Responsible Regionalism

Introduction

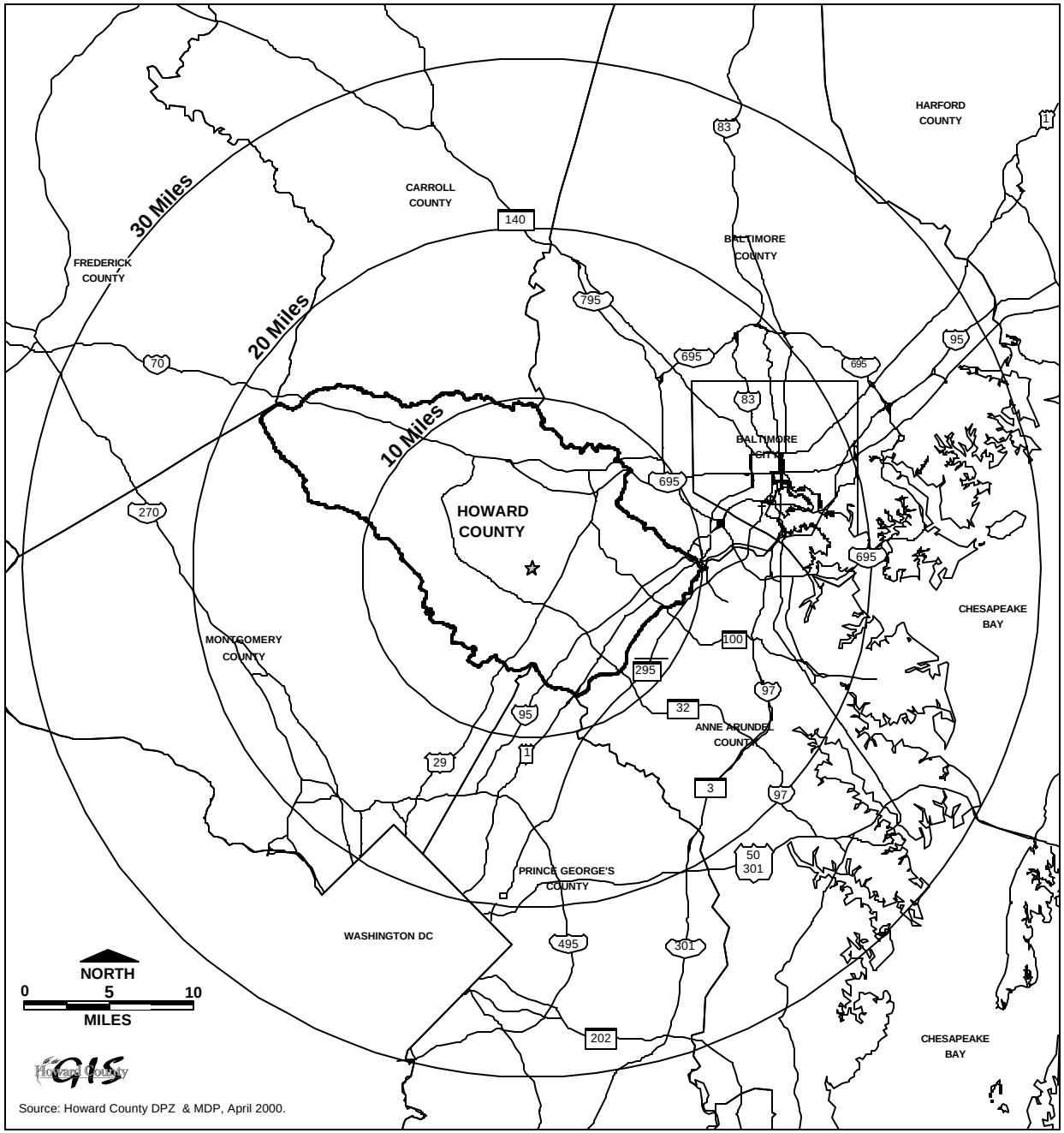
Howard County's relatively small size and its location between two major metropolitan areas makes examination of our regional context extremely important (Map 2-1). Howard County is part of a dynamic regional economy, transportation network, agricultural land base and natural resource system. The County is affected by regional trends and conditions which do not heed political boundaries. The County is influenced by the decisions of neighboring jurisdictions and, in turn, influences its neighbors and the region.

Vision 1:
Our actions will complement State and regional initiatives in resource and growth management.

This chapter focuses on policy decisions and actions that have ramifications beyond the County's borders. Howard County will work with neighboring jurisdictions and regional organizations on a variety of issues raised in this Plan. However, three major regional coordination goals are especially important to the General Plan vision cited earlier:

Manage growth and preserve rural lands. Howard County's Planned Service Area boundary for public water and sewer is also the County's growth boundary. By maintaining the current planned growth boundary, Howard County will reinforce State-wide growth management efforts. Farmland preservation in the Rural West will help establish a critical mass of preserved farmland in central Maryland.

Enhance regional transportation planning and programs. Regional transportation planning and programming are essential to the implementation of transit services and road improvements needed to sustain economic growth and the quality of life. The nature of these efforts will strongly influence the potential for regional air quality improvements.



Howard County
MARYLAND

General Plan 2000

Map 2-1
Regional Context

Protect water resources. Regional cooperation is necessary to protect water resources, including the Chesapeake Bay, the Patuxent and the Patapsco Rivers and their tributaries, and the reservoirs which provide the public water supply for Howard County and neighboring jurisdictions.

State Planning Mandates

Maryland's 1992 Planning Act provided common goals for local plans across the State. The Smart Growth program broadened the scope of State-wide planning goals, recognizing the impact of regional growth patterns on the natural environment and also on the health and vitality of existing communities. This General Plan calls for strengthening existing communities and encouraging compatible infill development and redevelopment in the East, goals that will enable Howard County to absorb some of the regional growth pressure where it can be appropriately accommodated.

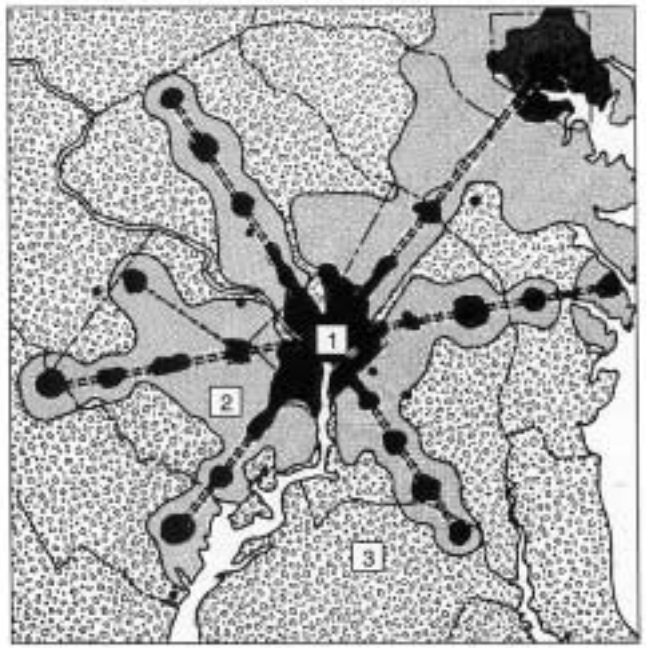
Land Use

History of Regional Growth Patterns

After the second World War, the counties immediately surrounding Washington and Baltimore saw a great surge of outward growth. Jobs followed people, and soon the beltway communities rivaled their downtowns as employment centers. These close-in counties were, for the most part, unprepared to respond to the growth surge, and planning for infrastructure and services was generally inadequate even though the pace of their growth had moderated by the 1970s.

In the mid-to-late 1970s, when the effects of this massive growth were clearly apparent in newly-congested roads and development of farmland, some of these counties took the first steps towards growth management. These steps took the form of more restrictive zoning, the development of adequate public facilities ordinances (which typically required that schools and roads have capacity to accommodate development) and the adoption of master plans to guide growth. A precursor of many later master plans and growth controls was the landmark General Plan for the Physical Development of the Maryland-Washington Regional District, published in 1964 by the Maryland-National Capital Park and Planning Commission. Known as the "Wedges and Corridors" plan, it proposed radial development along the highways that would be separated by regional-scale open space large enough to sustain farming (Figure 2-1).

Figure 2-1
Wedges and Corridors



1 Urbanized Area
2 Town Center
3 Open Space

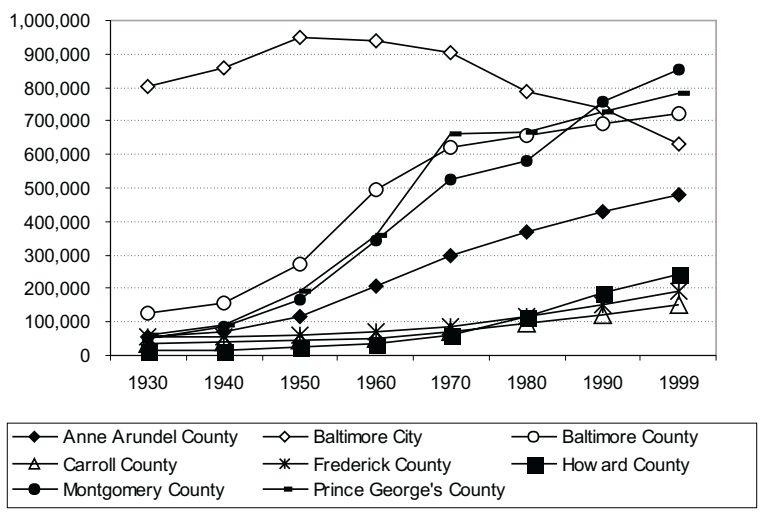
Source: General Plan for the Physical Development of the Maryland-Washington Regional District, 1964.

These fledgling growth controls, the high cost and low supply of land served by water and sewer, and the continuing pressure for jobs and housing in the Washington and Baltimore regions have forced development into areas well beyond the beltways. Figure 2-2 illustrates the earlier waves of growth rising and subsiding as growth in Baltimore City gave way to growth in the outlying counties.

Improvements to the regional highway system from the 1960s through the 1990s have been key to the movement of population and job growth from Baltimore and Washington into the surrounding jurisdictions. The Washington and Baltimore beltways were constructed in the 1960s. I-95 had replaced US 1 and the Baltimore/Washington Parkway as the major north-south through highway by 1970. This road network reinforced and expanded the centrifugal pattern of movement and development occurring in the 1970s. Employment centers began to spring up along the two beltways. The extension of I-270 and I-70 to Frederick created a "golden triangle." East-west movements became much easier, and suddenly commuting from Frederick and Carroll Counties to beltway employment centers became easier than ever before. Indeed, employment centers began to expand along the new radial highways. The growth of Baltimore-Washington International (BWI) Airport as an employment area and the possibility of commuting to the State capitol in Annapolis along MD 32 from Columbia and Westminster further established Howard County as the center of regional traffic patterns.

