property tax rate since 1987 and income tax rate since 1990 while meeting the demands of our tremendous growth. With CCNPP's recent success in obtaining relicensing and additional capital investments, they will continue to play an important role in Calvert County's economy. If the plant ever becomes inoperable, it would have far-reaching effects on Calvert County.

The other major utility in the County is the Cove Point Liquid Natural Gas Plant in Lusby. In 2003, it began receiving shipments at the offshore loading pier. The investments in the plant generated approximately \$2 million per year in additional public utility taxes.

Other new commercial endeavors throughout the County include the buildout of the industrial park and the commercial growth within the Prince Frederick Town Center. The Patuxent Business Park in Lusby will have a positive affect on personal and real estate tax revenues. It is expected to have more than 650,000 square feet of office space at buildout.

Recent financial forecasts show expenditures outpacing revenues, requiring the use of fund balance reserves. Expenditure growth over the past two years has averaged 8%. With income tax receipts expected to return to a more normal level of growth of 4% to 5% and assessments growing at 6%, the trend suggests that within the next few years additional revenue will be necessary, and the expansion of the County's commercial tax base through targeted industries will be more critical, to balance the budget.

Expenditures - Capital Costs

Calvert County continues to be one of the fastest growing counties in the State. This is clearly reflected

in the construction of new schools. From 1990 to 2000, Calvert County virtually built a school a year, spending more than \$62.9 million in local funding and \$40.9 million state dollars. Although slowing somewhat, school construction still constitutes a major portion of capital construction dollars. Between 2000 and 2010, the County will construct an additional middle school, high school, and elementary school, expand another elementary school, and do major renovation to the two older high schools. There are also plans to expand kindergarten classroom space to meet the full-day kindergarten mandate in 2007.

As the buildings age and more facilities are added, maintenance has become a major concern and each year more money is required to keep our schools efficient and in good working order. For this reason, the Commissioners successfully petitioned the legislature to drop impact fees in favor of the more flexible Excise Tax. The Excise Tax uses essentially the same fee structure as Impact Fees, but can be used for maintenance or other needs, and is not restricted to new construction. This revenue source is projected to cover all routine maintenance as well as some construction costs.

In the area of higher education, the County has partnered with the State to construct a new flagship building for the College of Southern Maryland at Prince Frederick. This \$17.8 million facility located on Williams Road will open in 2005. It is the first of five buildings to be constructed in a campus setting.

In addition to schools, the second area of priority funding is infrastructure, primarily roads, recreation, communications, and water and sewer. Over the next six years, \$26.8 million is allotted for the Prince Frederick Loop Road, \$5 million for Southern Connector Road and Patuxent High School entrance, and \$8.4 million for parks and recreation facilities, including a swimming pool at Cove Point Park. A major expansion of the Prince Frederick Sewer Plant was completed in 2003 to provide for the residential and commercial growth anticipated in the county seat.

To fund this level of capital investment, the County plans to issue general obligation bonds over the next

several years. Bond financing is an economical way to pay for large capital improvements. Because of the County's strong financial position and excellent bond ratings, the County has been able to obtain very attractive borrowing rates. The bonds are paid off over a 15-year term, allowing future generations who benefit from the improvements to help pay for them.

Expenditures - Operating Costs

For the 5-year period FY 1999 through FY 2003, total general fund expenditures and other financing uses increased \$31.3 million or 26.8%: \$19.7 million or 35.6% for the Board of Education, \$11.6 million or 18.9% for County. This increase correlates to the population growth and increased demand for services in all sectors of local government.

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 of no less than 8% of annual expenditures. The County has issued bonds one time in the past six years and received an upgrade from two of the three rating agencies.

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. These limits vary from county to county, as they are dependent on a government's financial situation and prospects. In 2001, the BOCC set the debt limit to not exceed 9.5% of current revenues.

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
- Court decisions arising from lawsuits.

