

2008 Garrett County Comprehensive Plan



Adopted October 7, 2008

Acknowledgements

The Garrett County Planning Commission expresses its appreciation to the many people, agencies and organizations that provided information, ideas and input for this plan.

Garrett County Commissioners

Dennis G. Glotfelty, Chairman

Ernest J. Gregg

Frederick A. Holliday

R. Lamont Pagenhardt, County Administrator

Garrett County Planning Commission

Troy Ellington, Chairman

Ruth Beitzel

George E. Brady

Tony Doerr

Gary Fratz

Joe McRobie

Jeff Messenger

Tim Schwinabart

Frederick Holliday, Ex Officio

Garrett County Planning and Land Development Office

John Nelson, Director

Planning Staff

Bill DeVore

Chad Fike

Deborah Carpenter

Louise Weimer

Contributing Agencies

Steve Sherrard,
Garrett County Health
Department

Jim Hinebaugh, Director,
Garrett County Economic
Development

Linda Lindsey, Director,
Department of Public Utilities

Gary Mullich, Director, General
Services

Cheryl DeBerry,
Agricultural Specialist, Garrett
County Economic Development

Duane Yoder, Community Action
Committee, Inc.

Jay Moyer, General
Superintendent, County Roads
Department

Brad Frantz, Director,
Department of Public Safety and
Emergency Management

Carolyn Mathews,
Maryland Department of Natural
Resources

Consultant Team

Environmental Resources Management, Annapolis

Whitman Requardt & Associates, Baltimore

Special thanks to Stephanie Martins at the Maryland Department of Planning

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THE BOARD OF GARRETT COUNTY COMMISSIONERS

203 South Fourth Street - Courthouse - Room 207, Oakland, Maryland 21550

www.garrettcountry.org · countycommissioners@garrettcountry.org

301-334-8970

301-895-3188

FAX 301-334-5000

Board of Commissioners

Dennis G. Glotfelty
Ernest J. Gregg
Frederick A. Holliday

County Administrator

R. Lamont Pagenhardt
County Attorney
Gorman E. Getty III

RESOLUTION

WHEREAS, Article 66B of the Code of Public General Laws of Maryland authorizes and empowers counties to make and adopt a Plan for the general purpose of guiding and accomplishing the coordinated, adjusted and harmonious development of the County; and

WHEREAS, Garrett County has by duly adopted resolution of the Board of County Commissioners appointed a Planning Commission to exercise the powers and duties conferred by said Article 66B; and

WHEREAS, Said Garrett County Planning Commission, acting with the advice and assistance of the citizens of the County has caused to be prepared an update to the County Plan entitled 2008 GARRETT COUNTY COMPREHENSIVE PLAN; and

WHEREAS, Said Comprehensive Plan is designed and intended to promote the health, safety, morals, order, convenience, prosperity and general welfare of the present and future residents of Garrett County; and

WHEREAS, Said Comprehensive Plan has been subject to public review and to public hearings pursuant to said Article 66B; and

WHEREAS, The Garrett County Planning Commission has thereafter approved said Plan and has recommended that it be adopted by the Board of County Commissioners; and

WHEREAS, The Board of County Commissioners have carefully considered said plan together with the comments and suggestions regarding said plan and, with certain minor revisions, find that said plan constitutes a suitable rational and timely plan to guide the future development of Garrett County.

NOW, THEREFORE, BE IT RESOLVED that the document dated October 2008 consisting of text and maps and entitled "2008 GARRETT COUNTY COMPREHENSIVE PLAN is hereby adopted as the Plan for Garrett County pursuant to said Article 66B; and

BE IT FURTHER RESOLVED that the Garrett County Planning Commission shall cause said plan to be published and a copy thereof to be certified to the Clerk of the Circuit Court of Garrett County.

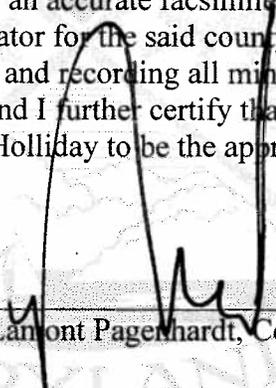
DULY ADOPTED BY A UNANIMOUS VOTE OF THE BOARD OF COUNTY COMMISSIONERS OF GARRETT COUNTY MARYLAND THIS 7TH DAY OF OCTOBER 2008.


Dennis G. Glotfelty, Chairman


Ernest J. Gregg


Frederick A Holliday

I certify that the foregoing resolution was duly passed and adopted by the Board of County Commissioners at a regular meeting held October 7, 2008; I further certify this reproduction is an accurate facsimile of said resolution; and I further certify I am the Administrator for the said county Commissioners charged with the responsibility of keeping and recording all minutes, records and acts of the said county Commissioners, and I further certify that Dennis G. Glotfelty, Ernest J. Gregg and Frederick A Holliday to be the appropriate officials to sign the same resolution.


R. Lamont Pagenhardt, County Administrator

GARRETT COUNTY PLANNING COMMISSION

**203 S. Fourth Street
Courthouse Annex, Room 210
Oakland MD 21550**

RESOLUTION

WHEREAS, Article 66B of the ANNOTED CODE OF MARYLAND authorizes and empowers counties to make and adopt a Plan for the general purpose of guiding and accomplishing the coordinated, adjusted and harmonious development of the County; and

WHEREAS, Garrett County has by duly adopted resolution of the Board of County Commissioners appointed a Planning Commission to exercise the powers and duties conferred by said Article 66B; and

WHEREAS, said Garrett County Planning Commission, acting with the advice and assistance of the Citizens of the County, has caused to be prepared the draft 2008 GARRETT COUNTY COMPREHENSIVE PLAN; and

WHEREAS, said Comprehensive Plan is designed and intended to promote the health, safety, morals, order, convenience, prosperity and general welfare of the present and future residents of Garrett County; and

WHEREAS, said Comprehensive Plan has been subject to public review and to public hearings pursuant to said Article 66B; and

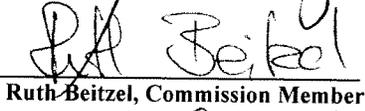
WHEREAS, the Garrett County Planning Commission has carefully considered the comments and suggestions submitted by the public on said PLAN, and believe it to constitute a suitable, rational and timely Plan to guide the future development of Garrett County.

NOW, THEREFORE, BE IT RESOLVED, that the Garrett County Planning Commission is hereby submitting its recommended 2008 GARRETT COUNTY COMPREHENSIVE PLAN, consisting of maps and text, pursuant to the requirements of Article 66B, to the Board of County Commissioners for that Body's consideration and adoption.

DULY ADOPTED BY UNANIMOUS VOTE OF THE GARRETT COUNTY
PLANNING COMMISSION THIS 1ST Day of October 2008.

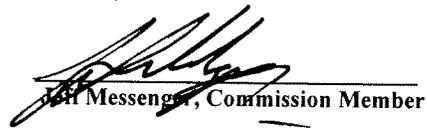

Troy Ellington, Chairman


George Brady, Commission Member


Ruth Beitzel, Commission Member

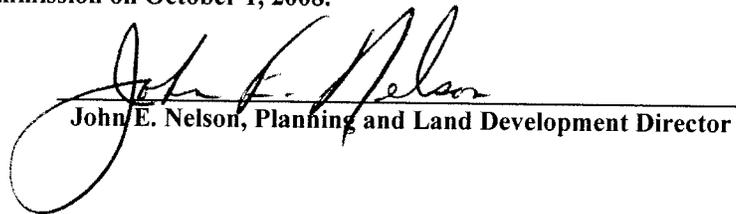

Anthony Doerr, Commission Member


Tim Schwinabart, Commission Member


Jeff Messenger, Commission Member


Joe McRobie, Commission Member

I certify the foregoing resolution was duly passed and adopted by the
Garrett County Planning Commission at a regular meeting held by the
Commission on October 1, 2008.


John E. Nelson, Planning and Land Development Director

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(Available on CD-ROM or from the Department of Planning and Land Development)

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- 1) How the Plan was Prepared (Public Involvement)
- 2) Growth Projections Packet 020107
- 3) Garrett Rural issues Presentation 6-13-07
- 4) Rural meeting 3-27-07 agenda & hand outs
- 5) Rural Issues Questionnaires Results
- 6) Land Use Comparison Map
- 7) Development Capacity Analysis
- 8) Recommendations of the Watershed Study
- 9) Planning Commission's Summary Report
- 10) DCL Land Use Scenarios
- 11) Water Resources Element Appendix
- 12) Letter from MDE Regarding Water Supplies

Appendix B: Supporting Materials 2

- 13) Transportation Technical Report
- 14) Transportation Appendix
- 15) US 219 Realignment/Oakland Bypass Joint Press Release
- 16) Wetlands of Special State Concern
- 17) Guidelines for Including Agricultural Land Protection in the Sensitive Areas Element of the Comprehensive Plan
- 18) Maryland Forest Service Conservation Goals
- 19) Maryland Power Plants and the Environment (excerpts, from DNR)
- 20) Assessment of Water Quality Impacts from Potential Land Development, Deep Creek Lake
- 21) Source Water Protection Plan

Appendix C: Plans Incorporated by Reference

- 1) Garrett County Land Preservation Parks and Recreation Plan (LPPRP)
- 2) Garrett County Heritage Plan

Appendix D: Public Comments Received

Appendix E: Planning Commission Recommended Plan, October 1, 2008

Other Items

A Development Plan for Garrett County (1974 Comprehensive Plan)

List of Acronyms Used

Acronym	Meaning
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACOE	Army Corp of Engineers
ADF	Average Daily Flow
AML	Abandoned Mine Land
AR	Agricultural Resource
ARC	Appalachian Regional Commission
ASCI	Adventure Sports Center International
BCF	Billion Cubic Feet
BNR	Biological Nutrient Removal
BOD	Biochemical Oxygen Demand
CAC	Community Action Committee
CARC	Community Athletic and Recreation Center
COMAR	Code of Maryland Regulations
CR	Commercial Resort
CTP	Consolidated Transportation Program
DBED	Department of Business and Economic Development
DHCD	Department of Housing and Community Development
DLLR	Department of Labor, Licensing, and Regulation
DNR	Department of Natural Resources
DPU	Department of Public Utilities
EC	Employment Center
EMS	Emergency Management
ENR	Enhance Nutrient Removal
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ERU	Equivalent Residential Unit
ESD	Environmentally Sensitive Design
FGA	Future Growth Area
GC	General Commercial
GCED	Garrett County Economic Development
GCPS	Garrett County Public Schools
GPD	Gallons Per Day
GTS	Garrett Transit Service
HCR	Hydrographic Controlled Release
HNI	Highway Needs Inventory
I/I	Inflow and Infiltration
LOS	Level of Service
LPPRP	Land Preservation, Parks, and Recreation Plan
LR	Lake Residential
MALPF	Maryland Agricultural Land Preservation Foundation
MDE	Maryland Department of the Environment
MDOT	Maryland Department of Transportation
MDP	Maryland Department of Planning

MEMA	Maryland Emergency Management Agency
MGD	Millions of Gallons Per Day
MRA	Maryland Recycling Act
MUTCD	Manual of Uniform Traffic Control Devices
NRCS	National Resources Conservation Service
PFA	Priority Funding Area
PRD	Planned Residential Development
PSADT	Peak Season Average Daily Traffic
R	Rural
RBC	Rotating Biological Contactor
RD	Rural Development
RR	Rural Resource
RTE	Rare, Threatened, and Endangered (species)
SDAT	State Department of Assessment and Taxation
SHA	State Highway Administration
SR	Suburban Residential
SWPP	Source Water Protection Plan
TC	Town Center
TMDL	Total Maximum Daily Load
TR	Town Residential
USGS	U.S. Geological Survey
VPD	Vehicles Per Day
WIC	Women, Infants, and Children
WMA	Wildlife Management Area
WSSC	Wetlands of Special State Concern
WWTP	Wastewater Treatment Plant

1 Introduction

This 2008 Comprehensive Plan (the Plan) serves as the policy guide and framework for future growth and development in Garrett County. The Plan looks at land use, water resources (including drinking water, wastewater, and stormwater), transportation, public facilities (including police, fire and emergency services, schools, and libraries), economic development, housing, environmentally sensitive areas, and mineral resources, and other natural resources. The Plan also includes a detailed plan for the area around Deep Creek Lake.

The Plan's "horizon" is the year 2030, meaning that the Plan looks at growth and development out over the next 20 years or so. However, under state law, the County must review the Plan at least every six years. The next review should begin in 2014, and may result in adjustments to the policies in this Plan.

This Comprehensive Plan replaces the last County Comprehensive Plan, which was adopted in 1995 and reviewed by the Planning Commission in 2001. Each chapter of this 2008 Plan contains goals and objectives, a review of background and trends, discussion of issues, and recommended policies and actions.

1.1 Legal Requirements

This Plan has been prepared pursuant to State enabling legislation and the requirements for Maryland counties contained in Article 66-B of the Annotated Code of Maryland. Under Article 66-B, among other requirements, the Plan must implement the following land use visions for Maryland's future¹:

1. Development is concentrated in suitable areas;
2. Sensitive areas are protected;
3. In rural areas, growth is directed to existing population centers and resource areas are protected;
4. Stewardship of the Chesapeake Bay and the land is a universal ethic;
5. Conservation of resources, including a reduction in resource consumption, is practiced;
6. To assure the achievement of the above, economic growth is encouraged and regulatory mechanisms are streamlined;
7. Adequate public facilities and infrastructure under control of the county or municipal corporation are available or planned in areas where growth is to occur; and
8. Funding mechanisms are addressed to achieve these visions.

Article 66-B was amended in 2006 to include several new requirements for Comprehensive Plans, including a new water resources element. This Plan has been prepared to meet these requirements.

The Plan has also been prepared consistent with and in consideration of ongoing efforts in Maryland in support of smart growth.

1.2 The Plan's Relationship with the Towns in Garrett County

Garrett County contains the incorporated towns of Accident, Deer Park, Friendsville, Grantsville, Kitzmiller, Loch Lynn Heights, Mountain Lake Park, and Oakland. Under state law, the towns have their own planning authority and adopt their own comprehensive plans

¹ First adopted in 1992 in the Economic Growth, Resource Protection and Planning Act, and amended in 2000.

and land use regulations. In that sense the County Plan does not apply to the towns. However, interjurisdictional coordination is a feature of planning in Maryland, and has been practiced in Garrett County for many years. The County coordinated the development of this 2008 Plan with the towns, most of whom expect to complete an update of their own comprehensive plans by 2009. The 2006 amendments to Article 66-B require coordination between the towns and the County over the municipal growth elements of those individual comprehensive plans.

1.3 Plan Preparation

Pursuant to Article 66-B, the Plan was prepared for the Garrett County Commissioners by the Garrett County Planning Commission. The Planning Commission was assisted by staff from the Garrett County Planning and Land Development Office and several other County agencies (see acknowledgements). The Plan was prepared between June 2006 and April 2008, recommended for approval by the Planning Commission October 1, 2008, and adopted by the County Commissioners on October 7, 2008.

Preparation of the Plan included an extensive amount of public outreach, input, and participation. More detail on how the plan was prepared including public meetings is provided in the Appendix.

1.4 Note on Plan Content and Appendix

A large volume of data and information was used to prepare this Plan. To keep the Plan to a manageable length and size, the main text contains the key points, data, maps, figures, conclusions, policies and recommendations. Supporting documents, reports, data and memoranda are in the appendix to this plan which is available in electronic format on the Garrett County website: <http://www.garrettcountry.org/>, or from the Garrett County Planning and Land Development Office, which also has paper copies.

2 Background

2.1 Location, Regional Setting, Government

Garrett County is a rural county, and is the westernmost county in Maryland. It has an area of approximately 655 square miles and a 2005 population of approximately 30,200¹. North of Garrett County is Pennsylvania, to the west and south-east is West Virginia. Allegany County borders the county on the east (see Map 2.1). Approximately 90 percent of the County is comprised of resource lands, primarily forest and agricultural land. Approximately one-fifth of Garrett County is publicly held land, primarily state forests and state parks.

Oakland, one of eight municipalities (incorporated towns) in the county, serves as the county seat. The other municipalities are Accident, Deer Park, Friendsville, Grantsville, Kitzmiller, Loch Lynn Heights, and Mountain Lake Park. The towns make up just over 20 percent of the County's total population.

2.2 History

Garrett County was split off from Allegany County in 1872. The county is named for John Work Garrett, one-time president of the Baltimore and Ohio Railroad.

Garrett County has a rich history as Maryland's gateway to the west and as a vacation and resort destination. In the years after the civil war John Garrett promoted the area and its easy access by railroad. The first resort was Deer Park, which opened its hotel in 1873. The Oakland Hotel followed and Mountain Lake Park and Loch Lynn Heights also developed as resort towns. These towns' resort heyday was the late 19th century when presidents and Baltimore-Washington high society vacationed in the area. Deep Creek Lake, created in 1923, quickly became a resort, first for residents of the Pittsburgh region, and later for the Baltimore and Washington, DC regions. With Deep Creek Lake, the Wisp Ski Resort, and numerous other recreational opportunities, Garrett County is sometimes referred to as "Maryland's mountaintop playground." Agriculture, timber, and coal mining are also important parts of the local economy, as well as historic and cultural traditions. More detail about Garrett County's history and heritage can be found in the Garrett County 2003 Heritage Plan (see below under Related Plans).

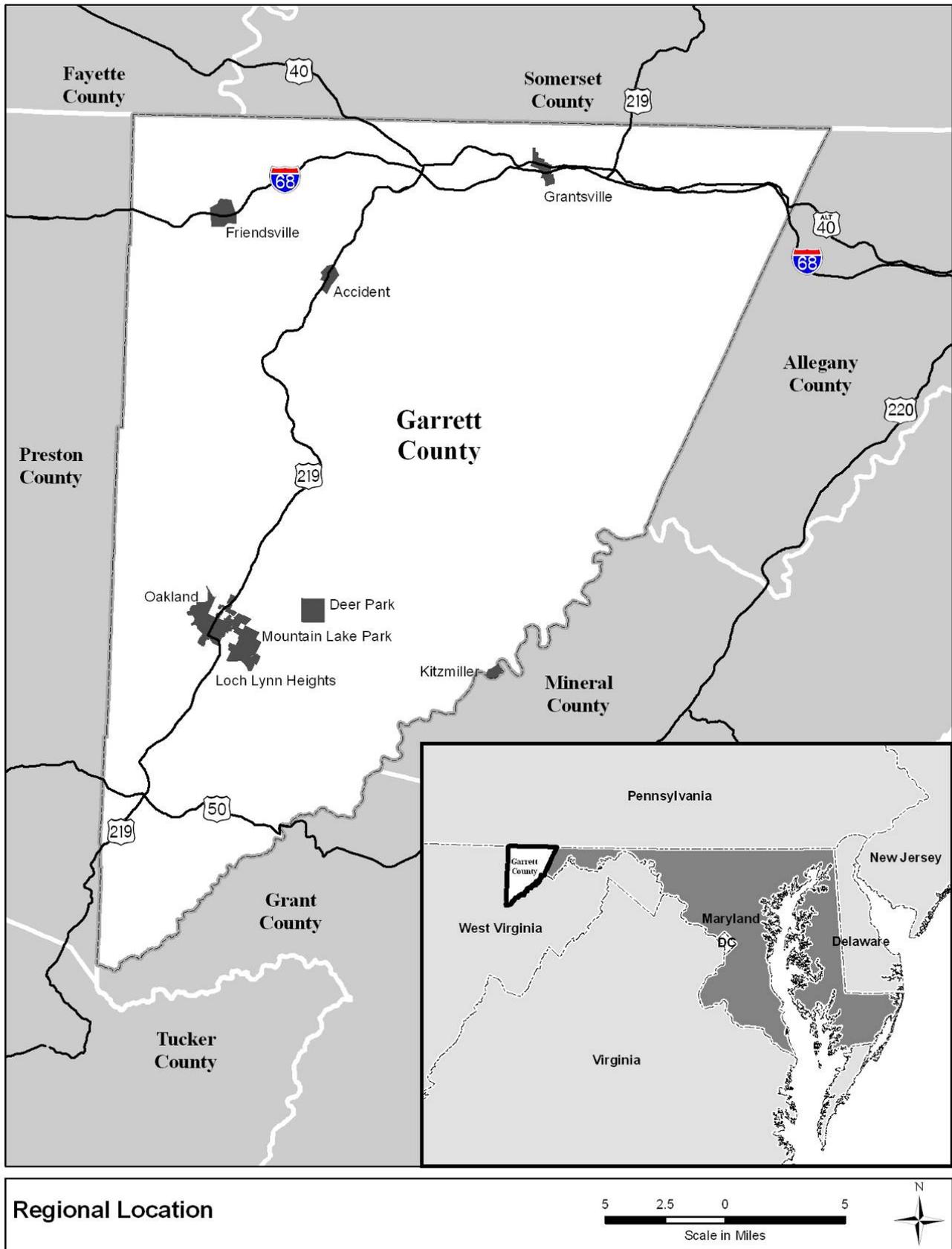
2.3 Planning History

Formal land use planning in Garrett County began in the 1970s, first with a plan for the Deep Creek Lake area in 1972. It was followed by the County's first comprehensive plan, "A *Development Plan for Garrett County*," which was adopted in 1974. This plan was replaced in 1995 by "A *New Development Plan for Garrett County*." The 1995 plan was reviewed by the Planning Commission in 2001.

¹ Please note that two boundary lines between Garrett County and Allegany County are recognized: the Chisholm Boundary and, slightly to the east, the Bowers Boundary. This Comprehensive Plan uses the Chisholm Boundary which results in a total county area approximately 5,600 acres less than if the Bowers Boundary were used. In early 2008, Garrett and Allegany Counties entered into a "friendly lawsuit" to resolve this boundary dispute.

Different agencies and data sources use different total areas for Garrett County (for example, the Maryland Department of Planning land use/land cover data set is based on the Bowers Boundary, while the Department of Assessment and Taxation uses the Chisholm boundary) based on their sources, interpretation of satellite imagery, legal descriptions, geographic information system polygon shapes and so on. Each dataset has its purposes and may have been used for different analyses in this Plan. As a result the reader may notice different acreage totals being used in different tables in this plan. The differences are minor and are of little importance at this comprehensive, large-scale level of planning.

Map 2.1: Location and Regional Setting



This 2008 Comprehensive Plan replaces the 1995 plan. The 1972 *Plan for the Deep Creek Lake Area* was replaced by the 1986 *Plan for the Deep Creek Lake Area*, and updated by the 1995 Garrett County Comprehensive Plan.

2.3.1 *Zoning and Subdivision*

In 1975, following the 1974 Comprehensive Plan, the County adopted a zoning ordinance to regulate land use in the Deep Creek watershed. The remainder of the County was not, and still is not subject to land use regulations.

In 1997, following the 1995 Comprehensive Plan, the County adopted a subdivision ordinance that regulates and controls the subdivision and development of land, but not the use of land, throughout the unincorporated part of the County.

The eight towns have their own planning authority and adopt their own comprehensive plans, zoning, and subdivision regulations.

2.4 **Related Plans and Documents**

The Comprehensive Plan influences and is influenced by companion plans and documents (and their amendments) that serve to implement the Plan:

- Deep Creek Watershed Zoning Ordinance. See previous section.
- Garrett County Subdivision Ordinance. See previous section.
- Comprehensive Water and Sewerage Plan. The Comprehensive Water and Sewer Plan guides the development of water supply and sewerage systems and facilities by implementing County growth and development policies. An update of this plan was scheduled to begin in summer 2007.
- Capital Plan. The annual Capital Plan relates the goals and objectives of the Comprehensive Plan to implementation. It states which capital projects will be undertaken over the next five years and how they will be funded. The Comprehensive Plan is, in turn, important to the capital budgeting process because it outlines the location of future growth and identifies needed capital projects.
- Garrett County Public Schools Educational Facilities Master Plan (annual).
- County Solid Waste Management Plan, 2004
- Garrett County Housing Assessment Report, 2005
- Economic Development Strategic Plan, 2005 update.
- Garrett County Multi-Hazard Mitigation Plan, 2005.

2.4.1 *Plans Incorporated by Reference*

Two additional plans are particularly important, because they were adopted specifically to inform the County's comprehensive planning program.

- Land Preservation Parks and Recreation Plan (LPPRP), 2005. This plan focuses on three types of County land resources: parks and recreation, agricultural lands, and natural resource lands. The plan identifies where these resources are located, how effective current implementation programs and funding sources are in protecting and conserving them, and recommends where changes are needed to overcome shortcomings, close gaps, achieve goals, and ensure good return on public investment.

- Garrett County Heritage Plan, 2003. This plan prepared by the Garrett County Heritage Committee describes the County’s heritage resources outlines a vision for capitalizing on these resources to increase visitation. Following plan adoption by the County Commissioners, the County became a state-designated “Recognized Heritage Area”.

These plans and their amendments are incorporated by reference into this 2008 Comprehensive Plan and have the same weight and authority as the Comprehensive Plan. For ease of reference, the text of these plans is provided in the Appendix to this Plan.

2.5 Population and Housing, Existing and Projected

As of 2005 Garrett County’s population was estimated at 30,150, a small increase over the population at the time of the 2000 census (Table 2.1)². The County had approximately 18,326 housing units in 2005. The population listed in Table 2.1 is the year-round population, that is, the number of full-time residents. However, Garrett County has a large number of seasonal (vacation) homes—almost 4,000 such units in 2000—which is why the number of housing units shown in Table 2.1 is large compared to the population.

Because of the County’s relatively small population, the effects of vacation homes and other types of visitation is pronounced, especially in the Deep Creek Lake area. For example, the peak-day population in the Deep Creek area in 2003 was estimated at 27,044, compared to a year round population in the Lake area of 4,246³. While these visitors and seasonal residents do not count toward the County’s year-round population, they often have the same impacts on traffic and transportation, drinking water, wastewater, and most community services (except education) as permanent residents. Therefore this Plan evaluates future growth in Garrett County primarily from the perspective of housing units, rather than population.

Table 2.1: Population and Housing, 2000, 2005, and 2030

Geography	2000 Census		2005 Estimate		2030 Projection	
	Population	Housing units	Population	Housing units	Population	Housing units
Towns	6,865	3,130	6,640	3,287	8,003	3,962
Accident	353	162	340	168	390	193
Deer Park	405	181	392	181	517	256
Friendsville	539	266	518	281	618	306
Grantsville	619	298	593	305	818	405
Kitzmilller	302	155	288	164	382	189
Loch Lynn Heights	469	202	449	210	475	235
Mountain Lake Park	2,248	948	2,164	1,017	2,357	1,167
Oakland	1,930	918	1,896	961	2,446	1,211
Unincorporated Area	22,981	13,631	23,310	15,039	25,397	21,114
Total County	29,846	16,761	29,950	18,326	33,400	25,076

Sources: US Census; Maryland Department of Planning; Garrett County.

Note: 2030 projections for the Towns are for population and housing units within 2007 boundaries.

The Comprehensive Plan’s countywide projections for population and housing are shown in Tables 2.1 and 2.2. The year-round population is projected to increase to 33,400 by 2030, an increase of approximately 3,450 persons, or 11 percent, over the total in 2005.⁴ During the

² Please note that the year 2005 is being used as the base year for most of the land use and growth analyses in the Comprehensive Plan. This allows data to be readily compared in an “apples to apples” manner.

³ Deep Creek Lake Boating Carrying Capacity Assessment, 2004.

⁴ Source: MDP, September 2006. http://www.mdp.state.md.us/msdc/popproj/TOTPOP_PROJ06.pdf

same period, Garrett County projects the number of housing units will increase to 25,076, a 37 percent increase over the number of units in 2005.

Table 2.2: Population and Household Projections, Five Year Increments

	2005	2010	2015	2020	2025	2030
Population	29,950	30,850	31,750	32,500	33,050	33,400
Households	11,850	12,325	12,850	13,325	13,725	14,000
Household Size	2.47	2.44	2.41	2.37	2.34	2.31

Source: Maryland Department of Planning 11-06

The housing unit projections are derived from analyses and public review conducted between November 2006 and February 2007 for the Comprehensive Plan⁵. These analyses considered a moderate growth and a rapid growth scenario for Garrett County. These scenarios were based on several considerations, including development trends since 1990, planned development (i.e., approved subdivisions), and anticipated market trends. The final projections in Table 2.1 reflect the moderate growth scenario, which the County believes is the more likely of the two scenarios to occur. A detailed description of the scenarios methodology is included in the Appendix to this Comprehensive Plan (Growth Projections Packet 020107).

The projections through 2030 assume the following, based on past trends, market observations, and the land use planning policies in this Plan:

- The Deep Creek Lake Area will absorb approximately 60 percent of housing unit growth, compared to 42 percent between 1990 and 2005.
- The Towns will absorb approximately 10 percent of housing unit growth, compared to 13 percent between 1990 and 2005, not counting possible growth through annexation.
- The rest of the County will absorb approximately 30 percent of housing unit growth, compared to 45 percent between 1990 and 2005.

2.5.1 Projections by Watershed

Garrett County has conducted its land use planning by watershed since the 1974 Comprehensive Plan. This 2008 Plan continues this watershed-based approach.

Table 2.3 shows the County’s housing unit projections by watersheds, towns, and sub-areas. The County contains all or portions of seven major (8-digit) watersheds⁶: Youghiogheny River; Little Youghiogheny River; Deep Creek; Casselman River; Savage River; North Branch Potomac River; and Georges Creek (Map 2.2). The first four all drain to the Youghiogheny River, which ultimately flows to the Mississippi River (via the Ohio River). The last three all drain to the North Branch Potomac River, and ultimately to the Chesapeake Bay. A very small area (approximately 143 acres) in the extreme northeast corner of the County is part of the Wills Creek watershed which lies mostly in Pennsylvania and in Allegany County, MD. This Comprehensive Plan counts this small area as part of the Savage River Watershed (consistent with current state watershed mapping).

⁵ This review included special coordination with the incorporated towns, which were given the opportunity to review and comment on preliminary draft projections in fall of 2006.

⁶ Watersheds are assigned unique numerical identifiers (for example, the Little Youghiogheny River is #05020202), and the number of digits refers to the size of the watershed. There are 138 large (8 digit) watersheds in Maryland, and each 8-digit watersheds is divided into several smaller (12-digit) watersheds.

The projections for each watershed are broken down by incorporated town and by the “remainder”, that is the unincorporated portion of the watershed. Three other geographic areas should be noted:

- The Deep Creek Lake Influence Area is the area around Deep Creek Lake that affects or is affected by the area’s resort activities, especially with respect to traffic and water and sewer. The influence area includes the entirety of the Deep Creek Watershed, as well as a small portion of the Youghiogheny River watershed. The influence area is discussed in detail in Chapter 4.

Table 2.3: Housing Unit Projections by Watershed and Subarea

Geography	Housing Units				
	2005 Existing ¹	2030 Projection	Change, 2005- 2030	Zoned Capacity (Current Regulations) ²	Projected Development as a Share of Capacity
<i>Watersheds</i>					
Youghiogheny River					
Deep Creek Lake Influence Area ³	124	1,311	1,187	1,076	110%
Bear Creek					
Accident	168	193	25	166	15%
Remainder of Bear Creek	822	1,049	227	7,933	3%
Southern Youghiogheny	386	433	47	5,008	1%
Friendsville	281	306	25	61	41%
Remainder of Youghiogheny	2,680	3,343	663	28,723	2%
Little Youghiogheny River					
Oakland	961	1,211	250	537	47%
Loch Lynn Heights	210	235	25	108	23%
Mountain Lake Park	1,017	1,167	150	377	40%
Deer Park	181	256	75	1,088	7%
Remainder of Little Youghiogheny	1,306	1,518	212	8,188	3%
Deep Creek					
Casselman River					
Grantsville	305	405	100	528	19%
Remainder of Casselman	1,955	2,387	432	16,201	3%
Savage River	1,093	1,355	262	10,947	2%
North Branch Potomac River					
Kitzmilller	164	189	25	115	22%
Remainder of North Branch	1,048	1,223	175	19,995	1%
Georges Creek					
	66	74	8	2,246	0%
Summary					
Towns (10% of Total New Units)	3,287	3,962	675	2,980	23%
Deep Creek Lake Area (60% of Total)	5,683	9,733	4,050	24,160	17%
Rest of County (30% of Total)	9,356	11,381	2,025	99,241	2%
County Total	18,326	25,076	6,750	126,381	5%

Notes:

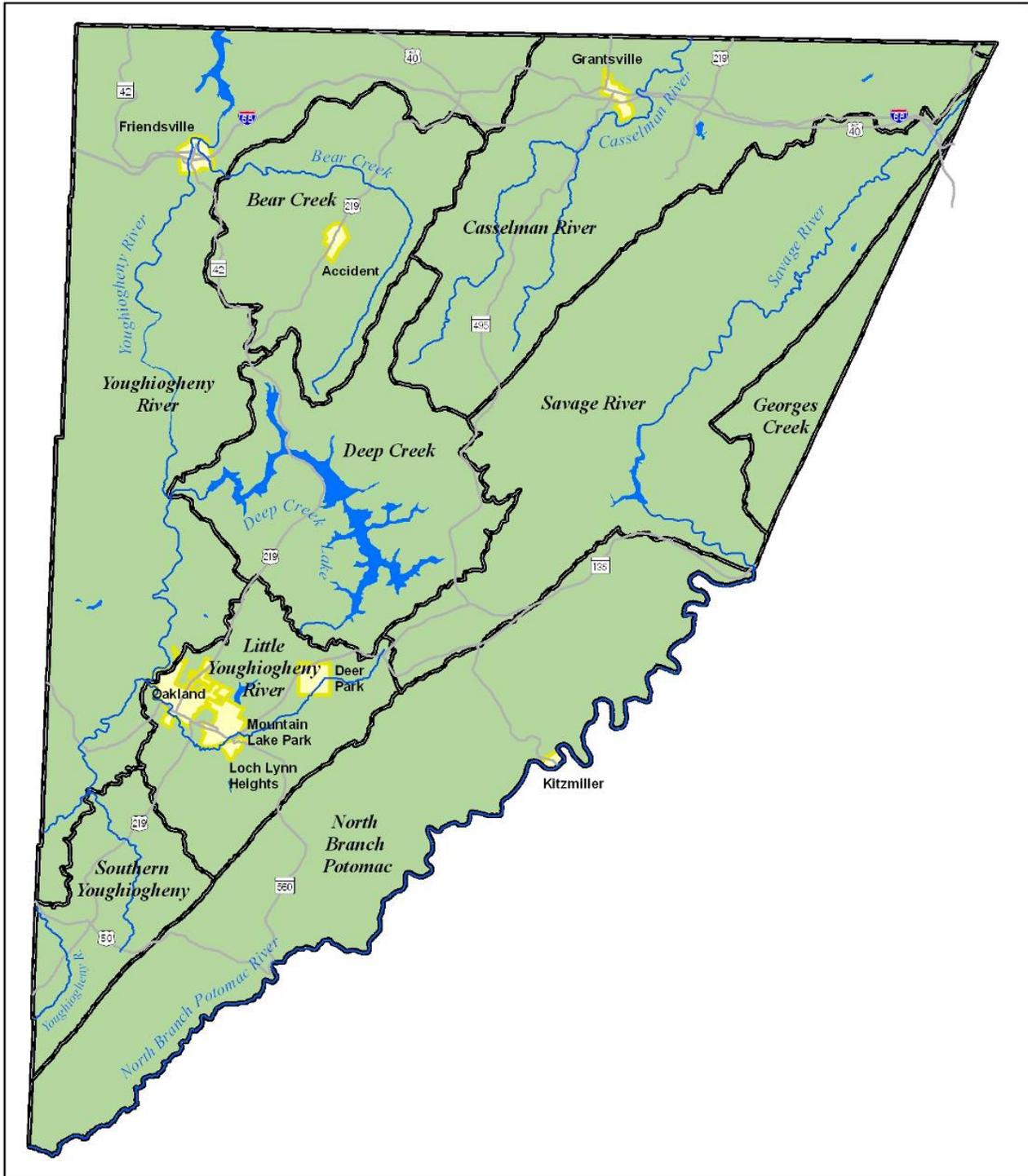
1: Source: MD State Department of Assessment and Taxation (SDAT) Maryland Property View 2005 reflecting existing units as of August 1, 2005. Minor differences may exist between SDAT and census data, due to different data collection methodology.

2: Source: Maryland Department of Planning, Development Capacity Analysis, November 1, 2006. Capacity is the capacity of existing (2005) undeveloped or underdeveloped land.

3: The Deep Creek Lake Influence Area includes the entire Deep Creek Lake watershed, as defined by MDE, plus a small portion of the Youghiogheny River watershed, near the WISP Resort and Sang Run Road. The projected development exceeds the "capacity" because the densities for the Wisp Resort development were set through the

Planned Residential Development (PRD) provisions of the Zoning Ordinance. These PRD densities were higher than the assumed average density used by MDP for the Development Capacity model.

Map 2.2: Comprehensive Plan Watersheds

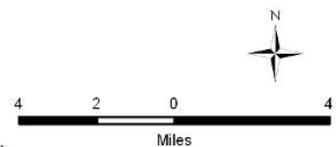


Comprehensive Plan Watersheds

Legend

- Watersheds
- Rivers and Streams
- Municipalities

Note: Bear Creek and the Southern Youghiogheny are geographically part of the Youghiogheny River Watershed, but are treated separately due to distinct cultural and land use patterns.



- Bear Creek is a combination of three 12-digit watersheds within the Youghiogheny River watershed. Bear Creek is broken out separately because of its special agricultural and scenic resources. The Bear Creek watershed (as defined in this Plan) is a state designated Rural Legacy Area, eligible for special preservation funds.
- The Southern Youghiogheny is combination of two 12-digit watersheds within the Youghiogheny River watershed. It is broken out separately because its agricultural and cultural character differentiates it from other portions of the Youghiogheny River watershed.

The two right hand columns in Table 2.3 address “capacity.” Capacity is the total number of housing units that could be built under existing (2005) land development regulations. The column “Projected Development as a Share of Capacity” shows what share of this capacity the projected growth through 2030 would use. For example, the 262 new units in the Savage River watershed (1,355 units in 2030, minus 1,093 existing units) would comprise two percent of the available capacity in the watershed as of 2005 (10,947 units).⁷

2.6 Commercial and Industrial

As of 2005, the Maryland Department of Planning (MDP) estimated that there were an estimated 20,300 part-time and full-time jobs in Garrett County. However, the County typically uses data on full-time jobs from the Department of Labor, Licensing, and Regulation, which reported 11,765 jobs in Garrett County in 2006. Of these jobs, the County estimates that approximately 1,126 were in the County’s major industrial sites such as Central Garrett Industrial Park, Northern Garrett Industrial Park, and Southern Garrett Business & Technology Park (Table 2-4). Major employers in the County include Wal-Mart, GMS Mine Services/Pioneer Conveyor, First United National Bank & Trust, Garrett County Memorial Hospital, Beitzel Corporation, and the Wisp Resort.

Applying MDP’s projected job growth rates (approximately 14 percent job growth through 2030) to DLLR’s job data shows that the County would gain approximately 1,629 jobs. The Garrett County estimates that non-residential building square footage in 2005 was approximately 3.8 million square feet, and will increase to 7.1 million square feet by 2030.

Table 2.4: Non-Residential Development, Existing and Projected

	Existing ¹	2030	Change
Jobs	11,765	13,394	1,629 (14%)
Business and Industrial	1,486	3,250	1,764 (119%)
Square Footage	3,921,488	6,720,738	2,799,250 (71%)
Business and Industrial	951,488	2,655,738	1,704,250 (179%)
Commercial and Retail	2,970,000	4,065,000	1,095,000 (37%)

1: Existing jobs data are from 2006, while square footage data are from 2008. Both are the most recent data available at the time of publication of this plan.

Source: ERM, DLLR, MDP, and Garrett County Economic Development.

⁷ A memorandum describing the capacity analysis is included in the Appendix to this Comprehensive Plan (MDP Capacity Development Analysis_final 11-1-06).

3 Land Use

This chapter describes the proposed land use plan for Garrett County. It lists land use goals and objectives, discusses land use and development trends since the 1995 Comprehensive Plan, and provides detailed information about existing and proposed land use in the County's major watersheds.¹ The Deep Creek Watershed is covered briefly in this Chapter, and is covered in greater detail in Chapter 4.

3.1 Goals and objectives

The County's land use goals and objectives are:

1. Conserve forest resource land.
2. Conserve agricultural resource land.
3. Encourage growth in designated growth areas, including the County's incorporated towns, and especially where development can be served by public water and sewerage systems.
4. Provide land in appropriate locations for growth and expansion of economic development opportunities.
5. Continue to encourage growth and development around Deep Creek Lake and its associated resort activities.
6. Provide land in appropriate locations and densities for a variety of housing types and choices.
7. Provide land in appropriate locations to allow for the development of affordable housing.
8. Improve the layout and design of residential subdivisions to conserve resource land and rural character.
9. Discourage strip commercial development.
10. Encourage high quality building and site design.

3.2 Land Use and Development Trends

This section discusses land use and development trends as background to the proposed land use plan.

3.2.1 Existing Land Use

Existing land use as of 2005 is shown on Map 3.1. Garrett County is a natural resource-rich County, with approximately 90 percent of the County comprised of resource lands—primarily forest and agricultural land. Less than 10 percent of the County is comprised of development lands (Table 3.1 and Map 3.1). Since 1973, approximately 23,100 acres of forest and agricultural have been converted to other uses, primarily low density residential development.

¹ Including the Bear Creek and Southern Youghiogheny "watersheds," as defined in Chapter 2 of this Plan.

Map 3.1: Existing Land Use

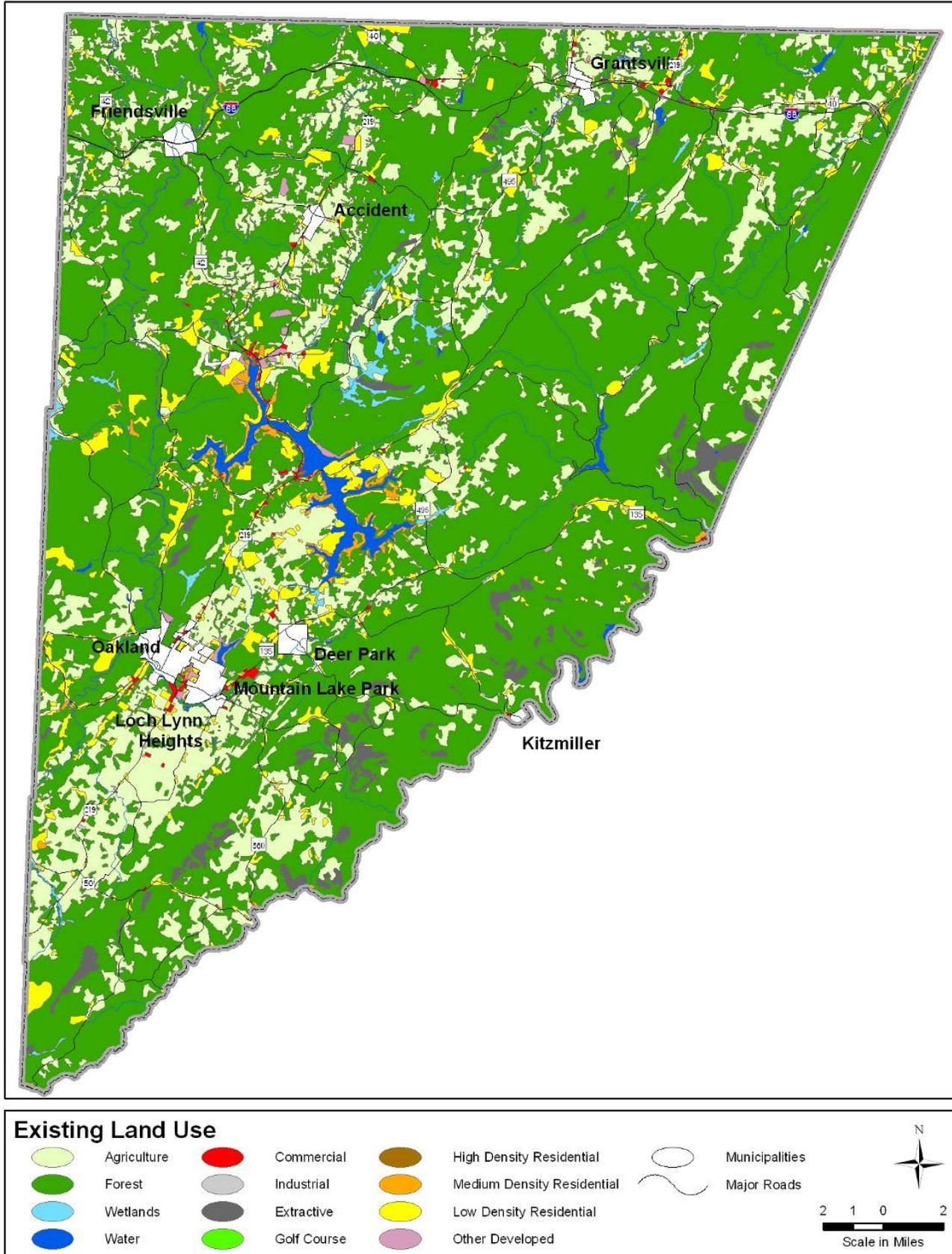


Table 3.1: Garrett County Land Use/Land Cover

Land Use	1973		2005		Change, 1973-2005 (Acres)
	Acres	Percent	Acres	Percent	
<i>Development Lands</i>					
Low Density Residential	3,702	1%	22,024	5%	18,322
Medium/High Density Residential	1,368	0.3%	3,318	1%	1,950
Commercial/Industrial	941	0.2%	1,808	0%	868
Other Categories ¹	7,960	1.9%	9,372	2%	1,412
<i>Resource Lands</i>					
Agriculture	102,865	25%	89,142	21%	-13,724
Forest	295,116	70%	285,508	68%	-9,608
Wetlands ²	2,043	0.5%	2,663	1%	620
Water	5,635	1.3%	5,795	1%	161
Total	419,630	100%	419,630	100%	

Notes:

1: Institutional, Extractive, Open Urban, Beaches, Bare rock, Bare Ground.

2: MDP's Land Use/Land Cover dataset shows generalized land use types and areas, based on satellite imagery. The Maryland Department of the Environment estimates that there are approximately 5,088 acres of mapped, vegetated wetlands (excluding open water) in Garrett County.

Sources: Maryland Dept. of Planning 2002 Land Use Land Cover dataset; Garrett County (Garrett County made minor adjustments to the 2002 dataset to update it to 2005). 2007 LU/LC data were not available for this plan.

Protected Lands

Approximately 121,000 acres, 29 percent of the County's land area, is regulated or protected by virtue of federal, state, or County ownership (primarily state forests and parks); utilities; wetlands; tax exempt status; or the presence of protective easements established through agricultural or other preservation programs.² The Bear Creek watershed in the northern part of Garrett County is a state-designated Rural Legacy Area, an area of focused land conservation efforts. For more detail on protected lands see the County's Land Preservation Parks and Recreation Plan in the appendix to this Comprehensive Plan.

Priority Funding Areas

Priority Funding Areas (PFAs) are existing communities and places where the County wants to direct state investment—in the form of loans and grants for highways, sewer and water infrastructure, and economic development—to support future growth. PFAs (municipalities, rural villages, and county-designated areas) were established in response to the 1997 Priority Funding Areas Act. Map 3.2 shows PFAs in Garrett County. Enterprise Zones are areas where tax incentives are offered for job creation and the establishment of new businesses. Designated Neighborhoods, as identified by local jurisdictions, are mixed-used areas in need of social and/or physical revitalization, and where special state funding and programs are available for such improvements.

3.2.2 Growth and Development Since 1990

In 1990, Garrett County had a year-round population of 28,138, of which 6,265 (22%) lived in the eight incorporated towns (Table 3.2). There were a total of 13,805 total housing units in the County in 1990 (including the incorporated towns). Between 1990 and 2005, the County's population increased by approximately 1,800 persons or six percent. This was a modest level of growth compared to the 17 percent population increase in the entire state during the same period. From 1990 to 2005 the number of housing units in Garrett County increased by approximately 4,500, or 33 percent. This larger housing unit growth rate (compared to the population increase) reflects the continued popularity and development of vacation homes in the County.

² Maryland Department of Planning, analysis from MDPropertyView data.

Map 3.2: Priority Funding Areas

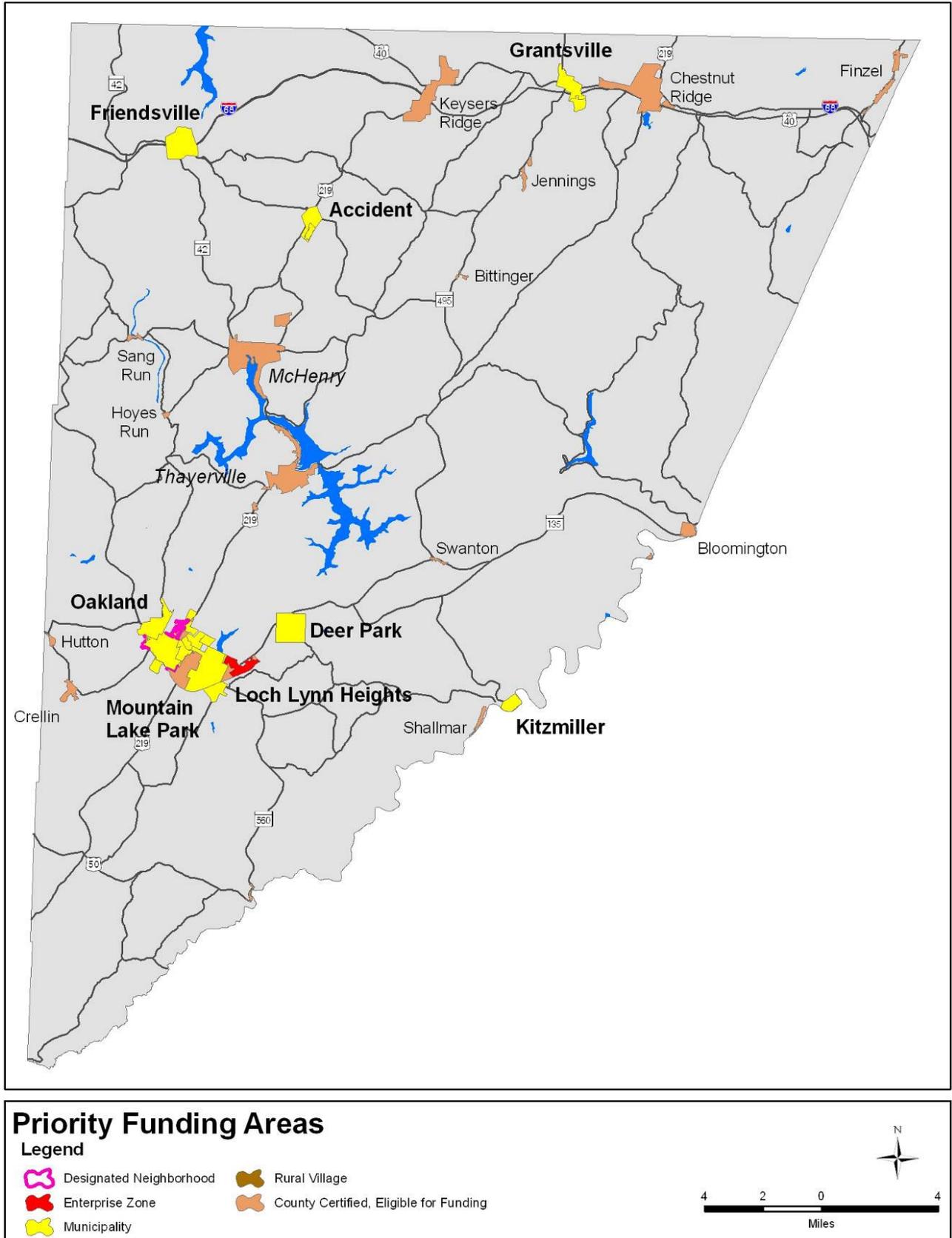


Table 3.2: Population and Housing Units, 1990-2005

	1990	2005	Change 1990-2005	
			Number	Percent
Population	28,138	29,950	1,812	6%
Incorporated Towns	6,265	6,640	375	6%
Housing Units (DAT)	13,805	18,326	4,521	33%

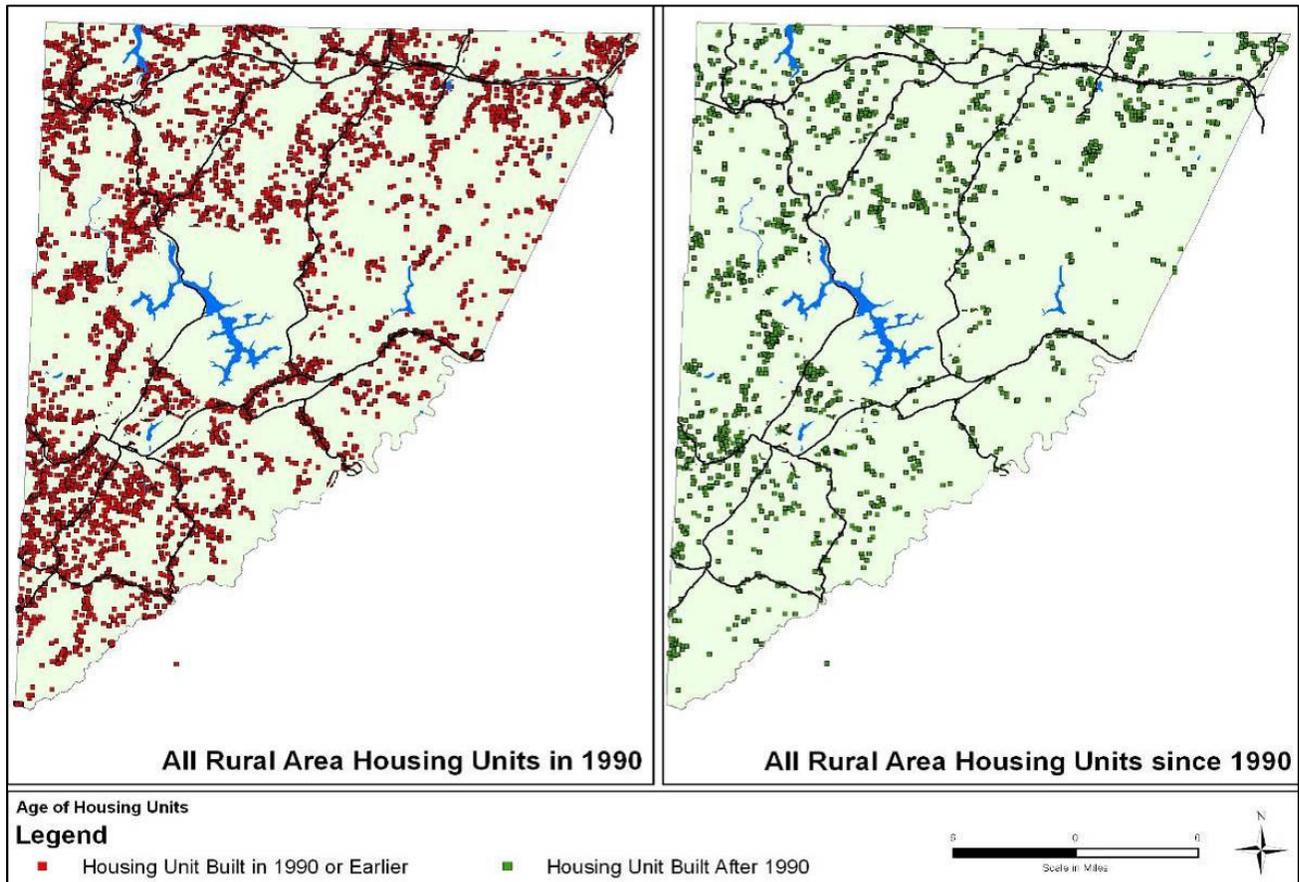
Sources: Population from the US Census; housing units are from MD Department of Assessments and Taxation (DAT)

Please note that the number of housing units for 1990 differs slightly (by around 300) from the number of housing units reported in the Census. Since the census is conducted only every 10 years, DAT's numbers are used to allow the housing data to be updated to 2005 for use in the Comprehensive Plan. 2005 is the Plan's baseline year.

Housing Units

Of the 4,500 new units built between 1990 and 2005, approximately 13 percent were built in the towns, 42 percent in the Deep Creek Lake Influence Area, and 45 percent in the rest of the County³. Approximately 1,800 units were built in the rural land use categories (AR, R, and RR). Map 3.3 shows the wide geographical distribution of these 1,800 units.

Map 3.3: Rural Area Housing Units



³ A more detailed breakdown is provided in Table 1 of Growth Projections Packet 020107 in the Appendices to this Comprehensive Plan.

Subdivision

Garrett County adopted subdivision regulations for the first time in 1997. Between 1997 and 2006 a total of approximately 16,000 acres were subdivided for residential development (Table 3.3).

Table 3.3: Subdivision Summary, 1997-2006

Subdivision Type	Deep Creek Watershed		Rest of County		Total	
	Acres	Lots	Acres	Lots	Acres	Lots
Major Subdivisions	5,021	4,320	1,408	325	6,429	4,645
Minor Subdivisions	1,117	246	4,767	661	5,884	907
Exempt Subdivisions	112	3	3,569	110	3,681	113
Total	6,250	4,569	9,743	1,096	15,993	5,665

Note that the "Rest of County" category includes some non-rural land use categories. Exempt subdivisions are subdivisions that due to their large size (over 25 acres) or prior health department approvals are exempt from the subdivision ordinance. This table only includes exempt subdivisions intended to create residential lots.

A little over 6,200 acres, or 40 percent of all subdivided land was in the Deep Creek watershed, while the remaining 60 percent was in the rest of the County—almost entirely in the County’s rural areas. A little over 80 percent of the lots created in the County between 1997 and 2006 were in the Deep Creek Watershed. During the same period 1,010 new lots were created on over 9,100 acres of rural land, at an average lot size of 9.1 acres (Table 3.4), accounting for approximately 57 percent of all land subdivided during that period.

Table 3.4: Subdivision Activity in Rural Areas, 1997-2006

Subdivision Type	Land Use Classification						Total, Rural Areas	
	Agricultural Resource		Rural		Rural Resource		Acres	Lots
	Acres	Lots	Acres	Lots	Acres	Lots		
Major Subdivisions	478	66	913	191			1,391	257
Minor Subdivisions	1,658	237	2,868	386	241	38	4,767	661
Exempt Subdivisions	746	22	2,140	67	102	3	2,989	92
Total	2,882	325	5,921	644	344	41	9,147	1,010
Average acres per lot	8.9		9.2		8.4		9.1	

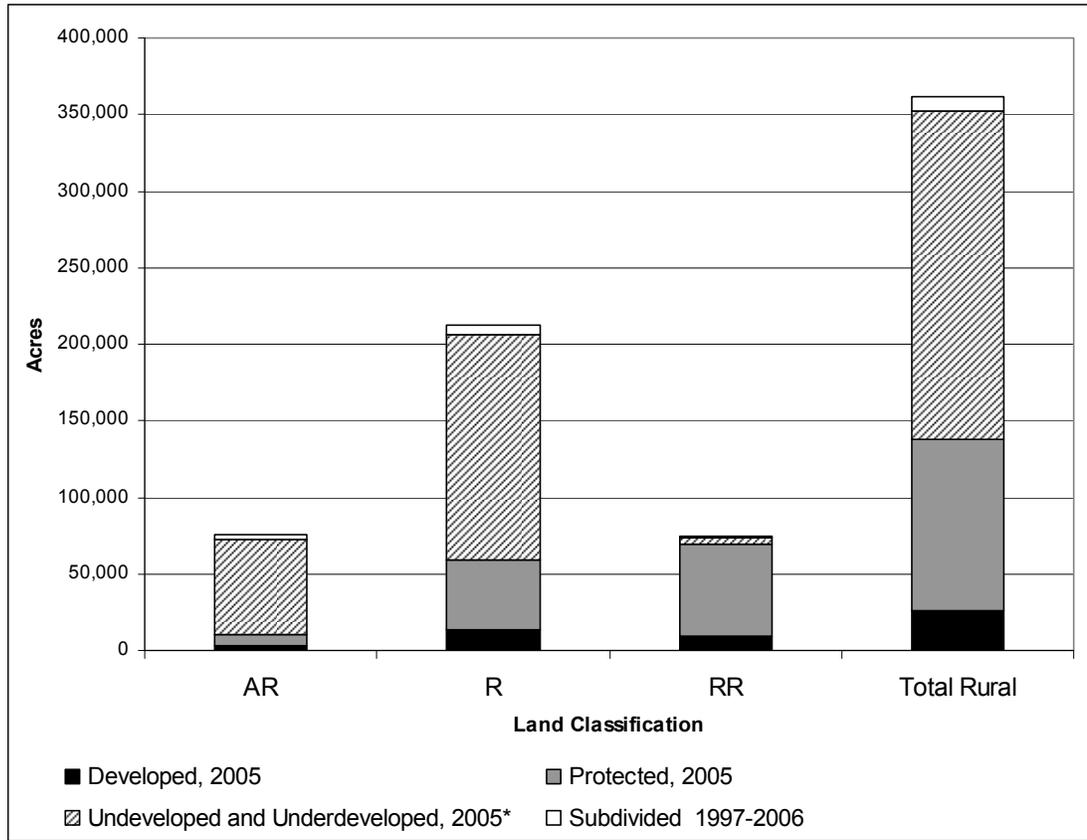
Note: Land use classifications are described in more detail in Section 3.4.

Figure 3.1 shows the amount of rural land that was subdivided between 1997 and 2006 in relation to developed, protected, and undeveloped or underdeveloped rural land as of 2005. Garrett County has a large rural land base in relation to developed land. However, the amount of subdivision and housing development in the rural portions of the County (9,147 acres in 9 years), as well as the way that this development fragments contiguous resource areas is of concern for its impact on forest and agricultural resources, rural character, and water resources.⁴

With regard to water resources, subdivision in rural areas has two primary impacts: increased numbers of septic systems and increased impervious surface. Septic systems are a major source of non-point source water pollution in the County, while increases in impervious surfaces can increase the amount of pollutants reaching streams and rivers, as well as the impact of nonpoint source flows (see Chapter 5, the Water Resources Element).

⁴ A PowerPoint presentation illustrating these concerns is included in the Appendix (Garrett Rural issues Presentation 6-13-07).

Figure 3.1: Subdivided Land, 1997 to 2006, In Relation to Other Rural Land



* "Undeveloped and Underdeveloped" indicates land that could be subdivided in the future.

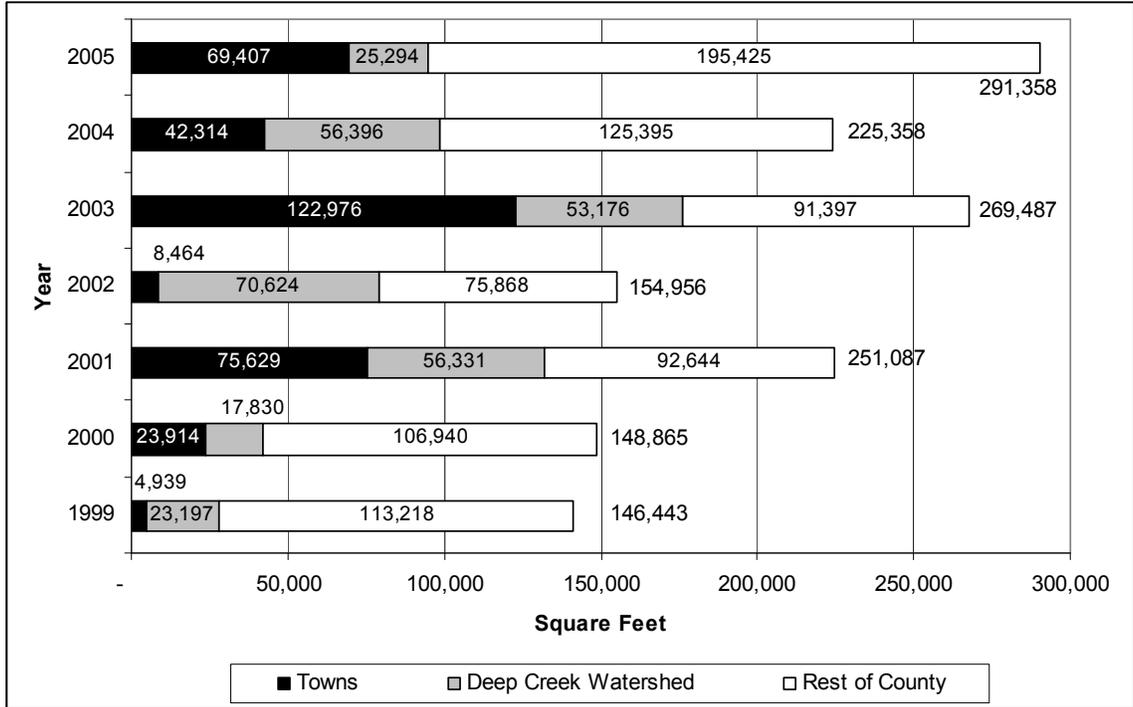
Commercial and employment development

Between 1999 and 2005 the County issued permits for approximately 1.45 million square feet of commercial space, valued at approximately \$85.7 million (Table 3.5 and Figure 3.2). Commercial development in the Deep Creek watershed accounted for approximately 20 percent of this new space and 27 percent of total declared value, while development in the incorporated towns (including the Northern Garrett Industrial Park in Grantsville and the Central Garrett Industrial Park in Accident) accounted for approximately 24 percent of the new space and 23 percent of value. Commercial development in the rest of the county accounted for the remaining 55 percent of square footage and 50% of value, including the Southern Garrett Business and Technology Park, the Keyzers Ridge Industrial Park, the Wisp Resort (particularly the Adventure Sports Center), and scattered development in the rural areas.

Table 3.5: Commercial and Employment Development Summary, 1999-2005

	Towns		Deep Creek Watershed		Rest of County		Total
	Amount	Percent	Amount	Percent	Amount	Percent	
Total Square Feet	347,643	24%	302,848	21%	800,887	55%	1,451,378
Total Declared Value (\$M)	\$23.5	27%	\$20.0	23%	\$42.10	50%	\$85.7

Figure 3.2: Commercial and Employment Development, 1999-2005



3.3 Projected Growth and Land Use Needs

As discussed in Chapter 2, Garrett County (including the Towns) is projected to experience steady population growth through 2030, increasing the year-round population from 29,950 in 2005 to 33,400 in 2030 (an increase of approximately 3,400 persons). The number of housing units is projected to increase by approximately 6,750, including new vacation units. Business, industrial, commercial, and retail development is projected to increase by approximately 2.8 million square feet.

Given the above projected demands, and the land use and development trends since the 1995 Comprehensive Plan, the proposed land use plan is intended to achieve the following:

- Conserve agricultural and forest land by increasing the amount of land in the AR and RR categories.
- Protect state owned lands from encroachment by incompatible development.
- Expand opportunities for economic development, such as near Garrett County Airport and east of Mountain Lake Park.
- Designate land in the Deep Creek Lake Influence Area in a way that directs future development (particularly residential development) to areas served by existing and planned public water and sewer.
- Recognize future growth areas around the incorporated towns.
- Increase opportunities for housing development around the towns, including workforce housing, especially near Oakland, Mountain Lake Park, and Grantsville.

3.3.1 Proposed Land Use

Map 3.4 is the proposed countywide land use plan. The map divides the County into the following land use categories:

Rural Areas	Growth Areas	
• Rural Resource ²	• Suburban Residential ¹	• Commercial Resort ²
• Agricultural Resource ²	• Town Residential ¹	• Employment Center ¹
• Rural ¹	• Town Center ¹	• Incorporated Town
• Lake Residential 1 ³	• General Commercial ¹	• Future Growth Area (Towns)
• Lake Residential 2 ³		

1: Category originated in 1974 Comprehensive Plan 2: Category originated in 1995 Comprehensive Plan
 3: Category originated in 2008 Comprehensive Plan.

