

CHAPTER 2

PHYSIOGRAPHIC, DEMOGRAPHIC AND LAND USE

CHARACTERISTICS OF CARROLL COUNTY

2.0 PHYSIOGRAPHIC LAND USE AND DEMOGRAPHIC CHARACTERISTICS OF CARROLL COUNTY

This chapter outlines Carroll County's present and projected population, its physical and cultural geography and land use. It also presents an outline of the County's Master Plan. Data on population and land use provides the basis for waste generation projections (both volume and composition) and thus become basic factors on waste management decisions.

2.1 GEOGRAPHY

Carroll County is located in the Piedmont region of north central Maryland. It is bounded to the north by Pennsylvania, on the south by Howard County and lies west of Baltimore and east of Frederick counties (see Figure 2-1). It encompasses just under 456 square miles and extends approximately 27 miles in length and width at its widest point (See Figure 2-2). Elevations range from 300 feet above sea level in the southeastern corner to 1,080 feet near Manchester in the northeast. Carroll County is divided diagonally by Parr's Ridge, which slopes gradually from an elevation of nearly 1,100 feet in the northeast corner of the County, near Dug Hill, to about 750 feet near Mount Airy in the southwest and divides the Piedmont into its eastern and western regions. MD Rt. 27, the major northeast-to-southwest highway corridor, roughly parallels this ridge. The ridge divides the County into two major drainage basins: streams to the north and west drain into the Monocacy and eventually the Potomac River, and streams to the south and east flow into the Patapsco or Gunpowder Rivers towards the Chesapeake Bay.

Created by an act of the General Assembly in 1836, Carroll has been considered rural and agricultural. However, Carroll County is within commuting distance of both the Baltimore and Washington, D.C. metropolitan areas (see Figure 2-1). This fact has placed considerable development pressure on especially the southern and eastern portions of the County. To date, the far northwest quadrant has been less affected.

The County has eight incorporated municipalities. Those towns are: Westminster (the county seat), located in the center of the County along MD Rt. 140; Manchester and Hampstead, located along MD Rt. 30 to the northeast; Sykesville, located in the south-central portion of the County along MD Rt. 32; New Windsor and Union Bridge, located west of Westminster toward the Frederick County line; Taneytown, at the intersection of MD Rts. 194 and 140 in the northwest; and Mount Airy, located at the intersection of U.S. Rt. 70 and MD Rt. 27 in the far southwest corner adjacent to both Frederick and Howard Counties. The County also hosts two Federal facilities. (see Figure 2-2)

2.2 CLIMATE

Temperature and precipitation data is given in Table 2-1. The data was compiled by Carroll County's Bureau of Emergency Services Operations. Generally, the coldest period of year is late January and early February; conversely, the warmest period is the last half of July. The highest temperature on record in the County is 105° Fahrenheit at Taneytown on July 17, 1900, while the lowest is -23° Fahrenheit at Bachman's Valley on February 11, 1899. The distribution of monthly precipitation is fairly uniform during the year with a slight increase in August. The heaviest precipitation during the colder half of the year is generally the result of low-pressure systems moving northeastward along the Atlantic Coast; in summer, it occurs in thunderstorms. The greatest one-day precipitation is 11.55 inches at Westminster on June 22, 1972 when tropical storm Agnes swept through Maryland. Thunderstorms occur on an average of thirty days per year. While they may occur in any month, 75% occur in the months of May through August.

Prevailing surface winds are from west-northwest to northwest except during the months of May

through September when they become more southerly. The average annual wind speed is about nine miles per hour. Damaging or dangerous storms, such as tornadoes, hurricanes, and blizzards, are rare but do occasionally occur.

2.3 DEMOGRAPHY

Carroll County's population was estimated to be 169,521 in 2005. Consistently, the greater densities of population are found in southern and eastern portions of the County and within the environs of the County's eight incorporated municipalities.

The population of Carroll County increased significantly during the period from 1960 to 1970, increasing approximately 31% over the period. In the next decade, 1970 to 1980, the overall rate increased to just under 40%. Although the percentage rates of increase decreased in the ensuing decades, from a 40% increase to 22% in the decade from 1990 to 2000, the numerical increase was relatively consistent at around 27,000 individuals per decade from 1980 through 2000. A rate of 2.5% increase has been realized through the period from 1990 through 2005 with the actual population increase dropping from just above 27,000 to just under 20,000, (see Table 2-2).