Figure 2-2

Regional Population, 1930-1999



Source: MDP

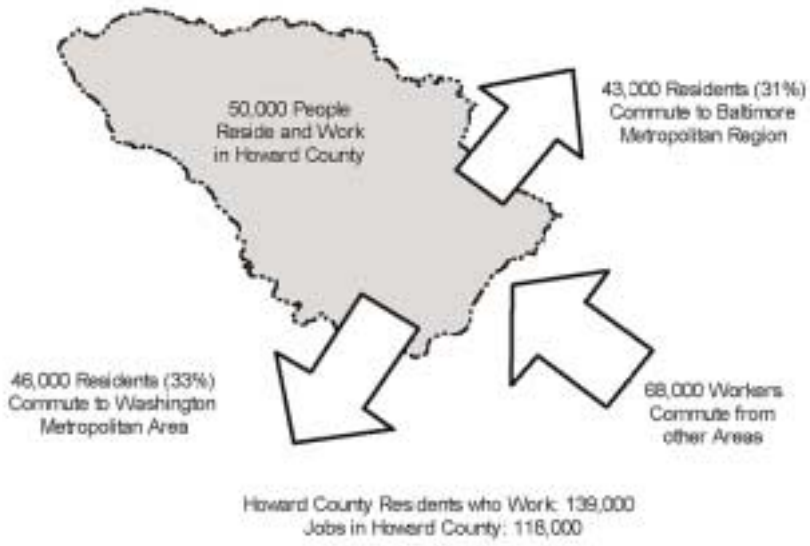
These regional highway improvements meant Howard County workers could easily commute to jobs in nearby jurisdictions. Conversely, the regional workforce had convenient access to employment centers that were developing in Columbia and along US 1 and I-95. Figure 2-3 shows that in 1990, 64% of Howard County residents commuted to jobs outside the County, being attracted almost equally to the Baltimore and Washington metropolitan regions. Of the jobs located in Howard County, only 42% were held by County residents.

The County's Role in Regional Patterns

The County most squarely in the path of the growth from both the Baltimore and Washington areas is, of course, Howard County. When Jim Rouse envisioned and founded Columbia in 1965, he created amidst a rural setting a sharply defined urban place meant to absorb growth within a planned framework. Howard County, astride these merging regions, assumed through the 1970s that Columbia would absorb most of the growth pressures and that its rural area would be insulated from development pressure. Nevertheless, in 1977 the County rezoned the West from one acre per dwelling unit to three acres per dwelling unit. The 1982 General Plan dramatically pulled back the 1971 planned water and sewer extension area in an attempt to further contain growth and maintain the rural landscape pattern.

The 1982 General Plan also identified some areas north, south and east of Columbia for higher density housing and expanded employment corridors along I-95, US 1, US 29 and the proposed MD 100. In addition, the State expanded its program for highways essential to through movement and, to a lesser extent, local growth. Thus, the MD 32 expansion, MD 100 and US 29 improvements were all approved during the 1980s.

Figure 2-3
Howard County Work Force Commuting Patterns



Source: Howard County Economic Development Authority, MD Department of Labor, Licensing and Regulations, and 1990 Census.

The approaches to growth management reflected in the 1982 General Plan were inadequate in the face of the strong pressures for development. Howard County became the development frontier of the 1980s. The increasingly stringent growth management techniques implemented in neighboring counties in the region only reinforced the attractiveness of Howard County for urban development.

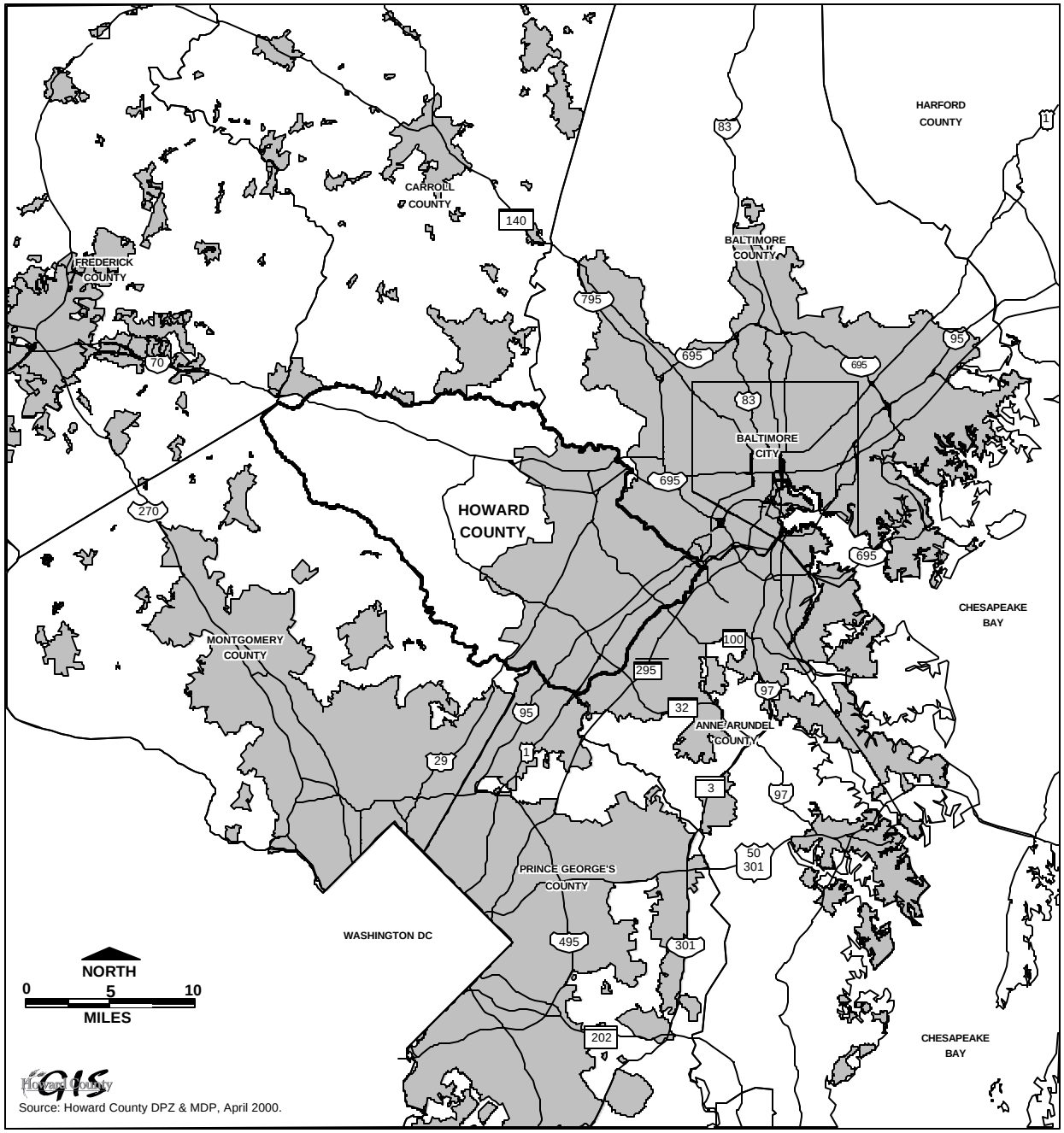
The 1990 General Plan responded to the rapid growth by recommending annual housing and employment growth targets, adequate public facilities legislation, a development monitoring system, and rural cluster and density exchange zoning in the Rural West. The 1990 General Plan also recommended creation of several major mixed use centers to absorb growth on the largest remaining parcels having good highway access.

Howard County's Adequate Public Facilities Act, adopted in 1992, has served its purpose of slowing the rapid residential growth rate of the late 1980s, assisted in part by the declining availability of undeveloped residentially zoned land. The pace of residential growth has been below the targets established by the 1990 General Plan. After the economic slowdown of the early 1990s, employment growth was strong during the remainder of the 1990s, substantially exceeding the 1990 General Plan projections. Chapter 4, *Balanced and Phased Growth*, provides more detail on recent growth.

Not only the amount, but also the distribution of growth is important to County and State-wide planning goals. The boundary of the Planned Service Area for public water and sewerage is Howard County's growth boundary. This identification was strengthened by Maryland's 1997 Smart Growth initiatives under which most categories of State spending for infrastructure and services must be targeted to "Priority Funding Areas" in each County. Howard County's Priority Funding Area is the eastern 40% of the County that lies within the Planned Service Area for both public water and sewerage.

Directing growth to the Priority Funding Areas in Howard County and adjacent counties is important to the State-wide growth management goals articulated in the 1992 Planning Act and the Smart Growth initiatives. These goals are protecting natural resources, preserving valuable resource and open space lands, discouraging sprawl and strengthening older communities. Eastern Howard County generally fits well with the Priority Funding Areas of adjacent counties and municipalities (Map 2-2). Howard County's Rural West is part of a belt of rural land that encompasses parts of Montgomery, Carroll and Frederick Counties.

Howard County succeeded in directing most residential growth to the East. During the 1990s, 86% of new housing was within the Planned Service Area, a proportion similar to that of other counties in the Baltimore region (Figure 2-4). However, during the 1990s, the proportion of units built in the sewerage service area gradually decreased (Figure 2-5), while the proportion of new housing built in the Rural West increased. Continuing growth pressures and the decreasing supply of land in eastern Howard County will reinforce this trend. Howard County must seek to reverse this trend by en-



Howard County
MARYLAND

General Plan 2000

Legend

PRIORITY FUNDING AREAS

Note: The Maryland Department of Planning has yet completed its analysis of all of the areas sho

Map 2-2
Regional Priority Funding Areas

Figure 2-4
Baltimore Region Residential Permits Inside & Outside Sewerage Service Areas (SSA), 1990-1998

Jurisdiction	Units Permitted	Inside SSA	Outside SSA	% Inside SSA	% Outside SSA
Anne Arundel County	29,481	26,202	3,279	89%	11%
Baltimore County	32,505	28,230	4,275	87%	13%
Carroll County	9,659	5,031	4,628	52%	48%
Howard County	**17,428**	**15,054**	**2,374**	**86%**	**14%**
Harford County	17,432	14,178	3,254	81%	19%
TOTAL	**89,073**	**74,517**	**14,556**	**84%**	**16%**

Source: BMC

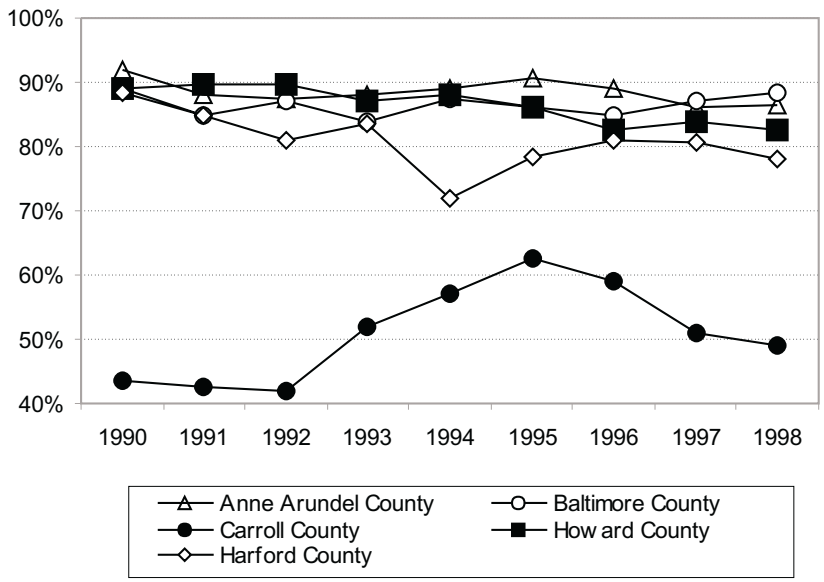
couraging infill development, revitalization and development of the areas zoned for mixed use development in the East, while purchasing additional preservation easements in western Howard County.

Regional Demographic Trends

The region's population is increasing and becoming older and more racially diverse. International migration accounted for a larger share of the population growth in the more urban jurisdictions (Montgomery, Prince George's and Baltimore Counties and Baltimore City), while domestic migration from other areas of the United States contributed more to population growth in the less urban jurisdictions such as Howard County.