Most of these land use categories were established in the 1974 Comprehensive Plan (the County’s first plan). The 1995 Comprehensive Plan created the Rural Resource and Agricultural Resource categories (from the 1974 Plan’s Rural Development and Open Space categories) and added the Commercial Resort category. These land use categories have generally served the County well, and, except for the Rural Development category (see Chapter 4, the Deep Creek Lake Master Plan), are retained in the 2008 Plan update, together with changes in their extent and arrangement on the Land Use Plan Map.

This 2008 Comprehensive Plan also recognizes 11 Rural Villages, which were added to the 1995 Comprehensive Plan by amendment in 1998.

3.3.2 The Land Use Plan Map

The Land Use Plan Map has three primary purposes:

- In the Deep Creek Watershed, the land use map is the basis for a more refined classification of land into districts for zoning purposes that regulate the *use* of land (that is, what uses can occur where and under what conditions), as well as the subdivision and development of land. This more refined classification appears on the map that is adopted as part of the Deep Creek Lake Zoning Ordinance.

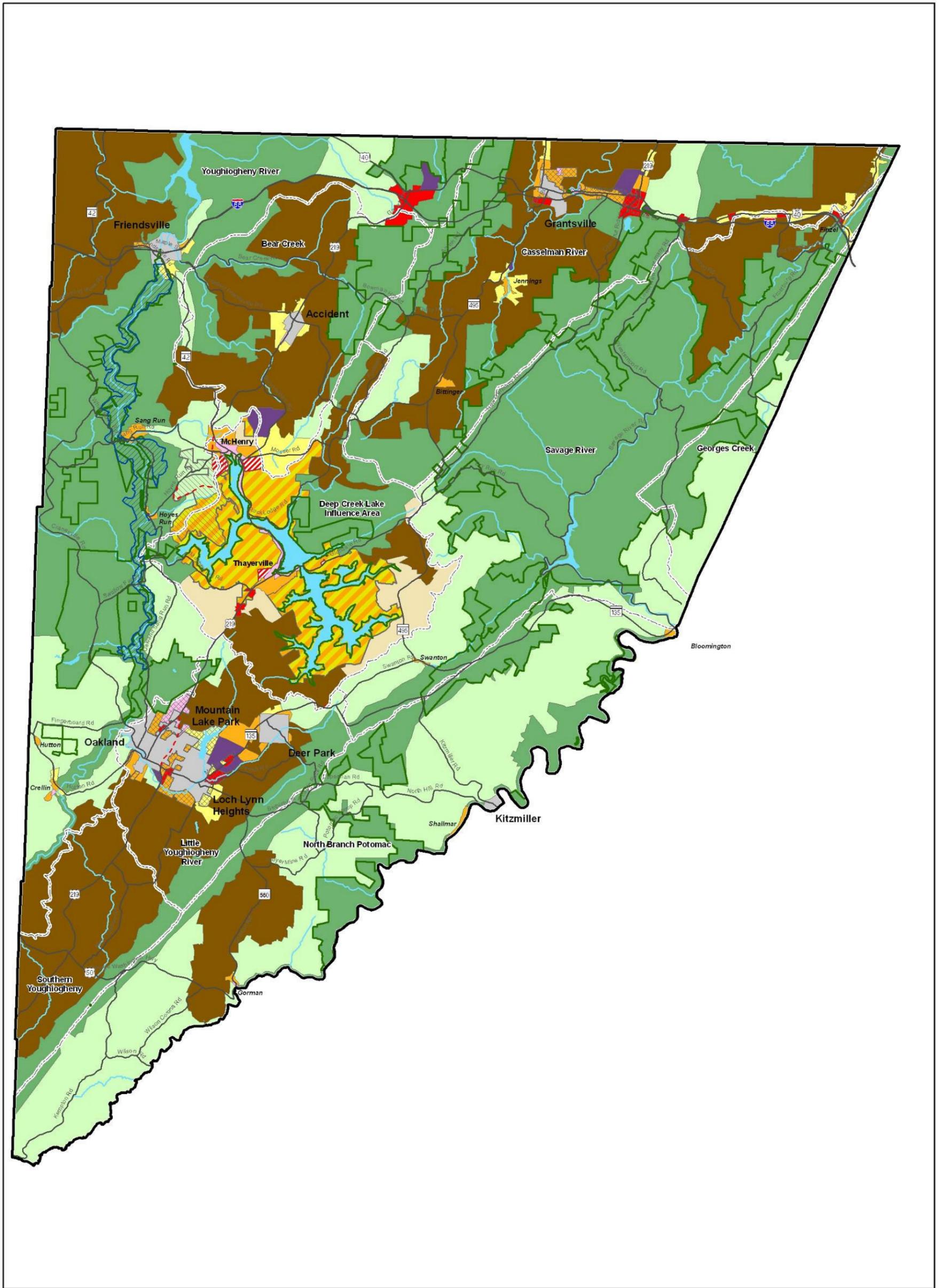
Chapter 4 discusses land use in the Deep Creek Watershed and the Deep Creek Lake Influence Area in greater detail.

- Outside the Deep Creek Watershed, the County does not have zoning. In these areas, the Land Use Plan Map is used as the basis for a Land Classification Map that regulates and controls the subdivision and development of land (but not the *use* of land). The Land Classification Map is adopted as part of the Garrett County Subdivision Ordinance.
- The Land Use Plan Map also serves as a guide to decision makers regarding community facilities—primarily water and sewer—as well as schools, economic development, and transportation.

3.3.3 Effect of the Land Use Plan Map on the Towns

The Land Use Plan Map does not apply to the County’s eight incorporated towns. The towns have their own planning authority and adopt their own comprehensive plans and land use regulations. The County coordinated the development of the Land Use Plan Map with the towns by sending them the preliminary draft land use map in the summer of 2007 for their review and comment.

Map 3.4: Proposed Land Use Plan Map



Proposed Land Use Plan

Legend

- | | | | | |
|----------------------|-----------------------|--------------------|--------------------|----------------------------------|
| Town Center | Commercial Resort | Rural | Future Growth Area | Youghiogheny Wild River Corridor |
| Town Residential | Employment Center | Lake Residential 1 | Watersheds | Wisp Resort |
| Suburban Residential | Rural Resource | Lake Residential 2 | Water | Major Roads |
| General Commercial | Agricultural Resource | Town | State Owned Land | Proposed Roads |



3.3.4 Changes from 1995 Land Use Plan Map

The 2008 Land Use Plan map makes the following changes to the 1995 Comprehensive Land Use Plan map:

- Significantly expands the Rural Resource areas and the Agricultural Resource areas, primarily by reclassifying large areas of Remaining Rural areas to either Rural Resource areas or Agricultural Resource.
- Changes the Remaining Rural classification to Rural.
- Expands the growth area around Friendsville, Grantsville, Loch Lynn Heights, Mountain Lake Park, and Oakland.
- Adjusts land classifications around Oakland and Mountain Lake Park.
- Major changes to the land classifications in the Deep Creek Watershed
- Deletes the sensitive areas information and the Special Water Resource land use category. Relevant information is now presented in Chapter 7, Sensitive Areas.
- Deletes recreation and open space information. This information is presented in the Land Preservation, Parks and Recreation Plan.
- Does not show land classifications within the towns.

3.4 Land Use Categories

As noted in Section 3.3 the County is divided into 12 categories. The relative sizes of each category are shown in Table 3.6.

Table 3.6: Proposed Land Use

Land Use Category	Existing (2005) ²		Proposed	
	Acres	Percent	Acres	Percent
Rural Resource (RR)	66,489	16%	181,761	43%
Agricultural Resource (AR)	73,056	17%	106,074	25%
Lake Residential 1 (LR1) ¹	39,663	10%	17,495	4%
Lake Residential 2 (LR2) ¹			5,719	1%
Rural Development (RD)	361	<1%	0	0%
Rural (R)	221,771	53%	88,423	21%
Suburban Residential (SR)	6,626	2%	4,748	1%
Town Residential (TR)	2,412	<1%	4,842	1%
Town Center (TC)	853	<1%	1,157	<1%
General Commercial (GC)	2,337	<1%	1,926	<1%
Commercial Resort (CR1/CR2)	475	<1%	483	<1%
Employment Center (EC)	740	<1%	1,870	<1%
Towns	4,847	<1%	5,131	1%
Total	419,630	100%	419,630	100%
Future Growth Areas ³	0	0 %	3,057	1%

1: The existing LR category was split into LR1 and LR2 in this plan.
 2: From the Subdivision Ordinance Land Classification Map;
 3: Future Growth Areas overlay other land classifications.

3.4.1 Rural Resource

Rural Resource (RR) areas comprise approximately 43 percent of the County. Rural Resource areas are comprised primarily of the County's large, contiguous timber and forest lands.

Garrett County's current Land Classification Map (which implemented the 1995 Comprehensive Plan) classified portions of the following areas as RR: Savage River State Forest; Potomac River State Forest; land around Jennings Randolph Lake; and land along the Youghiogheny River south of Mount Nebo. This 2008 Comprehensive Plan expands the RR category to include large contiguous public and private timber and forest lands categorized as Remaining Rural Area in the 1995 Comprehensive Plan. The RR category also includes some small scattered areas of agricultural land, low density rural housing, and limited commercial development.

The County's intent is for these areas to remain rural and to conserve these areas' natural resources, primarily forest and timber resources, for future generations. New residential and other forms of development are permitted, provided rural resources are protected (see "New Residential Development in Rural Resource and Agricultural Resource Areas" in Section 3.4.2). The purpose for expanding the area categorized as RR in this Plan is to provide greater protection from rural development for these resources. The County will continue to support the permanent preservation of these areas for their natural resources through purchase or easement acquisition by government agencies and private organizations.

The County's water and sewer policies for land designated RR are as follows:

- Shared septic systems that support cluster development are permitted.⁵
- No extensions of public water or sewer services will be permitted, except to correct health or safety problems in existing developed areas.
- No private wastewater treatment plants (including package treatment plants) will be permitted.⁶

The state owns and maintains over 85,500 acres of park, forest, and open space in Garrett County. These state-owned lands are an asset to the County, contributing to its rural character and supporting resource-based industries. Private property abuts these lands and, in some locations, such as within Savage River State Forest, is surrounded by state land. Both the state lands and nearby private properties are worthy of protection from incompatible adjoining development. Accordingly:

- This Comprehensive Plan designates a 500-foot buffer from state-owned land designated RR where it adjoins land in the Rural (R) category⁷. This buffer, which is on the adjoining R land, is not shown on the proposed Land Use Plan Map. The actual line is implemented through the subdivision ordinance and is surveyed at the time a subdivision is proposed.
- This Plan supports consideration of private property interests when potentially incompatible activities such as snowmobiling and all-terrain vehicle routes are sited or permitted on state lands.

⁵ A shared septic system is a form of community sewerage system, which is defined under the Code of Maryland Regulations (COMAR) as, "any system, whether publicly or privately owned, serving two or more individual lots for the collection and disposal of sewage combined with industrial waste, including various devices for the treatment of that sewage" (COMAR 26.04.02.01).

⁶ Package treatment plants are pre-manufactured wastewater treatment plants designed to serve small communities or individual properties, typically with a treatment capacity of 2,000 – 500,000 gallons per day (US EPA, 2000. http://www.epa.gov/owm/mtb/package_plant.pdf)

⁷ A similar buffer was identified in the 1995 Comprehensive Plan.

3.4.2 *Agricultural Resource*

Agricultural Resource (AR) areas comprise approximately 25 percent of the County. AR areas are large contiguous areas predominantly devoted to agricultural use. There are in six large blocks of AR in the County:

- In the northwest corner of the County, west of Friendsville;
- Large parts of the Bear Creek watershed, surrounding the Accident area;
- Large parts of the Casselman River watershed, surrounding, and south of the Grantsville area, stretching into part of the Cherry Creek sub-watershed in the Deep Creek Lake Influence Area (see Chapter 4);
- In the northeast part of the County near Finzel;
- Most of the Southern Youghiogheny watershed, and parts of the Little Youghiogheny River watershed, surrounding the Oakland, Mountain Lake Park, and Deer Park area, and extending into the southwestern portion of the Deep Creek Lake Influence Area; and
- North and west of Gorman.

One additional smaller block of AR land is in the northeastern portion of the Deep Creek Lake Influence Area.

This 2008 Comprehensive Plan expands the AR category by more than 30,000 acres to include some agricultural lands categorized as Remaining Rural Area in the 1995 Comprehensive Plan. These areas were identified based on refined aerial photography and mapping, especially north of Friendsville, west of Accident, and east of Jennings and Bitteringer⁸. The AR category also includes some scattered areas of forest land, low density rural housing, and commercial development.

The County's intent is for these areas to remain rural, and to conserve these areas' natural resources—primarily their agricultural resources—for future generations. New residential and other forms of development are permitted, provided rural resources are protected (see "New Residential Development in Rural Resource and Agricultural Resource Areas"). The purpose for expanding the area categorized as AR in this Plan is to provide greater protection from rural development for these resources. The County will continue to support the permanent preservation of these areas for their natural resources through purchase of development rights or easement acquisition by government agencies and private organizations. As part of this support, the County will consider using its funds to supplement state funding through the Maryland Agricultural Land Preservation Foundation (MALPF), which is used to purchase development rights on agricultural lands. For more information about agricultural land preservation, see Chapter 4 of the Land Preservation Parks and Recreation Plan.

The County's water and sewer policies for land designated AR are as follows:

- Shared septic systems that support cluster development are permitted.
- No extensions of public water or sewer services will be permitted, except to correct health or safety problems in existing developed areas.
- No private wastewater treatment plants (including package treatment plants) will be permitted.

⁸ The basis for this mapping was a public information meeting and workshop on rural planning and policy issues held on March 27, 2007 in Oakland. The handouts and PowerPoint presentation are provided in the Appendix to this Comprehensive Plan (Rural meeting 3-27-07 agenda & hand outs). Also relevant are the results of two questionnaires conducted at meetings sponsored by the Garrett Preston Rural Development Coalition in January 2007 and at the Land Use Planning meeting on March 27, 2007 (see Appendix, Rural Issues Questionnaires Results).

New Residential Development in RR and AR Areas

New residential development will be permitted in RR and the AR areas at the existing maximum density of one dwelling unit per three acres, but will be subject to the following strengthened development standards designed to protect rural resources:

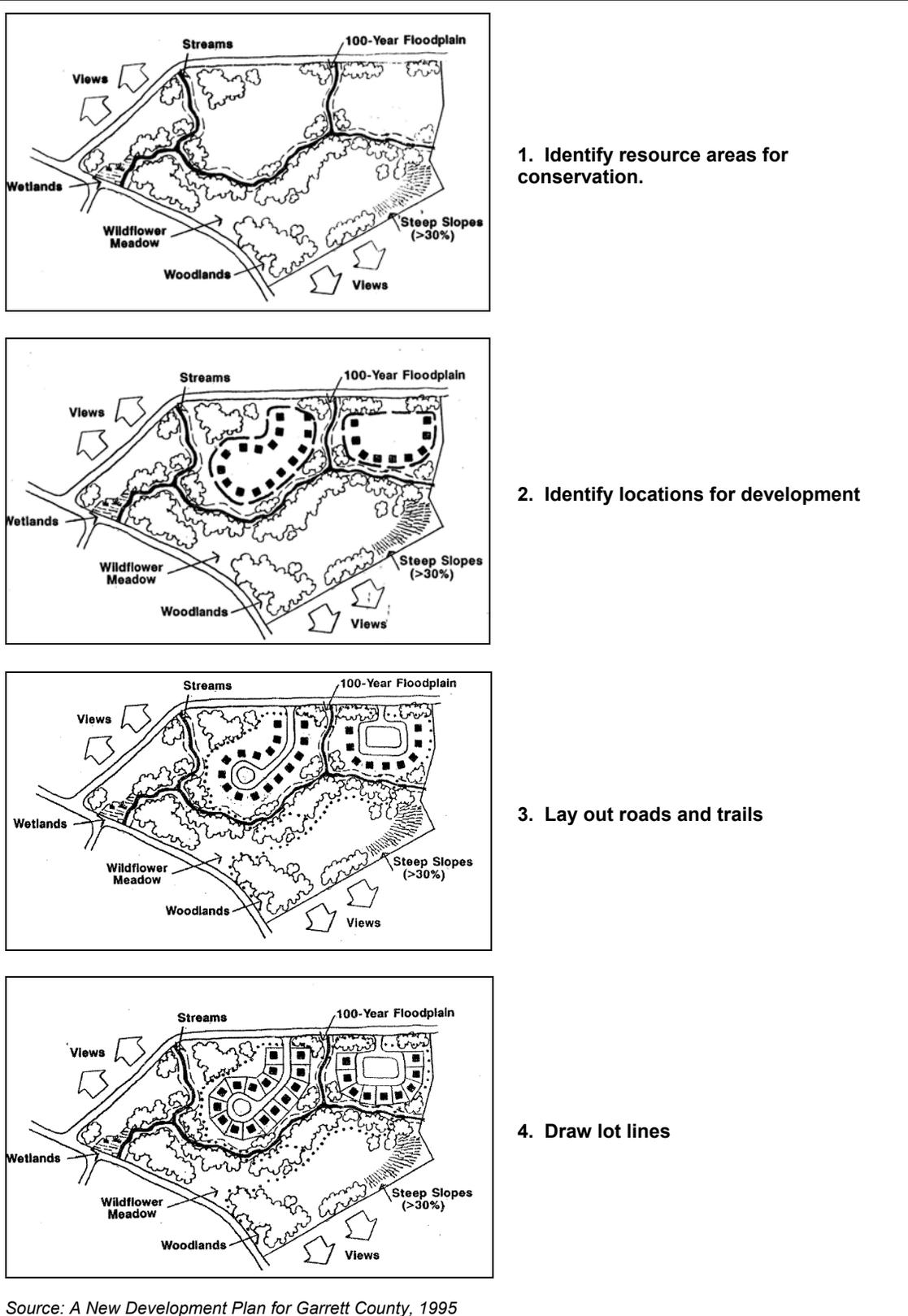
- Minimum protection share of 80 percent of the tract to be subdivided, unless special design or other measures are used to mitigate impacts to rural resources (see next bullet). Within the 20 percent developable area, encourage a maximum residential lot size of 1.5 acres, to maximize the amount of land for forest and agricultural activities.⁹
- Ability, upon application, for the Planning Commission to approve a minimum protection share of 66 percent of the tract to be subdivided. To make such an approval the Planning Commission would have to make affirmative findings that the development will meet the following criteria:
 - The subdivision meets the intent of the land use category.
 - Existing and potential contiguous forest and agricultural resources are conserved to the extent possible.
 - The additional development area (between 80 and 66 percent) does not impact important elements of rural character such as scenic views, and the quality and extent of open space.
 - The subdivision will fully mitigate for any adverse impacts on forest and agricultural resources and rural character.
- Design emphasis on conserving resources versus home siting, specifically:
 - Designing the subdivision in a way that gives highest priority to the protection of contiguous resources, rather than the location of potential home sites. Resources include farm fields, forests, scenic views, environmentally sensitive areas, and cultural features such as historic sites (see Figure 3.3).
 - Cluster the home sites on a maximum of 20 percent of the tract (33 percent with Planning Commission approval, as described above). Use shared septic systems if necessary.
- Preserving the value of the developable portion of AR and RR properties is a prime concern of AR and RR landowners, stakeholders such as the Farm Bureau and the Board of Realtors®, and the County. The County believes that the owner of a developable (or “parent”) tract of AR or RR land who wishes to sell land for development should receive appropriate compensation for their development rights, even if the developer wishes to create fewer lots than permitted by density limits.

In order to address this concern, the County should require the developer to prepare a Sketch Plat for development on AR and RR land (the Subdivision Ordinance “strongly encourages,” but does not require, Sketch Plats). The developer may prepare multiple Sketch Plats, but must, at minimum prepare one layout showing the maximum amount of development possible on the parent tract.

Regulations applying the above standards would be added to the County’s Subdivision Ordinance and to the Deep Creek Lake Watershed Zoning Ordinance. These regulations would address definitions of necessary terms, such as “rural character” and “scenic views,” and details regarding matters such as subdivision solely for agricultural purposes, minimum parcel size (if any), specific watershed protection provisions (likely to be similar to those proposed for the Deep Creek Lake Influence Area in Section 4.8.2), and other specific requirements.

⁹ The Garrett County Health Department estimates that 1.5 acres would be adequate to accommodate septic systems in areas where soils are not highly suitable for on-site wastewater disposal.

Figure 3.3: Steps in Site Analysis for Conservation Subdivisions



3.4.3 *Rural*

Rural (R) areas comprise approximately 21 percent of the County. The County's intent for Rural areas is to accommodate a wide range and variety of rural residential and non-residential uses at low densities, while maintaining open space and rural character. Residential densities in R areas will range from low to very low—i.e., from one dwelling unit per acre to one unit per 25 or more acres. The R category also includes some small scattered areas of agricultural land, forest land, and commercial development. There are seven large blocks of R areas in the County:

- East of Chestnut Ridge
- Route 40 corridor west of Keyzers Ridge
- North and south of Friendsville
- A portion of the Cherry Creek sub-watershed in the Deep Creek Lake Influence Area, formerly designated RD
- Areas on the periphery of the Deep Creek watershed
- West of Oakland
- Much of the North Branch Potomac River watershed, east of Backbone Mountain

While reduced in size compared to their extent in the 1995 Comprehensive Plan, Rural areas are extensive. Based on the rate of subdivision activity between 1997 and 2006 (see Table 3.4 and Figure 3.1), the amount of land in the R category provides an approximately 80 year supply of land for its intended purposes.

New residential development in R areas will essentially be permitted subject to current regulations. Unlike the changes proposed for the AR and RR categories, there would be no maximum lot size, no minimum protection share of the tract to be subdivided, and no new design emphases regarding home siting in the R areas. The same water and sewer policies established for the RR and AR areas would apply:

- Shared septic systems that support cluster development are permitted.
- No extensions of public water or sewer services will be permitted, except to correct health or safety problems in existing developed areas.
- No private wastewater treatment plants (including package treatment plants) will be permitted.

3.4.4 *Lake Residential 1*

This Plan splits the LR land use into two new classifications: Lake Residential 1 (LR1) and Lake Residential (LR2). Chapter 4 provides a more detailed discussion of the proposed future land uses in the Deep Creek Lake Influence Area.

LR1 covers approximately 17,400 acres of land, or 4 percent of the County. It includes land currently designated LR that falls within existing or future public sewer service boundary. The land use types (agriculture, recreation, and low-density residential development) and maximum residential densities (one dwelling unit per acre) envisioned for LR1 are unchanged from those in the existing LR land classification.

3.4.5 *Lake Residential 2*

LR2 covers approximately 5,800 acres of land, or 1 percent of the County. It includes land currently designated LR that falls outside of existing or future public sewer service boundaries. The land use types envisioned for LR2 are unchanged from those in the existing

LR land classification. However, the maximum envisioned residential density for LR2 areas is one dwelling unit per two acres.

3.4.6 Suburban Residential

Suburban Residential (SR) areas are intended to accommodate medium density residential development, with lot sizes of at least 20,000 square feet for properties with public water and sewer service (larger lot sizes if served by on-site wells and wastewater systems). Approximately 4,748 acres are in the SR category, equivalent to slightly more than one percent of the County. SR areas are located in several areas of the County, outside many of the incorporated towns and some of the rural villages. No areas within the Deep Creek Watershed are in the SR category, although the area east of Garrett College, north and south of Mosser Road (in the Bear Creek watershed) is designated SR.

3.4.7 Town Residential

Town Residential (TR) areas provide for higher density, more compact development near incorporated towns, villages (such as Bittinger and Swanton), and other places such as McHenry, and Thayerville. Development densities in TR areas are up to eight multi-family dwelling units per acre and approximately four to five single-family dwelling units per acre in areas served by public water and sewer. Minimum lot sizes are 8,000 to 10,000 square feet, or larger if served by on-site wells and wastewater systems. TR areas can accommodate a mix of housing types, including single family detached, townhouses, and apartments. Approximately 4,815 acres are in the TR category, equivalent to slightly more than one percent of the County.

3.4.8 Town Center

Town Center (TC) areas also provide for higher density, more compact development. The largest TC areas are in the Deep Creek watershed along US 219, especially in McHenry and Thayerville. Other TC areas are near some of the incorporated towns and in rural villages. TC areas are intended to be served by both public water and sewer. Development densities in TC areas are typically five to six dwelling units per acre, but can go up to nine units per acre. TC areas, like TR areas, can accommodate a mix of housing types including single family detached, townhouses, and apartments. TC areas, unlike TR areas, are mixed use areas where a variety of retail, service, and commercial uses can be intermixed with residential uses.

3.4.9 General Commercial

General Commercial (GC) areas provide for retail, service, commercial, and some light industrial uses including large businesses such as warehouses, service stations, and lumberyards. Because such uses are frequently highway-oriented and can generate vehicle traffic, noise, and glare, residential uses are discouraged in GC areas. There are approximately 14 GC areas in the County, including four areas near Oakland and Mountain Lake Park, two near Thayerville, and several near the interchanges along I-68 and on US 40 (alt).

The County's policy is to encourage concentrated commercial centers, and to discourage "strip commercial" development (see Table 3.7).

Table 3.7: Strip Commercial vs. Concentrated Commercial Development

Consideration	Strip Commercial	Concentrated Centers
Economic Land Use	Fosters linear, uneconomic use of land. Large individual sites require separate functions such as parking and storm water management.	Concentrated commercial development promotes the economic use of land including sharing facilities such as parking and storm water management.
Safety and Convenience	Requires consumers to use their cars to move from one destination to another.	Consumers can use an internal walkway system designed for pedestrians.
Effect on Real Estate	Can have a depressing economic effect on adjacent residential areas. Adjacent vacant areas tend to be held for speculation. This hinders immediate development and vacant lots proliferate.	Can be effectively buffered with landscaping from surrounding uses. This can make the area more attractive for residential purposes.
Customer Drawing Power	Businesses in strip development tend to draw customers on their own merit rather than also benefiting from the potential buying power associated with customers from adjacent complementary commercial uses.	The combined goods and services of the stores in a concentrated center attract customers.
Traffic	Unlimited driveway access onto main roads increases the risk of accidents.	Common driveways and controlled access to major roads enhance safety and convenience.

Source: Adapted from Garrett County 1995 Comprehensive Plan

3.4.10 Commercial Resort

Commercial Resort (CR) areas provide for commercial recreation uses and supporting commercial uses and residential development, such as the Wisp Resort and the Garrett County Fairgrounds and nearby land. CR areas promote resort-type light commercial uses and family recreation, as opposed to the highway-oriented uses that GC areas accommodate. CR areas are designated only in the Deep Creek Watershed. The Deep Creek Watershed zoning ordinance distinguishes two types of CR: CR1 provides for visitor-oriented commercial development only, while CR2 which emphasizes land-based family-oriented commercial development, as well as low density residential development.

3.4.11 Employment Center

Employment Center (EC) areas provide for business, manufacturing, and industrial economic development uses with varying land use requirements. EC areas are located at strategic points in the County, with the intent of providing business park or campus type settings near major highways, with access to public water and sewer services, and where there will be minimal adverse effects on adjoining land uses. Five EC areas are designated on the Land Use Plan Map. Three other employment areas are the industrial parks located in the incorporated towns of Oakland, Accident, and Grantsville (see Chapter 11, Economic Development).

3.4.12 Incorporated Towns

The land use plan map shows the current 2008 boundaries of the incorporated towns. As noted above, the towns have their own planning authority and adopt their own comprehensive plans.

3.4.13 Future Growth Area

Future Growth Areas (FGA) are areas that the incorporated towns have identified for future annexation. The land use plan map shows FGAs adjacent to Friendsville, Grantsville, Loch Lynn Heights, Mountain Lake Park, and Oakland, in recognition of the towns' interest in these areas, as expressed through the County-Town coordination process for this Comprehensive Plan. As noted in Chapter 2, most of the towns began an update of their comprehensive plans in 2007. Future Growth Areas for Oakland, Mountain Lake Park, and Loch Lynn Heights are generally within the boundaries of Priority Funding Areas as of 2008. The County will need to modify PFA maps to reflect other FGAs identified on Map 3.4.

FGAs are displayed as cross-hatched areas on top of land classifications. The underlying land classifications reflect the County's intended land uses for the FGAs (or the Town's intended land use, where the Towns' intent was expressed), and will apply until the area in question is annexed, at which time the land classification may change. As the towns complete their plans, the location and size of FGAs may change.

3.4.14 Rural Villages

The Comprehensive Plan recognizes the following 11 rural villages as growth areas:

- Bittinger
- Bloomington
- Crellin
- Finzel
- Gorman
- Hoyes Run
- Hutton
- Jennings
- Sang Run
- Shallmar
- Swanton
-

These villages are designated Priority Funding Areas (see Map 3.2).

3.5 Watershed Land Use Plans

This section discusses the land use plan as it applies to each of the County's nine planning area watersheds. As discussed in Chapter 2 these areas are comprised of the County's seven major watersheds, plus two subareas within the Youghiogheny River watershed—Bear Creek and Southern Youghiogheny.

The watershed boundaries are shown on Map 3.4. Existing land use, as of 2005, in each of the planning areas is shown in Table 3.8. Proposed land use is shown in Table 3-9.

Table 3.8: Existing Land Use/Land Cover in Planning Area Watersheds, 2005

		Low Density Residential	Medium/ High Density Residential	Commercial Industrial	Other Categories ¹	Agriculture	Forest	Wetlands	Water	Total
Bear Creek	Acres	1,719	30	182	378	9,494	19,401	0	33	31,236
	Percent	6%	<1%	1%	1%	30%	62%	0%	<1%	100%
Casselman River	Acres	2,742	129	263	748	14,113	39,614	637	356	58,602
	Percent	5%	0%	<1%	1%	24%	68%	1%	1%	100%
Deep Creek	Acres	4,813	1,758	307	781	8,002	20,527	1,060	3,688	40,938
	Percent	12%	4%	1%	2%	20%	50%	3%	9%	100%
Georges Creek	Acres	41	0	0	908	1,690	9,167	0	8	11,815
	Percent	<1%	0%	0%	8%	14%	78%	0%	<1%	100%
Little Youghiogeny River	Acres	2,406	812	730	767	10,063	11,214	15	205	26,214
	Percent	9%	3%	3%	3%	38%	43%	<1%	1%	100%
North Branch Potomac River	Acres	1,739	254	60	4,285	10,221	50,204	50	436	67,249
	Percent	3%	0%	<1%	6%	15%	75%	<1%	1%	100%
Savage River	Acres	1,665	51	59	840	10,186	60,449	133	314	73,697
	Percent	2%	0%	<1%	1%	14%	82%	0%	<1%	100%
Southern Youghiogeny	Acres	674	0	37	14	8,915	6,999	132	1	16,773
	Percent	4%	0%	<1%	<1%	53%	42%	1%	<1%	100%
Youghiogeny River	Acres	6,224	282	170	651	16,458	67,932	635	755	93,107
	Percent	7%	<1%	<1%	1%	18%	73%	1%	1%	100%
Total	Acres	22,024	3,318	1,808	9,372	89,142	285,508	2,663	5,795	419,630
	Percent of Land Use Type	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Percent of County	5%	1%	<1%	2%	21%	68%	1%	1%	100%

1: Institutional, Extractive, Open Urban, Beaches, Bare rock, Bare Ground.

Source: ERM (Table 3-1)

Table 3.9: Proposed Land Use in Planning Area Watersheds

		Rural Resource	Agricultural Resource	Lake Residential 1	Lake Residential 2	Rural	Suburban Residential	Town Residential	Town Center	General Commercial	Commercial Resort	Employment Center	Towns	Total ¹	Future Growth Area
Youghiogheny River	Acres	52,785	17,219	425	0	19,897	368	755	62	540	58	277	721	93,106	202
	Percent	29%	16%	2%	0%	23%	8%	16%	5%	28%	12%	15%	14%	22%	7%
Bear Creek	Acres	9,675	17,016	0	0	1,757	1,789	16	24	215	12	399	333	31,236	0
	Percent	5%	16%	0%	0%	2%	38%	<1%	2%	11%	3%	21%	6%	7%	0%
Southern Youghiogheny	Acres	2,939	13,834	0	0	0	0	0	0	0	0	0	0	16,773	0
	Percent	2%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%
Little Youghiogheny River	Acres	5,118	11,534	0	0	2,324	740	1,763	346	303	0	618	3,467	26,214	2,028
	Percent	3%	11%	0%	0%	3%	16%	36%	30%	16%	0%	33%	68%	6%	66%
Casselman River	Acres	24,300	24,963	0	0	5,029	1,534	1,235	70	616	0	411	445	58,602	827
	Percent	13%	24%	0%	0%	6%	32%	26%	6%	32%	0%	22%	9%	14%	27%
Savage River	Acres	54,308	6,355	0	0	12,536	278	80	0	140	0	0	0	73,697	0
	Percent	30%	6%	0%	0%	14%	6%	2%	0%	7%	0%	0%	0%	18%	0%
Georges Creek	Acres	6,429	0	0	0	5,347	38	0	0	0	0	0	0	11,815	0
	Percent	4%	0%	0%	0%	6%	1%	0%	0%	0%	0%	0%	0%	3%	0%
North Branch Potomac River	Acres	18,379	7,173	0	0	41,267	0	252	12	0	0	0	165	67,249	0
	Percent	10%	7%	0%	0%	47%	0%	5%	1%	0%	0%	0%	3%	16%	0%
Deep Creek	Acres	7,828	7,981	17,070	5,719	266	0	741	643	110	412	166	0	40,938	0
	Percent	4%	8%	98%	100%	<1%	0%	15%	56%	6%	85%	9%	0%	10%	0%
Total	Acres	181,761	106,074	17,495	5,719	89,423	4,748	4,842	1,157	1,926	483	1,870	5,131	419,630	3,057
	Percent of Land Use Type	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Percent of County	43%	25%	4%	1%	21%	1%	1%	<1%	<1%	<1%	<1%	1%	100%	<1%

1: Totals may not match due to rounding errors.

3.5.1 Youghiogheny River watershed (excluding Bear Creek and the Southern Youghiogheny)

This watershed is approximately 145 square miles, or 22 percent of the County. It extends from the northwest corner of the County east to Keyzers Ridge and south past Hutton Road (MD 39). I-68 crosses the northern part of the watershed. The Youghiogheny River flows north along the western edge of the County, through Friendsville and into Pennsylvania, where it joins with the Monongahela River, part of the broader Ohio/Mississippi River watershed.

As of 2005 the watershed was 73 percent forest and 18 percent agriculture (Table 3.8). Large areas of state-owned lands in the watershed include Garrett State Forest, Swallow Falls State Park, Herrington Manor State Park, and the Youghiogheny Scenic and Wild River management area. The US Army Corps of Engineers manages the Youghiogheny River Lake, north of Friendsville, as a flood control and hydroelectric power facility. The Youghiogheny River, especially south of the lake, is nationally-renowned for its whitewater recreation amenities (e.g., rafting, kayaking).

The Youghiogheny River watershed includes the Town of Friendsville and a portion of the Deep Creek Lake Influence Area. In 2005 there were approximately 3,085 housing units in the watershed, of which approximately 281 were in Friendsville, 124 in the Deep Creek Influence Area, and 2,680 in the “remainder” of the watershed (Table 2.3). Between 1990 and 2005, approximately 660 units were built in the “remainder” area.

The Youghiogheny River watershed is projected to add approximately 1,875 housing units through 2030, of which 25 will be in Friendsville, 1,273 in the Deep Creek Influence Area (Wisp Resort), and 663 in the remainder of the watershed.



The Youghiogheny River is one of the nation's premier whitewater recreation resources.

Map 3.5 shows the land use plan for the Youghiogheny River watershed. See Table 3.9 for the acreage summary associated with the plan.

Highlights of the land use plan

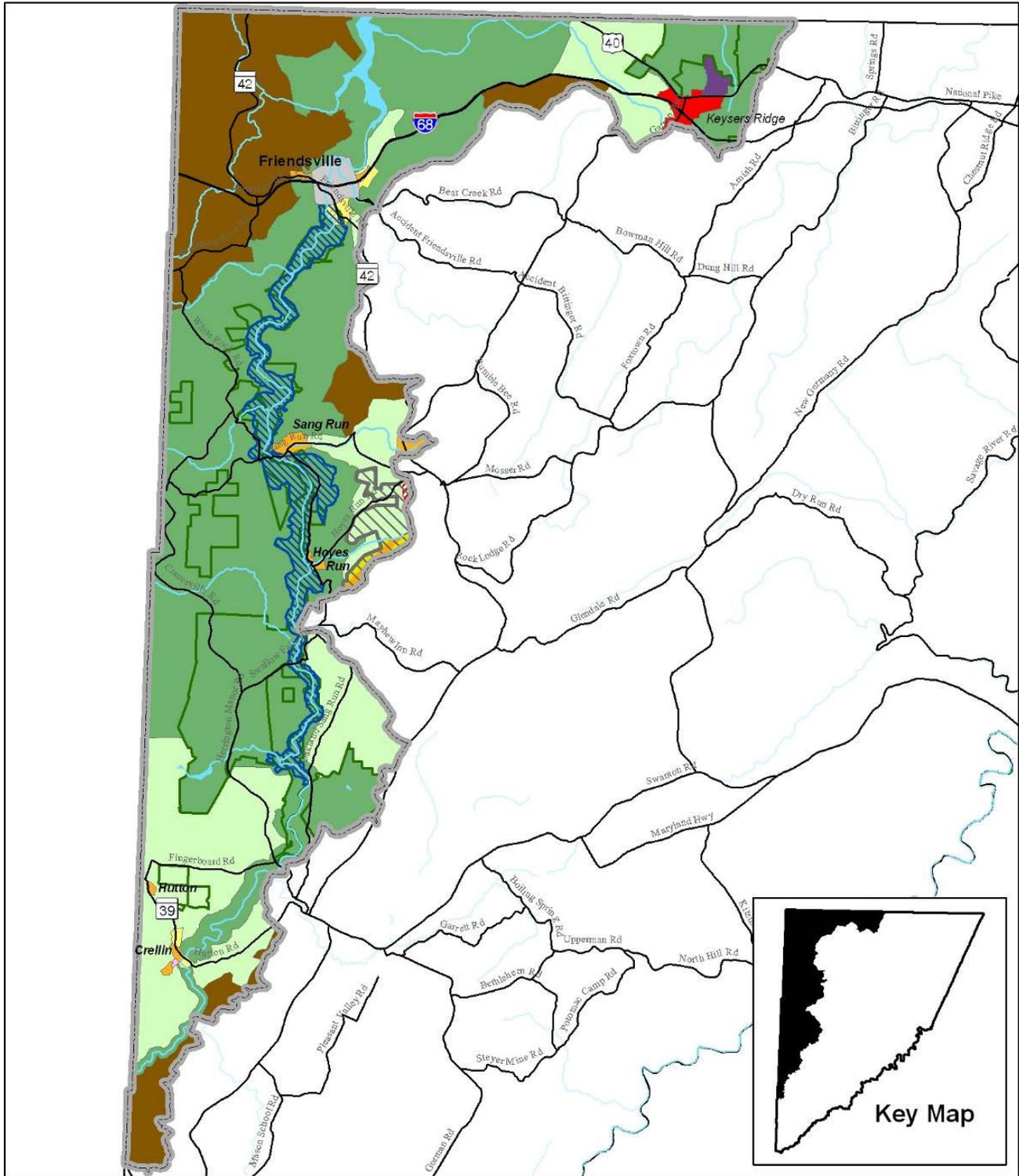
The land use plan emphasizes resource land conservation. The 2008 plan classifies the majority of the watershed as RR. Some large areas in the watershed that were classified as R in the 1995 Comprehensive Plan have been redesignated as RR in the 2008 plan. This plan also increases the amount of land designated AR, especially northwest of Friendsville¹⁰.

The Youghiogheny River is a state designated Scenic and Wild River between Millers Run (near Mount Nebo Road) in the south, and the Town of Friendsville in the north.¹¹ This area is subject to state use and development regulations designed to protect the wild and scenic qualities of the river and its corridor. These state regulations function like zoning regulations (even though the area is not subject to County zoning).

¹⁰ To assist in seeing the differences between the 2008 map and the 1995 map (as implemented by the 1997 Land Classification Map) the appendix to this plan contains “side by side” maps.

¹¹ COMAR Title 8 Subtitle 15.

Map 3.5: Youghiogheny River Watershed Land Use Plan



Future Land Use - Youghiogheny River Watershed

Town Center	Employment Center	Rural	Youghiogheny River Watershed	Wisp Resort PRD
Town Residential	Rural Resource	Lake Residential 1	Youghiogheny Wild River Corridor	Major Roads
Suburban Residential	Agricultural Resource	Future Growth Area	State Owned Land	
General Commercial			Water	

Miles

Growth areas in the watershed are the Town of Friendsville, and the rural villages of Crellin, Hutton, Hoyes Run and Sang Run. Small areas east of Friendsville are designated SR and TR.

The map shows a Future Growth Area along I-68 west of the town and along Friendsville Road (MD 42), south of town. Hoyes Run, Sang Run, and Hutton retain their existing TR designation, while Crellin retains its existing mix of TC, SR, and TR designations. Crellin is served by public water and sewer. Hutton is served by public sewer.

Keysers Ridge Business Park is Garrett County's newest industrial park, occupying 240 acres on the north side of the intersection of US 40 and US 219, with access from US 40. It is designated EC in the land use plan (a change from GC in the 1995 Plan). Construction of the park was completed in 2006, with the first tenants anticipated in 2008. South of the business park around the I-68 interchange is a GC area.

Youghiogheny Mountain Resort is a 2,000 acre second home subdivision on the west side of the Youghiogheny River, due west of Deep Creek Lake. Approximately 1,600 residential lots have been platted in this subdivision, with fewer than 200 residential units built. Many of the remaining lots are not suitable for future development, due to platted lot sizes that are inadequate for septic systems. As of fall 1997, the County health department is reviewing issues concerning building on these lots and other similar types of lots elsewhere in the County.

The Garrett County landfill is located on the east side of Oakland-Sang Run Road, approximately one mile north of Mount Nebo Road (see Chapter 8, Community Facilities). The landfill's is currently expected to be in service through 2028. See Chapter 8 (Community Facilities).

The western portion of the Wisp Resort is located in the Youghiogheny River watershed. The proposed Wisp Resort would include a mixed commercial/residential village, and approximately half of the overall proposed 2,500 residential units in the resort. The Wisp Resort property is covered by a County-approved Planned Residential Development (PRD). The approximate area covered by the PRD is shown on the land use plan map. The Wisp Resort is discussed in more detail in Chapter 4. A recirculating whitewater course—which opened in 2007, and is operated by the Adventure Sports Center Institute—is found in this area.

3.5.2 *Bear Creek Watershed*

As noted in Chapter 2, the Bear Creek watershed is a combination of three 12-digit watersheds within the 8-digit Youghiogheny River watershed. Bear Creek is broken out separately in this Plan because of its special agricultural and scenic resources. Bear Creek covers approximately 49 square miles, or seven percent of the County. It lies north of the Deep Creek watershed between Elder Hill, Negro Mountain, and Winding Ridge (Map 3.6).

As of 2005, the watershed was 62 percent forest and 30 percent agriculture (Table 3.8). The incorporated town of Accident is located on US 219, almost in the center of the watershed. US 219 runs north-south through the watershed, and is the County's second most heavily traveled roadway, after I-68. Agricultural lands are concentrated in the central portions of the watershed (see Map 3.1). The western portion of Savage River State Forest occupies much of the eastern part of the watershed.

Bear Creek is among the County's most scenic areas, with a combination of agricultural and forested landscapes. As noted earlier in this chapter, the entire Bear Creek watershed is a designated Rural Legacy Area, an area of focused land conservation efforts under the state-sponsored Rural Legacy program, which began in 1997. As of 2007, protective easements



The Cove, a scenic rural and agricultural area in the Bear Creek watershed

had been placed on 600 acres using Rural Legacy funds. An additional 4,469 acres of land in the Bear Creek watershed are protected through other means (parks, the Maryland Agricultural Land Preservation Foundation, and the Maryland Environmental Trust). Approximately 4,011 of those protected acres are in Savage River State Forest.

In 2005 there were approximately 990 housing units in the watershed, of which approximately 168 were in Accident and 822 in the “remainder” of the watershed (Table 2.3). Between 1990 and 2005, approximately 227 units were built in the watershed, outside of Accident.

The Bear Creek watershed is projected to add approximately 250 new housing units through 2030, of which 25 will be in Accident and 225 in the remainder of the watershed.

Map 3.6 shows the land use plan for the Bear Creek watershed. See Table 3.9 for the acreage summary associated with the plan.

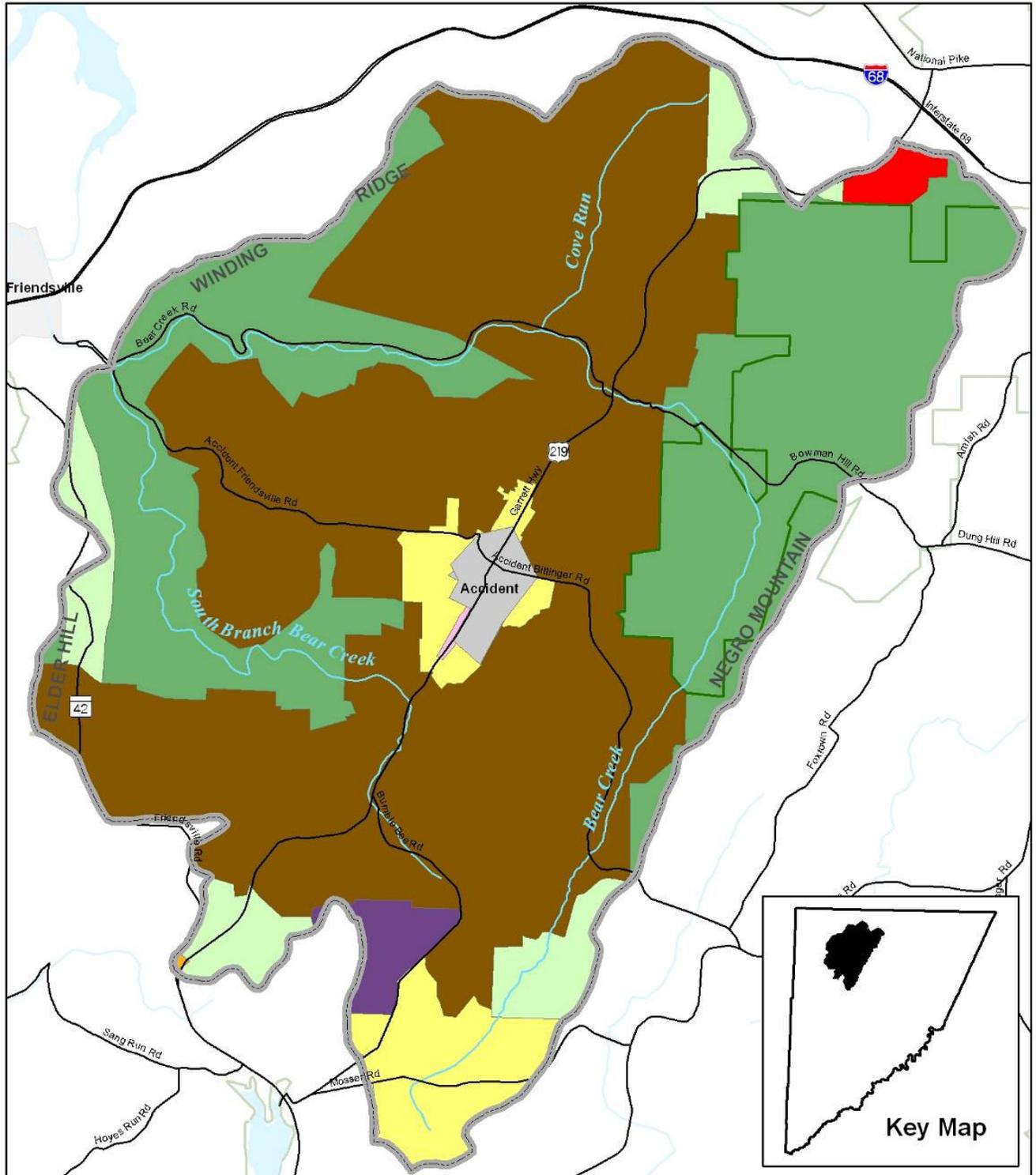
Highlights of the land use plan

The land use plan emphasizes resource land conservation. The plan designates more than three quarters of the watershed as AR and RR. Some areas that were designated R in the 1995 Comprehensive Plan (such as Savage River State Forest) have been redesignated RR in the 2008 plan. This plan also increases the amount of land designated AR, mostly west of Accident.

Growth areas in the watershed are the Town of Accident and the area around Garrett County Airport. Accident anticipates little growth over the life of this Comprehensive Plan, and the Plan does not propose changes to the growth boundaries around the town. Central Garrett industrial park is located in Accident, and is approximately 90 percent built out.

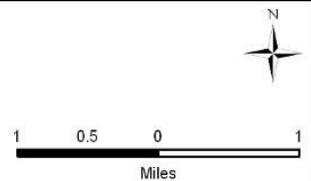
Garrett County Airport is located off Bumble Bee Road east of McHenry. It is designated EC on the land use plan. South of the airport is White Face Farm, an approximately 340 acre site that straddles the Bear Creek and Deep Creek watersheds. A portion of White Face Farm was designated EC in the 1995 Comprehensive Plan, but was not developed. This Comprehensive Plan slightly expands the area around White Face Farm designated EC. As of 2007 the County is actively working to develop a technology park here. A portion of the site is also being considered for housing, to be developed by Garrett County Community Action (see Chapter 9, Housing). The entire White Face Farm site will be connected to the McHenry water system and to the Deep Creek Lake sewer system.

Map 3.6: Bear Creek Watershed Land Use Plan



Future Land Use - Bear Creek Watershed

- | | | | |
|----------------------|-----------------------|----------------------|-------------|
| Town Center | Employment Center | Lake Residential 1 | Water |
| Town Residential | Rural Resource | Town | Major Roads |
| Suburban Residential | Agricultural Resource | Bear Creek Watershed | |
| General Commercial | Rural | State Owned Land | |



3.5.3 Southern Youghiogheny Watershed

As noted in Chapter 2, the Southern Youghiogheny watershed is a combination of two 12-digit watersheds within the Youghiogheny River watershed, and is broken out separately because its agricultural and cultural character differentiates it from the areas in the middle and upper portions of the Youghiogheny River watershed. The Southern Youghiogheny watershed is approximately 26 square miles, or four percent of the County. It covers much of the area known as Pleasant Valley, extending from the southwest corner of the County east to Backbone Mountain and north approximately to Wes White Road and Pleasant Valley Road (Map 3.7). US 219 runs north-south through the watershed.

As of 2005, the watershed was 53 percent agriculture and 42 percent forest (Table 3.8). The Southern Youghiogheny Watershed contains some of the County's most productive farm land, set in a largely intact agricultural landscape. North and south of Redhouse (the intersection of US 219 and US 50) are two concentrations of agricultural districts and easements.¹² A third concentration lies to the northeast along Mason School Road.

As of 2005 there were 386 housing units in the Southern Youghiogheny watershed. It is projected to add approximately 50 housing units through 2030, similar to the number of units added between 1990 and 2005.

Map 3.7 shows the land use plan for the Southern Youghiogheny watershed.

Highlights of the land use plan

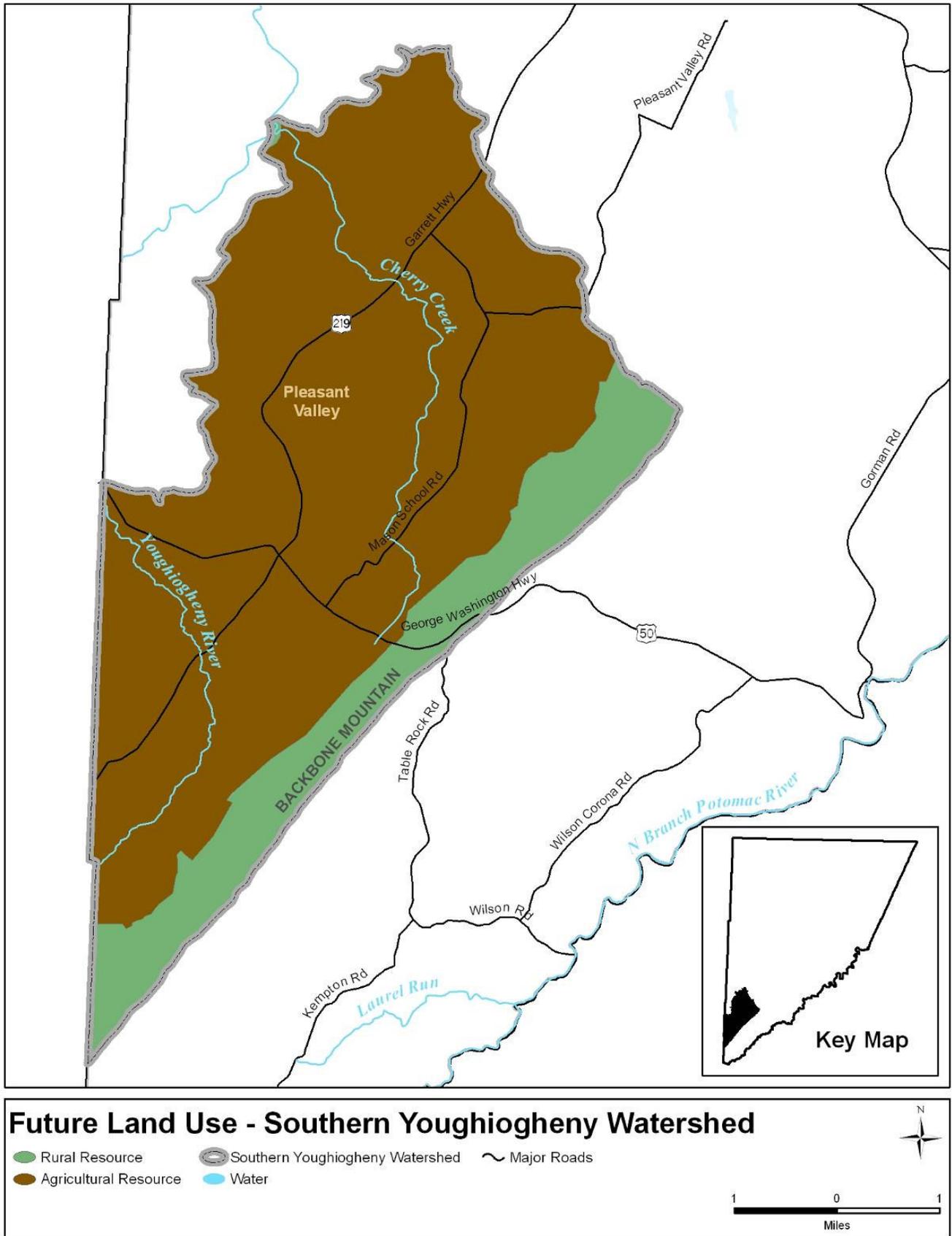
The plan designates nearly all the watershed as AR. The plan increases the amount of AR acreage (compared to the 1995 Comprehensive Plan) along Mason School Road and west of US 219 near the western watershed boundary. No growth areas are designated in the Southern Youghiogheny watershed.



Agricultural uses in Pleasant Valley

¹² Most agricultural districts and easements in the County are coordinated through the Maryland Agricultural Land Preservation Foundation (MALPF), part of the Maryland Department of Agriculture. A MALPF district is an area of agricultural land that has been designated as eligible to sell development rights (or easements) to MALPF. A MALPF easement permanently prevents subdivision or development.

Map 3.7: Southern Youghiogheny Watershed Land Use Plan



3.5.4 *Little Youghiogheny River Watershed*

The Little Youghiogheny River Watershed covers approximately 92 square miles, or 14 percent of the County. It is located between the Southern Youghiogheny watershed and the Deep Creek Watershed, and is bordered by the Youghiogheny River to the west and by Backbone Mountain to the east (Map 3.8). The Little Youghiogheny River flows into the Youghiogheny River just west of Oakland.

As of 2005, the watershed was 43 percent forest and 38 percent agriculture. The four incorporated towns of Oakland, Mountain Lake Park, Loch Lynn Heights, and Deer Park are located along, and primarily north of the east-west-flowing Little Youghiogheny River and MD 135. The towns and surrounding areas form the largest continuous urban area in the County. Agricultural lands are concentrated south of the incorporated towns, in the northern part of Pleasant Valley (see Map 3.1). Northwest of Oakland is the approximately 1,800 acre Mount Nebo Wildlife Management Area (WMA), which protects a red spruce bog special wetlands area.

In 2005, there were approximately 3,675 housing units in the Little Youghiogheny River watershed, of which approximately 961 were in Oakland, 210 in Loch Lynn Heights, 1,017 in Mountain Lake Park, 181 in Deer Park, and 1,306 in the "remainder" of the watershed (Table 2.3). Between 1990 and 2005, approximately 212 units were built in the watershed outside of the towns.

The Little Youghiogheny River watershed is projected to add approximately 712 new housing units through 2030, of which 250 will be in Oakland, 25 in Loch Lynn Heights, 150 in Mountain Lake Park, 75 in Deer Park, and 212 in the remainder of the watershed.

Map 3.8 shows the land use plan for the Little Youghiogheny River watershed.

Highlights of the land use plan

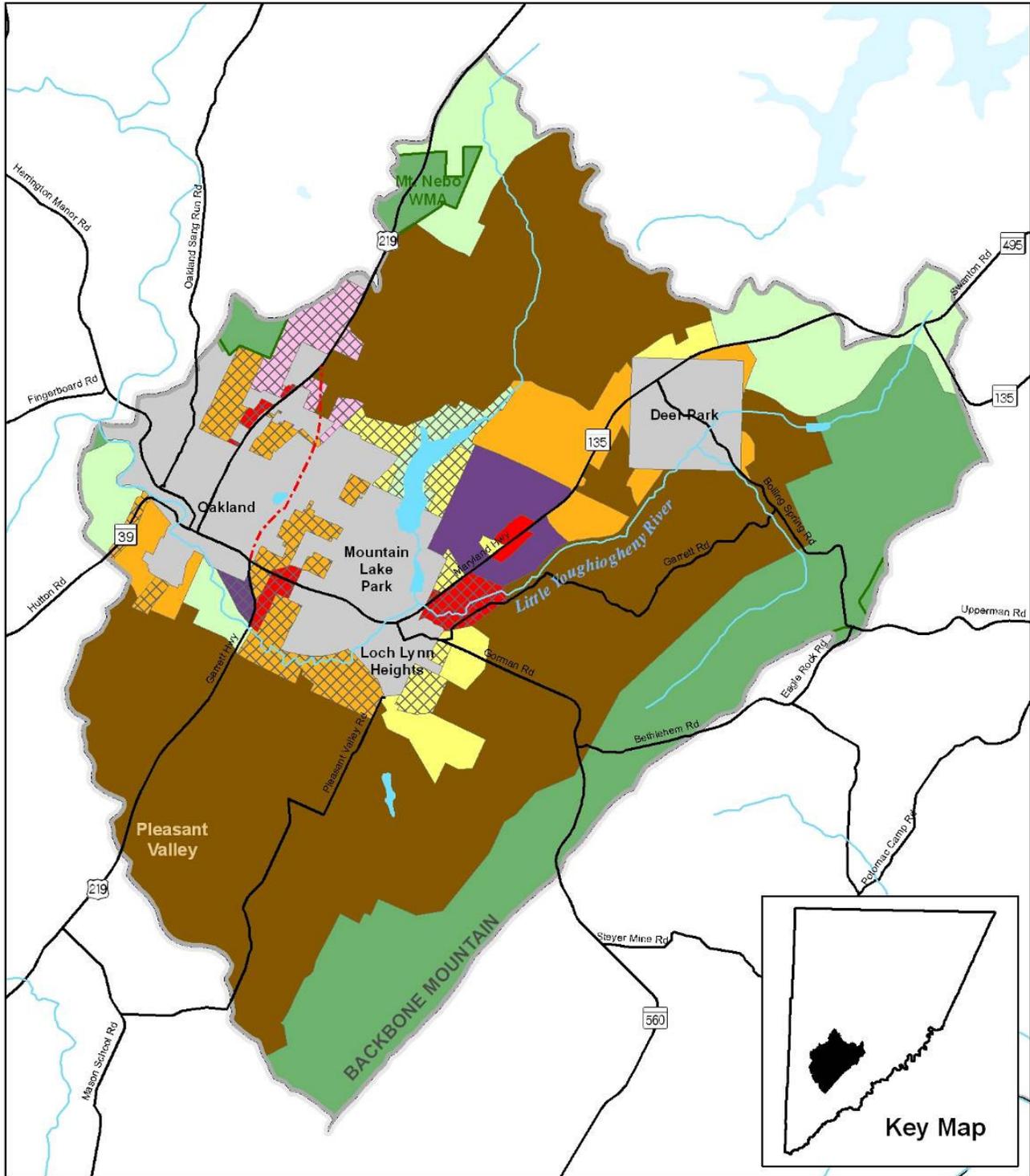
The plan designates the watershed a mix of AR, RR, and growth area. AR areas are designated north of Oakland and Mountain Lake Park and south of Oakland, Mountain Lake Park, and Loch Lynn Heights in the northern portion of Pleasant Valley. Along Jasper Riley Road and Pleasant Valley Road are two concentrations of agricultural districts and easements.

Mount Nebo WMA and portions of Backbone Mountain are designated RR. These areas were designated R in the 1995 Comprehensive Plan.

The four incorporated towns and most of the unincorporated land between and immediately surrounding them are designated growth areas. South of Oakland and between Oakland and Mountain Lake Park, some land is designated TR by this plan, a change from the SR designation in the 1995 Comprehensive Plan. This change supports the land use goals of encouraging growth in designated growth areas, providing land in appropriate locations and densities for a variety of housing types and choices, and allowing for the development of affordable housing (see Section 3.1 above).

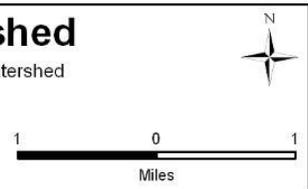
Oakland, Mountain Lake Park, and Loch Lynn Heights have identified more 2,000 acres of Future Growth Area, as shown in Map 3.8. These FGAs encompass all of the land between Oakland and Mountain Lake Park, as well as areas to the north and south of the towns.

Map 3.8: Little Youghiogheny River Land Use Plan



Future Land Use - Little Youghiogheny River Watershed

Town Center	Employment Center	Town	Little Youghiogheny Watershed
Town Residential	Rural Resource	Future Growth Area	Major Roads
Suburban Residential	Agricultural Resource	Water	Proposed Roads
General Commercial	Rural	State Owned Land	



The 224-acre Southern Garrett Business and Technology Park east of Mountain Lake Park is designated EC. This Comprehensive Plan expands this EC area east along the north side of MD 135 by nearly 350 acres. Two nearby areas that were designated SR in the 1995 Comprehensive Plan are designated TR in this 2008 Comprehensive Plan: lands north of this EC area up to Broadford Road, and an area south of the Southern Garrett Business and Technology Park on the south side of MD 135.

The land use plan recognizes a future town growth area on the north side of Oakland east and west of US 219.

The State Highway Administration is proposing to build a new road, known as the Oakland bypass, to re-route the portion of US 219 that runs through downtown Oakland. This road would run roughly due north from the existing intersection of US 219 at Oak Street, reconnecting to US 219 north of 4th Street, providing a more direct north-south route than the existing dog-leg, while separating long-distance traffic from local traffic in downtown Oakland. This project was identified in the 1995 Garrett County Comprehensive Plan and is supported by Garrett County (see also Chapter 6, Transportation).

3.5.5 *Casselman River Watershed*

The Casselman River Watershed covers approximately 92 square miles, or 14 percent of the County. It is located in the north-central part of the County, north of the Deep Creek watershed. It is bordered to the west by Negro Mountain and to the east by Meadow Mountain and Little Savage Mountain. The Casselman River flows north into Pennsylvania and eventually to the Youghiogeny River, and is part of the broader Ohio/Mississippi River watershed. Major roads crossing the watershed are I-68, MD 495, US 219 north of I-68, and National Pike (US 40 Alt). There are two interchanges with I-68, at Grantsville and at Chestnut Ridge.

As of 2005 the watershed was 68 percent forest and 24 percent agriculture (Table 3.8). The watershed contains large portions of Savage River State Forest, both north and south of I-68. The Western Maryland 4-H center occupies a large site south of Bittinger, extending west into the Glades, a large water and wetlands complex. The City of Frostburg owns and draws drinking water from Piney Reservoir and surrounding land on Piney Creek, northwest of Finzel. Map 3.9 shows the land use plan for the Casselman River watershed.

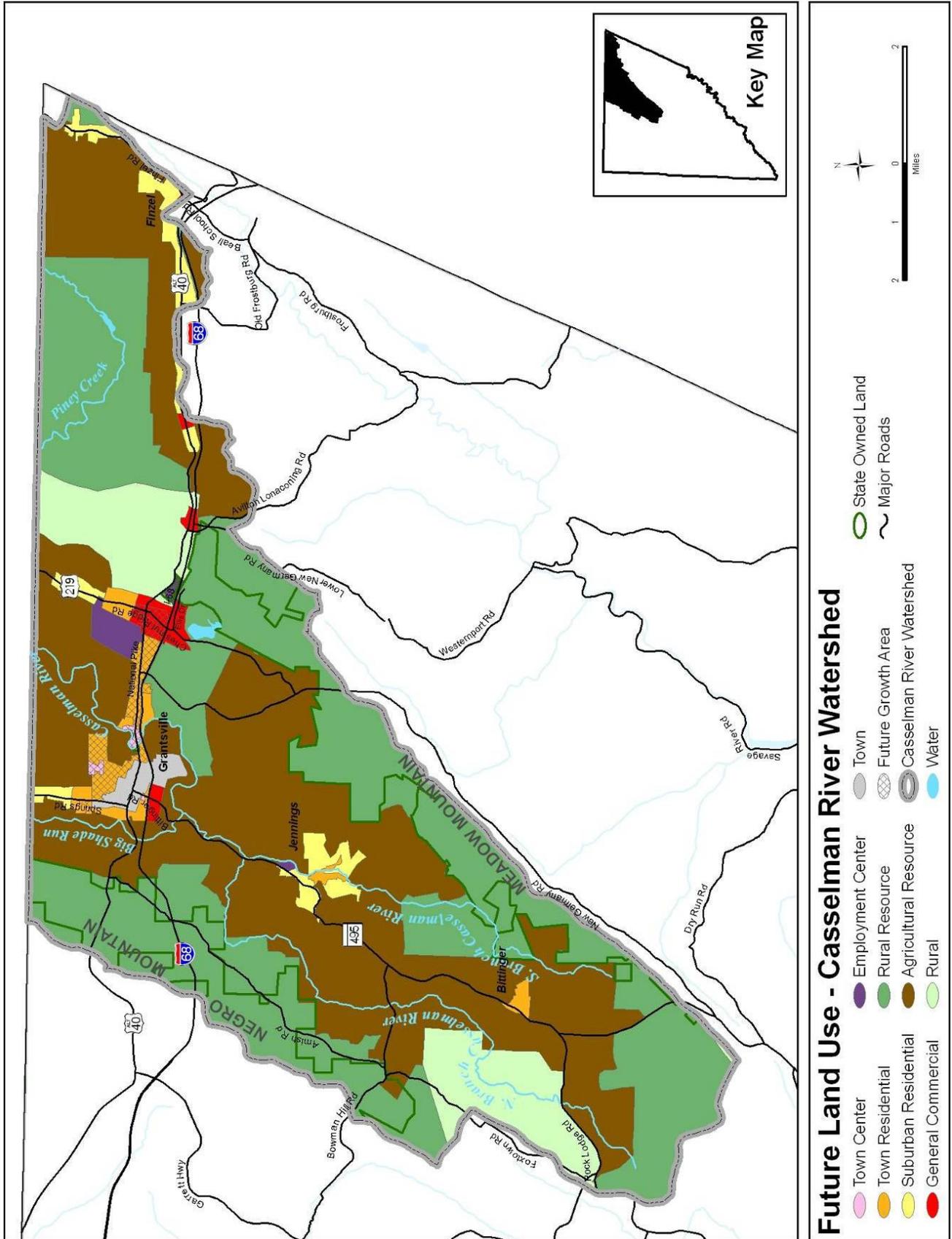
The Casselman River watershed includes the Town of Grantsville and the villages of Jennings and Bittinger. In 2005, there were approximately 1,950 housing units in the watershed, of which approximately 305 were in Grantsville (Table 2.3). Between 1990 and 2005 approximately 430 units were built in the area of the watershed outside Grantsville.