With an unreserved fund balance, a local government can maintain the orderly provision of services to residents if one of these situations occur. Bond rating agencies also look at whether a local government has an unreserved fund balance because 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 current economic conditions and forecasts, there are several steps that could be considered to help manage costs:

- Examine fees for services to determine if they are sufficient to cover costs.
- Slow residential growth because costs typically exceed revenues.
- Reduce the level of services.
- Encourage retirees to remain in existing homes or to move to the County because they place fewer demands on schools.
- Encourage volunteerism in lieu of expecting government to provide all services.
- Implement new user fees where appropriate.
- Privatize services (i.e., contract services to private firms) - see discussion in the Administration section.
- Implement energy conservation (see Energy, Public Facilities, and Services).
- Require a fiscal analysis prior to providing financial assistance to any commercial or residential project.

The Cost of Sprawl

Sprawl is the spreading of developments (houses and shopping centers) on undeveloped land near a city. (Merriam-Webster) 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 costs of:

- Building and maintaining roads and other major infrastructure to serve distant suburbs
- Dealing with social problems that remain in the older urban communities when the middle class moves out
- 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 jobs)
- Abandoned investments in older communities that become economically uncompetitive.

New residents who commute long distances are affected by:

- The cost of transportation
- Lost time commuting to work and other destinations
- Vehicle exhaust pollution
- Increases 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 by expanding targeted industries to

help balance the costs of residential growth. A Countywide effort to encourage more commercial and 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.

When determining the types of economic development to support, the County should give priority to businesses that bring money into the County and respending it in the County. For example, locally owned tourism businesses bring money from outside the County and it is usually reinvested in the County. On the other hand, when money is spent in large corporate stores, a large portion leaves the County and thereby reduces the respending of money in the County.

Actions

- IV-12 Maintain a budget process that allows adequate time for public review before a budget is adopted. [CA, F&B]
- IV-13 Maintain a ratio of debt service to total revenues in accordance with sound business principles. [CA, F&B]
- IV-14 Periodically review investment practices and policies and ensure that funds are monitored. [F&B]
- IV-15 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, F&B]
- IV-16 Adopt policies that discourage sprawl development. [BOCC, P&Z]
- IV-17 Encourage retirees to remain in or move to the County by considering tax breaks for seniors. [BOCC, P&Z]
- IV-18 Develop and maintain cost-containment measures to ensure that revenues meet expenditures. [CA, F&B]
- IV-19 Maintain fiscal policies that require new development to pay its fair share of the costs of new facilities and environmental impacts. [F&B, P&Z]

Actions Continued

- IV-20 Explore ways to expand the commercial tax base (see Chapter III: Economy). [ED]
- IV-21 Consider nontraditional funding sources to pay for the implementation of Town Center Master Plans and to preserve identified preservation areas. [F&B]
- IV-22 Require a fiscal analysis to be prepared prior to providing financial assistance to any commercial or residential project. [F&B, ED, P&Z]
- IV-23 Develop long-term revenue and budget scenarios, including one without the revenues from an operating nuclear power plant. Evaluate ways to deal with long-term revenue shortfalls. [F&B]

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- and 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, communications, 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, communications, 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., communications, 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 (e.g., 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., library; post office, or school). In recent years, efforts have been made to build multipurpose 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. Multipurpose use of public buildings makes sense for many reasons, including:

- Reduction in overall County space needs, when compared with creation of separate facilities
- Reduction in parking
- One-stop access to governmental services
- Opportunity for family members to attend

different public functions and/or use services while sharing modes of transportation.