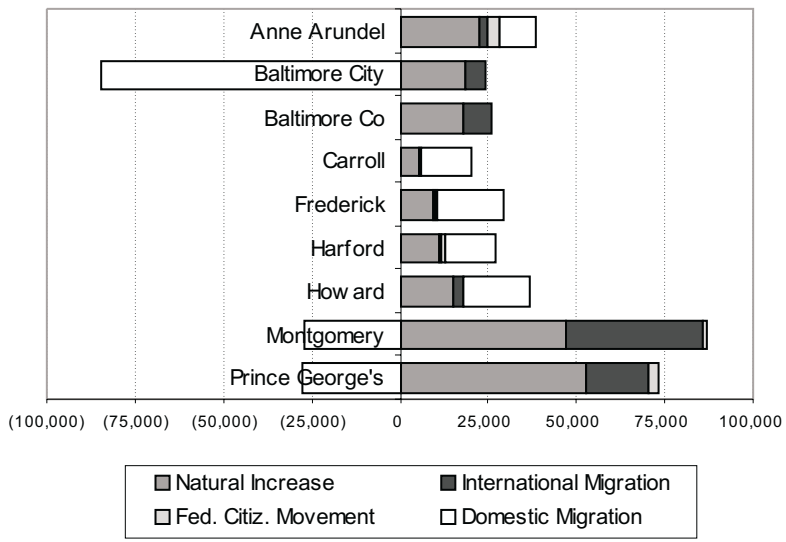
Figure 2-6 shows the components of recent population change. The largest component of population change in the region between 1990 and 1999 was

Figure 2-5
Baltimore Region Percent Residential Permits in Sewerage Service Areas, 1990-1998



Source: MDP

Figure 2-6
Components of Regional Population Change, 1990-1999



Source: US Bureau of the Census

Figure 2-7
Racial Mix by Jurisdiction, 1990 US Census

Jurisdiction	White	Black	Amer. Indian	Asian/Pac. Islander	Total	Hispanic*
Anne Arundel County	367,502	50,700	1,309	7,728	427,239	6,815
Baltimore City	289,041	436,378	2,578	8,017	736,014	7,608
Baltimore County	589,346	85,694	1,473	15,621	692,134	8,131
Carroll County	119,487	2,939	193	753	123,372	903
Frederick County	140,363	8,039	288	1,518	150,208	1,713
Harford County	163,434	15,653	510	2,535	182,132	2,821
Howard County	**156,687**	**22,110**	**410**	**8,121**	**187,328**	**3,699**
Montgomery County	598,281	94,261	1,919	62,566	757,027	55,682
Prince Georges County	324,703	372,573	2,397	28,880	728,553	29,970
TOTAL	**2,748,844**	**1,088,347**	**11,077**	**135,739**	**3,984,007**	**117,342**
Percent	**69.0%**	**27.3%**	**0.3%**	**3.4%**	**100.0%**	**2.9%**

Source: US Bureau of the Census * Hispanics may be of any race.

Figure 2-8
Racial Mix by Jurisdiction, July 1, 1998

Jurisdiction	White	Black	Amer. Indian	Asian/Pac. Islander	Total	Hispanic*
Anne Arundel County	388,896	73,345	1,699	12,120	476,060	11,297
Baltimore City	204,901	430,094	2,286	8,312	645,593	8,416
Baltimore County	581,519	115,744	1,791	22,820	721,874	12,734
Carroll County	143,563	4,517	280	1,337	149,697	1,797
Frederick County	170,220	13,389	416	2,752	186,777	3,353
Harford County	185,978	23,711	712	4,267	214,668	4,802
Howard County	**185,112**	**36,410**	**606**	**14,260**	**236,388**	**6,934**
Montgomery County	617,462	128,694	2,534	92,189	840,879	86,804
Prince George's County	290,733	447,511	2,693	36,874	777,811	39,143
TOTAL	**2,768,384**	**1,273,415**	**13,017**	**194,931**	**4,249,747**	**175,280**
Percent	**65.1%**	**30.0%**	**0.3%**	**4.6%**	**100.0%**	**4.1%**

Source: US Bureau of the Census *Hispanics may be of any race.

natural increase (births minus deaths) followed by migration. Most new residents moving to the region were from other countries. In Montgomery County, in particular, growth was divided between natural increase and international immigration. However, international immigration accounted for a much smaller proportion of growth in less urban counties, ranging from 7.8% in Howard County to as low as 3 to 4 % in Carroll, Harford and Frederick Counties.

After international immigration, the greatest source of population change was domestic migration between counties and states. Montgomery and Prince George's Counties and Baltimore City lost population to other jurisdictions in the United States. Howard County and Frederick County increased the most from domestic migration.

Figure 2-7 shows the regional population by race in 1990. The 1990 Census reported that 69% of the regional population was White and 27% Black. In two jurisdictions, Baltimore City and Prince George's County, the majority of the population was Black. Montgomery County had the largest Asian and Hispanic populations. Since 1990 the region has become more racially diverse. In Howard County, both the Asian and Hispanic populations increased by more than 75% (Figure 2-8).

Figure 2-9
Regional Population by Age, 1990-1998

Age	1990	1998	Difference	% Change
0-4	305,968	286,933	(19,035)	-6.2%
5-19	773,681	877,197	103,516	13.4%
20-44	1,731,371	1,701,790	(29,581)	-1.7%
45-64	759,145	907,241	148,096	19.5%
65+	413,842	476,586	62,744	15.2%
TOTAL	**3,984,007**	**4,249,747**	**265,740**	**6.7%**

Source: US Bureau of the Census

As shown in Figure 2-9, between 1990 and 1998 the region's population increased by almost 200,000 or 5%. The greatest increase among age groups was a 15% increase in persons between 45 and 65. The number of school age children increased by 6%. It is anticipated that the regional population will have a greater proportion of seniors in the future. The 1990 Census is now dated and the 1998 data are estimates. More current data will be available when the results of the 2000 Census are released.

Figure 2-10 shows the regional population estimates from 1995 to 2020.

Figure 2-10
Regional Population Increase (1,000s), 1995 to 2020

Jurisdiction	1995	2000	2005	2010	2015	2020
Anne Arundel County	460.5	485.8	506.6	516.8	528.0	537.1
Baltimore City	692.8	625.2	615.0	605.9	605.3	604.7
Baltimore County	713.6	727.2	736.5	749.5	762.9	776.0
Carroll County	139.3	154.9	166.7	181.7	193.9	206.0
Harford County	209.1	224.7	237.6	249.4	257.4	264.8
Howard County	**218.0**	**249.0**	**279.3**	**298.0**	**304.9**	**303.5**
Frederick County	175.4	193.6	216.6	238.3	260.0	281.7
Montgomery County	805.9	860.0	910.0	945.0	975.0	1,000.0
Prince George's County	765.2	790.3	824.5	852.4	886.1	916.6
TOTAL	**4,179.8**	**4,310.6**	**4,492.7**	**4,636.9**	**4,773.4**	**4,890.4**

Source: MDP, September 1999

Between 1995 and 2020 the region's population is expected to increase by 14.5%. The population growth rate is expected to level off as the national population ages. Howard County's share of the region's population, 5.2% in 1995, is expected to slightly increase to 6.2% in 2020.

Policies and Actions

POLICY 2.1: Contribute to regional growth management.

- ***Priority Funding Area.*** Confirm that the Planned Service Area and growth projections continue to meet State Priority Funding Area requirements. Use this designation to guide State and County decision-making regarding the provision of public facilities and services.

- ***Infill and Redevelopment.*** Encourage new infill development and redevelopment, with appropriate uses and densities, within the Planned Service Area in order to absorb some regional growth in areas where public service and infrastructure can be provided.

Regional Coordination

Regional Planning

Numerous forums allow Howard County to share information with neighboring jurisdictions and address issues that cross county or city boundaries. These include membership in the Baltimore Metropolitan Council (BMC), transit initiatives (such as the Corridor Transportation Corporation) and several working groups that address watershed protection and water quality for the Patuxent and Patapsco Rivers.

Federal funding and data collection are tied to formal regional organizations and regional designations. Jurisdictions can have formal membership in only one regional organization. Howard County has always been designated as part of the Baltimore region. This official designation does not preclude informal participation in other regional organizations. Howard County participates informally in the Metropolitan Washington Council of Governments (MWCOG), an organization centered on Washington, DC and its surrounding jurisdictions.

The Baltimore Metropolitan Council includes Baltimore City and Anne Arundel, Baltimore, Carroll, Harford and Howard Counties. The BMC is an important forum in sharing information, developing regional forecasts and discussing regional issues. In several areas, its impact and influence have grown over the past decade:

- **Roads**. In response to Federal transportation legislation enacted in 1991, the BMC coordinates a regional planning process which includes the local jurisdictions plus Maryland Department of Transportation, Maryland Department of the Environment and Maryland Department of Planning. A primary objective of this process is to develop a Baltimore Regional Transportation Plan (BRTP) every three years which establishes priorities for Federal and State transportation funding. The BRTP thus has a direct impact on funding roads and transit in the region. BMC serves as technical staff to the region's jurisdictions for the development of this plan.
- **Environment**. The Federal Clean Air Act Amendments of 1990 were designed to complement the transportation legislation by requiring metropolitan regions to develop transportation plans which are judged, in part, by how effectively they contribute to improving regional air quality. BMC serves as the regional forum for coordinating these processes via the BRTP.
- **Transit**. Increasingly, BMC has also taken on a major role in the development and coordination of regional transit initiatives, including the Reverse Commute and Access to Jobs programs. These programs are aimed at improving both regional mobility and regional air quality.
- **Pedestrian/bicycle facilities**. Similarly, BMC coordinates local and regional planning of facilities to serve pedestrians and bicyclists.
- **Solid waste management**. As regional facilities and programs for solid waste management become more important to most local jurisdictions, BMC's role as a forum for discussion has grown in importance. In the future, this role is likely to increase as new regional facilities or regional procurement of contracts for solid waste processing are considered.

Because of its key role in planning for roads, transit and Clean Air Act compliance, BMC's primary focus is transportation planning. However, it is also a forum for discussion on several other areas of common concern, including solid waste management, watershed protection, funding strategies for stormwater management and cooperative purchasing.

Effective regional coordination depends on the willingness and effort contributed by each individual county or city. Because of differing priorities and resources, the level of participation in the BMC and other regional forums varies among member jurisdictions. Howard County needs to continue to commit leadership and resources (including information and staff time) to improve the quality of regional planning efforts.

The Metropolitan Washington Council of Governments (MWCOG) includes Washington, DC and 17 surrounding jurisdictions, which are generally urban and have sophisticated planning programs. MWCOG is well-staffed and has considerable funding to support its mission. Howard County is strongly influenced by the Washington area in terms of economic development and the housing market. However, MWCOG, which focuses on two states and the District of Columbia, operates in a complex political environment that includes a more varied range of issues compared to the BMC. The BMC is Maryland based and focuses on issues that relate closely to Howard County's concerns. Because of its relatively small size and peripheral location, Howard County is not a formal member of MWCOG, but participates informally as a "fringe" jurisdiction. This allows the County to benefit from MWCOG information and interaction. Recognizing that the two metropolitan areas have many issues of mutual concern, BMC and MWCOG share forecasting and transportation data and are exploring other avenues of potential cooperation.