Little Meadows and the associated Tomlinson Inn, three miles east of Grantsville, is significant historic site dating back to colonial times. For additional detail see the Heritage Plan in the Appendix.

The Casselman River watershed is projected to add approximately 532 housing units through 2030, of which 100 will be in Grantsville.

A potential future economic development area has been identified in the Chestnut Ridge area, south and east of the I-68 interchange with US 219 North (Chestnut Ridge Road). This site would have access to I-68, and an upgraded US 219 (see the Transportation Chapter) via Ellis Drive. The creation of this economic development area would be consistent with this Plan's land use and economic development objectives, but would depend on the resolution of a number of issues, including support from property owners and the State, and final selection of the US 219 North alignment. Because these issues are not fully resolved, the area is not designated as an Employment Center on the Land Use map.

Map 3.9: Casselman River Watershed Land Use Plan



Highlights of the land use plan

The land use plan emphasizes natural resource land conservation. The plan designates a large portion of the watershed as RR. Some large areas in the watershed that were classified as R in the 1995 Comprehensive Plan have been redesignated as RR in the 2008 plan, mostly on the western side of the watershed. The plan also increases the amount of land designated AR, especially east of Jennings and Bittinger.

Growth areas in the watershed are the Town of Grantsville and the rural villages of Jennings and Bittinger. Land along the I-68/National Pike corridor between Grantsville and Chestnut Ridge is designated TR. Along National Pike, between Meyersdale Road and Finzel Road (MD 546), additional lands are designated a mix of SR and GC.

Land around the Chestnut Ridge interchange with I-68 is designated a mix of GC and EC. An area, covering approximately 400 acres northwest of the interchange is designated EC. This area is undeveloped and maintains its designation from the 1995 plan. A second area east of the interchange is designated EC and currently houses the County roads garage.

West and north of the Grantsville, land is designated TR by this plan, a change from the SR designation in the 1995 Comprehensive Plan. This change is consistent with the land use goals of providing land in appropriate locations and densities for a variety of housing types and choices, and allowing for the development of affordable housing. It is also consistent with the Future Growth Area identified by the town. The Grantsville FGA extends north of the existing town east of Springs Road, and east along US 40 Alt to the I-68/US-219 North interchange.

Land at the northern end of Springs Road (MD 669) up to the state line is designated SR. The 66-acre Northern Garrett Industrial Park is located in the Town of Grantsville.

Jennings is designated a mix of TR and SR. Bittinger is designated TR. Jennings is served by public sewer via an extension from the Grantsville system. The Plan does not propose changes to the growth boundaries around Jennings or Bittinger.

3.5.6 *Savage River Watershed*

The Savage River Watershed covers approximately 115 square miles, or 17 percent of the County. It is located on the east side of the County, east of Meadow Mountain and north of Backbone Mountain. The Savage River flows into the North Branch Potomac River at the village of Bloomington (Map 3.5). This watershed has rugged mountainous terrain with extensive areas of steep slopes.

As of 2005, the Savage River watershed was 82 percent forest and 14 percent agriculture (Table 3.8). Large areas of state-owned lands in the watershed are Savage River State Forest, New Germany State Park, and Big Run State Park. While Savage River State Forest is extensive (over 84 square miles), the state holdings are not contiguous and are interspersed with privately owned lands, some of which are entirely surrounded by state-owned land. Agricultural lands are mostly concentrated in the northeast part of the watershed, south of I-68. The Savage River Reservoir in the south central portion of the watershed was built in 1952 as flood control and water supply project. Like the Youghiogheny, the Savage River below the reservoir is nationally renowned for its whitewater recreation amenities.

No incorporated towns are located in the watershed, but there are three rural villages: Bloomington, Finzel, and Swanton. In 2005 there were just under 1,100 housing units in the watershed (Table 2-3), among the lowest housing densities of all the County's watersheds. Between 1990 and 2005 approximately 260 new units were built.



The Savage River reservoir

The watershed is projected to add approximately 260 new units through 2030.

Map 3.10 shows the land use plan for the Savage River watershed.

Highlights of the land use plan

The land use plan emphasizes natural resource land conservation in the Savage River watershed, by designating nearly three-quarters of the watershed as RR. Some large areas that were designated R in the 1995 Comprehensive Plan are designated RR in the 2008 Comprehensive Plan. These include the northern part of Backbone Mountain and areas in the northeast part of the watershed. This plan also expands the AR area in the Pea Ridge-Avilton area. Most of the Savage River watershed adjacent to the Deep Creek watershed is designated R, consistent with its designation under the 1995 Comprehensive Plan.

The only growth areas in the watershed are the three rural villages. Finzel, which is located near an interchange on I-68, is a mix of GC, TR, and SR. Bloomington is located on MD 135 near Luke and Westernport in Allegany County, and is partially located in the North Branch Potomac River watershed. It is designated TR, and is served by a small public water and sewer system. Swanton, located on MD 495, is designated TR.

3.5.7 Georges Creek Watershed

Georges Creek flows north-south through Allegany County into the North Branch Potomac River. A small portion, approximately 18 square miles (three percent) of the northeastern edge of Garrett County drains down the eastern side of Big Savage Mountain, towards Georges Creek. The Georges Creek watershed in Garrett County is 78 percent forest and 14 percent agriculture (Table 3.8).

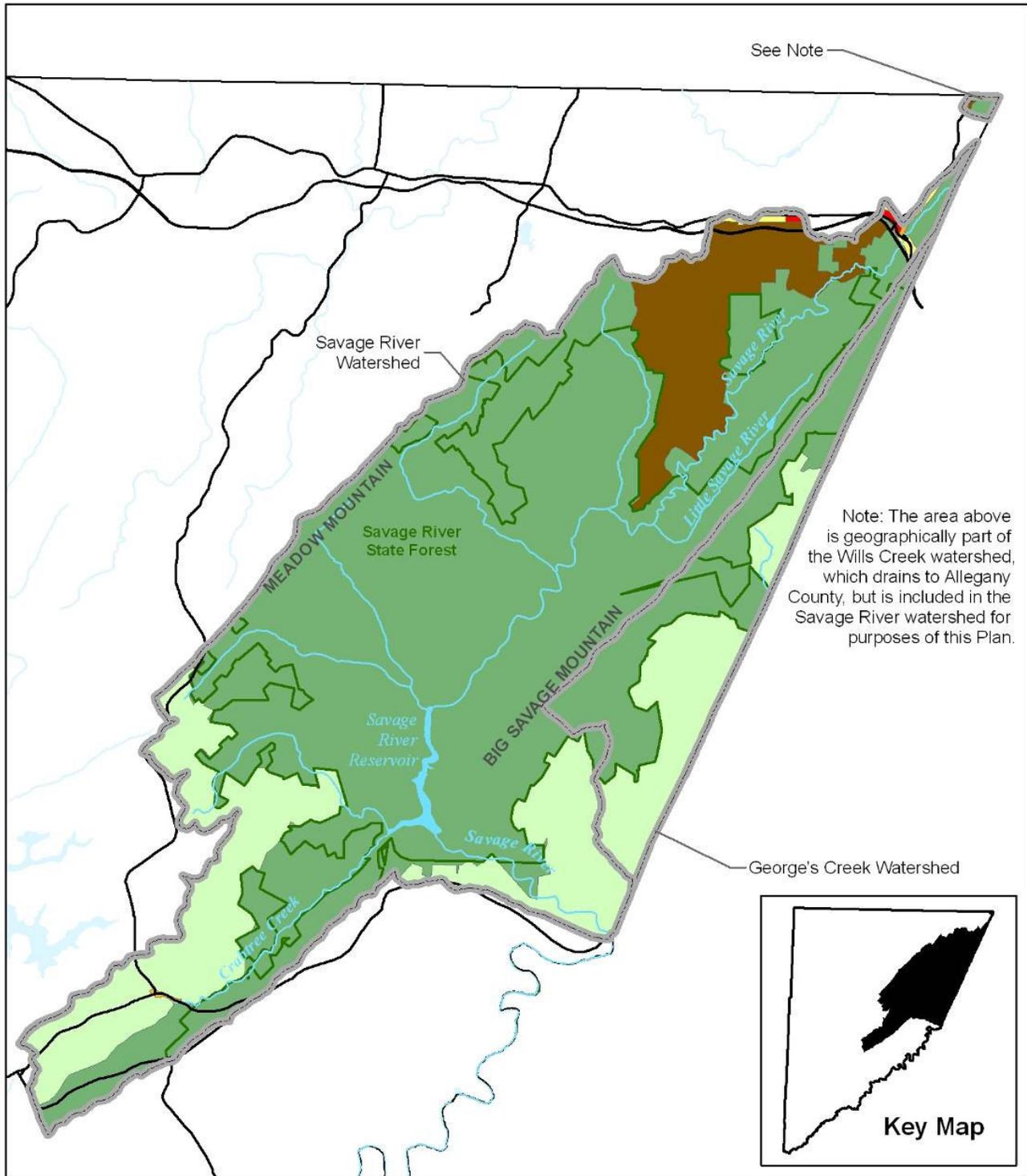
Map 3.10 includes the land use plan for the Georges Creek watershed.

In 2005 there were approximately 66 housing units in the watershed. Less than 10 units are projected to be added through 2030.

Highlights of the land use plan

The plan designates nearly all the watershed a mix of RR and R. A portion of Savage River State Forest runs along Big Savage Mountain on the western edge of the watershed, and is designated RR. The southern part of the watershed includes some farmland and some former mining sites. These areas are designated R. No growth areas are designated in the Georges Creek Watershed.

Map 3.10: Savage River and Georges Creek Watershed Land Use Plans



Future Land Use - Savage River and Georges Creek Watersheds

Town Residential	Rural Resource	Savage River and George's Creek Watersheds	
Suburban Residential	Agricultural Resource	Water	
General Commercial	Rural	State Owned Land	

A wind power electricity generation project has been proposed on Big Savage Mountain on the Allegany County/Garrett County border north of Lonaconing Road (see discussion of wind power in Chapter 7).

3.5.8 North Branch Potomac River Watershed

The North Branch Potomac River watershed covers approximately 105 square miles, or 16 percent of the County. It occupies the southeastern edge of the County, bordered on the west by Backbone Mountain and on the east by the North Branch Potomac River.

As of 2005, the watershed was 75 percent forest and 15 percent agriculture (Table 3.8). Approximately six percent of the watershed is “other categories,” most of which are “extractive” uses, reflecting the remains of former coal mining sites in this area. Approximately 10,500 acres in the central part of the watershed make up Potomac State Forest. Jennings Randolph Lake is a 952 acre impoundment created along the North Branch Potomac River in 1982 as a flood control facility. Surrounding the lake the US Army Corps of Engineers owns and manages a 4,500-acre national recreation area with many recreational opportunities. At the north end of the recreation area, the Maryland Department of Natural Resources (DNR) operates a 270-acre fish management area.

The North Branch Potomac River watershed includes the town of Kitzmiller and the villages of Gorman, Shallmar, and Bloomington. Bloomington is partially located in the Savage River watershed. In 2005 there were 1,212 housing units in the watershed (Table 2.3). Between 1990 and 2005 approximately 185 new units were built. The watershed is projected to add approximately 200 new units through 2030, of which 25 would be in Kitzmiller.

Map 3.11 shows the land use plan for the North Branch Potomac River watershed.

Highlights of the land use plan

The land use plan emphasizes natural resource land conservation in the North Branch Potomac River watershed, and designates the watershed a mix of RR, AR, and R. Potomac State Forest the Jennings Randolph Lake area and Backbone Mountain are designated RR.

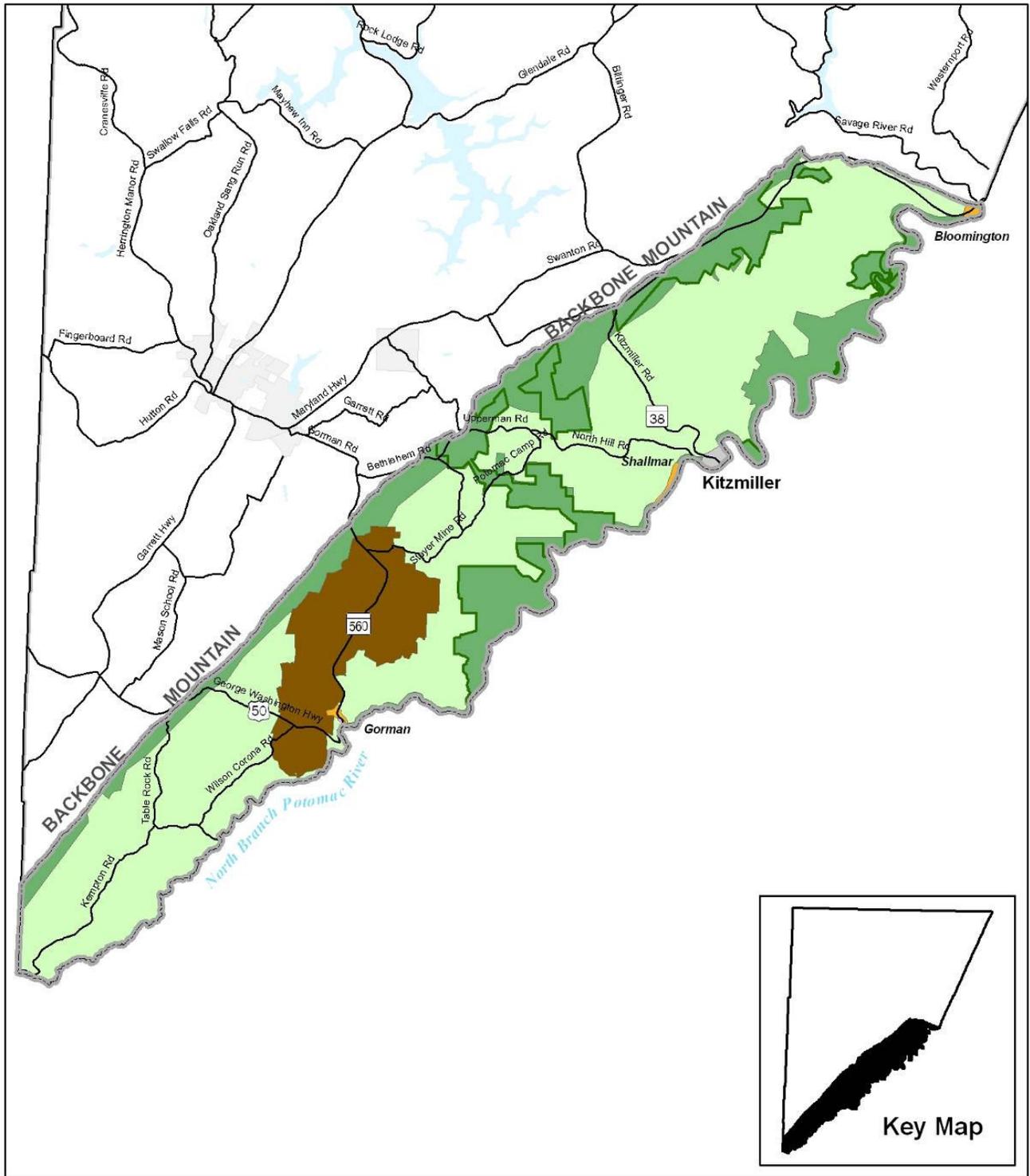


The view to the south from Kelso Gap



Gorman, MD, along the North Branch Potomac River

Map 3.11: North Branch Potomac River Watershed Land Use Plan



Future Land Use - North Branch Potomac Watershed

Town Center	Agricultural Resource	North Branch Potomac Watershed	Major Roads	
Town Residential	Rural	Water		
Rural Resource	Town	State Owned Land		

The area north and west of Gorman is one of the County's six major blocks of contiguous areas of farmland, and is designated AR. The remaining area east of Backbone Mountain is designated R.

The village of Shallmar, south of Kitzmiller is designated TC. Gorman is a mix of TR and TC. Bloomington is designated TR.

A wind power electricity generation project has been proposed along the ridge at the southern end of Backbone Mountain, one of several sites in Garrett County that are considered by DNR to be suitable for wind power because of the strong steady winds (see discussion in Chapter 7).

3.5.9 *Deep Creek Watershed*

Of all the watersheds in the County the Deep Creek watershed has the largest number of housing units (although not the largest year-round population) and the most complex land use issues. Accordingly, the Deep Creek watershed (and the broader Deep Creek Lake Influence Area) is described in detail in a separate Chapter, Chapter 4.

3.6 Policies and Actions

1. Use the Land Use Plan Map as the basis for revisions to the Land Classification Map, which is the reference map for the County's Subdivision Ordinance.
2. Revise the text of the Subdivision Ordinance:
 - Incorporate the recommendations in this chapter with respect to clustering and site layout in subdivisions, especially in the AR and RR land use categories.
 - Require mandatory Sketch Plats for development in AR and RR areas.
 - Add a reference in the ordinance text to the required 500-foot buffer designated around state-owned lands in the RR category adjoining land designated R (see above section 3.4.1). The Land Classification Map adopted as part of the Garrett County Subdivision Ordinance refers to the buffer but the text does not.
 - Clarify that development on public water and sewer on land designated TR is permitted at up to eight multi-family dwelling units per acre, and on land designated TC is permitted at up to nine multi-family dwelling units per acre (Ordinance Section 302).
3. Use the Land Use Plan Map as the basis for revisions to the Deep Creek Watershed Zoning Ordinance.
4. Revise Priority Funding Area mapping to reflect town Future Growth Areas identified in the Future Land Use Plan.
5. Concentrate commercial development in centers rather than in "strip commercial" developments (see Table 3.8).
6. Consider direct County contributions for agricultural land preservation. Such funds could be used directly to purchase development rights from willing sellers or to supplement offers from the Maryland Agricultural Land Preservation Foundation (MALPF).
7. Consider the recommendations for agricultural land preservation in the LPPRP (pages 4-11 to 4-13). Key recommendations that supplement the recommendations in this chapter of the Comprehensive Plan are:
 - Encourage formation of a private, non-profit local land trust to support current efforts to protect farmland
 - Encourage farmers who must sell their farms to sell to other farmers by working with local agricultural interests to establish a farm brokerage program that would match older farmers with younger ones and sellers with prospective farmer buyers.
8. Resolve issues concerning development of old platted lots that were of legal sized when created but do not meet current health requirements for on site water and/or wastewater systems. The largest number of such lots is in Youghiogheny Mountain Resort in the Youghiogheny River watershed.

4 Deep Creek Lake Influence Area Master Plan

The Deep Creek Lake area is a unique and special place. Deep Creek Lake is Maryland's largest freshwater lake, and is set amid scenic mountains and stream valleys. The combination of water, mountains, and forests in the Lake area provide year-round recreation opportunities, which have attracted residents and visitors since the early 20th century. As a result, the Deep Creek Lake area has become the County's most important economic engine, and is an increasingly popular place for new year-round and seasonal housing.

In part because of its success as a residential and vacation destination, the Lake area faces significant growth-related pressures, particularly related to traffic and circulation, water and sewer infrastructure, and the environmental quality of the Lake itself. The 2004 *Deep Creek Watershed Economic Growth and Planning Analysis Study* (the "Watershed Study")¹, recommended that a Deep Creek Master Plan be developed to

guide the type, location, and design of future growth and development in the Deep Creek Lake area and provide a long-term guide for public and private decisions affecting development and conservation.

This chapter of the 2008 Garrett County Comprehensive Plan responds to that recommendation, as well as several others in the 2004 *Watershed Study*. In particular, this chapter evaluates the Lake area's capacity to accommodate new growth, in terms of available land, water resources (drinking water, wastewater treatment capacity, and stormwater management), traffic, and public services.

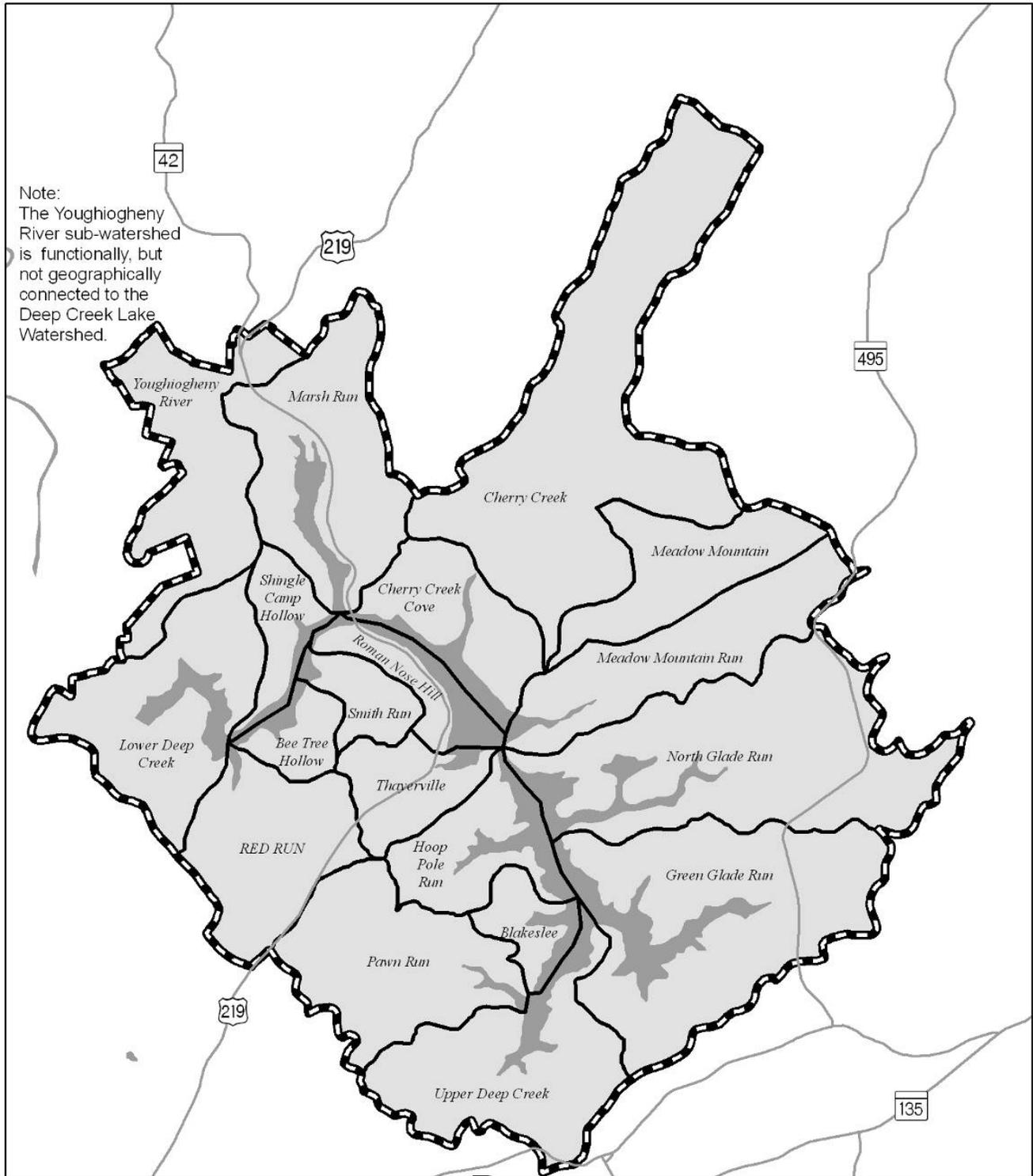
4.1 Influence Area

The Deep Creek Lake Influence Area, shown in Map 4.1, is the portion of Garrett County that has a direct impact on the environmental and visual resources of Deep Creek Lake and on the Lake Area's infrastructure and services. This 43,407 acre area includes the entirety of the Deep Creek watershed (40,937 acres), plus some areas outside the Watershed that directly impact the roads and community services in the Lake area: a portion of the Youghiogheny River watershed on the western slope of Marsh Mountain—encompassing the Wisp Resort Planned Residential Development (PRD) and other major subdivisions—and a very small portion of the Bear Creek watershed north of McHenry.

Within the Influence Area, this Comprehensive Plan identifies 19 "sub-watersheds" for detailed planning (see Map 4.1). Sub-watersheds were used for housing unit projections (Section 4.3.2), transportation projections (Section 4.4.1), and for the Deep Creek Lake Water Quality Assessment report (Section 4.6). The portions of the Influence Area that fall within the Youghiogheny River and Bear Creek watersheds are all covered by the "Youghiogheny River" sub-watershed shown on Map 4.1.

¹ The Recommendations of the Watershed Study, along with the Planning Commission's Summary Report (which contains the Planning Commission's response to the Watershed Study's recommendations) are included in the Comprehensive Plan Appendix.

Map 4.1: Sub-Watersheds in the Deep Creek Lake Influence Area



Deep Creek Lake Influence Area

Legend

-  Sub-Watersheds
-  Deep Creek Lake Influence Area



4.2 A Vision Statement for the Deep Creek Lake Influence Area

The Deep Creek Lake Influence Area, including the Lake, its watershed, and surrounding areas, is a vital part of Garrett County's identity and economy. Consistent with the recommendations of the 2004 *Watershed Study*, the goals and objectives for the Influence Area are expressed in the form of the following Vision Statement.

The Deep Creek Lake Influence Area is a place where:

- *Land use patterns, transportation systems, and community facilities support existing economic assets (such as commercial areas in McHenry and Thayerville, and the Wisp Resort) and encourage new economic activity.*
- *Agricultural and forest lands, as well as views of the lake and the surrounding mountains are preserved.*
- *The impact of new development on the lake's water quality is minimized through sewer connections and site designs that reduce non-point source pollution.*
- *Future development is concentrated in areas that are or will be served by public sewer service.*
- *The transportation system limits vehicle traffic congestion and enhances pedestrian and bicycle circulation, especially in McHenry and Thayerville.*
- *There are varied and diverse public recreational resources and offerings.*

4.3 Land Use and Development Trends

The Influence Area has experienced considerable land use change since the 1995 Comprehensive Plan. Understanding past land use and development activities, as well as projected future trends helps to inform the Master Plan's recommendations.

4.3.1 Existing Land Use

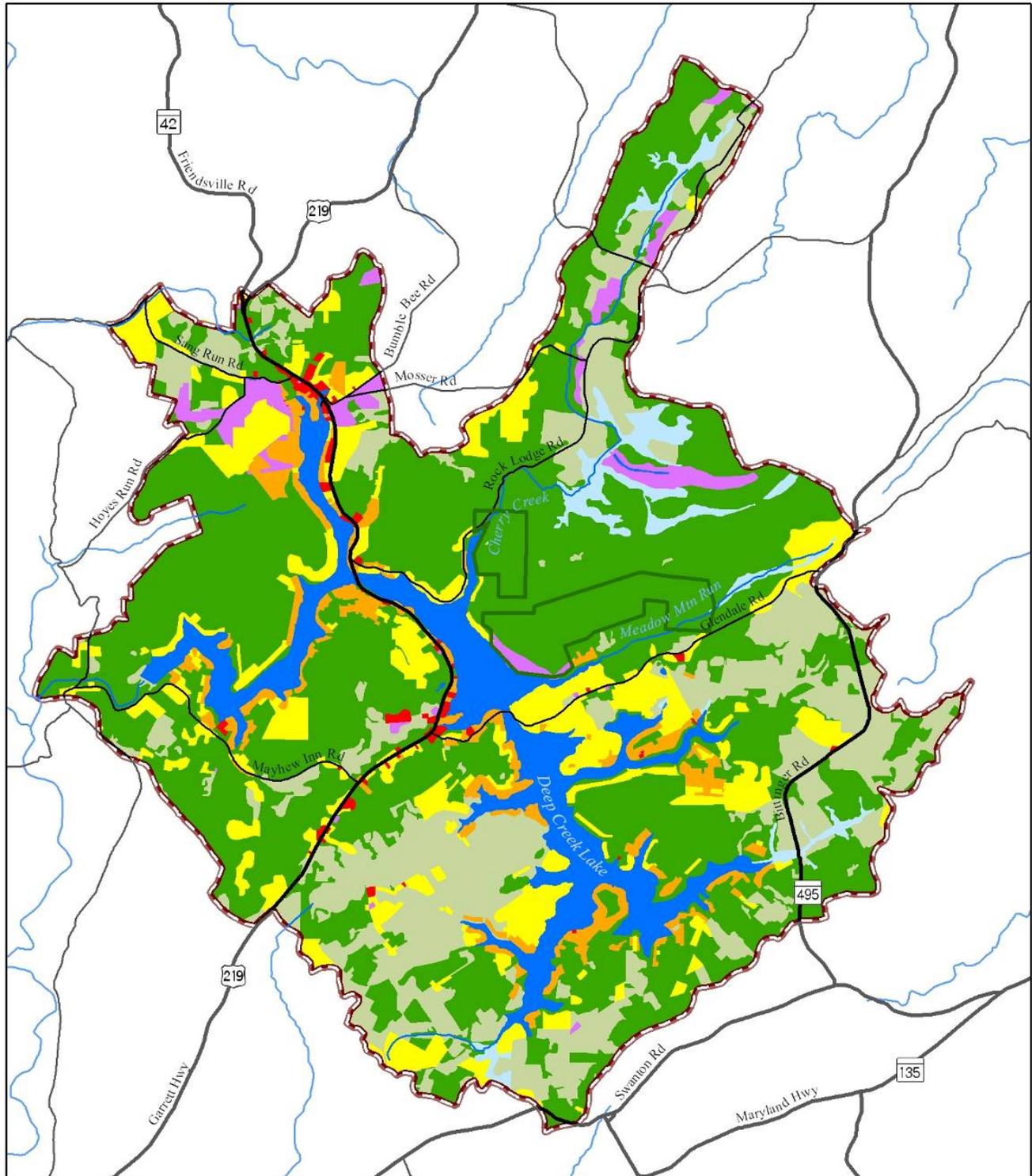
Existing land use as of 2005 is shown on Map 4.2, and land use acreages are listed in Table 4.1. Approximately 19 percent of the Influence Area is comprised of developed areas, including residences, businesses, and resort development. The remaining 81 percent of the Influence Area is resource lands or very lightly developed—primarily forest and agricultural land. Since 1973, approximately 6,500 acres of forest and agricultural land within the Influence Area have been converted to other uses, primarily low and medium density residential development.

Nearly 11,000 acres, or 25 percent of the Influence Area, is protected by state or County ownership; tax exempt status; utilities; or the presence of wetlands or protective easements established through agricultural or other preservation programs. Deep Creek Lake itself, a buffer strip around the lake, and the 1,400-acre Deep Creek Lake State Park are all state-owned, and are maintained by the Maryland Department of Natural Resources (DNR).

Within the Influence Area's forested acreage is the 3,060-acre Rock Lodge Trust property, located north and east of Deep Creek Lake State Park. While not officially protected by government ownership or easement, the Rock Lodge Trust property is managed for timber production.

McHenry and Thayerville (including nearby areas zoned CR1 and CR2), and the land zoned General Commercial at the intersection of US 219 and Sand Flat Road are the only Priority Funding Areas (PFAs) in the Influence Area (see Map 3.2). McHenry and Thayerville are discussed in greater detail in section 4.10.

Map 4.2: Existing Land Use/Land Cover, Deep Creek Lake Influence Area



Deep Creek Lake Influence Area Existing Land Use

Low Density Residential	Agriculture	Deep Creek Lake Influence Area
Medium/High Density Residential	Forest	Deep Creek Lake State Park
Commercial/Industrial	Wetlands	
Other Developed	Deep Creek Lake	

0.5 0 0.5 1
Miles

Table 4.1: Deep Creek Lake Influence Area Land Use/Land Cover

Land Use	1973		2005		Change 1973-2005 (Acres)
	Acres	Percent	Acres	Percent	
<i>Development Lands</i>					
Low Density Residential	1,599	4%	5,323	12%	3,724
Medium/High Density Residential	34	0%	1,766	4%	1,732
Commercial/Industrial	296	1%	316	1%	20
Other Categories ¹	554	1%	958	2%	404
<i>Resource Lands</i>					
Agriculture	10,010	23%	8,410	19%	-1,600
Forest	26,770	62%	21,886	50%	-4,884
Wetlands ²	439	1%	1,060	2%	622
Water	3,706	9%	3,688	8%	-17
Total	40,938	100%	43,408	100%	

1: Includes Institutional, Extractive, Open Urban, Beaches, Bare rock, Bare Ground.

2: MDP's Land Use/Land Cover dataset shows generalized land use types and areas. The extent of wetlands shown in Table 4.1 is used for estimation only.

Sources: Maryland Dept. of Planning 1973 and 2002 Land Use Land Cover dataset (2002 dataset updated by Garrett County to reflect 2005 conditions).

4.3.2 Growth and Development Since 1990

The year-round population of the Deep Creek watershed grew from 3,174 residents in 1990 to 3,845 residents by 2000, a 21 percent increase (compared with a 6.1 percent increase in overall County population during that period).²

Housing grew faster than population between 1990 and 2000. There were 3,787 total housing units (including homes used as permanent residences, as well as those maintained as vacation or rental units) in the Influence Area in 1990, and approximately 5,683 by the end of 2005, a 50 percent increase.³ By comparison, the County's housing stock grew by 30 percent, and new development in the Influence Area accounted for 42 percent of all new housing units in the County during the same period. The faster pace of growth in the Influence Area reflects the continued popularity and development of seasonal residences in the Influence Area.

Between 1997 and 2006, a little over 6,200 acres of land in the Influence Area—primarily forest and agricultural land—was subdivided for residential development, resulting in more than 4,500 lots (including the 2,500-unit Wisp Resort PRD). Approximately 270 residential units had been built on those subdivided lots in the Influence Area as of 2005.

Projected Growth

As discussed in Chapter 2, the Deep Creek Lake Influence Area is projected to experience steady growth through 2030. Approximately 4,050 new housing units, many of them vacation units, are expected to be built during this time period. Table 4.2 shows the number of projected units in each of the Influence Area's sub-watersheds. The Wisp Resort PRD spans portions of Marsh Run, Lower Deep Creek, and the Youghiogheny River sub-watersheds, accounting for the large projected housing unit growth in those areas.

² Please note that census data are not collected for the exact area of the Deep Creek Lake Influence Area. The population data listed above are for Census tract 0005, which nearly approximates the Deep Creek watershed. 2005 population data for smaller areas like Census tracts are not available. As per Chapter 2, the Comprehensive Plan relies primarily on housing units, rather than population, to express growth projections.

³ Housing unit data based on Maryland Property View.

Much of the growth shown in Table 4.2 will be part of proposed or approved subdivisions. The projected growth within *approved* subdivisions is in the “Pipeline” column on Table 4.2. New units that would be built in other subdivisions—those that have been *proposed*, but not yet approved—are listed as “Planned” units, while other projected housing units (either on individual properties, or as part of subdivisions that have not yet been proposed), are labeled “Scattered.”

Table 4.2: Influence Area Existing and Projected Housing Units

	2005 Existing	Projected, 2006-2030				Projected Total Housing Units, 2030
		Pipeline	Planned	Scattered	Total New	
Cherry Creek	128	13	0	19	32	160
Meadow Mountain	0	0	0	15	15	15
Marsh Run	1,294	113	368	50	531	1,825
Lower Deep Creek	335	0	673	20	693	1,028
Shingle Camp Hollow	129	191	0	5	196	325
Cherry Creek Cove	212	0	0	25	25	237
Meadow Mountain Run	204	12	0	22	34	238
Roman Nose Hill	386	0	0	20	20	406
Smith Run	79	96	0	25	121	200
Bee Tree Hollow	82	32	40	45	117	199
Red Run	231	0	0	25	25	256
Thayerville	250	117	0	80	197	447
North Glade Run	734	155	99	45	299	1,033
Green Glade Run	641	40	150	55	245	886
Hoop Pole Run	314	0	39	45	84	398
Blakeslee	99	31	0	70	101	200
Pawn Run	243	1	0	45	46	289
Upper Deep Creek	198	31	6	45	82	280
Youghioghny River	124	186	976	25	1187	1,311
Total	5,683	1,018	2,351	681	4,050	9,733

In addition to this projected residential growth, more than one million square feet of new business, commercial and retail development is projected to be built within the Influence Area by 2030. Expansion of the Wisp Resort, a new exhibition center at the Garrett County Fairgrounds in McHenry, and a new hotel/water park in McHenry are among the major planned non-residential developments. While outside of the Influence Area, development at White Face Farm (see Chapter 3) could also have traffic and infrastructure impacts on the Influence Area.

Capacity Analysis

As part of the Comprehensive Plan, the Maryland Department of Planning (MDP) performed a Development Capacity Analysis to evaluate development capacity in the Influence Area.⁴ The Capacity Analysis estimates the total number of dwelling units that could be built in the Influence Area (regardless of the time period for this development) based on land

⁴ Maryland’s local governments committed to performing Development Capacity Analyses as part of their comprehensive plan updates via a Memorandum of Understanding, signed in 2004 by the Maryland Municipal League and Maryland Association of Counties.

development regulations, the presence of sewer service, and environmental limitations such as steep slopes or wetlands (but excluding considerations such as septic requirements).⁵

Based on the MDP analysis, there is land capacity in the Influence Area for the construction of 24,160 new residential units beyond the 5,683 already present, of which 22,159 could be built outside of the McHenry and Thayerville PFAs (primarily in land zoned LR or RD).

4.4 Impacts of Growth

This Development Capacity data, as well as the projected growth for the Influence Area, should be evaluated in the proper context. At the Influence Area's projected growth rate (4,050 new units by 2030, or approximately 175 units per year), it could take several decades to reach maximum development capacity. However, the capacity of other resources is much more limited.

This section describes the impacts of projected growth and development capacity on the Influence Area's most critical resources: transportation and circulation facilities, public sewer systems, and the water quality of Deep Creek Lake.

4.4.1 Impacts on Transportation

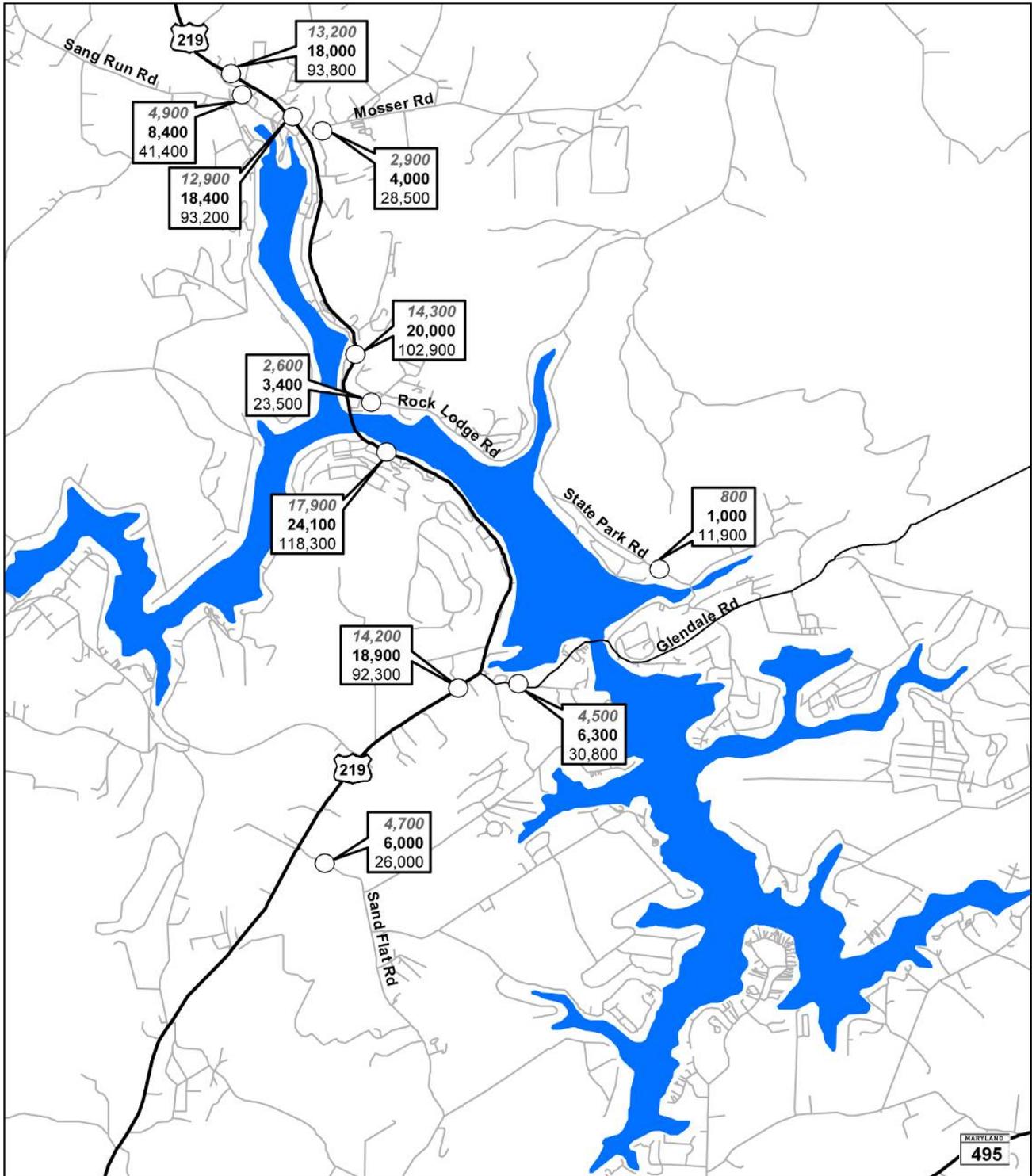
The 4,050 projected new residential units in the Influence Area represent 60 percent of all countywide residential development through 2030. Roadways serving the Influence Area will therefore be the most heavily impacted portion of the Countywide transportation system. Map 4.3 shows existing (2005) and projected 2030 Peak Season Average Daily Traffic (PSADT) in the Influence Area, based on the Comprehensive Plan projections. As Lake-area development increases, the resulting traffic will place higher demands on the US 219 corridor. Table 4.3 shows current and future Level of Service (LOS) at several key intersections in the Influence Area.⁶

Projected 2030 traffic volumes in the Influence Area can be accommodated with the provision of new traffic signals, intersection geometry improvements, access management, and similar approaches. However, the traffic volumes generated by Development Capacity would overwhelm the existing road system (for example, the potential 93,800 PSADT on US 219 north of McHenry would be twice the 2006 average daily traffic on I-68 in Cumberland), and could not be accommodated without significant new or widened road facilities. Please see the Transportation Technical Report in the Plan Appendix for more details. Such new or widened roads would be difficult to locate and build, due to challenging terrain, and the likely negative impacts on community character.

⁵ The full Development Capacity Analysis report can be found in the Comprehensive Plan Appendix, CapacityAnalysis_final.doc.

⁶ As described in the Transportation Research Board's *Highway Capacity Manual*, LOS evaluates the functional performance of roadway segments and intersections (based on capacity, speed, delay, and other factors), and assigns a letter grade characterize that performance. While each person experiences congestion and delay differently LOS A typically represents the very best conditions, while LOS F typically represents the worst, most "unacceptable" conditions, where a roadway segment or intersection cannot accommodate traffic demand. Typically, LOS D or better is typically considered an "acceptable" situation, while LOS E and F are considered unacceptable.

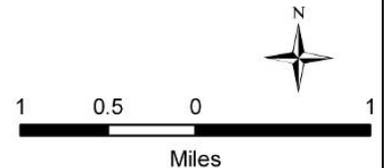
Map 4.3: 2030 Peak Season Average Daily Traffic



Peak Season Average Daily Traffic (PSADT) Volumes

- Traffic Count Station
- ### = 2005 PSADT (based on existing counts)
- ### = 2030 PSADT (based on Comprehensive Plan Projections)
- ### = Development Capacity PSADT

- ≡ Major Roads
- ≡ Other Roads
- Deep Creek Lake



Pinpointing a precise failure point for the system, in terms of an amount of development or a year, requires a more detailed understanding of the future road network than is available at a Comprehensive Plan level of analysis. The subjective nature of each person’s reaction to congestion and delay also complicates attempts to determine a single threshold for system failure. However, based on the change in LOS shown in Table 4.3 (between 2005 and 2030), the Lake-area transportation system (without significant upgrades) would likely begin to exhibit signs of failure during peak seasons with the addition of 6-8,000 new residential units in the Influence Area (i.e., 2-4,000 units beyond this Plan’s 2030 projections).

Table 4.3: Current and Future Traffic Impacts, Influence Area

Intersection	Approach Levels of Service, Peak Season							
	2005 (existing conditions)				2030 (projected growth)			
	NB	SB	EB	WB	NB	SB	EB	WB
US 219 at Sang Run Road ¹	A	A	E	n/a	B	B	D	n/a
US 219 at Mosser Road/Deep Creek Dr. ²	A	A	B	B	A	B	C	C
US 219 at Rock Lodge Road/Deep Creek Dr. ¹	A	A	E	F	B	A	C	D
US 219 at Glendale Road ²	C	B	B	B	C	B	C	C

1: 2030 Analysis assumes new traffic signal

2: Assumes Current Lane Configuration

Source: Transportation Technical Report (see Plan Appendix)

Stop Sign Controlled

Signal Controlled



4.4.2 Impacts on Public Sewer

Sewer service is currently available for residences and businesses in the northern and central portion of the Influence Area (including all PFAs in the Influence Area). By 2030, the County plans to extend the sewer service area to communities bordering the southern portion of the lake, as shown in Map 4.4. Some of these communities have failing or inadequate septic systems.

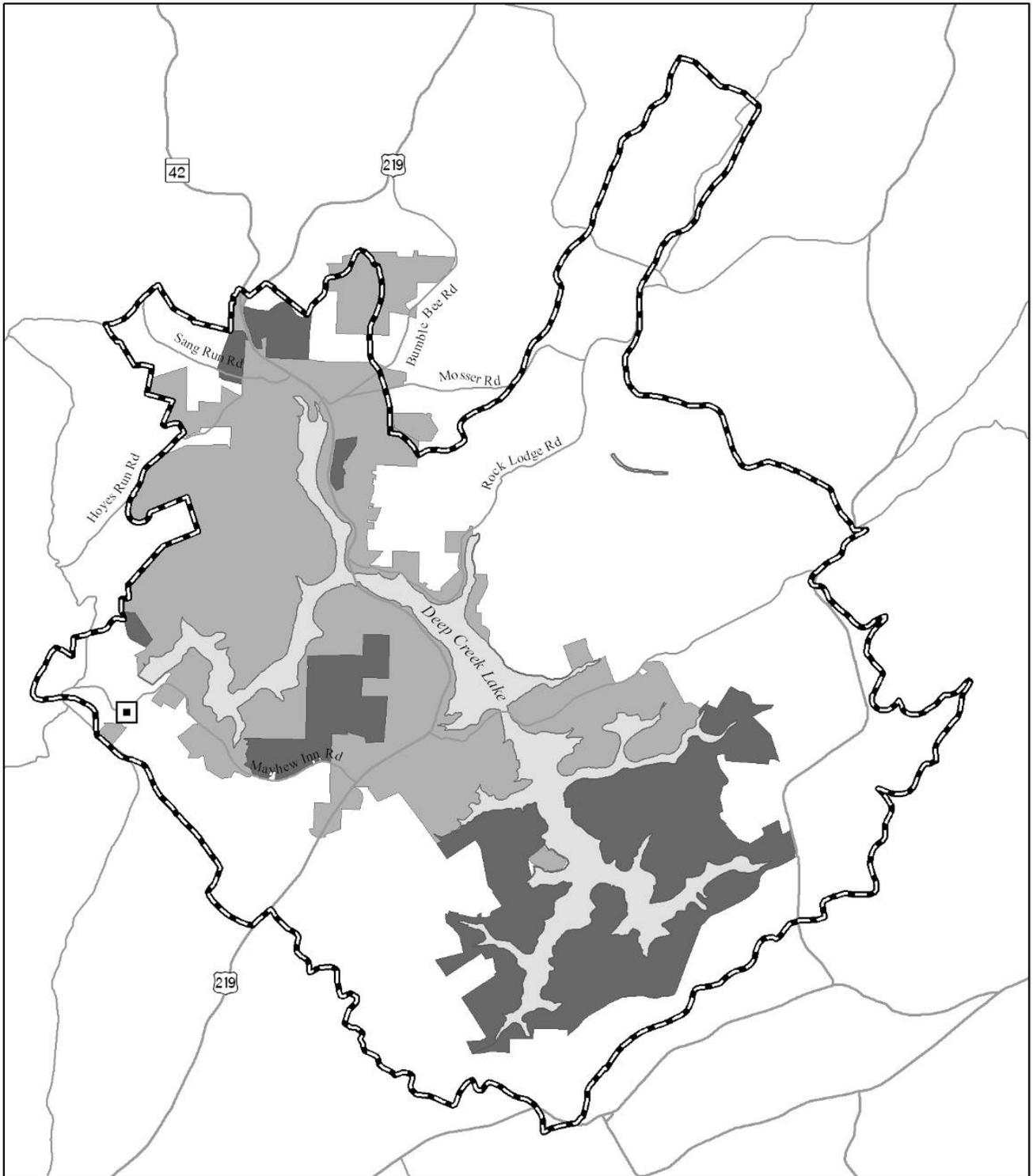
Sewer Demand from Projected Development

All wastewater within the service area is treated at the Deep Creek Lake Wastewater Treatment Plant (WWTP), which discharges into Deep Creek stream just west of the Deep Creek Lake dam (see Map 4.4). Table 4.4 summarizes existing capacity and demand at the WWTP, as well as future demand from projected development.

The Deep Creek Lake WWTP was upgraded and expanded to its current capacity of 2.2 million gallons per day (MGD) in 2007, and currently has unused capacity to serve more than 3,900 future Equivalent Residential Units (ERU—see note 2 in table). As shown in Table 4.4, projected residential and non-residential development in the sewer service area totaling 4,575 ERUs would exceed available capacity before the year 2030. The WWTP would therefore need to be expanded approximately by the year 2025.

The WWTP was designed and sited to allow expansion, and has an ultimate treatment capacity (after expansion) of 3.9 MGD. Such capacity would be more than adequate to serve projected growth in the Influence Area, as well as more than 5,800 additional ERUs of development after 2030. However, this capacity would not be adequate to serve the amount of development that is possible under the Development Capacity Analysis.

Map 4.4: Public Sewer Service in the Influence Area



Deep Creek Lake Sewer Service Area

- Existing Sewer Service
- Future Sewer Service
- Deep Creek Lake Wastewater Treatment Plant
- ⊖ Deep Creek Lake Influence Area

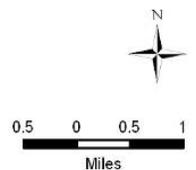


Table 4.4: Sewer Capacity and Demand

	Volume	
	MGD ¹	ERU ²
Permitted Capacity	2.2	8,381
Demand (2007) ³	1.2	4,459
Current Capacity Available for Future Development	1.0	3,922
Projected new residential demand in the Influence Area ⁴	1.1	4,171
Projected new non-residential demand in the Influence Area ⁵	0.1	404
Total projected new demand	1.2	4,575
Net available capacity (deficit), 2030	(0.2)	(653)
Average annual projected (new) sewer demand, 2007-30	<0.1	191
Years before WWTP expansion will be required (3,921 ERU available)/(191 new ERU demanded per year)		21

1: MGD = Million Gallons per Day of wastewater flow.

2: An Equivalent Residential Unit (ERU) is 262.5 gallons per day (gpd). ERUs are used to compare residential and non-residential water and wastewater use. See detailed note in Table 5.2 (Chapter 5, Water Resources Element).

3: Includes active sewer customers and sewer capacity that has been reserved, but not yet used, for future development.

4: Assumes that 75 percent of projected residential demand in the Influence Area would connect to sewer (the remainder would be outside of the sewer service area), and that some existing units currently on septic would also connect to the sewer system.

5: Future non-residential demand based on Table 11.5 (Chapter 11, Economic Development Element). See Water Resources section of the Plan Appendix for detailed methodology.

Expanded Sewer Service Beyond 2030

Regulatory requirements make it impractical to develop a new Wastewater Treatment Plant to serve the Influence Area (even if that plant were not physically located in the Influence Area). In addition, the underlying geology of the Influence Area would also hamper large-scale implementation of alternative wastewater treatment options such as spray irrigation (see Chapter 5, the Water Resources Element). Thus, the Deep Creek Lake WWTP's 3.9 MGD ultimate capacity represents the total amount of wastewater that can be treated within the Influence Area for the foreseeable future.

This fully expanded WWTP (3.9 MGD) could not serve the amount of development that is possible under the Development Capacity Analysis. As shown in Table 4.5, if development capacity were reached, and if the entire capacity of the sewer system was consumed by development, there would still be more than 10,000 ERUs of wastewater demand that would have to be met through septic systems, rather than sewer (in addition to any development that would not seek sewer connections in the first place). Such large numbers of septic systems would likely have a negative impact on water quality in Deep Creek Lake (see Section 4.4.3).

Table 4.5: Sewer Capacity and Demand, Using Development Capacity Analysis

	Volume	
	MGD	ERU
Total residential demand from Capacity Analysis	6.3	24,160
Assumed 25% share of Capacity Analysis development (new residential units) that would not seek sewer connection ¹	1.6	6,040
Total residential demand for sewer from Capacity Analysis	4.7	18,120
Other demand for sewer (conversion of existing residential septic systems to sewer, new non-residential sewer demand)	0.7	2,850
Total demand for sewer service from Capacity Analysis	5.5	20,970
Available WWTP capacity to serve Capacity Analysis demand (Total 3.9 MGD WWTP capacity, minus existing demand as of 2007)	2.9	10,935
Residential sewer demand not met under Capacity Analysis (available capacity minus total demand); new septic systems required	2.6	10,035

1: Approximately 30 percent of new residential development in 2005 was on septic. This analysis assumes that a slightly smaller share (25%) of future development would occur outside of sewer service areas, regardless of WWTP capacity.

4.4.3 Impacts on Water Quality

Deep Creek Lake’s pivotal role for the County’s economy and identity makes preservation of the Lake’s water quality a vital goal for residents, businesses, and visitors. Should the lake become impaired, the County’s economy could suffer irreparable harm. As part of this Comprehensive Plan, the County therefore commissioned an *Assessment of Water Quality Impacts from Potential Land Development, Deep Creek Lake* (the Water Quality Study, May 2007), which used existing water quality data to evaluate the impacts of projected development and the Development Capacity Analysis on the Lake’s water quality.⁷ The Water Quality Study’s key conclusions were:

- Projected development through 2030 is likely to have minor negative impacts on the lake’s water quality. Land use decisions related to projected development need not be *primarily driven* by concerns over water quality impacts.

It is realistic to assume that projected growth can be accommodated, as long as potential impacts on water quality are minimized by encouraging sewer connections, adequate septic system design, stormwater and runoff management, and other measures.
- Maximizing the watershed’s development capacity would likely have similarly minor negative impacts.⁸

The available data used for the Water Quality Study were quite limited, and the study recommended additional field observations and analyses before significant development—such as the amount of growth under Development Capacity Analysis, or the septic system volumes shown in Table 4.5—is allowed to proceed. In 2007, DNR began to collect much of the detailed information described above, with the aim of improving future water quality modeling.

⁷ The full document is included in the Comprehensive Plan Appendix.

⁸ This is true, in part, because runoff from agricultural land in the watershed already adds nitrogen (a primary factor in water quality degradation) to the Lake. The Development Capacity Analysis assumed that agricultural land would be converted to residential land, which would add nitrogen from septic systems.

4.4.4 *Conclusion and Recommendation*

Projected growth through 2030 in the Influence Area can be accommodated with minor improvements to the transportation system and expansion of water and wastewater systems, and would have minor negative impacts on the water quality of Deep Creek Lake.

However, the Development Capacity scenario is unsustainable, because it cannot be adequately accommodated by transportation and sewer infrastructure, and could pose a threat to the Lake's water quality. Sewer calculations suggest that development capacity should be reduced from 24,160 to approximately 13,000 new residential units in the Influence Area. Analysis of the transportation system indicates that a development capacity of as low as 8,000 new residential units may be preferable (although this estimate represents peak season conditions, which occur only a few times per year).

Based on these findings, the Future Land Use Plan for the Influence Area needs to reduce development capacity to a level that will be more sustainable for the transportation network, sewer and water infrastructure, and the Lake's water quality.

4.5 **Proposed Land Use Plan**

The Land Use Plan for the Deep Creek Lake Influence Area, as shown on Map 4.5,⁹ accommodates the projected residential and non-residential growth through 2030 (described in section 4.3.2), plus more than 60 years of development beyond 2030 (assuming approximately 170 new housing units per year—the average annual rate of growth implied by Table 4.2). At the same time, the Plan protects scenic and rural resources by extending AR and RR land classifications into the Influence Area, thereby reducing the maximum residential density in areas not served by water and sewer, and lowering the Influence Area's development capacity.¹⁰

4.5.1 *Changes from the 1995 Land Use Plan Map*

The Deep Creek Lake Master Plan makes significant changes to the 1995 Plan, as described in this section.

Elimination of the Rural Development Land Use

The Rural Development (RD) land use was first established in the 1974 Comprehensive Plan as a primarily residential area. It is currently codified in the Deep Creek Watershed Zoning Ordinance, with the purpose of accommodating “continued growth and development throughout rural areas, while providing minimum standards and safeguards against detrimental activities.” The existing RD district covers the northern portion of the Cherry Creek sub-watershed, and allows single-family residential development on approximately half-acre lots.

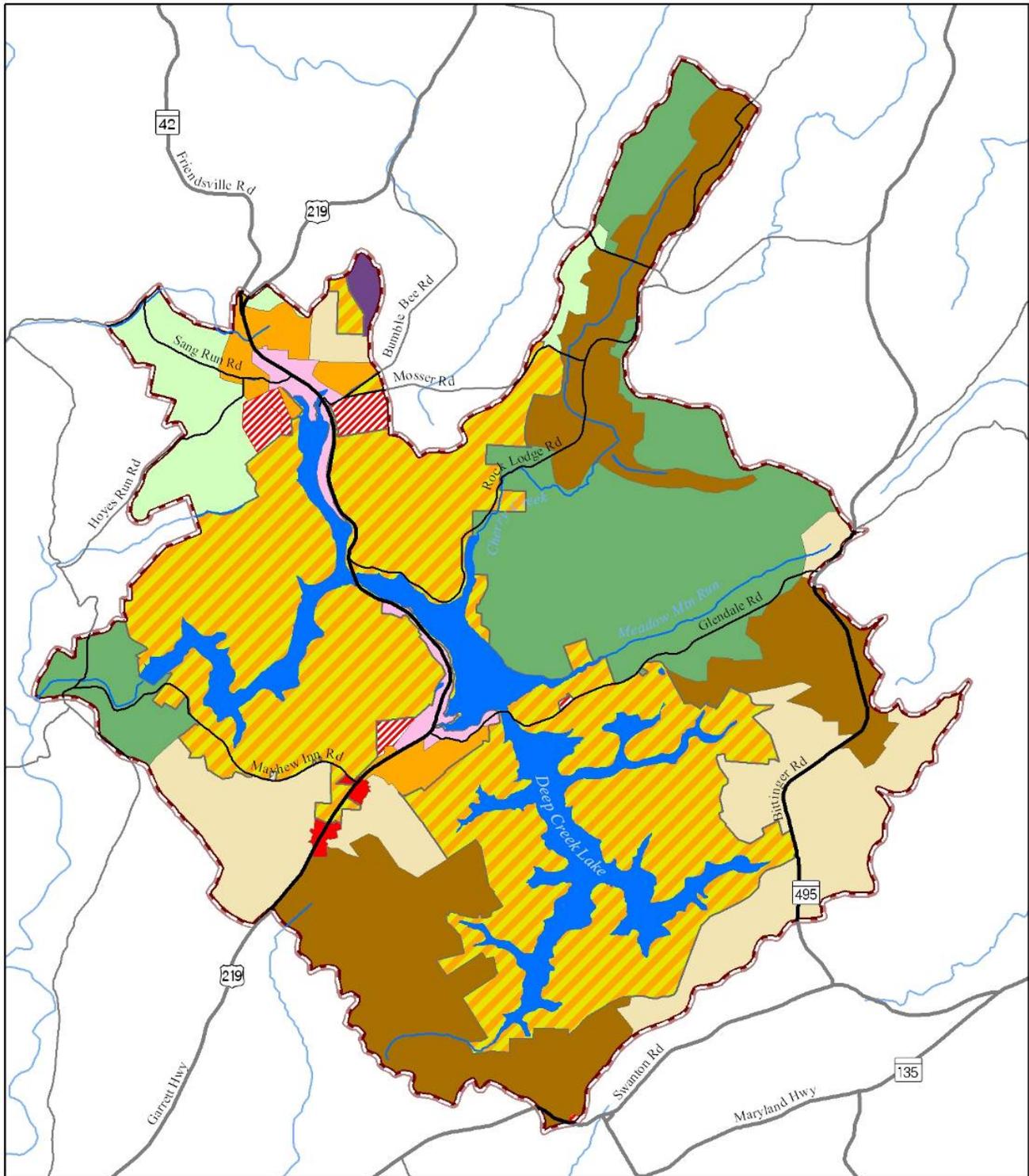
Much of the area in the RD zoning district is in the sensitive environmental area known as the Glades, is used for agriculture or forestry, or is preserved through ownership by the Nature Conservancy. None of the land in the RD district is in the future sewer service area (see Map 4.4). Given these factors, the RD area is recommended for re-designation as Rural Resource and Agricultural Resource land uses.¹¹

⁹ Zoning is based on parcel boundaries, while land classification follows the boundaries of the Influence Area. As a result, the boundaries of the revised zoning map will approximate, but may not exactly match the shapes shown in Map 4.5.

¹⁰ Please see “DCL Land Use Scenarios.doc” in the appendix for more detail on how the Land Use Plan was developed.

¹¹ Note that the “DCL Land Use Scenarios” document in the appendix did not initially convert any RD area to RR. This change was made as a result of public comments on the initial public draft of this chapter.

Map 4.5: Proposed Land Use, Deep Creek Lake Influence Area



Deep Creek Lake Influence Area Proposed Future Land Use

Deep Creek Lake Influence Area	General Commercial	Agricultural Resource
Town Center	Commercial Resort	Rural
Town Residential	Employment Center	Lake Residential 1
Suburban Residential	Rural Resource	Lake Residential 2

Changes to Lake Residential Land Use

Lake Residential (LR) is the land classification applied by the 1995 Comprehensive Plan to rural areas within the Deep Creek watershed, intended for low residential densities (no greater than one residential unit per acre), family-oriented recreation uses, as well as continued farming and forestry.

This 2008 Plan splits the LR land use into two new classifications: Lake Residential 1 (LR1) and Lake Residential (LR2). These classifications both support the same land use *types* as the existing LR areas, but differ in their envisioned maximum residential density. The establishment of the LR1 and LR2 land uses responds to the Deep Creek Lake Master Plan's vision by concentrating future development within sewer service areas (thus minimizing future water quality impacts on Deep Creek Lake), while reducing development potential in the more rural portions of the Influence Area.

- LR1 covers approximately 17,500 acres of land, or 40 percent of the Influence Area.¹² It includes all land currently designated LR that falls within existing or future public sewer service boundary. The land use types and maximum residential densities (one dwelling unit per acre) envisioned for LR1 are unchanged from those in the existing LR land classification.
- LR2 covers approximately 5,700 acres of land, or 13 percent of the Influence Area. It includes all land currently designated LR that falls outside of existing or future public sewer service boundaries. The land use types envisioned for LR2 are unchanged from those in the existing LR land classification. However, the maximum envisioned residential density for LR2 areas is one dwelling unit per two acres.

Extension of AR and RR Land Classifications

Large portions of the Influence Area—particularly areas not near the Lake—are essentially undeveloped, and are characterized by a mix of agricultural and forested land, like much of the rest of Garrett County. Outside of the Influence Area, the Land Use chapter of this Plan emphasizes resource conservation for agricultural and forest lands by expanding AR and RR land classifications. This Master Plan adopts the same approach, designating portions of the Influence Area (almost all of which are currently designated as LR) as either AR or RR.

- Rural Resource (RR) areas cover approximately 7,000 acres, or 16 percent, of the Influence Area, and comprise large, contiguous timber and forest lands. Deep Creek Lake State Park, the Rock Lodge Trust property and nearby portions of the Cherry Creek sub-watershed, and areas west of the Deep Creek Lake dam are designated RR.
- Agricultural Resource (AR) areas cover approximately 8,000 acres, or 18 percent, of the Influence Area, and comprise large contiguous areas predominantly devoted to agricultural use. Much of the Cherry Creek sub-watershed, upper portions of the North Glade Run sub-watershed, and the southwestern portion of the Influence Area (a continuation of a larger AR area that extends past Oakland into Pleasant Valley) are designated AR.

The development guidelines for AR and RR within the Influence Area are the same as those described in the Land Use chapter (sections 3.4.1 and 3.4.2).

¹² LR1 includes almost all of Deep Creek Lake's 3,700-acre surface area.

Extension of the McHenry Growth Area

A small cluster of residential and non-residential development exists near the public safety (State Police) complex, at the intersection of US 219 and Friendsville Road (MD 42). Although this area is outside of the Deep Creek Watershed, the public safety complex itself is served by public sewer, as are some surrounding properties (due to failing septic systems).

The Master Plan designates much of this area as Town Residential, thus expanding the McHenry growth area and making the area eligible for public sewer and water. Extension of TR *zoning* outside of the watershed to these properties is not recommended. Extension of the TR *land classification* recognizes the potential for development of this land to include affordable housing, which is in short supply in the Influence Area. Expanding the growth area north of McHenry would also reduce trips along US 219 in the vicinity of the impacted intersections described in Table 4.3, thus reducing traffic impacts of new development.

Additional Commercial (GC) Uses

McHenry and Thayerville are the two primary commercial and business areas serving the Influence Area, and will continue to play that role over the life of this Plan. However, additional commercial land may be needed to serve future development, particularly in the southern portion of the Influence Area. This Plan expands the existing clusters of General Commercial land on US 219 at Mayhew Inn Road and Sand Flat Road, adding approximately 75 acres of GC land. This new commercial land will serve residents and visitors to the southern portion of the Influence Area (as well as those from areas north of Oakland), and will also reduce some of the demand on the McHenry road network.

4.6 Transportation

The increased popularity of the Deep Creek Lake area as a vacation destination and as a location for permanent and seasonal homes has increased traffic on the roadways leading to and around the Lake, particularly on weekends and in peak summer and winter periods. Visitors come mainly from north and east of the County and travel along the county's rural roadway network to their Lake destinations. As the main access route to the Lake, US 219 is the most heavily impacted by traffic flows, although local roads in McHenry, such as Sang Run Road and Mosser Road also experience traffic impacts.

Given the importance of Lake-area tourism for the county's economy, safe and convenient access to the Lake area is a Countywide priority. It is also in the County's economic interest to provide an adequate circulation network (including non-motorized transportation) within the Lake area, to facilitate access to the area's growing number of commercial and recreational services.

4.6.1 Transportation Conditions and Issues

Most of the significant traffic issues in the Influence Area occur along or near US 219, particularly in the McHenry and Thayerville areas. More detailed planning considerations for these areas are discussed in Section 4.10 below.

Current Roadway Network Inadequacy

Peak-season traffic in the Influence Area varies considerably from average daily traffic. Thus, holiday weekends, and major events at the Wisp Resort (including the Adventure Sports Center) or the Fairgrounds have, and will continue to have a significant traffic impact on the transportation system. During the winter ski season in particular, the intersection of US 219 at Sang Run Road becomes congested, and traffic back-ups along US 219 are common. The evaluation in Table 4.3 shows that traffic has difficulty accessing US 219 from Sang Run Road and Rock Lodge Road. Similar difficulties have been reported for vehicles

turning onto US 219 from Pysell Road. Installation and optimization¹³ of traffic signals on US 219 at Sang Run Road and Rock Lodge Road would alleviate such problems. The new signals, combined with geometric improvements at other intersections (recommended in Chapter 6, the Transportation Element) would alleviate concerns at Pysell Road by creating gaps in the traffic flow to allow safe turning movements onto or off of US 219.¹⁴ Similar improvements are recommended along US 219 at Mayhew Inn Road.



