

MORGAN COUNTY COMPREHENSIVE PLAN 2017



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ACKNOWLEDGEMENTS

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INTRODUCTION

Purpose of the Comprehensive Plan

The general purpose of the Morgan County Comprehensive Plan is to guide the governing body to accomplish a coordinated and compatible development of land and improvements within its territorial jurisdiction, in accordance with present and future needs and resources.

A comprehensive plan is a process through which citizen participation and thorough analysis are used to develop a set of strategies that establish as clearly and practically as possible the best and most appropriate future development of the area under the jurisdiction of the planning commission. A comprehensive plan aids the planning commission in designing and recommending to the governing body ordinances that result in preserving and enhancing the unique quality of life and culture in that community and in adapting to future changes of use of an economic, physical, or social nature. A comprehensive plan guides the planning commission in the performance of its duties to help achieve sound planning.

A comprehensive plan must promote the health, safety, morals, order, convenience, prosperity, and general welfare of the inhabitants, as well as efficiency and economy in the process of development.

The purpose of the comprehensive plan is to:

- 1) Set goals and objectives for land development, uses and suitability for a governing body so a governing body can make informed decisions
- 2) Ensure that elements in the comprehensive plan are consistent
- 3) Coordinate all governing bodies, units of government and other planning commissions to ensure that all comprehensive plans and future development are compatible
- 4) Create conditions favorable to health, safety, mobility, transportation, prosperity, civic activities, recreational, educational, cultural opportunities and historic resources
- 5) Reduce the wastes of physical, financial, natural, or human resources which result from haphazard development, congestion, or scattering of population
- 6) Reduce the destruction or demolition of historic sites and other resources by reusing land and buildings and revitalizing areas
- 7) Promote a sense of community, character, and identity
- 8) Promote the efficient utilization of natural resources, rural land, agricultural land, and scenic areas

9) Focus development in existing developed areas and fill in vacant or underused land near existing developed areas to create well designed and coordinated communities

10) Promote cost-effective development of community facilities and services

A comprehensive plan may provide for innovative land use management techniques, including:

- 1) Density bonuses and/or density transfer
- 2) Clustering
- 3) Design guidelines, including planned unit developments
- 4) Conservation easements
- 5) Infill development
- 6) Consolidation of services
- 7) Any other innovative land use technique that will promote the governing body's development plans

When preparing or amending a comprehensive plan, a planning commission shall make comprehensive surveys and studies of the existing conditions and services and probable future changes of such conditions and services within the territory under its jurisdiction.

The comprehensive surveys and studies may cover such factors as population density, health, general welfare, historic sites, mobility, transportation, food supply, education, water and sanitation requirements, public services, accessibility for the disabled and future potential for residential, commercial, industrial, or public use.

The major objective of the planning process is providing information to and coordination among divergent elements in the municipality or county. The elements in the comprehensive plan shall be consistent and governing bodies, units of government and planning commissions must work together to ensure that comprehensive plans and future developments are compatible.

A planning commission shall prepare a comprehensive plan for the development of land within its jurisdiction. A planning commission shall then recommend the comprehensive plan to the appropriate governing body for adoption.

A county, multi-county, regional, or joint comprehensive plan may include the planning of towns, villages or municipalities to the extent to which, in the planning commission's judgment, they are related to the planning of the unincorporated territory of the county as a whole: Provided that the comprehensive plan shall not be considered a comprehensive plan for any town, village, or municipality without the consent of the planning commission and/or the governing body of the town, village, or municipality.

A comprehensive plan should be coordinated with the plans of the department of transportation in so far as it relates to highways, thoroughfares, trails and pedestrian ways under the jurisdiction of the planning commission.

A county planning commission may prepare a comprehensive plan for either the entire county or a part of the county.

A multi-county, regional, or joint planning commission may prepare a comprehensive plan for land within its jurisdiction.

A comprehensive plan, by State law, requires that the following minimum components be included in the Plan:

- Delineation of Land Use Designations
- Development of Housing Projections and Programs
- Outline of Transportation Networks and Needs
- Measurement of Infrastructure Capabilities
- Extension of Public Services
- Protection of Rural Areas
- Identification of Recreation & Tourism Goals
- Establishment of Economic Development Guidelines
- Promotion of Consistent Community Design
- Incentives for Preferred Development Areas
- Renewal and/or Redevelopment Initiatives
- Creation of Short and Long-term Financing Goals
- Historic Preservation Areas

The Comprehensive Plan may have, but is not limited to the following components:

- History of the area
- Environmental protection programs
- Promotion of tourism
- Conservation programs
- Public safety programs
- Natural resource areas

Prior to adoption of the Comprehensive Plan, public hearings must be held to include public participation and input from affected governing bodies and agencies. This process includes submission of the draft for review by the public for comment to the planning commission prior to making a recommendation to the County Commissioners. Subsequent to this process the Commissioners must also hold public hearings for additional public input before final adoption of the plan by ordinance.

Once the plan or any amendment thereto is adopted by the Commissioners, a certified copy shall be held on record in the office of the county clerk. However, if the plan is rejected it must be sent back to the planning commission with the reasons for rejection, for further review and recommendation as outlined in State law.

After the adoption of the comprehensive plan by the governing body, the planning commission shall follow the comprehensive plan, and review the plan and make updates at least every ten years. This update, whether it is in part or comprehensive shall follow the process as outlined in State law.

Role of the Comprehensive Plan

In order to carry out the purpose of the Comprehensive Plan as outlined in West Virginia State Code 8A, there are numerous supporting documents that serve to guide and direct the general components that make up the Plan.

The role of the Plan includes, but is not limited to the following characteristics:

- Focus on current trends and issues to develop appropriate solutions
- Review current growth patterns to develop strategies for a sustainable future
- Direct future change through a vision of community potential
- Establish consistency between land use policy and regulatory measures
- Assist County officials in the decision making process

The Comprehensive Plan is a broad policy document that provides guidance for future decision making. The Plan should provide consistency with other plans that have been developed in the community. Some of those plans considered for this update include:

- Morgan County Schools- Comprehensive Educational Facilities Plan
- WV Department of Transportation- 6 Year Highway Improvement Program
- Morgan County Solid Waste Authority- Litter & Solid Waste Control Plan
- Morgan County Commercial Solid Waste Facility Siting Plan
- Morgan County Water Resource Study
- West Virginia 9 Corridor Selection Report
- US Rt. 522 Improvements Report
- North South Appalachia Corridor Feasibility Study
- Berkeley County Comprehensive Plan

Other reports of civic organizations considered in development of this Plan include:

- Homegrown Vision and Recommendations Report
- Morgan County Trails Report
- Cultural Arts and Recreation Plan
- Travel Berkeley Springs Report
- North South Appalachia Feasibility Study
- Sleepy Creek Watershed Association Report

In addition to the above plans and reports, many other reports, recommendations, and responses from key agencies and organizations were used to develop the Plan. Data was also collected from

a variety of sources and several public meetings were held to provide additional public input in the process. This included a public survey that was conducted to identify important community issues outlined in the Plan.

The Comprehensive Plan is an ever-evolving document that should be reviewed and modified regularly to ensure that it provides adequate guidance regarding future growth in the County. This regular review will also ensure that as a guiding document it will remain viable in providing accurate supporting information and strategies for implementation of the above plans. Thus it is important for this Plan to include a brief outline of the strategies within other plans to serve as a record of major activities undertaken and accomplished. This review will provide regular opportunity to identify new issues that may impact the County, and the appropriate course of action to address them in the future.

Morgan County Description

Morgan County is the smallest of the three Eastern Panhandle counties of West Virginia. It is located less than 100 miles from the Baltimore-Washington metropolitan area, which has stretched further west over the past several decades placing increased growth pressures on many once secluded rural counties. It is surrounded to the north by Washington and Allegany counties in Maryland, to the south by Frederick County, Virginia and by fellow West Virginia counties of Berkeley and Hampshire on the east and west respectively.

The County has an area of about 230 square miles or roughly 148,000 acres, which is divided into 6 tax districts that include; Allen, Bath, Cacapon, Rock Gap, Sleepy Creek, and Timber Ridge. It also includes the Town of Bath located along US Rt. 522 surrounded by a larger area better known as Berkeley Springs, and the Town of Paw Paw located in the southwest area below Cacapon along WV Rt. 9. For planning purposes the County is divided into 3 planning regions that encompass the 6 districts. The Cacapon and Sleepy Creek districts comprise their own planning areas while the remaining districts combine to form the Central Valley region.

Although the County appears to be flush with natural waterways, rivers and streams make up less than 1% of the total County land mass. These water sources include Cacapon River, Cherry Run, Sir Johns Run, Warm Springs Run, and Sleepy Creek. All systems flow northeast into the Potomac River, which is primarily located in Maryland.

The County is flanked on both the west and east side by mountainous ridges that run north south. The higher mountain ridge of Cacapon separates Morgan and Hampshire counties on the west, while the lower Sleepy Creek ridge forms the boundary between Morgan and Berkeley counties to the east.

History of Morgan County

Morgan County was created by an act of the Virginia General Assembly in 1820. It was formed from parts of both Berkeley and Hampshire counties, and named in honor of the revolutionary

war general, Daniel Morgan. The first settlers to this area are believed to be squatters who arrived in the 1730s, with the first known cabin being built in 1745. Due to the areas popular warm springs, Lord Thomas Fairfax had the area surveyed in 1748. George Washington, at the age of 16, was part of that survey party, and returned many times with his half-brother, Laurence, believing the rumored medicinal benefits of the warm springs would aid in improving his brothers health.

Town of Bath

As news of the warm springs grew, the area of Berkeley Springs became a popular destination with vacation homes and private baths for the social elite. In 1776, the Virginia Assembly formally recognized the area as the Town of Bath, in honor of England's spa city called Bath. The main north-south street was named Washington and east-west street was named Fairfax. Seven acres were set aside for "suffering humanity", which later became West Virginia's (the nations) first state park. Bath later became known as Berkeley Springs, primarily because the Town's post office took that name to avoid confusion with another post office in southern Virginia, which was also called Bath.

Town of Paw Paw

The Town of Paw Paw was created in 1891, named after the paw paw, which is a wild fruit that once grew in abundance in this area of the County. It is best known for the nearby Paw Paw tunnel. It is also stated that George Washington passed through the area on his many trips west, using the Winchester-Cumberland road.

Historic Population

In its first census year of 1820 the County recorded a population of just 2,500, which was mostly located within the Berkeley Springs area or spread in remote southern portions of the County.

By 1900 the population had more than doubled to 7,294, with development continuing to occur around the Berkeley Springs area. Also, at this time population growth was increasing around the newly formed Town of Paw Paw in the southwestern part of the County, as well as along the major County thoroughfares.

Due to limited growth of its public infrastructure and the scenic charm of its rural seclusion, the County experienced increasing growth along its rivers and streams into the mid 1900s, with a population of 8,276 by 1950. The County again nearly doubled in size with an estimated 2000 population of 14,943, much of that growth occurring in the last two decades.

Table I-1 Historic Population Growth

<u>Year</u>	<u>Population</u>	<u>% Increase</u>
1820	2,500	-
1830	2,694	8%
1840	4,253	58%
1850	3,557	-16%
1860	3,372	-5%
1870	4,315	28%
1880	5,777	34%
1890	6,744	17%
1900	7,294	8%
1910	7,848	8%
1920	8,357	6%
1930	8,406	1%
1940	8,743	5%
1950	8,276	-5%
1960	8,376	1%
1970	8,547	2%
1980	10,696	25%
1990	12,128	13%
2000	14,943	23%

Source: US Census Reports

Comprehensive Policies

In order to maintain a consistent direction in accomplishing the goals of the Comprehensive Plan, as well as consider appropriate updates to such goals over time, each chapter must provide policy that directs the governing bodies in implementing initiatives to achieve the desired outcome. These policies can be found in each chapter, and are requisite to the following planning principles:

- Land Use should provide a flexible approach toward guiding the overall development of the County during the Plan period. As the principles by which this is accomplished over time continue to evolve, the objectives must be fluid in allowing conceptual guidance for the County to implement the Plan.
- Population and Housing will continue to be driven primarily by the role Morgan County plays within the region. As population increases and housing needs change, the demographic make up will continue to be affected. These indirect effects will require continual analysis by the County on the growing population and increased residential areas.

- Transportation includes coverage of all modes of pedestrian and vehicular movement. Although the County includes a relatively small population, its transportation network is heavily affected by its location within the region as well as its unique tourism industry. During the Plan period the transportation objectives will serve to recognize the volume of pedestrian and vehicular activity, and provide direction for how the County will address the coexistence of the effects from such activity with the added increase in residential and commercial development.
- Public infrastructure, much like public services, serves as the fabric by which growth will occur during the Plan period. It is important to ensure that adequate infrastructure is in place, especially in those areas designated for growth to occur. However, unlike many public services, infrastructure needs are regulated by higher governmental policies and in some cases owned and operated by private entities. As regulations move toward greater governmental efficiency and accountability within these facilities, it is important that the County actively participate in this process.
- The Public Services chapter is best represented by the accuracy and depth of historical data provided. In using this data, as past experience for how efficiently County services were able to serve existing population and business, proper planning based on future projections may be determined. It is important therefore to ensure that proper increases in public services are a reflection of those objectives outlined by the various public service agencies. Many of these entities have developed internal plans that serve to address these needs outlined in objectives that are included in this Plan.
- The natural environment and the physical factors affecting it are important to the local quality of life and the local economy. If new development is most efficiently guided toward existing population centers which provide basic public service and infrastructure, development can occur in the most cost-effective way, while preserving the rural open space, and sensitive areas. Unplanned growth, loss of farmland and open space, and subdivision of rural land, are among the top concerns for Morgan County residents. Since preventive measures to protect the environment are preferable to corrective measures, this Plan should accentuate goals and objectives which will prevent scattered sprawl in the rural areas, loss of open space, and degradation of the environment.
- Parks and recreation activities are an integral part of the overall tourism attractiveness of Morgan County. With a ratio of recreational space well above national standards, and being located in close proximity to urban areas where this positive ratio does not exist, Morgan County should continue to diversify and promote its parks, recreation and tourism related amenities to the local and regional market.
- To attract new industry, priority should be given to promoting the sale and lease of existing available buildings and established business parks near locations that provide adequate existing water and sewer resources as well as necessary public services. Focus should include the long-range diversification of employment opportunities, bridging a strong local economic market with global products and ensuring that production of such goods and services support the quality of life of local residents.

- The preservation of existing communities and other significant community features should be an ongoing process that evolves and changes with the changing of the community outlook. These initiatives are necessary to preserve the historic significance and cultural heritage of the community in order to promote the long-term asset and identity that such features provide. As the community grows to appreciate the importance that this identity offers to the overall design of neighborhoods, recreational amenities, and cultural activities, it may provide a natural pace at which each area wishes to proceed in implementing goals that support this approach.
- As Morgan County continues to grow, it is important to direct growth in a manner that strives to make the most efficient use of public services and infrastructure. Although market demand and availability of land for development will continue to be primary factors driving growth, it is important that the effects of this direction are monitored at all governmental levels to ensure that there is consistency between planning efforts and development pressure.
- Communities may often overlook the value of preservation and improvement of their existing neighborhoods. The impact of this value is difficult to measure, especially in the short term, as these improvements can affect the appeal of a neighborhood, the opportunity to create jobs, or the recognition of cultural heritage. All of these reasons are for the public good, and thus require public participation in the process to ensure there is a collective approach to sustain these efforts.
- It is important for planning purposes to understand the budgetary process in order to most efficiently address the priorities of the legislative body in ensuring that adequate services are provided as growth continues to occur. Through review of the general revenues and expenses experienced by the various local government entities, agencies and organizations, the County is provided the opportunity to address such priorities in a proactive manner, placing appropriate funding mechanisms in areas where services are projected to be needed.
- Historic preservation is an effort that is broadly defined and generally supported by an overwhelming majority of the local population. This is in part because of the value that preservation serves in promoting the cultural heritage of a community. Preservation efforts should serve to enhance the quality of life through the conservation, promotion and interpretation of cultural and historic resources.