Two other regional organizations provide a forum for addressing issues of interest to the business communities in the Baltimore region. The Greater Baltimore Alliance (GBA) is a regional economic development organization for the Baltimore metropolitan region, including Howard County. Its primary focus is marketing the region, rather than the coordination of economic development plans. The Greater Baltimore Committee (GBC) serves as a forum for coordination of regional positions on legislation impacting business concerns.

Interjurisdictional Coordination

Regional organizations, such as BMC and MWCOG, focus only on those issues of greatest concern to their diverse membership. There are many other topics of interest to smaller subsets of these groups. For example, the County works with Montgomery and Prince George's Counties in watershed protection and with Baltimore City and Anne Arundel County on transit services. Howard County would benefit from fostering closer coordination with adjacent jurisdictions on other shared concerns, such as US 1 corridor revitalization, preservation of rural land and others.

Howard County has used numerous formal and informal mechanisms for coordinating with surrounding jurisdictions about issues that are of common concern. It is frequently easier, more efficient and more effective to work with one or more jurisdictions to address a specific concern than it is to resolve issues via the large metropolitan organizations.

- **Land Use**. A Memorandum of Understanding, signed by Howard County, the City of Laurel, and Montgomery, Prince George's, Anne Arundel, Carroll and Frederick Counties, establishes an agreement to enhance communications about planning issues that cross jurisdictional lines. This is accomplished via notification to signatories about new policies, plans and regulatory cases or capital projects meeting certain criteria, as well as through periodic meetings of planning department representatives.
- **Transportation**. Howard County participates in a number of interjurisdictional transit initiatives that respond to joint needs, including the Corridor Transportation Corporation (with the City of Laurel and Prince George's and Anne Arundel Counties), the Spirit Shuttle and a new service between the Clarksville park-and-ride lot and the National Security Agency (in Anne Arundel County), and Reverse Commute (with Baltimore City).
- **Environment**. Coordination of water quality protection and watershed planning includes the Patuxent River Commission, the Patapsco/Back River Tributary Strategy Team, the Patuxent Reservoirs Watershed Protection Group and the Baltimore Reservoirs Technical Group.

Increased cooperation with all of the adjacent jurisdictions is desirable. However, enhanced communication with the City of Laurel and Montgomery and Prince George's Counties is particularly desirable as a means of balancing the County's more informal ties to the Washington area with the County's considerable involvement in the Baltimore region. For example, transit connections and US 1 corridor revitalization are two issues that offer opportunities to develop and implement joint solutions that are effective and that help strengthen ties between the Baltimore and Washington regions.

Policies and Actions

POLICY 2.2: Provide leadership to advance coordination between neighboring jurisdictions and improve the effectiveness of regional organizations.

- ***Baltimore Metropolitan Council.*** Continue active participation in the Baltimore Metropolitan Council (BMC). Provide leadership and encourage a higher level of member commitment to provide data and staff for key forecasting and transportation planning responsibilities in order to enhance the quality of BMC forecasting and decision-making. Encourage the BMC directors (county executives and mayors) to define a consistent standard for member staff participation.

- ***Metropolitan Washington Council of Governments.*** Continue informal participation in the Metropolitan Washington Council of Governments to help ensure that relevant information is exchanged and, where appropriate, that the Baltimore metropolitan or "Washington fringe" perspective is raised.

- ***Interjurisdictional Collaboration.*** Expand collaboration with neighboring jurisdictions on land use, economic development, transportation, agricultural and environmental issues of mutual concern.

Regional Transportation

Land Use and Highway Traffic

Building upon the regional farm-to-market travel patterns that evolved through the nineteenth and early twentieth centuries, the modern road network serving the Baltimore-Washington region was largely designed to accommodate radial patterns of land development that served commuters traveling from dispersed suburban communities to dense employment areas in the central cities. While employment has increasingly shifted to the suburbs, roadway infrastructure and transit routes have not been able to keep pace with the evolving need for cross-corridor and circumferential travel patterns.

The primary factor contributing to the traffic increases throughout the Baltimore-Washington region is the rise in the region's population and number of jobs. However, growth in traffic volumes is also due to changes in individual travel behavior, not only locally but throughout the United States. Auto ownership per household is rising, commuting trips are becoming longer, the number of two-income households is rising, and more people are doing lunch-time errands.

Except in parts of Columbia, Howard County's residential growth has occurred at lower densities than in more urban adjacent counties. However, traffic volumes in Howard County are heavily influenced by the County's location at the crossroads of several regional corridors that carry significant through traffic. Some of the travel corridors, such as I-70, I-95 and MD 32, are also major east coast and mid-Atlantic trucking routes, adding to the volume of through traffic. Through traffic comprises over half the traffic on such major highways in the County as I-70, I-95, MD 32 and MD 97 and ranges to as high as 82% of total daily traffic on some roadways.

Given the region's robust job growth and its increasingly dispersed housing, regional traffic volumes and congestion are anticipated to continue increasing. While Howard County has not yet experienced traffic congestion on the scale of some of the surrounding counties, the latest Baltimore Regional Transportation Plan (BRTP) indicates that several of the region's

transportation corridors most in need of improvement are in Howard County. Congested regional corridors projected for the year 2020 include portions of I-70, I-95, US 40 and MD 100 in Howard County (Map 2-3). The BRTP anticipates that congestion will occur despite significant investments in highways, transit and other transportation programs. Major improvements to relieve congestion on the interstate highways are not projected to occur for many years. Regional traffic congestion, therefore, is a problem that may not be solved, but only better managed, during the lifetime of this Plan.

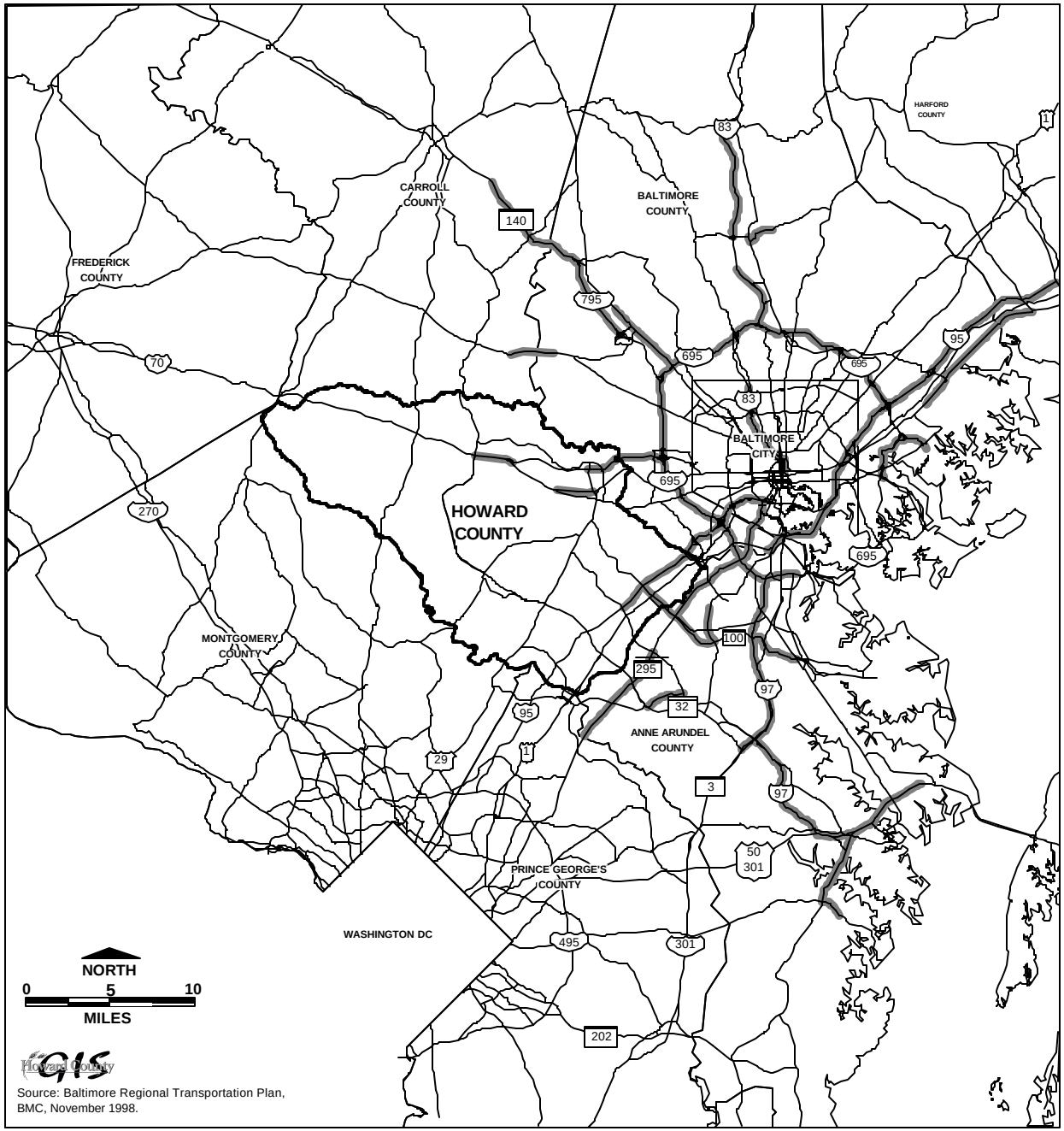
Currently, roads in Howard County accommodate slightly over one million vehicle trips per day traveling into, out of, through and within the County, based on data provided by the BMC. While most of these trips begin or end in Howard County, about 164,000 trips or 16.1% represent through traffic. By the year 2020, the number of total vehicle trips in the County is projected to increase by slightly under 28% to 1.3 million trips per day, while the through trip component is expected to increase by over 37% to more than 225,000 trips per day. Map 2-4 shows the projected growth in through traffic on some of the major commuter routes in Howard County.

These through trips will be a significant source of traffic growth on the major State roads such as I-95, I-70, US 29, MD 97, and MD 32. Effectively managing future traffic in Howard County, therefore, will require regional cooperation and the development of regional transportation solutions which emphasize the mitigation of congestion within the region's major commuter corridors. Box 2-1 highlights some of the ongoing regional and

Box 2-1

Current Regional Transportation Coordination Efforts

- Participation with State and local jurisdictions through the Baltimore Metropolitan Council (BMC) in the development of a multimodal regional transportation plan.
- Participation with BMC in delineating a short-range regional Transportation Improvement Program that provides the required coordination for securing Federal transportation funding.
- Participation in ongoing regional planning efforts as members of such committees as the Transportation Steering Committee, Technical Committee, Travel Analysis Subcommittee, Cooperative Forecasting Committee, and Pedestrian and Bicycle Advisory Group.
- Coordination with adjacent jurisdictions on regional and bi-regional transportation issues through joint technical staff meetings with emphasis on such issues as regional transit/high occupancy vehicle (HOV) corridors (for example, I-95 and US 29), park-and-ride lots, traffic forecasting and others.
- Support for joint transportation planning efforts between the Metropolitan Washington Council of Governments (MWCOG) and BMC to better anticipate transportation issues of mutual interest. These efforts include sharing of technical information and development of a bi-regional transportation model capable of forecasting future traffic levels within both regions.
- Provision of data and ongoing coordination and review of various State Highway Administration initiatives of regional significance including the MD 32 project planning study.
- Participation in ongoing State committees such as the Maryland Bicycle Advisory Committee, the State's Comprehensive Traffic Safety Program and the Maryland Older Driver Consortium.
- Coordination through the Maryland Mass Transit Administration (MTA) on the development and expansion of transit services which connect Howard County to the surrounding region.
- Coordination through MTA, BMC and MWCOG of a bi-regional carpool matching program.