US 219 in McHenry is heavily traveled by local, seasonal, and through traffic.

Future Roadway Network Inadequacies

After traffic signals are installed and optimized, intersections through the Deep Creek Lake area will be able to handle projected traffic volumes through 2030. However, other factors may lead to future inadequacies. US 219 through the Influence Area is characterized by roadside development with numerous driveways, as well as pedestrian and bicycle use. US 219 is mostly two lanes (one lane in each direction), and there are few areas with passing lanes. US 219 also carries a mix of local, recreational, and long-distance traffic (as evidenced by trucks and other heavy vehicles that comprise approximately 10 percent of traffic on US 219).¹⁵

Passing lanes can help to improve LOS on such roads, and the lack of passing lanes on US 219 will result in conditions approaching LOS E by 2030, an unacceptable level.¹³ To avoid such degradation in operating condition, the County and State will need to find ways to improve traffic flow, provide for safe pedestrian and bicycle movements, and separate—to the extent possible—short- and long-distance traffic in the Influence Area. One potential approach is to improve the MD 495 corridor as an alternative access route to serve the Lake area and the municipalities in the Little Youghiogheny River watershed, as discussed in Chapter 6, the Transportation Element.

Development of the White Face Farm business park, as well as associated residential development near the County airport (just outside of the Influence Area) will impact the Influence Area's road network, specifically Bumble Bee Road, Mosser Road, and US 219. The Transportation Element (Chapter 6) contains a more detailed description of this issue.

Pedestrian and Bicycle Conditions and Issues

Sidewalks are generally nonexistent in the Influence Area. While US 219 has shoulders along most of its length, most other road rights-of-way are not wide enough to allow safe use of whatever narrow shoulders exist, or the addition of sidewalks. However, there is an increasing amount of pedestrian activity occurring along, and even in roadways. Particularly

¹³ Optimization refers to setting signal cycles to vary with time-of-day and time-of-year traffic flows, and installing signal equipment that allows for actuation (e.g., where the signal changes from blinking-yellow to a standard green-yellow-red cycle, based on the presence of cross-traffic during an otherwise low-volume time of day).

¹⁴ Once the signal at Sang Run Road is installed and optimized, the Pysell Road/US 219 intersection could be further evaluated to determine the need for signalization.

¹⁵ See the Transportation Technical Report in the Plan Appendix.

in McHenry, visitors walk and bicycle along the edge of, or even within the roadway to visit restaurants and stores, or simply for recreation. This pedestrian and bicycle activity, combined with increased vehicular traffic, increases the potential for conflicts between vehicles and pedestrians/bicycles.

That potential danger is particularly high in the McHenry area. Pedestrian and bicycle activity is high on Deep Creek Drive and Marsh Hill Road, which serve the most intensely developed portions of the Influence Area. The Market Square Shopping Center, new housing, the Fairgrounds, the proposed hotel/water park, and other development along US 219 has also spurred (and will continue to spur) increased pedestrian activity along and across US 219, creating additional conflicts. The safety problem for pedestrians is worsened in the winter, when plowed snow is piled up along the roadside, or when illegally parked cars extend into the roadway.



Wide shoulders and signage for bicycle/pedestrian use along US 219. Note the marked crosswalk in the background.

The Maryland State Highway Administration (SHA) has designated US 219 as a bicycle route, and the segment of US 219 in the McHenry area has posted bicycle route signs and the wide paved shoulders. Other segments of US 219 in the Influence Area were identified by the County for improvements (refer to the Bicycle Needs List in the Plan Appendix). The 2003 Recreational Trails Plan Update (which was incorporated into the 2005 LPPRP, and which is in turn adopted by reference in this Plan) also recommended on-road trails along Glendale Road (from US 219 to MD 495), and along State Park Road, from Glendale Road to Deep Creek Lake State Park (see Section 4.9).

4.6.2 *Transportation Recommendations*

Deep Creek Lake Influence Area Transportation Improvement Fund

The County typically pays for needed transportation improvements through general fund revenues, and has generally avoided the use of eminent domain to acquire right-of-way. As a result, it is difficult for the County to widen roads, improve intersections, or construct pedestrian improvements, particularly in developed areas. In addition, the County will find it difficult to fund the road, bicycle, pedestrian, transit, and other improvements (described in this Master Plan) needed to accommodate projected residential and non-residential development in the Influence Area.

Several approaches exist to expand the County's ability to fund these transportation system improvements. The most common funding mechanisms, and their applicability to the County, are described below.

- Excise Tax. A tax or fee charged for new development. Revenues can be used to pay for capital and operating costs associated with new development, as well as existing needs

or deficiencies. The excise tax can be collected and applied Countywide, or within a designated taxing area. The authority to levy an excise tax must be expressly granted by the Maryland General Assembly. This would likely be the most desirable mechanism for the County, since it allows the greatest degree of freedom in how and where revenues are spent.

- Impact Fees: A fee charged for new development within a designated geographic area. Revenues can only be used to pay for capital costs associated with new development in that geographic area. For example, an impact fee for new development in the Influence Area could pay for bicycle, pedestrian, transit, and road needs that would occur as a result of growth, but could not be used to fund improvements necessary to address existing deficiencies. The County has obtained authority to levy impact fees from the Maryland General Assembly, but has not yet created an impact fee. This tool is more limited than, and not as desirable as, an Excise Tax, but should still be investigated. Collecting an impact fee to pay for transportation upgrades associated with future growth would free up General Fund revenues to pay for transportation improvements associated with existing needs.
- Adequate Public Facilities Ordinance: A tool that links the timing of new development to the availability and adequacy of public facilities (in this case, transportation facilities) needed to service it. APFOs require a development to fund necessary improvements to nearby intersections or roads. However, transportation needs in the Influence Area are more cumulative in nature (e.g., the need for traffic signals along US 219 cannot be tied to a single development). In addition, APFOs are complicated to enforce and manage. Therefore, this mechanism is not recommended.
- Road Clubs: An agreement between developers to jointly fund transportation improvements on a road or roads that serve their developments. Because projected development in the Influence Area will not be concentrated along one road (or even a small set of roads), this mechanism is not recommended.

The majority of new residential development and almost all significant transportation network needs (including existing deficiencies and likely future needs) in the County are in the Deep Creek Lake Influence Area. This Comprehensive Plan recommends that the County create a Deep Creek Lake Influence Area Transportation Improvement Fund. This Fund should take the form of an excise tax (or impact fees, if found to be more suitable) on new development in the Deep Creek Lake Influence Area, and should be used to pay for transportation and circulation improvements, including right-of-way acquisition, within the Influence Area. The size of the tax or fee should be set following a study that would estimate the costs of needed improvements against the amount of anticipated new development.

Traffic Impact Studies

A limited number of roadways provide access to and circulation through the Influence Area, and SHA frequently requires traffic impact studies for development along state roads. However, the County does not have the clear authority to require such studies for proposed developments on County roads. For example, even very large developments such as the Wisp Resort PRD and the Ridgeview Valley PRD were not required to prepare traffic impact studies.

The Subdivision Regulations should therefore be amended to give the Department of Planning and Zoning clear authority (in consultation with the Roads Department) to require a traffic impact study prior to final plat approval. A traffic impact study would be required when one or more of the following criteria are met:

- The proposed development would contain approximately 50 or more residential units, or non-residential development likely to generate a comparable amount of traffic.

- The proposed development would be near (but not on) a state road, but where a SHA traffic impact study is not required.
- The proposed development would be on a County road or near an intersection of County roads where significant traffic, geometric, or safety concerns exist (including the potential for conflicts between vehicles and pedestrians or bicyclists).

A traffic impact study would be in addition to the cumulative impacts addressed by the Transportation Improvement Fund described above. SHA staff should be allowed to review and comment on such impact studies, in conjunction with the County, to ensure coordination of improvements on County and state roads.

Access Management

To avoid future traffic congestion problems on US 219, the County should work with MD SHA to create an access management plan for US 219 in the Influence Area—or, at minimum, the portion of the highway that passes through McHenry. The Plan should identify access management strategies, such as allowing right-in/right-out access only, shared access points, or other solutions to minimize future traffic conflicts due to adjacent development.

As development plans are proposed in the Deep Creek area, in order to preserve capacity and optimize mobility, the County should also consider access management strategies along significant County roadways in the Influence Area, particularly on Glendale Road, Deep Creek Drive, Mosser Road, and Sang Run Road. Absent such strategies, the Planning Commission should carefully assess access management opportunities when new development is proposed along County roads.

Transit Service

The County should assess the future role for a transit shuttle as a service for visitors in the McHenry area, particularly during the busy summer and winter seasons (incorporating or building on the existing Wisp shuttle). In combination with enforcement of parking restrictions along narrow roads such as Marsh Hill Road and Deep Creek Lake Drive, this type of shuttle could help to reduce congestion, as well as illegal parking.

Road Network Recommendations

The County should implement the following improvements to the road network in the Deep Creek Lake Influence Area, in coordination with SHA:

- New traffic signals on US 219 at Sang Run Road and Rock Lodge Road, per table 4.3, to accommodate projected growth. The timing of the installation of these signals will depend on a traffic signal warrant analysis and SHA approval.¹⁶ Once new signals are installed on US 219, work with SHA to optimize signal timing along US 219.
- Improve wayfinding signage in McHenry, especially to guide visitors to parking areas and Wisp Resort shuttles during ski season.
- Reserve right-of-way for and build a new connector road from US 219 at Sky View Drive to the intersection of Sang Run Road and Hoyes Run Road (see Figure 4.2 in Section 4.10). This would provide direct access to the Wisp Resort (via the planned Wisp Resort access road connecting Hoyes Run Road to the resort's road network), relieving congestion at the US 219/Sang Run Road intersection.

¹⁶ A traffic signal warrant analysis is an evaluation of the need for a traffic signal, using the Manual of Uniform Traffic Control Devices (MUTCD), a standard traffic and transportation reference. Even if the warrant analysis indicates the need for a new signal, SHA will make the final decision to install a signal.

Bicycle and Pedestrian Recommendations

Use the 2003 Recreational Trails Plan Map (reproduced as Map 4.8 in Section 4.9) and the trails recommendations for McHenry and Thayerville (see Section 4.10) as the basis for working with property owners and developers to implement a network of paths and sidewalks within and outside of road rights-of-way.

4.7 Water Resources

This section briefly describes the public water system in the Influence Area, and its ability to support future growth. Section 4.4.2 above describes the public sewer system. Chapter 5, the Water Resources Element, presents a more detailed analysis of Countywide water, wastewater, stormwater, and non-point source issues, pursuant to the requirements of House Bill 1141, passed in 2006.

4.7.1 Drinking Water System Conditions and Issues

McHenry Water Service Area

The McHenry Water Service Area provides drinking water for residential, resort, and commercial properties on the west side of US 219 in the vicinity of McHenry, along Marsh Hill Road, and for the Wisp Resort (see Map 4.3). Groundwater wells provide the source for McHenry's water. The McHenry system is currently permitted to withdraw 215,000 gallons per day (gpd), or approximately 819 ERUs.

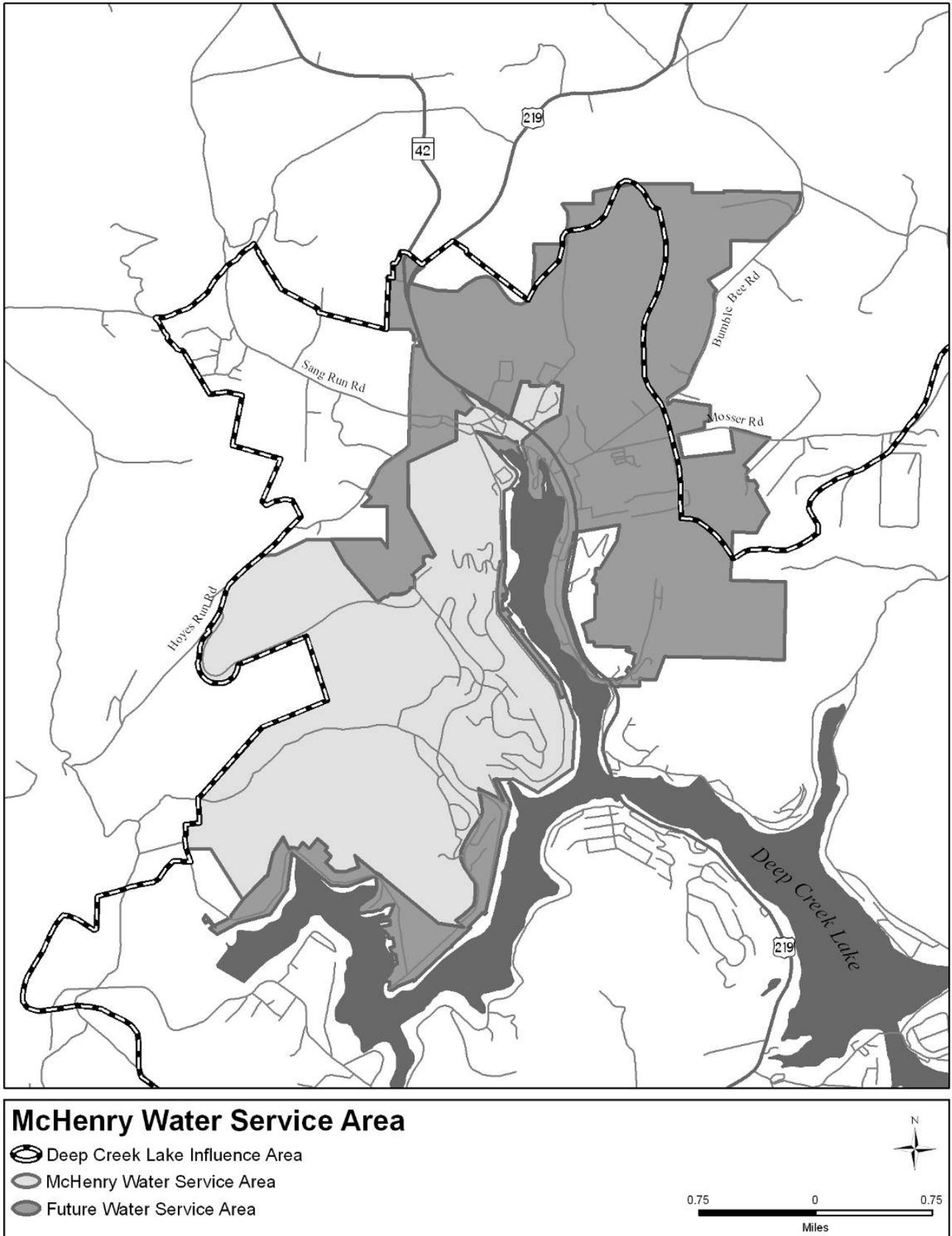
To satisfy additional water demand in the existing (2007) McHenry water service area, the Department of Public Utilities (DPU) is developing the following enhancements:

- A new well and treatment facility on Gravely Run Road, along with a 500,000 gallon storage tank.
- New water transmission lines to link the Gravely Run Road well with an existing water line at Garrett College. In addition to expanding the system boundaries, this "loop" line will add water pressure to the entire McHenry distribution system.
- Two additional wells and treatment facilities in the Wisp Resort PRD.
- An increased groundwater allocation rate from the existing McHenry well.
- Other wells and water sources as necessary.

The planned wells and allocation increases, if approved, would provide approximately 365,000 gpd of drinking water. An additional 470,000 gpd would be required to achieve the desired 1 MGD system capacity (see Chapter 5). These enhancements will expand the water service area to serve the Wisp Resort PRD, the 328-unit Ridgeview Valley PRD, the Exhibition Center (at the fairgrounds), and a number of other existing and proposed subdivisions, homes, and businesses using private wells, some of which are outside of the Influence Area.

DPU is working with the Maryland Department of the Environment (MDE) to finalize the size and capacity of the wells, treatment facilities, and transmission lines described above.

Map 4.6: McHenry Water Service Area



The McHenry system, expanded as described above, will produce enough water to serve the projected development through 2030 within the expanded water service area. In developing this expanded water system, consideration should be given to the broader impacts of large water withdrawals. The relationship between groundwater supply and surface water flows in Hoyes Run and other nearby streams should be taken into account, as should the potential impacts on existing wells near the future water service area.

Thayerville Water Service

Thayerville has public sewer service, but no existing or planned public water service. Citing inadequate water quantity, concerns about water quality in the area, and even the complete loss of production in some residential wells,¹⁷ residents and business owners in Thayerville have petitioned the County to develop a Thayerville water service area. The County has conducted initial engineering studies, and is in the process of locating an appropriate source (including improvement of existing privately-owned wells in the area) to serve Thayerville. Once adequate source water is found, the County will designate a water service area.

4.7.2 *Water Resources Recommendation*

As described in Section 4.4.2, the Deep Creek Lake Wastewater Treatment Plant may need to be expanded to its full 3.9 MGD capacity by approximately 2025, to accommodate growth through and beyond 2030. In its next Comprehensive Plan (likely 2014), the County should make a more detailed evaluation of the need for such expansion.

The County should create a Thayerville water service area, and the Department of Public Utilities should continue its efforts to develop water sources to serve such a district. If possible, the Thayerville water service area should include the proposed/expanded commercial nodes at Mayhew Inn Road and Sand Flat Road.

4.8 **Sensitive Areas and Development Character**

This section summarizes the sensitive natural and visual resources in the Influence Area, as well as issues and recommendations related to the way that new development relates to existing development. Mapping and more detailed data are presented in Chapter 7.

4.8.1 *Sensitive Natural Resources*

Some 110 miles of streams exist in the Deep Creek watershed. Cherry Creek (which drains the southern portion of the Glades) and Meadow Mountain Run are the largest tributaries to Deep Creek Lake.

The 100-year floodplain extends along many of these waterways, and the entire shoreline of Deep Creek Lake is also in the 100-year floodplain. Wetlands in the Influence Area are typically found near the confluence of small streams with Deep Creek Lake. The Glades, which extends from the Cherry Creek sub-watershed into the Bear Creek watershed, is one of the County's largest and most unique wetland areas, containing naturally-occurring peat bogs. These bogs provide habitat for species not otherwise present in the region, and serve important natural flood protection functions.

The Lake itself is also ringed by mountains, many of which are at or above 30 percent slope. Steep slopes are also found along some stream corridors. Limited areas of steep slopes (greater than 30 percent) also follow some waterways.

¹⁷ Source: Garrett County Department of Public Utilities. Some residents of the Mountainside subdivision on Roman Nose Hill had to drill new, deeper wells to replace their original service.

4.8.2 Scenic Protection Areas

The contrast between Deep Creek Lake's serene waters and the high ridges and peaks that surround the Lake create a series of scenic views of the mountains from the Lake and shoreline, and equally scenic views of the lake from surrounding hills. The main threat to scenic qualities in the Influence area has been development on slopes and especially along ridge crests.

The 2004 *Watershed Study* recommended the designation of Scenic Protection Areas—areas where new buildings would have to meet scenic protection criteria that would be set forth in the zoning ordinance. Map 4.7 shows the proposed Scenic Protection Areas in the Influence Area.¹⁸ Scenic Protection Areas include land that:

- Is undeveloped or lightly developed, and has views of, or is visible from the shore of Deep Creek Lake.
- Has a slope between 15 and 30 percent.
- Is not already protected by state or County ownership, and is free of slopes greater than 30 percent—where development is already limited by the Sensitive Areas Ordinance (see Chapter 7).

Given the generalized nature of the Scenic Protection Areas shown on Map 4.7, landowners should be allowed to submit detailed viewshed analyses (in lieu of Map 4.7) to more precisely delineate the portions of their property that meet the criteria described in this section.

The provisions listed below, mandatory in Scenic Protection Areas, should be added to the Zoning Ordinance, and should apply at the time of final plat approval.

Building on Slopes and Crests in Scenic Protection Areas (See Figure 4.1).

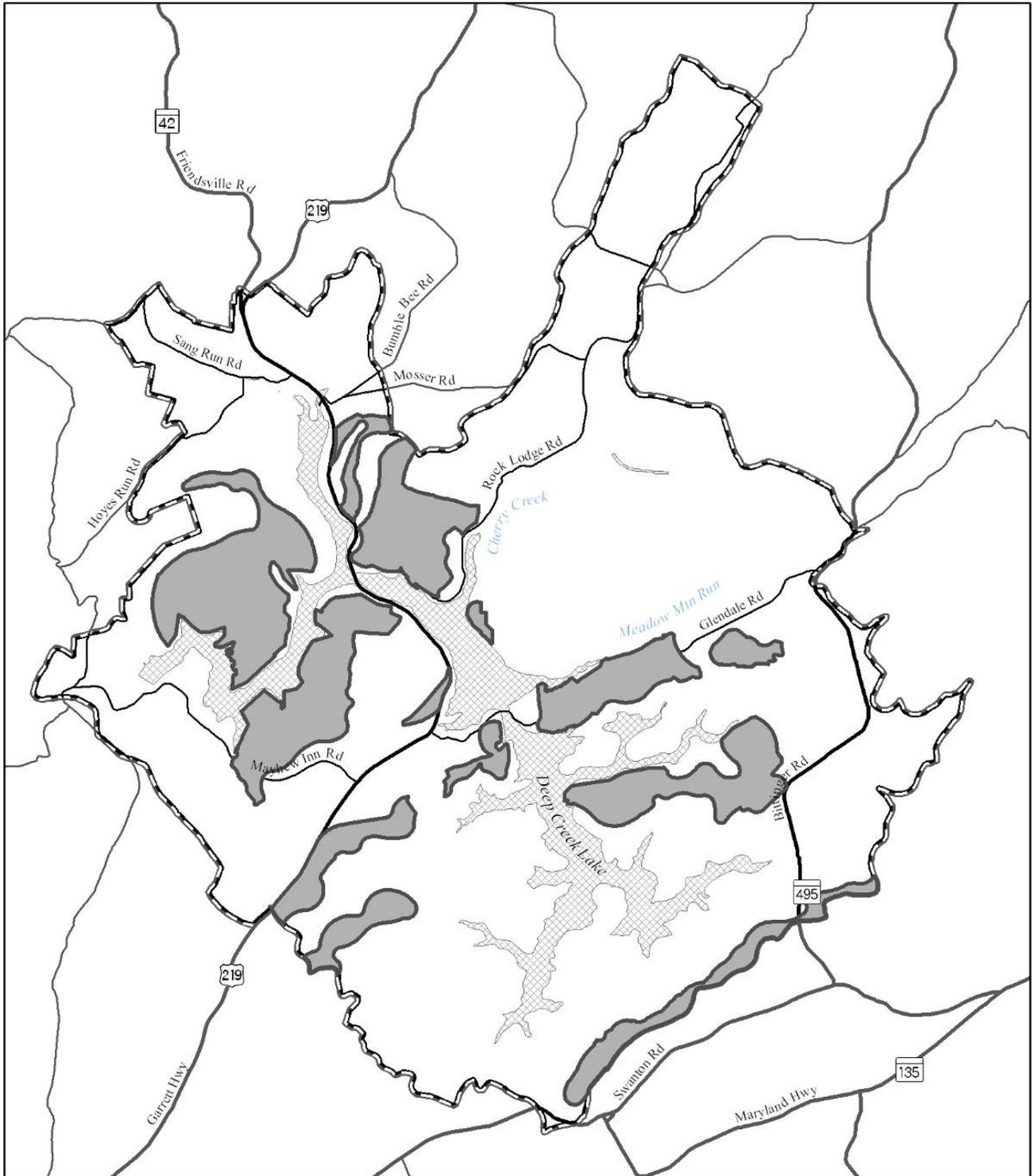
1. Locate buildings below or behind the slope crest, if possible.
2. If building on the slope crest:
 - Retain an 80 percent (summer) screen around buildings;
 - Retain trees at the rear (downhill side) of buildings.
 - Buildings may be no taller than trees to rear of building.
 - Agree to retain and/or replant trees after construction.
 - Replant or replace trees in previously cleared areas.



Scenic views of Deep Creek Lake and the surrounding mountains are important to County residents and visitors.

¹⁸ Scenic Protection Areas were identified through a GIS viewshed analysis, using the Deep Creek Lake shoreline as the viewing location.

Map 4.7: Scenic Protection Areas



Scenic Protection Areas

Legend

- Scenic Protection Areas
- Deep Creek Lake Influence Area

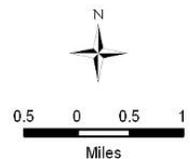
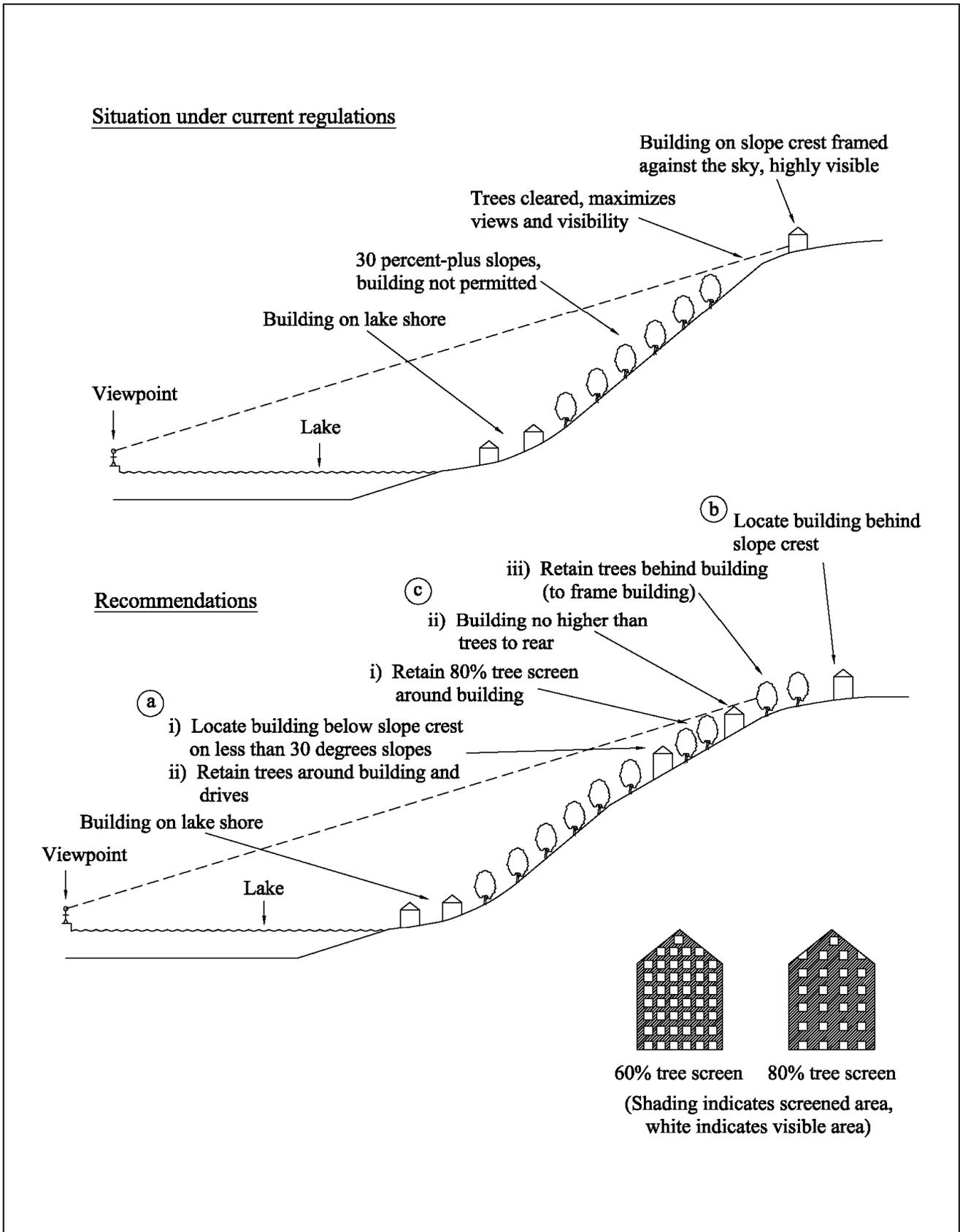


Figure 4.1: Development Options on Slope Crests



Landowners who harvest timber in scenic protection areas should be required to replace trees, should building occur on a site before the forest has regenerated. Landowners would need to be made aware of this requirement when they submit a timber harvest plan. In implementing this policy, a number of details would need to be worked out including what percentage of a harvest would trigger the bonding requirement (a select harvest might not, for example), and what size (e.g., caliper) of trees would have to be replanted.

4.8.3 *Development Character*

The 2004 *Watershed Study* highlighted concerns about the compatibility of new construction with existing development.¹⁹ The *Watershed Study* highlighted the trend toward larger homes, and the problems that can arise as these newer, larger homes are built next to much smaller existing homes. Similarly, the *Watershed Study* identified the need to ensure that new commercial development was compatible with existing commercial uses. To address these issues, the Planning Commission recommended the following actions, which are also recommendations of this Comprehensive Plan.

- Limit the enlargement or extension of existing nonconforming structures under Section 801 of the Zoning ordinance.

This recommendation particularly addresses the development of new large houses (or the major expansion of existing houses) on relatively small lots. Please see Recommendation 4iii.d in the *Watershed Study Recommendations* document in the Plan Appendix for more detail.

- Add additional construction standards (such as building material, roof styles, or similar standards) in the Zoning Ordinance for commercial buildings (see Recommendation 7 in the *Watershed Study Recommendations* document in the Plan Appendix).

4.9 **Community Facilities**

4.9.1 *Parks and Recreation*

Parks

The 1,400-acre Deep Creek Lake State Park is the largest concentration of protected land in the Influence Area, and is also the only public park. The Maryland Department of Natural Resources owns and manages Deep Creek Lake, as well as a buffer strip of land around the lake. The Lake and its entire perimeter are public areas on state-owned land, but aside from Deep Creek Lake State Park, there are no public access points to the Lake.

The McHenry Community Park on Bumble Bee Road is just outside of the Influence Area, although it does serve the Influence Area, particularly McHenry.

Recreational Trails

Existing off-road trails in the Influence Area include the Deep Creek Lake State Park trail system, with approximately 9.5 miles of hiking and mountain biking trails. The Wisp Resort also includes a hiker/biker trail system.

In addition to the on-road trails identified in Section 4.6.1, the 2003 Recreational Trails Plan Update recommends that two off-road trails be developed to serve the Influence Area: a trail connecting Deep Creek Lake State Park and Grantsville (generally via the Pleasant Valley 4-H Center and along Meadow Mountain); and a trail connecting the Wisp Resort with

¹⁹ See Recommendations 4iii.d, 4iv, 7, and 8i in the *Watershed Study Recommendations* document in the Comprehensive Plan Appendix.

Herrington Manor State Park (to be developed in conjunction with the Wisp Resort). Existing trail systems at Deep Creek Lake State Park and the Wisp Resort could be part of these recommended connections. Map 4.8 shows these recommended on-road and off-road trail improvements.

Extending snowmobile trails into the Influence Area would also enhance winter recreational opportunities.

Recreation Center

As described in Chapter 8 (Community Facilities), a new Community Athletic and Recreation Center (CARC) will be built on the campus of Garrett College. This facility will provide indoor recreational opportunities for the Influence Area and the County as a whole.

4.9.2 *Lake Access*

Public access to Deep Creek Lake is an important and sensitive issue. On one hand, the Lake is a publicly-owned resource. On the other hand, owners of lakeside property are concerned about trespassing and nuisances that could result from uncontrolled access. However, as the 2004 *Watershed Study* pointed out,

in the long run...providing more places where these activities can take place will reduce trespassing and nuisance occurrences in places where public access is not desirable. Pressure for Lake access is bound to increase, given continuing development of properties away from the Lake.

The *Watershed Study* recommended, and the Planning Commission endorsed, the creation of public and private/quasi-public areas for access to Deep Creek Lake. Such Lake access points would ideally accommodate or include some or all of the following: scenic views, fishing, picnic tables, put-ins for car-top boats (e.g., canoes or kayaks), and possibly a limited amount of parking. Clear signage should direct visitors to these locations. DNR's 2004 Deep Creek Lake Boating and Commercial Use Carrying Capacity Study specifically called for car-top boat put-ins. New Lake access points would not include boat ramps or other major recreational facilities.

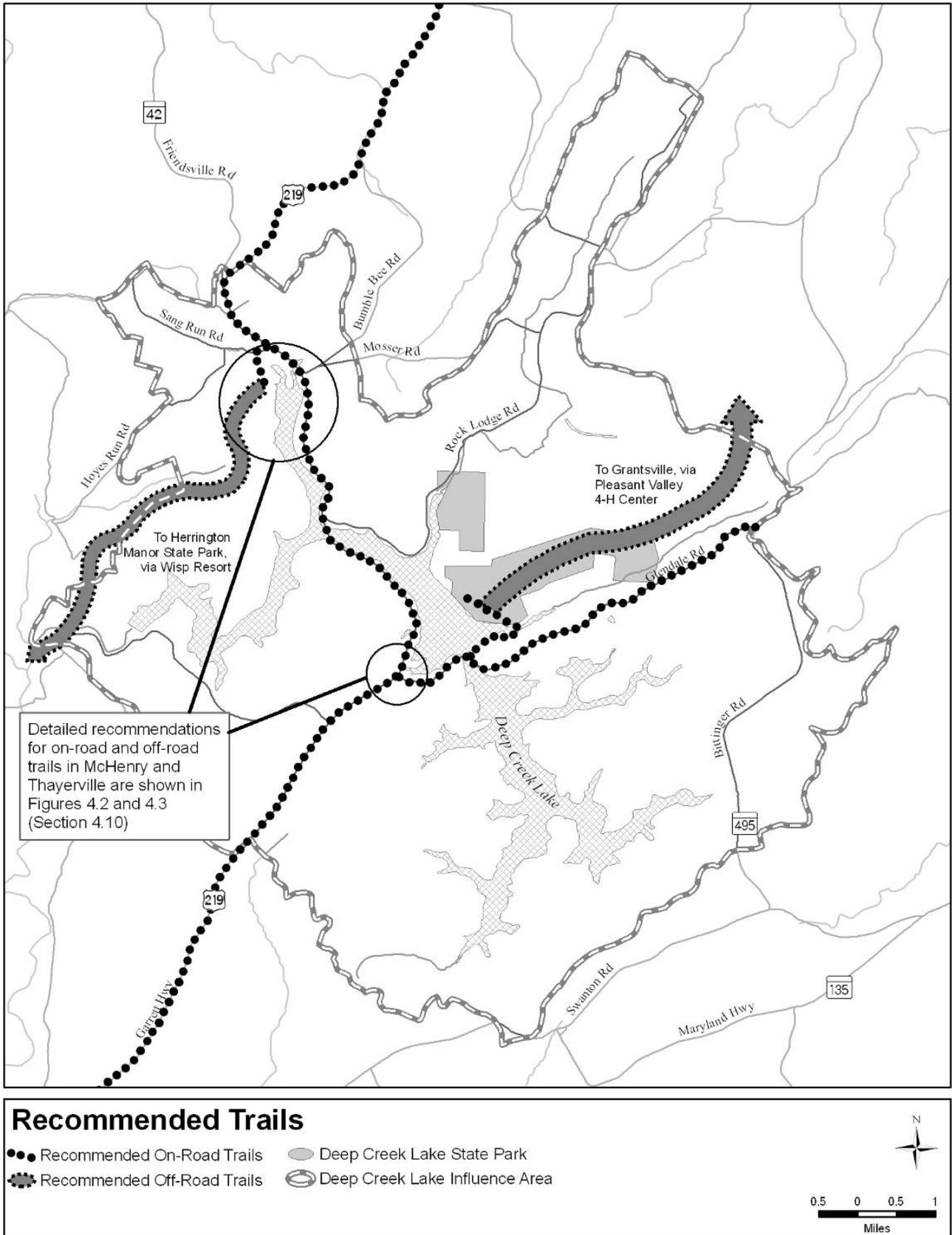
Private/quasi-public access points, such as the areas behind the Honi-Honi Bar or the planned Up the Creek restaurant in Thayerville, are typically created during the site development process, and are encouraged wherever feasible.

The County, in cooperation with DNR, is investigating the following potential public access points:

- Near the Deep Creek Lake dam, with access from Mayhew Inn Road.
- On DNR-owned land along Cherry Creek Cove, near the intersection of Rock Lodge Road and State Park Road.
- Deep Creek Lake State Park, near the Administrative Office.
- South of Point View Inn, near McHenry (see Figure 4.2).
- On the south side of the Deep Creek Bridge (US 219), where there is an existing DNR-owned parking lot and fishing access area.

In addition, the McHenry and Thayerville Improvement Plans (see Section 4.10) recommend other locations for public lake access.

Map 4.8: 2003 Recreational Trails Plan Update – Recommendations



4.9.3 *Public Safety*

The Deep Creek Volunteer Fire Department, located along Deep Creek Drive in McHenry, is the first responder for fire and medical emergencies (including water rescue) in the Influence Area, although fire and medical services from Oakland, Deer Park, and Accident may occasionally be called.

Police protection is provided by the Garrett County Sherriff's Office, based in Oakland, and the Maryland State Police, whose barracks are located at the Garrett County Public Safety complex at the intersection of US 219 and MD 42, north of McHenry.

Tourist activity in the Influence Area, particularly skiing and other outdoors-oriented activities, generates considerable demand for medical services in the Influence Area, and this demand is expected to rise as new seasonal residences are constructed, and as the Lake Area's attractions expand.

In addition, the Deep Creek VFD is surrounded by heavily traveled roads and intersections. As described in Chapter 8, moving the fire station out of central McHenry, to a location on US 219 north of McHenry (possibly at or near the Public Safety Complex) is under consideration.

4.9.4 *Community Facilities Recommendations*

This Plan makes the following recommendations for community facilities in the Influence Area:

- The County should continue to work with the Chamber of Commerce, DNR, and private land owners (including the Wisp Resort) to complete the recommended on-road and off-road recreational trails shown in Map 4.8, as well as the pedestrian and bicycle recommendations described for McHenry and Thayerville (Section 4.10).
- The County should continue to work with DNR to establish public Lake access points, particularly those described in Sections 4.9.2 and 4.10.
- The County should support the relocation of the McHenry Volunteer Fire Department to the area near the Public Safety Complex.

4.10 **Improvement Plans for Centers**

McHenry and Thayerville are the Deep Creek Lake Influence Area's two business and commercial centers, and also the largest Priority Funding Areas near the Lake. These two centers serve residential areas around the lake, as well as other parts of the County, particularly Accident and areas north of Oakland. The 2004 *Watershed Study* recommended Improvement Plans be developed for both centers. Those Plans, described in this section, detail the improvements necessary to enhance McHenry and Thayerville as centers for the Influence Area and the County as a whole.

4.10.1 *McHenry*

For most visitors, McHenry is the gateway to Deep Creek Lake, and is the Lake area's focal point for retail stores, restaurants, and other forms of entertainment. It also has a concentration of community service facilities, such as the Influence Area's only post office and fire station, the Fairgrounds, Visitor Center, Garrett College, and (north of McHenry itself) the County Public Safety Complex. Much of the projected residential and non-residential development in the Influence Area will occur near, or will use the businesses and services located in McHenry.

Issues and Concerns

The basis for the McHenry Improvement Plan is a two-day public workshop that was held on May 4th and 5th, 2007 at Garrett College. The evening of May 4th was devoted to data sharing and description of the key issues facing McHenry. May 5th was reserved for the development and refinement of recommendations for land use, traffic and circulation, urban design, and public facilities in McHenry. Approximately 60 property owners, residents, business owners, and other participants attended.



A break-out group at the McHenry Work Session

The work session focused on the central portion of McHenry (see Figure 4.2), but also considered needs in the broader area around McHenry. Work session participants identified the following major issues that the Comprehensive Plan should address:

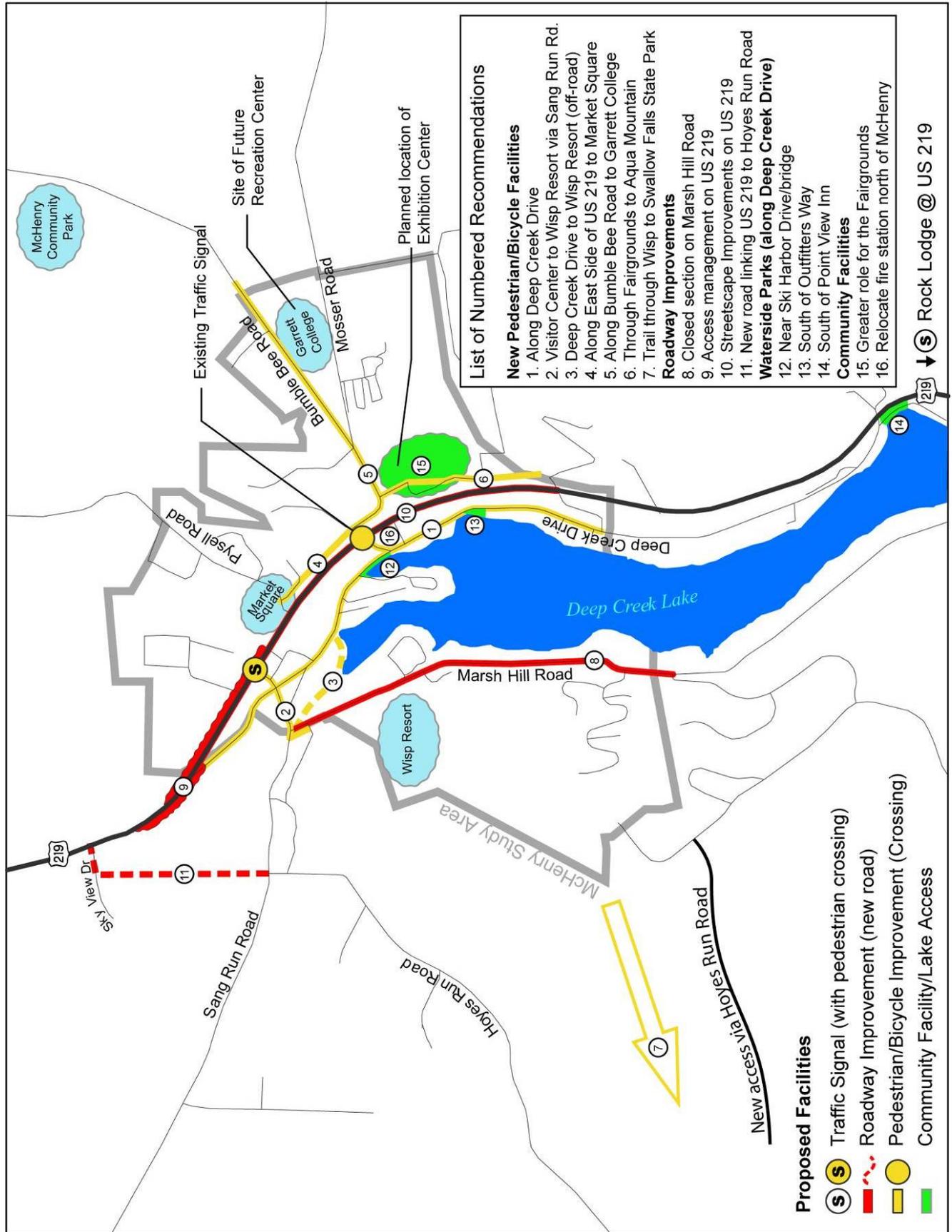
- The types and locations of land uses in McHenry are generally good, but these land uses need to be better linked, especially via pedestrian and bicycle connections.
- There is almost no public access to the lakefront, no public park or open space, and few safe places to walk or bicycle in McHenry. This severely limits recreational opportunities—one of the primary reasons for visiting the area.
- The lack of pedestrian and bicycle connections also forces residents and visitors to use automobiles for nearly all trips. This increases traffic congestion (especially on US 219) and also threatens the safety of those individuals who do choose to walk (often on narrow shoulders or on the road itself), or who wish to cross US 219 to access services and stores.
- Traffic congestion and conflicts on US 219 are worsened by multiple driveways and access points.
- Parking for major events (peak weekends at Wisp, the County Fair) needs to be better controlled, perhaps with enhanced shuttle bus service.
- The fairgrounds (owned and operated by a private entity) host a few events each year (most notably, the annual Agricultural Fair), but are not heavily used at other times, despite their location in the heart of McHenry.
- Signage for parking and services is needed, and should be uniform in design.

Recommendations

The major recommendations that emerged from the work session to address these issues are shown in Figure 4.2, and are described below. Many of the road and pedestrian/bicycle recommendations developed during the work session are described in greater detail in Section 4.6.2, while the potential relocation of the fire station is described in Section 4.9.3.

- #1: Pedestrian/bicycle improvements along Deep Creek Drive. This Plan's primary recommendation is to consider the feasibility of narrowing vehicular lanes or acquiring right-of-way to install a marked bike/pedestrian path on Deep Creek Drive and Marsh Hill Road. The County may also wish to consider the feasibility of converting some segments of Deep Creek Drive to a one way operation, so that an existing travel lane could be converted for bike and pedestrian use.

Figure 4.2: Recommended Improvements for the McHenry Area



- #8: Reconstruct Marsh Hill Road as a closed section. “Closed section” refers to a road that has curb and gutter.
- #9: Access Management on undeveloped properties with TC zoning. The County should work with SHA to develop access management plans for the portions of US 219 shown on Figure 4.2.
- #10: Streetscape improvements along US 219. This recommendation would upgrade the visual character of the segment of US 219 through McHenry (generally from Deep Creek Drive to Timber Ridge Road), and would include geometric improvements, signage, and other measures to enhance pedestrian/bicycle safety (in addition to the pedestrian crossings already described).
- #12-14: Waterside parks. These parks would provide public Lake access, as defined in Section 4.9.2.
- #15: The County should work with the Garrett County Agricultural Fair Board of Directors to encourage additional community events at the Fairgrounds.
- Pedestrian crossings of US 219 at Mosser Road and Sang Run Road. These crossings could include special high-visibility pavement, special lighting, or raised crosswalks, as well as pedestrian islands in between the northbound and southbound lanes of US 219.



Pedestrians and bicyclists often travel on Deep Creek Drive, despite a lack of safe paths or shoulders

4.10.2 *Thayerville*

While much smaller than McHenry, Thayerville is an important commercial hub for the southern and central portions of the Influence Area. Thayerville is home to a cluster of restaurants (including a proposed new restaurant) and stores, as well as the Influence Area’s only movie theater. Figure 4.3 shows the study area used for the Thayerville Improvement Plan, generally the area surrounding the intersection of US 219 and Glendale Road.

Issues and Concerns

A few property owners have expressed interest in development or redevelopment in the Thayerville study area, specifically the Keystone Lime property, the former mini-golf site, and the MUG, LLC property at the corner of US 219 and Glendale Road (as identified on Figure 4.3). No new development has officially been proposed for these locations. However, local landowners and developers believe residential development in the southern portion of the Influence Area and increased traffic in McHenry will continue to make Thayerville an attractive location for commercial development to serve areas outside of McHenry.

The planned Up the Creek restaurant (at the northeast corner of US 219 and Glendale Road) responds to this demand.²⁰ The owners of the Keystone Lime property have also

²⁰ Source: Personal Interview. October 24, 2007. Representative from Land Management, Inc, which manages the Up The Creek site, as well as the Pizzeria Unos/Arrowhead Market/Honi-Honi Bar property.

investigated redevelopment of their property, which was once envisioned as the location of the Exhibition Center, now destined for the Fairgrounds in McHenry. While Keystone Lime plans to continue existing industrial activities in the near future, long-term development options are being considered.

As described in Section 4.7, the lack of public water service in Thayerville is a significant concern for residents and businesses, and is being addressed by the County.

The commercial core of Thayerville has a compact, walkable scale—the Pizzeria Unos/Arrowhead Market/Honi-Honi Bar property is only approximately one-third of a mile from Dry Dock Plaza. Existing and proposed residential areas (Alpine Village, Silver Ridge, and Timberlake) are also within one-quarter mile of the intersection of US 219 and Glendale Road. However, the only pedestrian/bicycle facility in the area is a path and boardwalk along US 219 between the Garrett 8 Theater and Glendale Road.

There are no opportunities for public lake access in Thayerville, although there is private-quasi-public access behind the Unos/Honi-Honi Bar and the planned Up the Creek restaurant. Additional public access or private-quasi-public access (as defined in Section 4.9.2) is desirable.

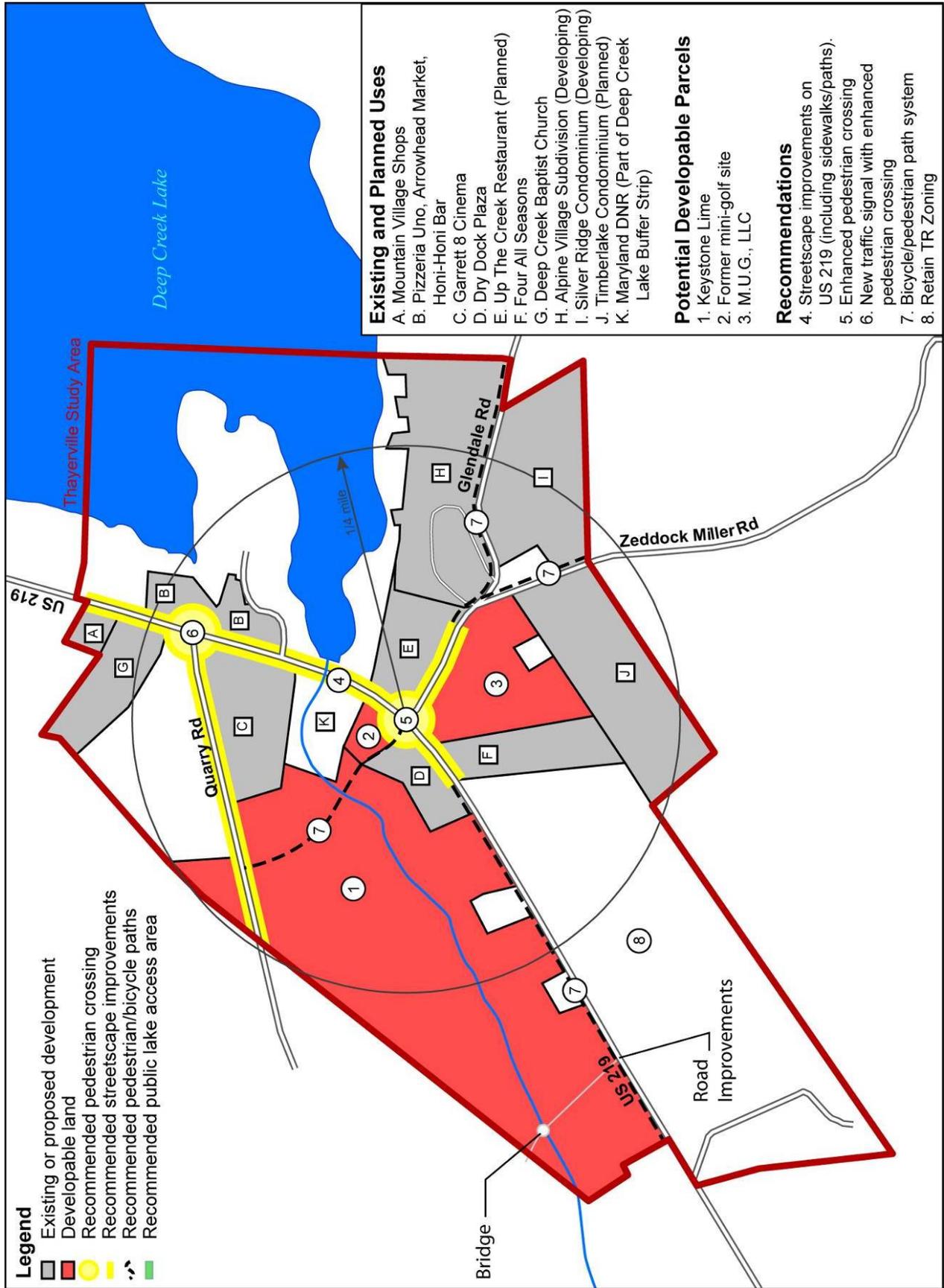
Recommendations

- Recommended improvements for the Thayerville area are shown in Figure 4.3 and described in detail below.
- Streetscape improvements along US 219 and Glendale Road would include a sidewalk or path system, pedestrian-scaled lighting, and a more clearly marked crossing at Glendale Road (perhaps with special high-visibility pavement or raised crosswalks).
- A new traffic signal at the US 219/Quarry Road intersection, with pedestrian crossing amenities similar to those described above for the Glendale Road intersection. This signal could be pedestrian-activated prior to redevelopment of the Keystone Lime property, but would likely need to be converted to standard operation once the Keystone Lime property is redeveloped.
- A new pedestrian path extending from the US 219/Glendale Road intersection to Quarry Road, via the Keystone Lime property.
- New development or redevelopment—particularly commercial uses—in the Thayerville study area should be clustered within one quarter mile of the US 219/Glendale Road intersection.

This particularly applies to the Keystone Lime property, where a previous conceptual plan indicated the possibility of a significant amount of new construction. Redevelopment on this property should cluster higher density/intensity uses at the northern end of the site (near Quarry Road), where they will reinforce the existing and planned activities in Thayerville's core. The circulation system within the redeveloped Keystone Lime property should connect US 219 and Quarry Road, via the planned road and completed bridge over the creek that feeds Arrowhead Cove (shown at the western end of the property on Figure 4.3).

- Areas south of US 219 and west of the Four All Seasons store should retain their TR zoning (which also covers the Silver Ridge and Timberlake properties). All other parts of the study area are zoned TC, and should retain this zoning.
- Encourage private/quasi-public lake access where possible.

Figure 4.3: Recommended Improvements for the Thayerville Area



4.11 Organization and Management

In addition to calling for the creation of this Master Plan, the 2004 *Watershed Study* recommended specific actions to help the County and the Influence Area's citizens manage the increasingly complex land use, transportation, community facility, and other challenges facing the Influence Area. The October 2006 amendments to the Zoning Ordinance implemented many of the *Watershed Study's* recommendations.

This section of the Comprehensive Plan lists the remaining *Watershed Study* recommendations that were endorsed by the Planning Commission, and adopts them by reference.

Adopt a More Proactive Stance Toward Management and Enforcement

In most cases, the zoning, subdivision, and other ordinances are adequate to guide development in the Influence Area. However, enforcement of those ordinances should be improved to ensure that the County's regulatory intent is implemented. Specifically, the County should:

- Support increased state inspection and enforcement of sediment and erosion control standards.
- Hire a zoning inspector.
- Issue citations for illegal parking on public streets.

Waterfront Business

The high value of waterfront property and the residential densities permitted by TC zoning make it difficult to recruit and retain waterfront businesses (such as restaurants), despite the community's desire to retain such establishments. To address this issue, the County should:

- Work "one on one" with individual waterfront businesses at risk of being lost.
- Explore with the local tax assessor the potential for changes in the way that property assessment values are prepared for waterfront businesses.

4.12 Policies and Actions

1. Use the Land Use Plan Map as the basis for revisions to the Deep Creek Watershed Zoning Ordinance and zoning map.
2. Amend the text of the Zoning Ordinance:
 - Remove the RD zoning district.
 - Replace the existing LR district with the LR1 and LR2 districts, as described in Section 4.5.1.
 - Create the AR and RR districts, with the same permitted land use types as LR, and clustering and site layout provisions that match the recommendations for AR and RR Land Classifications in Chapter 3 of this Plan. AR and RR districts would not be eligible for public sewer service.
 - Establish Scenic Protection Areas, with the following provisions, as described in section 4.8.2:
 - Encourage clustering of homes.
 - Encourage placement of non-residential development on the most suitable portion of a tract to preserve open space within developed areas.
 - Establish standards for identifying areas of outstanding scenic quality and for providing incentives to assure that development in such areas is harmonious with their scenic value.
 - At the time of plat submittal, the applicant may submit their own detailed viewshed analysis to determine the extent of Scenic Protection Areas on their property, in lieu of the generalized areas shown on Map 4.7.
 - Limit the enlargement or extension of existing nonconforming structures under Section 801 of the Zoning ordinance, as per Recommendation 4iv of the *Watershed Study*.
 - Add additional construction standards (such as building material, roof styles, or similar standards) in the Zoning Ordinance for commercial buildings, as per Recommendation 7 of the *Watershed Study*.
3. Extend the McHenry growth area (PFA) and TR land classification to include the properties near the intersection of US 219 and MD 42 (as shown on Map 4.5), but do not extend zoning to these properties.
4. Construct the following roadway and pedestrian/bicycle circulation improvements:
 - New traffic signals on US 219 at Sang Run Road and Rock Lodge Road.
 - Improved wayfinding signage in McHenry, particularly to identify parking for tourist activities such as the Wisp Resort.
 - Transportation and circulation system improvements for McHenry as shown in Figure 4.2 and described in Section 4.10.1.
 - Transportation and circulation system improvements for Thayerville as shown in Figure 4.3 and described in Section 4.10.2.
5. Implement the following transportation-related strategies, as described in section 4.4.3:
 - Amend the Subdivision Regulations to give the Department of Planning and Zoning clear authority (in consultation with the Roads Department) to require a traffic impact study prior to final plat approval.
 - Ensure that MD SHA has the opportunity to review and comment on traffic studies related to development near state roads.

- Work with MD SHA to develop an access management plan for US 219 in the Influence Area, focusing specifically on the portion of the highway that passes through McHenry.
 - Develop a County-maintained access management strategy for Glendale Road, Deep Creek Drive, Mosser Road, and Sang Run Road.
 - Consider establishing transit service in the McHenry area for busy summer and winter seasons, incorporating or building on the existing Wisp shuttle.
6. Work with SHA to add the transportation improvements recommended above to the Highway Needs Inventory (HNI) and Consolidated Transportation Program (CTP).
7. Conduct a study to determine the amount of revenue necessary to fund the transportation system improvements, including (but not limited to) the road, pedestrian, bicycle, transit, and other strategies described in this Master Plan. Obtain authority from the Maryland General Assembly to levy an excise tax, and establish such an excise tax (or an impact fee, if an excise tax is not desirable) to pay for these improvements. The final funding mechanism would be designed to balance the need for transportation improvements with economic development considerations.
8. As part of the next Comprehensive Plan update (approximately 2014), evaluate the need to expand the Deep Creek Lake WWTP to its full 3.9 MGD capacity.
9. Update the Water and Sewerage Master Plan as follows:
- Expand the McHenry water system as described in Section 4.7.
 - Define a new Thayerville water service area (based on ongoing efforts to identify water sources to serve development in this area). Consider extending the Thayerville water service area to include the commercial nodes along US 219 at Mayhew Inn Road and Sand Flat Road.
10. Develop public access points at various locations around Deep Creek Lake, including, but not limited to those described in Section 4.9.2 and 4.10.
11. Support relocation of the McHenry Fire Department to the area near the Public Safety Complex.
12. Work with DNR to continue monitoring of water quality in Deep Creek Lake.
13. Adopt a more proactive stance toward management and enforcement:
- Hire a zoning inspector
 - Increase state inspection and enforcement of stormwater management and sediment and erosion control standards (see Policy 6 in Chapter 7, the Sensitive Areas Element).
 - Issue citations for illegal parking on public streets.
14. Support efforts to retain and attract waterfront businesses:
- Work “one on one” with individual waterfront businesses at risk of being lost.
 - Explore with the local tax assessor the potential for changes in the way that property assessment values are prepared for waterfront businesses.

5 Water Resources Element

The purpose of the Water Resources Element, as defined in Maryland House Bill 1141¹, is to establish a clear relationship between existing and proposed future development, the drinking water sources and waste water facilities that will be necessary to serve that development, and measures to limit or control the stormwater and non-point source water pollution that will be generated by new development. This chapter identifies drinking water sources and wastewater treatment facilities needed to support the existing and future development described in the Plan's Land Use Element (Chapter 3). It also identifies suitable receiving waters for existing and future wastewater and stormwater discharges.

Coordination with Garrett County's Municipalities

The eight incorporated Municipalities in Garrett County all offer public water and sewer service to residents and businesses within their boundaries. The Garrett County Department of Public Utilities (DPU) owns and operates all water and wastewater systems (including transmission and collection infrastructure) in Garrett County except for those in the Towns of Accident, Grantsville, and Oakland (DPU provides operator supervisory services in Accident). In addition, the Towns of Mountain Lake Park and Loch Lynn Heights own the wastewater collection lines within their boundaries.

The municipalities are preparing their own Comprehensive Plans, including Water Resources Elements that link future growth in the Towns with the availability of water and sewer resources to serve that growth. However, because of the critical need for the County and the municipalities to coordinate their efforts to address water resources, this County Water Resources Element compiles—to the greatest degree possible—the data necessary to link water resources, growth, and land use for the County and for the towns. The water resources policies for unincorporated portions of the County are listed in this element, while water resources policies for the incorporated municipalities, are set forth in each town's Comprehensive Plan.

5.1 Goals and Objectives

The Water Resources goals for the County are to:

In cooperation with the County's municipalities, maintain a safe and adequate water supply, and adequate amounts of wastewater treatment capacity to serve projected growth.

Take steps to protect and restore water quality, and to meet water quality regulatory requirements in the county's rivers and streams.

Objectives to support the goals are listed below.

1. Assure that existing and planned public water systems meet projected demand.
2. Assure that existing and planned public wastewater collection and treatment systems meet projected demand without exceeding their permitted capacity.
3. Assure that the County's stormwater management policies reflect the most recent state requirements.
4. Pursue land use patterns that limit adverse impacts on water quality.

¹ HB 1141 approved by the Maryland legislature in 2006 requires that a Comprehensive Plan contain a "Water Resources Element".

5.2 Drinking Water Assessment

This section describes existing conditions and projected future demand for drinking water in Garrett County.

5.2.1 Public Water Systems

Approximately 4,300 dwelling units in Garrett County and its towns (24 percent of the County total) receive drinking water from public water systems. Map 5.1 shows existing and proposed public water service areas. Table 5.1 summarizes the water sources, treatment technology, and general needs of the County's public water systems (described according to watershed in this section). Table 5.2 shows drinking water capacity, existing demand, projected future demand, and the projected water surpluses and deficits for each of the County's public water systems. A more detailed description of the aquifers used by these public systems is included in the Water Resources section of the Comprehensive Plan Appendix.

Youghiogheny River Watershed

Crellin

Water for the community of Crellin is drawn from a spring source, with groundwater wells in the Allegheny and Pottsville formations as a back-up. The maximum daily permitted capacity is 45,000 gallons per day (gpd) with demand of 13,500 gpd. Due to concerns over the water quality of the spring source, the County has plans for a new well and upgraded treatment. No expansions to the service area are planned.

Friendsville

The source water for the Town of Friendsville is the Youghiogheny River. The County is permitted to withdraw up to 150,000 gpd for the Friendsville system, but the water treatment plant has a capacity of only 100,000 gpd. The current demand for Friendsville is 83,000 gpd. There are no planned system upgrades or service area expansions.

Keyser's Ridge

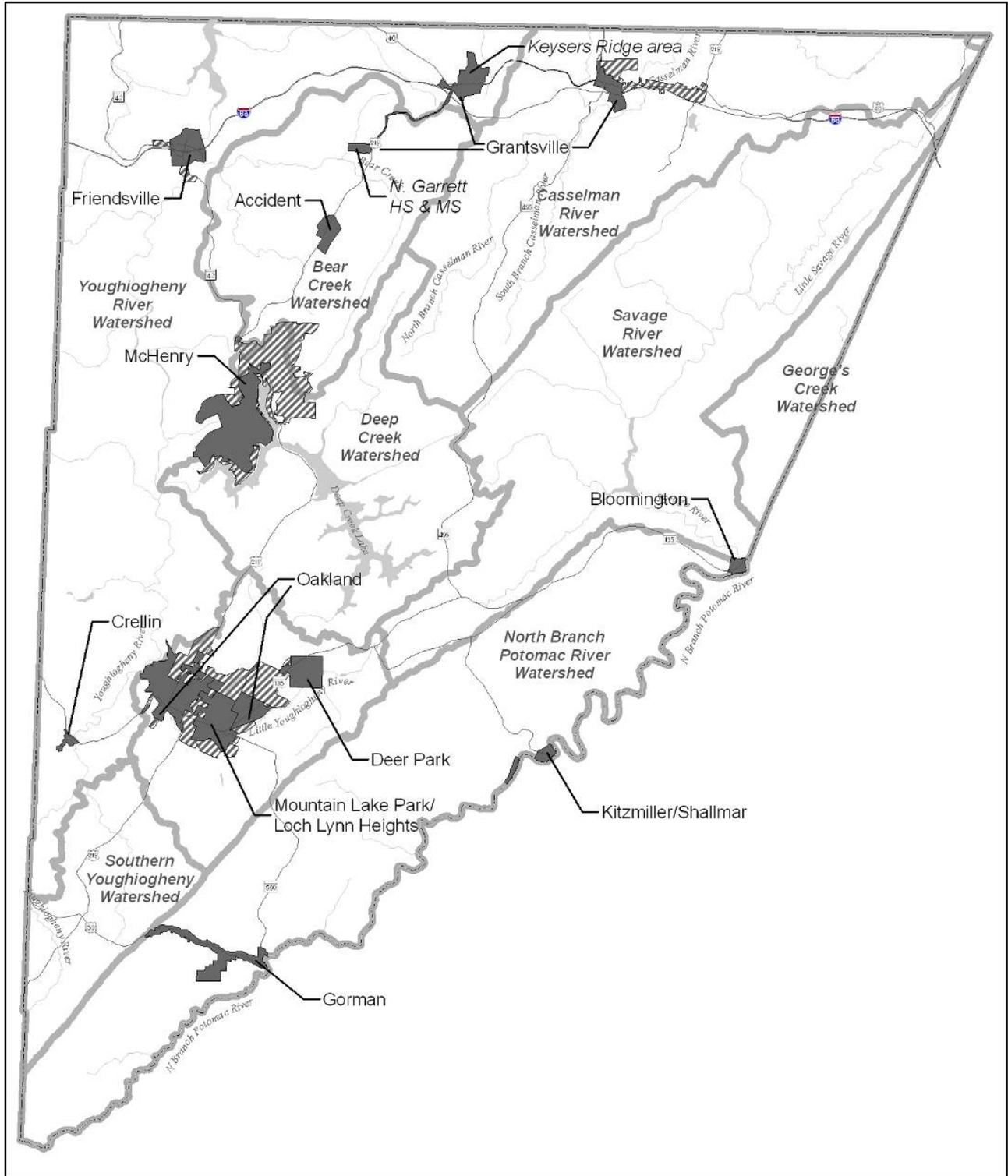
As described below, Grantsville currently supplies water to the Keyser's Ridge area. However, the County is exploring the feasibility of developing a chlorination station and new wells on DNR-owned land near Puzzley Run, to provide water to Keyser's Ridge and the schools. The size of this future water system has yet to be determined, but will be adequate to serve existing and potential future demand in the Keyser's Ridge Business Park, and in the commercial area surrounding the I-68/US-219 interchange. The Grantsville and Keyser's Ridge water systems would be linked to provide redundant water supply in case of system failure.

Bear Creek Watershed

Accident

The Town of Accident (including the Central Garrett Industrial Park) draws its water from two groundwater wells in Hampshire formation. The Accident water treatment plant has a production capacity of 108,000 gpd, with a permitted withdrawal capacity of 70,000 gpd. The current water demand for Accident is 60,000 gpd. There are no planned system upgrades or service area expansions.