Goals and Objectives

For the Comprehensive Plan to function in a successful manner, there must be established goals and objectives in order to achieve the desired outcome. These goals are structured around basic planning principles and incorporated into each chapter to ensure that policies are driven by the approach as outlined in this Plan. Major factors driving the goals and objectives within each chapter are centered on the following primary trends:

Land Use goals focus primarily on new development, including

- Location and density of new development
- Location of new commercial and industrial development
- Location of new community facilities and services

Population demographics focus on impacts to housing demand, including

- Significant population growth and housing starts since 2000
- Aging population with nearly 45% of residents over age 44
- Seasonal housing makes up more than 15% of total housing stock

Transportation network limitations creating inadequate levels of service, including

- Traffic volume and road alignment on US Rt. 522 and WV 9
- Lack of public transportation component for population migration
- Connectivity of alternative pedestrian system for leisure and destination travel

Infrastructure and utility capacities focus on impacts to utility resources, including

- Ground and surface water resource supply capacities
- Location and proliferation of septic fields and extension of public sewer
- Efforts to reduce solid waste through expansion of recycling programs

Public services expanding to provide for a growing population, including

- Placement and staffing of necessary services such as schools and public safety
- Support for cultural amenities, libraries and youth and elderly programs
- Efficiency of general government functions at both a town and County level

Rural land identification and preservation to protect sensitive areas, including

- Location of sensitive area features not conducive to additional development
- Location of rural land types that support productive agricultural uses
- Protection of waterways for recharge and recreational purposes

Recreation and tourism focus on increased local and visitor activity, including

- Evaluation of recreational activities distributed among population centers
- Support for civic organizations and commercially driven initiatives
- Cross over of tourism activities to maximize resident and visitor experience

Economic development efforts focus on sustained employment growth, including

- Promotion of available industrial parks and underutilized properties
- Support for tourism and recreational businesses
- Providing necessary commercial services to boost local spending

Community design being consistent with existing characteristics, including

- Compatibility of new development with existing neighborhoods
- Aesthetic appeal of commercial and industrial centers
- Recognizing the social importance of cultural amenities

Preferred development areas locating where services are readily available, including

- Coordination of development efforts around existing towns and communities
- Promotion of mixed uses and creative designs for new developments
- Limiting development in environmentally sensitive areas

Redevelopment and revitalization focused on quality of life issues, including

- Efficiency of location that links existing resources with community needs
- Sustaining long-term viability of important urban centers
- Utilizing creative strategies to ensure proper maintenance of properties

Finance plans should address the short-and long-term budgetary needs, including

- Use of funding plans that address projected capital expenditures
- Provision of funding mechanisms to provide adequate services to new growth
- Improved local economy to support sustainable community affordability

Historic preservation identifies, protects and preserves significant features, including

- Inclusion of historic features in heritage tours
- Support for programs that provide incentives for preservation efforts
- Placement of historic sites and structures on the National Register

Implementing the Comprehensive Plan

The ability to implement the Plan will depend largely on the County to follow through with the policies and goals of the Plan. The County cannot accomplish this alone and will require partnerships with the public and private entities to meet the objectives of the Plan. To achieve these partnerships the County must provide education and outreach to property owners, the general public, and development community to “buy into” the good planning principles of the Plan. Some of this outreach should include:

- Workshops on timely issues and topics
- Involving the public as part of coalition building
- Publicizing current activities and actions
- Ensuring adequate staff to handle planning related duties
- Fostering partnerships between the Planning Commission and other organizations

Timing of the various planning components attempting to be addressed through this outreach effort will be subject primarily to policy and funding. The Plan includes both a practical approach toward developing funding strategies to address the initiatives of this and other plans, as well as recognizing the cautious approach that often precedes such direction with changes in

policy. Understanding the role that each of these factors is bound by, the Plan does provide a 20 year window with the opportunity for update as goals and objectives are accomplished.

As growth and development activity continues to increase over the next 20 years, the County should be prepared to use this Comprehensive Plan and subsequent plans to appropriately guide it in directions that are most beneficial to the long-term goals of the community. The Plan includes numerous tools and strategies to accomplish this task and develop the County's ability to service and absorb the projected level of growth.

As outlined throughout the Plan, these short and long-term goals will be dependent upon numerous factors for achievement and may not occur in any specific order, but are projected to be resolved within the 10-year Plan period.

The short-term goals are those items identified primarily as recommendations for issues that already have an established direction and can be implemented through general planning policy. There are also goals outlined in various chapters that are already tied to specific activities and timeframes within other planning documents such as the Morgan County Board of Education Comprehensive Educational Facilities Plan and the Morgan County Solid Waste Management Plan, which this Plan accepts and incorporates through reference.

Long-term goals are typically made up of issues that will require further governmental action or do not process adequate clear direction through public support at this time to be implemented. Goals requiring governmental decisions include issues such as creating a Capital Improvement Program to address the growing needs of services and facilities, which will ultimately rest with the will and decision of the County Commission. Long-term goals that will require further consideration through public deliberation in establishing a clear direction prior to moving forward are more broad reaching issues such as implementation of land-use zoning, creation of impact fees and protection of resources.

Implementation of the Plan as a whole is necessary to accommodate future growth where it is designated and preserve those areas where it should be limited. It is important for the County to guide all parties identified in this Plan to work together with the tools and strategies that these partners will need to organize a collective approach toward the success of plan implementation.

Funding the Comprehensive Plan

Although the Comprehensive Plan update and adoption process is required by West Virginia State law, it is funded primarily by the Morgan County Commission. However, given the cost for this task, due to the time and technical data associated with development of Plan, it is also funded in part by the in kind contribution of various organizations and agencies associated with providing input.

Funding for the update of this Comprehensive Plan was also accomplished through a monetary contribution from the National Fish and Wildlife Foundation.

CHAPTER 1 - LAND USE

Introduction

In order to determine how the County should grow and most benefit its citizens, it is important first to evaluate what factors have driven County growth to its current status. The Land Use Plan may then utilize these factors, including balancing the protection of natural and cultural resources with the extension of necessary public services to develop the most appropriate growth policies.

Although the County planning process does not currently provide for established zoning districts, mapping of existing land uses provides an outline of the natural progression of growth that has occurred. From these defined growth areas the Plan should provide direction on how best to manage and direct future growth patterns that will affect existing land use. This direction will then aid in the promotion of the designation of projected growth areas to serve an increasing population and economy, as well as define limitations that may affect the pace at which future growth occurs.

Existing Land Use

Residential land use comprises approximately 11,000 acres of the total area within Morgan County, with just over 6,500 acres estimated as developed. This is a significant increase from less than 4,700 acres in 1980. However, average lot size for this same period decreased from roughly one-acre per home in 1980 to just over 0.75 acres in 2010. This land use designation is made up primarily of three types of residential development. These areas include urban growth served by public water and sewer, newer suburban subdivisions, and the less defined rural pockets of residential dwellings. These types overlap other developed land use designations such as municipal as well as undeveloped land use designations such as woodlands and agricultural.

Commercial land use comprises 1,300 acres of the total area within the County, for those areas specifically outside of the incorporated towns and excluding industrial business parks. This land use designation is made up primarily of retail and service businesses that are located in and around residential development. Development of property for commercial use is also affected by the location of necessary public services as well as the adequacy of public infrastructure such as roads, water, and sewer.

Industrial land use comprises approximately 3,000 acres of the total area within the county, most of which is owned by the US Silica Company. This area includes property that is part of undeveloped industrial property holdings, currently utilized for light and heavy industrial and manufacturing industries and underutilized developed land which may no longer serve its original purpose or be in full operation. Prior to 1985, most of the land included more than 7,000 acres of undeveloped property holdings under two companies, while the remainder was spread among nine smaller sites around the Berkeley Springs and Paw Paw areas. However, between 1985 and 2010, the major landholders either sold off or changed their prospective use of the

properties while most of the smaller sites have been developed or abandoned for industrial use. In order to designate and promote appropriate future industrial and manufacturing uses for these properties, it is important to understand the change in industries that provide the largest employment base for the local county workforce.

Agricultural land use comprises 18,000 acres of the total area within the County. This is a decrease from more than 23,000 acres in 2007 and 26,000 in 1980 and represents approximately 12.5% of the total county land area. The number of farms within the County has decreased from 212 to 196, and the average acreage per farm has decreased from 106 to 94 acres from the 2007 Plan.

Recreational land use comprises 11,500 acres of the total area within the County. Not included in this acreage is land designated as educational; however, it is reflected in Chapter 7 as part of the overall open space used by the public. Recreational land referred to in this chapter is owned and maintained primarily by the various governing entities for both active and passive use.

Educational land use, which totals 150 acres of the county land, comprises a small percentage of the total area within the county. This is primarily due to both a small and widely spread population that has not experienced a level of growth requiring construction of significant additional educational facilities and their accompanying school athletic field needs. However, given recent growth trends, including pace and location of new development, coupled with the fact that many existing schools are located on property with limited room for expansion and provision of adequate field space, it will be important for the school system to use the projections within the Comprehensive Plan to prepare to address future school needs. This is evident in the fact that over the last decade several older schools on smaller properties have been replaced by newer schools on larger campus settings, two of which make up two-thirds of the total acreage. Since 2007, there has been no change.

Municipal land use comprises 704 acres of the total land within the county. This land exists within the two incorporated towns including nearly 400 acres in the Town of Bath and the remainder in the Town of Paw Paw. Due to the varying mixture of uses, and the continual evolution of these primarily built-up areas, it is difficult to classify any large single area within either Town under one particular land use designation. Therefore it is understood for purposes of this chapter that areas within each town contribute in some part to all of the land uses listed.

Public land use is defined in this chapter as land other than schools and parks owned by government for the provision of public utilities and services such as water and sewer, police, fire, libraries and transportation. These uses comprise a small amount of the overall county acreage and are included in various designations as outlined in this chapter. More important, as reflected in Chapters 3, 4 and 5 of this Plan, is the current location of these services as it relates to their need and ability to expand in order to address future growth.

Woodlands comprise 120,000 acres of the total area within the county. This land use makes up a large part of the county, covering vast areas across many types of land uses including more than 11,000 acres in recreational, 12,000 in agricultural and some smaller amounts in other classifications. Thus, the net acreage thus represents roughly 80% of the total county land area.

This acreage has remained relatively constant over time due in large part to some areas previously in active agricultural production giving way to passive woodland, while in other areas previously wooded, new development has occurred. Although it is estimated that clear-cutting for development accounts for only 130 acres of the total 1,130 acres cleared per year, consideration of preservation of these natural areas may be included in future planning.

Historic and conservation land uses act more as an overlay of those areas previously outlined. The historic areas may include both natural and built features within the County that should be identified to protect their individual importance to the character of the community in which they are located. Conservation areas include both public and private properties. These areas may be protected through more stringent regulations that preserve the environmental integrity and sensitive elements that extensive growth would impair.

In addition to the various land use categories is the acreage for roads and water. Water coverage makes up less than 1% of the county's total landmass, which equates to just over 1,000 acres. This has remained relatively constant over time as development and environmental changes have not had significant effects on changing the county's waterways.

As residential development has increased in size since the 2007 Plan, local road systems have been added to serve new homes and accompanying commercial centers. Residential development has slowed considerably since the 2007 Plan due to the economic climate.

Based on US Census data the total county land mass consists of 229.67 square miles. Converted to acres, the total county land mass is 146,988.8 acres. Subtracting out the total estimated acreage covered by water and roads, the total net land use acreage is approximately 142,970 acres.

In developing Table 1-1, all acreage for those types of land uses clearly documented were established first. From this calculation, acreage for those land uses not documented, specifically residential and commercial, were estimated from the remainder.

Based on review of County statistics, it was estimated that 10% of the remaining acreage could be classified as commercial and 90% residential with 80% and 61% developed respectively. Several notable changes from the 2007 Plan include:

- Increase in total estimated county acreage from 142,970 to 146,605
- Increase in total residential acreage
- Accounting for undeveloped acreage in the residential planning pipeline
- Reduction in total industrial acreage due to changes in designation of land holdings
- Reduction in recreational land due to removal of large private recreational property
- Increase in municipal acreage from the 2007 plan which listed an "urban" acreage of 704

Land Use Zoning Regulations

Under West Virginia State Code, Article 8A-7-1 provides counties the ability to enact zoning ordinances. Based on this provision, there have been considerations in the past of enactment, the most recent of occurred in 2010 with the preparation of a zoning ordinance by the Morgan County Planning Commission. This zoning ordinance was placed on the November 2, 2010 general election ballot and was defeated by a 75%-25% margin.

The State Code specifically outlines the process by which a County must proceed with enactment of a zoning ordinance including:

- Determining the area in which the ordinance will apply
- Consideration of the contents of the ordinance and its application
- Certification of zoning district boundaries and maps
- Completing a study and providing a report of existing and proposed land uses
- Providing public review and input through hearings prior to enactment

Although the land use map in this chapter does not serve as part of any process to establish zoning, it does provide the basic outline of many of the existing land use categories that could be used in development of zoning designations. This map merely provides all property within the county with a land use designation that reflects the current or proposed use of that property in relation to the larger whole of the surrounding area. Therefore, in certain instances it may not reflect the use of each property specifically, but rather should be used as a guide for uses in general within the defined area.

Although the county has not chosen to enact zoning through its process of consideration, the Town of Paw Paw does have zoning ordinances which apply to those areas located within the corporate limits of the Town, and to all properties that would be annexed.

Population Trends

For purposes of development analysis and growth projections, this chapter is divided into three planning areas made up of 6 districts. These areas include: the small northeastern tip of the county known as the Sleepy Creek region, the Central Valley region, made up of four districts that encompass the largest and most heavily populated area, and the southwestern mountain area known as the Cacapon region, which includes the Town of Paw Paw as well as a large amount of publicly owned lands. These planning regions are further referenced throughout the Comprehensive Plan.

Morgan County is the western most of three counties that make up the Eastern Panhandle of West Virginia. These counties, unlike much of the rest of the State, have experienced significant increases in growth over the past 50 years, due in large part to the automobile-driven development pressures from the growing metropolitan areas of Baltimore and Washington to the east. It has also experienced recent pressures from the spreading Winchester area in Virginia to the south.

Historic growth shows that the county experienced a 25% increase in residential land use growth between 1970 and 1980. Prior to this time, growth was either negligible or in some areas

declining. This increase in growth, however, did not result in a significant increase in population since the average household size continued to decline from 3.1 persons per household in 1970 to 2.8 in 1980. Further, an increasing percentage of this residential growth was due to new construction of scattered minor rural subdivisions and single-lot recreational homes. By 1980 the decrease in average household size and increase in rural lot development produced roughly an average population of 46 persons in 16 households per square mile.

Between 1980 and 1990 the growth trend declined slightly, producing roughly 57 additional households or 143 persons each year as compared with nearly 74 new households and 215 persons per year in the previous decade. This decline included a further reduction in household size to just over 2.5 persons on average. Growth patterns during this period were focused on new development being located in the Sleepy Creek and upper Central Valley regions.

In spite of the further decline of household size to 2.43 persons per household, the growth trend of the previous decade nearly doubled between 1990 and 2000, adding more than 117 new households and 280 persons per year, which accounted for an increase in population from just over 12,000 in 1990 to nearly 15,000 in 2000. One important trend bolstering new households during this period, which is further outlined in the Population and Housing Chapter, is the reduction of vacant rental units from nearly 13% to 7.6% in this period. As a result of the significant increase in growth from 1980 to 2000 the average population and households increased to roughly 65 persons in 27 households per square mile, which accounted for nearly a 71% population and 60% housing increase over the 1980 figure.

The most significant increase in growth has occurred over the 5 year period between 2001 and 2005. In 2002 Morgan County experienced its first year of issuing more than 100 permits for new homes. In 2005 this number approached 300. Building activity slowed significantly after the 2008 economic recession. Only within the past two years has activity been on the rise, particularly commercial activity along Rt. 522.

Table 1-1 Population Trends

Trend	1960-1970	1970-1980	1980-1990	1990-2000	2000-2010
Household Size	3.1	2.8	2.5	2.43	2.39
Units per Year	7	74	57	117	150
Annual Pop. Increase	20	215	143	280	253
Housing/Square Mile	14	20	23	30	32
Persons/Square Mile	37	46	52	65	77

Source: US Census Reports

At the current pace it is projected that the 2030 population could reach 23,625 under the medium growth scenario, which would mean an increase of more than 2,750 new housing units equating in an average yearly population increase of 300. While still remaining quite rural in its overall appearance, this growth will result in increased population and housing densities, especially in the urban areas within the County.

Table 1-2 Historic Population

Location	1970	1980	1990	2000	2005	2010
Sleepy Creek	640	967	N/A	N/A	N/A	N/A
Central Valley	6,063	7,673	N/A	N/A	N/A	N/A
Cacapon	1,844	2,071	N/A	N/A	N/A	N/A
Town of Bath	944	789	735	663	764	624
Town of Paw Paw	706	644	538	524	N/A	508
Morgan County	8,547	10,771	12,128	14,943	17,232	17,541

Source: Morgan County Comprehensive Plan 2007, US Census Reports 2010

Building Intensity

From the growth trends described above, the County has experienced three distinct types of residential development. These include lots served by well and septic, private community systems for water and sewer, and public utilities. Each type of development has a different impact on the ability to adequately provide various public services, which must be taken into account in determining direction for future growth. This is important in development of a land use map because the provision of water and sewer services in particular plays a large role in estimating the density and pace at which development may occur.

Major Subdivision Activity

As outlined in Table 1-3, there are several changes taking place in the development pipeline, which must be considered to understand better how increased pressures may affect growth. In using the sketch plan to final plat permit application step as a timeline, one noticeable trend is the increase in total number of lots being submitted for development approval as part of a single subdivision. These larger developments also include an increased average density per acre, which means that under State regulations many of these larger, denser developments must be supported by a public or community water and/or sewer system. It should also be noted that many of the smaller developments that have reached final plat approval, and therefore presumably older in the pipeline, have been submitted in sections, which typically denotes that the development is part of a larger whole being constructed by a smaller developer over a longer period of time.

Table 1-3 Major Subdivision Activity

Subdivision	Approval	Location	Units	Acres	Avg. Lot Size	Year Start
Parkside Sect. III	Final	Rock Gap	10	31.38	3.1	2014
Kesecker Knoll III	Final	Allen	11	31.39	2.85	2013

Kesecker Knoll II	Final	Allen	7	16.25	2.32	2010
Sleepy Crk Forest II	Preliminary	Rock Gap	13	39.2	3.00	Expired
Shadow Valley Farms	Preliminary	Allen	65	130.0	2.0	Expired
Windfall Acres	Phased	Sleepy Creek	38	116	2.0	N/A
Creeside Village	Phased	Timber Ridge	418	112.11	.46	Expired
Kesecker Knoll 4-6	Phased	Allen	53	147	2.0	N/A
Michael Farm	Phased	Allen	40	121.41	3.0	Expired
Totals			655	744.74	2.3	acres

Source: Morgan County Government

Minor Subdivision Activity

Although major subdivision activity is increasing, it appears that much of the current and past development continues to occur on individual building lots within subdivisions of less than five total lots, which are commonly referred to as exemptions that often include several lots and a remainder. In order to understand trends as they relate to this type of growth and the effect they will have on future development patterns in the county, it is important to utilize recent data due to the fact that, unlike large subdivisions which may be affected by government policy, environmental constraints, or significant changes in land value, minor lot exemptions are not typically limited by such constraints, but collectively impact services, infrastructure, and available resources in a similar manner.