Source: Baltimore Regional Transportation Plan, BMC, November 1998.

Howard County
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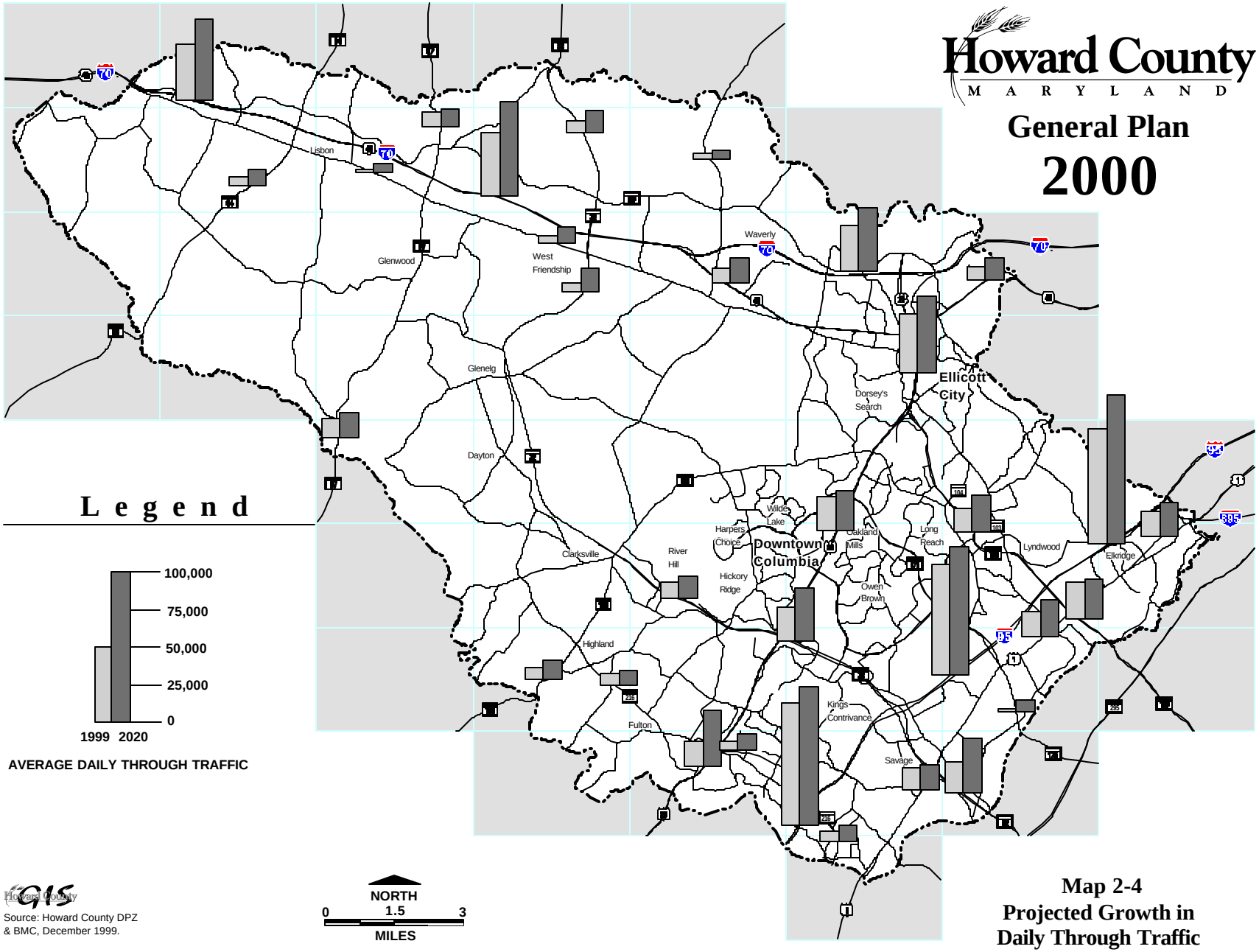
Legend

PROJECTED CONGESTED ROAD (LEVEL OF SERVICE E AND F*)

*Note: Map shows Baltimore region highway analysis only, Washington region does not provide data on year 2020 congestion. Baltimo Regional Transportation Plan (BRTP) is expecte to be updated in FY 2001. Congestion projectio take into account improvements listed in the BF

Map 2-3
Projected Regional Highway Congestion, 2020



Source: Howard County DPZ & BMC, December 1999.

Map 2-4
Projected Growth in Daily Through Traffic

interjurisdictional transportation planning efforts in which Howard County participates that must be continued and strengthened if Howard County is to adequately address future regional transportation demands.

Transit and Related Strategies

Public transportation currently plays a relatively minor role in accommodating the County's transportation needs, providing for less than 2% of all trips. This is due to the wide geographic dispersion of trip origins and destinations, high automobile ownership levels and limited transit service availability.

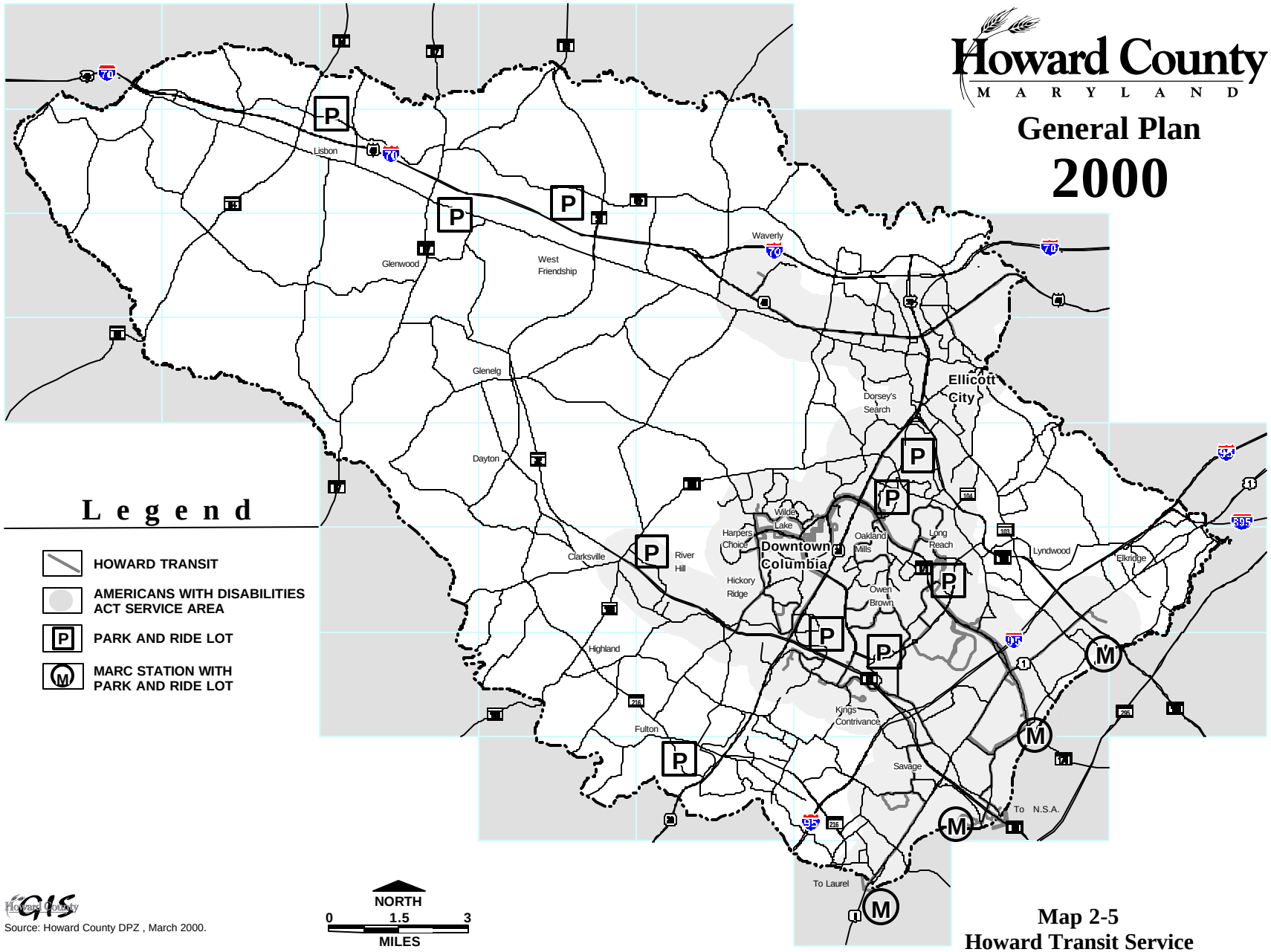
Because of the County's strong job growth over the last decade, Howard County has one of the lowest unemployment rates in the State and, indeed, the nation. Meanwhile, Baltimore and Washington have areas of consistently high unemployment. The regional imbalance between the available labor force and available jobs is expected to result in added demand for commuting into Howard County from the Baltimore and Washington areas. It is expected that Howard County employers will continue to have difficulty finding employees to fill entry level and lower skilled jobs, while relatively high housing prices in the County preclude much of the eligible work force from living in Howard County. As a result, the demand for regional public transportation to bring workers into the County and for local public transportation to carry these workers from major transfer points to job sites is expected to increase.

Improved transit and related strategies are often cited as the best response to Howard County's traffic congestion. Buses, highway lanes dedicated to high occupancy vehicles (HOV), light rail and commuter rail extensions are ways to improve regional mobility. Combinations of these options must be explored and implemented over the next two decades despite their relatively high cost and need for public subsidies. Based on experience in other metropolitan regions with similar land uses and residential densities, however, these strategies are likely to divert at most 5% of trips from highways on a daily basis and perhaps 10% of trips during peak periods.

Nonetheless, transit use in the Baltimore-Washington region does marginally reduce the need for added highway capacity improvements and causes less air pollution than if these trips were made in single occupant automobiles. As efforts to improve air quality nationally and in the Baltimore region intensify, implementation of transit, ridesharing and other related strategies will become increasingly necessary.

Maryland Rail Commuter Service (MARC) and Mass Transit Administration (MTA) bus service together provide the regional transit system serving Howard County. These services operate predominantly along radial corridors fanning out from downtown Baltimore and Washington. As such, they do not adequately address the cross-corridor and circumferential travel patterns which increasingly typify suburban commuting demand. There are many areas of the County and region that are not served at all by these services and other areas for which a typical commute can only be accomplished through multiple transfers and circuitous, time-consuming travel. MTA has been constrained from expanding services due to a State-legislated 40% farebox recovery requirement for the system. The General Assembly reduced the farebox recovery requirement to 40% in the spring of 2000. Hopefully, this amendment will allow the MTA more flexibility to test new service options.

Howard County's Howard Transit (formerly Howard Area Transit Service or HATS) fixed route bus service attempts to at least partially address these needs by serving as a feeder/distributor service connecting to the regional bus and rail services (Map 2-5). Howard Transit routes are structured to use rail stations and park-and-ride lots throughout the County as major transfer points, coordinating with MTA schedules wherever possible. Laurel Connect-A-Ride serves the greater Laurel area, and its buses connect with the Columbia area to allow riders to transfer to Howard Transit buses serving the southern portion of the County. County bus service also connects with the Spirit Shuttle, a free morning and evening peak period shuttle bus service operating between the MARC rail system and employment sites in the US 1 corridor and Columbia Gateway area. Despite these coordinated efforts, significant service area gaps remain. Future transit upgrades that address these interjurisdictional travel demands should be focused within several regional travel corridors (shown on Map 4-10). Accomplishing this objective will require a series of coordinated efforts between Howard County, MWCOG, BMC, State agencies and adjacent jurisdictions.