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 multipurpose 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

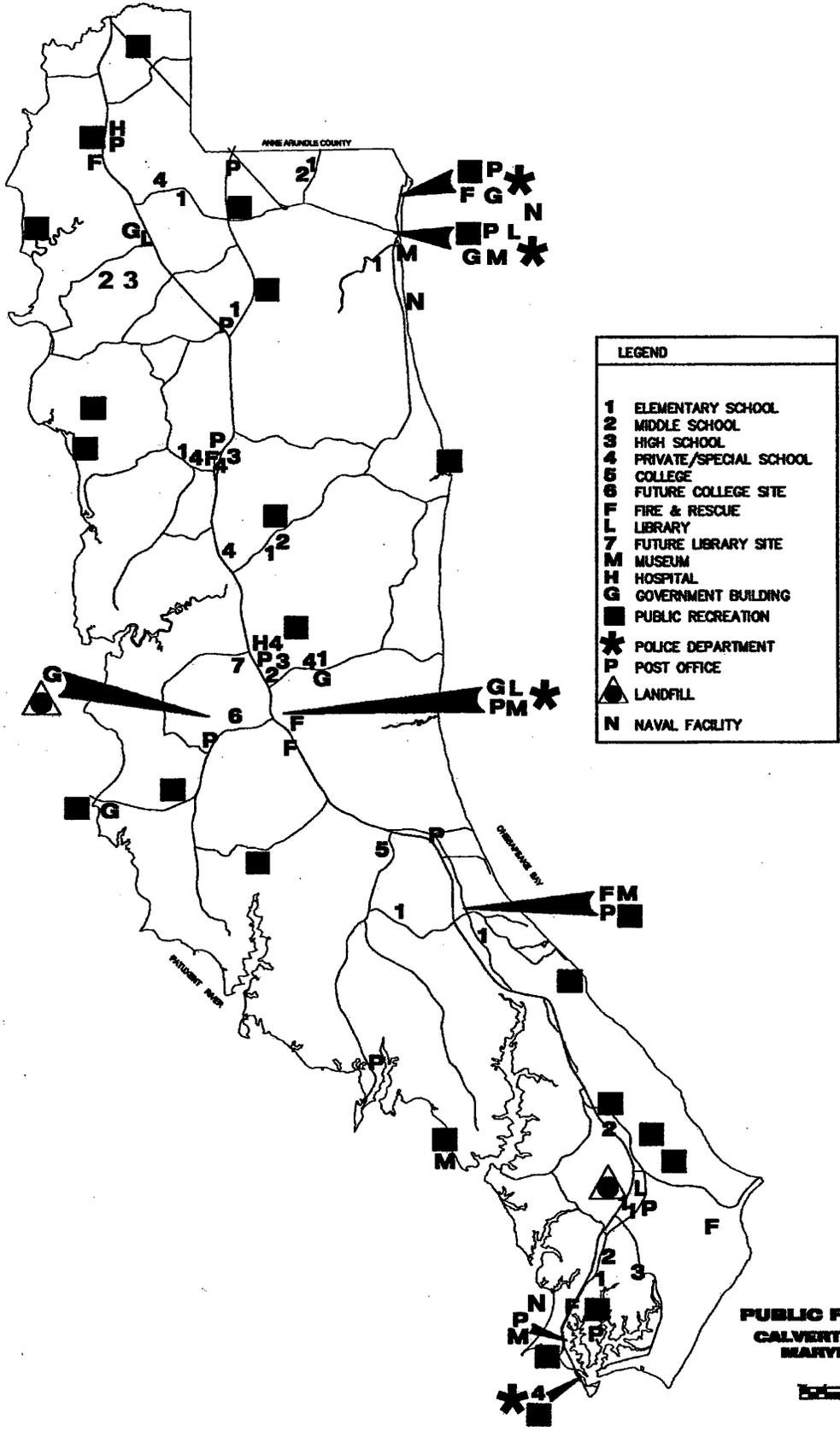
After a new public building is completed, it must be maintained, along with the landscaping, heating and cooling equipment, paper goods, etc. As each building has been erected, there has been no attempt at standardizing the equipment. If several public buildings used the same heating equipment, then 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 or mowing.

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 might not be effectively concentrated.

Town centers should have community water systems 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 or shared sewer systems. Properly designed community sewer systems 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. The County authorized a case study of a shared sewer system in the Marley Run subdivision near Huntingtown.