Table 1-4 Minor Lot Exemptions (Individual buildings lots of less than five total lots)

District	2010	2011	2012	2013	2014	2015	Total	Annual Average
Sleepy Creek	6	4	0	2	5	1	18	3
Allen	11	1	1	8	7	1	29	5
Bath	4	2	7	5	1	6	25	4
Rock Gap	6	4	6	2	3	6	27	5
Timber Ridge	7	3	4	17	5	2	38	6
Central Valley Total	28	10	18	32	16	15	119	20
Cacapon	11	3	2	10	1	0	27	5
Total	45	17	20	44	22	16	164	48

Source: Morgan County Government

Development Activity

It is apparent from the tables above that the concentration of newly approved growth is and will continue to occur in the southern area of the Central Valley Planning Region, especially in the Timber Ridge and Rock Gap districts. This region includes 1,112 of the total proposed 1,117 major subdivision lots, and has experienced an average of 82 minor lot exemptions per year since 2000. This region also includes an estimated 1,750 undeveloped residential parcels which may

yield a significant amount of additional future growth. This does not include the nearly 200 farms, most of which are located in the south central area of this region and can be expected over time to continue to experience both marginal and major development patterns. For this reason it may be important for the county to identify these areas and establish programs to maintain the agricultural character of important areas within this part of the Central Valley region.

The second most impacted region for immediate future growth is in the Cacapon Planning Region, located west of Timber Ridge. There is only one listed major subdivision containing 5 lots in the development pipeline and approximately 18 minor lots per year on average over the past 6 years. However, the number of minor lot exemptions approved has continued to grow from 10 in 2000 to 29 in 2005 and 27 between 2010 and 2015. Further, this region includes many of the necessary resources that may adequately absorb future growth, with an estimated 1,615 undeveloped residential parcels. Given this amount of vacant available acreage, this region could also experience significant additional residential dwellings. However, unlike the Central Valley Planning Region, this area has a much smaller number of parcels classified as farms. And, due to its more rural character, limited community and public water and sewer systems, it may expect to see a greater number of minor lot exemptions on larger lots over a longer period of time.

Although it appears that the much smaller Sleepy Creek Planning Region is least impacted at this time with no major subdivision proposals in the development pipeline and a sporadic annual average of 3 minor lot exemptions, pressures from the spreading growth in Berkeley and Jefferson counties immediately to the east and the lack of adequate infrastructure and resources elsewhere in the county may change this direction at any point. However, this region being much more limited in physical size has less than 600 undeveloped residential parcels remaining for additional growth. Under optimistic standards this may yield a limited amount of additional growth. Further, it has less than 20 farms, and appears from recent permit activity to be building out at a faster pace than the Cacapon Planning Region, which could result in both land and resources being “used up” sooner than either of the two larger planning regions to the west.

Population Projections

Population projections for the County are developed in order to ensure that public utilities and services are adequate to provide for the natural increase in development. Projections are affected by such factors as the economy, household size, public policy and adequacy of services. They are developed based on historic growth trends, current development activity and land available for future development. However, given the method by which each factor may be affected, it is important to develop at least three growth scenarios for the County to consider.

Low- Growth Scenario

The low-growth scenario takes into account the pace at which development has occurred over the past 20 years. Although much of this chapter has focused on presentation of information in census periods, the impact of growth since the 1990 census period has increased significantly, and must be accounted for. Therefore, for purposes of this scenario, the historical growth period will be measured from 1990 to 2010. During the past 20 year period as outlined, the average

annual increase was 270 persons or 110 additional units with an average household size of 2.46 persons per household. Using these historical figures to project growth for the next 20 years, this static scenario would result in a projected population of 22,941 in a total of 9,325 dwellings for the year 2030. This assumes there will be similar periodic constraints on new development that have occurred in the past.

Medium-Growth Scenario

The medium-growth scenario analyzes all land currently available for development and the projected ability for existing public services to adequately provide for that growth. It is much more difficult to project than the low and high scenarios, as it must take into account potential changes in infrastructure, economy, services and especially the regulatory process. This scenario recognizes that the current development pipeline will exceed the low growth scenario, while at the same time acknowledges services and resources may need to be expanded or improved in a more timely manner in order to sustain the pace estimated under the high-growth scenario

Taking into account that development slowed between 2000 and 2010 because of the economic recession, the actual build-out of such development between 1990 and 2005 has averaged approximately 138 new homes being constructed and occupied per year and an increase in population of 340 per year. In comparing this data with the estimated availability of services from other chapters, it is evident that the pace of both current and projected growth will be affected by improvements to these necessary services being an integral part of the overall development process and the finite capacity of natural resources. This includes such examples as:

Public Service Needs

- Schools- the overall school system having less than 600 available seats will need to be evaluated for efficient student distribution and timing of expansion to handle increased growth
- Roads- upgrades will be required to address major issues such as capacity limitations on US Rt. 522 and alignment deficiencies on WV Rt. 9 as well as minor local road needs
- Public Safety- entities experiencing increased call load on primarily volunteer services will need additional funding for personnel and capital equipment outlay

Environmental and Natural Resource Limitations

- Water- development will be affected by future regulatory measures, the cost of extension of service and the accuracy at which quantity may be accounted for and distributed
- Sewer- development will be affected by additional regulatory restrictions, the cost of extension of service and the term of existing consent orders placed on various systems
- Sensitive Areas- consideration of development in areas where there are sensitive soils, steep slopes, waterways, floodplains and other significant features

Other Factors Affecting Development

- Market- with a noticeable decrease in average number of new units available, increased market demand for housing has created a significant jump in housing prices.
- Government Regulation- possible creation of comprehensive local zoning ordinances and expanded State and Federal environmental regulations

It is assumed that in order to maintain the recent pace of growth, such necessary services and regulations would be addressed as part of the development process. In addressing these current and projected limitations, it is also assumed that the 2005 peak of more than 300 permits will steadily decline and eventually level out as public will places increased pressure on the regulatory process to require growth and services be consistent in their collective approach.

Given this experience as reflected in the growth process of more developed counties to the east, it is a fair estimate to conclude that Morgan County may expect to experience a more balanced pace of an additional 300 people in 127 units per year through 2030.

High-Growth Scenario

Like the low-growth scenario, the high-growth scenario will also utilize an average household size of 2.46 persons per household, but will continue the escalation in development activity between 2000 and 2005, prior to the economic recession of 2008. This projection is tempered by the realization that the economy has not yet and may not return to the previous level of development rather than an average of the previous 20 years. The high-growth scenario takes into account all land currently available for development, as well as optimal conditions that reflect continued growth pressures that have been experienced in the past several years. Therefore, for purposes of this scenario it is assumed that growth will continue to build out without considering the impact of possible limitations to infrastructure, services, economy or changes in the regulatory process. This would result in a projected increase in population of 410 per year and 166 dwellings per year until 2030.

Table 1-5 Population Growth Scenarios

Scenario	Historical Growth				Projected Growth	
	1990	2000	2005	2010	2020	2030
Low Growth	12,128	14,943	17,231	17,541	20,241	22,941
Medium Growth					20,357	23,625
High Growth					21,641	25,741

Factors Affecting Growth

Public Services include all necessary and desirable services provided by the government that allow for a community to function appropriately. These services range from necessary services such as public safety to desirable amenities such as public libraries. It is important to link the goals of the public services section of this Plan with the potential changes in land use and ultimately the direction of growth in order to ensure that services are timely, adequate, funded and financially efficient to maintain.

Infrastructure includes both public and privately developed services that are necessary in order for development to occur. These services primarily include roads, water and sewer. It is important to understand how the extension of infrastructure, or lack thereof, over time has allowed for growth to occur. This will allow for the public to make the most appropriate decision on whether growth will be better served by well and septic, private systems or public water and sewer, and determine how best to manage the design and maintenance of road systems to ensure efficient transportation networks and traffic flow.

Because environmental regulations are driven by ever-changing State and Federal policy, this constraint is often the most overlooked and unpredictable factor affecting growth. In order to sustain some consistent direction for the county as it relates to growth and development, it is important for the county to develop policies that place it at the forefront of environmental policy rather than at the mercy of development that may leave behind costly measures for the County to correct later. This includes such efforts as assessment of the existing water table, watershed capacity and other information involving the establishment and extension of water and sewerage resources.

Possibly the most important factor affecting land use and growth is the socio-economic make-up of the county. This can be observed at every point across the county from substandard housing to large vacation homes as well as declining industry and the rise of small seasonal retail tourism. In order to direct such change in a comprehensive manner, it is important to develop a plan for the most beneficial use of finite public resources. To accomplish this effort, the county must develop and lead this direction through the necessary implementation of all available planning tools that serve to guide all growth in an appropriate and timely manner.

Land Use Planning Tools

Although there are currently no zoning regulations governing land use within Morgan County, there are numerous available planning tools that should be considered by the County during the planning period to guide future land use. Given the sensitive issues surrounding what land use policies can and cannot control, it is important that the public is invited to participate in this decision making process. The following land use tools may be important to consider in the effective growth management of the Comprehensive Plan.

- Countywide Zoning Ordinance as provided by State Code and based on the strategies outlined in the Comprehensive Plan, most notably the ability for resources to support various types of growth in designated areas.
- Subdivision and Land Development Regulations recently updated by Morgan County to ensure that techniques used for development of land will be consistent with measures to benefit the entire county.

- Traditional Neighborhood Design development with concepts that recreate and promote the continuation of small town character in design elements of new subdivisions and redevelopment proposals.
- Planned Residential Development permits innovative, well planned development that creates open space, blends housing types and includes a mixture of uses that promotes neighborhood activity.
- Overlay Districts may be considered as part of the development of a comprehensive zoning ordinance to allow for increased flexibility within classifications while preserving the underlying controls that ensure neighboring uses are compatible.
- Agricultural Land Preservation includes methods to establish permanent easements that protect prime agricultural land from development, while providing financial value to the farmer to continuing viable operations.
- Transfer of Development Rights preserves land for agricultural and other sensitive areas directing growth to preferred development areas where services and resources are available.
- Neighborhood Revitalization incentives work to identify blight areas and properties that detract from the overall health of a community so that targeted strategies can be established to address each area's needs.

Goals & Objectives

Goals

The goal of land use planning in Morgan County is to provide a reasonable, flexible guide for an orderly and economically sound pattern of development consistent with the goals in this Comprehensive Plan, which include:

- Preserving the rural nature of the county while providing for compatible residential, commercial and industrial development;
- Protecting, encouraging and maintaining viable agricultural land use;
- Preserving the views, water resources and other natural features that define the county; and
- Protecting and enhancing the cultural, historic and aesthetic aspects of life in Morgan County.

Objectives

These goals may be achieved by implementing objectives such as the following:

Procedural Objectives:

- Determine the issues and how the process for obtaining Planning Commission review and approval for development plans might be streamlined;
- Promote coordination of the work of government entities to identify and designate areas where public services, infrastructure expansion and public utilities will be needed in the future; and
- Create clear, consistent definitions for land use designations and development standards.

Land Use Design:

- Consider incorporating into development regulations elements that would protect view sheds and other natural features;
- Expand programs that protect the viability of active agricultural land uses;
- Ensure that adjoining areas are compatible when mapping transitions from urban to rural areas; and
- Minimize effects of conflicting or incompatible land uses.

CHAPTER 2 – POPULATION AND HOUSING

Introduction

In order to influence positively the balance of growth that will occur in Morgan County, the Comprehensive Plan must determine the most appropriate direction in which to proceed to ensure that both existing and future populations are provided with adequate public services and housing. Using projections from the Land Use chapter and analyzing demographics and housing stock can most accurately make this determination. This analysis will provide a comprehensive direction in identifying projected housing needs, rehabilitation goals for existing housing stock and adaptive reuse of underutilized structures. It will also serve to some degree in developing growth areas where housing will be encouraged to develop near existing population centers and public services.

Demographics

The most obvious demographic data are census figures that generalize changes in age, sex and race. However, this data fails to provide an in-depth perspective of the socio-economic and cultural uniqueness of the community. For that reason it is also important to outline changes in income, education and migration that provide a better picture of how the County is changing. To further understand these changes it would also be desirable to analyze how similar changes in neighboring counties and how migration from those counties might affect Morgan County.

Age, Sex and Race

From the census tables it is clear that growth over the past several decades has increased significantly, without greatly changing the trend of demographic characteristics. This is evident in the fact that census percentages in each of the categories within the age, sex and race tables have remained fairly consistent from 1970 to 2010.

Changes in the age characteristics include decreases in those under age 19 of nearly 15% of the total population make-up, while population figures for ages 20 and up have increased by 14%, thus continuing the trend of an ever-aging population between 1970 and 2010. Male to female changes from 1970 include a slight decrease in the female population from 50.5% of the total to 50.1% in 2010. Racial makeup has also remained fairly constant with less than a tenth of a percent change from the 1980 estimate of 98.7% decreasing to 97.3% classified as white in 2010.

Table 2-1 Population by Age

<u>Age</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>
0-4	750	720	700	905	1,043	843
5-19	2,420	2,700	2,340	2,723	3,140	3,107
20-44	2,540	3,580	4,270	4,819	5,557	4,816
45-64	1,840	2,380	2,860	4,021	4,637	5,559

65+	1,000	1,440	2,040	2,475	2,854	3,216
	8,550	10,820	12,210	14,943	17,231	17,541

Source: US Census Reports

Table 2-2 Population by Sex

Sex	1970	1980	1990	2000	2005	2010
Male	4,231	5,259	5,890	7,337	8,461	8,749
Female	4,316	5,452	6,238	7,605	8,769	8,792
	8,547	10,711	12,128	14,942	17,230	17,541

Source: US Census Reports

Table 2-3 Population by Race

Race	1970	1980	1990	2000	2005	2010
White	N/A	10,583	11,985	14,689	16,939	17,063
Black	N/A	104	92	89	103	149
Am Indian/Alaskan	N/A	8	25	26	30	164
Asian/Pacific/Hawaii	N/A	11	18	20	23	81
Other	N/A	5	8	34	39	84
		10,711	12,128	14,858	17,134	17,541

Source: US Census Reports

Household Education, Income and Size

In addition to basic age, sex and race statistics identified in census reports, education, income and household size provide a view of changing characteristics of households over time. These three factors play a larger role in determining more of the socio-economic direction of the County.

The most notable point in educational achievement between 1970 and 2010 is the number of residents over 25 having some college experience, increasing from less than 6% to more than 40% during this period. Also important was the decrease in number of people without high school diplomas representing a decline of approximately 66% in 1970 to less than 24% in 2010.

Although Table 2-5 is not converted into today's dollars, the increases in per capita and household incomes are an obvious reflection of improvements in socio-economic status such as education. Most notable are the recent increases from census 2000 to 2010 figures. Poverty levels, which declined between 1980 and 1990 and have gradually increased since that period, still represent a decrease in total percent of population.

While household population has been steadily declining since 1970, it is important to note the current housing market for both seasonal and year-round housing is steadily increasing in the average size of structures being built. Further, although it appears the average age has been

increasing during this same period, it is likely the strong inward migration of new residents purchasing larger homes may gradually decrease the average age and increase population per household over the next 20 years.

Table 2-4 Household Education

Education Level	1970	1980	1990	2000	2010
No Diploma	3,315	3,010	2,934	2,564	N/A
High School Graduate	1,032	2,350	3,275	1,668	14,401
Some College	256	554	868	4,868	N/A
Associate Degree	N/A	N/A	274	291	N/A
Bachelors Degree	235	628	669	681	2,894
Graduate/Professional	N/A	N/A	316	506	N/A
	4,838	6,542	8,336	10,578	17,295

Source: US Census Reports

Table 2-5 Household Income

Income Level	1970	1980	1990	2000	2010
Median Income	\$6,018	\$13,632	\$24,372	\$35,016	\$37,406
Per Capita Income	\$2,132	\$6,242	\$11,420	\$18,109	\$22,770
No. Below Poverty	N/A	1,764	1,317	1,531	2,280

Source: US Census Reports

Table 2-6 Household Size

Year	Persons in Household	Households	Persons per Household
1970	8,507	2,780	3.06
1980	10,609	3,830	2.77
1990	11,969	4,731	2.53
2000	14,748	6,145	2.40
2005	17,181	7,159	2.40
2010	17,418	7,303	2.39

Source: US Census Reports

Population

Morgan County, along with Jefferson and Berkeley Counties, is located within Region 9, the easternmost of eleven West Virginia State Planning and Development Regions. Population trends for Region 9 are in several respects unlike the trends and characteristics of the State as a whole. This is due in part to these three counties being wedged between three other states, including Maryland, Virginia, and Pennsylvania. As Morgan County, more so than Jefferson or

Berkeley, serves as the gateway to the rest of the State, it is important to understand how it functions in the context of both Region 9 within the State as well the four state region.

Table 2-7 Regional County Comparison Census 2010

County	Population	Housing Cost	Median Income	Median Age
West Virginia				
Berkeley County	104,169	\$162,400	\$52,857	38
Hampshire County	23,964	\$117,600	\$31,792	43
Jefferson County	53,498	\$204,900	\$65,603	39
Mineral County	28,212	\$118,300	\$36,571	42
Morgan County	17,541	\$160,700	\$37,281	45
Virginia				
Clarke County	14,034	\$337,700	\$75,508	44
Frederick County	78,305	\$223,300	\$68,719	39
Maryland				
Allegany County	75,087	\$120,800	\$37,747	41
Washington County	147,430	\$200,700	\$52,994	40
Pennsylvania				
Bedford County	49,762	\$120,100	\$44,692	44
Franklin County	149,618	\$174,300	\$53,394	40
Fulton County	14,845	\$156,300	\$48,452	42
Region Average	63,039	\$174,758	\$50,468	41

Source: US Census Reports

Population Trends

Since 1950, all three counties within Region 9 have been exceeding the State's population growth trends. While the State's population declined from 1950-1970, Morgan County grew by 3%. Further, all three counties exceeded the State growth rate of 11.8% from 1970 to 1980, with Morgan County more than double at 25.3%. From 1980 to 2010 this increase and disparity continued, with the State again experiencing a loss in population of 5% and Morgan County growing by nearly 64%.