Map 5.1 Water Service Areas in Garrett County



Public Water Service Areas

Legend

-  Existing Service
-  Proposed Service
-  Bodies of Water
-  Watershed Boundaries

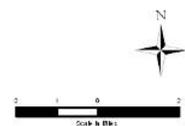


Table 5.1: Public Water System Characteristics

Water System	Source	Treatment Technology	Planned/Potential System Upgrades or Expansions	Water Quality Concerns	Planned/Potential Service Area Extensions
<i>Youghiogheny River Watershed</i>					
Crellin	Groundwater wells in the Allegheny and Pottsville formations.	Chlorination and iron removal	Planned new well, iron filter, chlorine contact tank, and emergency generator.	High iron levels.	None
Friendsville	Youghiogheny River	Sand filter	None	None	Future Growth Area (see Chapter 3) along MD 42 south of town.
<i>Bear Creek Watershed</i>					
Accident	Groundwater wells in the Hampshire formation.	Chlorination	Planned replacement of water storage tank	None	None
<i>Little Youghiogheny River Watershed</i>					
Deer Park	Groundwater wells in the Greenbrier formation.	Chlorination, iron removal	None	None	None
Mountain Lake Park/Loch Lynn Heights	Springs and groundwater wells in the Pocono and Greenbrier formations.	Chlorination	Rehabilitation of water distribution lines to reduce system water loss. Additional wells and filtration. New wells at Landon's Dam.	Sedimentation and poor water quality.	None
Oakland	Youghiogheny River and Broadford Lake	Chlorination	None	None	Planned extension to the Lowes store (US 219 north of the Town), areas along MD 135 east of Mountain Lake Park.
<i>Casselman River Watershed</i>					
Grantsville	Springs and groundwater wells in the Allegheny and Pottsville formations.	Chlorination and filtration	Potential need for additional treatment and storage capacity to support system expansion	None	Planned extension MD 669 to Pea Vine Road and Dorsey Hotel Road; east along US 40.
<i>North Branch Potomac River Watershed</i>					
Bloomington	Savage River	Slow sand filter	Potential need to replace 1980 treatment plant	None	None
Gorman	Groundwater wells in the Greenbrier and Mauch Chunk formations.	Chlorination	Potential need for additional well to support system expansion to 50,000 gpd.	None	Planned extension to Table Rock Road and a portion of Fairview Church Road.
Kitzmilller/Shallmar	Groundwater wells in the Allegheny and Pottsville formations, impoundment on Wolf Den Run	Activated carbon filter	Potential need for additional well to replace the Wolf Den Run source.	Sedimentation (Wolf Den Run impoundment).	None
<i>Deep Creek Watershed</i>					
McHenry	Groundwater wells in the Greenbrier formation.	Chlorination	Additional wells and treatment facilities (see Section 4.7.1)	None	Planned extension to a large area surrounding McHenry and the Wisp Resort (see Section 4.7.1)

Table 5.2: Drinking Water Demand and Capacity

		Crellin	Friendsville	Accident	Deer Park	Mountain Lake Park/ Loch Lynn Heights⁷	Oakland⁷ (Includes expansion to Lowe's site and surrounding areas)	Grantsville (Includes Chestnut Ridge, Schools, Pea Vine Road extension)	Keysers Ridge (current service: Grantsville; future service: new source)	Bloomington	Gorman	Kitzmillier/Shallmar	McHenry⁸
Existing Water Production ³	gpd ¹	45,000	100,000	70,000	72,000	343,000	590,000	100,000		43,000	40,000	63,000	215,000
	ERU ²	172	380	267	274	1,307	2,248	380		164	152	240	819
Demand, 2007	gpd	13,500	83,000	60,000	37,000	252,000	400,000	47,000	13,000	38,000	35,000	20,000	150,000
	ERU	51	316	229	140	960	1,524	179	50	145	133	76	571
Net Available Capacity, 2007	gpd	31,500	17,000	10,000	35,000	91,000	190,000	40,000		5,000	(8,000)	43,000	-
	ERU	120	64	38	134	347	724	151		19	(30)	164	-
Projected New Residential Demand, 2030 ⁴	gpd	4,544	6,563	6,563	19,688	90,300	109,988	72,250	-	5,564	4,732	7,877	740,250
	ERU	17	25	25	75	344	419	275	-	21	18	30	2,820
Projected New Non-residential Demand, 2030 ⁵	gpd	-	1,000	3,338	-	7,500	63,150	18,950	63,000	-	-	-	106,050
	ERU	-	4	13	-	29	241	72	240	-	-	-	404
Total Projected Demand	gpd	18,044	90,563	69,900	56,688	349,800	573,138	138,200	76,000	43,564	39,732	27,877	996,300
	ERU	69	345	266	216	1,333	2,183	526	290	166	151	106	3,795
Future Capacity, 2030 ⁶	gpd	45,000	100,000	70,000	72,000	343,000	590,000	100,000	0	43,000	50,000	63,000	1,000,000
	ERU	171	381	267	274	1,307	2,248	381	0	164	190	240	3,810
Net Available Projected Capacity (Deficit), 2030	gpd	26,956	9,438	100	15,313	(6,800)	16,863	(38,200)	TBD	(564)	10,268	35,123	3,700
	ERU	103	36	0.4	58	(26)	64	(146)	TBD	(2)	39	134	14

Source: Garrett County Department of Public Utilities and ERM

1: gpd = gallons per day

2: One Equivalent Residential Unit (ERU) equals 262.5 gallons per day (gpd). An ERU represents the average amount of water used by one household. ERUs are used by the Department of Public Utilities to calculate residential and non-residential (e.g., businesses) water demand on a common basis—to enable an “apples to apples” comparison of water supply and demand. For example, in 2007, there were approximately 180 residential units in Deer Park, and 274 ERU of water demand—indicating almost 100 ERU of demand from Deer Park’s businesses.

3: Indicates the more restrictive of either MDE’s groundwater appropriations permit, or the system’s design capacity.

4: For towns: reflects projected housing units added by 2030, from Table 2.3, plus any specific system expansions listed in Table 5.1. See the Water Resources section of the Plan Appendix for detailed methodology for unincorporated areas.

5: Future non-residential demand based on Table 11.5. See Water Resources section of the Plan Appendix for detailed methodology.

6: Incorporates all ongoing or planned capacity upgrades.

7: Oakland, Mountain Lake Park, and Loch Lynn Heights have all indicated interest in annexing unincorporated land that lies in between and around the three jurisdictions, as shown in Chapter 3, the Land Use Element (Map 3.8). There are approximately 338 existing residences in this Future Growth Area. This plan assumes that approximately half of those units would be served by the Oakland water system, with the other half being served by the Mountain Lake Park/Loch Lynn Heights system.

8: Please see section 4.7.1 for more detailed discussion of the McHenry water system.

Little Youghiogheny River Watershed

Deer Park

The Town of Deer Park draws its water from groundwater wells in the Greenbrier formation, with a permitted withdrawal capacity of 72,000 gpd. The current water demand for Deer Park is 37,000 gpd. There are no plans for system upgrades or expansions of the Deer Park water service area.

Mountain Lake Park/Loch Lynn Heights

The towns of Mountain Lake Park and Loch Lynn Heights draw water from groundwater wells in the Pocono and Greenbrier aquifer and springs, located some two and half miles southeast of the town of Loch Lynn Heights on the western slopes of Backbone Mountain. Maximum daily permitted withdrawal for this area is 343,000 gpd, with a current demand of 252,000 gpd. The Department of Public Utilities (DPU) has had to issue "boil water" warnings in the past, due to poor water quality from the springs due to sedimentation. In an effort to eliminate the reliance on the spring sources, additional wells and a possible filtration plant are being planned. According to DPU, the wells, which would be drilled near Landon's Dam, could supply as much as 275,000 gpd of drinking water. The County and Town also plan to rehabilitate the system's water distribution lines to reduce system water loss, which currently accounts for as much as 50 percent of produced water. There are no plans to expand the service area at this time.

Oakland

The Town of Oakland withdraws water from Broadford Lake and the Youghiogheny River. The maximum permitted withdrawal from Broadford Lake is 420,000 gpd, while the maximum permitted withdrawal from the Youghiogheny River is 170,000 gpd, for a total permitted withdrawal of 590,000 gpd. Oakland's water treatment plant can process up to 2 million gallons per day (MGD) of water. The Oakland system also serves the Southern Garrett Industrial Park, the Southern Garrett Business and Technology Park, the former Bausch and Lomb property, and the new Roads Department facility (all on MD Route 135, east of Mountain Lake Park), and the Wood Products, Inc. site southeast of Oakland. The Town is planning to extend water service north along US-219 to the site of a new Lowes store (including nearby residential areas with failing well and septic systems), which would consume approximately 50,000 gpd of water.

Casselman River Watershed

Grantsville

The Town of Grantsville draws its water from groundwater wells in the Allegheny and Pottsville formations and natural springs. Grantsville also supplies water to the Northern Garrett Industrial Park, the Keyser's Ridge area, and Northern Garrett High School and Middle School. The maximum daily withdrawal for the Town of Grantsville is 100,000 gpd. The current demand for Grantsville is 60,000 gpd, including 13,000 gpd for Keyser's Ridge. A service expansion along Route 669 to Pea Vine Road and Dorsey Hotel Road is planned, which would increase water demand by 46,000 gpd.

North Branch Potomac River Watershed

Bloomington

The source water for the community of Bloomington is the Savage River. The capacity of the water treatment plant is approximately 43,000 gpd, and current demand in Bloomington is 38,000 gpd. The permitted maximum daily withdrawal from the Savage River is 58,000 gpd. At this time, there are no planned system upgrades or expansions to the service area. Any

new system expansion would require increased withdrawals from the Savage River and capacity upgrades to the water treatment plant, including increased treatment requirements for surface water sources.

Gorman

Water for the community of Gorman is drawn from groundwater wells in the Greenbrier and Mauch Chunk formations. Demand is 35,000 gpd, while system capacity is approximately 40,000 gpd (this includes a water supply line installed by the Mettiki corporation). There are plans to expand the service area to Table Rock Road and a portion of Fairview Church Road, which will require additional water sources and an amended appropriation permit to increase the maximum daily withdrawal. The County has requested that MDE expand the Gorman system's water appropriations permit to 50,000 gpd.

Kitzmilller/Shallmar

Water for the Town of Kitzmilller and nearby area of Shallmar is drawn from groundwater wells in the Allegheny and Pottsville formations, and an impoundment on Wolf Den Run. The water treatment plant has a rated capacity of 86,000 gpd, with a maximum permitted withdrawal of 63,000 gpd, and demand of 20,000 gpd. An additional well is being planned to replace the Wolf Den Run impoundment, which is subject to siltation. After completion of the second well, the impoundment would be retained as a redundant water supply in case of well failure. There are no plans for service area expansion.

Deep Creek Watershed

McHenry

The McHenry system serves areas around the northern end of Deep Creek Lake. Water for the McHenry system is drawn from groundwater wells in the Greenbrier formation, with a maximum permitted withdrawal of 150,000 gpd. Demand in the McHenry system in 2007 was also approximately 150,000 gpd, meaning that the system could not support any additional demand.

The County is planning a significant expansion of the McHenry system, with additional wells, treatment and storage facilities, and service area expansions onto Mosser Road, Gravelly Run Road, Deep Creek Drive, Shingle Camp Road, Stockslager Road and Sandy Beach Road (see Map 4.6). The expanded McHenry water system would have a total capacity of approximately 1.0 MGD.

5.2.2 *Private Water Systems*

All residents in portions of Garrett County outside of public water systems (approximately 14,000 homes, or 76% of all homes in the County), obtain their water from private wells or springs. Since 1945, approximately 12,000 wells have been drilled in Garrett County for individual residences.² These wells draw their water from a variety of water-bearing formations—typically the nearest available formation—in the County, with no single formation being prevalent.³ Although water quality from wells and springs systems is generally good, these systems are vulnerable to pollution from septic systems and other sources. This is especially true in cases where wells and/or septic systems predate current health regulations related to parcel size and system design.

² Source: Western Maryland Resource Conservation and Development Council. 2006. Garrett County, MD Water Well Inventory. Wells drilled prior to 1945 were not inventoried.

³ Individual wells are generally drilled into the nearest underlying water bearing formation, generally characterized by the 1968 Geologic Map of Maryland, developed by the Maryland Geologic Survey (<http://www.mgs.md.gov/esic/geo/gar.html>).

5.2.3 *Commercial and Agricultural Use*

Overall Commercial Water Use

All of the County's major business and industrial parks, as well as most of its major commercial areas (see Map 11.1 in Chapter 11, the Economic Development Element) receive public water from one of the systems described in section 5.2.1. Since 1945, 571 wells have been drilled in Garrett County for industrial and commercial use.⁴

The Thayerville area in the Deep Creek watershed is the largest business/commercial area without public water. As described in Chapter 4, the Deep Creek Lake Influence Area Master Plan, the County has conducted initial engineering studies, and is in the process of locating an appropriate water source to serve Thayerville. Once source water is found, the County intends to designate a water service area.

Specialized Commercial Water Uses

The Wisp Resort draws water from Deep Creek Lake—and stores that water at the top of Marsh Mountain—for snowmaking activities during the winter ski season. Most of this water eventually returns to the Lake as snowmelt. Adventure Sports Center International (ASCI) also withdraws lake water to fill and replenish its recirculating whitewater course.

The Oakland Country Club golf course irrigates extensively during the summer months, using on-site ponds fed by Bradley Run, a tributary of the Little Youghiogheny River.

Agricultural Water Uses

Natural rainfall is generally adequate to support agriculture in Garrett County. Some farmers use individual groundwater wells (approximately 288 have been drilled in Garrett County since 1945⁵), on-property streams or springs, or reclaimed stormwater collected in farm ponds to provide water for livestock, or for limited irrigation purposes. However, large-scale irrigation for agricultural purposes is not generally present in Garrett County, and does not comprise a significant use of ground or surface water.

5.2.4 *Identification of Issues – Drinking Water*

With the residential growth projections shown in Chapter 2 (which were reviewed by the towns in 2006, early in the comprehensive plan process) and the non-residential growth assumptions in Chapter 11, the public water systems in Accident, Mountain Lake Park/Loch Lynn Heights, Grantsville, and Bloomington will approach or slightly exceed their available capacity (see Table 5.2). The McHenry water system, described in detail in Section 4.7.1, will be adequate to serve projected demand (approximately 1 MGD, as listed in Table 5.2).

Unmet Future Demand in Public Water Systems

To serve projected growth, the County and the municipalities will need to obtain additional water supplies, and will, in many cases, need to upgrade and expand treatment facilities and water distribution systems, as described below. Potential new supplies for unmet demand are described in Sections 5.2.5 and 5.2.6. In all cases, water conservation measures (installation of water-conserving fixtures, limiting excess outdoor water use, etc.) can help to avoid potential shortfalls.

- Based on growth projections, the Town of Accident has adequate water supplies to accommodate future growth. However, the Town is evaluating an expansion of its wastewater treatment system to accommodate up to 90,000 gpd. Should wastewater

⁴ See footnote 2. This also includes state and federal government wells.

⁵ Ibid.

demand rise to 90,000 gpd, the Town would need to obtain an additional 20,000 gpd of water to ensure proper flushing of the expanded wastewater system.

- There are more than 2,800 acres of Future Growth Area (FGA) surrounding Oakland, Mountain Lake Park, and Loch Lynn Heights, currently containing approximately 350 residences and several businesses. All three towns have indicated interest in annexing at least some of this land, and these areas (which contain approximately 338 existing residences) would likely receive public water upon annexation into a town. Accordingly, the data in Table 5.2 include the water demand that existing development in these Future Growth Areas would generate. That demand is divided approximately evenly between the Oakland and Mountain Lake Park/Loch Lynn Heights systems.

In aggregate, the two systems appear to be able to serve existing development in the FGAs. However, full development of the undeveloped portions of the FGAs would likely require additional water supplies. In addition, upgrades may be needed for the Mountain Lake Park/Loch Lynn Heights system to address poor water quality.

- The Grantsville water system will need an additional 40,000 gpd of water to serve future growth (primarily due to the Pea Vine Road extension).
- The Bloomington water system is nearing capacity. As the water treatment plant is replaced, the system's permitted and physical capacity should also be increased.

Water Quality Concerns

(In addition to the concerns listed in Table 5.1.)

- The community of Finzel, located atop Little Savage Mountain in the northeast corner of the County, depends entirely on wells in the Hampshire and Pocono formations for its water supplies. The quality of ground water in this region is poor, with high concentrations of iron and other minerals, necessitating residents to install water conditioners in order to use well water
- Development of Garrett County's potential natural gas resources (see Chapter 11) could have impacts on water supply and water quality. Natural gas mining techniques can involve considerable water consumption, and can produce wastewater that must be treated before being discharged.

5.2.5 *Potential New Groundwater Supplies*

More than half of the water used in Garrett County is drawn from groundwater wells.⁶ Except in extreme drought conditions, such as those experienced during the spring and summer of 1991 (the worst on record), these groundwater resources, combined with surface water sources, have been adequate to meet demand.

However, information on the capacity of the County's groundwater resources—particularly groundwater's capacity to serve continued growth, and stresses upon those groundwater resources—is outdated. The last full study of the County's groundwater resources was a 1980 U.S. Geological Survey (USGS) groundwater study.⁷ Since then, the number of residents and seasonal housing units in the County has increased rapidly (housing units grew by 33 percent between 1990 and 2005 alone).

⁶ Source: 1993. A Second Closer Look at Garrett County. This was the most recent information available about Countywide water use patterns.

⁷ 1980. USGS. *Basic Data Report 11, Garrett County Water-Well Records, Chemical-Quality Data, Ground-Water Use, Coal Test-Hole Data, and Surface Water Data.*

Based on MDE's water balance methodology (described in the Plan Appendix), the water-bearing formations that serve Garrett County recharge at the rate of more than 200 million gallons per day.⁸ At the broad scale, and lacking specific data to the contrary, this volume is adequate to serve projected growth in rural areas of Garrett County through 2030. In addition, MDE's own calculations show that "an analysis of stream base flow information indicates that the quantity of recharge per acre [in Garrett County] is sufficient to support the density of one home per three acres or a greater density."⁹

However, the caveats to this finding are important. Garrett County's water-bearing formations serve the broader region beyond the County itself (notably, the City of Frostburg owns wells in the Savage River watershed). In addition, geological and seasonal variations mean that groundwater resources may not be uniformly available in every location in the County.

A frequently expressed concern is the impact of new development (and its wells) on existing groundwater wells serving individual homes and businesses. Neither the County Health Department, nor MDE are aware of "situations in Garrett County where water use at a subdivision on individual wells [is] impacting other users."¹⁰ However, this situation could potentially arise in cases where the existing well is older and shallower. In such a situation, new wells could reduce flows to existing wells in the immediate vicinity, forcing existing well owners to drill new, deeper wells.

These older, shallower wells are often more vulnerable to direct transmission of septic effluent and contamination from the surface (via underground storage tanks, landfill leachate, mining and construction, petroleum and pesticide spills, and nutrients and bacteria from feedlots) than deeper commercial or public supply wells. In the past, salt runoff from highway deicing and salt storage facilities in the County have affected some homeowners.¹¹ While significant new wells (such as those serving public water systems) require a groundwater appropriations permit from MDE's Water Management Administration, 12 wells for individual businesses and homes (even those in small subdivisions) require no such state permit.

Finally, it is also important to remember that groundwater and surface water resources are linked. While groundwater withdrawn through wells is typically returned to the ground or surface via septic systems and absorption of runoff from outdoor water uses (such as watering lawns), large withdrawals can potentially impact nearby surface water bodies. In developing expanded public water systems, consideration should be given to potential impacts on nearby bodies of water and private wells outside of the service area.

To improve available data on groundwater availability, Garrett County, Allegany County, MD, and Mineral County, WV have begun to plan a detailed regional study of groundwater resources. Future updates to the Comprehensive Plan should explicitly incorporate the planned regional water resources study into decisions about growth and development—particularly if the groundwater study reveals limitations on groundwater capacity.

⁸ Source: *Models and Guidelines 26*, the official state guidance for preparing the Water Resources element (see <http://www.mdp.state.md.us/mgs/pdf/mg26.pdf>). See also the Water Resources section of the Comprehensive Plan Appendix. This calculation reflects only the nearest water-bearing formation. In most locations, two or more water-bearing formations could reasonably be tapped.

⁹ MDE. Letter dated June 20, 2007. See Water Resources section of the Plan Appendix.

¹⁰ See footnote 9.

¹¹ Source: DNR, Comments on Preliminary Draft of 2008 Comprehensive Plan

¹² Source: <http://www.mde.state.md.us/Permits/WaterManagementPermits/index.asp>. Typically, new wells drawing more than 10,000 gpd and residential subdivisions with more than ten lots require a MDE permit.

5.2.6 *Potential New Surface Water Supplies*

The County's surface water resources include major rivers and a number of surface water impoundments, many of which are already used as public water sources. This section describes the characteristics and limitations of those bodies of water.

Deep Creek Lake

Deep Creek Lake is Maryland's largest and highest inland body of water, and is owned by the Maryland Department of Natural Resources (DNR). The lake is not used as a source of drinking water, although this possibility has been discussed in the past. While Deep Creek Lake's size makes it an attractive potential source of drinking water, this opportunity must be balanced against other concerns.

Using Deep Creek Lake as a source of drinking water could lead to a drawdown (drop in water elevation) that could adversely impact recreational uses of the Lake—a major component of the County's tourism economy. Such drawdown could also impact hydroelectric generation at the Deep Creek Lake Dam.

In addition, the Maryland Department of the Environment (MDE) currently lists the lake as being impaired due to the presence of bacteria, mercury, and nutrients. MDE has completed a Total Maximum Daily Load, or TMDLs (see Section 5.3.3), for mercury, and will prepare a TMDL for the other impairments. There are also concerns about petroleum pollution from the motorized watercraft that use the Lake. As a result, lake water would likely require specialized (and potentially costly) treatment before being suitable for public consumption.

As part of this Comprehensive Plan, the County commissioned an Assessment of Water Quality Impacts from Potential Land Development, Deep Creek Lake (the *Water Quality Study*, May 2007), which used existing water quality data to evaluate the impacts of projected development and the Development Capacity Analysis on the Lake's water quality. The overall findings of that study are described in Chapter 4, the Deep Creek Lake Influence Area Master Plan.¹³ The Maryland Department of Natural Resources began more detailed monitoring and study of the Lake's water quality in 2007.

Savage River Reservoir

The Savage River Reservoir is used for flood-control purposes, and is also a source of water for Westernport in Allegany County, as well as a small number of customers in Garrett County connected to Westernport's water transmission line. The reservoir has a usable capacity of 20,000 acre-feet.¹⁴ As with Deep Creek Lake, Savage River Reservoir is a recreational, economic, and scenic resource for Garrett County. These considerations should be addressed in any future proposal to withdraw additional drinking water from the reservoir.

Youghiogheny River Reservoir

The 16-mile long Youghiogheny River Reservoir, formed by the damming of the Youghiogheny River in Southern Pennsylvania, extends south into the county for a distance of approximately three miles. The reservoir is primarily used for flood control and recreational purposes has a usable capacity of 254,000 acre-feet, the vast majority of which is in Pennsylvania. The reservoir's water level is lowered dramatically during the summer and fall months to provide storage for downstream flood control. As a result, the Maryland portion of the Lake is frequently dry or heavily silted, and is not well suited as a water supply.

¹³ The full document is included in the Comprehensive Plan Appendix.

¹⁴ Usable capacity is the volume that could be withdrawn each year while still maintaining minimum lake or reservoir volume, as determined by the agency responsible for managing the body of water. One acre-foot is equivalent to approximately 326,000 gallons per year (Source: NOAA, <http://www.srh.noaa.gov/wgrfc/convert.html>).

Broadford Lake

Broadford Lake was created by the Natural Resources Conservation Service (NRCS) for flood control, recreation, and municipal water supply for the Town of Oakland. It has usable capacity of 2,337 acre feet. The town of Oakland owns and operates the facility as the secondary source of water. Some capacity may be available to serve future growth.

Piney Run Reservoir

The Piney Run Reservoir in the northeastern corner of Garrett County (just west of Finzel) is owned and operated by the Town of Frostburg (in Allegany County), exclusively as the town's municipal water supply. The reservoir impounds 400 million gallons of water. Garrett County may wish to work with Frostburg to explore the possibility of using the reservoir as a public water source for existing residents and businesses in Finzel, alleviating groundwater quality problems. One difficulty of such an agreement is that Frostburg's water treatment plant is adjacent to the city, and not at the source. Pumping treated water from Frostburg back to Finzel would be quite difficult and expensive. To use water from the Piney Run Reservoir, the County would likely need to build a separate water treatment facility for the Finzel area.

Jennings Randolph Lake

Jennings Randolph Lake, along the North Branch Potomac River east of Kitzmiller, was built by the U.S. Army Corp of Engineers (ACOE), for flood control and water storage purposes to regulate flow in the Potomac River. The lake has also helped to improve water quality in the North Branch Potomac below the dam related to acid mine drainage. This structure at spillway level has a usable capacity of 130,900 acre-feet.

Barton Reservoir

The Town of Barton (in Allegany County) owns a reservoir on Butcher Run in Garrett County. The Barton Reservoir allows a sufficient storage capability to withdraw up to 100,000 gallons of water a day. It is not known whether excess capacity is available for use in Garrett County, but the reservoir's distance from existing public water systems makes it an unlikely candidate for such use.

Rivers, Streams and Other Sources

The Towns of Friendsville and Oakland both withdraw water from the Youghiogheny River, while the Town of Bloomington withdraws its drinking water from the Savage River. Beyond those sources, Garrett County's rivers and streams are not generally used as sources of drinking water. Significant seasonal variations in water level, and degraded water quality in some streams due to acid mine drainage (see Chapter 10) tend to discourage the use of these bodies of water. That fact notwithstanding, treatment of surface water from mines can be feasible in some situations, and should not be eliminated as an option for providing drinking water.

Finally, the link between stormwater and drinking water should be considered. Stormwater management facilities (ranging from stormwater ponds to cisterns on individual homes) could be designed and sited in ways that allow collected stormwater to be treated and reused as process water or even drinking water.

5.2.7 Source Water Protection

In 2004, MDE conducted a series of Source Water Assessments (SWA) for the public water systems in Garrett County. Each SWA characterizes the extent of and threats to the public water system, and lists a number of actions necessary to protect source water in those systems. The major common recommendations of the SWAs are:

- Creation of a Source Water Protection Team (for each water system)

- Better education of residents and business owners about source water issues and concerns
- Continued adherence to groundwater monitoring requirements
- Communication with County land use officials about future planning and land use

The 2007 Garrett County Source Water Protection Plan (SWPP) used the findings of the SWAs as the basis for delineation of Source Water Protection Areas for public water systems in Accident, Crellin, Gorman, Grantsville, Kitzmiller, and McHenry.¹⁵ The SWPP delineates 1,738 acres containing 22 wells and springs serving public systems for future source water protection.

The SWPP's major recommendations are similar to those in the SWAs, and include:

- Establishment of a Source Water Protection Committee (already accomplished).
- Establishment of a public education program. Such a program would include signage (including emergency contact information in the case of a contamination event), and distribution of printed materials related to source water protection.
- Coordination with the County departments of Planning and Public Utilities to ensure that growth and development activities incorporate source water protection considerations.
- Continued monitoring of source water, as required by MDE.

Further actions to protect source water could include reduction or prohibition of development in delineated source water protection areas, and the establishment of buffers around the edges of source water protection areas. In particular, the County's existing Sensitive Areas Ordinance could be updated to include Source Water Protection Areas (as mapped by the SWPP and its future updates) as a type of Sensitive Area, with appropriate development and buffering regulations. The SWPP, including maps and descriptions of source water protection areas, is included in the Comprehensive Plan Appendix.

5.3 Wastewater Assessment

This section describes existing and projected future demand for public wastewater service in Garrett County.

5.3.1 Existing Conditions

Approximately 6,700 dwelling units in Garrett County (37 percent of the County total) are connected to public sewer systems. Map 5.2 shows existing major public sewer service areas. Table 5.3 summarizes the discharge points, treatment technology, and general needs of the County's public wastewater systems. Table 5.4 shows wastewater treatment capacity, existing wastewater flows, projected future flows, and the projected wastewater capacity surpluses and deficits for each of the County's public wastewater systems. capacity and demand for public water systems. Those water systems are described in detail below.

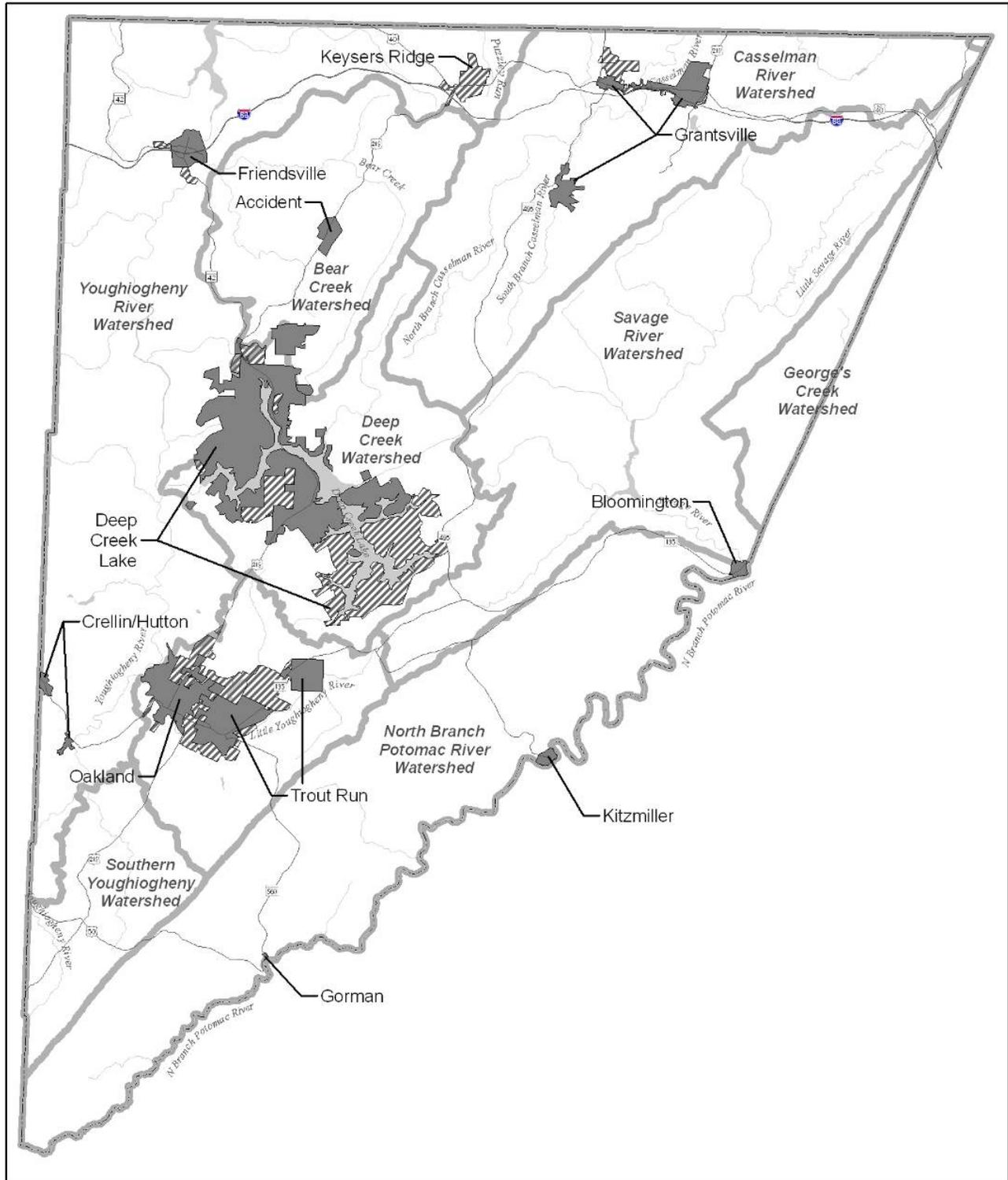
Youghiogheny River Watershed

Crellin

Wastewater for Crellin and the nearby community of Hutton to the northwest is treated using a recirculation tank, sand filter, and UV radiation disinfection. Effluent is discharged into the Youghiogheny River near the MD 39 bridge. The permitted capacity for the Crellin WWTP is 27,000 gpd, compared to existing Average Daily Flow (ADF) of 14,000 gpd. No system upgrades or service area expansions are currently planned.

¹⁵ These are the public systems operated by the County—or with County assistance, as is the case in Accident. Other public water systems in Garrett County are operated by municipalities.

Map 5.2 Sewer Service Areas in Garrett County



Public Sewer Service Areas

Legend

-  Existing Service
-  Proposed Service
-  Bodies of Water
-  Watershed Boundaries



Table 5.3: Public Wastewater Treatment Plant (WWTP) Characteristics

Wastewater Treatment Plant	Discharge Location	Treatment Technology	Planned/Potential WWTP Upgrades or Expansions	Planned/Potential Service Area Extensions
<i>Youghiogheny River</i>				
Crellin/Hutton	Youghiogheny River, south of MD Route 39 bridge.	Septic Tank, Recirculating Sand Filter	None	None
Friendsville	Youghiogheny River in Friendsville	Activated Sludge	Rehabilitation of main sewer lines to eliminate Inflow and Infiltration (I/I) ²	None
Oakland	Youghiogheny River, downstream of Little Youghiogheny River	Aerated lagoons	None	Planned extension to annexed areas north of town on US 219.
<i>Bear Creek</i>				
Accident	Bear Creek South Branch tributary in Accident.	Activated sludge	Rehabilitation of main sewer lines to eliminate I/I. Planned upgrade to 90,000 gpd.	None
<i>Little Youghiogheny River</i>				
Trout Run ¹	Little Youghiogheny River south of Mountain Lake Park	Aerated lagoons	Rehabilitation of sewer lines and interceptors to eliminate I/I.	None
<i>Casselman River</i>				
Grantsville	Casselman River, north of the Casselman River Bridge	Submerged Biological Contactor (BNR)	None	Planned extension MD 669 to Pea Vine Road and Dorsey Hotel Road
<i>North Branch Potomac River</i>				
Bloomington	NB Potomac River in Bloomington	Activated sludge	None	Possible extension to failing septic areas along MD 135.
Gorman	NB Potomac River just east of Gorman	Septic Tank, Recirculating Sand Filter	None	Possible extension to Althouse Hill Road area (south of Gorman)
Kitzmilller	NB Potomac River, north of Kitzmilller	Activated sludge	None	Possible extensions to Jennings Randolph Lake.
<i>Deep Creek</i>				
Deep Creek Lake	Deep Creek Stream, west of Deep Creek Dam	Oxidation Ditch (BNR)	Eventual expansion to 3.9 MGD. Upgrade to ENR considered.	Planned extension to properties at the southern end of Deep Creek Lake (see Chapter 4).

1: Treats wastewater from the Towns of Deer Park, Loch Lynn Heights, and Mountain Lake Park

2: Inflow is water from storm events entering the system through roof drains, sump pumps, foundation drains, and similar sources. Infiltration is groundwater entering the system through leaking pipes, manholes, and other elements. I/I takes up sewer capacity that should be reserved only for wastewater, effectively limiting the system's overall capacity.

Table 5.4: Wastewater Flow and Treatment Capacity

		Crellin/Hutton	Friendsville (Future demand assumes I/I problems resolved)	Oakland (Includes expansion to Lowe's site and surrounding areas)	Accident (Future demand assumes I/I problems resolved)	Trout Run	Grantsville (Includes Chestnut Ridge, Jennings, Pea Vine Road extension)	Bloomington (Excludes extension along MD 135)	Gorman (Includes extension to Althouse Hill Rd)	Kitzmillier (Excludes extension to Jennings Randolph Lake)	Deep Creek Lake
Existing Treatment Capacity ³	gpd ¹ ERU ²	27,000 103	125,000 476	900,000 3,429	50,000 190	900,000 3,429	600,000 2,286	50,000 190	8,500 32	40,000 152	2,200,000 8,381
Average Daily Flow (ADF), 2007	gpd ERU	14,000 53	123,000 469	490,000 1,867	160,000 610	701,000 2,670	440,000 1,676	36,000 137	5,000 19	18,000 69	1,170,488 4,459
Net Available Capacity, 2007	gpd ERU	13,000 50	2,000 8	410,000 1,562	(110,000) (419)	199,000 758	160,000 610	14,000 53	4,000 15	22,000 84	1,029,513 3,922
Projected New Residential Demand, 2030 ⁴	gpd ERU	8,762 33	6,563 25	109,988 419	6,563 25	109,988 419	41,266 157	4,819 18	5,070 19	6,563 25	1,094,822 4,171
Projected New Non-residential Demand, 2030 ⁵	gpd ERU	- -	1,000 4	57,390 219	3,338 13	13,260 51	18,950 72	- -	- -	- -	106,050 404
Total projected demand	gpd ERU	22,762 87	90,563 345	657,378 2,504	69,900 266	824,248 1,906	500,216 1,906	40,819 156	9,070 35	24,563 94	2,371,359 9,034
Future Treatment Capacity ⁶	gpd ERU	27,000 103	125,000 476	900,000 3,429	90,000 343	900,000 3,429	600,000 2,286	50,000 190	8,500 32	40,000 152	2,200,000 8,381
Net Available Projected Capacity, 2030	gpd ERU	4,238 16	34,438 131	242,623 924	20,100 77	75,753 289	99,784 380	9,181 35	(570) (3)	15,438 59	(171,359) (653)

Source: Garrett County Department of Public Utilities and ERM

1: gpd = gallons per day

2: ERU = An Equivalent Residential Unit (ERU) is 262.5 gallons per day (gpd). See note in table 5.2.

3: Indicates the more restrictive of either MDE's wastewater discharge permit limits, or the system's design capacity.

4: For towns: reflects projected housing units added by 2030, from Table 2.3, plus any specific system expansions listed in Table 5.3. See Water Resources section of the Plan Appendix for detailed methodology for unincorporated areas.

5: Future non-residential demand based on Table 11.5. See Water Resources section of the Plan Appendix for detailed methodology.

6: Incorporates all ongoing or planned capacity upgrades.

Friendsville

Wastewater for the Town of Friendsville is treated via the extended aeration variant of the activated sludge process, followed by disinfection, before being discharged into the Youghiogheny River in Friendsville. The permitted capacity for the Friendsville WWTP is 125,000 gpd. Existing ADF to the Friendsville WWTP is 123,000 gpd, although flows as high as 1 million gallons per day (MGD) have been reported during wet weather events, due largely to the presence of Inflow and Infiltration (I/I).¹⁶

An I/I reduction program for the main sewers is being planned. In 2008, the County was awarded \$100,000 from the Maryland Department of Housing and Community Development's Community Development Block Grant program to replace aging sewer lines and address I/I. The County is working to obtain additional funding for I/I repairs. A service area expansion along MD 42 west of the Town will serve the Future Growth Area identified in Map 3.5. However, this and other future expansions will be severely restricted until the Town completes its I/I reduction program.

Keyser's Ridge

As of early 2008, there were no active tenants in the Keyser's Ridge Business Park, with the first tenant (American Woodmark) expected to begin construction in 2008-9. Wastewater from this tenant and any other tenants is expected to be treated by on-site septic systems for the foreseeable future. Development of a Keyser's Ridge WWTP, which would treat wastewater from the Business Park and surrounding areas, is a long term goal that is dependent on occupancy at the business park.

Once constructed (although there are no active plans to do so), the Keyser's Ridge WWTP could potentially discharge treated effluent into a tributary of Puzzley Run near the Pennsylvania state line via an existing permitted discharge point. Given the fact that Puzzley Run is a Tier II stream (see Section 5.3.3), extreme care will have to be taken when designing the plant, and alternative disposal options (wastewater reuse, more advanced treatment technologies not yet available) should be considered when such a facility is built.

The treatment technology, and size of the future Keyser's Ridge WWTP and collection system has yet to be determined,¹⁷ but will be sized to serve existing and potential future demand in the Keyser's Ridge Business Park, and in the commercial area surrounding the I-68/US-219 interchange.

Oakland

The Town of Oakland operates its own wastewater system and WWTP, which uses a series of aerated lagoons and discharges into the Youghiogheny River, just downstream of its confluence with the Little Youghiogheny River.¹⁸ The design and permitted capacity of the Oakland WWTP is 900,000 gpd, compared to ADF of 490,000 gpd. The Oakland system also serves the Wood Products, Inc. site southeast of Oakland. The Town is planning to extend sewer service north on Garrett Highway to accommodate the planned Lowe's store and nearby businesses and residences. This extension would require approximately 50,000 gpd of treatment capacity.

¹⁶ Source: Garrett County DPU

¹⁷ For the purposes of evaluating current and future nitrogen loads in the Youghiogheny River watershed, specifically in Section 5.3.3, the future Keyser's Ridge system is assumed to have a capacity of 100,000 gpd, using Biological Nutrient Removal (BNR) technology.

¹⁸ Thus, while the Town sits in the Little Youghiogheny River watershed, its wastewater is discharged into the Youghiogheny River. Accordingly, the Oakland sewer system is described as part of the Youghiogheny River watershed.

Bear Creek Watershed

Accident

The Town of Accident operates its own wastewater system and WWTP, with operator supervisory service from the Garrett County Department of Public Utilities. Wastewater for Accident (including the Central Garrett Industrial Park) is treated using the extended aeration variant of the activated sludge process followed by chlorine disinfection. Effluent is discharged into a tributary of the South Branch of Bear Creek, at the southern end of the Town.

The permitted capacity for the Accident WWTP is 50,000 gpd, compared to ADF of 160,000 gpd. This imbalance between ADF and permitted capacity led the Maryland Department of the Environment (MDE) to issue a consent order in 2000, mandating that the town rehabilitate its system to reduce I/I. That rehabilitation is underway, and is believed to be caused largely by improper connection of roof drains and sump pumps to the sewage collection system from individual homes.¹⁹

The town is also planning to expand the treatment capacity of the plant to 90,000 gpd, largely to support full buildout of the Central Garrett Industrial Park. However, until the Town brings flows to within the parameters of the existing design and permitted capacity of the plant, expansions to the system are restricted. At present, no service area expansions are planned.

Little Youghiogeny River Watershed

Trout Run

The Trout Run WWTP serves the towns of Mountain Lake Park, Loch Lynn Heights, and Deer Park, as well as the Shady Acres and Weber Road areas. The County owns and operates the WWTP and the sewer collection lines for Deer Park, while the towns of Mountain Lake Park and Loch Lynn Heights own and maintain the sewer collection lines within their respective jurisdictions. The Trout Run WWTP also serves Southern Garrett Industrial Park, the Southern Garrett Business and Technology Park, the former Bausch and Lomb property, and the new Roads Department facility (all on MD Route 135, east of Mountain Lake Park). The Trout Run WWTP uses an aerated lagoon, and discharges into the Little Youghiogeny River. These discharges are restricted through the use of a Hydrographic Controlled Release (HCR) when flows in the receiving stream are below a prescribed level.

The permitted capacity of the Trout Run WWTP is 900,000 gpd, compared to ADF of 701,000 gpd. Severe I/I is present in the Trout Run collection system, and the County and towns are cooperatively implementing an I/I reduction program currently underway in Mountain Lake Park, Loch Lynn Heights, and on the main interceptor line that feeds the plant. Repair of this I/I is complicated by split ownership of the sewer collection lines.

Casselman River Watershed

Grantsville

Wastewater from the Town of Grantsville, Chestnut Ridge, Jennings, and the Goodwill Mennonite Home is treated at the Grantsville WWTP using the Rotating Biological Contactor (RBC) variant of the Biological Nutrient Removal (BNR) process, prior to discharging into the Casselman River. Sludge from the WWTP is treated in an aerobic digester and the stabilized liquid sludge is spread on nearby farm fields for which sludge application permits have been obtained. The design and permitted capacity for the Grantsville WWTP is 600,000 gpd, compared to ADF of approximately 440,000 gpd.

¹⁹ Source: Garrett County DPU.

A service expansion along Route 669 to Pea Vine Road and Dorsey Hotel Road is currently planned, requiring a treatment capacity of 24,000 gpd (92 ERUs).

North Branch Potomac River Watershed

Bloomington

Wastewater for Bloomington is treated by an activated sludge process prior to discharging into the North Branch Potomac River. The Bloomington WWTP has a permitted capacity of 50,000 gpd, compared to ADF of 36,000 gpd. The County is considering expanding the system to serve failing septic areas along Route 135, west of Bloomington, but such expansion would likely require increased permitted capacity.

Gorman

Wastewater for Gorman and nearby communities consists of individual septic tanks at residences and businesses, a recirculating tank and sand filter, and an ultra violet radiation disinfection unit. The treated effluent is discharged into the North Branch Potomac River. The Gorman WWTP has a permitted capacity of 8,500 gpd, compared to ADF of 5,000 gpd. There are no planned system upgrades, although the County is considering expanding the service area to the Althouse Hill Road area to address failing septic systems. This expansion would require approximately 4,500 gpd of treatment capacity, leaving plant essentially at capacity.

Kitzmilller

Wastewater from Kitzmilller is treated via activated sludge and discharged into the North Branch Potomac River. The permitted capacity for Kitzmilller's WWTP is 40,000 gpd, (with a design capacity of 50,000 gpd), compared to ADF of 18,000 gpd.

Deep Creek Lake Watershed

Deep Creek Lake

The wastewater collection, conveyance and treatment system serving the Deep Creek Lake area is the largest in the County. Map 4.4 (in Chapter 4, the Deep Creek Lake Influence Area Master Plan) provides a detailed delineation of the existing and planned service area for the Deep Creek Lake WWTP. Wastewater from this service area is treated using the oxidation ditch variant of the BNR process before discharging into Deep Creek, below the Deep Creek Lake dam and approximately one-half mile from its confluence with the Youghiogheny River. Current permitted capacity for the Deep Creek Lake WWTP is 2.2 MGD, compared to ADF of approximately 1.17 MGD.

Marginal and failing septic systems in Turkey Neck, Sky Valley, Green Glade and Hazelhurst at the south end of Deep Creek Lake are included in the Deep Creek Lake WWTP's future sewer service area. As shown in Table 5.4, extension of the sewer service area to existing residences and businesses in these locations, combined with projected new development in the service area would generate ADF of nearly 2.4 MGD by the year 2030, creating the need to expand the plant to accommodate approximately 170,000 gpd of additional flow.

The Deep Creek Lake WWTP was laid out for a potential mirrored (duplicate) expansion on the north side of the plant property. Ultimately, the site could accommodate a total of 3.9 MGD of treatment capacity, enough treatment capacity to accommodate projected growth through the year 2030, plus approximately 5,800 additional ERU of capacity. Expansion—perhaps to the full 3.9 MGD capacity—will likely be necessary by 2030 (see Table 5.4). Any additional demand beyond this would not be able to be treated at the current site.

In addition to the treatment plant, numerous collection and conveyance system upgrades will be required to transport wastewater flows to the treatment plant. The most significant is the Western Conveyance system, currently under design and expected to be operational by the end of 2008, that will take flows from the proposed portions of the Wisp Resort and redirect flows from the McHenry area directly to the WWTP. Other areas of potential conveyance system expansion include the failing septic areas of Green Glade, Turkey Neck, and Hazelhurst, at the southern end of the lake. These systems were typically installed prior to current health regulations, and fail due to small lots and underlying soils and geology that are not suitable for septic systems.

Should a future upgrade to Enhanced Nutrient Removal (ENR) technology²⁰ be necessary or desirable, the WWTP site has adequate space to add ENR infrastructure. However, there is not adequate land at the site to increase the system's overall capacity beyond 3.9 MGD, regardless of treatment technology.

Wastewater from Deep Creek Lake State Park is currently treated on site and disposed via spray irrigation during spring, summer, and early autumn, and at the Deep Creek Lake WWTP during the remainder of the year (when spray irrigation is not possible). The state and County are in the process of eliminating the spray irrigation system in favor of year-round treatment of state park wastewater at the Deep Creek Lake WWTP.

5.3.2 *Identification of Issues – Public Sewer Systems*

Public Wastewater Systems

As shown on Table 5.4, most of the County's public sewer systems will be able to accommodate projected residential and nonresidential growth through the year 2030, while still having some additional capacity to accommodate long-term growth beyond 2030. Systems that will require expansions or other modifications are as follows:

- The Gorman system will be at capacity after expansion to serve failing septic systems along Althouse Hill Road, and the County may wish to pursue expanded system capacity and increased discharge limits to provide a margin of safety.
- The Crellin/Hutton system could approach 85 percent capacity, based on development projections for the unincorporated portions of the Youghiogheny River watershed. If development in these villages exceeds projections, the County may wish to pursue expanded system capacity and increased discharge limits.
- As discussed in this chapter and in Chapter 4, the Deep Creek Lake system will likely need to be expanded prior to 2030, and would likely be expanded to the full 3.9 MGD site capacity. This would allow the plant to accommodate considerable growth beyond 2030. Assuming continued use of BNR technology, expansion of the Deep Creek Lake WWTP will likely require increased discharge limits for both discharge volume and nutrient loads, and additional collection infrastructure beyond what already exists.
- The County has been cited for violations of discharge restrictions at the Trout Run WWTP during prolonged low flow conditions in the Little Youghiogheny River. In these cases, existing storage capacity was inadequate to hold the accumulated sewage flows without discharging. The system's I/I deficiencies contribute to this problem.

²⁰ ENR is the best available wastewater treatment technology, resulting in loading as low as 3 mg of Nitrogen and 0.3 mg of Phosphorus per liter of effluent, compared to 8 and 2 mg/L, respectively for BNR.

Other Wastewater Needs

The village of Finzel uses septic systems, and is already experiencing poor drinking water quality due to iron and minerals, as described above. The Finzel area is in the same watershed as the Piney Run Reservoir—the City of Frostburg’s water supply—and also sits near Finzel Swamp, a sensitive natural area that is the source of the Savage River. While there is no current evidence of failing septic systems in this area, a Finzel sewer system may eventually be needed to protect water quality and sensitive habitat.

5.3.3 *Point Source Discharge Limits*

This section describes the key limits on point source discharges of nitrogen and phosphorus (more generally referred to as “nutrients”) as they apply to the County’s WWTPs.

Point Source Caps

To address nutrient loads from point sources such as WWTPs, the state has established Chesapeake Bay Tributary Strategy point source caps. These caps are numerical limits on the amount of nitrogen and phosphorus that WWTPs can discharge to the Bay and its tributaries (loading and caps are expressed as pounds per year of nitrogen and phosphorus). The Bloomington, Gorman, and Kitzmiller WWTPs, all of which discharge to the North Branch Potomac River or its tributaries, and are the only WWTPs in Garrett County that discharge to the Chesapeake Bay basin, and are therefore the only County facilities subject to point source caps. For all three WWTPs, the nutrient cap is equivalent to the maximum existing capacity of the wastewater treatment system.

Expansion of treatment capacity is possible at these facilities, but due to nutrient caps, must be accompanied by improved treatment technology. In theory, upgrading these WWTPs to Biological Nutrient Removal (BNR) standards (which would reduce nitrogen loads by more than half, compared to existing discharges—see Section 5.3.4 below) would permit those facilities to treat a larger volume of wastewater without violating nutrient load caps. However, BNR technology is quite expensive, and has only been implemented for large WWTPs, such as Deep Creek Lake and Grantsville. Thus, the existing capacities of the Bloomington, Gorman, and Kitzmiller WWTPs are likely to be the long-term limit of available sewage treatment capacity.

TMDL

Another measure of “assimilative capacity” is the Total Maximum Daily Load (TMDL) concept. A TMDL is the maximum amount of pollutant (in this case, nutrients) that a water body, such as a river or a lake, can receive without causing a water quality impairment. In essence it quantifies an upper threshold on pollutants or stressors. The TMDL accounts for all sources of the given pollutant; for example, for nutrients the sources could be point sources such as WWTPs, or nonpoint sources such as stormwater or agricultural runoff. A TMDL typically establishes separate caps for point source and nonpoint source discharges of the impairing pollutant.

The Deep Creek watershed is not subject to point source caps described above, but is “impaired” due to nutrients—that is, the amount of nitrogen and phosphorus generated in this watershed is higher than permitted. MDE has identified the need to develop a TMDL for nutrients in the Deep Creek watershed, but has not yet completed it.

The Little Youghiogheny River watershed was originally listed as being impaired for nutrients. However, MDE’s investigation revealed that the actual problem in the Little Youghiogheny is

excess Biochemical Oxygen Demand (BOD), a separate type of impairment.²¹ The resultant TMDL for BOD does not specifically limit nutrient loads.

Several of Garrett County's waterways are also impaired by other contaminants, such as bacteria, biological contaminants, metals, and sediments (notably in the Youghiogheny River watershed). In most cases, TMDLs have been completed to address these impairments.

Antidegradation

Maryland's antidegradation policy significantly limits new discharge permits that would degrade water quality. Discharged wastes that exceed a waterbody's assimilative capacity violate this policy and will result in listing a water body as being impaired—possibly requiring determination of a TMDL. Of particular concern are Tier II (high quality) waters, as defined by MDE.²² Garrett County's Tier II waters are shown in Figure 5.1. In most cases, Tier II waters in Garrett County are in areas where development is already limited by state land ownership or agricultural land preservation.

The primary exception is Puzzley Run, which would be the receiving body for the proposed WWTP serving the Keysers Ridge area. The County plans to use an existing, privately held discharge point on this stream. The Keysers Ridge WWTP would likely have to use BNR or higher treatment technology to avoid degradation of water quality in Puzzley Run.

Other Discharge Limits

Aside from the cases described above, there are few numeric or policy limits on WWTP discharges in Garrett County. Most major WWTPs discharge to the Youghiogheny River basin (which drains to the Ohio and Mississippi Rivers), and are not governed by the Tributary Strategy requirements or TMDLs (except in the case of Deep Creek Lake, which will eventually be assigned a TMDL).

In preparing the Comprehensive Plan, the County consulted with MDE regarding other discharge limits. Any forthcoming MDE guidance regarding this subject will be incorporated into future Comprehensive Plan updates. Regardless, the County's overall approach will be to pursue land use and water resources policies that limit adverse impacts on water quality from both point and nonpoint sources.

²¹ Source: MDE. 2001. Total Maximum Daily Loads [TMDL] of Carbonaceous Biochemical Oxygen Demand (CBOD) and Nitrogenous Biochemical Oxygen Demand (NBOD) for the Little Youghiogheny River

²² See MDE's website for more information on the antidegradation policy:
<http://www.mde.state.md.us/ResearchCenter/Data/waterQualityStandards/Antidegradation/index.asp>

Figure 5.1: Tier II Waters



Maryland Department of the Environment
 Science Services Administration
 Montgomery Park Business Center
 1800 Washington Boulevard
 Baltimore, Maryland 21230-1718

Date Map Prepared: August 2007

5.3.4 *Alternative Wastewater Disposal Options*

BNR Upgrades

The need to protect and improve water quality in Maryland is not limited to the Chesapeake Bay. Treatment capacity at the County's WWTPs could eventually be limited, and it is important to understand how WWTP technology can be used to reduce overall nutrient loads in the Youghiogheny River and its tributaries.

The Deep Creek Lake and Grantsville WWTPs are already at BNR technology, and it is assumed that the future Keyzers Ridge WWTP will be constructed using BNR technology. Table 5.5 shows the amount, or "load" of nitrogen and phosphorus that could be reduced if all other WWTPs in the County were upgraded to BNR standards.

Upgrade of the Grantsville and Deep Creek Lake WWTPs to Enhanced Nutrient Removal (ENR) technology could further reduce nutrient loads by as much as 35,000 lbs per year of nitrogen and 15,000 lbs per year of phosphorus by 2030. In the case of Grantsville, such upgrades could allow for further expansion of WWTP capacity.

Although the Trout Run WWTP is projected to have available capacity in 2030, its size, discharge limitations, and projected growth in the Little Youghiogheny watershed suggest the need to upgrade the plant's treatment technology. However, as described in Section 5.3.1, the Trout Run collection system experiences significant I/I. After completion of the ongoing I/I reduction program, DPU will be better able to determine whether expansion is necessary.

Should expansion become necessary, the Town of Mountain Lake Park has purchased land adjacent to the WWTP, and the County and Town have discussed use of this land for expansion of the WWTP. If combined with upgrade to BNR expansion of the Trout Run facility could be achieved without increasing overall nutrient discharge the Little Youghiogheny River.

However, discharges at the Trout Run WWTP are tied to flow rates in the Little Youghiogheny River. Because the Little Youghiogheny's flow can be quite low during dry months (typically the summer), significant capacity increases may not be possible, or may require more effluent storage (during the dry season) than could be achieved at the site.

Other Wastewater Disposal Alternatives

A number of other opportunities exist to protect and improve water quality while still accommodating projected growth and development. This section summarizes key concepts that the County may wish to consider.

Continue System Repairs. Considerable capacity is taken up by I/I at the Trout Run and Friendsville WWTP. Although these systems are not projected to approach their permitted treatment capacities, resolving these problems will give the system additional flexibility, and may prevent further discharge violations during low-flow conditions on Trout Run. Similar benefits could be realized at the town-run Accident WWTP, where new development will be constrained until I/I problems are fixed.

Spray Irrigation. Spray irrigation refers to the application of treated wastewater effluent directly to the soil, allowing pollutants to be absorbed before the effluent reaches receiving streams. In Garrett County, shallow soils, heavy annual rainfall, and hilly topography giving rise to minor watercourses over short distance intervals limit the acceptability of spray irrigation as a primary wastewater disposal technique, and have limited the use of this technique.

Table 5.5: Point Source Nutrient Loads

Watershed	System	Existing Demand	Existing Nutrient loading (lbs/year)		Projected Demand, 2030	Nutrient Discharges, before BNR upgrade, 2030 ² (lbs/year)		Nutrient Discharges, 2030, after BNR upgrade ³ (lbs/day)		Potential Nutrient Reduction (lbs/year), after BNR upgrade	
		MGD	TN ¹	TP	MGD	TN	TP	TN	TP	TN	TP
Youghiogheny River	Crellin	0.01	768	256	0.02	1,248	416	555	139	693	277
	Friendsville	0.12	6,744	2,248	0.09	4,965	1,655	2,207	552	2,759	1,103
	Oakland ⁴	0.49	26,866	8,955	0.66	36,359	12,120	16,160	4,040	20,200	8,080
	<i>Total</i>	<i>0.63</i>	<i>34,378</i>	<i>11,459</i>	<i>0.78</i>	<i>42,573</i>	<i>14,191</i>	<i>18,921</i>	<i>4,730</i>	<i>23,652</i>	<i>9,461</i>
Bear Creek	Accident	0.16	8,773	2,924	0.07	3,833	1,278	1,703	426	2,129	852
Little Youghiogheny River	Trout Run	0.70	38,435	12,812	0.82	44,877	14,959	19,945	4,986	24,932	9,973
North Branch Potomac River	Bloomington	0.04	1,974	658	0.04	2,238	746	995	249	1,243	497
	Gorman	0.00	219	73	0.01	497	166	221	55	276	111
	Kitzmilller	0.02	987	329	0.02	1,347	449	599	150	748	299
	<i>Total</i>	<i>0</i>	<i>3,180</i>	<i>1,060</i>	<i>0</i>	<i>4,082</i>	<i>1,361</i>	<i>1,814</i>	<i>454</i>	<i>2,268</i>	<i>907</i>

1: TN = Nitrogen; TP = Phosphorus

2: Assumes that loads prior to BNR upgrade are 18 mg Nitrogen and 6 mg Phosphorus per liter of effluent. Source: MDE.

3: Assumes that loads after BNR upgrade are 8 mg Nitrogen and 2 mg Phosphorus per liter of effluent. Source: MDE

4: Although Oakland sits in the Little Youghiogheny River watershed, its discharge is to the main stem of the Youghiogheny River.

Deep Creek Lake State Park has the only existing spray irrigation facility in Garrett County. As described above, the state and County are working to eliminate the spray irrigation system, in favor of year-round treatment at the Deep Creek Lake WWTP.

Capacity Credits. The County may be able to obtain credit (and therefore permission to expand treatment capacity) from MDE for connecting septic systems to public sewer systems. Septic systems generally discharge higher nitrogen loads per household than public systems. Similarly, the County may also be able to receive credit for funding septic denitrification improvements for existing homes or businesses.

Nutrient Trading. In a trading system, a WWTP from one part of the County could agree to forego a certain amount of development, and then send or “trade” that excess treatment capacity to another WWTP in need of capacity. Any such trading system would need to conform to regulations and guidelines developed by MDE in 2008.²³ This might be a viable option for the larger systems in the County that are within the same basin, such as the Upper Potomac River basin (which includes the Savage River, North Branch Potomac, and George’s Creek watersheds in Garrett County) or the Youghiogheny River basin.

5.4 Programmatic Assessment of Nonpoint Source Policies

In addition to point source nutrient discharges, a majority of Garrett County's primary water courses are influenced by nonpoint source nutrient loading, consisting of agricultural runoff,, sediment from development, and stormwater runoff from the roads, streets, and highways. Other nonpoint pollution comes from bacteriological contamination (primarily caused by inadequate treatment and disposal of sanitary wastewater and agricultural runoff) and toxic chemical intrusion (primarily caused by surface and deep mining activity which occurred prior to implementation and enforcement of regulatory controls; the modern day use of fertilizers, herbicides and insecticides are also contributing factors). This section characterizes County policies and regulations that address nonpoint source pollution.

Maryland Stormwater Design Manual

The 2000 Maryland Stormwater Design Manual, Volumes I & II is incorporated by reference into the Garrett County Stormwater Ordinance, and serves as the official guide for stormwater principles, methods, and practices. In addition, the County encourages innovative stormwater management techniques such as tree conservation areas, buffer strips, rain gardens, vegetated swales, and dry wells to reduce the quantity of runoff from urban and rural development sites.

In 2007, the General Assembly passed the Maryland Stormwater Management Act, which mandates substantial revision of the Stormwater Design Manual. The most notable provision of the Stormwater Management Act of 2007 is the requirement that new development use Environmentally Sensitive Design (ESD) techniques, which are intended to “maintain pre-development runoff characteristics” on the site.²⁴ MDE expects to have the revised manual and accompanying regulations adopted by the end of 2008. This Comprehensive Plan recommends that the County revise its Stormwater Management Ordinance to incorporate the forthcoming revision of the Maryland Stormwater Design Manual and other enhanced stormwater management policies (recommended by MDE, pursuant to the Stormwater Management Act of 2007).

Other Nonpoint Source Management Techniques

In addition to updating the Stormwater Management Ordinance, the following actions can help manage stormwater.

²³ Information available at: <http://www.mde.state.md.us/Water/nutrientcap.asp>

²⁴ Source: MDE. <http://www.mde.state.md.us/assets/document/act%20-%20a%20state%20perspective.pdf>

Sedimentation and Erosion. As described in Chapter 7, the Sensitive Areas Element, sedimentation and other impacts resulting from construction activity, and increased stormwater flows to streams and rivers from development are also a potential threat to water quality. The County feels that its ordinances are (and will be, after adoption of the revised state Stormwater Manual) adequate to manage these impacts. However, the County strongly supports increased state inspection to ensure implementation of erosion and sediment controls.

Open Section Roads. Outside of towns and populated areas where pedestrian facilities are a priority, new roads in the County should continue to be developed with open sections, to better disperse stormwater.

Land Use Regulations. The expansion of the RR and AR land classifications, and the new standards for development in these areas (see Section 3.4.2) will help to reduce nonpoint source pollution. The new development standards specifically call for the preservation of contiguous forest and agricultural resources and sensitive areas. Such resources can act as buffers help to reduce the flow of nutrients and pollutants to streams.

Other elements of the Land Use Plan, such as the concentration of development in and around towns and other areas with public sewer systems will reduce nonpoint source pollution from septic systems.

Septic Denitrification. Requiring the use of septic denitrification systems in new construction, and encouraging denitrification retrofits for existing septic systems can further reduce nonpoint source pollution.

Stormwater Retrofits. As described in Section 7.3.1, stormwater retrofits can help to reduce nonpoint source pollution. Due to the expense of installing large-scale retrofits, such improvements should be targeted to environmentally sensitive areas.

5.5 Total Nutrient Loads and Assimilative Capacity

Nutrient loading from WWTPs, stormwater, and other “non-point sources” are the primary contributors to degraded water quality, particularly in the Chesapeake Bay and its tributaries. As a result of state policies designed to help protect and restore the Bay, the Comprehensive Plan must take into account the “assimilative capacity” of a receiving body of water—the amount of nutrients that the stream can receive while still maintaining acceptable water quality. While only a portion of Garrett County is in the Chesapeake Bay Watershed (the remainder is in the Mississippi River basin), nutrient pollution can degrade water quality in any receiving body; protecting and improving water quality in Maryland is a Countywide goal. Accordingly, this section describes the ability of the County’s water bodies to assimilate point and nonpoint source nutrient loads from existing and projected development.

Nonpoint Source Loading

In developing the Comprehensive Plan, two future land use scenarios were considered.²⁵

Scenario 1: Continuation of existing land use policies (1995 Comprehensive Plan). This scenario would retain the existing amount of all land classifications, notably a large amount of Rural and Lake Residential land (one unit per acre).

Scenario 2: Considerable expansion of the RR and AR designations (with accompanying reduction of area designated R and LR), with mandatory clustering of

²⁵ Four land use scenarios for the Deep Creek Lake Influence Area were also evaluated primarily for their impact on development capacity—but not for water and water quality impacts. These are described in Chapter 4 and the accompanying appendix material. Of these four scenarios, one corresponds to Scenario 1, as described in this section, while the other scenarios all generally correspond to Scenario 2.

development in AR and RR areas. Within the Deep Creek Lake Influence Area, all RD land and significant amounts of LR land are reclassified as AR or RR. The remaining LR land is split into LR1 (one unit per acre, on sewer) and LR2 (one unit per two acres, no sewer) districts (see description in Chapters 3 and 4).

In developing the Water Resources Element, a third scenario was developed:

Scenario 3: The same as Scenario 2, except that all new development uses septic denitrification systems. More than two thirds of development in Garrett County uses well and septic systems, rather than public water and sewer. However, very few residences and businesses in the County use septic denitrification technology, which reduces nitrogen from septic discharges. This scenario would not change the land use pattern, compared to Scenario 2, but would result in lower nitrogen discharges.

The nonpoint source nutrient loads for these three land use scenarios were evaluated using methodology developed by the Maryland Department of the Environment, as modified by the County to reflect conditions specific to Garrett County. More detail on the nonpoint source evaluation methodology is presented in the Water Resources section of the Comprehensive Plan Appendix.

Combined Loading

The projected point source, nonpoint source, and total nutrient loads for each land use scenario are shown in Table 5.6. Nonpoint source pollution from residential and non-residential septic tanks is an input into the state's nonpoint source model, and is therefore included in the nonpoint source component of Table 5.6. The point source data assume that the Accident, Friendsville, Oakland, and Trout Run WWTPs would be upgraded to BNR by 2030. Although no specific BNR plans exist for these facilities, such upgrades are reasonably foreseeable due to impending TMDLs, antidegradation policies, and other considerations related to existing and future development.

All three scenarios would result in increased nitrogen and phosphorus loads, due to the accommodation of more than 6,000 new dwelling units and more than 750 ERU of commercial and industrial development. The point source nutrient loads were held constant across all three scenarios, reflecting the Plan's assumptions about the amount of new development that would occur within existing or future public sewer service areas.

Thus, nonpoint source pollution (including septic systems) was the only variable amongst the three scenarios. The increased nonpoint loading (compared to existing conditions) is largely due to the conversion of forest and agriculture land to residential, commercial, and other development types which typically have higher nutrient loading rates. All three scenarios would convert approximately 20,000 acres of forest and 5,000 acres of agricultural land (for additional information, please see the Water Resources section of the Comprehensive Plan Appendix).

Scenarios 2 and 3, both of which incorporate changes to the County's land use pattern, would have smaller increases in nitrogen and substantially smaller increases in phosphorus loading than Scenario 1. This pattern applies Countywide, and for each of the County's watersheds.