2.4 CARROLL COUNTY MASTER PLAN

2.4.1 THE HISTORIC PREMISE OF THE MASTER PLAN

The growth of Carroll County has been guided by a master plan since 1964. The basic premise of the plan has been to direct development into and around the County's nine Community Planning Areas (CPA's) while retaining the rural character and use of the surrounding land. Implementation of the premise was strengthened in 1978, when the allowable density in the Agricultural zone was decreased from one dwelling unit per acre to one dwelling unit per twenty acres.

The land use designation map identifies nine CPA's within the County. A CPA is an area on the county-wide master plan for which a more detailed comprehensive plan was prepared. Most of the CPA's have a municipality at their centers. These CPA's include Hampstead, Manchester, Mount Airy, New Windsor, Taneytown, Union Bridge and Westminster. The Freedom CPA includes the Town of Sykesville, but Sykesville is not the focal point or center of the CPA. The Finksburg CPA has no municipality within it and is no longer an area where additional growth will be concentrated. These CPA's are the areas in the County where the majority of residential, commercial and industrial development is concentrated.

The approach to land use that has been guiding development in the County for the past 43 years provides for the efficient use of land for development and the effective provision of services. By concentrating growth, the delivery of facilities and services such as water and sewer, roads, schools, and natural gas, as well as police, fire and emergency services, is much easier and more cost effective.

Community interaction is promoted when developments are well designed and integrated with each other.

Concentrated growth also accommodates the same number of people on less land, allowing the land outside of the growth area to remain relatively rural. This rural land is composed of agricultural land, open space, and environmental resource lands such as forests, streams, wetlands and steep slopes. Lots currently are required to be clustered in the Agricultural Zoning District on areas that are not suitable for farm fields. This policy serves to preserve the

rural working landscape as well as to maximize the land available for active farming.

2.4.2 THE VISION AND GOALS OF THE CARROLL COUNTY MASTER PLAN

Through the process of developing a county-wide master plan, the following vision statement for the County was developed and adopted:

Carroll County offers a safe environment in which all its citizens may reside, work, shop, learn and play. The rural character of our County is preserved through measures that protect our natural and cultural resources, minimize residential sprawl and save farmland. Carroll County is enriched by sustainable agriculture and agribusiness, as well as retention and recruitment of responsible, productive business and industry that offers family-wage jobs and employ the existing skilled workforce in the County. Adequate public facilities will be provided as Capital Improvement Program funding is available and concurrent with times and phased development demand.

The goals developed to help achieve the County vision address multiple aspects of the County-wide community. They are broad enough to be applicable Countywide. All of the functional and small area (detailed) plans developed within the County strive to achieve and to be consistent with these overall goals.

Goal 1 - Pursue policies and Capital Improvement expenditures that facilitate growth in the designated growth areas, thereby protecting and conserving agricultural and environmental resource areas, preserving open space, and providing public facilities and services efficiently and cost effectively.

Goal 2 - Preserve 100,000 acres of tillable agricultural land for the production of agricultural products and promotion of related agribusiness.

Goal 3 - Protect, maintain and restore, where practical, the environmental resources and natural ecosystems in the County by promoting land use practices that are in balance with, and minimize the effects on, the natural environment.

Goal 4 - Promote a healthy economy and additional employment opportunities by:

- 1) Supporting the retention and expansion of existing businesses including agribusiness through sensible land use policies, and
- 2) Providing land appropriately located and zoned for a variety of types and intensities of new economic development activities.
- 3) Maintaining a balance between economic development and population growth through diversified industrial expansion that offers job opportunities and steady employment for skilled workers.

Goal 5 - Phase and time development at a rate consistent with the County's ability to fund and expand community services and facilities through public and private resources.

Goal 6 - Ensure adequate and appropriate Capital Improvement Program and operating budgets to implement the Master Plan and provide public facilities and services.

Goal 7 - Provide a safe and functional transportation system which implements the land use plan while promoting access and mobility for people and goods through a network of roads, rail, transit and non-motorized opportunities.

Goal 8 - Promote development design that is in harmony with the surrounding built and natural environments, encourages community interaction, and, in rural areas, preserves the County's rural character.

Goal 9 - Preserve the County's historic, cultural, scenic and architectural heritage.

Goal 10 - Provide for a wide range of housing types, density and affordability that is well maintained and will meet the needs of the entire community.

Goal 11 - Provide a coordinated and comprehensive system of public and private parks, recreational facilities and programs and open space that will meet the active and passive recreational needs of all citizens of the County and enhance community design, identity and vitality.

Goal 12 - Provide community educational opportunities, facilities and resources, particularly libraries and schools, to meet the needs of a diverse population.

Goal 13 - Ensure communication and coordination between the County and the municipalities on projects and issues of mutual concern. Promote interjurisdictional cooperation in planning and land use decisions.

Goal 14 - Involve the community in implementing the Master Plan.