Source: Howard County DPZ , March 2000.

Map 2-5
Howard Transit Service

Pedestrian And Bicycle Travel

Perhaps the most overlooked and underused modes of travel are walking and bicycling. The BMC has developed and continues to refine a proposed regional pedestrian/bicycle facilities network as part of the BRTP. Howard County participates in the Pedestrian/Bicycle Workgroup that developed this initiative. Over the past several years, the County has been successful in implementing some of the proposals in the BRTP (for example, segments of the spinal pathway system) and in filling some key gaps in the County's network of sidewalks, pathways and paved shoulders.

Bicycle and pedestrian travel in Maryland was assisted in 1995 by enactment of Access 2000 legislation by the Maryland General Assembly. This legislation prohibits the severance or supplanting of any major pedestrian or bicycle route by the State Highway Administration (SHA) unless an equivalent facility is provided. The law requires SHA to consider pedestrian/bicycle facilities in all highway projects and to provide them if requested by the local government. Other provisions include a cost sharing with local governments for retrofitting sidewalks on existing State roads and a MTA requirement that bicycle/pedestrian access to rail stations be studied and planned.

Intelligent Transportation Systems

Another promising approach to address growing travel demand is known as Intelligent Transportation Systems (ITS). ITS strategies complement and enhance existing infrastructure and technologies using new telecommunication, information and remote sensing technologies. A traffic signal system, for example, can be made more effective with electronic sensing and enforcement. A freeway may not have to be widened if electronic ramp-metering can apportion peak hour traffic flow so that acceptable levels of service can be maintained on the existing roadway.

Howard County is at the forefront of a national effort to use an ITS strategy to detect and photograph motorists who run red lights. The BMC is investigating ways in which ITS technologies can be used effectively in the Baltimore region. Initially, these efforts will focus on using ITS technologies for highway incident detection, monitoring and traffic management.

Transportation Management Strategies

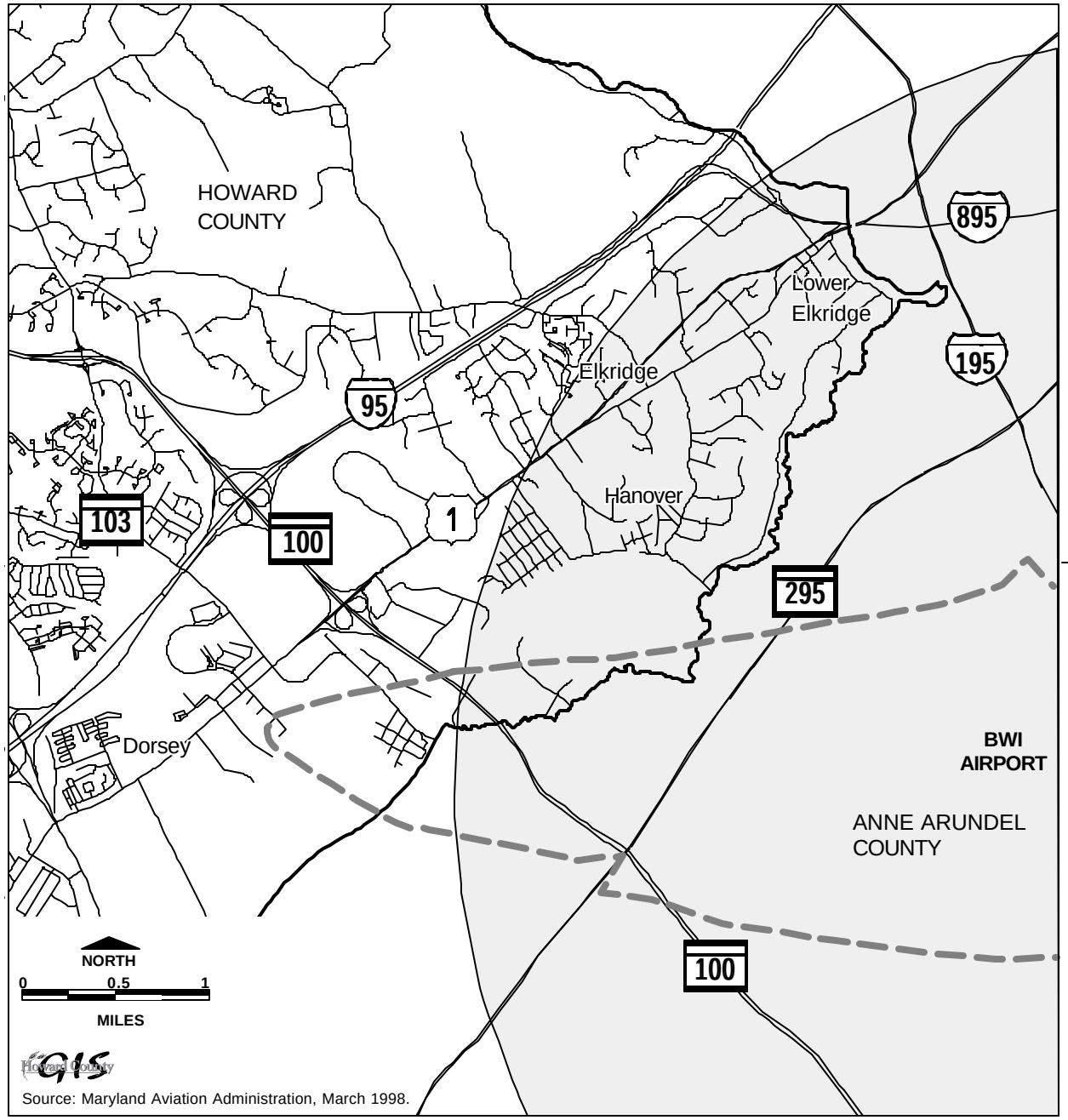
Finally, there are a number of low cost strategies such as telecommuting, ridesharing and flex-time which can each help in modestly reducing traffic congestion and improving air quality. These strategies, typically categorized as either transportation systems management (TSM) or transportation demand management (TDM) strategies, are most effective when implemented at both the local and regional levels. In most instances, TSM and TDM strategies allow the existing transportation system to function more efficiently and more cost effectively, thus increasing overall system capacity without major capital expenditure. Ultimately, a combination of many approaches will be needed to accommodate growing mobility needs and to maintain traffic congestion at tolerable levels.

Land Use and the BWI Airport

BWI Airport, located nearby in Anne Arundel County, is a major traffic destination and one of the major employment centers of the Baltimore-Washington region. Significant growth of the airport is anticipated over the next five to ten years. Deregulation of the air transportation industry has dramatically increased the number of flights into BWI in recent years. Based on projections for the coming decade, air traffic will increase for both business and leisure travel. Not only will passenger traffic increase, but with a new cargo facility being added, air freight is expected to increase as well. One of the four major flight approach paths to BWI Airport extends roughly along the MD 100 right-of-way.

On an ongoing basis, the Maryland Aviation Administration (MAA) monitors noise levels in the area surrounding BWI and has established an official Airport Noise Zone (ANZ) comprised of those areas of the region falling within the 65, 70 and 75 Ldn noise level contours. Ldn is a noise level measurement system which provides a 24-hour weighted noise level average as a means of evaluating the relative impact of airport activities (primarily flight arrivals and departures) on land uses close to flight paths. MAA also regulates the height of proposed structures within a four-mile radius of the airport to avoid obstructions which may pose a hazard to aircraft. Map 2-6 and Box 2-2 provide details on these concepts.

The County attempts to work within the framework of the adopted 1998



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- 1998 CERTIFIED AIRPORT NOISE ZONE (65 LDN)
- FOUR MILE HEIGHT RESTRICTION ZONE

Map 2-6
Baltimore-Washington International (BWI) Airport Noise Zone

Box 2-2

Baltimore-Washington International (BWI) Airport Noise Zone

The Airport Noise Zone

The expansion of BWI Airport has been accompanied by modifications to land use regulations in the form of an Airport Noise Zone (ANZ) established and administered by the Maryland Aviation Administration (MAA). This zone is an "overlay" on local land use regulations establishing limits in addition to those in local zoning and subdivision controls. The first Airport Noise Zone and Abatement Plan for BWI was adopted in 1976. It was updated in 1998 (Map 2-6) using existing and projected noise levels based upon the expected growth in aircraft traffic and the mandated usage of new or retrofitted quieter jet engines in commercial aircraft. The Noise Abatement Plan establishes controls and restrictions on airport/aircraft operations that will minimize the impact of noise on communities surrounding the BWI Airport.

Within the BWI Airport Noise Zone, most industrial, commercial and recreational activities are permitted, but residential development and many community facilities (such as churches, libraries, schools, hospitals) are not, except for pre-existing uses. Should a developer wish to develop such uses, he must petition the Board of Airport Zoning Appeals (BAZA) showing that his proposal meets specific noise reduction standards.

Height Restrictions

Similarly, the height of temporary and permanent new structures within a four-mile radius of BWI is regulated by MAA. Potential non-height related "obstructions", such as lighting, are also subject to MAA regulations.

ANZ and height restriction area. The majority of the area affected by the ANZ is zoned for employment. The County review process seeks to forewarn developers about the ANZ so they can work within MAA guidelines. Because Howard County's zoning regulations are more restrictive with regard to height restrictions, it is unlikely that a proposed structure would be in conflict with MAA height restrictions.

The Department of Planning and Zoning, as a member of the BWI Neighbors and Environmental Committees, continues to monitor impacts that airport operations and flight patterns may have on the County and attends Board of Airport Zoning Appeals hearings for residential variance petitions within the County.

Policies and Actions

POLICY 2.3: Promote coordinated planning of transportation programs and facilities of regional significance.

- ***Baltimore-Washington Cooperation.*** Expand efforts to promote regional coordination and cooperation through various committees and the exchange of technical information, including refinements of the regional transportation simulation model to better evaluate the feasibility of bus, rail and high occupancy vehicle (HOV) options.

- ***Baltimore Regional Transportation Planning.*** Maintain an active role in the development and implementation of a multimodal regional transportation plan for the Baltimore region in cooperation with the Baltimore Metropolitan Council (BMC) and the other jurisdictions of the Baltimore region.

- ***Regional Highway Corridors.*** Encourage the Maryland Department of Transportation to expand the capacity of regionally significant commuter corridors. Use County funds to selectively leverage additional Federal and State funds to accelerate improvements for regionally important corridors in Howard County.

- ***Intelligent Transportation Systems (ITS).*** Work with BMC and surrounding jurisdictions to continue exploring the feasibility of implementing ITS strategies in the Baltimore region.

- ***Regional Demand Management Strategies.*** Promote, at a local and regional level, low cost strategies such as telecommuting, ridesharing and flex-time which can help reduce traffic congestion and improve air quality.

- ***Pedestrian/Bicycle Facilities.*** Continue, through the BMC, to plan for and implement pedestrian/bicycle facility improvements which emphasize expanding the regional network and filling critical gaps within the existing local network.

POLICY 2.4: Encourage the use of public transportation, reduce private automobile usage and facilitate access to employers.

- ***Improve Regional Bus Service.*** Work with the Mass Transit Administration, Washington Metropolitan Area Transit Administration and neighboring jurisdictions to coordinate and implement priorities for improved regional bus service and linkage to the Baltimore and Washington transit systems.