The bulk of Morgan County's population and growth has always and continues to be in the Central Valley region, especially in the Berkeley Springs area. However, the growth rate, which was greatest in the Sleepy Creek region between 1970 and 1980, shifted to the Central Valley region between 1980 and 2000, and most recently toward the southern districts of Timber Ridge and Rock Gap. The proportion of the total county population made up by the population of the Cacapon region has been slowly but steadily increasing since 1980.

Table 2-8 Population Trends

Area	1970	1980	1990	2000	2010	Avg. % Growth
Berkeley	36,356	46,775	59,253	75,905	104,169	186%
Jefferson	21,280	30,302	35,926	42,190	53,498	151%
Morgan	8,547	10,696	12,128	14,943	17,541	105%
Region 9	66,183	87,773	107,307	133,038	175,208	164%
West Virginia	1,744,237	1,949,644	1,793,477	1,808,344	1,853,534	6%

Source: US Census Reports

Historical Population Forecasts

Although extrapolating basic percentages from historical planning region counts may not have yielded accurate numbers for growth by planning region between 1980 and 2000, the overall County projections were fairly close. This includes the 1985 Plan projection of 12,991 people for 1990 compared to the actual census count of 12,210 for that same year. It appears this slightly over-projection by the Plan continued into 2000 with the Plan projecting 15,276 total population, while the actual census figure was 14,943.

As outlined in Chapter 1 of this Plan, population projections for the next 20-year period cannot realistically depend on the historical models used here. This is due to increases from current growth being well beyond the mere measure of birth and death rates, and depending much more heavily on inward migration from neighboring counties and beyond at a much faster pace.

Migration Trends

Population increases due to inward migration are difficult to estimate with accuracy. To do so, the analysis must take into account residential changes of those leaving and coming into the County. It also includes changes of births and deaths, which are based on national averages, and may not apply to Morgan County in a manner that would provide an accurate net migration figure.

There were two studies conducted covering the periods of 1960 to 1970 and 1970 to 1980. From the first study period of 1960 to 1970, estimates suggested that the County experienced a net migration of 446 people out of the County. Based on the analysis, most of the outward migration occurred in the age groups between 15 and 29 years of age. The second period of 1970-1980 showed a reversed trend with a net inward migration of 1,794 people.

A study developed by the West Virginia Health Statistics Center for the periods of 1980 to 1990 and 1990 to 2000 reflected a continued increase in the net inward migration trend. This included a net inward migration of 1,334 people between 1980 and 1990, increasing the County's ranking from 3rd to 2nd overall for net inward migration of all counties in West Virginia. This trend further increased with the County moving to 1st overall, having a net inward migration of 2,783 people between 1990 and 2000.

Housing

Morgan County has continued to experience two distinct effects from additional housing development. This includes a continued decrease in population per household and a continued increase in housing stock being built for recreational or second home purposes.

Housing Occupancy

Historical growth trends show that Morgan County experienced an increase of 1,462 housing units from 1970 to 1980. While total housing during this period increased more than 42%, total population grew by only 25%. This is due in part to an increase in recreational housing stock from 7.1% to 7.7% of the total available housing as well as an increase in number of households comprised of elderly and single persons, and a slight decrease in children per household.

From 1980 to 2010 these trends continued with declines in children per household and increases in the middle age and elderly populations resulting in a year 2010 average of 2.39 persons per dwelling. At the same time-significant increases in seasonal housing, especially during the 1980's, produced an estimated increase from 7.7% of total housing to 17% in 2010, much of it occurring in the Sleepy Creek region. As a total percentage of housing occupancy, there was an increase in vacant units from 15.4% in 1980 to 25.1% in 2010, which may have resulted from the economic recession. At more than 2,400 units, this represents a relatively substantial stock for potential rehabilitation.

Table 2-9 Occupancy Statistics

Data	1970	1980	1990	2000	2010
Owner Occupied	2,068	3,132	3,927	5,119	6,050
Mortgage Cost	N/A	\$378	\$619	\$747	1,194
Rental	700	684	804	1,026	1,253
Average rent	N/A	\$183	\$217	\$342	704
Married Households	N/A	2,690	3,107	3,780	3,953

Source: US Census Reports

Housing Stock

An important component of a successful community is a balance of housing stock. This provides housing opportunities for a financially diverse population, stabilizes equity within the tax base, promotes healthy urban and rural development patterns and allows local government the ability to plan efficiently for the provision of services. As pointed out previously, housing stock within Morgan County has continued trends of declining persons per household, substantial increase in vacant and seasonal housing and dramatic increases in residential activity, especially prior to 2007. For that reason, this section will use the estimated 2010 figures to provide some further insight into the balance of housing stock within the county.

Table 2-10 Housing Type

Subject	1970	1980	1990	2000	2005	2010
Total Housing	3,422	4,884	6,757	8,076	9,487	9,753
Year Round	3,180	4,508	5,335	6,863	8,102	7,303
Seasonal	242	376	1,422	1,213	1,385	1,644
Vacant	413	694	604	718	843	2,450
Single Family	2,818	3,661	5,174	6,327	7,432	N/A
Multi Family	169	311	346	360	422	N/A
Mobile Home	260	537	1,237	1,360	1,646	N/A
Median Value	\$9,500	\$35,000	\$61,900	\$89,200	\$149,000	\$160,700

Source: US Census Reports

Seasonal housing during the past ten years has increased by 431 units, and 2% as a percentage of overall housing stock. This is due in part to the migration of out-of-state residents pursuing vacation property. Although the total seasonal units appear to be on the rise, given the number of projected year-round housing units in the development pipeline, this number may continue to increase slightly in overall units, but decrease as a percentage of total housing stock.

The number of vacant housing units has nearly doubled as a percent of overall housing stock since 1970. As noted previously, the significant increase from 2000 to 2010 may be associated with the economic downturn of 2008.

Year-round housing increased in number but decreased as a percentage of the overall total housing stock from 2000 to 2010. This includes conversions of seasonal housing, rehabilitation of vacant housing, and new housing.

While mobile and multi-family homes have increased significantly over time, much of the balance of recent permit activity has included single-family housing. During the period 2000 to 2010 median housing value has risen from less than \$89,200 to nearly \$161,000, or an 81% increase over the past ten years.

Housing Conditions

Since 1970, housing standards have dramatically improved for the overall housing stock within Morgan County. These standards are measured by such factors as age of structure, overcrowding and presence of heating equipment and plumbing.

Although it is difficult to measure an exact number of substandard housing units given the overlap in criteria, generally, from 1970 to 1980 substandard housing decreased from approximately 23% of the total housing stock to less than 10%. Much of this housing exists in the Central Valley region, while a larger proportion is in the Sleepy Creek region. This can be

directly correlated to the proportion of seasonal and vacant housing units within these respective regions of the County.

Between 1980 and 2010 this number continued to decrease as a percentage of the overall housing stock. This was due in part to the continued decline in persons per household, conversion of seasonal housing, rehabilitation of vacant structures and an overall increase in number of houses. This is evident by the decline in total number of units constructed prior to 1939 from 1,229 to 1,111. More significant, however, is the total number of units constructed from 1970 to 2010 making up more than 50% of the available year-round housing stock.

As of 2010 less than 10% of the remaining housing units were considered substandard, with much of those units listed as lacking an adequate heating system. However, as the number of units lacking adequate plumbing has decreased significantly, it should also be reflected that a majority of the units listed as lacking an adequate heating system actually use a natural wood heating method, thus indicating that most of the substandard housing units are either adequately provided with heat or that they lack both adequate plumbing and heating systems.

Table 2-11 Substandard Housing

Subject	1970	1980	1990	2000	2005
Without Plumbing	N/A	291	N/A	66	N/A
Constructed Pre-1939	N/A	1,229	1,229	1,111	N/A
Overcrowded	81	93	78	119	N/A
Lacking Heating System	N/A	1,027	N/A	1,133	N/A

Source: US Census Reports

Housing Needs

General housing needs should provide for a balance of housing types and opportunities for individuals of all income levels and family size. This balance is important in both recognizing the diversity of the community make-up and the provision of sustaining and promoting a healthy housing stock for existing residents and those who would choose to move into the County. In establishing this balance, growth should be directed in a manner that makes efficient use of public services and infrastructure, and promotes the establishment of sustainable communities and neighborhoods through a mixture of housing types.

Much of the existing subsidized housing in Morgan County is located within the Towns of Bath and Paw Paw. However, the total units within this classification make up less than 1% of the total housing stock. These units are primarily within multi-family type housing, which serves mostly elderly and low-income families, and includes at times a waiting list of people seeking housing. To measure low-income status most Federal HUD Programs use a factor of 30-50% of median income. Using 50% of the median household income it appears that nearly 20% of families based on the 2010 Census would be considered low income. This factor is important to consider as it relates to new development and redevelopment efforts for multi-family residential structures given that at least 90% of all new housing units built since 1990 were single-family detached dwellings.

With housing prices continuing to increase, the county should also identify the housing needs of the moderate-income population to ensure that all areas of the county include opportunities for those who typically work in the county to be able to afford to live in the county. This may include implementation of local, State, and Federal programs where use of such programs is most appropriate. Although there is no standard measure of moderate income households, Federal HUD programs typically use 80% of median household income for 2 person and 90% for 3 person. Given that average household size for Morgan County is roughly 2.4 persons per household, a measure of 85% of median household income is used in this chapter to determine the number of moderate-income families. Not including the low-income households above, it appears that 20% of the total households could be defined as moderate income in 2010. This is important given that between 2000 and 2010 median housing costs have increased by more than 80%.

As new development continues to concentrate on construction of primarily single-family detached dwellings, the County may consider using this opportunity to promote the rehabilitation efforts of its vacant multi-family structures as well as development of infill lots, where services are most conducive to the population seeking this type of housing lifestyle. This approach would focus on the urban areas where much of the County's existing underutilized structures are located, and given the age and proximity of such structures to existing services may be eligible to utilize comprehensive plans and funding strategies to accomplish larger redevelopment efforts.

Although new housing development has increased significantly in cost and capacity, it appears the most important impact on the County is location. As much of the new housing is projected for the lower Central Valley region where existing services are limited, the County should take appropriate steps to ensure that development occurs in such a manner that services and resources will be adequate. The geographic distribution of housing as noted in the Land Use chapter appears to reflect the continued trend of much of the new growth occurring in the Central Valley region. As more than 70% of all new growth has been in this region over the past several decades, more than 90% of the new growth potential is projected to occur in this region.

The total demand for mobile home placement, as well as seasonal housing, may not be completely accurate given that applications for mobile homes include both new as well as transferred units, and seasonal housing starts are listed as such on occasion by an applicant seeking more favorable tax treatment from the process. However, market demand has and continues to remain steady for mobile, seasonal and single family housing, while demand for new multi-family and attached style development has remained relatively low.

The demand for mobile home construction derives from both an issue of affordability as well as a greater general acceptance of the higher quality type mobile home structures being introduced into the market. Also, while many homebuyers continue to seek larger homes on several acre lots, larger builders are introducing a new trend toward larger developments located near existing services with homes on smaller lots.

The demand for seasonal housing has changed over time, with a growing trend toward middle-age and older couples seeking long weekend use and eventual retirement locations. However,

there continues to be little interest in joint ownership or conversion of seasonal homes to timeshare investments. Since 1980, the number of applications for seasonal homes has remained relatively constant at nearly 70% out-of-state, primarily from Maryland and Virginia. However, in that same time, costs for seasonal homes have increased from \$50,000 to more than \$200,000. This is due in part to the fact that many seasonal homes are being constructed much larger than the one- and two-bedroom styles in the 1980s.

Among the barriers to future housing development are the prospect of rising interest rates, saturation of the surrounding market, lack of adequate public services and constraints on natural resources. Each factor will have a varying effect on the types of housing currently in demand and projected for development. This includes interest rates and the economy affecting seasonal housing, saturation of the market influencing large single-family subdivisions and limitations on public services and resources limiting densities.

Housing Affordability

As land and housing costs continue to escalate in Morgan County it is important to consider the overall affordability of housing that is available. To address the issue of affordability there are a number of strategies that should be considered to improve the availability of this housing stock.

One strategy would be to incorporate smart growth techniques into the development process that would encourage affordability, especially in designated growth areas. This would decrease the cost to provide services, allow for adequate densities, provide for mixed-use developments and ensure compatibility with surrounding neighborhoods.

A second measure could be the development of inclusionary housing tools to target affordable housing to below market and moderate income households. This approach may include a minimum percent of each development being offered as affordable housing that encourages smart growth techniques and provides housing opportunities for changing demographics.

Other methods include working with the development community to establish innovative housing styles and expanding relationships with lending institutions to diversify funding mechanisms for home ownership financing.

Goals and Objectives

Goals

The makeup of Morgan County's population will continue to be driven by regional factors, i.e. housing affordability relative to the surrounding area, population mobility, transportation costs, economic conditions (especially the proportion of disposable income as this relates to vacation homes) and the aging of the population. Goals related to population and housing include:

- Supporting a growth rate that is in concert with the availability of services;

- Promoting the creation of diverse housing types, with a healthy balance between permanent and recreational dwellings, for all income levels, with special attention to affordable housing for the local workforce and the elderly;
- Encouraging improvement of aging and neglected housing stock; and
- Maximizing open space and protecting environmentally sensitive areas.

Objectives

The following objectives will further accomplishment of these goals:

- Increasing the proportion of housing stock served by public water and sewer systems;
- Providing incentives to focus new development around existing population centers and available public resources;
- Encouraging diverse housing alternatives such as assisted living and apartments;
- Identifying the needs of the seasonal housing population and assessing the impact of this group on public facilities in relation to its contribution to the tax base;
- Developing programs to assist with purchase and rehabilitation of neglected or deteriorating housing stock;
- Providing incentives for innovative development methods that will help achieve County goals; and
- Exploring the need for a housing committee to monitor and make recommendations on the availability of housing;

CHAPTER 3 – TRANSPORTATION

Introduction

This Chapter serves to focus not only on the existing transportation system as it pertains to roads, but also the network of alternative means of travel, which include pedestrian, rail, air, water and mass transit. Identifying all modes of transportation in a comprehensive manner allows for the local governing body to develop plans for improvements to this system that will provide for the efficient movement of people and goods throughout the County. This approach ensures that all governing bodies with jurisdiction over this network will work together for the benefit of this County in a regional context as well.

Roads

There are several governing jurisdictions within Morgan County that oversee the road system. This includes the State routes under the West Virginia Department of Transportation Division of Highways (DOH), the municipal roads within the towns of Paw Paw and Bath, and to a lesser degree the private road systems that are approved primarily as part of developments in the county. This order of ownership and maintenance is part of the reason for current limitations on the County's ability to improve the overall road network.

First, the West Virginia Department of Transportation DOH owns and maintains most of the roads in Morgan County. This means that improvements must be programmed, funded and implemented at the State level through an established process. Second, there are no specific requirements within the county's regulations to assess and mitigate the traffic impacts of new development. Third, the county is wedged between several other counties that cross over four separate states with their own established transportation improvement process and funding priorities. Lastly, the county includes numerous historically significant sites and sensitive areas which create difficulties in constructing necessary improvements in a timely manner.

The West Virginia DOH uses a functional system which classifies each public roadway. In Morgan County two functional classifications are represented. This includes feeders, which serve communities and collect and feed traffic to the higher systems, and state-local service roads, which serve local traffic movement in and around the county. U.S. Rt. 522 and WV Rt. 9 are considered feeders, and all other roadways are classified as state-local service.

The functional classification system is as follows:

- Expressway- connects metropolitan areas and provide service to major interstate or interstate travel
- Trunk-line- is the intrastate network intended to serve smaller cities
- Feeder- serves smaller towns and industrial and recreational areas not served by the higher systems
- State-local Service- roads are localized arterial and spur roads which provide access and

socio-economic benefits abutting properties and are further sub-classified as Essential Arterials, Collectors, and Land Access

- Occasional use- is the lowest classification of the local road, providing access to rural areas on a low-volume basis

Level of Service

Transportation studies conducted by the West Virginia Department of Highways consider the ability of roadways to provide adequate service for the existing volume of traffic in terms of Level of Service (LOS). Level of service is a comparison of traffic volume and the capacity of the roadway, which are measured in a range from “A” to “F” with “A” being the highest condition and “F” the worst. Level of Service “C” represents stable flow and is generally considered as the goal for service.

Table 3-1 Traffic Volume Level of Service

<u>Level</u>	<u>Description</u>
A	Zone of condition of free flow, with low volumes and high speeds.
B	Zone of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation.
C	Zone of mostly stable flow, but speeds and maneuverability are more closely constricted by the higher volumes.
D	Zone that approaches unstable flow, with tolerable operating speeds, however driving speed is considerably affected by changes in operating conditions.
E	Zone that cannot be described by speed alone. Operating speeds are lower than in Level D, with volume at or near the capacity of the highway.
F	Zone in which the operating speeds are controlled by stop-and-go mechanisms, causing forced flow. The stoppages disrupt the traffic flow so that the volume carried by the roadway falls below its capacity; without the stoppages, the volume of traffic on the roadway would be higher, or in other words, it would reach capacity.