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 ensure that all new construction will be on lots that can accommodate onsite septic fields. In deciding whether or not a specific system is appropriate for older dwelling units, the following should 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 benefiting from the system?
- Can the system be developed without increasing buildout?

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 remain fully functional. There are several advantages to developing regional stormwater management facilities versus individual (onsite) 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 make major town centers more pedestrian-friendly, 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 less expensive to acquire sites and rights-of-way before most of a town center develops. Regional stormwater management facilities are often more effective and less expensive to maintain for all parties than individual onsite systems, but need to be planned before much development occurs.

Actions	
IV-24	Be proactive in the development of infrastructure in town centers as called for in town center master plans. [F&B, GS]
IV-25	Permit community or shared 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. [CR]

Actions Continued

- IV-26 Locate new public buildings in towns centers, wherever appropriate, consistent with the requirements of the town center master plans. [F&B, GS]
- IV-27 Periodically conduct energy efficiency studies on public buildings and make cost-effective improvements. Consider service of buildings with natural gas, if practical. [GS]
- IV-28 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]
- IV-29 Identify problem stormwater and drainage areas. [PW]
- IV-30 Encourage communities with substantial stormwater management problems to petition for establishment and implementation of stormwater management districts. [PW]
- IV-31 Evaluate the use of regional or shared stormwater management systems, on a case-by-case basis. [PW, P&Z]
- IV-32 Require that County and State agencies review plans for any new public buildings to help promote efficient multiple use. [F&B, PW, GS]
- IV-33 Consider using solar energy and other alternative energy as a supplemental energy source (e.g., at the compactor sites). [F&B, PW]
- IV-34 Consider function, aesthetics, and energy efficiency during site selection and site and building design. [F&B, PW]
- IV-35 Include funding in the County budget to properly maintain public buildings and grounds. [F&B, GS]

Interjurisdictional Coordination

Objectives

- Ensure coordination and cooperation between Calvert County government and other public and 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, and 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.

Southern MD Coordination

Calvert County is part of the Southern Maryland regional economy comprising St. Mary's and Charles Counties. On some levels, such as jobs and market share, Calvert County competes with these other counties. Moreover, the three counties share common interests:

- Common borders with the Patuxent River
- A threatened agricultural economy

- A changing rural lifestyle
- A commuter population.

Calvert County will benefit from collaboration within Southern Maryland to address these issues. The three counties already participate in a number of regional initiatives and organizations, including the Tri-County Council and County Departments such as Public Safety, Public Works, Planning and Zoning, and Economic Development meeting with their counterparts on a regular basis. Coordination is evidenced in (among others):

- Southern Maryland Heritage Partnership
- NPS Gateways Program
- Agricultural Development Commission
- Southern Maryland Regional Transportation Coordination Program
- Southern Maryland Economic Development Association.

Town/County Relations

Calvert County has two incorporated towns, North Beach and Chesapeake Beach. Both exercise local legislative authority independent of the County. Both have their own municipal tax authority and departments of Planning and Zoning and Public Works.

The County and the Towns cooperate in many ways. Examples include:

- County shares revenue with the towns
- Coordination of water and sewer
- Police
- Fire and Rescue
- Schools
- Northeast Sector Plan provides guidance for public facilities such as roads, schools, and parks
- The County and Town of Chesapeake Beach have a Memorandum of Understanding on adequacy of schools.

Federal, State, and Other Agencies

The 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.

Many State and Federal agencies operate within Calvert County. Those most predominantly involved in local land use issues are:

- Department of Defense*
- Federal Communications Commission
- Federal Emergency Mgmt. Agency
- Federal Energy Regulatory Commission
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Environmental Protection Agency
- Critical Area Commission
- Maryland Dept. of Environment
- Maryland Dept. of Health & Mental Hygiene*
- Maryland Dept. of Housing & Community Development
- Maryland Dept. of Natural Resources*
- Maryland Dept. of Planning
- Maryland Dept. of Social Services*
- Maryland State Police*
- Patuxent River Commission
- State Board of Education*
- State Liquor Board
- State Highway Administration*
- University of Maryland*

* Agencies with facilities in Calvert County

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 Department 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.