Table 5.6: Total Nutrient Loading, By Land Use Scenario¹

Annual Loading (lbs/year)		Existing Conditions ²		Scenario 1		Scenario 2		Scenario 3		
		TN	TP	TN	TP	TN	TP	TN	TP	
Watershed	Youghiogheny River	Nonpoint Source	87,537	4,333	156,010	8,313	143,368	7,421	135,198	7,421
		Point Source	34,378	11,459	19,474	4,973	19,474	4,973	19,474	4,973
		Total	121,915	15,792	175,484	13,286	162,842	12,393	154,672	12,393
	Bear Creek	Nonpoint Source	29,989	1,421	45,141	2,475	42,959	2,321	41,367	2,321
		Point Source	8,773	2,924	1,703	426	1,703	426	1,703	426
		Total	38,761	4,345	46,844	2,901	44,662	2,747	43,071	2,747
	Southern Youghiogheny River	Nonpoint Source	9,994	430	13,101	638	12,392	588	12,186	588
		Point Source	-	-	-	-	-	-	-	-
		Total	9,994	430	13,101	638	12,392	588	12,186	588
	Little Youghiogheny River	Nonpoint Source	57,323	3,066	64,660	3,963	60,782	3,689	60,088	3,689
		Point Source	38,435	12,812	20,086	5,021	20,086	5,021	20,086	5,021
		Total	95,758	15,877	84,746	8,984	80,868	8,710	80,174	8,710
	Casselman River	Nonpoint Source	51,686	2,301	86,628	4,588	78,802	4,036	76,307	4,036
		Point Source	10,722	2,681	12,190	3,047	12,190	3,047	12,190	3,047
		Total	62,408	4,982	98,817	7,636	90,992	7,083	88,496	7,083
Savage River	Nonpoint Source	32,440	1,472	50,631	2,635	46,578	2,349	45,428	2,349	
	Point Source	-	-	-	-	-	-	-	-	
	Total	32,440	1,472	50,631	2,635	46,578	2,349	45,428	2,349	
George's Creek	Nonpoint Source	8,052	479	8,610	517	8,448	505	8,413	505	
	Point Source	-	-	-	-	-	-	-	-	
	Total	8,052	479	8,610	517	8,448	505	8,413	505	
North Branch Potomac River	Nonpoint Source	58,974	3,420	70,609	4,235	67,076	3,986	66,475	3,986	
	Point Source	3,180	1,060	4,082	1,361	4,082	1,361	4,082	1,361	
	Total	62,154	4,480	74,691	5,596	71,158	5,346	70,557	5,346	
Deep Creek	Nonpoint Source	89,059	4,630	149,437	9,292	111,684	6,627	107,240	6,627	
	Point Source	28,523	7,131	57,787	14,447	57,787	14,447	57,787	14,447	
	Total	117,582	11,760	207,224	23,739	169,471	21,074	165,027	21,074	
Total Point Source		425,054	21,552	644,827	36,656	572,089	31,522	552,702	31,522	
Total Nonpoint Source		124,011	38,067	115,322	29,275	115,322	29,275	115,322	29,275	
Grand Total		549,065	59,618	760,148	65,930	687,411	60,796	668,024	60,796	
Change from Existing Conditions		n/a	n/a	211,083	6,312	138,346	1,178	118,959	1,178	

1: The nonpoint source component of this table was generated by using a modified version of the state's default nonpoint source model. For more details on modifications to the state's model, please see the Water Resources portion of the Comprehensive Plan Appendix.

2: Existing nutrient loads reflect the Countywide land use pattern at the end of 2005.

Impervious Surface

Impervious surfaces are primarily human-made surfaces, such as roads, rooftops, and sidewalks, which do not allow rainwater to enter the ground. The amount of impervious surface in a watershed is a key indicator of water quality. Water quality in streams tends to decline as watersheds approach 10 percent impervious coverage, and drops sharply when the watershed approaches 25 percent impervious coverage. Table 5.7 summarizes existing and potential impervious coverage by watershed.

Table 5.7: Impervious Coverage

	Existing	Scenario 1	Scenario 2/3
Youghiogheny River	1.3%	2.4%	2.2%
Bear Creek	1.6%	2.6%	2.5%
Southern Youghiogheny	0.7%	1.0%	1.0%
Little Youghiogheny	4.7%	5.7%	5.5%
Casselman River	1.1%	2.3%	2.1%
Savage River	0.4%	0.8%	0.7%
Georges Creek	0.2%	0.3%	0.3%
North Branch Potomac	0.7%	1.0%	0.9%
Deep Creek	3.6%	6.5%	4.9%
Total	1.4%	2.4	2.1

Countywide, less than two percent of all land is impervious. Even in Garrett County’s most developed watersheds, impervious surface coverage is low: under four percent and five percent in the Deep Creek and Little Youghiogheny River watersheds, respectively. Under all scenarios, countywide impervious coverage would increase above two percent. Individual watersheds would have higher impervious coverages under Scenario 1, particularly the Deep Creek watershed, which would rise above six percent impervious coverage.

Choice of Land Use Plan

Land use and water quality are closely linked. Lacking specific measures of assimilative capacity, such as completed TMDLs for nutrients, it is not possible to determine whether or by how much the nutrient loads from future development would exceed that capacity. Because Garrett County is projected to remain largely undeveloped, it is unlikely that assimilative capacity will be exceeded in most watersheds (the exception being Deep Creek, which is already impaired due to nutrients). However, other environmental impacts from development, such as air pollution or pollution from road sand and salt, could alter the analysis in this section. A comprehensive analysis of such impacts is difficult.

Given these uncertainties, and the goal of protecting and restoring water quality, the County’s choice of future land use plan should minimize additional nutrient loads. Based on point and nonpoint source considerations, such as potential increases in nitrogen and phosphorus discharges, and changes in impervious surface, the land use pattern described for Scenarios 2 and 3 (shown in Map 3.4) would have less impact on water quality than Scenario 1, and is therefore the preferred land use scenario. The land use plans for each watershed, described in Section 3.5, reflect this preferred scenario.

Any steps that the County can take to further reduce nonpoint source nitrogen and phosphorus discharges by encouraging septic denitrification technologies and improved agricultural management practices (to reduce nutrients in agricultural runoff) will help to further improve water quality. To this end, the County should take advantage of funding opportunities from both the Chesapeake Bay Program and the Mississippi River & Gulf of Mexico Hypoxia Task Force, coordinated by the US Environmental Protection Agency (US EPA). Garrett County is Maryland’s headwaters representative for the latter organization, which addresses water quality concerns in the Gulf of Mexico.

5.6 Policies and Actions

1. Use data from the planned regional water resources study (Garrett, Allegany, and Mineral Counties) in future Comprehensive Plan updates to guide growth and development decisions.
2. Work with appropriate federal, state, and local authorities as necessary to identify additional sources of water necessary to serve projected demands. In particular, work with the Town of Frostburg to evaluate the possibility of drawing water from Piney Run Reservoir to serve the Finzel community.
3. Amend the Sensitive Areas Ordinance to limit development in—and establish buffers around—Source Water Protection Areas, as defined in the Source Water Protection Plan.
4. Review the County's building and land development codes to ensure that water conserving fixtures and appliances are required for all new development and retrofits outside of public water systems.
5. Consider requiring all new development outside of existing or planned public sewer service areas to use septic denitrification systems.
6. Explore incentives to encourage property owners to:
 - o Install water conserving fixtures and appliances.
 - o Install septic denitrification units on existing septic systems.
7. Continue to resolve I/I problems in the Friendsville and Trout Run sewer systems.
8. Consider upgrading the Trout Run WWTP to BNR (or ENR) technology.
9. Continue to work with MDE to determine whether the County can receive nutrient credits for providing sewer service to properties with septic systems (especially failing systems).
10. As part of the next Comprehensive Plan update, re-run the nonpoint source loading analysis, incorporating up-to-date land use and any changes to the state's default model.
11. Consider adopting a nutrient trading program that conforms to MDE regulations and guidelines.
12. Continue to support land preservation activities such as MALPF and Rural Legacy, and specifically encourage such activities (including the purchase of land by private conservation organizations) on land that drains to Tier II waters in the County, and in watersheds where impervious coverage approaches or exceeds 10 percent.
13. Consider stormwater management retrofits targeted to areas where runoff impacts sensitive environmental features (see policy 7 in Chapter 7, the Sensitive Areas Element).
14. Work with MDE to monitor natural gas development activities to ensure the safety of the ground and surface water supplies.

15. Amend the Stormwater Management Ordinance, the Deep Creek Lake Watershed Zoning Ordinance, and the stormwater provisions of the Subdivision Ordinance as follows:
 - o Adopt the Maryland Stormwater Design Manual, as revised by MDE to reflect provisions of the Stormwater Management Act of 2007 (anticipated to be completed by 2008), as the County's governing stormwater regulations for new development.
 - o Adopt future MDE guidelines and recommendations for using Environmentally Sensitive Design (ESD) in new development.
16. Monitor the activities of and opportunities presented by US EPA's Mississippi River Basin and Gulf of Mexico Hypoxia Task Force.

6 Transportation Element

This chapter identifies the components comprising the countywide transportation system. It identifies transportation improvements and policies that are needed to support planned land uses and improve the function and safety of the transportation system. The Plan recommends improvements that will accommodate bicycle and pedestrian circulation as components of the transportation network and as part of the County's overall plan for recreation.

The transportation considerations in the Deep Creek Lake area of the County are different from those in the more rural portions of the County. Chapter 4 of this Plan identifies the specific transportation policies and facility improvements for the Deep Creek Lake area. The local transportation needs within Garrett County's eight towns are addressed by each town's individual Comprehensive Plan and not in this chapter.

The Transportation Element was prepared by reviewing the County's transportation system components, including highways, pedestrian facilities, bicycle routes, bus system and the airport. Existing conditions were identified using the most recent available data. Development of this element included a functional assessment of the highway network, a review of transportation trends, and identification of additional issues for consideration for each transportation system component. Recommendations to address these issues and support the County's transportation goals and objectives are listed at the end of this chapter. Specific recommendations for the Deep Creek Lake area are in Chapter 4.

6.1 Goals and Objectives

The transportation goal for the County is to:

Plan and build a balanced, efficient transportation system to meet the mobility needs of residents and businesses and to support the County's growth as a vacation destination.

Objectives to support the goal are listed below.

1. Assure consistency between the county land use plan, zoning and subdivision ordinances, and other regulations, and the requirements the transportation system.
2. Preserve roadway capacity and improve safety.
3. Improve coordination between county and state agencies in the review and approval of road projects and development projects that impact roads.
4. Establish on-going funding and improvement mechanisms for roadway system preservation to address system deficiencies and for transportation system capital improvements.
5. Support planned growth of the Garrett County Airport as a component of the County's multi-modal transportation system and a focus for related economic development.
6. Protect scenic qualities of the rural roads.
7. Promote mobility for all by encouraging transit use.
8. Provide accommodation for bicycling and walking as a means of local travel and for recreational purposes.

6.2 Roads

6.2.1 Existing Conditions

Roads within Garrett County are owned and maintained primarily by the Maryland State Highway Administration (SHA), the County, and the eight municipalities. Private entities including developers and property owners' associations have responsibility for maintaining some local roads.

State

The Maryland State Highway Administration (SHA) owns and maintains 197 miles of roadway in Garrett County. For funding purposes, SHA categorizes roadways into a primary highway system and a secondary system. The basis for categorizing roadways according to the function that they serve is referred to as a "functional classification system" (see box below). The classification system is used for federal, state and local highway programs and can be used for a variety of other planning purposes, such as prioritizing maintenance and snow removal.

SHA uses only three functional roadway categories for Garrett County, reflecting its rural nature: Rural Interstate, Rural Principal Arterial and Rural Minor Arterial. Map 6.1 shows the roads within Garrett County that hold a Federal Functional Classification. I-68 is classified as a Rural Interstate. North of Oakland, US 219 is classified as a Rural Principal Arterial, and south of Oakland, US 219 is designated as a Rural Minor Arterial. This is due to the amount of development north of Oakland along the highway. The National Pike (US 40) is classified as a Rural Principal Arterial. MD 42, MD 135, MD 39 and US 50 are all classified as Rural Minor Arterials. These facilities are considered the primary regional routes in Garrett County and have the highest priorities for funding and planning.

SHA identifies highway improvement needs in the five-year Consolidated Transportation Program (CTP), which is part of the Maryland Transportation Plan. SHA also maintains a Highway Needs Inventory (HNI) which is a long-range list of deficiencies on state-maintained highways in each county. The HNI is updated by SHA every two years and it serves as the technical basis for projects to be added into the state transportation capital budget or the CTP.

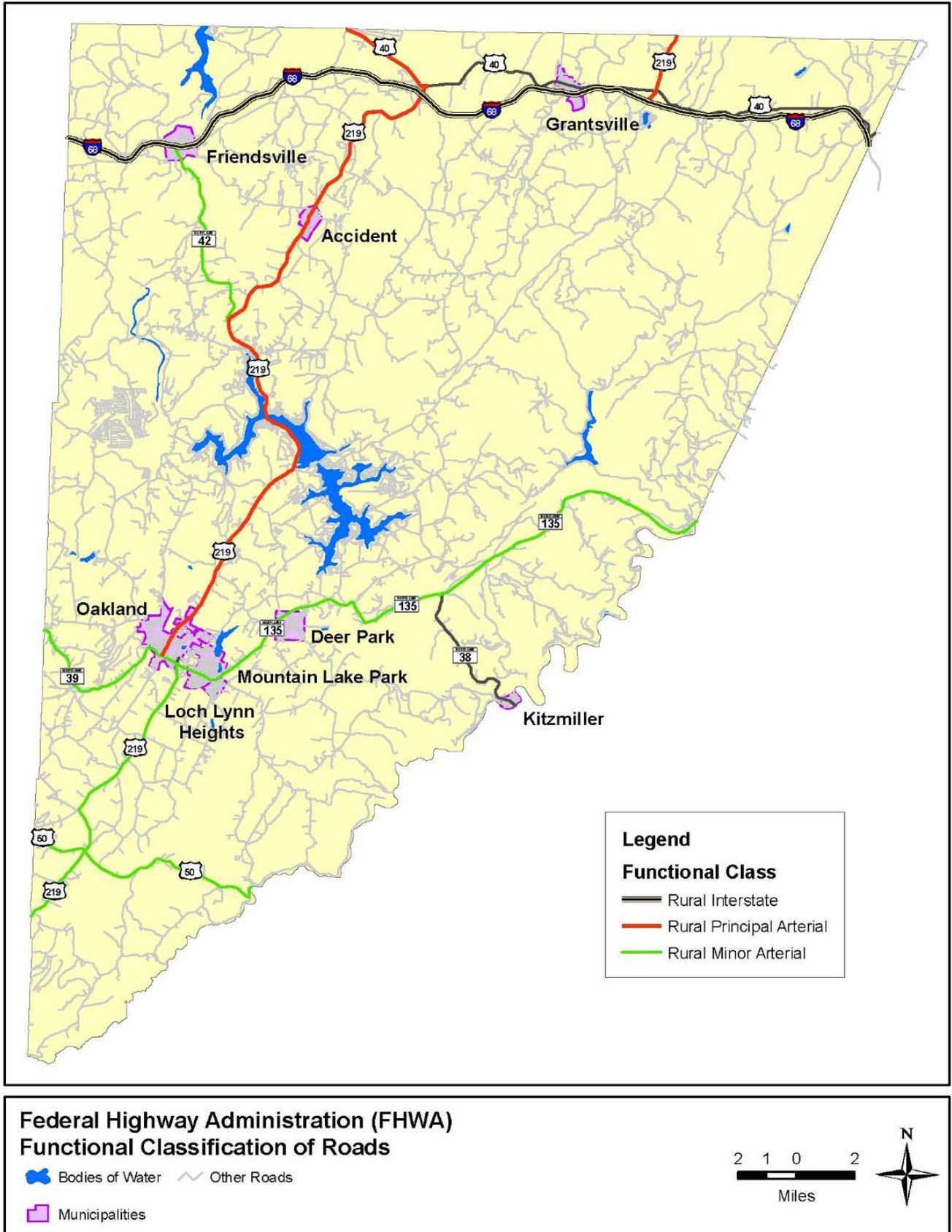
Garrett County is within SHA's District 6, headquartered in LaVale (near Cumberland), one of seven districts in the state. SHA staff consult with the County each year to discuss the County's transportation priorities and the projects to be proposed for funding in the CTP. Since the overall state needs for transportation exceed the state funding available there are often needs identified (from the HNI or newly arising needs) that cannot be funded in the CTP.

Functional Classification

In the 1960s, the Federal Highway Administration (FHWA) developed a system to classify the nation's roadways according to function. This "Functional Classification System" is the nationwide standard for categorizing roadways, and is used to plan, budget, program, and fiscally manage highway infrastructure improvements.

Functional classification groups roadways into a hierarchy based upon the type of service they are intended to provide to a community. Roads work together as a system to provide for travel in a region, striving to simultaneously provide access to property and travel mobility. Local roads primarily provide land access, arterials primarily provide mobility for through traffic, and collectors bridge the gap between the functions of land access and mobility. As a rural county, Garrett has no roads classified as "collectors".

Map 6.1 Functional Classification of Roads



County

The Garrett County Roads Department designs, manages, and constructs the County roads and bridges. The Department maintains 680 miles of roadway and 127 bridges and operates three maintenance facilities. Most County roads are two lanes wide and only some have shoulders. Each year the County allocates funding to pave some of its remaining dirt roads. As of 2007, only 15 miles of unpaved roads were left in the county.

Towns

The eight incorporated Towns within the County are responsible for operation and maintenance of their local roads. There are 64 miles of roadway maintained by the municipalities in Garrett County.

6.2.2 *County Traffic Trends*

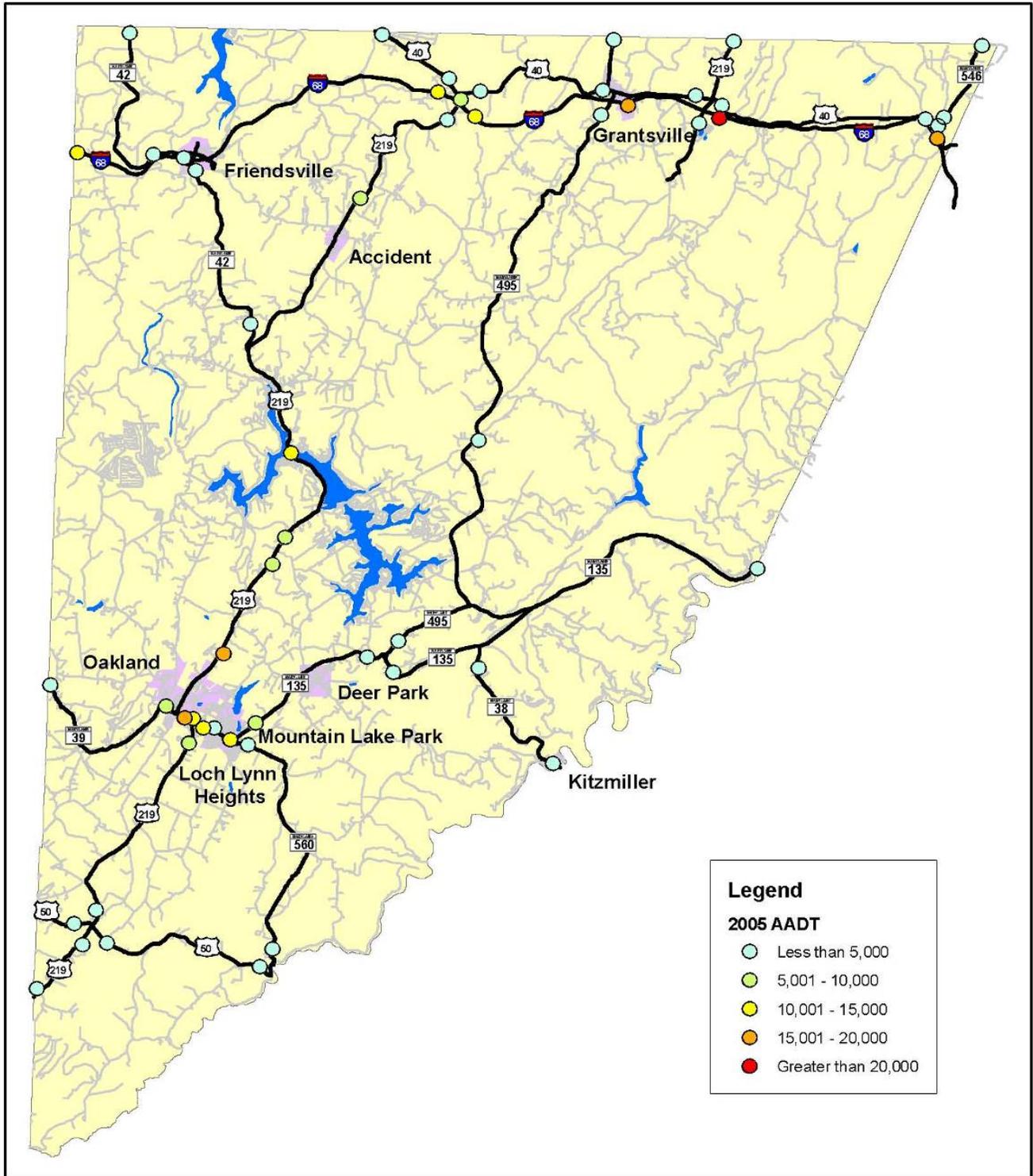
SHA monitors traffic at a number of locations throughout Garrett County. Average Annual Daily Traffic (AADT) counts for these locations are shown in Map 6.2. The data show that the largest traffic volumes in the County typically occur on I-68 and US 219. Oakland's role as the County seat also results in higher traffic volumes. The highest AADT in the County is just over 20,000 vehicles per day (vpd), along I-68 near US 219. This volume is indicative of the rural nature of the County (for example, AADT on I-68 in Cumberland is more than 44,000). Map 6.3 shows the average annual percentage change in AADT since 1995, when the last Comprehensive Plan was prepared. There are several trends worth noting:

- Traffic growth on County roads ranged from one to six percent annually, compared to approximately two percent statewide and throughout SHA District 6.
- In some locations, such as along MD 135 and MD 39, traffic volumes have declined.
- Traffic in the southern portion of the County grew three to five percent annually, particularly around Oakland, which has seen an increase in volume of about 7,000 vpd since 1995.
- Traffic along I-68 and US 219 grew by two to five percent annually. Traffic volumes on I-68 have increased by about 5,000 vpd since 1995.
- Traffic along US 219 in the Deep Creek Lake area grew by about two percent per year, adding approximately 2,000 vpd since 1995.

Map 6.3 also shows steady growth in traffic volumes along the Maryland-Pennsylvania border, likely due to policies supporting economic development in the Appalachian Region along that corridor. As planned improvements along US 219 to Meyersdale, PA are completed, the growth in traffic volumes is expected to continue (see the discussion of Corridor H in Section 6.3.3).

The primary routes serving the County are I-68, US 219 and MD 135. I-68 is the primary east-west corridor serving through travel and the northern portion of the County. MD 135 is the primary east-west corridor serving the southern part of the County. US 219 is the primary north-south corridor, which also directly serves the Deep Creek Lake area. Several Priority Funding Areas and the County's Enterprise Zones are also located along these corridors. The Towns of Oakland, Accident, Friendsville, Grantsville, Deer Park, and Loch Lynn Heights are all accessed via these primary corridors, making them primary areas for growth in the County.

Map 6.2 2005 Average Annual Daily Traffic Volumes

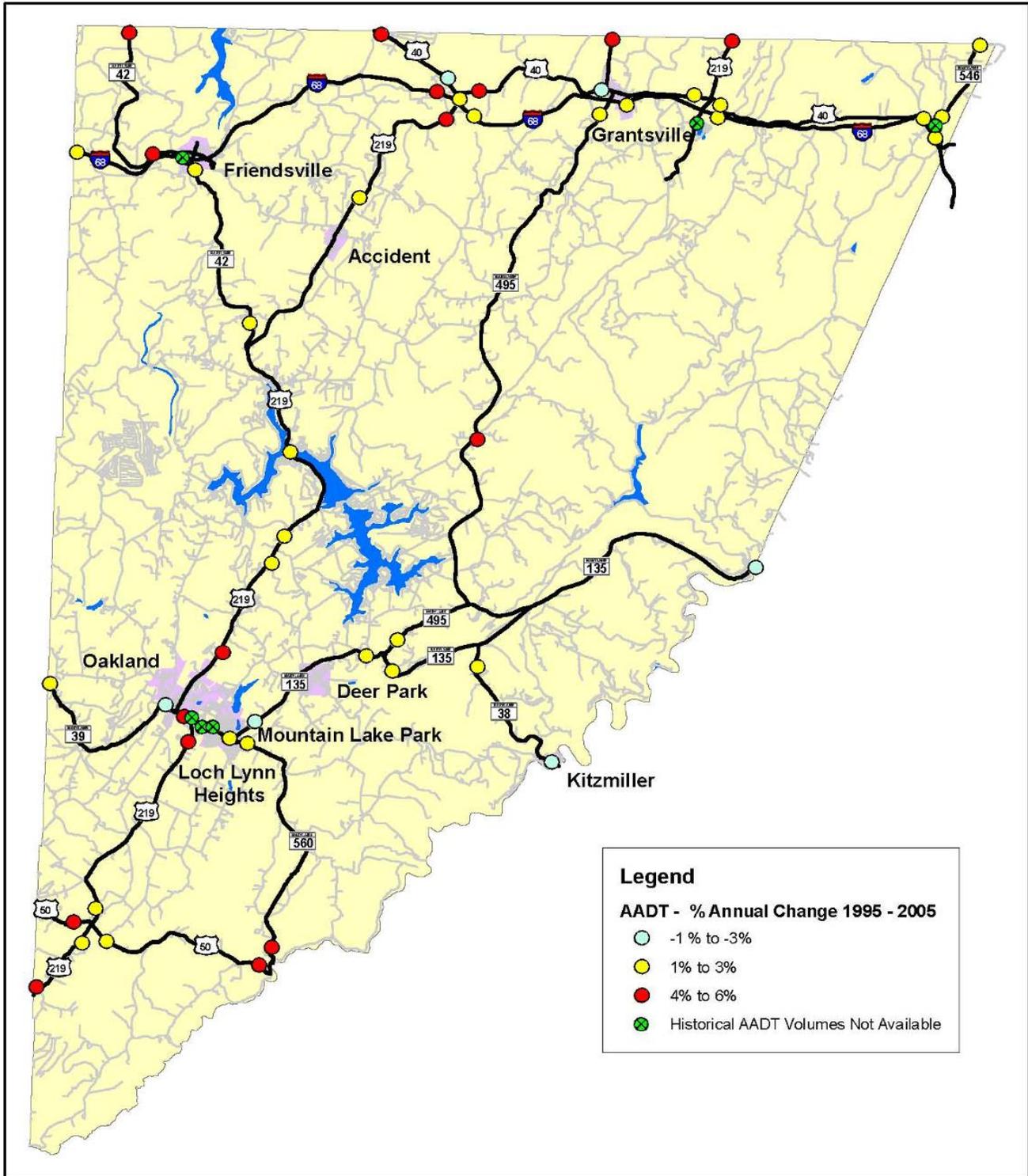


2005 Average Annual Daily Traffic (AADT) Volumes

- Major Roads
- Other Roads
- Bodies of Water
- Municipalities

Miles

Map 6.3 Average Annual Daily Traffic Volumes % Annual Change 1995-2005



**Average Annual Daily Traffic (AADT) Volumes
% Annual Change 1995 - 2005**

- Major Roads
- Other Roads
- Bodies of Water
- Municipalities



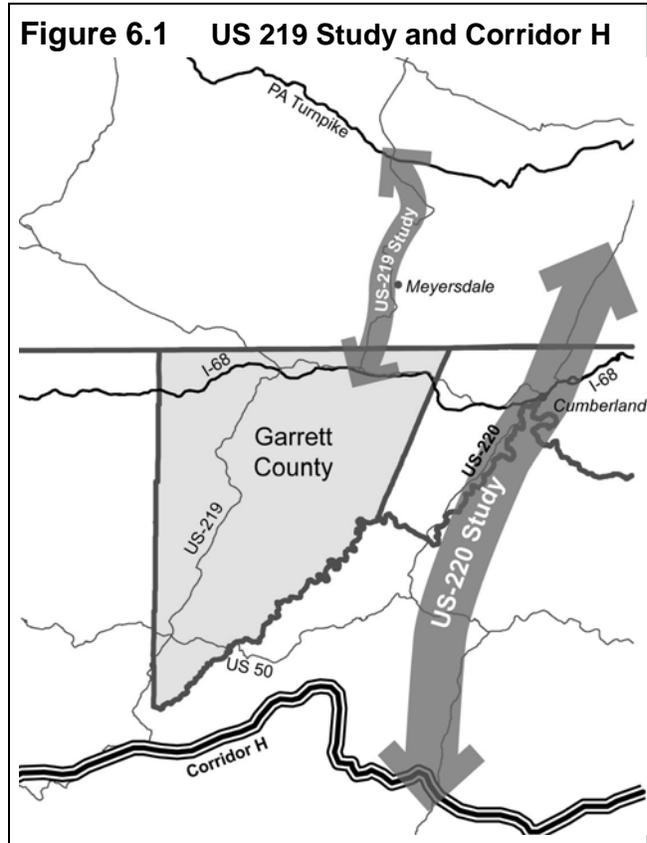
6.2.3 Planned Road Improvements

State Roads

The following projects have funding and are included in the MDOT CTP under the Primary and Secondary Construction Program for 2007:

- US 219 North Study.** A joint planning study between the states of Maryland and Pennsylvania, investigating options to improve US 219 to provide better access from I-68 in Maryland to the Pennsylvania Turnpike via Meyersdale, Pennsylvania (see Figure 6.1). Most of the corridor is in Pennsylvania; the Maryland portion of the project from I-68 north to the state line is 2.54 miles long.

This project is part of a broader effort to improve the highway links between Pennsylvania and points north and Appalachian Development Highway System Corridor H; upgrade north-south access for residents, businesses, and visitors; and provide opportunities for improving economic development in this region of Appalachia.¹ The main link between I-68 and Corridor H would follow the US-220 corridor south of Cumberland. The County supports the effort to improve the US 220 corridor and the US 219 north corridor (north of I-68 only) as the primary link between Pennsylvania and Corridor H.



The County does not support the US 219 right of way south of I-68 as the primary link between Pennsylvania and Corridor H as this right-of-way is physically constrained in many locations, particularly around Deep Creek Lake. The segment of US 219 near the Lake is also the heart of the County's tourism-related economy. The segments of US 219 in the Bear Creek (north of McHenry) and Southern Youghiogheny (south of Oakland) watersheds also traverse areas rich in scenic, agricultural, and sensitive natural resources. A major roadway and its associated traffic, as would necessarily occur on the primary link to Corridor H, are incompatible with these economic, environmental, and scenic resources.

- US 219 Oakland Bypass (US 219 Relocated).** A 2.4 mile roadway that will relocate US 219 to the east from north of Oakland to MD 135. This project was identified in the 1995 Garrett County Comprehensive Plan and is supported by Garrett County. The intent of the project is to divert through traffic and truck traffic from downtown Oakland. Construction is expected to begin in 2010 and the acquisition of needed right-of-way has

¹ Corridor H is a new road that will run roughly parallel to I-68, linking Elkins to Wardensville, near the Virginia/West Virginia line. More information can be found at <http://www.wvcorridorh.com/>.

begun. Sidewalks and shoulders will be included. Federal and state funds are approved for this project.

County Roads

Garrett County's 2008 Capital Budget includes funds for realignment and improved geometric design at the intersection of MD 495 and Spring Lick Road. The County has also indicated that the following intersections are candidates for similar improvements:

- MD 495 at New Germany Road
- US 219 at Kings Run Road
- US 219 at Pysell Road
- US 219 at Mayhew Inn Road

The capital budget also includes line items for improvements to bridges. Funding needs for bridge maintenance and repair are significant and can comprise the majority of the County Roads Division projects in a budget year.

Highway Needs Inventory

Table 6.1 lists the projects included in the Highway Needs Inventory (HNI) for Garrett County.

Table 6.1: Highway Needs Inventory Projects in Garrett County

Location	Type of Improvement, Comments
US 219 <ul style="list-style-type: none"> • All of US 219 north of Oakland • Oakland Bypass • Accident Bypass • West Virginia line to US 50 • Ben Dewitt Road to Mason School Road • I-68 to Pennsylvania Line (see Section 6.3.3) 	Reconstruction for all segments, except the Oakland Bypass and the Accident Bypass (a two-mile bypass of US 219 around Accident). US 219 north of I-68 would be reconstructed as a freeway.
MD 42 from US 219 to MD 742	Reconstruction
MD 135 <ul style="list-style-type: none"> • From US 219 to MD 560 • From MD 495 to scenic overlook near MD 38 	Reconstruction
MD 495 <ul style="list-style-type: none"> • From MD 135 to North Glade Road • From Maple Grove Road to South of I-68 	Reconstruction. These routes provide alternate access to the Deep Creek Lake area.
MD 560, from US 50 to White Church Steyer Road	Reconstruction

6.2.4 Future Traffic

In order to evaluate the anticipated traffic impact of the projected 2030 growth on the Garrett County transportation system, a sketch method of traffic analysis was applied. Using information on the existing transportation network, this method assumed that projects currently included in the county and state capital programs would be complete. Significant state projects included were the Oakland Bypass and the US 219 project north of I-68. County-funded capital projects included were the access roads for the Adventure Sports Center and the Keyzers Ridge business park.

Based on the assumptions about the future network conditions and projected growth by 2030 (as described in Table 2.2), estimates were made on the number and distribution of new vehicle trips. These estimates led to projected average daily traffic (ADT) and Peak Season ADT (PSADT) volumes on key roadways.² This traffic analysis method was used to identify existing and future system deficiencies and roadway network capacity.

Once future year Peak Season ADT was determined, critical intersections in the Deep Creek Lake area were evaluated according to Highway Capacity Manual standards (see Chapter 4 for more detail and discussion), which assign Level of Service to roadways and intersections (see box on next page).

The Transportation Technical Report (included in the Plan Appendix) gives more detail on traffic analysis methodology. Map 6.4 shows the anticipated 2030 PSADT on state roads throughout the county, based on the 2030 growth projected in Table 2.2. The overall conclusion of the traffic analysis is that the growth in traffic volumes in the County through 2030 is generally expected to be slower than was seen between 1995 and 2005 (see Table 6.2), although increased traffic will still have impacts on the transportation system, particularly in the Deep Creek Lake area, as described in Chapter 4.

Level of Service

Level of Service (LOS) analyses assign a letter grade, ranging from A to F, to roadway segments and intersections. Level of Service is determined by evaluating a number of factors including capacity, speed, delay and even the percent time spent following other traffic.

LOS A represents the very best conditions, where the driver experiences very little delay or discomfort. LOS F represents the worst conditions where congestion and delay are unacceptable and a roadway segment or intersection is simply unable to process the traffic demand.

LOS B, C, D and E represent the ranges between the best and worst conditions. LOS D or above is typically considered acceptable, while LOS E and F are typically considered unacceptable.

Table 6.2: Traffic Growth Trends

Location	Historic Trend Analysis ¹	Future Trend Based on Comprehensive Plan ²
MD 39 West of US 219	1.6%	0.7%
US 219 South of MD 135	1.7%	0.9%
MD 135 West of MD 560	1.0%	1.0%
MD 560 South of MD 135	0.4%	0.7%
MD 135 Northeast of MD 560	0.7%	0.9%
US 219 North of Oakland	2.2%	1.0%
US 219 South of Sand Flat Road	1.9%	1.0%
US 219 North of Sand Flat Road	1.7%	1.1%
MD 495 North of Glendale Road	2.1%	1.4%
ATR 35 US 219 at Deep Creek Bridge	2.1%	1.3%
MD 42 West of US 219	2.3%	1.1%
I-68 at West VA State Line	1.8%	2.0%
US 219 South of Bear Creek Road	1.8%	0.8%
I-68 East of US 219 S	1.4%	1.7%
I-68 East of MD 495	1.8%	1.7%

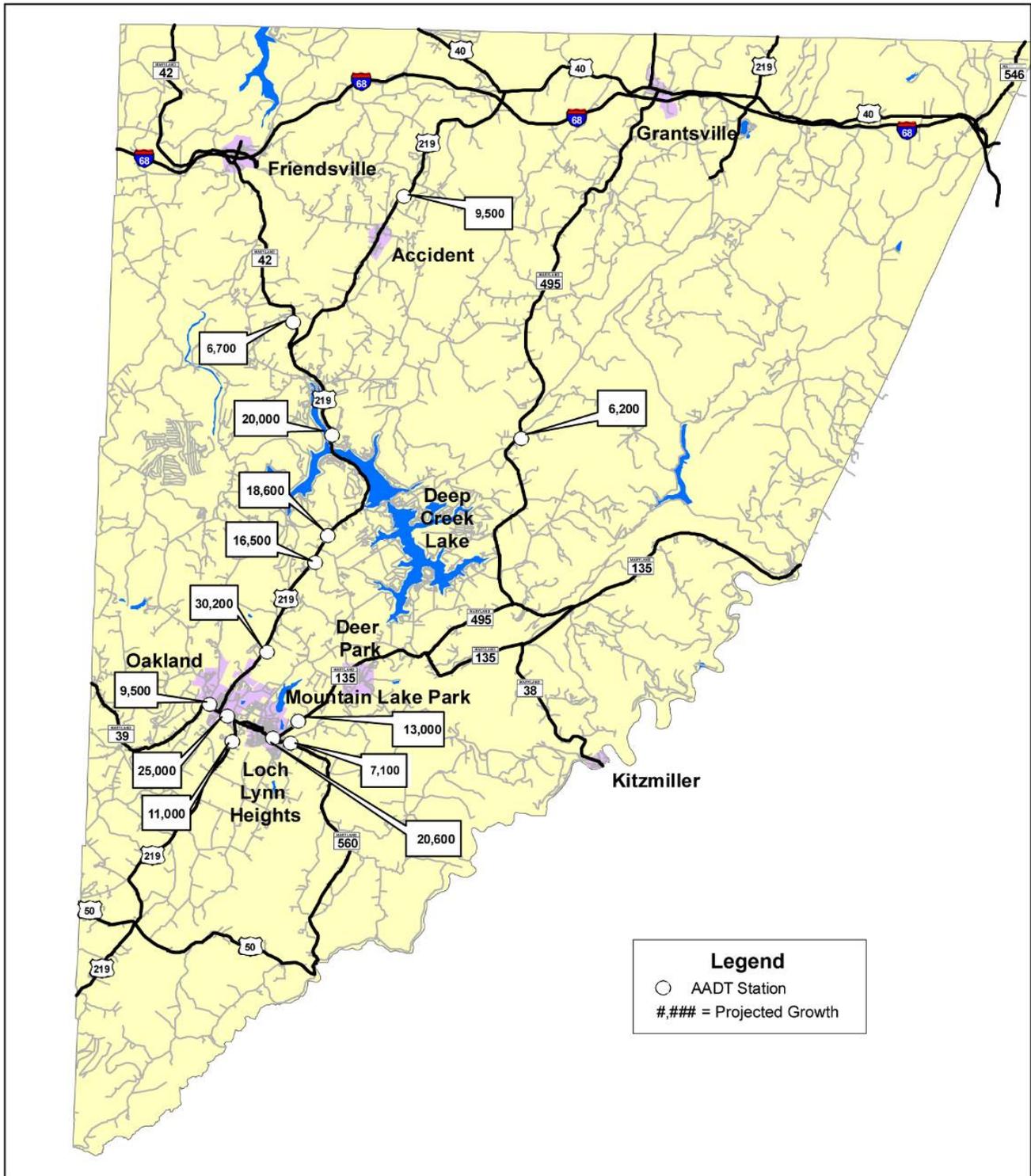
¹ Indicates the average annual growth in traffic volume from 1995 to 2005.

² Indicates the projected average annual growth in peak season traffic volume from 2007 to 2030.

Source: ERM and Whitman, Requardt & Associates, based on SHA data and Comprehensive Plan projections.

² PSADT is the average daily traffic that occurs during the winter and summer peak seasons, and is approximately 33 percent higher than year-round average daily traffic.

Map 6.4 2030 Peak Season Daily Traffic Volumes



2030 Peak Season Daily Traffic (AADT) Volumes

- Major Roads
- Bodies of Water
- Other Roads
- Municipalities



The leveling-off of traffic growth reflects this Plan's growth projections, which assume a slower pace of growth than occurred during the 1995-2005 period. In addition, much of the County's projected residential growth (the primary generator of traffic in the County) will be in the form of seasonal units in the Deep Creek Lake Influence Area. Seasonal units generate lower traffic volumes than permanent residences.³

I-68, MD 135 and MD 560 are exceptions to this general trend, due to the expected increases in development in or near these corridors. With the exception of the US 219 corridor through the Deep Creek Lake area (see Chapter 4), it is anticipated that the current and planned highway infrastructure will be able to accommodate the growth anticipated by the Comprehensive Plan. The key roadway considerations for the County over the horizon of this plan will be to ensure the continued adequacy of the roadway system by preserving roadway capacity, and addressing safety issues that arise.

6.2.5 *Identification of Issues—Road Network*

In general, the existing roadway system outside of the Deep Creek Lake area will adequately serve future anticipated traffic needs, based on the plan projections. The Comprehensive Plan recommends no new roads beyond those identified in current plans (see Section 6.2.3), and a new road in the vicinity of Sky View Drive (see section 4.6.2). Broader considerations about mobility are noted in later sections of this chapter. Since most of the County's growth will occur in the Deep Creek Lake area, most impacts to the County's roadway network are in the Lake area. These impacts, and the Comprehensive Plan's recommended solutions (including recommendations for funding transportation system improvements), are discussed in Chapter 4.

MD 495

As development reaches projected levels, the County should consider an alternative access route to serve the Lake area and the municipalities in the Little Youghiogheny River watershed. Thayerville, the two lane Deep Creek Bridge, and the segment of US 219 between those two points, act as traffic bottlenecks. Topography and concerns about community character also limit the County's ability to widen US 219 in areas where it might be warranted after traffic volumes pass projected levels.

With an existing interchange at I-68, MD 495 would be a logical eastern gateway to the Lake area and (with its connection to MD 135) the municipalities of Oakland, Mountain Lake Park, Loch Lynn Heights, and Deer Park. Reconfiguration of MD 495 as a major collector⁴ with wider shoulders could also promote economic development and increase the safety and redundancy of the transportation network—providing increased road capacity and alternative egress in case US 219 were to become disabled by weather, traffic accident, or other emergency.

Such a concept would require improving MD 495's geometry, as well as paving and signage improvements (more extensive than those listed in the HNI). MD 495 is a designated Scenic Byway (see Section 6.7.2), and future improvements to increase capacity would have to respect this status.⁵ The direct and secondary land use impacts of upgrading MD 495 would also need to be carefully assessed, particularly in rural portions of the County where there is no zoning.

³ The ITE Trip Generation Manual, which is the nationwide standard for trip generation calculations, assigns 3.1 weekday trips per "recreational home" (i.e., "seasonal residential unit") and 9.5 weekday trips per permanent residential unit.

⁴ Major collectors are designed to link arterial roadway. They typically have one travel lane and a paved shoulder in each direction.

⁵ Proven methods, often referred to as Context Sensitive Design, exist for adding capacity to Scenic Byways, while maintaining or even enhancing the scenic qualities of the highway.

White Face Farm

The development of the White Face Farm (near the Garrett County Airport, just outside the Deep Creek Lake Influence Area) into a business park and mixed housing site will have impacts on Bumble Bee Road and the Mosser Road/US 219 intersection, since this road and intersection are the main access to the development area. Once the business park tenants (or target industry types) and the amount of housing have been identified, the traffic to be generated, and the adequacy of Bumble Bee Road, Mosser Road, and the US 219 intersection can be assessed. The County may need to improve other access roads (such as Bumble Bee Road north toward Accident) to provide an additional access point for the White Face Farm site, thus reducing the impact on US 219.

Assessing Traffic Impacts

Outside of the Lake area, the County's road system is primarily rural in character, and much of the land it serves is targeted for resource conservation. However, there are some locations—such as White Face Farm—where development will nonetheless occur. The Subdivision Ordinance allows the County to require road improvements along property frontages (such as acceleration/deceleration lanes). SHA can require a traffic impact study for any new development on a state road. However, the County does not have the clear authority to require such studies for proposed developments on County roads, even in cases where a project developed on a County road brings traffic onto a state road. In these situations, there is no mechanism to allow SHA to comment on the proposed project, even though traffic will impact the SHA-maintained road.

Please see Section 4.6.2 (in the Deep Creek Lake Influence Area Master Plan chapter) for additional discussion on the provisions of potential Traffic Impact Study requirements.

Access Management

The County also needs to consider is the importance of maintaining the capacity of the existing road system, specifically by limiting the number of new entry points onto public roads. Individual access for each developed lot can interrupt traffic flow and eventually reduce roadway capacity.

Currently, the Planning Commission has the ability to require frontage roads (or service roads) and shared driveways on arterial highways (such as US 219 in the Deep Creek Lake area—see Chapter 4), but cannot do so on other roads. Amending the Subdivision Ordinance to allow the County to require such access management (be it for new development, redevelopment of existing lots, or to consolidate entrances to existing properties in high traffic areas) can help to preserve road system capacity.

6.3 Bicycle Facilities

Existing Conditions

SHA's 2007 Maryland Bicycle Map identifies US 219 (from US 40 to the West Virginia line and US 40A and US 40 from Allegany County to the Pennsylvania Line) as part of its statewide network of on-road bicycle routes. Over time, SHA expects to post bicycle route signs on the entire statewide network. "Share the Road" signs and shoulder improvements have been made on US 219, and it has been designated as a bike route by SHA.

As part of the 2002 Statewide 20 Year Bicycle and Pedestrian Access Master Plan, the Maryland Department of Transportation (MDOT) compiled a Bicycle and Pedestrian Needs Inventory. Similar to the HNI, the Bicycle/Pedestrian Needs Inventory identified those state roads with the greatest need for bicycle and pedestrian improvements. Most of Garrett County's bicycle improvement needs identified in the 2002 Plan are located in rural areas

outside of the PFAs, which made them a secondary priority for state funding. Those improvement needs are summarized Table 6.3.

Table 6.3: Bicycle Improvement Needs¹

Route Name/Number	From	To	Length in Miles
US 40 Alt	US 40	Finzel Rd	18.0
US 40	State Line	US 40 Alt National Pike	3.7
MD 42	Garrett Highway	First Ave	7.2
US 219	Memorial Dr	Accident	16.8
US 219	Accident	Stockyard Rd	5.20
MD 669	State Line	US 40 Alt	1.67
Other small segments			2.4

*1: Excludes segments that are wholly or primarily within municipalities.
Source: Maryland DOT, <http://www.mdot.state.md.us/Planning/Bicycle/TECHNI.PDF>*

Garrett County's 2003 Recreational Trails Plan update included some recommendations for on-road biking improvements in addition to recommendations for hiking trails, recognizing the importance of bicycling as a recreational activity in the County. The intent of the trails plan is to link the existing and proposed trails in various parks throughout the County, using on-road bicycle trails when off-road connections are not possible.

The 2003 Recreational Trails Plan calls for bicycle facility improvements on the following County Roads:

- Herrington Manor Road from Tomar Drive to Swallow Falls
- New Germany Road from Route 495 to Grantsville
- Along Broadford Road.

The Recreational Trails Plan is described in the 2005 LPPRP, which is incorporated into this Comprehensive Plan, and included in the Plan Appendix.

A link to the Allegheny Highlands Trail near Finzel would provide an important connection between Garrett County's existing and planned trail system, and this highly popular regional trail.



US 219, a designated bicycle route, has widened shoulders and “Share the Road” signage

Outside of the Deep Creek Lake Influence Area, the Comprehensive Plan recommends no new bicycle routes beyond those already identified in other plans, or as discussed above. Chapter 4 discusses bicycle mobility needs and recommendations in the Influence Area.

6.4 Pedestrian Facilities

Existing Conditions

Pedestrian facilities can include multi-use paths, sidewalks, crosswalks, pedestrian crossing signals, or signage and pedestrian-level street lighting. Since most of Garrett County is rural, pedestrian facilities are limited, particularly outside of the Deep Creek Lake area. Along the

197 miles of State-maintained highways in Garrett County, there are currently 4.5 miles of sidewalk, most of which are in municipalities, where development is more concentrated.

The County's 2008 Capital Projects Fund lists only one sidewalk project: the provision of a sidewalk between Southern High School and Mountain Lake Park.

Chapter 4 discusses pedestrian needs and recommendations for the Deep Creek Lake Influence Area.

Discussion of Issues

It is desirable to promote walking as a means of transportation for overall personal health and environmental reasons. Additionally, federal transportation policies support pedestrian travel as a viable option to driving where the land uses make it feasible.

Sidewalks are not generally warranted along rural roads, where there are relatively low traffic volumes, little walking, and few destinations for pedestrian trips. In these cases, pedestrian travel along shoulders is generally acceptable. However, as areas begin to develop and change from rural to suburban in nature, and as the level of vehicular and pedestrian traffic increases, and the need for pedestrian facilities should be considered.

As new County facilities with high levels of activity are planned, and existing facilities (schools, college, libraries, parks, etc.) are improved, an assessment of pedestrian access should be completed to ensure safe pedestrian access within and to these sites. Consideration should be given to pedestrian access along and across roads in developed and developing areas (including villages), particularly the need for marked crosswalks or pedestrian crossing signs to assure safety.

6.5 Transit

Existing Conditions

Garrett Transit Service (GTS) is the public transportation provider for Garrett County. This is a demand response transit system operated by the Garrett County Community Action Committee, Inc (CAC). The service operates 24 hours per day, 7 days per week, as requested. In fiscal year 2006, GTS had a fleet of 34 vehicles and carried 149,312 total passengers. This was an eight percent increase in ridership over 2005. GTS carries County residents to medical facilities, employment, shopping, senior centers, adult day programs, appointments, early child development centers, and after school programs. GTS also delivers meals to the homebound elderly. A new Garrett Transit vehicle storage/maintenance facility is to be located within the new Garrett County Public Works Complex on Francis Sanders Drive near Mountain Lake Park.

GTS plays a role in supporting economic development. During busy ski season weekends, the Wisp Resort contracts with GTS to provide shuttle service for customers and employees between the parking lots at Garrett Community College and the resort. GTS also has plans to provide shuttle services for activities at the Adventure Sports Center. The Wisp Resort also has one or more vehicles used for shuttle services as a precursor to an expanded on-site Resort shuttle service.

In the future, GTS is considering shuttle service from the Oakland area to the Northern Garrett Industrial Park and the Keyzers Ridge Business Park.

The Wisp Resort owns and operates shuttle vehicles for travel within the Resort, and expects to expand this on-site shuttle service in the future.

Discussion of Issues

Special events and seasonal activities that occur in the County create periodic congestion. Most of these activities occur in the Lake area, and the role of shuttles to address the congestion is discussed in Chapter 4.

The County should continue to evaluate the broader role of GTS in providing mobility options for other areas of the County, particularly in light of future employment opportunities and the needs of older residents. As the activity in the Lake area and County business parks expands, employment opportunities will also grow. New GTS service to industrial parks would be a way to increase access to those employment opportunities, particularly for residents without cars. There may be more opportunities for the business community to coordinate with GTS on transit services, to help bring employees to businesses with jobs to fill.

As the County population ages, there will also be an increase in the number of residents who no longer drive. After retirement, many people prefer to live in their homes as long as possible (a phenomenon referred to as “aging in place”). For this to be possible, transit options must be available to help elderly residents conduct their daily business.

6.6 Other Transportation

6.6.1 Recreational Trails

The County’s 2005 Land Preservation, Parks, and Recreation Plan (LPPRP) identifies approximately 100 miles of trails in the County’s state lands, managed by the Maryland Department of Natural Resources (DNR). The 2003 County Recreational Trails Plan also identifies a number of implementation priorities for trails (listed in the Comprehensive Plan Appendix). The Trails Plan also emphasizes the need for enhanced marketing and education about trail use and securing financial support for trails. Assuring ADA accessibility on paths is also identified as a priority.

Private property owners or trail advocacy organizations are also involved in making connections to state lands and between activity centers. The County and the Appalachian Regional Commission have proposed a Meadow Mountain Trail to be created on property owned by the 4H Education Center.

Discussion of issues

There are currently a number of entities involved in the identification, funding and implementation of recreational trails in the County. The County is considering the establishment of a Department of Recreation and Parks, which would centralize responsibility for trail planning. Such a department could better coordinate the various interests, identify overall needs, and establish County priorities for trail facilities. Such an entity could also focus on the availability of special grant funding or programs to assist the County with trail project implementation.

6.6.2 Scenic Roads

Existing Conditions

The Maryland Scenic Byways Program, established by SHA, has designated the following scenic byways in Garrett County.

- I-68: Entire length in Garrett County
- MD 495 (Bittering Road): Entire length from I-68 to MD 135

- MD 135 (Maryland Highway): Entire length from Bloomington to Oakland
- MD 38 (Kitzmilller Road): Entire length from MD 135 to Kitzmilller
- Rock Lodge Road: From MD 495 to State Park Road, then through Deep Creek Lake State Park to Glendale Road.
- Oakland to Bittering, via Herrington Manor Road, Swallow Falls Road, Mayhew Inn Road, US 219, Glendale Road, and Rock Lodge Road.
- Grantsville to Bloomington, via New Germany Road, Big Run Road, and Savage River Road

The mission of the Maryland Scenic Byways Program is to enhance the quality of life and pride in, and the visitor appeal of the local community. The Program promotes responsible management and preservation of the state's most scenic cultural and historic roads and surrounding resources. The Program provides funds for community based corridor management plans, which makes them eligible for additional grant funds.



The view from MD 495, one of the state-designated Scenic Byways in Garrett County

The County has not sought funding to develop corridor management plans for scenic roads. However, protection of views is important to the County's appeal as a vacation destination. It is an objective of this Plan to protect the scenic qualities of the rural landscape. Tunney letter re: high signs on I-68 near Chestnut Ridge.

Discussion of Issues

The loss of scenic views would reduce the beauty of the County's landscape, as viewed from roads, which would detract from its overall character. Tools such as the proposed open space and clustering requirements for development in AR and RR areas, as described in Chapter 3 will help protect scenic qualities. The County's Subdivision Ordinance currently discusses scenic character only in Section 304 (single family cluster option), which is rarely used. The County should consider adding a more general provision to the Ordinance that would require the County to assess the impacts of a subdivision on scenic views (a term that

would have to be defined for purposes of the Ordinance). Any new or upgraded roads in rural areas should have an open section design (i.e., without curbs and gutters), to minimize the road's impact on scenic and rural character, and to maintain stormwater flow.

6.6.3 *Airport*

Existing Conditions

The Garrett County Airport, located on Bumble Bee Road north of McHenry, is a general aviation airport serving private aircraft. The airport has no scheduled commercial air service. Federal funds were recently utilized to extend the runway to 5,000 feet, and to expand hangar space to include an operations facility.

The County owns 340 acres (known as the White Face Farm) south and west of the airport, where a business park and workforce housing project are planned. A 2008 grant from the Appalachian Regional Commission will support the development of this business park.

6.6.4 *Rail*

There are two existing CSX freight rail lines in Garrett County. Both lines pass through Bloomington, and connect in Luke (in Allegany County) where the New Page paper mill is located. One rail line extends from Luke along the North Branch Potomac River, alternately traversing Garrett County and Grant County, WV, before exiting Maryland at Kempton, the County's southwestern most point. The other rail line extends from Luke, along the Savage River into Deer Park, Loch Lynn Heights and Oakland, before leaving the County near Hutton. This freight rail line serves one wood-products business in Oakland.

Discussion of Issues

As the nation's highways become more congested, there is greater interest in cargo movement via freight rail. However, freight rail lines all over the country are facing challenges. Most rail lines need to be upgraded to allow trains to operate at efficient speeds, but there is a shortage of funds available for such improvements. The freight rail lines in Garrett County would likely need similar improvements to support significantly increased use. The County should support the retention of these rail lines for potential future use.

6.7 **Policies and Actions**

1. Amend the Subdivision Regulations to give the Department of Planning and Zoning:
 - Clear authority (in consultation with the Roads Department) to require a traffic impact study prior to final plat approval (see also Policy 5 in Chapter 4).
 - Authority (in consultation with the Roads Department) to require access consolidation—in the form of frontage or service roads, shared driveways, shared parking lots, or other appropriate measures—on all County Roads.
 - Authority to require developers to provide pedestrian facilities as part of new development.
2. Coordinate with SHA to assess the feasibility of upgrading MD 495 to provide an alternative north-south route through the County, as described in Section 6.2.5. As a first step, include this project on the Highway Needs Inventory. Any improvements should be compatible with the Scenic Byway status of MD 495.
3. Conduct a study to determine the amount of revenue necessary to fund the transportation system improvements, including (but not limited to) the road, pedestrian, bicycle, transit,

and other strategies described in this Comprehensive Plan. Obtain authority from the Maryland General Assembly to levy an excise tax, and establish such an excise tax (or an impact fee, if an excise tax is not desirable) to pay for these improvements (see Policy 7 in Chapter 4).

4. Assess the adequacy of Bumble Bee Road/Mosser Road to accommodate traffic generated by the planned business park and housing development at White Face Farm.
5. The County supports completion of the Oakland Bypass, as designed by SHA.⁶
6. The County supports the regional effort to link the Pennsylvania Turnpike with Corridor H in West Virginia, via an improved or relocated US 220. The County also supports plans to upgrade US 219 north of I-68, as a supplemental improvement to the region's highway network. However, the County opposes the use of US 219 south of I-68 as the primary link to Corridor H.
7. The County supports implementation of 2003 Recreational Trails Plan.
8. Use AASHTO design guidelines for all new on-road and off-road trails.⁷
9. Ensure collaboration between the Roads Department, the Planning and Land Development Office (or the Department of Recreation and Parks, if created pursuant to the recommendations in this plan), SHA, and trail advocates including the Chamber of Commerce to address bicycling issues, such as route designations, assessing bicycling safety issues, and identifying needs for future improvements.
10. Identify pedestrian needs in areas where pedestrian activity is high or increasing, such as the County's designated villages, and around schools and other institutional uses.
11. Support increased GTS service, particularly to serve employment areas and the needs of elderly residents. Consider building on existing shuttle bus service in the Deep Creek Lake Influence Area (see Policy 5 in Chapter 4)
12. Amend the Subdivision Ordinance to include the following provisions related to Scenic Byways:
 - Establish design criteria to protect the scenic qualities of Scenic Byways and adjacent land.
 - Require the County to review the impacts of a subdivision on scenic views, and define "scenic views" in the Subdivision Ordinance).
 - Require that new roads outside of Priority Funding Areas be "open section" designs.
13. Update the Airport Master Plan as needed to assure eligibility for funding.
14. Promote private air charter use and economic development associated with the Airport.

⁶ See joint press release of the Board of County Commissioners and the Mayor and Town Council of Oakland, April 17, 2007 (full text in the Plan Appendix).

⁷ American Association of State Highway and Transportation Officials (AASHTO). 1999. Guide for the Development of Bicycle Facilities.

7 Sensitive Areas

Garrett County's physical landscape is characterized by mountainous ridges, stream valleys, extensive forests, and productive agricultural areas. The County is home to the four highest mountains in Maryland, the state's first designated Scenic and Wild River (the Youghiogheny River), and the state's largest freshwater lake (Deep Creek Lake). These features are scenic and recreational resources for the County's residents and visitors, and many are also environmentally sensitive.

The Planning Act of 1992 and subsequent legislation requires each comprehensive plan in Maryland to establish goals and policies related to sensitive environmental areas, specifically addressing:

- Steep slopes,
- Streams, wetlands, and their buffers,
- 100-year floodplains,
- The habitat of threatened or endangered species,
- Agricultural and forest land intended for resource protection or conservation, and
- Other areas in need of special protection.

The County's Sensitive Areas Ordinance (adopted in 1997) and Floodplain Management Ordinance (adopted in 1991) provide detailed guidance for development affecting these sensitive areas. This chapter updates the 1995 Plan's description of the County's sensitive areas, and, in conjunction with the Water Resources and Land Use chapters of this Plan, further strengthens policies to protect sensitive areas. This chapter includes a discussion of ridgelines as a sensitive area in need of protection.

7.1 Goals and Objectives

The County's sensitive areas goal is:

Continue to protect Garrett County's sensitive environmental resources and natural features.

The objectives for achieving this goal are:

1. Limit development in and near sensitive environmental areas, including steep slopes, streams, wetlands, 100-year floodplains, and the habitats of threatened or endangered species.
2. Conserve agricultural and forest resource land.
3. Protect scenic resources.
4. Support increased use of soil and water conservation practices.
5. Preserve 20,000 acres of farmland by 2020.
6. Protect public wellhead resource areas (see Chapter 5, the Water Resources Element)

7.2 Description of Sensitive Areas

7.2.1 Steep Slopes

Garrett County is traversed by the northeast-southwest ridges of the Appalachian Mountains, interspersed with numerous rivers and streams (see Section 7.2.2). Along the sides of these ridges and waterways are more than 54,500 acres of land (approximately 13 percent of the County) with steep slopes—natural slopes greater than 30 percent. Although found throughout the County, steep slopes are most extensive in the following areas (see Map 7.1):

- In and around Savage River State Forest,
- Along the North Branch Potomac River and its tributaries,
- Along the Youghiogheny River and the Youghiogheny River Reservoir,
- Along Backbone Mountain, and
- Along Bear Creek and its north and south branches.

Steep slopes are inherently unstable land forms. When disturbed, they become susceptible to increased soil erosion. The adverse effects of steep slope disturbance are more pronounced when the slope is adjacent to a stream or other water body, where erosion can lead to decreased water quality and negative impacts on riparian plant and animal species.

The Sensitive Areas Ordinance limits new development on steep slopes (above 30 percent) by requiring the following for most new development:

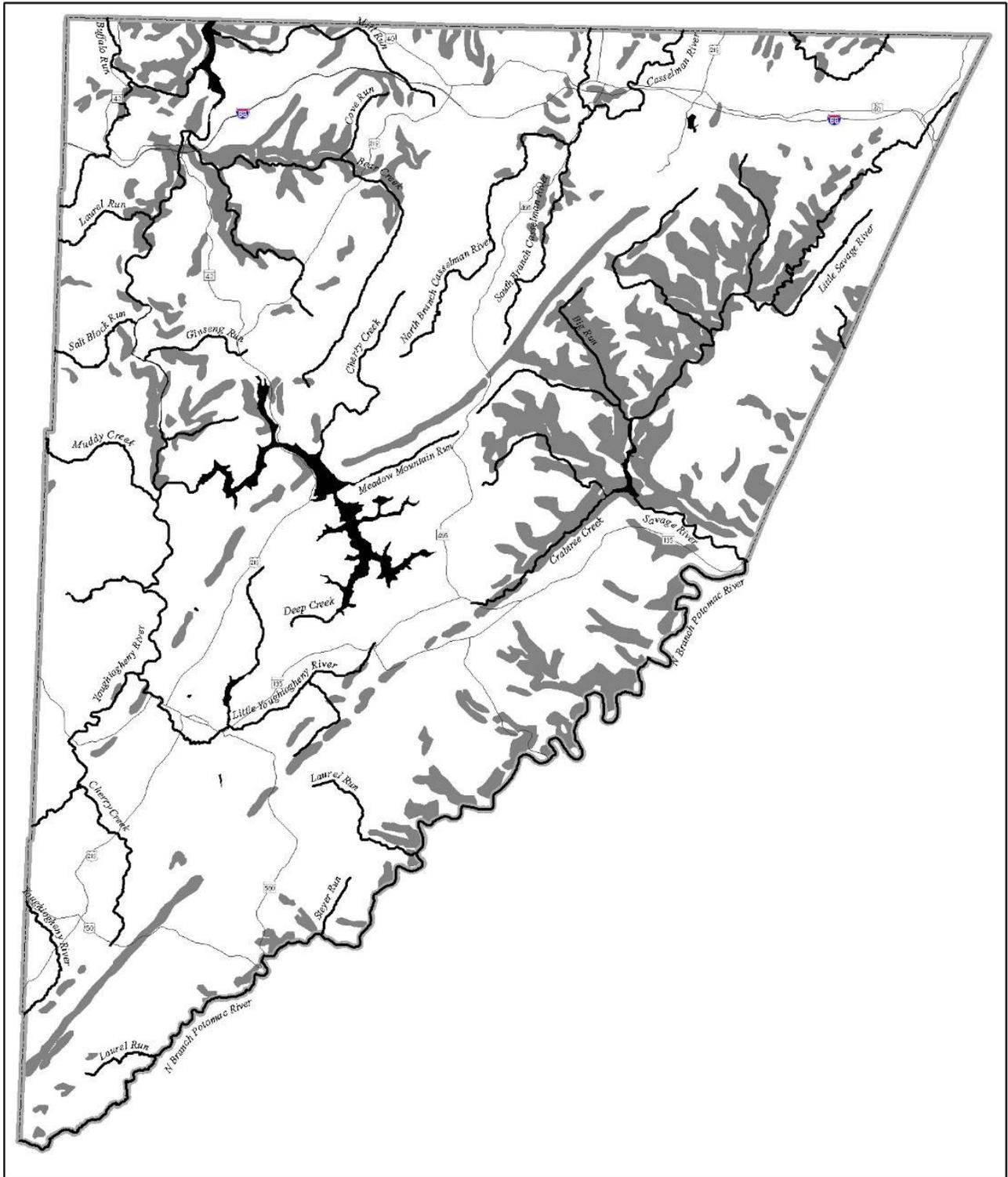
- Minimum lot size of 4 acres.
- No more than five percent of the steep slope area may be covered by buildings or pavement.
- Development on steep slopes can only occur if no other reasonable option exists.
- Grading of slopes over 25 percent must be held to a minimum.

The ordinance also encourages (but does not require) reduced development on slopes greater than 25 percent.

Within the Deep Creek Watershed, the Zoning Ordinance provides incentives such as reduced lot sizes to minimize development on slopes greater than 30 percent.

This Comprehensive Plan also defines Scenic Protection Areas (typically found on land with slopes between 15 and 30 percent) and requires new development in these areas to take special care to minimize visual impacts. See Section 4.8 in Chapter 4 (the Deep Creek Lake Influence Area Master Plan) and Section 6.6 in Chapter 6 (the Transportation Element) for more detail.

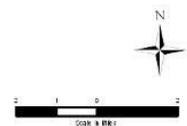
Map 7.1: Steep Slopes and Major Streams



Sensitive Areas: Steep Slopes and Major Streams

Legend

-  Water
-  Slopes over 30%



7.2.2 Streams and Buffers

Garrett County has nearly 1,200 miles of streams and rivers, ranging from first-order headwater streams to large water bodies like the Youghiogheny and North Branch Potomac Rivers (larger streams and rivers are shown in Map 7.1).

Many of the County's major rivers, particularly the Youghiogheny, Savage, and North Branch Potomac (sometimes known as the "three sisters") are also important recreational resources. Portions of the Youghiogheny River have been designated as a "Scenic and Wild River," a designation that recognizes and protects (through state ownership) the corridor's "substantial natural values, especially outstanding whitewater, and impressive scenic beauty."¹ This portion of the Youghiogheny River is subject to state land use and development guidelines (see Section 3.5.1 and Map 3.5 in Chapter 3, the Land Use Element).

The County's 2005 Land Preservation, Parks, and Recreation Plan (LPPRP) also proposes ecological greenways² along the Youghiogheny, Savage, and North Branch Potomac Rivers.

Stream buffers—the strips of land at the edge of every river and stream—help to control flooding and reduce the volume and speed with which pollution and sediments enter rivers and streams. This, in turn helps to protect water quality in Garrett County and beyond.

The Sensitive Areas Ordinance defines stream buffers as:

- In Growth Areas (See Chapter 3): 25 feet from the top of the primary bank of a stream.
- In non-Growth Areas: 50 feet from the top of the primary bank of a stream.

The Sensitive Areas Ordinance allows no new buildings, and only minimal paved area, in these buffer areas. Landowners and subdividers are encouraged (but not required) to maintain buffers in natural vegetation, plant trees and vegetation where necessary, and establish deed restrictions against cutting trees within the buffer.



The North Branch Potomac River passing through Gorman

7.2.3 Wetlands

Wetlands are valuable natural resources that provide habitat for plants, fish, and wildlife, maintain water quality (by slowing and collecting sediment and pollutants), act as ground water recharge areas, and control flooding and erosion.

¹ Source: LPPRP, page 3-33. A 21-mile stretch of the river received this designation in 1976, making it the first Scenic and Wild River in Maryland.