Source: West Virginia Department of Transportation

Major Roads

Historically, the highest traffic volumes in Morgan County have been experienced on US Rt. 522, particularly in the Berkeley Springs area. Traffic volumes in this location decreased from approximately 18,200 vehicles per day in 2008 to 14,120 in 2016. Other areas along this route include the Timber Ridge District, which experienced 6,540 vehicles per day in 2016. This route has also seen a significant and continued increase in heavy truck traffic, which is used as an alternate route between I-81 at Winchester, Virginia and I-70 at Hancock, Maryland. Based on standard Level of Service (LOS) measurements for average daily traffic flow, US Rt. 522 operates

at level E for its entire length through West Virginia.

The second most heavily traveled roadway in Morgan County is West Virginia Route 9. This route enters the County at Paw Paw, running north along the west side of Cacapon Mountain and crossing U.S. Rt. 522 in Berkeley Springs, then turning east toward Martinsburg in Berkeley County. Since 2008, traffic volume has not fluctuated much from 4,900 vehicles per day at the Berkeley County line and 4,896 in Berkeley Springs to 4,480 and 3,930 respectively in 2016.

Traffic on WV Rt. 9 from Berkeley Springs to Great Cacapon ranged from 1,700 to 4,200 vehicles per day in 2008 to 1,960 to 3,160 in 2016. Traffic volumes near the Paw Paw area remained basically the same ranging from 2,100 vehicles per day in 2008 to 1,960 in 2016. Depending on location, alignment and other factors, WV Rt. 9 operates at various LOS throughout the County, with the worst being a level E at its intersection with US Rt. 522 in Berkeley Springs.

Local Roads

Aside from the major road improvements to US Rt. 522 and WV Rt. 9, there are ten projects from previous studies outlined in the 1985 Comprehensive Plan that were identified for improvements by the State. Since that time four of the projects have been completed. The remaining projects have either been removed from the State priority list or folded into the major ongoing projects relating to the US Rt. 522 bypass and WV Rt. 9 alignment study.

Except for several minor routes that traverse the county, which are also maintained by WVDOT, all other roads outside of the municipal systems are private and/or part of the various subdivisions. However, simply because these types of roads within the transportation network are not owned and maintained by any governing entity does not mean that there are not needs for improvements to segments of these types of roads throughout the county.

The Town of Paw Paw includes several miles of local roads, which function primarily as local neighborhood roads connecting to WV Rt. 9. This State route runs east-west through Town, serving as Main Street before crossing the river on the west side of Town, into Maryland.

The Town of Bath, which is surrounded by the Berkeley Springs area, includes several miles of roads within the corporate limits. These roads are owned and maintained by the town government, and serve as local connections to US Rt. 522 running north south through the Town. This road, which serves as Main Street through Town is also used as the connection for WV Rt. 9 which enters the north end of Town from the west and heads east out of Town to the south.

Bridges

Due to the terrain, elevation, and number of waterways, bridges play a key role in improvements and expansions to the road network in Morgan County. According to the 2011 – 2016 Statewide Transportation Improvement Program (SSTIP) two bridge replacement projects are listed for the county. Replacement of the Sleepy Creek arch bridge at a cost of \$3,250,000.00 and the Duckwall Bridge at \$2,700,000.00. Neither of these bridge projects has been completed. All other projects

within the following lists have been completed.

Table 3-2 WVDOT Highway State Funded Projects Listed in SSTIP 2011-2016

Route	Location	Improvement	Cost	Year
CO-001	River Road	Bridge Repl	3,250,000	2012
CO-015	New Hope Rd	Gabions	150,000	2011
CO-008	Virginia Line Rd	Resurfacing	89,000	2011
CO-018	Detour Road	Resurfacing	102,000	2011
CO-010	Householder Rd	RipRap	50,000	2012
CO-01/07	Collier Rd	Relocate portion	225,000	2012
National Gateway Freight		Ren CSX RR Tunnels	35,000,000	2015

Total **38.866 million**

Source: West Virginia Department of Transportation

Table 3-3 Federal Aid Projects Listed in the SSTIP 2011-2016

Route	Location	Improvement	Projected Cost
US 522	Route 522	Resurface	300,000
National Gateway Freight-CSX RR Tunnels		Renovation	35,000,000
Bath Community Center-Green Street		Sidewalks/steps/culverts	207,500
Cacapon State Park Inn		Exterior Restoration	100,000

Total **\$35,607,500**

Source: West Virginia Department of Transportation.

Other Road System Deficiencies

In addition to the major roads and bridges, which receive much of the State government's attention, there are a number of secondary roads and minor bridges in the county that need to be addressed. With the continued growth in the county and surrounding area, these roads are becoming increasingly congested while bridges are receiving a greater number of passes. To address this issue in a proactive manner, the county must increase the level of communication with the State. This includes regular review of traffic volume and its relationship to new development as well as an exchange of information on deficiencies in alignment, capacities and structural integrity of roads and bridges.

To ensure that the road system standards are consistent with pressure from additional growth, the county should consider development of a county-wide Master Transportation Plan to develop joint solutions with the State. This Plan could be coupled with projects already identified by the State for improvement that have not received approval to be included in the State transportation improvement plan. This would provide the county the opportunity to assist in prioritization of such

projects based on projected growth, emergency services, and other factors important to consider.

Major Improvements

Unlike the more routine projects listed above, there are two major projects that have been long planned to improve the major transportation network within the county. This includes the US Rt. 522 Bypass and relocation and upgrade of parts of WV Rt. 9. Both projects require millions of dollars in funding, have included numerous comprehensive studies for impacts and alignments, and have received increased attention due to both increased growth within the region and effects of increased traffic volume and decreased safety along both routes.

US Route 522

US Rt. 522 has been included in numerous studies, the most recent of which are the 2001 North South Appalachia Feasibility Study and the 2000 US Rt. 522 Upgrade from the Virginia to the Maryland state lines. The Feasibility Study focused on the economic benefits of upgrades to several major routes connecting the eastern panhandle of West Virginia with Virginia, Maryland, and Pennsylvania. Although it did not find that US Rt. 522 upgrades would serve the same level of economic benefits as some of the comparative routes within the report, it did provide some key traffic volume and safety information confirming the need for improvements to US Rt. 522 through West Virginia to address both increased through traffic and growing unsafe traffic conditions.

The US Rt. 522 Upgrade around Berkeley Springs includes several reports in the ongoing State and Federal review of developing a bypass to address both increased through traffic and unsafe traffic conditions. This includes reports that deal with traffic volume, accident data, environmental assessments, and economic impacts. All of these reports are required in the evaluation and recommendation of improvements to this corridor by the West Virginia Division of Highways. The goal of this assessment is to develop a plan that will improve the corridor through Morgan County from the Maryland to the Virginia line.

The purpose and need as outlined in the report are to improve the unacceptable levels of service, especially in the Berkeley Springs area, as traffic volume is expected to double over the next 20 years. It is also to decrease the level of traffic incidents, as the reports show that in 1999 accidents in the Berkeley Springs area, were nearly double the State rate for similar road systems. Indirect benefits for more rural sections of the road include improvements to unsafe access points, site distance, turn lanes, shoulder widths and pedestrian travel.

During the evaluation and review process there were four alternatives studied with Alternative One being the chosen option. This alternative is divided into two sections, north and south, for future improvements, and an Environmental Impact Study has been completed for the entire corridor. As development continues to occur within the county, it is important to consider the expectations of this ongoing State project with the various elements of growth that will have an impact on this improved transportation network both before and after the improvements are complete.

WV Route 9

WV Rt. 9 has been included in more recent studies, the latest of which is the Corridor Selection Report drafted by the WV Division of Highways in 1998. This report was the culmination of nearly four years of evaluation and public review during the period between 1992 and 1996. From this report was developed a State project to identify the most appropriate corridor in which to relocate and improve parts of WV Rt. 9 from Berkeley Springs in Morgan County to Martinsburg at I-81 in Berkeley County. The report further separated out the Martinsburg area for more immediate improvements around the I-81 interchange.

From the review and evaluation conclusions, the WVDOH selected Corridor IIBc, which is further defined in the report as one of numerous routes considered. This corridor was chosen for best meeting the transportation services, public improvements, and environmental objectives outlined in the report. In meeting transportation services it was determined that this route, which would remain south of Hedgesville would receive both WV Rt. 9 and Rt. 7 traffic flows. This corridor satisfies the preferences of the majority of the public surveyed. It also compares most favorably in avoiding the displacement of environmentally and culturally significant locations.

As the report is part of an ongoing State project, there were no costs included in the evaluation. However, it is clear that cost as it is related to the primary factors outlined will play a role in the ultimate development costs of the project. As it relates to the long term planning efforts of this Comprehensive Plan it is important to ensure that implementation of the elements of this plan take this necessary improvement into account as growth will continue to impede upon this selected route.

Regional Transportation Authorities

There are several specific authorities that carry regional system-wide multimodal transportation planning for the Eastern Panhandle. These authorities provide a direct link to State and Federal funding programs that link Morgan County to larger transportation projects requiring joint cooperation.

Hagerstown Eastern Panhandle- Metropolitan Planning Organization (HEP-MPO)

In addition to the projects identified in the State Highway Improvement Program there is a larger regional plan that addresses the long-term needs of the entire Eastern Panhandle and neighboring counties. The HEP-MPO is a long-range multi-modal plan that identifies regional issues of the entire transportation network. This Plan, which includes Morgan County, identifies road projects that impact the County as part of the Eastern Panhandle, such as improvements to WV Rt. 9. The Organization regularly reviews and updates the needs of this Plan which is shared by West Virginia, Maryland, and Pennsylvania, and identifies projects in an effort to receive federal funds to improvements to areas based on population projections and employment opportunities.

According to the plan's projections it is anticipated that population growth will create demand for highway capacity that outpaces the planned system of improvements, resulting in a deteriorating system performance. If enhancements to the roadway system are limited to projects currently

underway and those programmed, it is likely that WV Rt. 9 will experience unacceptable levels of service by the year 2030. This project is included in the long-range plan, but not in the current funding scenarios.

Region 9 Eastern Panhandle Regional Planning and Development Council

This council is the official group that represents the Eastern Panhandle counties through the HEP-MPO process. It is the coordinating body linking the MPO with the West Virginia Department of Transportation.

West Virginia Eastern Panhandle Transportation Authority (WVEPTA)

The WVEPTA is a newly created authority that acts in an advisory capacity to promote mobility, economic development and tourism investment in the Eastern Panhandle. It supports the activities of the HEP-MPO and the Region 9 Council. It was created by an act of the West Virginia Legislature in 2004 to coordinate transportation-planning decisions among the Eastern Panhandle counties. The newly created authority is expected to promote and advance highway construction projects in conjunction with the counties and municipalities as well as advocate for economic development and tourism investment. A specific focus of the authority is to organize local input on improvements proposed for WV Rt. 9 and other highways that serve the area.

Eastern Panhandle Transit Authority (PanTran)

This is a non-profit public transit provider for all three counties within the Eastern Panhandle. It operates 73 fixed-route bus services Monday through Saturday. At the present time the service is not extended into Morgan County.

Scenic Byways

There are several scenic byways that are located within or traverse Morgan County. These include trails and tours that follow roads, waterways and walking routes, many of which are centered on The Washington Heritage Trail and historic Berkeley Springs area.

The Washington Heritage Trail was developed in 1998, and includes a self-guided tour of the many locations throughout Morgan County which are associated with the rich historical link it shares with George Washington. The tour covers at least 15 points of interest within the County, from the Town of Paw Paw to a small park in the Sleepy Creek region. The tour is defined as “following his footsteps on the Washington Heritage Trail National Scenic Byway takes you on a tour of the county’s most historic locations” associated with George Washington, who “from the time he was sixteen through the reading of his will in 1799, ate, slept, owned land, and bathed in and around Berkeley Springs”. The tour follows closely along WV Rt. 9 and includes some locations along the southern portion of US Rt. 522.

Also associated with the George Washington Heritage Trail are both a self-guided boating and driving tour of the Cacapon River. The boating tour extends from the small hamlet of Largent,

located off of WV Rt. 9, east of Paw Paw, and ends at Great Cacapon, where the Cacapon joins the Potomac River. This tour passes many natural and man-made features including historic bridges and unique rock outcrops. The self-guided driving tour follows much the same route, traveling in either direction along WV Rt. 9, which hugs and crosses the river for its entirety through the County. Both tours are administered by the Friends of Cacapon River, which is a local nonprofit group that works to preserve, protect, and promote the Cacapon River watershed.

One other scenic Byway that is in the early stages of development is the Grand Highlands Scenic Byway and Trail System. This byway would be the first to traverse the entirety of the State extending from the eastern panhandle to the southwest tip, and encompassing numerous highways, which traverse countless towns, parks, waterways, and tourist destinations. This proposed byway would run through Berkeley Springs, providing access to numerous existing scenic systems.

Berkeley Springs includes two pedestrian scenic byways for those who choose to walk to see the sites of this historic area. These walking tours include; the Treasure Tour of Berkeley Springs State Park, which features 16 points of interest centered around the nearly five acre park that houses the original Berkeley springs, and the Walking Tour of Berkeley Springs, which includes the sites and structures of 28 local historic landmarks, most within several blocks of downtown Bath.

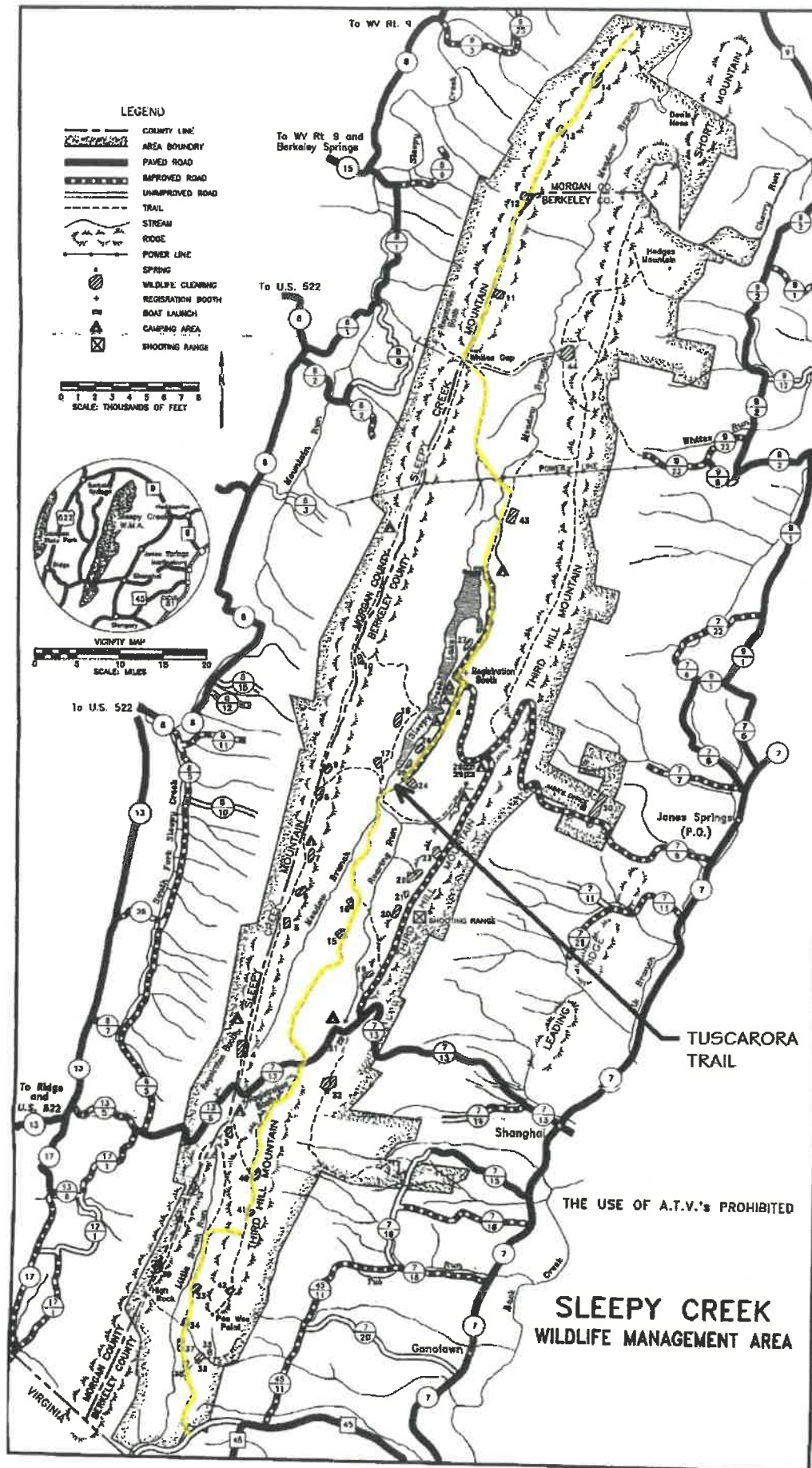
Hiking and Biking Trails

The Western MD Rail Trail is a continuing joint effort between County, State and Federal government agencies to convert the length of the abandoned railroad along the Potomac and C & O Canal into a hiker/biker trail for recreational use. Parts of the proposed trail in Washington and Alleghany counties have been converted by the National Park Service, while efforts further west, along the Morgan and Alleghany sections, especially near Paw Paw, have yet to be completed. This includes 6 areas where the trail crosses several bridges and includes 3 tunnels where the trail would cross into and out of Morgan County. The possibilities in completing this trail would support the economic and recreational goals of the County simply by opening up an opportunity for the public to enjoy some of the most natural and scenic views in the Appalachian region.

The Cacapon State Park Trails include nine different trail systems making up more than 20 miles of hiking and riding access that spread throughout the 6,000 acre park. These trails are primarily used by the many visitors to the park, enjoying a stay at camping cottages, the Lodge or Old Inn, or simply visiting the many other attractions such as beach swimming, boating or fishing. The trail also follows a road that climbs nearly 1,400 feet to the Cacapon Mountain summit.