2.4.3 IMPLEMENTATION OF THE CARROLL COUNTY MASTER PLAN

2.4.3.1 AGRICULTURE LAND PRESERVATION

The preservation of agricultural land and the continuation of viable farming and agribusiness uses have traditionally been a major priority in Carroll County. Approximately 147,200 acres, or 50 percent of the land area of the County, is currently being use for agriculture. The average farm size is 139 acres. The majority of the active farms in the County are on lands currently zoned Agricultural or Conservation. The agricultural goal and threshold are directed at preserving the land used for agriculture. Maintenance of a large agricultural land base will assure that farming can continue into the future.

With a market value of all products sold of \$68.96 million dollars, according to the 2002 Agriculture Census, agriculture continues to be an important industry in Carroll County. Of the major grain crops produced in Maryland, Carroll ranks fifth in corn, third in forage, seventh in wheat (for grain), and ninth in soybeans. The County is ranked third in dairy, third in beef, second in hogs, first in sheep, and fourth in the number of horses. Preserving farmland provides many additional benefits to the citizens of Carroll County over and above any economic gains. Environmental and water quality are preserved through the careful stewardship of the County farmer. The rural working landscape provides open space and unparalleled views across the countryside. The overall "quality of life" experienced in Carroll County is enhanced through preserving agricultural lands and the agricultural heritage. Preservation also reduces the future need for provision of services to these areas, thereby reducing the cost of providing services.

2.4.3.1.1 AGRICULTURAL LAND PRESERVATION PROGRAM

In order to retain the overall character of the region, both the State and the County have taken significant steps toward the permanent preservation of

farmland. In the past, Carroll County has had remarkable success in attracting landowners to participate in the Agricultural Land Preservation Program. As of June of 2005, 45,399 acres of farmland throughout the County were permanently preserved with purchased easements prohibiting future development, primarily through the Maryland Agricultural Land Preservation Foundation, or MALPF. An additional 52,446 acres are currently in MALPF agriculture districts, while 1,599 acres of farmland have permanent easements held by either the Maryland Environmental Trust or the Carroll County Land Trust. The majority of easements and districts are located in the northern half of the County, more specifically in the northwestern sector.

2.4.3.1.2 RURAL LEGACY PROGRAM

The Rural Legacy Program, developed in the late 1990's by the Maryland General Assembly, is another method to substantially increase land conservation thereby protecting valuable farmland, forest, natural resources, and historic features. The County selects an area of the County ideal for conservation and applies to the State for funds to purchase permanent conservation easements from landowners that voluntarily participate in the program. Easements are held jointly by the County Commissioners and MALPF or other qualified organization. Since 1998, Carroll County has preserved 4,170 easement acres in the Little Pipe Creek Rural Legacy Area (in the New Windsor area) with Rural Legacy funding.

The Upper Patapsco Watershed has been selected by the County as the best location for an additional Rural Legacy area. The initial application was not funded in Fiscal Year 2002, however, the County was awarded State funds to acquire preservation easements for FY2006.

2.4.3.2 ENVIRONMENTAL RESOURCES

Carroll County and the incorporated municipalities, working through an Interjurisdictional Steering Committee, adopted an Environmental Resources Element (ERE) of the Master Plan in 1997. This element satisfies the State requirement to develop and adopt a "sensitive areas" element to the Plan. The ERE is focused on reducing any additional adverse impacts on the environment as the County and municipal land use plans are implemented, especially water quality and land-based resources. County and municipal plans have been amended to address the established set of "visions", which were prepared as part of the 1987 Chesapeake Bay Agreement between Maryland, Virginia, the District of Columbia and Pennsylvania and were reiterated in Maryland's 1992 Planning Act. The ERE and implementing measures provide a uniform definition and protection for identified environmental resources throughout the County. These resources include the following:

- A.) Streams
- B.) Stream Buffer (100 feet from each bank)
- C.) Steep Slopes (>25%)
- D.) 100-Year Floodplains
- E.) Habitats of Threatened and Endangered Species

- F.) Wetlands
- G.) Wellhead Buffers (100 feet)
- H.) Carbonate Rock Areas
- I.) Reservoir Watersheds
- J.) Use II Waters

More specific goals, objectives, and action strategies have been developed and included to implement the overall environmental goal established in this Carroll County Master Plan.

The 2005 Land Preservation and Recreation Plan inventories and maps County recreational facilities and valuable resources.