² Greenways are "natural corridors set aside to connect larger areas of open space and to provide for the conservation of natural resources, protection of habitats, opportunities for recreation, alternative transportation, and nature study." Ecological greenways are primarily reserved for natural resource protection, but can have recreational facilities.

Despite its mountainous character, there are nearly 12,200 acres of non-tidal, or “upland” wetlands in Garrett County, approximately 5,088 of which are mapped, vegetated wetlands (excluding large bodies of water such as Deep Creek Lake, Youghiogheny River Lake, Jennings Randolph Lake, and the Savage River Reservoir).^{3,4} Although found throughout the County, wetlands are most extensive in the following areas (see Map 7.2):

- Between the Youghiogheny River and the West Virginia border. One notable wetland feature in this area is the Cranesville Subarctic Swamp (along the West Virginia border, west of the village of Sang Run). This area was designated as a National Natural Landmark by the National Park Service in 1964 (one of the first such designations), and is home to plant and animal species that are rare in Maryland.
- In and around the Bear Creek watershed and the Cherry Creek sub-watershed (part of the Deep Creek watershed). In particular, this area contains Cunningham Swamp and The Glades, an extensive area of peat (*Sphagnum*) bogs that are rare in Maryland.⁵
- Along the tributaries of the Savage River, particularly Poplar Lick Run and the Little Savage River (notably, Callahan Swamp).
- Southwest of Deep Creek Lake, between Mount Nebo/Roman Nose Mountain and Hoop Pole Ridge. This includes Hammel Glade and the wetlands of the Mount Nebo Wildlife Management Area (WMA). The Mount Nebo WMA is managed by the Maryland Department of Natural Resources (DNR), and protects two red spruce bogs, a rare type of wetland in Maryland. They are among the oldest peat bogs in eastern North America, and are home to wild cranberries and several rare and endangered plant species (see Section 7.2.5).
- In the northeast corner of the County, including Wolf Swamp and Finzel Swamp (known as Cranberry Swamp). Both of these wetland areas are owned by the Nature Conservancy. Wolf Swamp contains old-growth spruce-hemlock and mountain bog ecosystems, both rare in Maryland,⁶ and forms the headwaters of Red Run, a tributary to Piney Creek and the Casselman River. Finzel Swamp (much of which is in the Nature Conservancy-owned Finzel Swamp Nature Preserve) is a large mountain peatland community,⁷ and forms the headwaters of the Savage River.

Development with the potential to impact wetlands in Garrett County is regulated by the Maryland Department of the Environment (MDE), through the provisions of the Non-Tidal Wetlands Protection Act.⁸ In some cases (typically where a proposed development involves large amounts of wetlands), the U.S. Army Corps of Engineers must also issue permits for development. The Garrett County Sensitive Areas Ordinance does not contain a provision related to wetlands.

³ In fact, all open bodies of water (lakes, reservoirs, ponds, rivers, and streams) are classified as wetlands, as are bogs, lowland forests, and many other types of habitat.

⁴ MDP's Land Use/Land Cover summarized in Table 3.8, only identifies large concentrations of wetlands (and lists bodies of water separately), whereas the data in Section 7.2.3 are based on detailed mapping from the Maryland Department of Natural Resources (DNR).

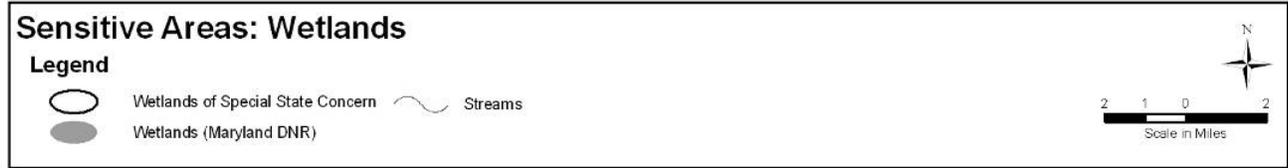
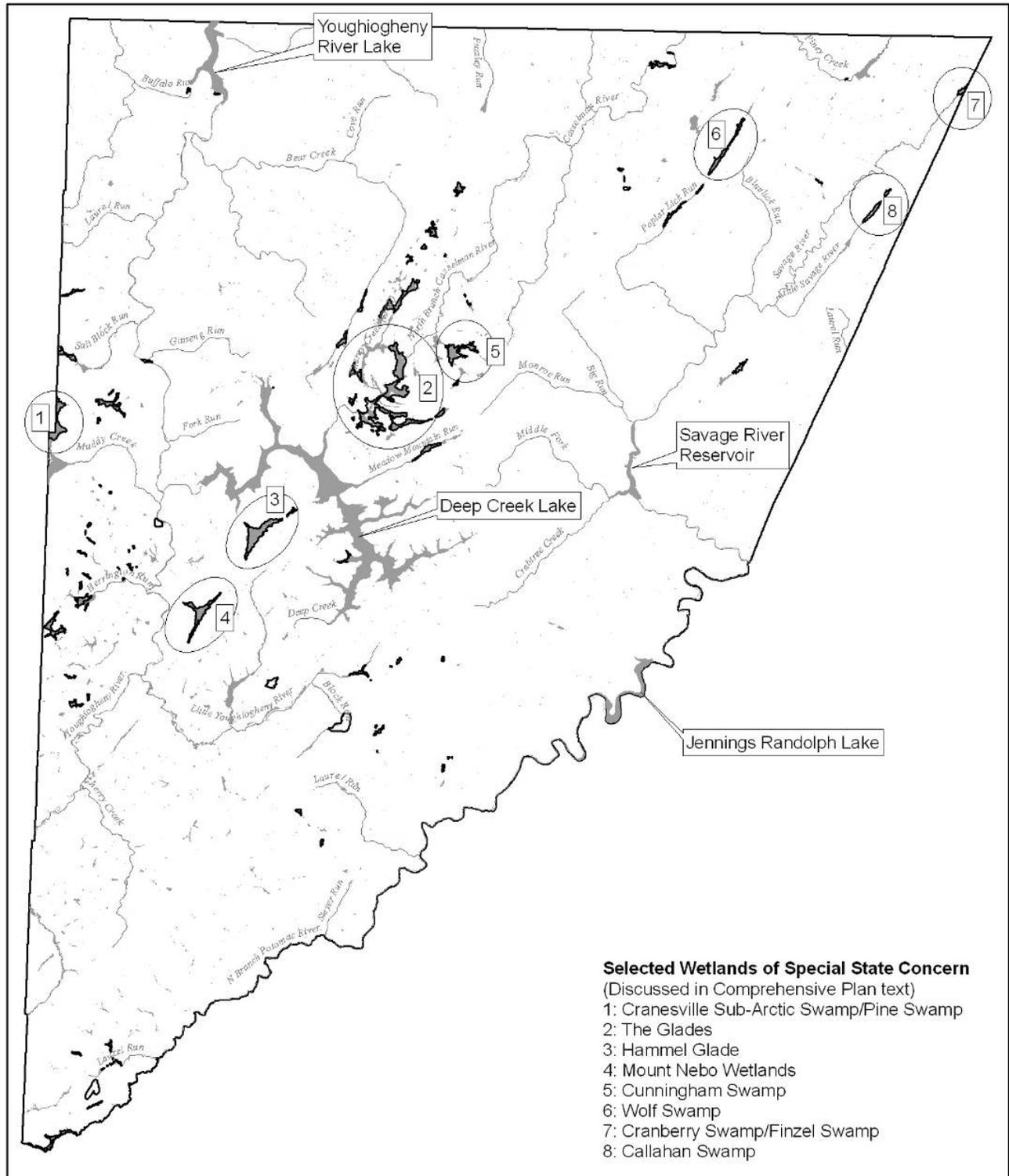
⁵ Source: MDE. Total Maximum Daily Loads to Address Low pH in Cherry Creek. October 2003.

⁶ Source: The Maryland-DC Audubon Society, www.audubonmddc.org/SciCon_IBAs_sitedescriptions.html

⁷ Source: The Nature Conservancy: www.nature.org/wherewework/northamerica/states/maryland/press/press1905.html

⁸ COMAR Title 26, Subtitle 23

Map 7.2: Wetlands



MDE also identifies and gives special regulatory attention to “Nontidal Wetlands of Special State Concern (WSSC)”, wetlands with rare, threatened, or endangered species, or other unique attributes. MDE mandates additional regulatory protections for WSSCs, such as sediment controls, 100 foot regulated buffers, and other specific types of stormwater management practices. MDE has designated 73 WSSCs in Garrett County, comprising more than 2,900 acres. The Glades, Cunningham Swamp, Hammel Glade, the Mt. Nebo wetlands, and the Cranesville Subarctic Swamp are among the WSSCs in Garrett County (see the Appendix for a full list of WSSCs).

7.2.4 Floodplains

Floodplains are relatively low, flat areas adjoining rivers, streams, and other bodies of water that are usually naturally-formed, and are subject to partial or complete flooding on a periodic basis. Floodplains store and moderate the speed and impact of floodwaters, and, in conjunction with wetlands (many of which are found in floodplains), also help to maintain water quality and recharge ground water.

Floodplains are typically described in terms of the frequency of flooding that they experience. The 100-year floodplain is the area that has a one percent chance of being flooded in any given year. Garrett County has nearly 19,800 acres of 100-year floodplains (approximately 5,000 acres of which are in the large bodies of water described in the Wetlands section),⁹ most of which are found near the County’s rivers, lakes, streams and wetlands.

The County’s Floodplain Management Ordinance limits most development and disturbance in the 100-year floodplain. Occupied areas of residential structures must be entirely outside of the floodplain (although garages and accessory structures totaling no more than 600 square feet may be placed in the floodplain, if no other alternative exists on the property). Non-residential structures in the floodplain must be flood-proofed. No more than 600 cubic yards of fill material may be placed in the floodplain, if no other option exists for developing the site or raising the structure above the floodplain.

7.2.5 Habitats of Rare, Threatened, and Endangered Species

The federal and state governments maintain separate lists and maps of the habitats of rare, threatened, and endangered (RTE) species, including plants and animals. There are 74 state-listed RTE animal species (one of which is also a federally-listed endangered species), and 126 state-listed RTE plant species in Garrett County.¹⁰



The Northern Goshawk (*Accipiter gentilis*), one of 200 state-listed RTE species with habitat in Garrett County.

The 1,887-acre Mt. Nebo Wildlife Management Area (WMA) north of Oakland protects an area of rare

⁹ As with wetlands, floodplains include all major bodies of water (rivers, streams, and lakes).

¹⁰ Source: Department of Natural Resources, 2004. State mapping of RTE species habitat does not indicate which individual species is associated with a particular habitat extent. See <http://www.dnr.maryland.gov/wildlife/rte/rte04qarr.pdf> for a complete listing of RTE species with habitat in Garrett County.

wetlands and endangered plant species. Several Nature Conservancy properties and other private conservation lands throughout the County also protect RTE species and their habitats, as described in Section 7.2.3.

The U.S. Fish and Wildlife Service regulates development with the potential to impact the habitats of federally-listed RTE species, while DNR regulates development with the potential to impact state-listed RTE species. The County's Sensitive Areas Ordinance defers to federal permitting statutes regarding federally-listed RTE species, and refers developers to state authorities for regulation of state-listed RTE species.

7.2.6 *Agricultural and Forest Land Intended for Protection*

Agriculture

More than 89,000 acres of land in Garrett County (more than 21 percent of the County) are used for the production of crops, livestock, or other agricultural purposes (see Chapter 3). This agricultural land is an integral part of Garrett County's identity, as evidenced by the Rural Legacy designation in the Bear Creek watershed, and the scenic quality of the Pleasant Valley area in the Southern Youghiogheny watershed. The AR land classification in the Land Use Plan (Chapter 3) reflects the general extent of agricultural activity in the County. Protected agricultural and forest lands are shown in Map 7.3.

The County supports the Maryland Agricultural Land Preservation Foundation's (MALPF) efforts to preserve farmland in the County. As of 2007, 5,480 acres of agricultural land were permanently protected by MALPF easements, and another 4,504 acres were in MALPF districts (areas where land is temporarily protected, and is eligible for permanent protection through easements).

Garrett County's 31,000-acre Rural Legacy (RL) Area covers the Bear Creek watershed, as well as part of the Youghiogheny River watershed near Friendsville. Expanded funding resources are available to purchase development easements from landowners in RL areas. As of 2007, protective easements had been placed on 600 acres in the Bear Creek watershed using Rural Legacy funds.

Forest

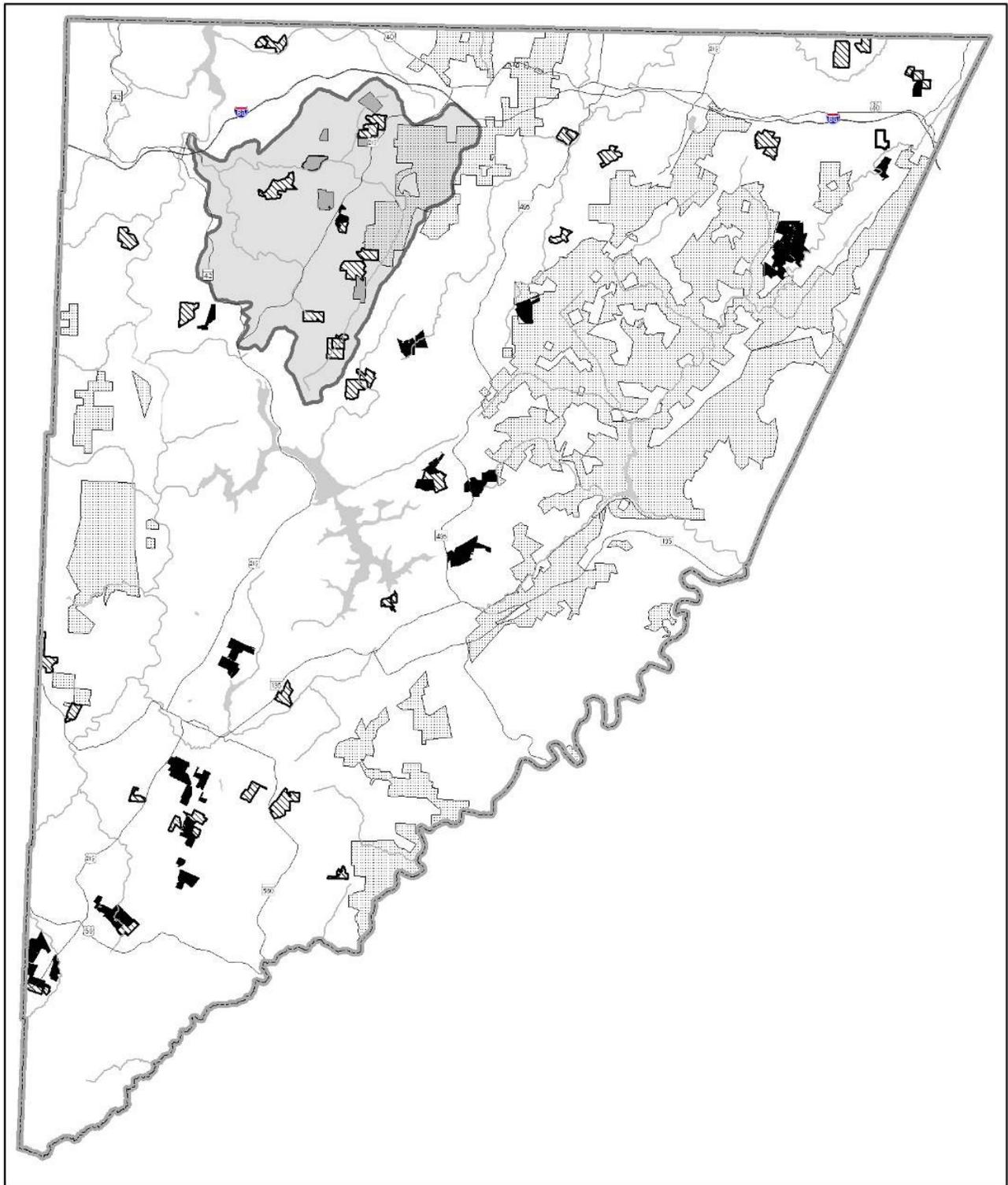
There are more than 285,000 acres of forest land in Garrett County (see Table 3.8 and Map 3.1). The County's forests are important economic, scenic, and environmental resources. The Savage River, Potomac, and Garrett State Forests, as well as a small amount of privately owned land (see Map 7.3); protect over 70,000 acres of forest land. Although the state and local parks in Garrett County are primarily intended for recreational activities, many of these parks also provide protection for forested land (see Chapter 3 of the LPPRP for a detailed listing of the park land in the County).

Other Protected Land

In addition to stream and river buffers, wetlands and their buffers, agricultural easements and state forest land, nearly 23,000 acres of land in Garrett County in the following categories (not depicted on Map 7.3), are protected from development:

- 14,300 acres of DNR-owned land (other than state forests), such as state parks, fishery management areas, Deep Creek Lake and its buffer strip, the Youghiogheny Scenic and Wild River corridor, and other land.
- The federally-owned Youghiogheny River Lake and Jennings Randolph Lake, which cover more than 3,700 acres.

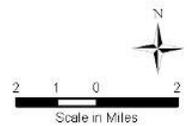
Map 7.3: Sensitive and Protected Agricultural and Forest Land



Sensitive and Protected Agricultural and Forest Land

Legend

- | | | |
|---|--|--|
|  MALPF Easements |  Rural Legacy Easements |  State Forests |
|  MALPF Districts |  Bear Creek Rural Legacy Area |  Private Forest Conservation Area |



- 400 acres of land in County parks.
- More than 2,000 acres of land protected by Maryland Environmental Trust Conservation Easements.
- More than 5,000 acres of privately-owned preserved land (such as the Cranesville Swamp and a portion of the Glades), much of it owned or under easement by The Nature Conservancy, the Allegheny Highlands Conservancy, and other groups.

7.2.7 *Ridgelines*

The County's Sensitive Areas Ordinance regulates ridgelines to the extent that wetlands, steep slopes, and/or habitat of threatened or endangered species occur there.

Within the Deep Creek Lake Watershed, housing development on slope crests has affected aesthetics. Chapter 4 of this plan (the Deep Creek Lake Influence Area Master Plan) recommends that scenic protection areas and regulations be added to the Deep Creek Lake Zoning Ordinance.

7.3 **Discussion of Issues**

7.3.1 *Future Growth and Development*

The potential encroachment of future development on sensitive environmental, agricultural, and forest resources is an important issue facing the County's sensitive areas. As shown in Table 2.3, more than 2,000 new residential units are projected to be built in the County's rural areas (in addition to as many as 700 units that are projected outside of growth areas in the Deep Creek Lake Influence Area).

Sensitive environmental areas should be avoided wherever possible, and emphasis should be placed on preserving *contiguous* environmental resources (e.g., entire floodplains and wetland complexes, rather than isolated wetlands or forest stands). In cases where disturbing resources cannot be avoided, mitigation may be necessary.

Broad Impacts of Development

Taken as a whole, projected development in rural areas could increase fragmentation of the County's substantial agricultural, forest, and rural resources. The Land Use Element (Chapter 3) addresses many of these concerns by greatly expanding the geographic area of AR and RR land classifications, reducing the extent of the Rural and Lake Residential land classifications, and by recommending more conservation-oriented development standards in AR and RR areas.

As described in Chapter 3, development regulations in AR and RR areas will require protection of at least 66 percent (in most cases, 80 percent) of a developable parcel, as well as an emphasis on the conservation of rural (agricultural and forest) resources on the parcel. These new development standards, in conjunction with the Sensitive Areas Ordinance, Floodplain Management Ordinance, and MDE wetland requirements, will enhance the County's efforts to direct development away from sensitive environmental resources.

Localized Impacts of Development

Localized impacts, such as sedimentation resulting from construction activity, and increased stormwater flows to streams and rivers from development are also a potential threat to sensitive environmental resources.

Garrett County uses the Maryland Stormwater Design Manual as its official guide for stormwater facility design and implementation in all new development and redevelopment. In addition, the County encourages innovative stormwater management techniques such as tree conservation areas, buffer strips, rain gardens, vegetated swales, and dry wells to reduce the quantity of runoff from urban and rural development sites.

As described in the Water Resources Element (Chapter 5), this Comprehensive Plan recommends that the County revise its Stormwater Management Ordinance to incorporate the forthcoming revision of the Maryland Stormwater Design Manual and other enhanced stormwater management policies (recommended by MDE, pursuant to the Stormwater Management Act of 2007). The most notable provision of the Stormwater Management Act of 2007 is the requirement that new development use Environmentally Sensitive Design (ESD) techniques, which are intended to “maintain pre-development runoff characteristics” on the site.¹¹

The County should also give consideration to reducing the impacts of runoff from existing development constructed prior to the time when any stormwater management controls were required. Such stormwater management retrofits can be difficult to achieve and costly, and should be targeted to the most environmentally sensitive areas.

The Deep Creek Lake Influence Area Master Plan (Chapter 4) also refers to support for increased state inspection and enforcement of sediment and erosion controls. This issue was first identified as part of the 2004 *Deep Creek Lake Watershed Study*, and is a concern throughout the County.

7.3.2 *Agricultural and Forest Land Intended for Protection*

Agriculture

Maryland House Bill 2, passed in 2006, requires counties whose agricultural land preservation program is certified by the MDP and MALPF (as well as counties that wish to have their preservation programs certified or create new certified preservation programs) to include a Priority Preservation Element in their Comprehensive Plan. The objective of the Priority Preservation Element is to identify and protect land that:¹²

- Contains productive agricultural or forest soils, or be capable of supporting profitable agricultural and forestry enterprises where productive soils are lacking;
- Be governed by local policies that stabilize the agricultural and forest land base so that development does not convert or compromise agricultural or forest resources;
- Be large enough to support the kind of agricultural operations that the County seeks to preserve, as represented in the comprehensive plan; and
- Be accompanied by the County’s acreage goal for land to be preserved through easements and zoning in the PPA equal to at least 80% of the remaining undeveloped areas of land in the area.

Garrett County’s agricultural land preservation program is not currently certified, and the County is not currently seeking such certification.¹³ Accordingly, this Comprehensive Plan

¹¹ Source: MDE. <http://www.mde.state.md.us/assets/document/act%20-%20a%20state%20perspective.pdf>

¹² Source: MDP. Guidelines for Including Agricultural Land Protection in the Sensitive Areas Element of the Comprehensive Plan (see Comprehensive Plan Appendix).

¹³ Certification would require the County to select targeted areas for agricultural preservation efforts and funding. The County has found that its land preservation efforts are more effective when its preservation funds can be applied to agricultural land in all parts of the County.

therefore does not contain a Priority Preservation Element. However, this Plan does recognize the importance of conserving Garrett County's agricultural and forest land, and the County's conservation efforts support the overall goals of the Priority Preservation Element:

- The Land Use Plan expands the AR and RR land classifications to include the vast majority of the County's agricultural and forest areas.
- The recommended land development regulations in the AR and RR areas seek to conserve the agricultural and forest base by emphasizing conservation of resources over home siting, and by stipulating a maximum residential lot size of 1.5 acres.
- The Plan recommends conservation of 80 percent of a developing parcel.

The County's agricultural land preservation goal (as stated in the LPPRP, which is incorporated by reference into the Comprehensive Plan) is to preserve 20,000 acres of land in permanent easements by 2020. MALPF and Rural Legacy easements currently account for approximately 6,100 acres.

Forest

The County has not adopted a numeric goal for forest conservation. However, the County's intent to conserve as much of its forested areas as possible for resource uses is reflected by the significant expansion of the RR land classification, as well as the strengthened development regulations in RR areas. The County does support forest conservation through MALPF and RL, which contain forested areas. This plan's policies are also supportive of the Maryland Forest Conservation Act (from which Garrett County is exempt, due to the large

Figure 7.1 State Forest Lands Assessment, Significance and Vulnerability amount of existing forest in the County), and are in line with initial public drafts of the Maryland Forest Service's long-term forest conservation goal of conserving an additional 250,000 acres of forest statewide by 2020 (please see Forest Service Draft Goals in the



Pleasant Valley, south of Oakland, is one of the County's productive agricultural areas

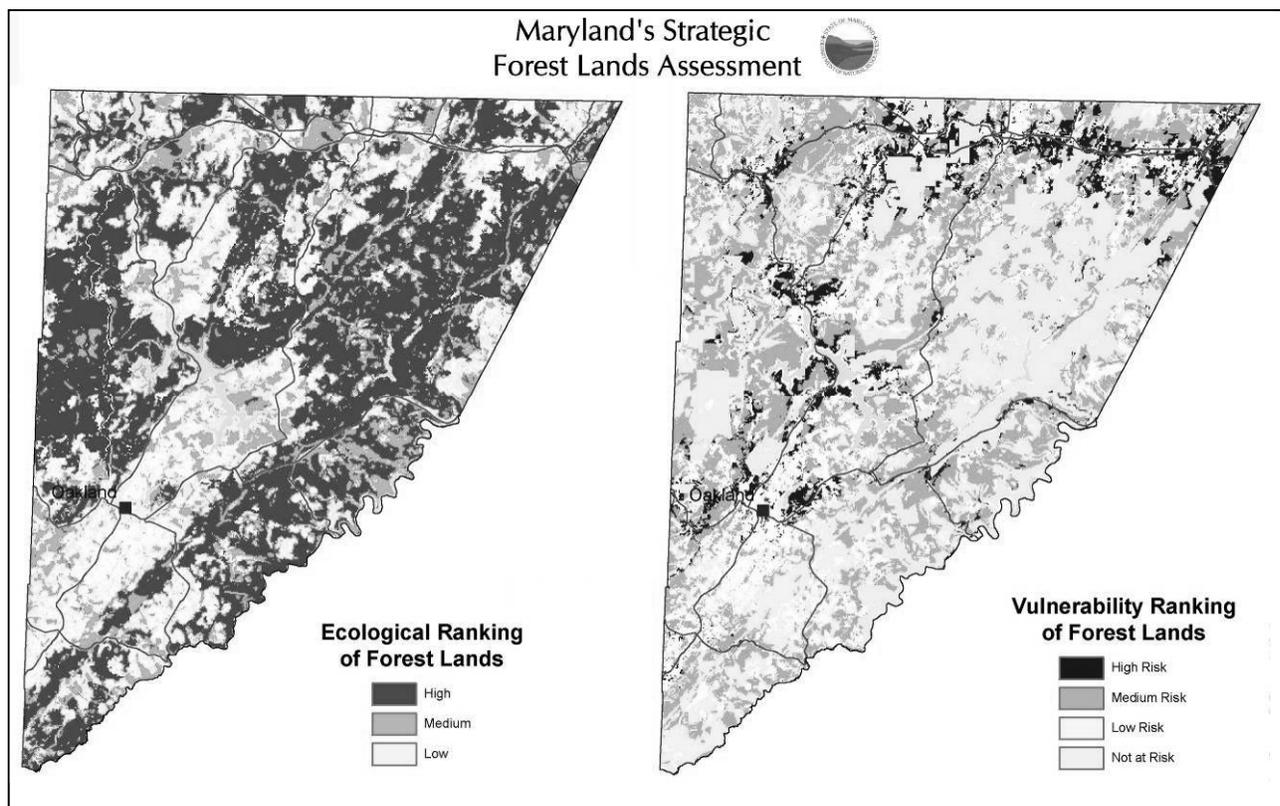
Comprehensive Plan Appendix).

As part of its Strategic Forest Lands Assessment, DNR identified forests in Maryland according to their ecological significance (including impacts on water quality, sensitive

species, and other factors), and according to their vulnerability to conversion to non-forest uses.¹⁴ Figure 7.1 shows (respectively) the ecological rank and vulnerability of the County's forests, according to the State Forest Lands assessment.

As Figure 7.1 shows, much of the County is covered by forest with high or medium ecological ranks, as well as medium risks for conversion to non-forest uses. The expanded RR land classification in the Land Use Plan (Figure 3.4) covers much of the high-value, medium-risk forest land in the County.

7.3.3 Ridge tops



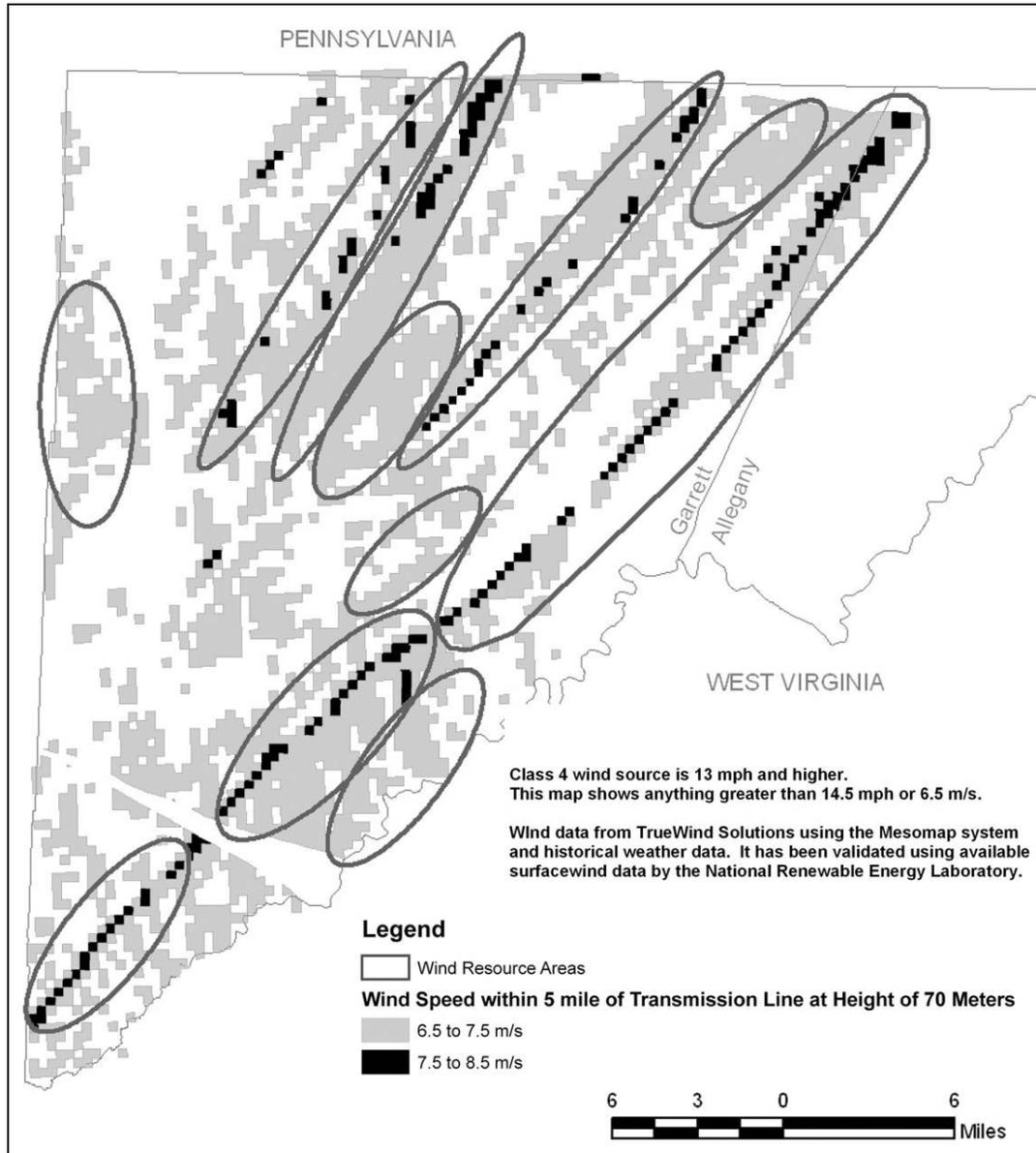
Many participants in the Comprehensive Planning process regard the widespread use of ridge tops for wind power generation as an industrial use, incompatible with the aesthetics, scenic quality, and rural character of the County.

Based on research conducted by DNR, large portions of Garrett County are potentially suitable for wind power, as shown in Figure 7-2. Three projects have been proposed on privately-owned land in or near Garrett County: two on Backbone Mountain and one on Big Savage Mountain on the Allegany County/Garrett County border.¹⁵

¹⁴ Source: DNR State Forest Lands Assessment, <http://www.dnr.state.md.us/forests/conferences/sfla/index.htm>

¹⁵ Source: 2008. *Maryland Power Plants and the Environment*. Maryland DNR Power Plant Research Program. Excerpts included in Appendix.

Figure 7.2 Areas Potentially Suitable for Wind Power



Source: Maryland DNR, Power Plant Research Program

As of 2008, no projects have been built in Garrett County, although wind power sites are in operation south of Garrett County in West Virginia.

The use of wind power for energy has been controversial in Maryland and in Garrett County. Concerns have been expressed by some people regarding impacts of wind power facilities on birds, bats, sensitive species, aesthetics and scenic views, and property values including impacts from noise. A potential proposal to locate a wind power project on state-owned land was very controversial and occasioned a great deal of vociferous criticism from many county residents.

While the County acknowledges the potential negative impacts of wind power facilities, it also recognizes the potential benefits, especially those related to clean, sustainable power

generation, and potential socioeconomic and fiscal benefits. The County further acknowledges property rights of the owners of land that is suitable for wind power facilities to use their property for that purpose.

The Board of County Commissioners has expressed its intent to seek legislation for authority to establish minimum set-back requirements for wind turbines from property lines and from existing residential structures.

7.4 Policies and Actions

1. Continue to use the Sensitive Areas Ordinance and the Deep Creek Lake Watershed Zoning Ordinance to limit development on steep slopes, near rivers and streams, and near the habitat of rare, threatened, or endangered species.
2. Amend the Sensitive Areas Ordinance
 - Limit development in—and establish buffers around—Source Water Protection Areas (see Section 5.2.7 and Policy 3 in Chapter 5, the Water Resources Element).
 - Add a Wetlands section, stating that the County’s policy is to conserve contiguous wetlands, consistent with state regulations governing development in wetlands. Refer readers to the Maryland Non-Tidal Wetlands Act, and to the Subdivision Ordinance which govern development with the potential to impact wetlands.
 - Add a Floodplains section, which states that the County’s policy is to conserve contiguous floodplains and floodplain buffers, consistent with state and federal regulations governing development in floodplains. Refer readers to the County’s Floodplain Management Ordinance.
3. Amend the Subdivision Ordinance to require that all major and minor subdivision proposals define the status of wetland delineation at both the preliminary and final plat stage.
4. Ensure that new clustering and site layout regulations for the AR and RR land classification areas channel development away from sensitive environmental areas, and conserve contiguous areas of wetlands, agricultural and forest land.
5. Continue to work with MALPF, the Maryland Department of Agriculture, DNR (particularly the Rural Legacy program), and other public and private preservation interests to achieve the County’s goal of preserving 20,000 acres of farmland by the year 2020.
6. Amend the Stormwater Management Ordinance, the Deep Creek Lake Watershed Zoning Ordinance, and the stormwater provisions of the Subdivision Ordinance as follows:
 - Adopt the Maryland Stormwater Design Manual, as revised by MDE to reflect provisions of the Stormwater Management Act of 2007 (anticipated to be completed by 2008), as the County’s governing stormwater regulations for new development.
 - Adopt future MDE guidelines and recommendations for using Environmentally Sensitive Design (ESD) in new development.
7. Support increased state inspection and enforcement of sediment and erosion controls for new development and redevelopment (see Policy 12 in Chapter 4, the Deep Creek Lake Influence Area Master Plan).

8. Consider stormwater management retrofits targeted to areas where runoff impacts sensitive environmental features.
9. Continue to encourage innovative stormwater management practices to reduce runoff and increase groundwater recharge, particularly those that utilize ESD techniques.
10. Seek legislation for authority to establish minimum set-back requirements for wind turbines from property lines and from existing residential structures.

8 Community Facilities

This chapter describes community facilities and services in Garrett County, including educational facilities, public safety (fire, police, and EMS), health care, solid waste and libraries. Parks and recreation facilities are covered in the Garrett County Land Preservation, Parks and Recreation Plan (LPPRP), which is incorporated by reference into this Comprehensive Plan (see Chapter 2).

8.1 Goals and Objectives

The Community Facilities goal for the County is to

Provide a system of community facilities and services that is consistent with projected growth and development and the land use plan.

1. Maintain and upgrade school facilities to high standards, regardless of projected system-wide declines in enrollment.
2. Expand higher educational opportunities in the County and facilities and services for community use at Garrett College.
3. Provide adequate police, fire, and emergency medical services for residents and visitors.
4. Provide high quality medical and health care facilities and services.
5. Upgrade library facilities to meet space and service needs.

8.2 Primary and Secondary Education

8.2.1 Organization and Planning

Garrett County's public schools are operated by Garrett County Public Schools (GCPS), with oversight by the Garrett County Board of Education, which consists of five elected members, an ex-officio member from the Garrett County Commissioners, and a student member. The Board is responsible for the establishment of public schools, the delineation of geographical attendance areas, the reception and administration of funds, the acquisition of sites and the construction of school buildings, the appointment and compensation of school employees, the prescription of curriculum guides and programs of instruction, and the establishment of local school policy.



Northern Garrett High School

8.2.2 Facilities

There are nine public elementary schools (grades K-5), two public middle schools (grades 6-8), and two public high schools (grades 9-12) in Garrett County (see Table 8.1 and Map 8.1). Other public schools are the Swan Meadow School, south of Oakland (grades 1-8, largely serving the Amish and Mennonite population in the Pleasant Valley area), and the Bloomington School (a K-8 school). Six elementary schools house pre-kindergarten programs, while four elementary schools house Head Start programs. Special education services are found at all schools, but Accident and Dennett Road Elementary Schools have concentrated programs. Career and technical education programs, along with a Leadership Academy (Junior ROTC) are provided at both high schools. The Hickory Environmental Education Center and a Planetarium program both complement the school-based instructional programs in science.

Garrett County's school attendance feeder system determines which school students will attend (see Table 8.1).

Table 8.1 GCPS Feeder System

Residents of Southern Garrett County		
Elementary	Middle	High
1. Broad Ford 2. Crellin 3. Dennett Road 4. Kitzmiller 5. Yough Glades	Southern Middle School	Southern High School
Residents Northern Garrett County		
Elementary	Middle	High
1. Accident 2. Friendsville 3. Grantsville 4. Route 40 (some students attending this school attend Allegany County public schools after the 5 th grade)	Northern Middle School	Northern High School

8.2.3 Enrollment Projections and Facility Needs

Enrollment Projections

Public school enrollment in Garrett County has declined slowly but consistently since 1995. This trend is projected to continue through 2015 (Table 8-2). As of September 2006, 157 students were enrolled in five non-public schools in Garrett County. Some of these students may reside outside Garrett County¹.

Facility Needs

Garrett County is the second largest county in the state, but has one of the smallest populations. The transportation of students—and especially travel time—to schools is therefore a major concern. The County strives to keep ride time to school under one hour.

¹ Maryland Department of Education, Non-Public School Enrollment 9-30-2006.

Map 8.1: Community Facilities

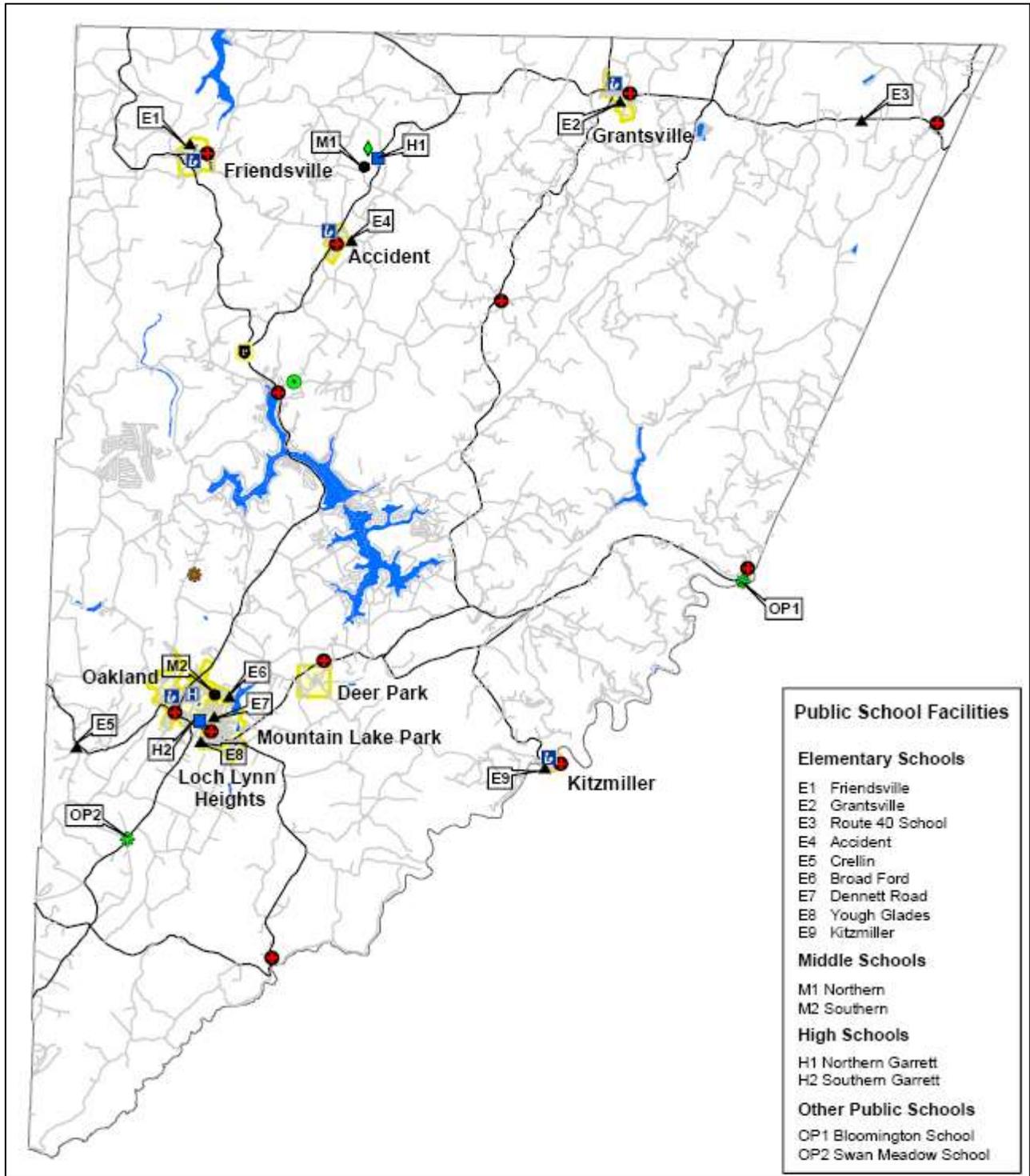


Figure 8-1: Community Facilities

Legend

- | | | | |
|-----------------------|--|-----------------------------|---------------|
| ▲ Elementary School | ◆ Hickory Environmental Education Center | ⓘ Garrett Memorial Hospital | ~ Major Roads |
| ● Middle School | ● Garrett College | 📖 Library | ~ Other Roads |
| ■ High School | ● Fire/EMS Station | ☼ Landfill | 💧 Water |
| ● Other Public School | 👮 State Police | 🏘 Municipalities | |

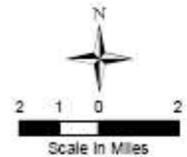


Table 8.2 GCPS Enrollment Trends and Projections, 1995-2015

	Elementary	Middle	High	Special Education	Total	Change from previous 5 years	
						Number	Percent
1995	2,324	1,255	1,487	12	5,078		
2000	2,346	1,110	1,318	39	4,813	-265	-5%
2005	1,940	1,155	1,479	0	4,574	-239	-5%
2010 ¹	1,840	950	1,420	0	4,210	-364	-8%
2015 ¹	1,720	940	1,200	0	3,860	-350	-8%

¹ 2007 Projection (Elementary enrollment for 2010 adjusted by 10 to account for rounding)

Source: Garrett County Public Schools Educational Facilities Master Plan FY 2007.

Each year, Garrett County Public Schools prepares an Educational Facilities Master Plan. This Plan identifies facilities and renovations needed to support projected enrollment and upgrade outdated facilities over the next ten years. While the enrollment projections show a decline through 2015, many of the educational facilities in the County need renovation. The FY 2007 Educational Facilities Master Plan calls for significant renovations at some schools.

The largest project is the renovation of the Northern Middle School, which was approved for construction to begin in FY 2008. The project will include the renovation of the existing 67,646 square feet and an addition of 16,362 square feet. Based on instructional program changes, geographic barriers, and facility age, the Board of Education is targeting Dennett Road and Kitzmiller Elementary Schools for renovation or possible replacement beginning in FY 2010.

8.3 Higher Education

Garrett College is the County’s only higher education facility. The College offers two-year Associate degrees in various fields, and focuses on students wishing to transfer to four-year universities. Approximately 750 students were enrolled at the College in 2007. Garrett College has recently established a number of signature programs, and has gained national reputation for its Adventure Sports Program, the first of its kind in the United States. Garrett College’s Natural Resources and Wildlife Technology program has also built a strong regional reputation, and the College offers Maryland’s only degree program in Juvenile Justice. Garrett College also offers a variety of noncredit educational opportunities through its Continuing Education and Workforce Development Division.

Garrett County offers full scholarships to Garrett College for any resident who receives a diploma from one of the County’s high schools. By encouraging a better educated workforce, this is one of the unique ways the County is supporting its economic development program.

Over the past five years many new facilities have been added to the Garrett College campus:

- Garrett Information Enterprise Center: A 20,000 square foot small business technology incubator building
- Garrett Hall: 60-bed residential housing complex located on campus
- Laker Hall: A 128 bed residential housing complex located on campus
- Learning Resource Center: A 20,000 square foot state-of-the-art library and classroom building

The County and Garrett College have secured funding to construct a Community Athletic and Recreation Center (CARC) on the Garrett College campus. The CARC will have an indoor

competition and recreation swimming pool, a 2,000-seat basketball arena, workout/weight training areas, an indoor track, a climbing wall, and regulation practice and competition gymnasiums. The CARC will also house a therapeutic medicine wing for the Garrett County Memorial Hospital as well as space for the College's Adventure Sports Program functions. Construction is anticipated to begin in 2008 with completion slated for Summer 2010.

An update of the Garrett College Facilities Master Plan is scheduled for completion in 2008. The campus footprint currently occupies approximately 45 of the 60 acres owned by the College. Additional land may be necessary to accommodate future growth, and there is land around the campus that could be used to meet future growth needs.

8.4 Fire/EMS (Emergency Management)

8.4.1 Existing Service

The County is served by 15 fire and/or EMS stations located throughout the County (Map 8.1). Eight of these stations provide both fire and medical first response, while three of the stations provide fire services only. There are Four EMS-only stations (including ambulance service) in the County, located in Mountain Lake Park, Grantsville, Friendsville, and at the Wisp Resort. Four other fire departments from neighboring counties in Maryland and West Virginia provide second-responder service

8.4.2 Discussion of Issues

Staffing and Service

While the number, size, and general geographical distribution of fire and EMS stations in the County is adequate to meet projected population growth and seasonal activity, a major issue faced by Garrett County's fire and EMS service is the decline in volunteerism. Because the County's fire and emergency services are staffed primarily by volunteers, the County is concerned that the lack of staff is making the emergency and fire services inadequate for current and projected needs.

Demand for both fire and emergency services continues to rise with the County's increased resident and visitor population. At the same time, expectations about the level of fire and EMS service are changing as visitors and new residents may expect the same levels of service that were provided in the more urbanized areas that they came from, levels sometimes higher than currently provided in Garrett County.

To address this issue, the County has created an Emergency Services Board to consider ways to address this issue. The Board is actively involved in volunteer recruitment and retention initiatives, including:

- Hiring a contractual employee to implement Emergency Services initiatives;
- Developing a length of service award program which would pay volunteers a retirement stipend after a set number of years of service
- Addressing personnel and equipment standards for stations and individual providers.

The Board has already negotiated for paid providers to augment the existing volunteer system.

Another major issue for Garrett County emergency services is the effect of vacation homes in the County. Development of vacation homes, especially around Deep Creek Lake, creates additional demand for services without offering a population base from which new volunteers can be recruited.

Facility Needs

The existing fire/EMS station located in McHenry is in a confined location, and responding units have longer response times than desired. Relocating the facility to a highway and out of the center of McHenry would allow for a larger facility and improved response times. There has been discussion about constructing a consolidated public services center on Route 219, north of McHenry. A relocated fire/EMS station could be part of this center.

8.5 Public Safety

8.5.1 Emergency Operations Plan

The Garrett County Department of Public Safety and Emergency Management is responsible for disaster planning, response, evacuation, sheltering, and hazard mitigation. The Director of Public Safety and Emergency Management serves as County Local Emergency Planning Committee Coordinator and also serves on the EMS Advisory Council, Traffic Advisory Council, and Fire and Rescue Association.

The Department of Public Safety and Emergency Management produces a County Emergency Operations Plan (EOP). The Plan’s purpose is to, “prescribe those activities to be taken by County government and officials to coordinate activities, provide support to the municipalities, and interface with the Maryland Emergency Management Agency (MEMA) for the purpose of protecting the lives and property of the citizens in the event of a natural, technological emergency, terrorism event or disaster”. The Department last updated the EOP in July 2004.

8.5.2 Multi-Hazard Mitigation Plan

In 2005, the Department of Public Safety and Emergency Management completed a Multi-Hazard Mitigation Plan, as required of all states and local jurisdictions by the Federal Disaster Mitigation Act of 2000. This plan assesses the County’s vulnerability to natural hazards and contains a long-term strategy for addressing these hazards and preventing future damage and loss of life. The Multi-Hazard Mitigation Plan lists potential mitigation projects to be considered by the Department. The County’s vulnerability to specific hazards as presented in the plan is shown in Table 8.3.

Table 8.3: Garrett County’s Hazard Risks

High	Medium-High	Medium	Medium-Low	Low
<ul style="list-style-type: none"> • Winter weather 	<ul style="list-style-type: none"> • Stream flooding • High wind • Thunderstorms • Tornado • Soil movement • Dam failure • Transportation-fog related issues 	<ul style="list-style-type: none"> • Hurricanes • Wildfires • Epidemics • Hazardous materials transportation 	<ul style="list-style-type: none"> • Drought • Fire/explosion 	<ul style="list-style-type: none"> • Heat related issues

The Multi-Hazard Mitigation Plan assesses the County’s vulnerability to each of these hazards and gives a full risk assessment followed by the County’s capabilities to handle each of the hazards. The plan presents a mitigation strategy with a set of goals and objectives which serve as the basis for implementing action items for mitigating the hazards described in the plan.

The plan also lists potential mitigation projects for the Office of Emergency Management. The plan's three top priority projects are listed in the policies and actions section of this chapter.

8.6 Law Enforcement (Police)

8.6.1 Responsibilities and Facilities

The Garrett County Sheriff's Office is the primary law enforcement provider in Garrett County. Maryland State Police Barracks W also provides police service. The Sheriff's office is located in Oakland, and has a satellite office in Grantsville that opened in 2006. There is also satellite office space available in Friendsville and Accident for emergency use. The Sheriff's Office staffs the Garrett County Detention Center which is also located in Oakland. Maryland State Police Barracks W is part of the Garrett County Public Safety complex at the intersection of Friendsville Road and US 219 north of McHenry. The state fire marshal and Natural Resources Police are also housed at this complex.

8.6.2 Staffing

As of February 2007, there were 55 sworn law enforcement personnel in Garrett County. The Sheriff's Office has 27 sworn officers, while the Maryland State Police has 28 troopers. State police work with the Garrett County Sheriff's Office to patrol roads, staff the Garrett County Narcotics Task Force, and assist the Garrett County Bureau of Investigation.

The Garrett County Detention Center has a capacity for 64 inmates. The inmate population in October 2007 was 39 persons.

8.6.3 Facility Needs

Approximately ten percent of the Sheriff's Office's time is currently devoted to the Deep Creek Lake area. The need for police services in this area is increasing as the number of vacation homes and tourist activities grows. With this growth, a satellite police station may be needed in as few as five years. Consideration should be given to providing space in association with a new public services center in or near McHenry (see Section 8.5.2). The current detention center is also in need of replacement.

8.7 Health Care

Garrett County's only hospital, the 76-bed non-profit Garrett County Memorial Hospital, is located in the Town of Oakland. The hospital offers a comprehensive range of diagnostic testing, emergency services, a maternity suite, a variety of inpatient services, a ten-bed sub-acute care unit, and numerous wellness programs. The hospital is the third largest employer in the County. It is staffed by 320 employees with services available 24 hours a day, seven days a week. The hospital serves approximately 18,000 patients annually.

Garrett County Memorial Hospital's future plans include a Heart Catheterization Laboratory Center and a Comprehensive Care/Wound Care Center. However, the hospital recently completed a large expansion project and is now site-constrained. The hospital is in the process of trying to acquire land for these future needs.

Three nursing homes are located in the County: Goodwill Retirement Community in Grantsville, and Dennett Road Manor and Oakland Nursing and Rehabilitation center in Oakland.

The Garrett County Health Department provides a wide range of public health services through ten program divisions: Adult and Geriatric Services, Behavioral Health, Core Service Agency, Dental Health, Environmental Health, Health Education and Outreach, Healthy

Families, Home Health, Personal Health, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

8.8 Solid Waste

8.8.1 Waste stream

Garrett County has one landfill, the Garrett County Solid Waste Disposal and Recycling Facility, located on Oakland Sang Run Road north of Oakland (see Map 8.1). The facility is operated by the Solid Waste and Recycling Division of the County's Department of General Services. In 2005, 37,246 tons of waste were received at the landfill. Of the total, approximately 34 percent was household waste, 30 percent was commercial waste (including industrial), 25 percent was construction and demolition debris, four percent was tree stumps, and one percent was composted yard waste. The County landfill has four permitted disposal cells, and has an expected life of approximately 22 years, through 2028.

8.8.2 Recycling

Under the Maryland Recycling Act (MRA) of 1989, Garrett County must recycle a minimum of 15 percent of the municipal solid waste generated within the County. The state recommends a recycling rate of 40 percent. Garrett County's MRA waste diversion rate for 2005 was approximately 47 percent.

In addition to the landfill, there are six recycling site locations in Garrett County: Kings Run/Mt. Nebo; Weber Road Crossing; the Backbone Mountain site located on Route 135 west of Swanton Hill Road; Bumble Bee Road; Friendsville; and Grantsville.

8.8.3 Future Needs

Since the County's landfill has capacity through 2028, a new landfill site during the life of the Comprehensive Plan is not expected. However, the next update of the County's Solid Waste Management Plan is scheduled for 2014 (approximately the same time as the next Comprehensive Plan update). As part of the Solid Waste Plan update, the General Services Department should consider in detail the need for additional landfill space. In the interim, the General Services Department will continue to monitor and evaluate population trends, recycling (which may tend to reduce landfill demand), alternatives to landfill disposal (such as incineration or similar technologies), and re-use of landfill methane (which is not currently a fiscally viable option).

8.9 Public Libraries

8.9.1 Library Facilities

The Ruth Enlow Library system, the public library system for Garrett County, consists of five branches: Oakland (branch and headquarters), Friendsville, Accident, Grantsville, and Kitzmiller. These five branches have a combined total floor area of approximately 24,000 square feet.

The combined collection of the five branches is approximately 90,000 volumes, approximately three books per capita (based on the 2005 population estimates). The library collection also includes other materials such as books on CD/tape, DVD/VHS videos, music CDs, and access to online subscription databases on a variety of topics.

The Ruth Enlow Library is a participant in the Western Maryland Public Libraries regional cooperative. In addition, all Maryland libraries share resources through a statewide inter-library loan program, allowing Garrett County to provide a combined catalog that offers

access to a wider variety of materials than would be possible as a totally separate county library system.

8.9.2 Future Needs

The library system has identified three facility needs:

- The Oakland branch was built in 1950 and remodeled in 1969. This building needs more space, modern wiring and greater parking capacity.
- The Friendsville branch shares a building with the Friendsville Town Hall. The building is a 40 year old temporary classroom that had an intended life span of 30 years.
- The Kitzmiller branch is in the Kitzmiller Elementary School, a building in need of renovation. The demand for computer time has also created the need for more floor space to support more computer stations in order to meet the need.

8.10 Exhibition Center

The County has for many years pursued the possibility of developing a new Exhibition Center in the Deep Creek Lake Influence Area. An Exhibition Center could be used for small conferences, public, and private events. Originally envisioned as being built in the Thayerville area, the Exhibition Center is now more likely to be built at the Fairgrounds in McHenry. The exact size and cost of this facility are yet to be determined.

8.11 Policies and Actions

1. Work with Garrett County Public Schools and the Garrett County Board of Education to address on-going and future facility needs.
2. Work with Garrett College to address future land use needs for expansion based on future growth.
3. Support efforts to recruit and retain volunteer fire and EMS staff, augmented by paid providers where appropriate.
4. Support relocation of the McHenry fire/emergency services station to a location on US 219 north of McHenry.
5. Implement the following three highest-priority mitigation projects in the Multi-Hazard Mitigation Plan:
 - Revise the Emergency Operations and Hazardous Materials Response Plan;
 - Expand the duties and involvement of the Local Emergency Planning Committee;
 - Expand training and exercise opportunities.
6. Identify an appropriate location in the Deep Creek Lake area for a Sheriff's Office satellite station, in order to meet the expected need for services in that area. Consider co-location with the relocated fire/EMS station in a public services center.
7. As part of the next Solid Waste Master Plan and Comprehensive Plan update (both approximately scheduled for 2014), evaluate the need for a new or expanded County landfill.
8. Work with Garrett County Memorial Hospital to address future land needs for expansion purposes.
9. Support renovations and upgrades to library facilities at the Oakland, Friendsville and Kitzmiller branches.
10. Support development of an Exhibition Center in the Deep Creek Lake Influence Area.

9 Housing

Between 2000 and 2005, the number of housing units in Garrett County increased by 10 percent, from 16,761 to 18,326 units (Table 9.1). Approximately 15,000 of these units (82 percent) are located in the unincorporated areas of the County, including the Deep Creek Lake area. As described in Chapter 2, this Comprehensive Plan projects a 37 percent increase in housing units through 2030, for a total of approximately 25,000 units (Table 9.1).

Table 9.1: Housing Units, 2000 through 2030

Jurisdiction	2000 Census		2005 Estimate		2030 Projection		Actual Change, 2000-2005		Projected Change, 2005-2030	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Towns	3,130	19%	3,287	18%	3,962	16%	157	5%	675	21%
Accident	162	1%	168	1%	193	1%	6	4%	25	15%
Deer Park	181	1%	181	1%	256	1%	-	0%	75	41%
Friendsville	266	2%	281	2%	306	1%	15	6%	25	9%
Grantsville	298	2%	305	2%	405	2%	7	2%	100	33%
Kitzmilller	155	1%	164	1%	189	1%	9	6%	25	15%
Loch Lynn Heights	202	1%	210	1%	235	1%	8	4%	25	12%
Mountain Lake Park	948	6%	1,017	6%	1,167	5%	69	7%	150	15%
Oakland	918	5%	961	5%	1,211	5%	43	5%	250	26%
Rest of Garrett County	13,631	81%	15,039	82%	21,114	84%	1,408	10%	6,075	40%
Total County	16,761	100%	18,326	100%	25,076	100%	1,565	9%	6,750	37%

Source: U.S. Census, Maryland Department of Planning, Garrett County

With this increase in housing over the next 25 years the major housing issues facing Garrett County are the:

- Need to provide affordable workforce housing; and
- Age and condition of portions of the existing housing stock.

The Deep Creek Lake area has special housing issues. Additional detail on these is in Chapter 4.

House Bill 1160 Workforce Housing Grant Program

This chapter is intended to meet the eligibility requirements under House Bill 1160 Workforce Housing Grant Program. That bill requires the County to have a comprehensive plan with a workforce housing element that assesses workforce housing needs and contains goals, objectives and policies that preserve or develop workforce housing.

9.1 Goals and objectives

The County's housing goals and objectives are:

1. Increase the amount of housing in Garrett County that is affordable to residents at all income levels.
2. Direct housing development to the Towns and to designated growth areas.
3. Ensure a broad variety and diversity of housing in the County.
4. Encourage rehabilitation and renovation of existing older substandard housing units.

9.2 Existing conditions

In 2000, there were 16,761 housing units in Garrett County, a 19 percent increase compared to 1990 (Table 9.2). Of the 16,761 units, the majority (12,624 units or 75 percent) were single

family detached homes. Between 1990 and 2000 the mix of housing units in the County changed slightly. The share of single family detached units increased by one percent to 75 percent of the total units in the County. Likewise, the share of single family attached units increased by one percent to four percent of the total units in the County. The share of multi-family housing units (apartments and townhomes) increased by two percent to eight percent in 2000. The only type of housing to decrease between 1990 and 2000 was the share of mobile homes, trailers and similar units, which decreased by four percent to 13 percent of total units in the County (Table 9.2).

Table 9.2: Housing Type and Tenure, 1990 to 2000

	1990		2000		Change 1990-2000	
	Number	Percent	Number	Percent	Number	Percent
Units in Structure						
1 unit detached	10,465	74%	12,624	75%	2,159	21%
1 unit attached	367	3%	589	4%	222	60%
2 or more units	904	6%	1,400	8%	496	55%
Mobile Home, Trailer, Other	2,383	17%	2,148	13%	-235	-10%
Total	14,119	100%	16,761	100%	2,642	19%
Owner Occupied	7,998	57%	8,945	53%	947	12%
Renter Occupied	2,112	15%	2,531	15%	419	20%
Vacant	4,009	28%	5,285	32%	1,276	32%
For seasonal, recreational, or occasional use	3,084	77%	4,191	79%	1,107	36%
Total	14,119	100%	16,761	100%	2,642	19%

Source: U.S. Census

Note: Information at this detail is only available at the decennial census—that is for 2000, but not for 2005.

A little over half of the housing units in Garrett County in 2000 were owner occupied (8,945 units or 53 percent). The number of owner occupied units increased by 12 percent compared to 1990, but overall there was a decrease in the share of housing that was owner occupied from 57 percent to 53 percent (Table 9.2). Renter occupied housing accounted for 15 percent (2,531 units) of the housing units in 2000, the same share as in 1990. Only 419 new renter occupied units were added between 1990 and 2000. The remaining approximately 5,300 units (32 percent) were vacant in 2000. There was a 32 percent increase in vacant units compared to 1990 (Table 9.2). Of the 5,285 vacant units, 4,191 (79 percent) were for seasonal, recreational, or occasional use, primarily in Deep Creek Lake area.

9.3 Discussion of Issues

The need for affordable, quality workforce housing is the main housing issue facing the County. In addition to being a basic need for many residents, affordable housing is also an economic development issue in Garrett County, influencing ongoing economic growth and the recruitment of businesses and workers (see Chapter 11, the Economic Development Element). There are two key ways to meet this need: i) upgrades to the existing housing stock and ii) new affordable housing.

9.3.1 Cost of housing (Affordability)

Affordability is a function of income and the cost of housing. Although Garrett County is perhaps best known outside the County for the luxury vacation homes around Deep Creek Lake, average incomes of County residents are low. The median household income in Garrett County in 2005 was \$39,000, \$25,300 less than the median household income for the

State of Maryland (\$64,300)¹. In 1999, the median household income in all of the Towns in the County was lower than that of the State, as was the Countywide median income (Table 9.3).

Table 9.3: Median Household Income, 1999, 2005

Jurisdiction	1999	2005¹
Garrett County	\$32,238	\$39,250
Maryland	\$52,868	\$64,450
Accident	\$22,500	\$27,394
Deer Park	\$26,339	\$32,068
Friendsville	\$24,286	\$29,568
Grantsville	\$27,778	\$33,820
Kitzmilller	\$25,000	\$30,438
Loch Lynn Heights	\$31,875	\$38,808
Mountain Lake Park	\$27,917	\$33,989
Oakland	\$26,728	\$32,542

Sources: 2000 U.S. Census, MDP, ERM

1: 2005 data for Maryland and Garrett County from MDP. 2005 income data was not available for the municipalities. Incomes for municipalities were estimated, assuming the same growth rate as was experienced countywide.

The Maryland Department of Housing and Community Development (DHCD) produces a statewide Homeownership Affordability Index. Between September 2006 and February 2007, Garrett County ranked as the least affordable county in the state to buy a home.²

Another important measure of affordability is the share of income spent on housing. Generally households spending more than 30 percent of their income on housing are considered to be burdened, that is the cost of housing leaves insufficient funds for other needs such as food and transportation. In 2000, approximately 1,200 homeowner households (19 percent) spent more than 30 percent of their household income on housing and over 900 households (15 percent) spent over 35 percent of household income on housing (Table 9.4). The towns of Deer Park and Friendsville had particularly high percentages of households spending 35 percent or more of their income on monthly housing costs (19 and 24 percent). The share of income spent on housing is also a concern for the County’s senior population, many of whom live on fixed incomes and thus have less ability to afford increasing housing costs.

Garrett County renter households also experienced affordability issues with respect to the amount of household income spent on monthly housing costs. In 2000, 735 renter households (32 percent) spent 30 percent or more of their household income on monthly housing costs (Table 9.4). Over 500 renter households (23 percent) spent 35 percent or more of their household income on monthly housing costs. Five of the eight towns in Garrett County had a higher percentage of renter households spending 35 percent or more on monthly housing costs than the County as a whole.

¹ Source: Maryland Dept of Planning, Planning Data Services, November 2006

² Source: Blueprint Maryland, April – May 2007. http://www.blueprintmaryland.com/document/BP_0407.pdf. Note this measure includes real estate within the Deep Creek Lake area. The affordability index would likely be higher (more affordable) if this area was disaggregated.

Table 9.4: Monthly Housing Costs as a Percentage of Household Income

Jurisdiction	Owner Households				Renter Households			
	30% or more		35% or more		30% or more		35% or more	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Accident	8	12%	8	12%	16	29%	10	18%
Deer Park	14	19%	14	19%	26	41%	23	36%
Friendsville	26	28%	22	24%	40	36%	20	18%
Grantsville	22	18%	16	13%	40	29%	35	25%
Kitzmilller	9	13%	9	13%	4	10%	2	5%
Loch Lynn Heights	21	17%	17	14%	25	60%	21	50%
Mountain Lake Park	61	13%	35	7%	134	39%	97	29%
Oakland	47	14%	28	8%	146	39%	95	25%
Garrett County	1157	19%	903	15%	735	32%	536	23%
Maryland	269,524	23%	189,225	16%	220,031	35%	170,658	27%

Source: U.S. Census, 2000 – Summary File 3, Tables H94 and H69.

Cost of land

Housing affordability in Garrett County is further complicated by the high cost of land. According to a 2005 study, the cost of residential lots in Garrett County has, “doubled from approximately \$10,000 to \$15,000 per acre just a few years ago to at least \$20,000 to \$30,000 per acre”³. This increase in land value is largely attributable to the strong demand for development (particularly second and vacation homes) in the Deep Creek Lake area.

The Garrett County Board of Realtors® reports a wide range of values in rural building lots, with some showing little appreciation over the past ten years and some with appreciation consistent with the general increase in property values seen in the state and region⁴.

While land costs have accelerated particularly rapidly in the Deep Creek area, there is general consensus that the “lake effect” has affected overall land costs in the County. The rising cost of land adds to the cost of new housing making it harder to produce workforce housing.

9.3.2 Condition/Age of Housing Stock

In most communities the existing housing stock is an important source of affordable housing, especially for renters and first time home buyers. Garrett County’s housing stock is unable to fully meet these needs because of its age and condition.

Condition

Garrett County has a relatively high number of substandard housing units (Table 9.5). In 2000, 316 units (1.9 percent) of the total number of housing units in Garrett County lacked complete kitchen facilities and 2.2 percent of the total number of housing units in the County lacked complete plumbing facilities, higher than the percentages of units lacking similar facilities in the State as a whole.

³ “An Assessment of Housing in Garrett County, Maryland: Exploring Issues Associated with Affordable Housing”, Terrell Ellis & Associates, Inc, October 2005, page 30.

⁴ Garrett County Board of Realtors® comments on Garrett County Comprehensive Plan, April 8, 2008 (full text in Appendix).