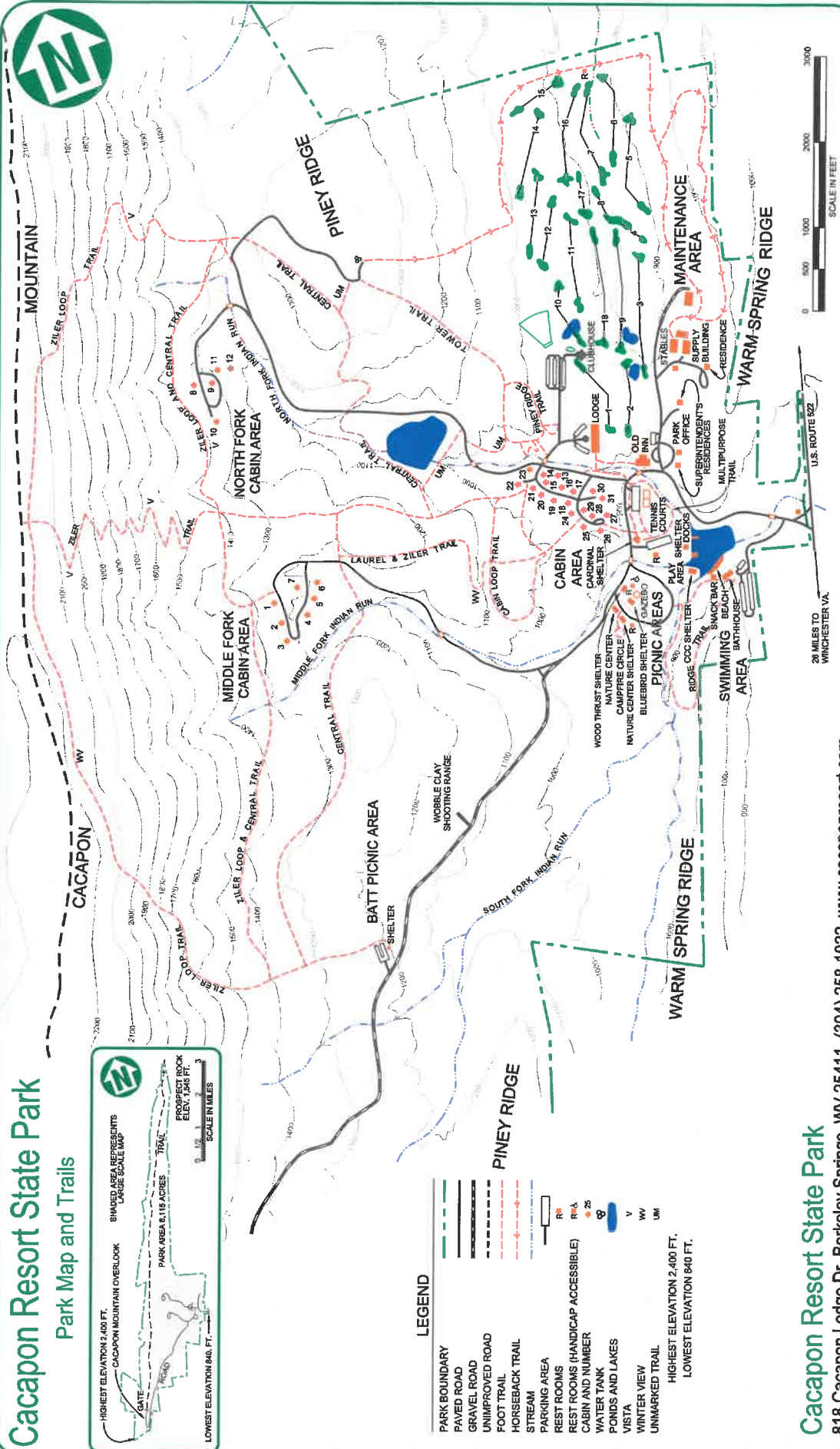
The Tuscarora Trail extends south from Pennsylvania through West Virginia and into Virginia and is used for hiking purposes. It cuts through the eastern part of Morgan County following a north south route, exiting into the Sleepy Creek Wildlife Management Area. It is considered a side trail to the Appalachian Trail.

Although not considered a greenway trail system in the sense of connectivity of specific destinations, the Sleepy Creek Wildlife Management Area, which is the largest single recreational



Cacapon Resort State Park

Park Map and Trails



Cacapon Resort State Park

818 Cacapon Lodge Dr, Berkeley Springs, WV 25411, (304) 258-1022, www.cacaponresort.com

Drawn By: Saldano Drafting Service LLC, daniel@csd.com File Name: Cacapon Resort State Park.dwg Date: 4/20/2016 10:35:55 PM

tract of land owned by the State, includes nearly 35 miles of trails for both pedestrian and vehicular access primarily for hunting activities. Vehicular access is limited to fall and winter seasonal activities, and ATV use is prohibited.

Given the length and location of existing trail systems located throughout Morgan County there is an excellent opportunity to integrate biking and pedestrian paths with new development and the County's stream system to create a regional trail network. This "greenway" network would provide an alternative means of travel connectivity among the County's towns and village centers as well as its historically significant and recreational sites.

This process would require strong public and private partnerships as many of the corridors are adjacent to private properties, are maintained by park services and civic organizations, or located in remote areas where safe accessibility would need to be established. However with careful planning and community involvement this network could increase neighborhood interaction, and attractiveness to draw visitors to the area.

Railroads

The main line of the Baltimore and Ohio Railroad parallels the entire length of Morgan County's boundary with Maryland and the Potomac River. This is part of the category A mainline owned by CSX, which crosses the northern portion of West Virginia from Parkersburg to Harpers Ferry. The segment within Morgan County has two or more parallel tracks.

The B & O line segment is listed in the State Rail Plan (West Virginia Railroad Maintenance Authority) as an active freight carrier of coal and other commodities. Traffic density is listed as carrying in the millions for gross ton per miles in both the eastward and westward directions. These are among the largest listed for any rail line in the region. A major rail siding location north of Berkeley Springs serves the US Silica Glass Corporation. The B & O line also carries the Amtrak Capital Limited, which provides daily passenger service from Cumberland, Maryland to Washington D.C. A train station is located at Hancock, but is no longer used. The closest passenger train service for Morgan County residents is located in Martinsburg, West Virginia.

Concern over the capability of the nation's railroads to transport essential Department of Defense supplies and equipment during both peacetime and wartime led to the identification of a national strategic rail corridor network (STRACNET). Based on extensive analysis of defense peacetime rail carload traffic, clearance requirements and contingency plans, several rail corridors are determined strategically important to national defense. The B & O line that passes through Morgan County is one of three STRACNET corridors that cross the State of West Virginia. The significance of STRACNET designation to Morgan County is that the B & O line is likely to remain an active rail line well into the future.

The Western Maryland Railroad also parallels the Potomac River on the Maryland side, with crossings into Morgan County at three locations. The segment from a point 8 miles west of Hancock, Maryland to Cumberland including stretches in Morgan County has been abandoned and the right-of-way purchased by the National Park Service for the development of a pedestrian

friendly hiker/biker trail. There is a short spur of the Western Maryland Railroad that connects the B & O system at Cherry Run to Hagerstown, Maryland and points east.

Air Facilities

The only airport in Morgan County is Potomac Airpark, which is privately owned and operated by Riverside Airpark, LLC. Commercially approved by the Federal Aviation Administration, the Airpark includes a 5,000' paved airstrip located just east of the bridge to Hancock, Maryland. The Airpark is currently available for emergency medical and rescue operations.

Within the region, commercial airports are located at Cumberland, Hagerstown, and Martinsburg. National airports are located further east and north in the Baltimore and Pittsburg metropolitan areas.

Public Transportation

Morgan County is currently not served by public transportation. However, with the increase in commuter traffic to the metro areas east, the Tri-State Rail Effort Committee, through a grant from the Appalachian Regional Commission, explored expansion of the MARC train system in 1997.

Findings from the report released in 2000 showed support from CSX to extend the MARC commuter service from its closest existing station in Martinsburg West Virginia to Hancock, West Virginia. A plan for extension included both a Service and Station Concept plan, with estimated capital costs. A market analysis was developed to project how operating impacts would be offset by ridership potential.

The study found that extension of the MARC commuter rail service from Martinsburg to Hancock would be economically feasible with the support of CSX. Improvements would include a weatherized passenger platform, lighted parking facilities, security fencing, and a new switching spur. Given the location of the station in close proximity to adjoining states, it was concluded that funding might be achieved through federal programs and participation by other states.

Since that study was completed in 2000, additional review of the logistics has returned less positive results. This includes factors which make the prospect much less feasible given the increased capital and operational costs of adding stations and manpower, ongoing difficulties and passenger delay from sharing of lines with the freight carriers, and more pointedly the actual costs per passenger projected to be well beyond initial expectations. Such difficulties have led a majority of the support for this expansion to conclude that it is not probable to proceed at this time.

Two public transportation services in the region include; the Eastern Panhandle Transit Authority, which provides bus service within Berkeley and Jefferson counties but discontinued service to Berkeley Springs in the 1990's due to lack of riders, and also the Amtrak Capitol Limited, which provides daily passenger rail service between Cumberland and Washington D.C.

Goals and Objectives

Goals

Transportation issues, too, are heavily influenced by regional conditions as well as the area's desirability as a tourist destination. Goals must address and try to reconcile the coexistence of through and local vehicular traffic while accommodating pedestrian and other non-motorized or recreational movement. Goals that will tend to improve transportation in Morgan County and address the major issues about which the community has expressed concern include:

- Relieving congestion on major thoroughfares such as WV Rt. 9 and US Rt. 522 and improving local roads so they become a more efficient intra-county network;
- Enhancing the quality and safety of local roads by ensuring that initial local road and related infrastructure construction meets standards, and supporting state efforts to identify and repair deficiencies in existing local roads and bridges;
- Expanding transportation options by promoting public transportation, alternate forms of transportation, public transit-oriented communities, and pedestrian-friendly walking and biking trails;
- Promoting tourist-friendly travel; and
- Facilitating commuter travel.

Objectives

Objectives that will facilitate the achievement of these goals include:

- Developing, evaluating and coordinating with the state priorities for road improvements, particularly those that will help relieve traffic on WV Rt. 9 and US Rt. 522 and provide alternate intra-county routes;
- Assessing the need for traffic calming devices in heavy pedestrian areas;
- Exploring the designation of additional main streets and historic byways for inclusion in state and federal funding programs and linking the Eastern Panhandle with the rest of the state;
- Exploring creative and interactive ways to get tourists to and from local attractions;
- Developing sign regulations to keep the locations and features of signs appropriate to their setting;
- Continue to work with the West Virginia Division of Highways regarding future development projects and permitting requirements;
- Reducing reliance on cars and accommodating the needs of a growing commuter population, assessing the need and developing the concept for a public transportation system, including as components of this system, expanded rail service to metropolitan areas and 'park and ride' lots; and
- Cooperate with the West Virginia Transportation Authority.

CHAPTER 4 – PUBLIC UTILITIES AND INFRASTRUCTURE

Introduction

Infrastructure is typically limited to those services found in an urban setting made available under finite conditions. These services include water, sewer, solid waste, electricity, communication and other related utilities. Most of these services are regulated by the Public Service Commission for rates to the customer and by State Environmental Authorities for capacity limitations and expansion. This arrangement governs the regulated cost to the consumer as well as the physical impacts expansion of such services may have on the community and environment.

This chapter provides an overview of the historical methods of provision and regulation of these services, as well as the current trends experienced by each. It also outlines existing and projected deficiencies in order to establish goals for both corrective measures and adequate realistic projections to ensure that services are extended appropriately for the foreseeable future.

Water

A water system is defined by the West Virginia Department of Health as any water system or supply which regularly supplies, or offers to supply, piped water to the public for human consumption, if serving at least an average of 25 individuals per day for at least 60 days per year, or which has at least 15 service connections. In Morgan County, there are three distinct methods by which water is provided. They include: public systems owned and operated by a government entity, community systems typically owned by an association of users and maintained by private contract, and private wells that are owned and operated to serve a limited number of customers or larger single user that still meets the above criteria.

Public Water Systems

The largest public water system in Morgan County is the Berkeley Springs Water Works (BSWW), located on the corner of Wilkes and Fairfax streets in the Town of Bath. This system, which draws its supply from mineral springs located at the base of Warm Springs Ridge on park property owned by the State Department of Natural Resources, serves more than 20% of the County's residents, including the Town of Bath and surrounding greater Berkeley Springs area. The system serves 1,354 customer's total, 1,135 residential, 187 commercial, 30 government agencies and 2 industrial. Total water taps are 1,600.

The Town leases from the State the right to take water from the springs in Bath Square to a maximum amount of 750 gallons per minute. The State rated allocation for this system is one million gallons per day. It is operated by seven full time employees and has an average usage of 275,000 gallons per day (gpd). The system has 5 storage tanks totaling 1,086,000 gallons.

The Town acquired the system from the Mountain State Water Company in 1963. Since that time major improvements were made in 1980 to address storage, treatment, and pumping needs. This included the addition of a 500,000 gallon storage tank and treatment system which was required due to a determination by the West Virginia State Department of Health and Human Resources that the springs are “under the influence of surface water”.

Since 2006, BSWW has completed projects which include replacement of over 100,000 feet of main and service lines and upgraded to electronic meter. With these improvements, the percentage of loss has gone from 67% in 2006 to 17% in 2016.

Currently, engineers are working on finding a second water source for the system and a line extension project that includes the extension of water lines from Rydersville Cycle on Route 522 to the Morgan County Business Park. A cost estimate for this extension is roughly 3.46 million.

Extension and improvements to the system to serve new development must be approved by the Bath Town Council, with the cost of such extensions borne by the developer. There are no written policies and procedures for new extensions which are subject to a predefined service area determined by the PSD.

Second largest of the public water systems, the Paw Paw Municipal Water Works was reconstructed in 1981 at which time the Potomac River replaced a series of wells as the source of raw water. This water plant provides chlorination and sedimentation treatment.

The Paw Paw water system serves 265 residential and commercial customers located within the Town limits. Daily metered water usage has averaged nearly 70,000 gpd over the past five years, slightly decreasing over time. This system, which is owned by the Town of Paw Paw, is operated under supervision of the Water Board and receives water through an appropriation from the Potomac River. The Town of Paw Paw has recently been awarded a grant through the Small Cities Block Grant Program in the amount of \$1.5 million to replace old water lines throughout the project area to serve more than 240 households.

Community Water Systems

Due to a growing number of larger subdivisions and industrial business parks being located along the major transportation routes throughout the county, there has been a continued increase in this type of system within the county. These systems are much like public systems in serving more than 15 connections or 25 people. However, unlike public systems they are owned by the association of users rather than a government entity and are maintained through user fees and contracted services.

Community systems as they exist across the State have experienced some difficulty with long-term maintenance and operation. This has led to increased scrutiny of the continued proliferation of these systems, most recently by the State Legislature under Senate Bill 760.

Individual Wells

There are a total of 19 private individual wells located throughout the County that serve more than 25 people daily but less than 15 connections, thus meeting the State classification of a water system. Most of these wells serve mobile parks, recreational facilities, or commercial and industrial centers. Given that many of these systems are developed and approved where extension to additional users is limited, or the infrastructure is antiquated, there is little room for expansion to provide for additional growth on these systems in the areas in which they are located.

Table 4-1 Water Systems (million gpd)

Name	Type	Source	Pop Served	Yield	In Use	Available
Apple Orchard Acres	Community	2 wells	60	0.0570	0.0062	0.0508
Autumn Acres	Community	1 well	75	0.0400	0.0050	0.0350
Autumn Acres	Community	1 well	116	0.0350	0.0070	0.0280
Berkeley Springs Water Dept	Public	Springs	2,440	0.4688	0.7000	-0.2312
Bob's Big Beef	Private	1 well	0	0.0461	0.0002	0.0459
Bowlerama	Private	1 well	0	0.0288	0.0004	0.0284
Cacapon Bed and Breakfast	Private	1 well	0	N/A	N/A	N/A
Cacapon State Park	Private	3 wells	100	0.1380	0.0210	0.1170
Caperton Furniture Works	Private	1 well	160	0.0075	0.0008	0.0067
Coolfont Mtn. Assoc.	Community	2 wells	0	0.0547	0.0170	0.0377
Coolfont Recreation	Private	2 wells	0	0.0734	0.0000	0.0734
Country Road Restaurant	Private	1 well	0	0.0022	N/A	N/A
Great Cacapon Elementary	Private	1 well	23	0.0259	0.0002	0.0257
Greenwood Elementary	Private	1 well	66	0.0432	0.0012	0.0420
Hillbilly Heaven Restaurant	Private	1 well	0	0.0864	N/A	N/A
Homestead Restaurant	Private	N/A	0	N/A	N/A	N/A
Morgan County Early Childhood	Private	1 well	23	0.0259	0.0002	0.0257
Morgan Industrial Park	Private	1 well	0	0.0864	0.0000	0.0864
Morgan Village MHP	Community	2 wells	94	0.1771	0.0083	0.1688
Panorama at the Peak	Private	2 wells	0	0.0202	0.0004	0.0198
Paw Paw Water Works	Public	Potomac	524	0.0605	0.0380	0.0225
Pleasant View Elementary	Private	1 well	151	0.0864	0.0011	0.0853
Skyline Village MHP	Community	2 wells	120	0.0187	0.0071	0.0116
Tri-Lake Campground	Community	2 wells	178	0.1296	0.0085	0.1211
Troubadour Restaurant	Private	1 Well	0	N/A	N/A	N/A
VFW Post	Private	1 well	0	0.0259	N/A	N/A
Waugh's MHP	Community	2 wells	144	0.0864	0.0110	0.0754
Total		33 wells	4,251	1.8558	0.8334	0.8791

Source: West Virginia Department of Health and Human Resources

The Morgan County Health Department requires permits for individual well installations. Properties that are located within the 100-year floodplain as determined by the Federal Emergency Management Agency (FEMA) face restricted permitting and installation of wells for the Morgan County Health Department currently has restrictions on permitting within flood prone areas.