2.4.3.3 CARROLL COUNTY ZONING ORDINANCE

County Zoning Ordinance restricts Sanitary Landfills, Solid Waste Transfer Stations and Solid Waste Incinerators to Restricted Industrial (I-R) and General Industrial (I-G) districts. Sanitary landfills are conditional uses under Sections 223-118 (IR) and 223-126 (IG). Sewage sludge storage is covered by Section 223-26. County facilities are covered by Section 223-24 of the Code.

A complete description of both Industrial Districts is included as an Appendix “D” of this document.

These two zoning categories restrict the location of any type of privately-owned solid waste management facility to those zones. County-owned facilities, however, are not restricted in that manner, as specified (Section 4.22 County Public Buildings, Structures, Uses, etc.).

2.4.3.4 ECONOMIC DEVELOPMENT

Carroll County actively and aggressively seeks opportunities for quality economic development. The Department of Economic Development works in conjunction with the Economic Development Commission, an advisory Board to the County Commissioners, to improve the quality of life for all citizens through the expansion, retention and attraction of business. The mission of the Department is to promote a positive business environment in order to accommodate the expansion of resident industry and the attraction of new industry. Goals of the Department include the creation and retention of productive employment opportunities and the enhancement of the commercial/industrial tax base.

The County works in partnership with the Maryland Department of Business and Economic Development and the Economic Alliance of Greater Baltimore to attract new business to the County as well as encourage expansion of local businesses. Through these partnerships, the County has been very successful in securing State investments to support local economic development projects.

The Department of Economic Development promotes Carroll County as a business location. The Department provides an array of services to resident and potential businesses such as site and facility tours, research, financing, regulatory agency assistance and business advocacy services.

To expand the business sector, the County must continue to fund critical infrastructure necessary for economic growth. Roads, water, sewer and other technology infrastructure will be necessary to keep the local economy growing.

2.4.3.5 TRANSPORTATION NETWORK

Carroll County is serviced by a variety of transportation systems. The roadway network consists principally of both County roads and State highways with only 2 miles of Interstate Highway. U.S. Interstate Rt. 70 runs through the County in the southwestern tip, south of Mt. Airy. Major roadways in the County are MD Rt. 27, running diagonally from southwest to northeast along Parr's Ridge; MD Rt. 97, which runs north and south of the entire length of Carroll County, dividing the County in half; MD Rt. 140 which runs from Baltimore County through Finksburg, Westminster, and Taneytown, and into Frederick County (southeast to northwest) and MD Rt. 26 which runs generally east/west out of Baltimore County crossing Liberty Reservoir through Eldersburg and Taylorsville and into Frederick County.

Carroll County is also served by rail systems operated by CSX Transportation in the southern and northeastern areas and Maryland Midland Railway in the central and northwestern regions. The two-rail systems interchange at Glyndon (Baltimore County) in the east and at Highfield (Washington Co., MD). Seven of the eight incorporated towns in Carroll County are serviced by these two railroads. There is no scheduled passenger rail service in Carroll County.

A report, entitled the "Carroll County Greenways, Bicycle, and Pedestrian Facilities Technical Report", was prepared by the County in 1994 and outlines a recommendation for creating a County-wide trail system. The trails system, if implemented, would facilitate better access to existing and future recreation facilities while concurrently decreasing the impact on the local roadway network.

2.4.3.6 TOWN/COUNTY AGREEMENT

Since 1977, the County Commissioners and the municipalities have annually entered into an agreement to share funds and coordinate planning and other governmental functions. The Town/County Agreements are formal documents enumerating the types of services the County provides to the towns. The agreements are tailored to the needs of the municipality and vary in complexity, depending on whether the town has in-house planning staff. County services range from simple liaison (i.e. notifying the town of all future developments within one mile of its boundaries) to full staffing for most planning and zoning matters. The latter includes reviewing development plans and advising the appropriate municipal boards and commissions on the best course of action, as well as preparing comprehensive plans and zoning and subdivision ordinances. The agreement provides for cooperative referral by each jurisdiction to the other for review of subdivision plans, comprehensive plans or comprehensive plan amendments, annexation petitions, and rezoning petitions. This cooperative relationship has worked well. It ensures the open exchange of information regarding plans and development proposals. As a result, many issues are resolved at the staff level, reducing the possibility of problems later in the process. The County Commissioners also distribute funds annually to the municipalities upon execution of the Agreement.

2.4.3.7 CONCURRENCY MANAGEMENT ORDINANCE

The Concurrency Management and Adequate Public Facilities Ordinance, revised and re-codified April 20, 2004, provides for information on new development, facility capacity, levels of service, and fiscal/budgetary considerations. This information is put into a report for the Planning Commission and Board of County Commissioners each year. The information is used to establish an Available Threshold Capacity limit and Housing Allocation for various geographical areas of the County when facilities are not adequate to serve proposed development.