- ***Expansion of Howard Transit Bus Service.*** Expand the County's bus service to selectively provide additional connections to surrounding jurisdictions and transfers to other transit systems, while continuing to strengthen the intra-County bus service.

- ***Transit Corridors.*** Work cooperatively with the Metropolitan Washington Council of Governments (MWCOG), BMC, State agencies and adjacent jurisdictions to promote designation of several regional travel corridors in Howard County for bus and/or HOV use and, by preserving rights-of-way, provide the opportunity for a long-term conversion to light rail corridors. Work proactively with other jurisdictions and the State to determine whether bus-only lanes and light rail in the I-95, US 1 and US 29 corridor are feasible and would provide an effective regional tool for reducing congestion.

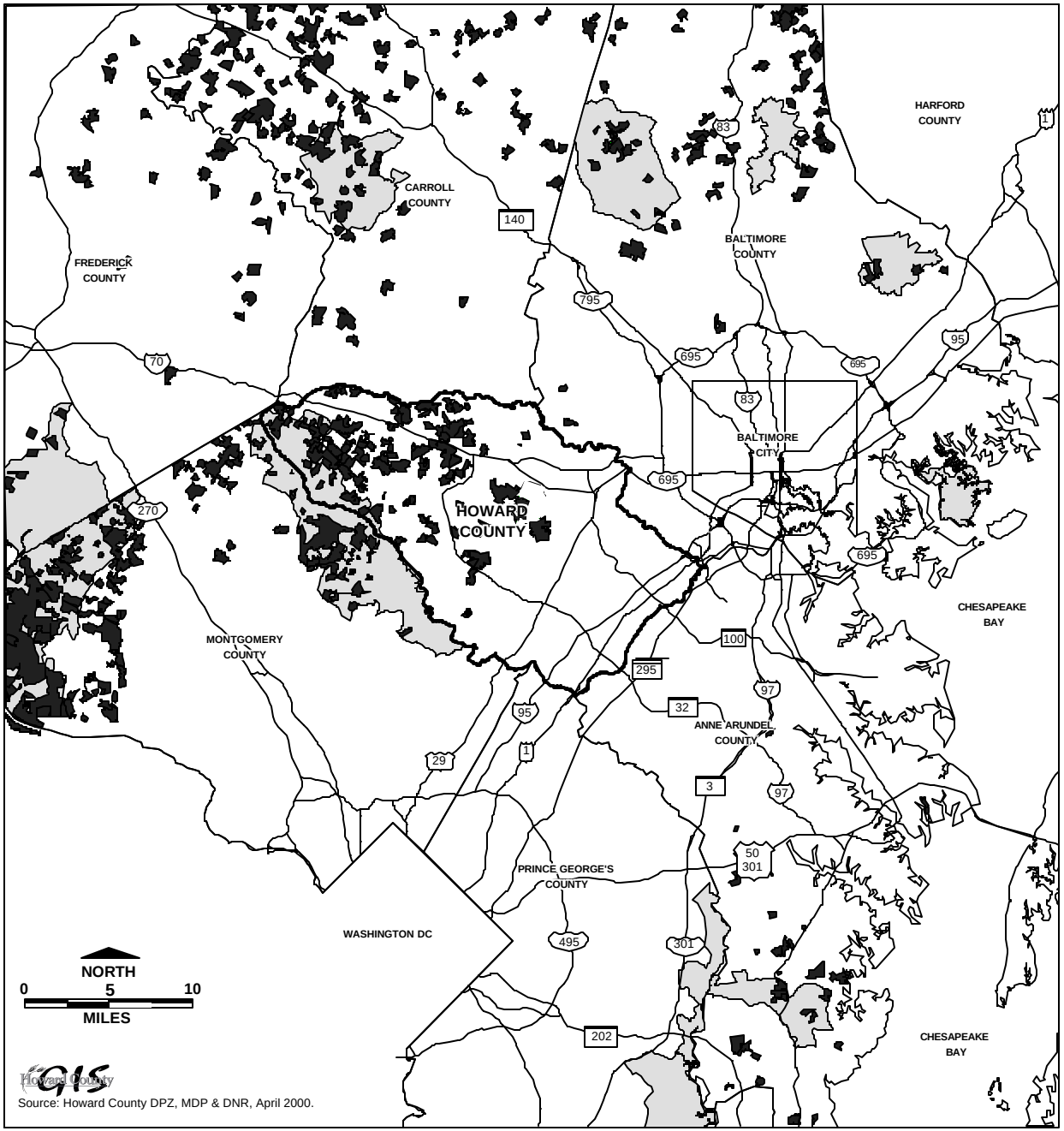
- ***Transportation Management Association.*** Encourage greater participation by Howard County employers in the BWI Business Partnership, Inc., a transportation management association which serves employers in portions of Howard, Anne Arundel and Baltimore Counties.

Regional Farm Economy

Farming in the region has undergone significant changes. Farming has evolved in response to changing economic realities (for example, high land and labor prices demand higher value per acre crops) and to changing market opportunities (for example, horticultural nurseries to supply plant materials for new residential and employment areas). A growing proportion of farms are turning to "green industry" products (nursery and turf), horses, and fruits and vegetables, while the number of traditional grain, beef and dairy farms is declining. This trend is more pronounced in areas of the region close to suburban development. More often than not, farm income is supplemented by other income and farms are operated by part-time farmers. This change in farming patterns is generally prevalent in metropolitan areas.

Howard County's farmland is part of a network of farms cutting through large portions of Carroll, Frederick, Howard and Montgomery Counties. The critical mass of farmland needed for the regional farm industry to survive is not clear. However, the permanently preserved farmland in Howard County clearly helps to provide stability and predictability for farmers and farm support businesses throughout the region. Likewise, the long-term viability of farming in the region is necessary for Howard County's farm industry. As a small county with a relatively small portion of the regional farm acreage, Howard County's farm industry depends on services located elsewhere in the region.

Each of the four counties within this farming region has zoning and easement programs in place aimed at permanently preserving farmland (Map 2-7). Land use patterns are for the most part established, but opportunities may exist for productive cooperation between Howard County and adjacent counties in identifying areas to target for easements. State farmland protection programs, in particular the Rural Legacy Program, provide counties with added resources to preserve locally and regionally significant farming areas. The Upper Patuxent Watershed has been designated as a Rural Legacy area in both Howard and Montgomery Counties, furthering the potential for linking these farmland preservation areas.



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- STATE AND COUNTY PRESERVATION EASEMENTS
- APPROVED RURAL LEGACY AREAS

Map 2-7
Regional Agricultural Preservation Areas

Significant potential also exists to support and strengthen the regional farm industry through joint economic development efforts. All counties in this farming region have Agricultural Economic Development Officers. Sharing information and strategies can lead to a more complete understanding of the regional industry and of the resources available to or needed by farm operators. Cooperative efforts could lead to the establishment of regional services such as marketing cooperatives or small-scale processing facilities for local farm products.

Policies and Actions

POLICY 2.5: Help promote regional agricultural land preservation and strengthen the regional farm economy.

- ***Land Preservation.*** Cooperate with neighboring jurisdictions in regional land preservation initiatives that will protect and support productive farmland and rural watershed areas.
- ***Marketing and Economic Development.*** Expand regional cooperation on marketing and economic development initiatives that support agriculture.

Solid Waste

Most of Howard County's solid waste has been diverted from Alpha Ridge Landfill and is recycled or exported to private out-of-state landfills. Similar waste export steps have also been taken by other jurisdictions in the Baltimore region. As jurisdictions become less able to provide locally all of the processing and disposal facilities needed for solid waste management, regional cooperation has become more important. For its long-term needs, Howard County needs to pursue regional strategies that will reduce its susceptibility to potential future changes in cost and available capacity at private waste disposal facilities.

In 1993, members of the BMC entered a Regional Solid Waste Compact to study the feasibility of regional solid waste management programs and facilities. The Compact's goals are to reduce, reuse and recycle as much waste as feasible and to develop composting and/or waste-to-energy facilities for the remainder, reserving landfills for disposal of non-recyclable, non-combustible and non-compostable wastes. This Compact produced the 1996 report, Strategies for Developing Regional Solid Waste Management Programs, which considers the use of facilities located both within and outside the Baltimore-Washington region.

Howard County currently participates in two regional agreements. Howard, Anne Arundel and Baltimore Counties pool yard waste for processing at a composting facility in Prince George's County. Under a second agreement, Anne Arundel and Howard Counties export municipal solid waste to a private landfill in Virginia.

Landfill disposal will become an increasingly limited option in the Baltimore region as existing landfills approach capacity and large tracts of land for new landfills become scarce or unavailable. Economies of scale and siting constraints make it far more likely that new facilities will serve the region rather than an individual county or city. New facilities could be built by private companies, such as the waste transfer station in Anne Arundel County, or by regional organizations, such as the Baltimore Refuse Energy Systems Company (BRESCO) waste-to-energy plant in Baltimore City or the yard waste composting site in Prince George's County. New facilities may also be built by local jurisdictions, such as the waste transfer station that Baltimore County operates, contracting excess capacity to other users.

If the export of waste to out-of-state landfills becomes unavailable or less cost effective in the future, regional solutions will become essential. Howard County and other jurisdictions in the region need to explore and work towards regional solutions now, to ensure that options will be available when needed.

Policies and Actions

POLICY 2.6: Ensure that regional solutions are available for environmentally sound and cost effective solid waste management.

- ***Regional Coordination.*** Continue active participation in the Baltimore Metropolitan Council's Solid Waste Management Compact, the Northeast Maryland Waste Disposal Authority and other organizations seeking regional options for solid waste management.

Environment

Growth affects the retention of environmentally sensitive land as well as farmland. A large number of acres of woodland has been lost over the past 30 years. Until twenty years ago, wetlands were routinely filled in for development, their critical ecological functions unheeded, and runoff from tilled farms and from impervious areas flowed directly into streams and eventually to the Chesapeake Bay.

While the past two decades have witnessed strong efforts at the State and County levels to increase protection of sensitive resource areas, much damage has already been done, and incremental damage continues. Continuing to enhance existing measures to protect these resources in undeveloped areas is an ongoing challenge. The more expensive and difficult challenge of retrofitting has only recently begun.

The protection of stream valleys is a key element to preserving the water quality of the Chesapeake Bay. Howard County is bounded by two major rivers, the Patuxent and the Patapsco, which are protected as part of a State park system along most of their lengths. The main Patuxent watershed feeds the Washington Suburban Sanitary Commission (WSSC) reservoirs system which supplies water to the Washington region. Outside Howard County, other major streams are also important parts of the Baltimore-Washington regional park system. The North Branch of the Patapsco River is the basin of the Liberty Reservoir (which supplies water to Baltimore City, Baltimore, Carroll and Howard Counties). The long tradition of park planning in Montgomery County has yielded the Seneca and Rock Creek Parks and the Northwest and Paint Branch Parks within the Potomac River watershed. Map 2-8 shows the mosaic of Federal, State and major County lands that have been placed in permanent protection as parks, green spaces and environmental preserves.