Morgan County Water Resource Study

The Morgan County Water Resource Study being developed along the same time frame as the Comprehensive Plan update by the Eastern Panhandle Conservation District will be used to recommend the most cost effective means of meeting future water demand through 2030. The study focuses on the priority population areas that would be served by public water sources.

The report, which was in draft form during this Plan update, breaks the County into three priority areas where development potential has increased, and includes approximately 8,000 people. Several assumptions made in the report are based on 75% of the low and high growth scenarios as outlined in Chapter 1 of this report, and that 75% of new growth would occur in the priority areas, with 50% of the ultimate priority area population being served by public water. The report provides further analysis of commercial and industrial water needs as well as water system loss that create an average daily demand of 1.86 million gpd and peak daily demands of more than 2.7 million gpd by 2030.

After identifying projected water demand, the Study evaluated four possible scenarios including impoundment, river intakes, groundwater and purchasing water from a nearby utility with the primary objective of recommending a course of action from one or more of these scenarios to meet future demand.

The study considered four possible alternatives to meet future demand with costs ranging from an estimated 29 million to more than 31 million dollars with groundwater resources for all three areas scoring the highest of the four scenarios being considered.

The Study also provides for evaluation of meeting future demand through development of groundwater supply. This would allow for independent systems to be located in each of the three identified priority areas. From this approach there were three necessary stages outlined to achieve implementation of this recommendation with the ultimate goal of utilizing six wells within various high yield aquifers. These stages would require identification, testing, and engineering of well resources.

Linking the analysis of the Water Resource Study with the USGS Report summarized later in this chapter provides an outline of what direction the County may need to proceed in. This will guide the County in efforts to develop future water sources to meet projected demand and in turn determine where and how those resources may be negatively impacted by activity in other aquifers.

Sewer

A sewer system is defined by the West Virginia State Department of Health as any sewage collection system with or without treatment facilities with a daily design flow exceeding one thousand (1,000) gpd with sub-surface discharge or exceeding six hundred (600) gpd with surface discharge serving one or more dwellings or establishments and owned and maintained by one entity. In Morgan County three types of systems fall under this definition. They include: public systems owned and operated by a government entity, community systems typically owned by an association of users and maintained by private contract and individual systems typically serving a large commercial establishment. A fourth type of sewage treatment system, not

typically regulated through monitoring as the three above, is one which serves only one lot and can include such common methods as a typical septic or, due to unique circumstances of a property, may utilize alternative methods such as sand mounds.

Public Sewer Systems

The largest public sewer system in Morgan County is the Warm Springs Public Service District (PSD). The District is governed by the Warm Springs Public Service District Board, which includes a three-member board appointed by the County Commissioners, covering many areas of the County, excluding the Town of Paw Paw.

The Warm Springs system in Berkeley Springs, serves 1,297 customers with an average annual flow of more than 780,000 gpd between 2012 and 2016. This plant, which opened in 1980, has received minor upgrades in 1989, 1990, 1994, and 2002. A major plant upgrade was completed in 2013 that increased the design flow to 1.7 million gallons per day. This included further extension and improvements to inflow and infiltration in the system and allows for approximately 1,000 additional customers.

A smaller sewer system that is also owned and operated by the Warm Springs PSD is the Great Cacapon Waste Water Treatment Plant, located on Stinebaugh Lane in Great Cacapon. This system opened in 1999 and serves approximately 123 customers within the unincorporated area of Great Cacapon. The Plant is rated for 60,000 gpd, but receives an annual average flow of 10,500 gpd. There are no current plans for expansion of this system, which has an available capacity of 45,000 gpd, or approximately 180 additional customers.

The Town of Paw Paw Sewer System serves 265 residential and commercial customers. The sewer system opened in 1964, with upgrades to its lagoon in 1988, line extensions in 2000 and pump station upgrades in 2002. In July 2013, construction on the sewer system was completed replacing approximately 10,000 linear feet of sewer lines, 40 manholes, tied in 110 existing laterals and replaced the existing lift station which included installation of new pumps. The Paw Paw Sewer System is identified in the WV Watershed Implementation Plan (WIP) as a non-significant facility, meaning the discharge is less than 250,000 gpd. Non-significant facilities are currently not required to reduce their loads, only to maintain and hold existing loads. Should the Town wish to expand the sewer system in the future, the additional load offset would need to be demonstrated before the Department of Environmental Protection would issue a permit. As there is limited growth currently within this area, there are no immediate plans for expansion of personnel or facilities.

Community Sewer Systems

With the development larger subdivisions and business parks along the major transportation routes, there has been a continued increase in this relatively new type of system. These systems are much like public systems in serving more than one dwelling and/or establishment. However, unlike public systems they are owned by an association of users rather than a government entity and have experienced some difficulty with long-term maintenance and operation. This has led to

increased scrutiny of the continued development of these systems, most recently by the State Legislature under Senate Bill 760.

Individual Systems

There are a total of 4 individual private septic systems that meet the State classification of a sewer system. Most of these systems serve recreational facilities or commercial centers. Given that many of these systems are developed and approved where extension to additional users is limited, or the infrastructure is antiquated, there is little room for expansion to provide for additional growth on these systems in the areas in which they are located.

Septic & Alternative Methods

The most common form of sewage service for the more rural areas within the county is by means of individual septic systems. Although the county does allow for alternative methods in certain circumstances, these types of systems have become more obsolete with regulatory measures, technological advances, and decrease in development in sensitive areas.

Table 4-2 Sewer Systems (million gpd)

<u>Name</u>	<u>Type</u>	<u>Discharge Source</u>	<u>Capacity</u>	<u>In Use</u>	<u>Available</u>
Cacapon East	Community	Indian Run	0.0100	0.0000	0.0100
Cacapon South	Community	Indian Run	0.0380	0.0043	0.0337
Cacapon State Park	Public	Indian Run	0.0500	0.0127	0.0373
Camp Harmison	Private	Sleepy Creek	0.0055	N/A	N/A
Coolfont Recreation	Private	Sir Johns Run	0.0560	0.0400	0.0160
Coolfont Mt. Assoc.	Community	Sir Johns Run	0.0195	0.0098	0.0097
Morgan Village MHP	Community	Cherry Run	0.0350	0.0079	0.0271
Paw Paw SS	Public	Potomac River	0.2000	0.0592	0.1408
Ridge View Inc	Community	Dry Run	0.0270	0.0010	0.0260
Skyline Village. MHP	Community	Dry Run	0.0110	0.0061	0.0049
Tri-Lake Campground	Community	Sleepy Creek	0.0300	0.0000	0.0300
Valley Dale Subdivision	Community	Sleepy Creek	0.0100	0.0045	0.0055
Valley View Nurse Home	Private	Sleepy Creek	0.0350	0.0136	0.0214
Warm Springs PSD	Public	Warm Springs Run	0.4000	0.6000	-0.2000
Waugh's Com Home Park	Community	Sleepy Creek	0.0147	0.0061	0.0086
Wayside LLC	Private	Sleepy Creek	0.0050	0.0014	0.0036
522 Industrial Park	Community	Sleepy Creek	0.0250	0.0000	0.0250
Total			0.9717	0.7666	0.1996

Source: West Virginia Department of Environmental Protection

Water and Sewer Plan Limitations

Septic Systems

In considering parameters for planning water and sewer facilities, it is informative to review pertinent physical features within the county. These key features, as outlined in Chapter 6, are slope and soils. As slope increases, care must be taken in land development to prevent soil

erosion and improperly installed systems. Twenty-five percent slope is the generally accepted limit for structural development and is the regulatory limit in West Virginia for the installation of septic systems. Approximately 21% of Morgan County falls within a slope range of 15 to 25%. An additional 30% of land is between 8 and 15% slope. Only 5% of the County can be considered relatively flat at a slope of less than 8%. This means that nearly 45% of land within the county is greater than the 25% allowable limit under State law.

In addition to slope, soil suitability should be considered when evaluating sites for development. The soil material between depths of 18 inches and 6 feet is evaluated for septic drain field use by means of a Soil Survey. The soils properties considered are those that affect the absorption of effluent and construction and operation of the system. Properties that affect absorption are permeability, depth to water table, and susceptibility to flooding. Slope is a property that affects difficulty of layout and construction and also the risk of soil erosion, lateral seepage, and down-slope flow of effluent.

Properties that are located within the 100-year floodplain as determined by the Federal Emergency Management Agency (FEMA) face potential restrictions on septic system permitting and installation. The Morgan County Health Department currently has restrictions on permitting within flood prone areas. A property owner can appeal a decision to the Morgan County Board of Health.

Limitations of the use of a particular soil for septic system use are expressed as slight, moderate, and severe. A rating of severe indicates the soil has serious limitations that are difficult, though not impossible to overcome. A review of available data for soils present in Morgan County indicates a severe limitation on the use of septic systems for all but less than 1% of the County's land area. When compared to available slope data, nearly the entire county is severely limited for septic systems. However each site is determined on a case-by-case basis by the Morgan County Health Department based on State review standards.

The Morgan County Health Department issued 715 septic permits from 2006 through 2015. Well permits total 804 for the same time period.

The lack of adequate sewage disposal systems is typically brought to the attention of the Morgan County Health Department through citizen complaints. The most frequent complaints of such failures have occurred along US Rt. 522 south of Berkeley Springs. This is due in part to high water tables and poor percolation in these areas, or aging systems, all of which may be resolved through extension of service to these areas.

Surface Water Quality

Surface water quality in the West Virginia portion of the Potomac River Basin is generally good. Water quality parameters evaluated include dissolved oxygen, pH temperature, metals and conductivity.

There have been occasional violations for fecal coliform bacteria which is indicative of either human or animal waste entering the streams from failing septic or agricultural activity. Also, the

Potomac River is subject to inadequately treated and occasional raw sewage discharge from various public systems both north and south of the County.

Water quality of the Cacapon River is considered excellent as reflected by available chemical data collected on a regular basis. Like many of the streams in the Eastern Panhandle that are unaffected by mine drainage, the Cacapon has an excellent pH value and has tested well for acidity, hardness, oxygen levels, and alkalinity. There have been few instances of fecal coliform standard violations, as well as few instances of metal readings exceeding State standards.

The Sleepy Creek watershed is also a major contributor to the Potomac River Basin. Sleepy Creek's source lies near the Hampshire County, West Virginia border at Good, north of Virginia State Highway 127 in Frederick County, Virginia. From Frederick County, Sleepy Creek flows north through Morgan County and drains into the Potomac at Sleepy Creek on the old B & O Railroad mainline. It includes a wide drainage area made up of numerous tributaries including; Bear Garden Run, Hands Run, Breakneck Run, Indian Run, Rock Gap Run, Middle Fork Sleepy Creek, South Fork Sleepy Creek, Mountain Run, Yellow Spring Run and Meadow Branch.

The potential exists in Morgan County for water quality problems due to sediment and nutrients loadings, which occur after heavy rains in areas of agricultural and construction activities. Sediment often includes organic and inorganic pollutants from fertilizers, pesticides, animal waste, and constructions materials. Chemical pollutants may be toxic to fish, and may be retained in fish, which have eaten contaminated organisms. Over a period of time, sediment fills watercourses covering bottom dwelling organisms and contributing to increased flooding potential. By increasing turbidity or cloudiness of water, sediment and nutrients reduce light available for growth of aquatic plants and animals. For these reasons, it offers the potential to significantly reduce the health, scenic and recreational value of Morgan County streams.

Storm Water Management

The West Virginia Department of Environmental Protection's Storm Water Permit Team is responsible for administrative and technical review of applications and storm water pollution prevention plans submitted for coverage under storm water general regulations. There are three General Storm Water Permits:

- The Storm Water Construction permit covers all earth-disturbing construction activities that are one acre or greater.
- The Multi-Sector Storm Water permit covers storm water effluent from certain industrial activities.
- The Municipal Separate Storm Sewer Systems permit covers storm water discharges from certain municipalities and other public entities.

Groundwater

Precipitation is the chief source of water in Morgan County. Although precipitation is intermittent, water is continually moving from storage in the underground rock structure to

streams and from streams back into the ground. In general, groundwater movement parallels the land surface, moving from ridges to the valleys, where it discharges to springs and streams.

Water is found in practically all rock formations of the Potomac River Basin, of which Morgan County is a part. However, the quantity of water largely depends on the kind, size, and degree of interconnection of the openings in the rock. The largest groundwater supplies are available from areas underlain by sandstone and limestone bedrock, which contain fractures and solutional cavities through which groundwater can move easily. The least water is available from shale, which contains very few openings of this type. Shale is more plastic than sandstone or limestone and at greater depths the weight of overlaying rock squeezes openings shut.

There are two strips of land along either side of Cacapon Mountain where groundwater availability can be reflected in well yields from 100 to 200 gallons per minute. The remaining areas of the county report lower well yields of 0 to 70 gallons per minute due to geologic structure.

The most frequent groundwater quality problem in Morgan County is high mineral content. Groundwater beneath the ridges has a lower concentration of dissolved minerals than beneath valleys because the ridges are mainly recharge areas and the valleys are mainly discharge areas. A well on a ridge draws relatively pure groundwater near the beginning of its flow path. A well in a valley draws comparatively impure groundwater, which is near the end of its flow path, has been exposed to bedrock longer, and has picked up dissolved minerals along the way. Based on available data, the ridges along the west side of Cacapon Mountain have produced higher quality water than the Sleepy Creek Valley to the east. Further, areas east of the Cacapon ridge have experienced excessive iron content and hardness due primarily to the slow movement of water through areas underlain by shale.

There is a greater potential for groundwater contamination in limestone areas because of the presence of solutional cavities and sinkholes through which contaminated water can enter without being filtered through the soil mantle. This type of pollution is more frequently found in the Great Valley of which Berkeley and Jefferson counties form a part. Although such regions are not the only areas susceptible to contamination, the sparsely populated areas underlain by shale and sandstone in Morgan County have not produced any major problems.

Maintaining high quality groundwater is important to Morgan County as the number of residents who rely on groundwater for drinking and domestic use has doubled from nearly 7,500 in 1980 to more than 14,000 in 2000. It is also important for industry and particularly for those enterprises which rely on pure spring water such as the water bottling companies in Berkeley Springs, the Ridge State Fish Hatchery and the baths of Berkeley Springs State Park.

West Virginia Conservation Agency USGS 2005 Report

The West Virginia Conservation Agency and Eastern Panhandle Conservation District worked with the US Department of the Interior and the Geological Survey to develop a report on groundwater resource information in 2005. This report was conducted to analyze the

hydrogeologic, geochemical, and water-quality characteristics of aquifers and springs within the County.

The report provides a very technical and comprehensive analysis of 91 wells and 8 spring sites throughout the County, primarily located within Cacapon and Sleepy Creek mountain drainage areas. The study reviewed in part the relationship of geology and ground flow, aquifer properties, water levels, and chemical make up and influence. A major component of this report was the determination of the level of transmissivity occurring between the aquifers, or how each of the areas were interacting throughout the various aquifers within the watersheds.

Although the summary and conclusion to the report does not include definitive analysis of individual areas, it does provide an outline for how conceptually the results assume the various factors exist within the overall hydrogeologic system. This includes levels of transmissivity, and thus, potential for influence within the system for water resources to be affected by different geochemical levels being spread throughout the groundwater system.

Chesapeake Bay Initiative

With a land-to-water ratio higher than any estuary in the world the shallow 4,000 square-mile Chesapeake Bay is a delicate natural system especially vulnerable to development and pollution. How the land in the watershed is treated and cared for profoundly affects the Bay's overall health.

The Chesapeake Bay is the largest of the 130 estuaries in the United States. It receives about half of its water volume from the Atlantic Ocean, with the Susquehanna River providing approximately 50 percent of its freshwater. The Chesapeake Bay watershed spans parts of six states (Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia) and the District of Columbia. There are about 150 major rivers and streams in the Chesapeake drainage basin, and the basin is home to roughly 16 million people most of which are clustered around the Bay and its tidal rivers. Over the next 30 years the basin's population is expected to increase by 3.7 million people, or nearly 25 percent.

The Bay supports more than 3,600 species of plants, fish and animals, including 348 species of finfish, 173 species of shellfish and over 2,700 plant species. In addition, the region is home to 29 species of waterfowl and is a major resting ground along the Atlantic Migratory Bird Flyway. Every year, one million waterfowl winter in the Bay watershed.

Current Restoration Plan

Restoration of the Chesapeake Bay involves a very strong sense of cooperation, with a dominant State role. Goals are set in voluntary agreements between the states through a series of directives and statements which serve as executive orders adopted by each State. Since 1910 there have been more than 100 actions or initiatives that have led to the establishment of a large-scale restoration program in the Chesapeake Bay watershed.

The Chesapeake 2000 Agreement provided goals and objectives for Chesapeake restoration through 2010 and is the current restoration vehicle for the ecosystem. The Agreement outlined over 80 specific objectives to be achieved to restore and protect the Bay's living resources, habitats, and water quality. Commitments focus on the topics of Living Resource Protection and Restoration; Vital Habitat Protection and Restoration; Water Quality Protection and Restoration; Sound Land Use; and Stewardship and Community Engagement. The agreement outlines these initiatives through several primary goals based on the following principles of implementation:

- Restore, enhance and protect the finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem.
- Preserve, protect and restore those habitats and natural areas that are vital to the survival and diversity of the living resources of the Bay and its rivers.
- Achieve and maintain the water quality necessary to support the aquatic living resources of the Bay and its tributaries and to protect human health.
- Develop, promote and achieve sound land use practices which protect and restore watershed resources and water quality, maintain reduced pollutant loadings for the Bay and its tributaries.
- Promote individual stewardship and assist individuals, community-based organizations, businesses, local governments and schools to undertake initiatives to achieve the goals and commitments of this agreement.