Important Coordination Issues

State and regional coordination are vital in the areas of:

Emergency Protection and Reaction

- Hurricanes and floods are potential threats because Calvert County is a peninsula with many waterfront communities and 143 miles of shoreline.
- The Calvert Cliffs Nuclear Power Plant, the Cove Point LNG facility, and the nearby Patuxent River Naval Air Station are potential terrorist targets.
- Tornadoes, forest fires, and other natural disasters have the potential to do severe damage.

Coping with these emergencies is complicated by the shape of the county and the resulting limited road access in case of the need for evacuation. Only four roads, two of which have bridges crossing the Patuxent, lead into or out of the County.

Growth Management

- 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 that would otherwise occur as scattered suburban development in the rural areas. The ongoing implementation of growth 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.

Environmental Protection

- Our waterfront is shared with other jurisdictions.
- Well water and sewage disposal by other jurisdictions affects the County and vice versa.
- Air pollution from the metropolitan area and regions further west has an impact on our environment and quality of life.

Tourism

- Attracting visitors can be made more effective and efficient in cooperation with adjacent destinations in many cases.

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

Actions

IV-36 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. Evaluate the impact and cost of expansions of the Patuxent River Naval Air Station. [ED]

IV-37 Continue coordination of transportation planning and programs with all appropriate State, federal, and regional agencies. [P&Z, PW]

IV-38 Minimize potential land use conflicts between incorporated towns and the County through coordination and development referrals, including:

- a. Review of proposed developments which are adjacent to or near town borders
- b. Continued coordination of 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]

IV-39 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]

IV-40 Support State policies that concentrate growth in designated growth centers and policies that protect farm areas. [P&Z]

IV-41 Continue regular communication between agency counterparts in local, regional, and State governments. [All Depts.]

IV-42 Develop memoranda of understanding with the municipalities concerning the provision of infrastructure and services in connection with growth management. [BOCC]

Appendix A

Agency Acronym List

BOCC	Board of County Commissioners
BOE	Board of Education
B&F	Department of Budget and Finance
CA	County Administrator
CSM	College of Southern Maryland
CR	Department of Community Resources
ED	Department of Economic Development
GS	Department of General Services
HD	Health Department
P	Personnel Office
PS	Department of Public Safety
PW	Department of Public Works
P&Z	Department of Planning and Zoning
SCD	Soil Conservation District
TS	Technology Services

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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 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). 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.

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 boundary 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 an Adequate Facilities Ordinance to help ensure that schools would be able to accommodate 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 developments 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 Preservation 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 Preservation District. Design standards were included to protect productive fields, forests and scenic vistas.

Employment Districts. 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.

1997 Comprehensive Plan. The central focus of the 1997 Plan was to establish measurable benchmarks to determine appropriate residential build-out. The Plan also established a set of visions with benchmarks to monitor progress on implementing the visions. The land preservation goal was increased from 20,000 acres to 40,000 acres.

1999 Build-out Reduction. After conducting a thorough analysis of the costs and benefits of reducing build-out and developing options for public review and comment, the County adopted a program to reduce build-out that included a combination of Zoning Ordinance changes with new funding and new incentives for voluntary land preservation. One of these incentives was the Agricultural Preservation Leveraging Program.

2003 Build-out Reduction. The residential build-out issue was revisited in 2003 and further reductions were made to meet the build-out goals established in 1999. Changes were also made to the Adequate Public Facilities Ordinance.

By 2004:

- 22,400 acres of prime farm and forestland had been permanently preserved.
- The Town Center concept had effectively prevented strip commercial development along highways outside Town Centers while promoting one of the biggest percentage increases in the commercial tax base, new jobs and wages in the State during both the 1980's and 1990's.
- Build-out had been reduced to an amount that could reasonably be accommodated without major reductions in the quality of public facilities and services (in particular schools and roads) or the need for major increases in taxes.

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