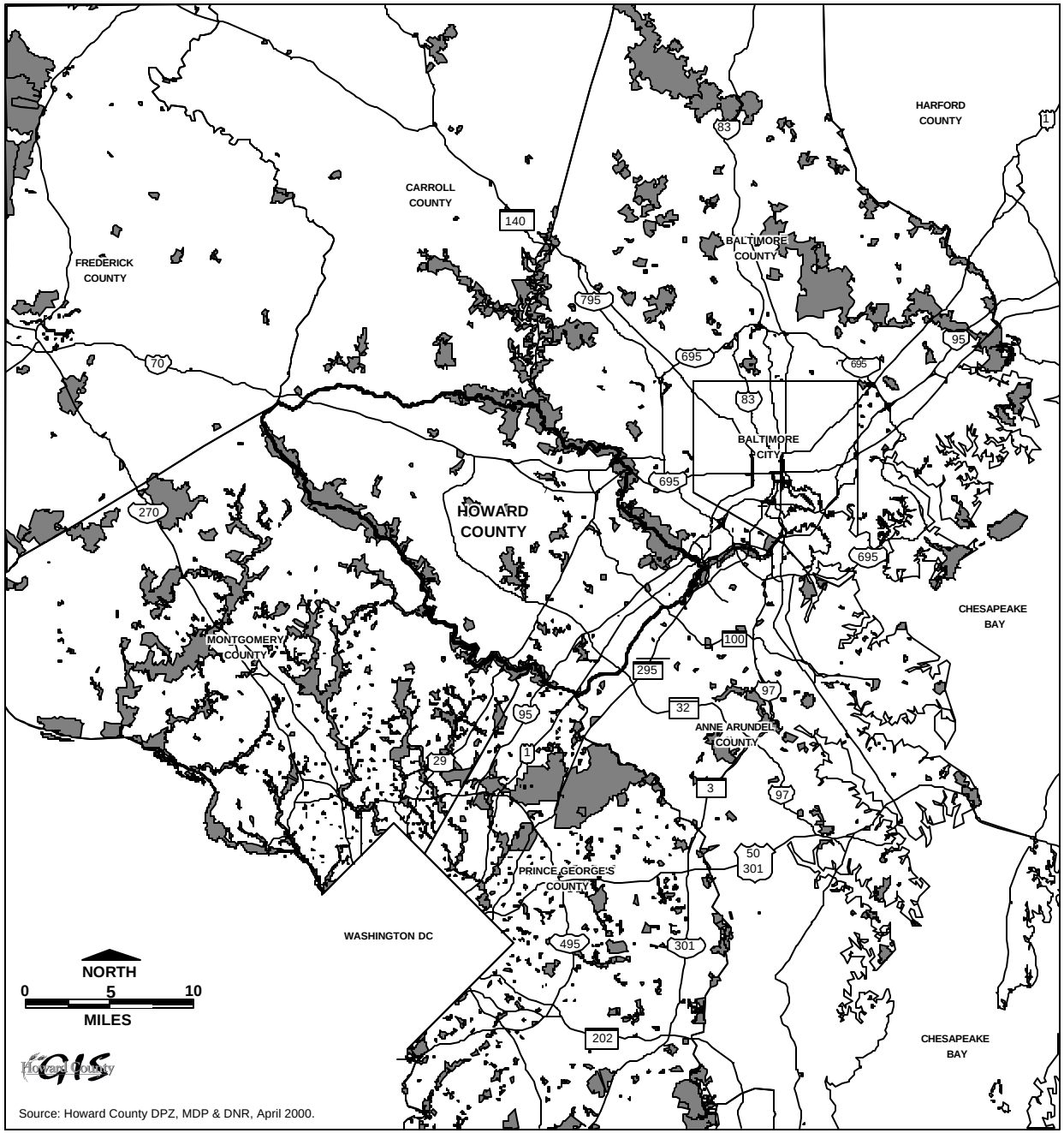
Watershed boundaries often cross jurisdictional boundaries, so protection efforts for water resources must often be coordinated on a regional basis. Howard County works with neighboring jurisdictions to protect the reservoir watersheds that supply water for our region's public water systems.

The County relies on the Baltimore City water system for the majority of its public water supply. However, the three reservoir watersheds for this system lie predominantly in Baltimore and Carroll Counties. Conversely, the County gets a small percentage of its water supply from the WSSC reservoirs along the main stem of the Patuxent, but approximately half of this system's reservoir watersheds lie within the County and the remainder lie predominantly within Montgomery County. As a result, the County participates in two regional cooperative agreements to protect these reservoir watersheds.

The (Baltimore City) Reservoir Watershed Management Agreement was signed in 1984 by Baltimore City, Baltimore and Carroll Counties, the Maryland Department of Health and Mental Hygiene (now the Maryland Department of the Environment), the Maryland Department of Agriculture, the (Baltimore) Regional Planning Council (now the Baltimore Metropolitan Council), the Water Quality Coordinating Committee and the Baltimore County and Carroll Soil Conservation Districts. Signatories to this agreement pledge to work cooperatively to prevent increased phosphorus and sediment loadings to the reservoirs and to actively reduce phosphorus loadings to the reservoirs. Howard County is a member of the organizational structure created by this agreement to coordinate protection efforts and supports this effort financially.

The Patuxent Reservoirs Watershed Protection Agreement was signed in 1996 by Howard, Montgomery and Prince George's Counties, the Howard and Montgomery Soil Conservation Districts, the Maryland-National Capital Park and Planning Commission and the WSSC. Signatories to this agreement pledge to work cooperatively to protect the long-term biological, physical and chemical integrity of the reservoirs watershed.

The County also participates in the Patuxent River Commission and the Patapsco/Back River Tributary Strategy Team. The legislatively-created Commission coordinates State and local efforts to protect and improve wa-



Source: Howard County DPZ, MDP & DNR, April 2000.

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REGIONAL PARKS, GREEN SPACES AND OTHER PROTECTED LANDS

Map 2-8
Regional Parks, Green Spaces and Other Protected Lands

ter quality and habitat within the Patuxent River watershed and acts as the Patuxent River Tributary Team. Tributary Teams, which are appointed by the Governor, coordinate State and local efforts to achieve a 40% reduction in nutrient loadings for each watershed as part of the overall goal to reduce nutrient loadings to the Chesapeake Bay.

A related environmental issue of regional importance is the discharge of treated effluent from sewage treatment plants into the region's rivers. This effluent contains nitrogen and phosphorous, and excessive nitrogen and phosphorus in the Bay's water are key factors in its degradation. Howard County has added enhanced phosphorus removal and biological nitrogen reduction to the Little Patuxent Water Reclamation Plant as a pilot demonstration project, with full implementation scheduled to be complete by 2002. The Little Patuxent plant's present capacity is 18 million gallons per day (mgd). The County plans to increase its capacity to 25 mgd by 2002, with an ultimate planned capacity of 29 mgd by 2015.

Those areas of the sewer service area not served by the County's own plant are served by the Baltimore City-owned and operated Patapsco Wastewater Treatment Plant. Howard County participates with the City, Baltimore and Anne Arundel Counties for a share of its costs and capacity.

Policies and Actions

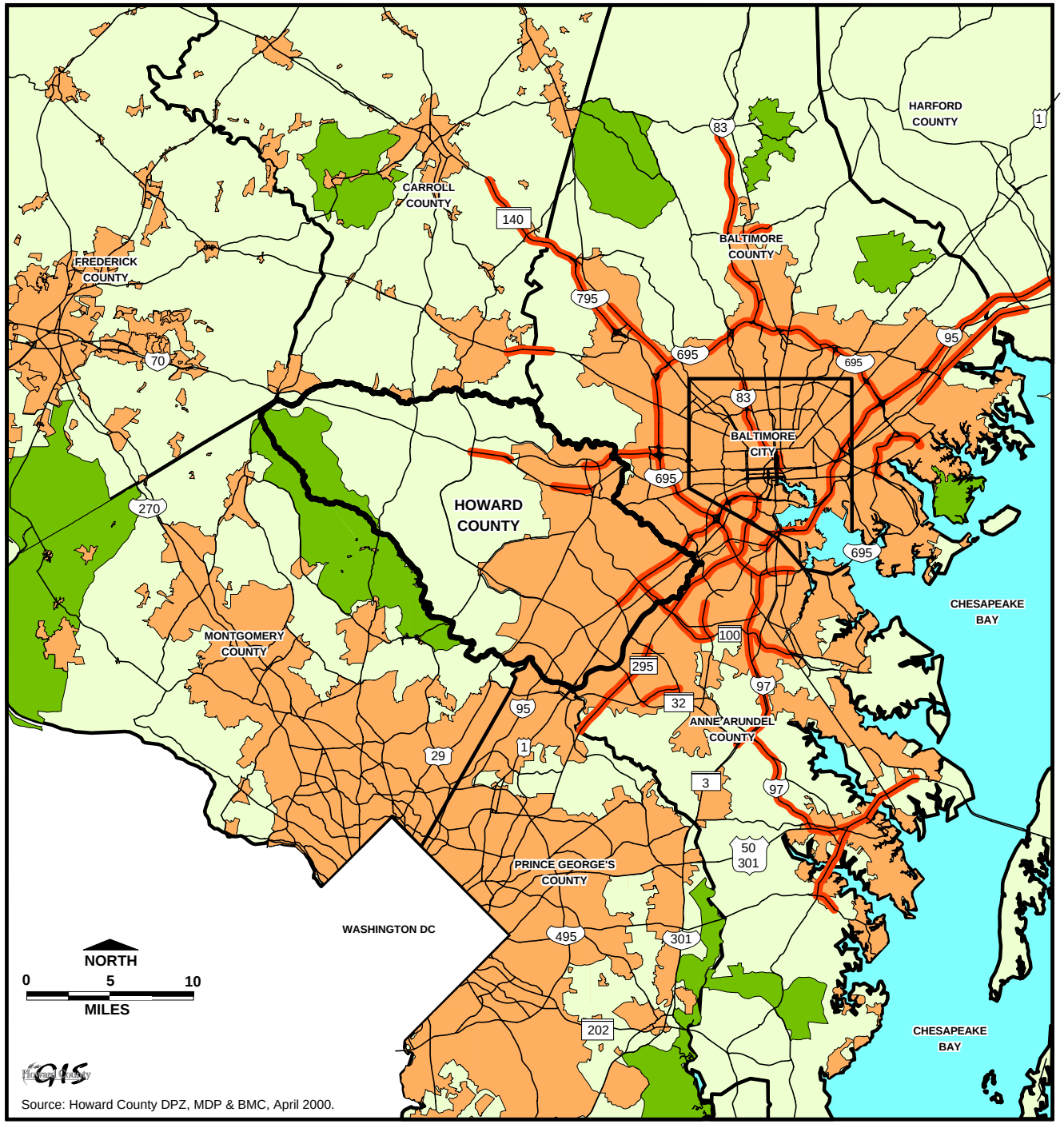
POLICY 2.7: Coordinate regional protection of water resources.

- ***Watershed Planning and Management.*** Coordinate and cooperate with other local, regional and State agencies and organizations on joint watershed planning and management for the Patuxent and the Patapsco Rivers.

- ***Protection of the Patuxent and Patapsco Rivers.*** Urge the State to extend the boundaries of the Patuxent and Patapsco Valley State Parks through fee simple purchase of parkland or purchase of easements.

Summary Map

Map 2-9, titled Summary Map – Responsible Regionalism, summarizes and illustrates some of the policies and actions described in this chapter.



Source: Howard County DPZ, MDP & BMC, April 2000.

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- PRIORITY FUNDING AREA
- APPROVED RURAL LEGACY AREA
- PROJECTED CONGESTED ROAD (LEVEL OF SERVICE E AND F) *

*Note: Map shows Baltimore region highway analysis only. Washington region does not provide data on year 2020 congestion. Baltimore Regional Transportation Plan (BRTP) is expected to be updated in FY 2001. Congestion projections take into account improvements listed in the BRTP.

Map 2-9
Summary Map
Responsible Regionalism