Table 9.5: Units Lacking Complete Kitchen and Plumbing Facilities, 2000

	<i>Units Lacking Complete Kitchen Facilities, 2000</i>		<i>Units Lacking Complete Plumbing Facilities, 2000</i>	
	Number	Percent	Number	Percent
Garrett County	316	1.9%	370	2.2%
Maryland	8,223	0.4%	9,033	0.5%

Source: U.S. Census, 2000

While the census count of the number of substandard units is a little less than 700, housing providers that work with substandard housing believe that the number of substandard housing units in a community is usually greater than shown in the Census data, based on factors not considered by the Census such as the condition of roofs and other structural components. As of 2004 the Maryland Department of Assessments and Taxation’s property database reported that approximately 1,000 (seven percent) of the homes in Garrett County were in “poor” condition and approximately 4,500 (31 percent) were in “fair” condition. A visual assessment of Garrett County’s housing stock conducted in 2005 identified a general need for rehabilitation of existing structures. The assessment concluded that a, “large percentage of the structures may contain asbestos, lead-based paint and/or lead-based solder in water pipes”⁵ since these were the types of materials used during the time these structures were built. Rehabilitating and upgrading existing housing stock would provide a greater inventory of available housing for workforce families.

Age

The median year housing structures are built is another indicator of the condition and livability of the housing stock in a place. In 2000, the median age of owner occupied housing in the County 27 years, one year younger than the median age of owner occupied houses in the State (28 years old) (Table 9.6). The younger median age reflects the number of homes built in the Deep Creek Lake area between 1990 and 2000.

Table 9.6: Median Year Owner Occupied Structure Built

Jurisdiction	
Accident	1975
Deer Park	1971
Friendsville	1940
Grantsville	1948
Kitzmilller	1940
Loch Lynn Heights	1949
Mountain Lake Park	1970
Oakland	1956
Garrett County	1973
Maryland	1972

Source: U.S. Census, 2000



Examples of older housing units located in Crellin.

The housing in most of the County’s towns was significantly older than the State. Only in the town of Accident, was the housing stock younger than the State’s (25 years old).

Some older housing is structurally sound and can be attractively renovated to meet today’s needs. However, much of Garrett County’s older housing is small, energy inefficient with

⁵ “An Assessment of Housing in Garrett County, Maryland: Exploring Issues Associated with Affordable Housing”, prepared for the Garrett County Community Action Committee by Terrell Ellis & Associates, Inc.

older plumbing, electric and heating service. The cost of renovating such housing units to meet today's needs often exceeds their total value.

9.4 Need Estimate

Three estimates have been made of the number of affordable housing units that will be needed over the next ten years in Garrett County:

- The Governor's Commission on Housing Policy estimated a need for 613 affordable rental housing units by 2014⁶;
- The Garrett County Community Action Committee (CAC) estimated a need for 244 rental units and 892 single family homes by 2014⁷; and
- More recently, the Garrett County CAC has estimated a need for 700 to 1,000 units in the Deep Creek Lake area to meet the housing need of current and future employees within the Lake area⁸.

Based on these assessments this Comprehensive Plan estimates that construction of approximately 1,000 affordable units in the Deep Creek Lake Area and approximately 300 to 400 affordable housing units in the rest of the County, including the towns, would meet the need for affordable housing in the County through 2030. This number represents approximately 20 percent of the total number of housing units projected to be built in the County through 2030 a high target.

9.5 Workforce Housing Providers

This section discusses the work of agencies and organizations that provide workforce housing in Garrett County.

Garrett County Community Action Committee

Garrett County Community Action Committee (CAC) is a private, non-profit corporation that works with partners to build a stronger community and to provide services that improve the quality of life in Garrett County. One of CAC's main focuses is to provide affordable housing to low income and workforce families. CAC uses various programs to assist homeowners, homebuyers, renters, and those who are homeless or facing a housing crisis:

- A Home Repair Loan Program provides loan assistance to low income homeowners to help them maintain a safe, affordable and healthy home.
- A First Time Homeowner Program provides counseling, training and down payment assistance to as many as 65 potential homebuyers each year through a partnership with local banks and the U.S. Department of Agriculture Rural Housing Service.
- A Section 8 Tenant-based and Project Unit-based Assistance Program provides long-term rental leasing assistance based on income (typically targeted at families making 40 to 60 percent of County median income, with an additional subsidy for families making less than 40 percent of the median), family size, and other requirements to as many as 200 participants each year.

⁶ "Workforce Affordable Housing in Maryland", Maryland DHCD and the Governor's Commission on Housing Policy, August 2004.

⁷ "An Assessment of Housing in Garrett County, Maryland: Exploring Issues Associated with Affordable Housing", Terrell Ellis & Associates, Inc, October 2005.

⁸ Garrett County Community Action Committee, based on 2007 informal survey of major employers in the Deep Creek Lake area.

In addition to these programs, the CAC is the developer and owner of over 400 rental housing units in Garrett County. The CAC builds single family homes, which are sold to graduates of its First Time Homebuyer Program. The CAC also develops and sells lots in single family subdivisions for low and moderate income homebuyers in the County.

The third and final phase of the CAC's most recent housing development, Mountain village, located on Pysell Road in McHenry, was completed in 2007. The total development includes 88 affordable rental units, which were 100 percent occupied as of September 2007. The CAC is also in the planning stages for two other developments which it hopes will provide approximately 480 new units when complete:

- The White Face Farm property northeast of McHenry on Bumblebee Road was acquired by the county and is intended as a joint economic development and housing site. The Lake Hill housing component is in preliminary planning stages and will comprise approximately 250 total owner occupied units of mixed unit types.
- River Hill located on Liberty Street in the Town of Oakland will have approximately 230 units, among which would be affordable for sale units, elderly rental units, and mixed market rate units.

The CAC has also acquired land in the Town of Grantsville for future housing development.

The CAC frequently coordinates affordable housing activities with DHCD, the single largest funding source for for-sale and rental housing for low and moderate income households in the state. In particular, DHCD provided funding for the Mountain Village project.

Task Force Committee on Workforce Housing

As described in the introduction to Section 9.3, affordable housing is an economic development issue. In 2007 the CAC and the Garrett County Development Corporation (which provides financial and technical assistance to existing and new businesses) created a task force committee on Workforce Housing to address the gap in residents' income and the housing available to them on the private market. The committee conducted research and developed policies and actions—in the form of the Workforce Housing Plan—to address the lack of affordable housing for workforce families in Garrett County.

The Workforce Housing task force coordinated the development of the Workforce Housing Plan with this Comprehensive Plan element. The two documents share some of the same goals, policies, and actions, notably Goal #1 in this chapter.

USDA Rural Development

The USDA Rural Development's Rural Housing Service offers assistance to first time low income homebuyers through various loan programs:

- Single-Family Home Loan Program (Section 502): provides low interest loans directly from the USDA to homebuyers who would not otherwise be able to afford regular monthly mortgage payments with higher interest rates. With this loan, there is no down payment required and the interest rate can be as low as one percent, depending on the size of the family.
- Guaranteed Single-Family Home Loan Program: low and moderate income families can qualify for loans directly from a bank or mortgage company through this program. This is possible because the Federal Government guarantees the lender up to 90 percent of its losses if the homeowner defaults on the loan.

The USDA provides approximately 15 of these loans a year to County residents. Through 2030 this would amount to 375 units of housing.

Habitat for Humanity

Habitat for Humanity is a non-profit, volunteer organization that builds approximately two to three houses a year in Garrett County. Habitat houses are sold to low income families in need of shelter. These homes are built at no profit and families receive affordable loans and monthly mortgage payments. All mortgage payments are used to build future Habitat homes.

Homeless

There is no homeless shelter in Garrett County, but the CAC houses people who are considered homeless in motels until more permanent housing can be provided. In 2006 CAC has sheltered 157 different individuals in motels for one to three nights. CAC also owns and operates Rose Terrace Transitional Housing, located at its offices in the Town of Oakland, which provides temporary housing for homeless. Rose Terrace has nine individual units available for rent with common kitchen, living and dining facilities. This facility provides a temporary housing option until an apartment becomes available or more permanent accommodations can be obtained.

9.6 Policies and Actions

Garrett County will need approximately 1,400 affordable housing units by approximately 2030. With approximately 470 units in the planning stages (see above), an additional 800-900 units will be needed (including rental units and owner-occupied units). The Comprehensive Plan endorses the Workforce Housing Plan. The following policies and actions are intended to help the County meet the need for affordable housing, and are generally in line with the recommendations in the Workforce Housing Plan:

1. Expand opportunities for higher density development that will facilitate the provision of affordable housing. This Comprehensive Plan's land use plan (Chapter 3) recommends conversion of land in the lower-density R and SR classifications to TR near the Towns of Grantsville and Oakland; and between the Towns of Loch Lynn Heights and Deer Park. In addition, the Chapter 3 recommends new growth areas outside the Towns of Grantsville, Oakland and Friendsville.
2. Continue to support the CAC, the state Department of Housing and Community Development, USDA Rural Development, and Habitat for Humanity in their affordable housing development efforts. Providing land and facilitating the development of infrastructure (water, sewer, electricity, and roads) are particularly effective means to reduce the cost of housing development.
3. Consider means for businesses creating new jobs to be a supportive partner in contributing to the provision of the affordable housing needed for the employees of these jobs. The need is particularly acute in the Deep Creek Lake area where many service jobs are needed to support resort based activities, but where housing for holders of these jobs is expensive to develop. Businesses could contribute in different ways: directly providing housing, partnering with the CAC, providing land for housing, or contributing financially to organizations such as the CAC who develop housing.
4. Continue programs to rehabilitate existing substandard housing in the County. This action will increase the number of affordable housing units available to workforce families.
5. Consider tax or other incentives for developers that build affordable housing, including affordable units in the same subdivision as more expensive units.

10 Mineral Resources Element

Mining has played a strong role in the economic and employment history of Garrett County. The County's two main mineral resources are coal and natural gas, each produced for fuel. Non-coal mineral resources such as limestone and sandstone are also mined.

Mining jobs remain a small, but not insignificant, portion of Garrett County's economy, accounting for approximately 350 jobs (see the Chapter 11, the Economic Development Element).

10.1 Goals

The mineral resources goal of this Comprehensive Plan is to:

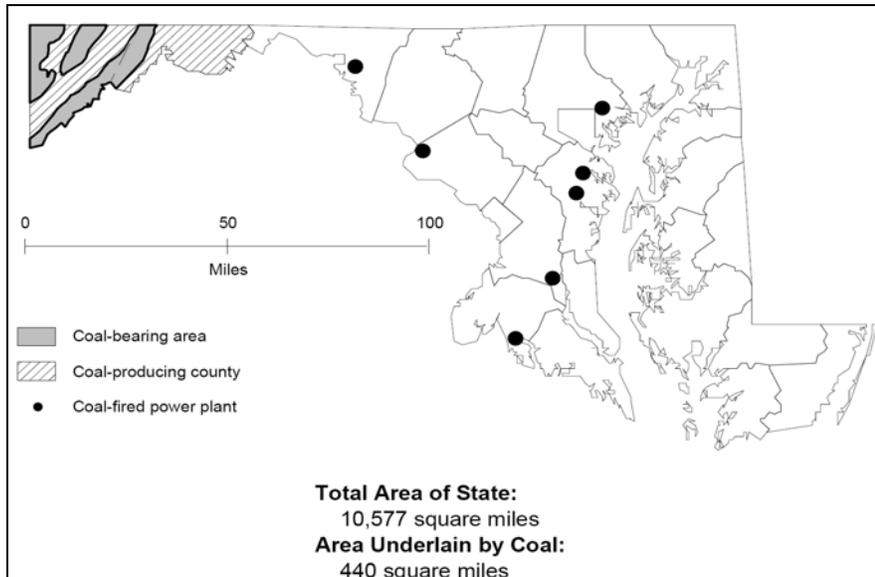
Promote responsible surface and underground mining of Garrett County's resources in compliance with strict standards for preventing environmental pollution and reclaiming the mined land to productive reuse.

10.2 Description of Mineral Resources

10.2.1 Coal Production

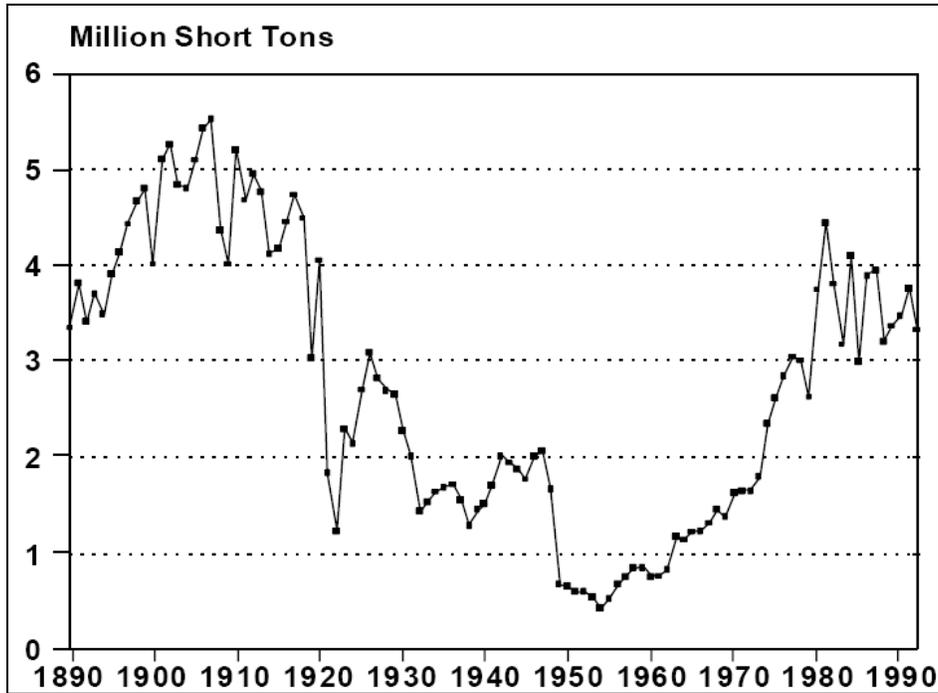
Coal is mined in both Garrett and Allegany Counties in western Maryland (Figure 10.1). The state's coal production peaked around 1905 with about 5.5 million tons of coal mined. Statewide coal production decreased sharply in the 1920s, when slightly over one million tons was mined, but has leveled off. Since 1975, annual coal production in Maryland has ranged between approximately three and four million tons per year (Figure 10.2). Garrett County is the largest coal producer in Maryland, with over 4 million tons mined in 2006, 77 percent of the State's total production (Table 10.1).

Figure 10.1 Maryland's Coal Producing Counties



Source: US Department of Energy, State Coal Profiles, 1992

Figure 10.2 Coal Production in Maryland: 1890-1990



Source: US Department of Energy, State Coal Profiles, 1992
 Note: Chart data beyond 1992 were not provided in the original source material.

Table 10.1: 2006 Coal Production

Mining Method	Tons		
	Maryland	Garrett County	% of State Total
Strip	2,356,855	1,186,569	50%
Deep	2,839,591	2,839,591	100%
Total	5,196,446	4,026,160	77%

Source: 2006 Annual Report of the MD Bureau of Mines

As of 2007 there were two deep mines and 14 strip mines on 250 acres of land in Garrett County. The County is the sole deep mine coal producer in the State and provides 50 percent of the State’s strip mined coal (Table 10.1).

10.2.2 Natural Gas Production

Garrett and Allegany Counties are the only natural gas producing counties in Maryland. In 2006, six natural gas production wells were operational in Maryland in, producing approximately 12.8 billion cubic feet (bcf) of natural gas. In addition, natural gas from production sites in the Gulf Coast region is temporarily stored in geologic formations in the Accident natural gas field, for use in the northeastern United States during high-demand periods.

Natural gas production in the state has been steadily declining since it peaked in the 1950s.

Garrett County’s natural gas resources are shown in Figure 10.3.

10.2.3 Non-Coal Mineral Production

Non-coal mineral deposits in Garrett County include limestone, dimension stone, sandstone, industrial sand, and clay. Approximately 520,000 tons of non-coal minerals were mined in Garrett County in 2006 (Table 10.2).

As of 2007, there were three limestone and two sandstone quarries in Garrett County. While quarrying non-fuel minerals produces only a small portion of the State’s overall product, it still provides the County with both economic and employment benefits.

Table 10.2: 2006 Non-Coal Mineral Production

Type of Stone	Tons		
	Maryland	Garrett County	% of State Total
Dimension stone	32,184	14,000	43%
Crushed and broken limestone	22,053,787	389,000	2%
Crushed and broken dimension stone	3,474,329	95,000	3%
Industrial sand	21,100	20,000	95%
Clay	48,530	1,800	4%
Total	25,629,930	519,800	2%

Source: Maryland Department of the Environment

10.3 Discussion of Issues

10.3.1 Abandoned Mine Land Reclamation

While mining in Garrett County provides economic and employment benefits, it has also left the County with environmental and aesthetic issues to address. Acid water discharge, gob piles (waste coal and rock), dangerous highwalls, erosion, and other environmental disruptions were frequent byproducts of surface mining. The 1977 Federal Surface Mining Control and Reclamation Act established new standards for surface mining, and has led to the reclamation of many acres of abandoned strip mines.

In order to address the environmental and aesthetic damages caused by mining, the State of Maryland enacted its Abandoned Mine Land (AML) Reclamation Program in 1982 (supplanting the federal program based on the 1977 legislation). The state Program’s main purpose is to address environmental problems which have damaged land and water, with the overall goal of returning unused and environmentally unstable land to some form of passive use.

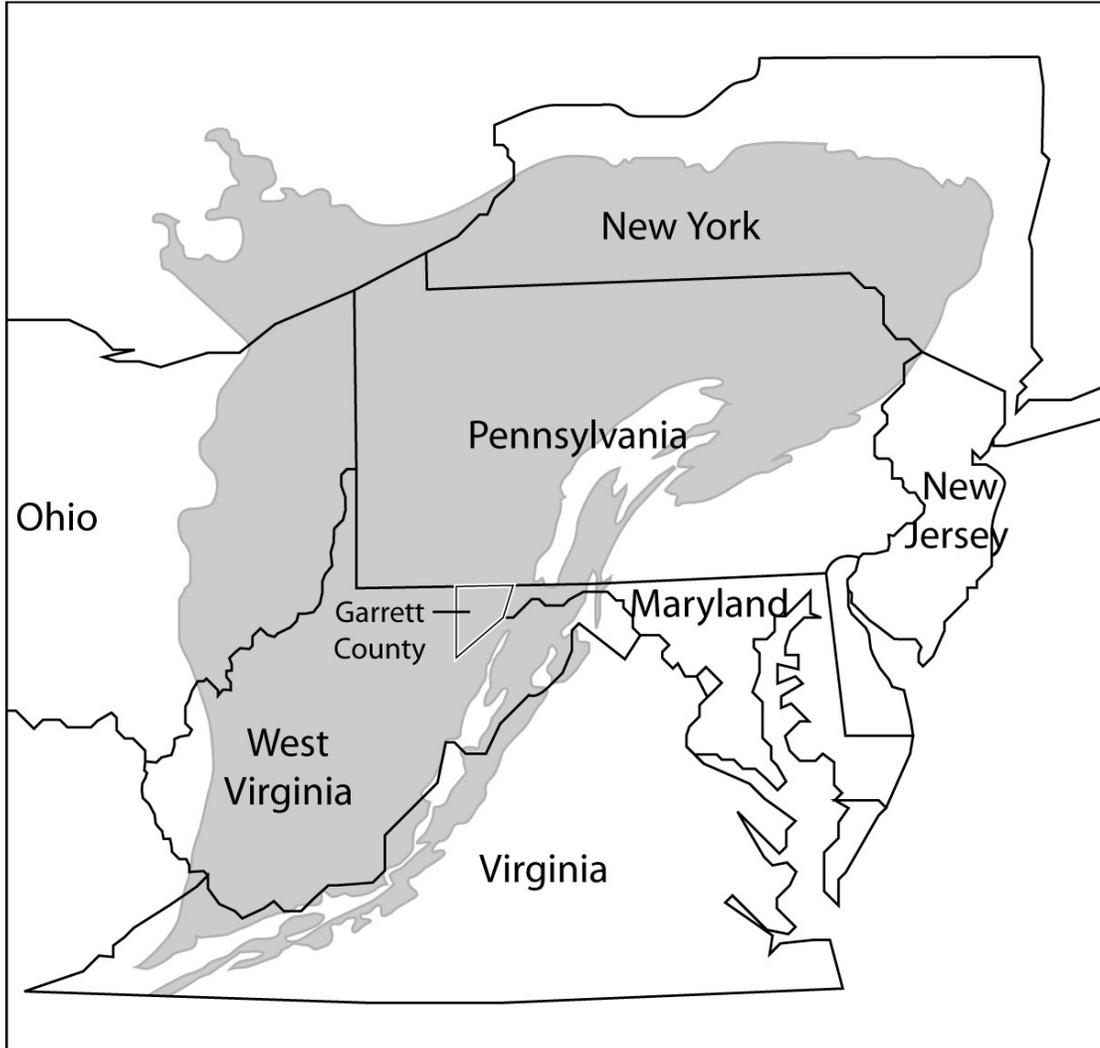
In particular, the AML Reclamation Program addresses abandoned mine drainage upstream of water supply intakes, highwalls and pits near roads, and potential landslides. Since 1975, the AML Reclamation Program has reclaimed 960 acres of previously unusable mine land in Garrett County. Land uses on reclaimed land typically include hunting, fishing, recreation, timber production, and agriculture; reclamation can also be associated with an increase in nearby land value.

10.3.2 Natural Gas Production

Natural gas production in Garrett County is likely to increase significantly over the life of this plan. Garrett County sits atop a geological layer known as the Marcellus Shale (see Figure 10.3), which has long been known to contain significant amounts of natural gas. The recent development of directional drilling and rock fracturing processes allow that gas to be

recovered in a cost-effective manner. The combination of reduced production costs and high national energy demand (particularly from sources other than coal or petroleum) have spurred considerable interest in natural gas production in Garrett County, and have dramatically increased the value of property owners' mineral rights.

Figure 10.3 Marcellus Shale (Approximate Extent)



Source: Adapted from USGS. 2005. *Assessment of Undiscovered Natural Gas Resources, Appalachian Basin*

Natural gas production can benefit the County and its residents in a number of ways. Property owners receive lease payments, royalties, and free gas from energy companies to heat homes in exchange for natural gas drilling rights.¹ This money, along with money spent by gas drilling and related contractors, can help to boost the County's economy. Natural gas is also considered a more environmentally friendly energy source than coal or petroleum products.

Natural gas drilling can also have negative impacts. In particular, the fluid byproducts of the drilling process contain a number of contaminants. If not properly contained and disposed of,

¹ Source: Baltimore Sun, September 14, 2008.

these fluids can pose threats to water quality and nearby habitat. In addition, drilling activity can generate noise and heavy truck traffic. Contractors and other workers associated with drilling operations can also generate demands on County services, as well as demand for lodging.

MDE is responsible for monitoring and enforcing environmental regulations related to natural gas drilling. The County—particularly the Health Department and Department of Planning and Land Development—should work with MDE to closely monitor such activity to ensure that it does not adversely impact water resources and sensitive environmental areas. The County Roads department should also work with SHA and energy companies to ensure that roads are safe and adequate to support the vehicle traffic associated with drilling activities.

10.4 Policies and Actions

1. Support responsible mining of Garrett County's mineral resources.
2. Support the reclamation activities of the Maryland Abandoned Mine Reclamation Program to bring environmentally problematic land back to a useable state.
3. Work with MDE, SHA, other state agencies, and energy companies to monitor natural gas development activities to ensure the safety of the ground and surface water supplies, to protect sensitive environmental areas, to address the socioeconomic impacts of natural gas drilling, and to ensure the safety and adequacy of roads to accommodate natural gas drilling activities.

11 Economic Development

Many of the elements of the 2008 Comprehensive Plan relate to economic development in Garrett County. This chapter describes the County's overall economy, identifies economic trends, and lists the Comprehensive Plan's goal, policies, and implementation actions for economic development through 2030.

11.1 Goals and Objectives

Garrett County Economic Development (GCED) coordinates economic development policy for the County. Its strategic plan establishes overall economic development goals (see Section 11.2.4). This Comprehensive Plan both influences and is influenced by these goals, and sets the land use framework for economic development. The Comprehensive Plan's economic development goal is:

Ensure that adequate land and infrastructure are available to support economic development activities.

The objectives for achieving this goal are:

1. Designate appropriate amounts of land in appropriate locations as Employment Center and Commercial land classifications.
2. Ensure that water, sewer, and transportation infrastructure support existing and projected economic development.
3. Use land use policies to maintain the strength of the County's key industries—such as real estate, tourism, agriculture, and timber—and to diversify the County's employment base.

11.2 Overview

Like other parts of Western Maryland, Garrett County is transitioning from an economy based primarily on manufacturing, agriculture, and other resource-based industries. While these industries will continue to play an important role in the County's economy, the County's overall economic development goal is to move toward a more diverse, modern economy that takes advantage of the County's transportation system, its natural resources, its year-round beauty, and its workforce.

11.2.1 Employment

Table 11.1 shows the jobs in Garrett County in 2006. The trade, transportation, and utilities; government (primarily local government, including public education); education and health services; and leisure and hospitality sectors are the four largest job providers in the County.

The list of major private employers in Garrett County (Table 11.2 shows those with 100 or more employees) tells a slightly different story. Several of the County's largest employers are in the manufacturing and health care industries. In particular, the three large nursing homes are a reflection of the County's aging population. In 2006, 15 percent of the County's population was age 65 or older (compared to 11 percent statewide); this age group is expected to grow to 27 percent by approximately 2025.¹

¹ Source: Garrett County Economic Development Strategic Plan, 2002-8.

Table 11.1: Jobs in Garrett County, 2006

Sector	Full Time Employment, 2006	Share of Total
<i>Government</i>		
Federal	75	1%
State	219	2%
Local	1,463	12%
<i>Total Government</i>	<i>1,757</i>	<i>15%</i>
<i>Private Sector</i>		
Natural Resources and Mining	573	5%
Construction	1,141	10%
Manufacturing	918	8%
Trade, Transportation, and Utilities	2,460	21%
Information	137	1%
Financial Activities	507	4%
Professional and Business Services	781	7%
Education and Health Services	1,596	14%
Leisure and Hospitality	1,548	13%
Other Services/Unclassified	347	3%
<i>Total Private Sector</i>	<i>10,008</i>	<i>85%</i>
Total Non-Farm Employment	11,765	100%

Source: Maryland Department of Labor, Licensing, and Regulation (DLLR), 2006 Garrett County Fact Sheet

Table 11.2: Major Employers (Excluding County Government)

Employer/Firm	Employees	Product/Services
Garrett Industrial Supply/Pioneer Conveyor	350	Industrial supply services
Garrett County Memorial Hospital	335	Medical services
Wal-Mart of Maryland, Inc.	320	Retail sales
First United Bank & Trust	268	Banking and insurance
Beitzel Corporation	220	Metal fabrication
Recreational Industries/WISP Resort	175 ¹	Year-round resort
Flying Cross by Fechheimer	159	Uniform shirts/trousers
Goodwill Retirement Community	130	Short & long-term nursing care
Dennett Road Manor, Inc.	120	Short & long-term nursing care
Oakland Nursing & Rehab	120	Short & long-term nursing care
Appalachian Parent Assn.	115	Education/job services
Global Hardwoods/Wood Products	100	Kiln-dried hardwood lumber

1: Increases to 750-800 during ski season

Source: Garrett County Economic Development

The manufacturing industry in Garrett County reflects the County's low labor cost, proximity to markets, labor availability, and skill base. Although the manufacturing sector is smaller and more specialized than during America's manufacturing heyday, these characteristics of the County's economy continue to make manufacturing an important industry.

Other large employers, such as the Wisp Resort and Global Hardwoods, demonstrate the County's existing strengths in tourism and forest products (see Section 11.2.2 below).

11.2.2 Key Industry Sectors

This section describes some of the major components of the County's economy.

Real Estate

Real estate is also a major contributor to the County's fiscal health. In 2006, the County received more than \$28 million in taxes from residential real estate, approximately 45 percent of the \$62.7 million in overall revenue that the County received that year.² Given the Comprehensive Plan's projection of 4,050 new residential units and more than 3 million square feet of non-residential development by the year 2030 (see Tables 2.2 and 2.4), the real estate industry should continue to be a major component of the County's economy.

The links between real estate and other elements of the County's economy are also important. For example, demand for new homes directly generates activity (and jobs) in the construction, transportation, utilities, and manufacturing industries. The purchase and maintenance of a new home, in turn, spurs secondary activity in the retail and wholesale industries.³ The real estate industry in Garrett County is strongly tied to the County's tourist economy. As the popularity of vacation and recreation activities increases, so does the demand for seasonal and permanent homes, as well as businesses to serve new residents and visitors.

Tourism

Since the 19th century, Garrett County's abundant natural resources and transportation system have been the basis for a tourism economy. By the early 20th century, the County's scenery and railroad access from major cities allowed the cluster of resorts in Deer Park, Oakland, Mountain Lake Park, and Loch Lynn Heights to flourish. Major roads such as US 219, US 40, and I-68 soon spurred recreational and vacation amenities surrounding Deep Creek Lake (which was created in 1923). The Lake area is now home to the state's only ski resort, a recirculating whitewater course at Adventure Sports Center International (ASCI)—one of two such courses in America—and the County's largest concentration of restaurants, hotels, and other tourist-related establishments. The County's historic towns, state forests and parks, streams with national reputations for trout fishing, and whitewater resources (particularly the Youghiogheny and Savage Rivers) are also important elements of the tourist industry.



The recirculating whitewater course at Adventure Sports Center International on Marsh Mountain is a unique recreational resource. (Photo courtesy of ASCI)

² Source: Garrett County FY 2008 Budget.

³ Source: Garrett County Board of Realtors. 2007. *The Contribution of Real Estate to the Garrett County Economy*.

The Garrett County Chamber of Commerce estimates that 1.2 million tourists visited Garrett County in 2006, spending over \$136 million. Tourism employs approximately 18 percent of the County's workers, and contributes \$8.5 million in tax revenue, making it a critical element of the County's economy⁴ The strength of the tourist industry is reflected by the number of jobs in the retail, arts/entertainment, and lodging/food industries on Table 11.1.

Agriculture

Agriculture has been and will continue to be an important part of Garrett County's economy and lifestyle. A Resource-Based Industries study conducted for the Forum for Rural Maryland indicates that the agriculture industry accounts for more than 900 jobs in Garrett County (the jobs cited in this report are a composite across several of the industry sectors shown in Table 11.1, and are therefore not shown in that table).⁵ Table 11.3 summarizes basic data about Garrett County's agricultural industry. These data show a few key trends in Garrett County agriculture:

- Garrett County lost farms between 1997 and 2002, but the average farm size increased. The number of farms and the land in farms remains significant (almost 25 percent of the land in the County).
- The market value per farm of agricultural products remained steady between 1997 and 2002.
- Sales of agricultural products shifted away from livestock and toward crop production between 1997 and 2002.
- There was a small but notable shift toward fruit and vegetable production (the increased land dedicated to vegetable production and orchards). This may indicate a move toward more specialized agricultural products (one of the objectives of the County's *Economic Development Strategic Plan*, as described in Section 11.2.4, is the development of a berry industry in the County).



Agriculture is an important part of Garrett County's history, culture, and economy

⁴ Source: ACDS, LLC. 2007. *Feasibility Assessment, Garrett County Agribusiness Park.*

⁵ Source: Forum for Rural Maryland. *County-by County Economic Impact Estimates for Resource-Based Industries in the State of Maryland.*

Table 11.3: Agricultural Economy in Garrett County

	2002		1997		Change	
	Number	Acres	Number	Acres	Number	Acres
Farms	634	101,444 ¹	718	111,829	-84	-10,385
Average Farm Size (Acres)		160		156		4
Total Cropland		50,876		56,013		-5,137
Land in Vegetable Production		129		101		28
Land in Orchards		59		40		19
Market Values in 2002 Dollars of Agricultural Products Sold²						
All Agricultural Products		\$20,857,000		\$23,411,000		-\$2,554,000
All Crops		\$3,748,000		\$2,716,000		\$1,032,000
All Livestock, Poultry, Related Products		\$17,109,000		\$20,695,000		-\$3,586,000
Market Value (All Products) per Farm		\$32,897		\$32,607		\$290

1: The US Census reports the number of acres in farms, (including land in farms that is not suitable for agricultural activity), whereas MDP's Land Use/Land Cover dataset, used throughout this Comprehensive Plan (specifically, Tables 3.1 and 3.8) shows 89,142 acres--the acreage that is actually used for agricultural activity.

2: Based on 1997 Agricultural Census market values, converted using the Bureau of Labor Statistics Inflation Calculator (<http://www.bls.gov/>)

Source: 2002 Agricultural Census (U.S. Census Bureau). Data from the 2007 Agricultural Census were not available for the Comprehensive Plan.

Forestry

Garrett County has traditionally been one of Maryland's leading producers of saw timber. As shown in Chapter 3, forest land covers more than two thirds of the County's land area. The Forum for Rural Maryland's Resource-Based Industries study indicates that the forestry industry accounts for more than 600 jobs (across several industry sectors) in Garrett County. Nearly 300 forestry and wood products companies have operations in Garrett County,⁶ such as Global Hardwoods/Wood Products (Table 11.2) in Oakland, and the future American Woodmark facility in the Keyzers Ridge Business Park, indicate the continued strength of the forestry industry.

The most recent data on timberland collected by the US Department of Agriculture is from the *1999 Forest Statistics for Maryland*.⁷ According to these data, forest land covers nearly 298,000 acres of land (71 percent of the County). Timberland (forest land that grows at least 20 cubic feet of wood per acre per year) covers more than 285,000 acres (68 percent of the County).⁸ In 1999, the County had an estimated timberland standing crop of nearly 1.46 billion board-feet of sawtimber, with more than 62 percent of that land owned by non-industrial, private landowners. Assuming an average stumpage value of \$250 per 1,000 board feet,⁹ this translates to an economic value of over \$365 million for the County's forests. This economic value is "on the stump," and does not take into account value-added or other economic returns. The full value of the County's forests far exceeds the stumpage value when environmental and recreational benefits are considered.

⁶ Source: Garrett County Forest Conservancy District Board. 2007.

⁷ Source: USDA Forest Service, Resource Bulletin NE-154: Forest Statistics for Maryland, 1986 and 1999.

⁸ This data exceeds the 285,508 acres of forest in Tables 3.1 and 3.8 (which show MDP's 2002 Land Use/Land Cover, adjusted by the County to reflect development between 2002 and 2005) by more than 12,000 acres. The Forest Service data are estimates based on sample plots throughout Maryland, whereas the MDP and County data are based on interpretation of satellite imagery.

⁹ Based on averages from Maryland, Delaware and West Virginia.

Mining

As with agriculture and forestry, mining is part of the economic, historical, and social fabric of Garrett County, western Maryland, and Appalachia as a whole. Garrett County is Maryland’s largest coal producer (see Chapter 10, the Mineral Resources Element), but coal and other mining production has decreased from the early 1900s peak. As recently as 1982 (the most recent peak in coal production), mining employed 963 employees in Garrett County, nine percent of the total workforce.¹⁰ Today, the Forum for Rural Maryland’s Resource-Based Industries study indicates that mining accounts for nearly 350 full-time jobs in Garrett County.

11.2.3 Existing Economic Activity

Employment Centers

Garrett County’s business and technology parks (shown in Map 11.1 and described in Table 11.4) are the location for many of the County’s large and medium-sized employers. The 240-acre Keyzers Ridge Business Park is Garrett County’s newest industrial park. Construction of the park was completed in 2006, with the first tenant—American Woodmark—anticipated by 2008.

The Central Garrett Industrial Park, Southern Garrett Industrial Park, Southern Garrett Business & Technology Park, Northern Garrett Industrial Park, and Keyzers Ridge Business Park are state-designated Enterprise Zones. Businesses that locate or create jobs in Enterprise Zones are eligible for property tax or state income tax credits.

Table 11.4: Existing Employment at County Business/Technology Parks

Business/Technology Parks	Total Acres	Total Square Footage	Existing (2008)	
			Jobs	Percent of Land Sold
Central Garrett Industrial Park	67	131,618	200	100%
Northern Garrett Industrial Park	110	311,406	257	100%
Southern Garrett Industrial Park	164	199,808	642	100%
Southern Garrett Business & Technology Park	104	120,461	147	95%
Keyzers Ridge Business Park ¹	240	0	0	0%
Garrett Information Enterprise Center (Incubator)	n/a	12,795	45	100%
Total, Business and Technology Parks	685	776,088	1,291	64%

1: American Woodmark, the first Keyzers Ridge Business Park tenant, expects to begin construction by 2008-9.

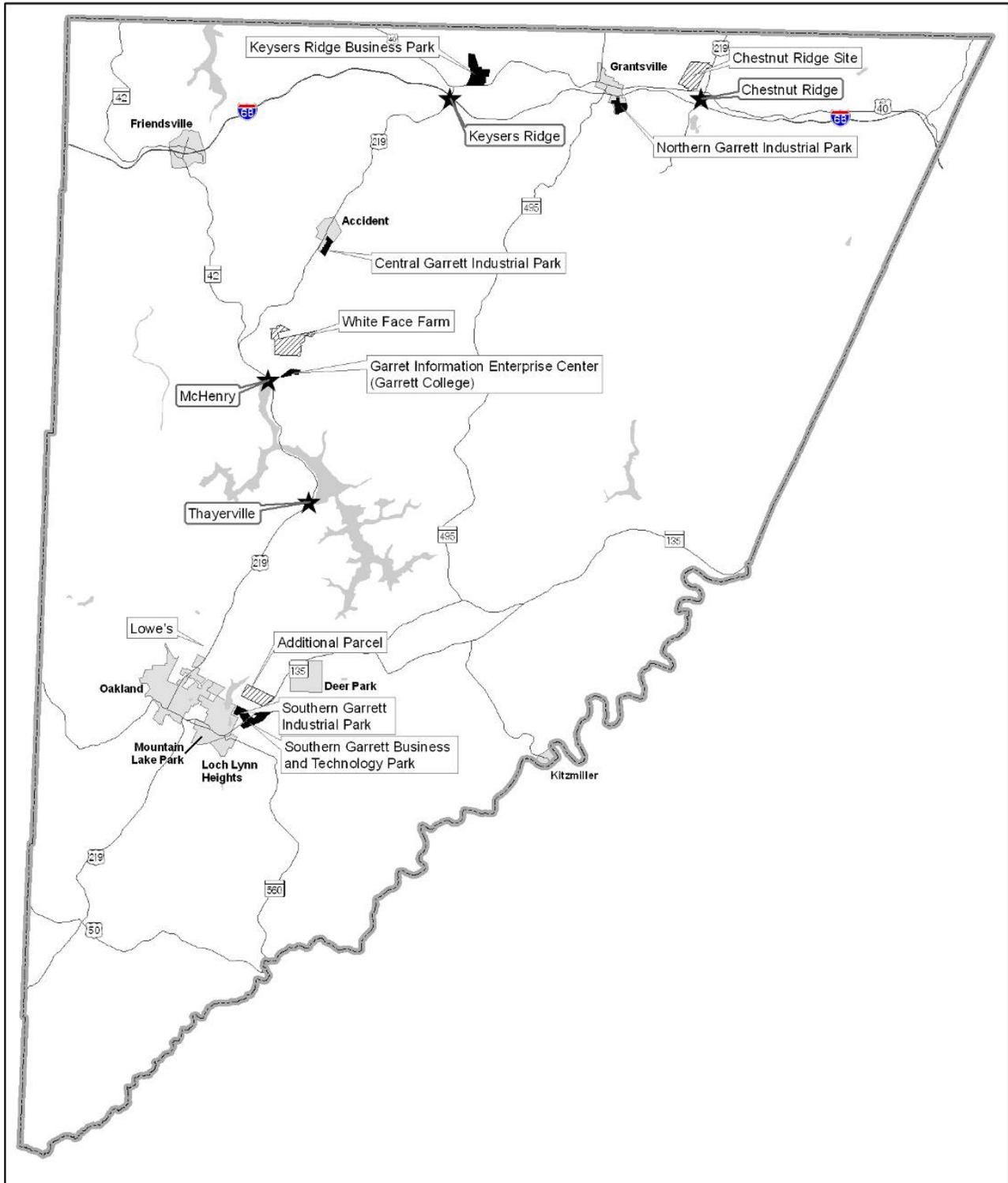
Source: Garrett County Economic Development and ERM

Commercial Areas

Commercial activity in Garrett County is concentrated in the towns of Accident, Friendsville, Grantsville, Loch Lynn Heights, Mountain Lake Park, and Oakland, as well as the areas shown on Map 11.1. The McHenry and Thayerville areas are described in detail in Chapter 4 (the Deep Creek Lake Influence Area Master Plan).

¹⁰ Source: Maryland Department of Planning.

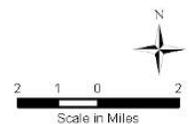
Map 11.1: Employment and Commercial Areas



Employment Areas

Legend

-  Existing Business/Industrial Parks
-  Potential Employment Areas
-  Major Commercial Areas



11.2.4 County Economic Policy

Garrett County Economic Development

Garrett County Economic Development (GCED) is the County department responsible for economic development planning and strategy. GCED's primary mission is to attract and retain jobs and employers in the County, and to diversify the County's economic base.

Through the semi-public Garrett County Development Corporation, and GCED's partnerships with the Maryland Department of Business and Economic Development (DBED), the Appalachian Regional Commission (ARC), the Tri-County Council (Garrett and Allegany County, MD, and Washington County, MD), and federal agencies, GCED administers all local, state, and federal assistance for companies in Garrett County.

Economic Development Strategic Plan

The 2002-8 *Economic Development Strategic Plan*, prepared by GCED and the Economic Development Corporation, is the County's primary economic policy guidance document. The *Strategic Plan's* goals are:

1. To develop a skilled and educated workforce that will support a diverse economy, thereby attracting employment opportunities for residents.
2. To identify specific desirable industry sectors and implement programs for their recruitment to Garrett County.
3. To achieve an Economic Development Plan integrated with other local, state, and federal plans where linkages are mutually beneficial.
4. To support growth and diversification of existing business sectors, including agriculture.
5. To establish an infrastructure that can sustain desired business growth.
6. To implement the economic development initiatives while being mindful of sustaining and enhancing Garrett County's quality of life and the environment.

The *Strategic Plan* lists three major strategies to achieve these goals:

1. Grow the workforce's skill base through education, training, and diversified employment opportunities.
2. Increase the availability of affordable housing.
3. Expand and enhance supporting infrastructure.

The Comprehensive Plan's role is to support GCED in implementation of the *Strategic Plan*. In particular, the Comprehensive Plan focuses on goals 5 and 6, and strategy 3—the initiatives that link economic development to land use and infrastructure.

11.3 Discussion of Issues

11.3.1 Projections

Table 11.5 below shows projections for new employment sites and commercial areas through 2030. These projections are consistent with the more generalized data listed in Table 2.4.

Table 11.5: Projected Employment and Commercial Activity

Employment Sites	Existing (2008)		Additional (by 2030)	
	Square Footage	Jobs	Square Footage	Jobs
<i>Existing Sites</i>				
Central Garrett Industrial Park	131,618	200	25,250	45
Northern Garrett Industrial Park	311,406	257	465,000	152
Southern Garrett Industrial Park	199,808	642	2,000	49
Southern Garrett Business & Technology Park	120,461	147	182,000	193
Keysers Ridge Business Park	0	-	300,000	450
Wisp Resort, Adventure Sports Center International ¹	175,400	175	100,000	178
Garrett Information Enterprise Center (Incubator)	12,795	45	-	50
<i>Future Sites Identified on Map 11.1</i>				
Chestnut Ridge Site	-	-	100,000	150
White Face Farm	-	-	350,000	400
Exhibition Hall	-	-	30,000	2
Additional parcel east of S. Garrett Business & Tech Park	-	-	40,000	25
Oakland Lowes	-	-	110,000	90
Total, Employment Sites	807,737	1,151	1,704,250	1,784
Commercial and Retail Areas <i>(Includes retail, hotel, restaurant, entertainment, etc.)</i>	Existing Square Footage (2005)²		Additional Square Footage (by 2030)	
Oakland/Mountain Lake Park/Loch Lynn Heights	1,702,000		300,000	
Grantsville Area	317,000		100,000	
Friendsville Area	91,000		20,000	
Chestnut Ridge	267,000		75,000	
Keysers Ridge	37,000		100,000	
McHenry (excluding Wisp/Adventure Sports)	387,000		350,000	
Thayerville	169,000		150,000	
Total, Commercial and Retail	2,970,000		1,095,000	

1: Wisp: Shows full time employment only. Seasonal employment is 500, with another 250 seasonal employees possible by 2030. Future additional square footage could range from 50,000 to 125,000.

2: Source: Maryland Property View 2005

Other Sources: ERM, Garrett County Economic development

Table 11.5 reflects some key accomplishments toward the Economic Development Strategic Plan's goals, particularly:

- The acquisition of Keysers Ridge Business Park, and development of water and sewer infrastructure at the site.
- Planned development of the McHenry Business Park at the White Face Farm site.
- Expansion of the employment area east of Mountain Lake Park, including the new Public Works complex (not listed in Table 11.5), and potential development of an additional nearby parcel (see Map 11.1).

11.3.2 *New Employment Areas*

The Land Use Element (Chapter 3) and Deep Creek Lake Influence Area Master Plan (Chapter 4) assigns Employment Center land classifications to the sites of future business and technology parks, and by designating additional areas of General Commercial land classification (particularly along US 219 at Sand Flat Road and Mayhew Inn Road).

An additional potential future economic development area has been identified south and east of the I-68/US 219 North interchange (as described in Section 3.5.5). The creation of this additional economic development area would be consistent with this Plan's land use and economic development objectives, but would depend on the resolution of a number of issues, including support from property owners and the State, and final selection of the US 219 North alignment. Because these issues are not fully resolved, the area is not designated as an Employment Center on the Land Use map.

Infrastructure

The presence of public infrastructure (water, sewer, and roads) is critical for the success of the County's major employment and commercial areas. Most of the Employment Sites shown in Table 11.5, have public water and/or sewer service, and road infrastructure to serve existing and projected future needs, or are within planned water and sewer service areas (see Chapter 5, the Water Resources Element). Of the commercial areas listed in table 11.5, only Thayerville and Chestnut Ridge lack public water service. This Plan proposes extension of public water to the Thayerville area (see Chapter 4).

In some cases, road infrastructure may need to be upgraded to support proposed future economic activity. Chapters 4 and 6 describe the need to improve Bumble Bee Road to serve the White Face Farm site, while Section 4.10 describes the proposed road improvements for the McHenry and Thayerville commercial areas.

The Comprehensive Plan also supports the upgrade of US 219 North (from I-68 to the Pennsylvania state line). As described in Chapter 6 (the Transportation Element), the upgrade of US 219 North would be part of a broader effort to provide highway linkages in the Appalachian region. More specifically, this improvement will increase the value of the Chestnut Ridge area (at the intersection of I-68 and US 219 North) for economic activity. The existing Employment Center designation in the northwest quadrant of that interchange responds to this potential demand.

11.3.3 *Affordable Housing*

In addition to being a basic need for many residents, the availability of affordable housing is also an economic development issue in Garrett County (see Chapter 9, the Housing Element). The availability of adequate affordable housing can encourage existing businesses to expand, and can make the County an attractive location for new businesses and workers (see Chapter 11, Economic Development).

11.4 **Policies and Actions**

1. Continue to support implementation of the *Economic Development Strategic Plan* by designating new or expanded Employment Center and General Commercial land classifications to support business and technology parks, commercial areas, and other employment uses.
2. Continue to invest in new water and sewer infrastructure, and to reserve water and sewer capacity in existing infrastructure, new and expanded employment and commercial areas.

3. Ensure that road infrastructure is adequate to support employment and commercial activities in the County's business parks and major commercial centers. In particular assess the adequacy of Bumble Bee Road/Mosser Road to accommodate future traffic (see Chapter 6, Policy 4).
4. Conserve natural resource lands and maintain the strength of the agriculture and timber industries through expansion of the AR and RR land classifications, and through new clustering and site layout regulations in those areas.
5. Support efforts to increase the supply of affordable housing (see the policies in Chapter 9, the Housing Element).

12. Implementation

Introduction

The 2008 Comprehensive Plan Elements list numerous implementation actions necessary to transform the County's goals and visions into reality. This Implementation Element provides a framework for successful implementation. The table below summarizes the implementation actions from each Comprehensive Plan Element, lists the responsible County agency or agencies, and defines the timeframe in which the implementation action will be achieved.

The following abbreviations are used in the "Responsibility" column of this element.

BOE	Board of Education
CR	County Roads Department
CAC	Community Action Committee
DNR	Maryland Department of Natural Resources
DPU	County Department of Public Utilities
ED	Garrett County Economic Development
ES	Extension Service
FS	Department of Financial Services
GC	Garrett College
GS	General Services Department
HD	Health Department
NRCS	USDA Natural Resources Conservation Service
PLD	Planning and Land Development Office
PS	Department of Public Safety and Emergency Management
SCD	Garrett Soil Conservation District
SH	Sheriff's Department
SHA	Maryland State Highway Administration

The "Timeframe" column indicates how quickly each implementation policy or action will be addressed or started, but does not define the completion date for the policy or action. The following definitions are used in the "Timeframe" column in this element:

- 1 = Underway/ongoing
- 2 = Immediate: 0 to 2 years
- 3 = Medium Range: 2 to 5 years
- 4 = Long Range: Beyond 5 years

Table 12-1: Plan Implementation			
Implementation Policy/Action		Responsibility	Timeframe
<i>Land Use</i>			
1	Use the Land Use Plan Map as the basis for revisions to the Land Classification Map, which is the reference map for the County's Subdivision Ordinance.	PLD	2
2	Revise the text of the Subdivision Ordinance: <ul style="list-style-type: none"> • Incorporate the recommendations in this chapter with respect to clustering and site layout in subdivisions, especially in the AR and RR land use categories. • Require mandatory Sketch Plats for development in AR and RR areas. • Add a reference in the ordinance text to the required 500-foot buffer designated around state-owned lands in the RR category adjoining land designated R. • Clarify that development on public water and sewer on land designated TR is permitted at up to eight multi-family dwelling units per acre, and on land designated TC is permitted at up to nine multi-family dwelling units per acre (Ordinance Section 302). 	PLD	2
3	Use the Land Use Plan Map as the basis for revisions to the Deep Creek Watershed Zoning Ordinance.	PLD	2
4	Revise Priority Funding Area mapping to reflect town Future Growth Areas identified in the Future Land Use Plan.	PLD	2
5	Concentrate commercial development in centers rather than in "strip commercial" developments.	PLD	2
6	Consider direct County contributions for agricultural land preservation.	PLD	2
7	Consider the key recommendations for agricultural land preservation in the LPPRP: <ul style="list-style-type: none"> • Encourage formation of private, non-profit local land trusts to support current efforts to protect farmland • Encourage farmers who must sell their farms to sell to other farmers by working with local agricultural interests to establish a farm brokerage program that would match older farmers with younger ones and sellers with prospective farmer buyers. 	PLD, SCD, ES, NRCS	2
8	Resolve issues concerning development of old platted lots that were of legal sized when created but do not meet current health requirements for on	HD	2

Table 12-1: Plan Implementation			
Implementation Policy/Action		Responsibility	Timeframe
	site water and/or wastewater systems.		
<i>Deep Creek Lake Influence Area Master Plan</i>			
1	Use the Land Use Plan Map as the basis for revisions to the Deep Creek Watershed Zoning Ordinance and zoning map.	PLD	2
2	Amend the text of the Zoning Ordinance: <ul style="list-style-type: none"> • Remove the RD zoning district. • Replace the existing LR district with the LR1 and LR2 districts. • Create the AR and RR districts, with the same permitted land use types as LR, and clustering and site layout provisions that match the recommendations for AR and RR Land Classifications in Chapter 3 of this Plan. • Establish Scenic Protection Areas, with the provisions described in section 4.8.2: • Limit the enlargement or extension of existing nonconforming structures under Section 801 of the Zoning ordinance, as per Recommendation 4iv of the <i>Watershed Study</i>. • Add additional construction standards (such as building material, roof styles, or similar standards) in the Zoning Ordinance for commercial buildings, as per Recommendation 7 of the <i>Watershed Study</i>. 	PLD	2
3	Extend the McHenry growth area (PFA) and TR land classification to include the properties near the intersection of US 219 and MD 42 (as shown on Map 4.5), but do not extend zoning to these properties.	PLD	2
4	Construct the following roadway and pedestrian/bicycle improvements <ul style="list-style-type: none"> • New traffic signals on US 219 at Sang Run Road and Rock Lodge Road. • Improved wayfinding signage in McHenry, particularly to identify parking for tourist activities such as the Wisp Resort. • Transportation and circulation system improvements for McHenry as shown in Figure 4.2 and described in Section 4.10.1. • Transportation and circulation system improvements for Thayerville as shown in Figure 4.3 and described in Section 4.10.2. 	SHA, CR	3

Table 12-1: Plan Implementation

Implementation Policy/Action		Responsibility	Timeframe
5	Implement the following transportation-related strategies:		
	<ul style="list-style-type: none"> Amend the Subdivision Regulations to give the Department of Planning and Zoning clear authority (in consultation with the Roads Department) to require a traffic impact study prior to final plat approval. 	PLD	2
	<ul style="list-style-type: none"> Ensure that MD SHA has the opportunity to review and comment on traffic studies related to development near state roads. 	PLD	2
	<ul style="list-style-type: none"> Work with MD SHA to develop an access management plan for US 219 in the Influence Area, focusing specifically on the portion of the highway that passes through McHenry. 	PLD, SHA	3
	<ul style="list-style-type: none"> Develop a County-maintained access management strategy for Glendale Road, Deep Creek Drive, Mosser Road, and Sang Run Road. 	CR	3
<ul style="list-style-type: none"> Consider establishing transit service in the McHenry area for busy summer and winter seasons, incorporating or building on the existing Wisp shuttle. 	CAC	3	
6	Work with SHA to add the transportation improvements recommended in #4 above to the Highway Needs Inventory (HNI) and Consolidated Transportation Program (CTP).	PLD, CR	3
7	Conduct a study to determine the amount of revenue necessary to fund the transportation system improvements, including (but not limited to) the road, pedestrian, bicycle, transit, and other strategies described in this Master Plan. Obtain authority from the Maryland General Assembly to levy an excise tax, and establish such an excise tax (or an impact fee, if an excise tax is not desirable) to pay for these improvements. The final funding mechanism would be designed to balance the need for transportation improvements with economic development considerations.	PLD, FS	3
8	As part of the next Comprehensive Plan update (approximately 2014), evaluate the need to expand the Deep Creek Lake WWTP to its full 3.9 MGD capacity.	PLD	4

Table 12-1: Plan Implementation			
Implementation Policy/Action		Responsibility	Timeframe
9	Update the Water and Sewerage Master Plan as follows: <ul style="list-style-type: none"> Expand the McHenry water system as described in Section 4.7. Define a new Thayerville water service area. Consider extending the Thayerville water service area to include the commercial nodes on US 219 at Mayhew Inn Road and Sand Flat Road. 	DPU	1
10	Develop public access points at various locations around Deep Creek Lake, including, but not limited to those described in Section 4.9.2 and 4.10.	ED, DNR	3
11	Support relocation of the McHenry Fire Department to the area near the Public Safety Complex.	ED, PLD	3
12	Work with DNR to continue monitoring of water quality in Deep Creek Lake.	DNR, PLD	2
13	Adopt a more proactive stance toward management and enforcement: <ul style="list-style-type: none"> Hire a zoning inspector Increase state inspection and enforcement of stormwater management and sediment and erosion control standards (see Policy 6 in Chapter 7, the Sensitive Areas Element). Issue citations for illegal parking on public streets. 	PLD, SH	2
14	Support efforts to retain and attract waterfront businesses: <ul style="list-style-type: none"> Work “one on one” with individual waterfront businesses at risk of being lost. Explore with the local tax assessor the potential for changes in the way that property assessment values are prepared for waterfront businesses. 	ED, PLD	2
<i>Water Resources Element</i>			
1	Use data from the planned regional water resources study in future Comprehensive Plan updates to guide growth and development decisions.	PLD	4
2	Work with appropriate federal, state, and local authorities as necessary to identify additional sources of water necessary to serve projected demands. In particular, work with the Town of Frostburg to evaluate the possibility of drawing water from Piney Run Reservoir to serve the Finzel community.	DPU	3

Table 12-1: Plan Implementation

Implementation Policy/Action		Responsibility	Timeframe
3	Amend the Sensitive Areas Ordinance to limit development in—and establish buffers around—Source Water Protection Areas, as defined in the Source Water Protection Plan.	DPU, PLD	2
4	Review the County’s building and land development codes to ensure that water conserving fixtures and appliances are required for all new development and retrofits outside of public water systems.	PLD	2
5	Consider requiring all new development outside of existing or planned public sewer service areas to use septic denitrification systems.	HD	3
6	Explore incentives to encourage property owners to install water conserving fixtures and appliances; and to install septic denitrification units on existing septic systems.	DPU, HD	4
7	Continue to resolve I/I problems in the Friendsville and Trout Run sewer systems.	DPU	3
8	Consider upgrading the Trout Run WWTP to BNR (or ENR) technology.	DPU	4
9	Continue to work with MDE to determine whether the County can receive nutrient credits for providing sewer service to properties with septic systems (especially failing systems).	DPU	3
10	As part of the next Comprehensive Plan update, re-run the nonpoint source loading analysis, incorporating up-to-date land use and any changes to the state’s default model.	PLD	3
11	Consider adopting a nutrient trading program that conforms to MDE regulations and guidelines.	DPU, HD	3
12	Continue to support land preservation activities such as MALPF and Rural Legacy, and specifically encourage such activities (including the purchase of land by private conservation organizations) on land that drains to Tier II waters in the County, and in watersheds where impervious coverage approaches or exceeds 10 percent.	PLD, SCD	1
13	Consider stormwater management retrofits targeted to areas where runoff impacts sensitive environmental features (see policy 7 in Chapter 7, the Sensitive Areas Element).	PLD	3
14	Work with MDE to monitor natural gas development activities to ensure the safety of the ground and surface water supplies.	HD	2

Table 12-1: Plan Implementation			
Implementation Policy/Action		Responsibility	Timeframe
15	<p>Amend the Stormwater Management Ordinance, the Deep Creek Lake Watershed Zoning Ordinance, and the stormwater provisions of the Subdivision Ordinance as follows:</p> <ul style="list-style-type: none"> • Adopt the Maryland Stormwater Design Manual, as revised by MDE to reflect provisions of the Stormwater Management Act of 2007 (anticipated to be completed by 2008), as the County's governing stormwater regulations for new development. • Adopt future MDE guidelines and recommendations for using Environmentally Sensitive Design (ESD) in new development. 	PLD	2
16	<p>Monitor the activities of and opportunities presented by US EPA's Mississippi River Basin and Gulf of Mexico Hypoxia Task Force.</p>	PLD	2
<i>Transportation Element</i>			
1	<p>Amend the Subdivision Regulations to give the Department of Planning and Zoning:</p> <ul style="list-style-type: none"> • Clear authority (in consultation with the Roads Department) to require a traffic impact study prior to final plat approval (see also Policy 5 in Chapter 4). • Authority (in consultation with the Roads Department) to require access consolidation—in the form of frontage or service roads, shared driveways, shared parking lots, or other appropriate measures—on all County Roads. • Authority to require developers to provide pedestrian facilities as part of new development. 	PLD	2
2	<p>Coordinate with SHA to assess the feasibility of upgrading MD 495 to provide an alternative north-south route through the County, as described in Section 6.2.5. As a first step, include this project on the Highway Needs Inventory. Any improvements should be compatible with the Scenic Byway status of MD 495.</p>	PLD, ED	4
3	<p>Conduct a study to determine the amount of revenue necessary to fund the transportation system improvements, including (but not limited to) the road, pedestrian, bicycle, transit, and other strategies described in this Master Plan. Obtain authority from the Maryland General Assembly to levy an excise tax, and establish such an excise tax (or an impact fee, if an excise tax is not desirable) to pay for these improvements.</p>	PLD	4

Table 12-1: Plan Implementation

Implementation Policy/Action		Responsibility	Timeframe
4	Assess the adequacy of Bumble Bee Road/Mosser Road to accommodate traffic generated by the planned business park and housing development at White Face Farm.	ED, CR	2
8	Use AASHTO design guidelines for all new on-road and off-road trails.	CR	3
9	Ensure collaboration between the Roads Department, the Planning and Land Development Office (or the Department of Recreation and Parks, if created pursuant to the recommendations in this plan), SHA, and trail advocates including the Chamber of Commerce to address bicycling issues, such as route designations, assessing bicycling safety issues, and identifying needs for future improvements.	PLD	4
10	Identify pedestrian needs in areas where pedestrian activity is high or increasing, such as the County's designated villages, and around schools and other institutional uses.	PLD	4
11	Support increased GTS service, particularly to serve employment areas and the needs of elderly residents. Consider building on existing shuttle bus service in the Deep Creek Lake Influence Area.	CAC	2
12	Amend the Subdivision Ordinance to include the following provisions related to Scenic Byways: <ul style="list-style-type: none"> • Establish design criteria to protect the scenic qualities of Scenic Byways and adjacent land. • Require the County to review the impacts of a subdivision on scenic views, and define "scenic views" in the Subdivision Ordinance. • Require that new roads outside of Priority Funding Areas be "open section" designs. 	PLD	2
13	Update the Airport Master Plan as needed to assure eligibility for funding.	GS	4
14	Promote private air charter use and economic development associated with the Airport.	GS, ED	2
<i>Sensitive Areas</i>			
1	Continue to use the Sensitive Areas Ordinance and the Deep Creek Lake Watershed Zoning Ordinance to limit development on steep slopes, near rivers and streams, and near the habitat of rare, threatened, or endangered species.	PLD	1

Table 12-1: Plan Implementation

Implementation Policy/Action		Responsibility	Timeframe
2	<p>Amend the Sensitive Areas Ordinance</p> <ul style="list-style-type: none"> • Limit development in—and establish buffers around—Source Water Protection Areas (see Section 5.2.7 and Policy 3 in Chapter 5, the Water Resources Element). • Add a Wetlands section, stating that the County’s policy is to conserve contiguous wetlands, consistent with state regulations governing development in wetlands. Refer readers to the Maryland Non-Tidal Wetlands Act, and to the Subdivision Ordinance which govern development with the potential to impact wetlands. • Add a Floodplains section, which states that the County’s policy is to conserve contiguous floodplains and floodplain buffers, consistent with state and federal regulations governing development in floodplains. Refer readers to the County’s Floodplain Management Ordinance. 	PLD	2
3	Amend the Subdivision Ordinance to require that all major and minor subdivision proposals define the status of wetland delineation at both the preliminary and final plat stage.	PLD	2
4	Ensure that new clustering and site layout regulations for the AR and RR land classification areas channel development away from sensitive environmental areas, and conserve contiguous areas of wetlands, agricultural and forest land.	PLD	2
5	Continue to work with MALPF, the Maryland Department of Agriculture, DNR (particularly the Rural Legacy program), and other public and private preservation interests to achieve the County’s goal of preserving 20,000 acres of farmland by the year 2020.	PLD	1
6	<p>Amend the Stormwater Management Ordinance, the Deep Creek Lake Watershed Zoning Ordinance, and the stormwater provisions of the Subdivision Ordinance as follows:</p> <ul style="list-style-type: none"> • Adopt the Maryland Stormwater Design Manual, as revised by MDE to reflect provisions of the Stormwater Management Act of 2007 (anticipated to be completed by 2008), as the County’s governing stormwater regulations for new development. • Adopt future MDE guidelines and recommendations for using Environmentally Sensitive Design (ESD) in new development 	<p>PLD</p> <p>PLD</p>	<p>2</p> <p>2</p>

Table 12-1: Plan Implementation			
Implementation Policy/Action		Responsibility	Timeframe
7	Support increased state inspection and enforcement of sediment and erosion controls for new development and redevelopment.	PLD, SCD	2
8	Consider stormwater management retrofits targeted to areas where runoff impacts sensitive environmental features.	PLD	2
9	Continue to encourage innovative stormwater management practices to reduce runoff and increase groundwater recharge, particularly those that utilize ESD techniques.	PLD	2
10	Seek legislation for authority to establish minimum set-back requirements for wind turbines from property lines and from existing residential structures.	PLD	2
<i>Community Facilities</i>			
1	Work with Garrett County Public Schools and the Garrett County Board of Education to address on-going and future facility needs.	BOE, PLD	1
2	Work with Garrett College to address future land use needs for expansion based on future growth.	PLD, GC	2
3	Support efforts to recruit and retain volunteer fire and EMS staff, augmented by paid providers where appropriate.	PS	1
4	Support relocation of the McHenry fire/emergency services station to a location on US 219 north of McHenry.	PS	2
5	Implement the following three highest-priority mitigation projects in the Multi-Hazard Mitigation Plan: <ul style="list-style-type: none"> • Revise the Emergency Operations and Hazardous Materials Response Plan; • Expand the duties and involvement of the Local Emergency Planning Committee; • Expand training and exercise opportunities. 	PS	2
6	Identify an appropriate location in the Deep Creek Lake area for a Sheriff's Office satellite station, in order to meet the expected need for services in that area. Consider co-location with the relocated fire/EMS station in a public services center.	SH, PS	3
7	As part of the next Solid Waste Master Plan and Comprehensive Plan update (both approximately scheduled for 2014), evaluate the need for a new or expanded County landfill.	GS, PLD	4
8	Work with Garrett County Memorial Hospital to address future land needs for expansion purposes.	PLD	3
9	Support renovations and upgrades to library facilities at the Oakland, Friendsville and Kitzmiller branches.	PLD	3

Table 12-1: Plan Implementation			
Implementation Policy/Action		Responsibility	Timeframe
10	Support development of an Exhibit Center in the Deep Creek Lake Influence Area.	ED	1
<i>Housing</i>			
1	Expand opportunities for higher density development that will facilitate the provision of affordable housing.	PLD	2
2	Continue to support the CAC, the state Department of Housing and Community Development, USDA Rural Development, and Habitat for Humanity in their affordable housing development efforts.	PLD, ED	1
3	Consider means for businesses creating new jobs to be a supportive partner in contributing to the provision of the affordable housing needed for the employees of these jobs.	ED	3
4	Continue programs to rehabilitate existing substandard housing in the County. This action will increase the number of affordable housing units available to workforce families.	CAC	1
5	Consider tax or other incentives for developers that build affordable housing, including affordable units in the same subdivision as more expensive units.	FS, ED, PLD	2
<i>Mineral Resources</i>			
1	Support responsible mining of Garrett County's mineral resources.	ED	1
2	Support the reclamation activities of the Maryland Abandoned Mine Reclamation Program to bring environmentally problematic land back to a useable state.	PLD, SCD	1
3	Work with MDE, SHA, other state agencies, and energy companies to monitor natural gas development activities to ensure the safety of the ground and surface water supplies, to protect sensitive environmental areas, to address the socioeconomic impacts of natural gas drilling, and to ensure the safety and adequacy of roads to accommodate natural gas drilling activities.	HD, PLD	3
<i>Economic Development</i>			
1	Continue to support implementation of the <i>Economic Development Strategic Plan</i> by designating new or expanded Employment Center and General Commercial land classifications to support business and technology parks, commercial areas, and other employment uses.	PLD	1
2	Continue to invest in new water and sewer	DPU	1

Table 12-1: Plan Implementation

Implementation Policy/Action		Responsibility	Timeframe
	infrastructure, and to reserve water and sewer capacity in existing infrastructure, new and expanded employment and commercial areas.		
3	Ensure that road infrastructure is adequate to support employment and commercial activities in the County's business parks and major commercial centers. In particular assess the adequacy of Bumble Bee Road/Mosser Road to accommodate future traffic (see Chapter 6, Policy 4).	CR	1
4	Conserve natural resource lands and maintain the strength of the agriculture and timber industries through expansion of the AR and RR land classifications, and through new clustering and site layout regulations in those areas.	PLD	1
5	Support efforts to increase the supply of affordable housing (see the policies in Chapter 9, the Housing Element).	CAC	1