West Virginia's Role in the Chesapeake Bay

West Virginia's portion of the Chesapeake Bay watershed is the land that drains into the Potomac River and its tributaries and a small area that drains into the James River. Fourteen percent (14%) of West Virginia drains into the Potomac River and on to the Chesapeake Bay. The Chesapeake Bay drainage area in West Virginia includes Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton and small portions of Preston and Tucker counties. The headwaters of the James River is in Monroe County.

To better protect and restore local water quality in the Shenandoah and Potomac Rivers and the Chesapeake Bay, on June 18, 2002, West Virginia officially committed as a "headwater partner" in the Chesapeake Bay Program. This Memorandum of Understanding created a seven state partnership and reaffirmed West Virginia's obligation to voluntarily maintain and protect the Potomac River watershed.

Since becoming a "headwaters partner," West Virginia has been an active participant in numerous Chesapeake Bay committees, subcommittees and workgroups. These groups established water quality objectives for all seven jurisdictions involved in the Chesapeake Bay

Program. West Virginia spent one year developing its tributary strategy and anticipates achievement of these objectives by 2010.

The addition of Nitrite, TKN, Total Suspended Solids, Suspended Sediment Concentration and occasional sand/fine splits allows West Virginia to comply with sampling protocols set forth by the Non Tidal Water Quality Workgroup. The new parameters, as well as the existing nutrient analysis, will be applied to samples collected from drains to the North Branch of the Potomac River, the mouth of the South Branch, the Potomac River main stem and its direct tributaries. These samples will be collected monthly through at least 2010.

Like all of the Bay States, West Virginia has been actively involved in pollution reduction programs for over twenty years. Bay program partners agreed to develop and carry out cooperative and voluntary Tributary Strategies to reduce the flow of nutrients and sediment loads to the Potomac River, and ultimately to the Chesapeake Bay. The goal is to improve water quality without placing undue hardships on community resources. Throughout West Virginia, communities are voluntarily improving wastewater treatment, upgrading storm water control systems and developing controlled growth plans.

The policies, goals and objectives of this Comprehensive Plan have been developed to meet this effort at the local level given the County's primary drainage pattern flows into the Potomac River, and ultimately the Chesapeake Bay.

Solid Waste

Solid waste services are provided to the residents and businesses of Morgan County through a variety of means. Although the County no longer provides a local landfill, it does have two solid waste haulers and a growing recycling program.

Morgan County Solid Waste Authority

The Morgan County Solid Waste Authority, established by State Legislation in 1988, consists of 5 volunteer board members. They completed a comprehensive Solid Waste and Litter Control Plan in 2012. This Plan outlines an assessment of solid waste problems in the county and an evaluation of solid waste disposal methods applicable to the county including recycling. It also speaks to the adequacy of the provision of solid waste disposal services to the county, the separation of source solid waste and its impact on the LCS Waste Services Landfill in Berkeley County, the clean up of open dump sites and litter along roadways and evaluation of the ongoing recycling program and its expansion needs. The Plan also provides goals and objectives, prioritization of monitoring of existing services and development of funding strategies to carry out the plan.

A second study completed by the Morgan County Solid Waste Authority is the Commercial Solid Waste Facility Siting Plan Amendment. This Plan, through criteria established for review of possible acceptable locations for development of a new landfill within the county, determined that there is no present site within the county suitable for location of a land fill and further that

the current use of the LCS Landfill in Berkeley County was sufficient to serve the future projected needs of Morgan County through the Plan period.

A concern identified by the Solid Waste Authority Plans was the proliferation of illegal dump sites. To address this issue the Authority partnered with the West Virginia Department of Environmental Protection and achieved clean up of more than 35 locations to date, reclaiming 49 acres of land and removing 749 tons of waste.

Landfill

Morgan County currently does not have a landfill located within its boundaries. Instead, both haulers and citizens transfer the waste to the landfill located in Berkeley County.

The landfill previously used in Morgan County is located on Milo School Road in Cacapon district. It discontinued operations in 1993 due to changing regulatory issues and State standards that the facility could not practically meet. There was adequate land still available at the time of closure to provide service to the County for the foreseeable future. Since that time, ownership of the "used" portion of the land was transferred to the Morgan County Solid Waste Authority for use as a recycling transfer station, while the County retained the vacant remainder.

Hauling Service

Morgan County is served by two trash haulers both of which haul trash out of the county to the LCS landfill in Berkeley County. The Town of Bath provides trash pick-up within the municipal limits of the town and Morgan Sanitation serves all other areas within the County. Both services are headquartered in the Town of Bath. Unlike the municipal service provided by Bath, Morgan Sanitation is a privately owned company. Morgan Sanitation, now owned by Apple Valley Waste and being the larger provider, serves more than 4,000 accounts of which more than 100 are nonresidential. The Town of Bath serves nearly 500 accounts, with more than 100 being nonresidential. Based on the Solid Waste Authority report in 2012, the LCS landfill receives waste from US Silica and other haulers which accounts for nearly 20% of waste received from Morgan County under separate direct service contracts.

Recycling

Over the past decade Morgan County has developed a successful recycling program. This program, which was initiated in 1994, is operated under the Morgan County Solid Waste Authority located on Washington Street in Berkeley Springs. It continues to offer recycling sites and additional permanent containers for cardboard at schools and businesses. The Authority consists of three part time paid recycle coordinators, five volunteer directors and volunteer assistants.

On December 15, 2008, the Charles R. Biggs Recycling Center was opened on Route 522 at 2990 Valley Road, Berkeley Springs. Five trailers were purchased to haul recycled materials to the market. The center currently recycles all plastics, except Styrofoam, cardboard, mixed paper, steel cans and scrap metal, aluminum cans and glass. The center is open two days a week,

Fridays 11a.m.-5p.m. and Saturdays from 8:30 a.m. to 3:00p.m. It is operated by three part time employees.

In addition to the recycling program, there are two commercial providers of tire recycling within the county, following State legislation regarding this material passed in 2000 and the inception of voluntary programs of these business entities, illegal disposal of tires has greatly diminished in Morgan County as well as elsewhere statewide. This program is further supported through the efforts of the State Roads department which periodically takes tires for recycling as well.

Table 4-3 Recycling Materials (thousand pounds)

Year	Paper	Cardboard	Steel	Aluminum	Glass	White Goods	Plastic	Comm. Service	Total
1995	33.3	N/A	2.3	1.1	8.7	1.5	N/A	N/A	47.1
2000	403	595.6	16.0	2.6	52.4	32.4	3	985	1,106.3
2005	673.3	335.3	18.8	2.3	82.5	0	6	0	1,118.4
2011	737.8	270.9	35.1	8	149.7	N/A	53.6	N/A	1,303.2

West Virginia Solid Waste Management Board

Morgan County is included in Watershed E of the West Virginia Solid Waste Management Plan for 2011. Under this Plan, it is projected that the County's population will increase by more than 17% between 2005 and 2025 for a total projected 20,265 residents. From these projections, the Plan estimates that the total monthly municipal tonnage for waste will increase from the current 947 tons per month to 1,126 tons per month.

There are several significant factors that do not appear to be included for consideration in the report, such as the efforts of the County to reduce waste through recycling efforts. It also does not address the issue of the LCS landfill in Berkeley County requiring a change in classification once it exceeds 10,000 tons per month, which from the current loads is projected to occur within the Plan period. However, possibly the most important factor in the Plan is its low population projection of only 17% growth. This projection fails to reach even the lowest growth projection outlined in the Growth Scenarios section of Chapter 1 of this Comprehensive Plan, and falls more than 9,000 residents short of the medium growth scenario for the same period.

Miscellaneous Utilities

Morgan County is served by First Energy for our electricity. There are 11,328 customers served. There are no plans for expansion at this time.

Morgan County residents receive phone service through the Verizon and Frontier networks.

Propane gas is provided to certain areas of the County by Blueflame, Inc. and Thompson Gas.

A proposed natural gas pipeline that would be accessible to the northern end of the county could be developed within the next couple of years. Natural gas is a highly desirable infrastructure asset.

Goals and Objectives

Goals

The County's goals concerning infrastructure are aimed at protecting critical water supplies, managing waste and matching growth to the resources available in the county by:

- Evolving reasonable approaches to ensure that patterns of future residential and commercial development are congruent with water and sewer capacity;
- Encouraging the placement of high density development in areas served by central water and sewer systems;
- Recognizing and protecting sensitive groundwater recharge areas and encouraging water conservation;
- Encouraging recycling and discouraging illegal waste disposal;
- Promoting stable, state-of-the-art communication and other technology infrastructure to provide efficient communication links for citizens and government and make the county an attractive business location; and
- Encouraging the establishment of riparian buffers along rivers and streams within the county.

Objectives

The following objectives will serve to advance these goals.

- Evaluating on an ongoing basis, e.g. via a master plan, the quantity and quality of available water resources and sewer capacity;
- Encouraging expansion of public sewer systems into areas where the condition is not well suited to septic systems;
- Considering the impact of and limitations on commercial sales of water and the conditions under which this might be done;
- Promoting the development of a water and sewer master plan that would include (but not be limited to) components addressing inflow and infiltration flow (I&I) to maximize the efficiency of projected water and sewer capacities, the reservation of corridors for future water and sewer infrastructure, and the merits of merging existing public water and sewer districts;
- Supporting state initiatives to limit homeowners' associations (HOA) ownership and maintenance of community water and sewer facilities;
- Providing impetus for improved management of on-lot wastewater systems.
- Evaluating long term needs for a landfill;
- Supporting the Morgan County Solid Waste Authority Plan, and the Berkeley County plan that directs solid waste disposal in the landfill in that county;

- Evaluating and promoting methods to reduce littering, including optimum placement of litter receptacles in public areas and an 'adopt a highway' program;
- Investigating ways to increase recycling of solid waste; and
- Supporting development of high speed Internet access throughout the County.

CHAPTER 5 – PUBLIC SERVICES

Introduction

Planning for future growth in Morgan County must take into account the provision of public services. Because all future land use proposals will create a need for expanded public services, the County must evaluate how those services are currently provided in order to ensure adequate provision will be made as growth occurs. If such services are found to be currently inadequate, then the most appropriate first step is to develop solutions to address existing deficiencies.

Due to the absence of zoning designations, it is especially desirable to integrate this chapter into future land use decisions. Without the ability to determine with some certainty the future density and types of proposed land uses, it is important to have an intimate understanding of available public services to determine how each proposal may affect them. These services, which are separate from those outlined in the preceding chapter on infrastructure, typically include general tax funded operations such as schools, police, fire & rescue, libraries, medical, historic & cultural and local government.

Educational Facilities

Educational opportunities are provided for both youth and adult residents of Morgan County by facilities located within the County and surrounding region. This includes head start programs for toddlers, K-12 public system, vocational institutions and numerous small colleges and universities.

Morgan County Public Schools

As with most jurisdictions, possibly the largest publicly-funded service is the Morgan County Schools System. School systems are required to develop and adopt a Master Plan. For Morgan County, a Plan was developed and adopted in 2010 and is referred to as the Comprehensive Educational Facilities Plan (CEFP).

The primary purpose of the Comprehensive Educational Facilities Plan for 2010 to 2020 is to establish a planned, organized, systematic approach to providing educational facilities which will support the county school system in the delivery of the best possible education to its students within the parameters of available resources. The content of the CEFP will take into consideration student health and safety, economics of scale, demographics and travel, multi-county projects, curricular improvements, educational innovations and adequacy of space for projected enrollments and will result in the accomplishment of the county's educational goals and objectives. The School System reviews this Plan during the plan period and makes updates as necessary to address annual changes.

The plan provides an outline of the schools as they existed in 2010, methods to address deficiencies, student population projections, and methods to manage increased enrollment over time.

The Morgan County Public School system is made up of 8 public schools, which include a total State-rated capacity of 3,126 students. Enrollment for the system has decreased from a 2005 enrollment of 2,584 to 2,350 in 2015. Based on the 2015 enrollment figures and the State-rated capacities of 3,156 seats, there are an estimated 806 available seats within the system. .

Table 5-1 Morgan County Public Schools

School	District	2015 Enrollment	Capacity	%	Seats Available
Morgan Co. Child Dev. Ctr.*	Cacapon	119	N/A	N/A	N/A
Greenwood Elementary	Timber Ridge	51	70	73%	19
Paw Paw Elementary	Cacapon	98	170	58%	72
Pleasant View Elementary	Sleepy Creek	120	147	82%	27
Widmyer Elementary	Bath	388	525	74%	137
Warm Springs Intermediate	Bath	391	500	78%	109
Warm Springs Middle	Bath	470	672	70%	202
Berkeley Springs High	Bath	735	802	92%	67
Paw Paw High	Cacapon	97	270	36%	173
Total	9 schools	2,350	3,156	70%	806

* Note: Child Development Center is not included in total figures.

Source: Morgan County Public Schools

The Morgan County Board of Education office opened in 1956 and is currently located on Harrison Avenue in Berkeley Springs which was previously operated as North Berkeley Elementary School. Since its original start it added 2 rooms in 1975 and an annex in 1983. Total staffing is currently at 29 full time personnel, and there are plans to add a Maintenance Warehouse for maintenance department services.

The Morgan County Child Development Center, which includes Headstart, is located in what used to be the Great Cacapon Elementary School. This program was created in 1975 as a head start for children before entering kindergarten. Its primary service area is the Berkeley Springs attendance zone, and included a 2015 enrollment of 119 children. There are 57 professional staff and 15 service staff who operate the program. There are no plans for expansion of the facilities or operational needs as the overall growth in the program has experienced an increase from 79 children in 2001 to 119 in 2015.

Greenwood Elementary School located in the Timber Ridge district opened in 1956, and is located on Winchester Grade Road. It was expanded in 1975, adding both office space and additional classrooms. The State-rated capacity is 70, with the school experiencing a decline from 55 students in 2005 to 51 in 2015. Due to budget cuts and constraints, the Morgan County Board of Education made the decision to close this school at the end of the 2016 school year.

Students and staff will be dispersed to other schools within the system. Future use of the building is undetermined at this time.

Paw Paw Elementary School is a split school that feeds directly into Paw Paw High School, and serves grades K-6. It is located on Pirate Circle in Paw Paw and has experienced a decline in enrollment from 120 in 2005 to 98 in 2015. The school has a State rated capacity of 170 students. The current enrollment is served by 16 professional and 6 service staff.

Pleasant View Elementary School, located on Martinsburg Road in the Sleepy Creek district, is currently under capacity at 120 students. There are no plans for any future additions beyond the single addition completed in 1989, which expanded the school during a period of higher growth in this area of the County. The total staffing is 10 professional and 6 service personnel.

Widmyer Elementary School is the largest elementary school in the County, serving 363 students in grades K-2 in 2015. This attendance area was originally served by North Berkeley Elementary School until the new Warm Springs Intermediate School opened in 2005 to serve grades 3-5. This school received a new gym in 2005. The current staffing is 30 professional and 19 service personnel.

Warm Springs Intermediate School, the newest elementary school which opened on Warm Springs Way in the Bath district in 2004, serves grades 3-5 for total student enrollment of 391 in 2015. This number has decreased from 530 in 2001. This school, which operates with 30 professional and 12 service staff, serves the Berkeley Springs attendance zone.

Warm Springs Middle School is the only traditional 6-8 middle school in the County. This school is the second most recent addition to the system, opening in 1998 and adding 4 additional classrooms in 2003. Enrollment has not reached the 672 student State-rated capacity; instead it has steadily declined from 572 in 2005 to 470 in 2015. It is fed by Warm Springs Intermediate and Pleasant View and Greenwood elementary schools. It is served by 42 professional and 13 service staff.

Berkeley Springs High School is the single largest school in the County system at 802 State-rated capacity. At 735 students in its 2015 enrollment figures, it does have some room to accept additional growth in its feeder area. The school is also one of the oldest in the system, opening in 1939 on Concord Street in the Bath district. Since that time, it has received numerous upgrades including expansions in 1975 and 2001, Arts and Humanities programs in 1963, a new gymnasium in 1975 and a vocational building in 1986. The school operates with 56 professional and 15 service staff, which is the largest number of personnel at any one school in the system.

Paw Paw High School is a joint middle and high school, including grades 7-12. Rated to handle 270 students, this school, which opened in 1956, has a current enrollment of 97 students. The School includes 10 professional and 3 support staff. Its service area includes much of the Cacapon district. The school received an expansion to include shop and band programs in 1960. However, as enrollment has remained steady since 2001 there are no current plans for future expansion.

Table 5-2 Morgan County Public School System Services

School	Acreage	Facilities	Professional	Service
Morgan Co. Child Dev. Ctr.	2	1 building	57	15
Greenwood Elementary	8	2 buildings, play fields	8	4
Paw Paw Elementary	15*	1 building, play fields	17	6
Pleasant View Elementary	5	1 building, play fields	15	5
Widmyer Elementary	12	1 building, play fields	37	18
Warm Springs Intermediate	100**	1 Building, play fields	34	12
Warm Springs Middle	100**	1 building, play fields	46	14
Berkeley Springs High	8	5 buildings, 1 varsity field	57	15
Paw Paw High	15*	1 building, 2 varsity fields	15	2
Total	150		286	91

* Paw Paw Elementary and High schools share a campus of 15 acres and fields

** Warm Springs Intermediate and Middle share a campus of 100 acres and fields

Source: Morgan County Public Schools

Vocational School

The James Rumsey Center, located in Martinsburg serves high school students from the Eastern Panhandle and post-secondary students from the quad-state region. The Adult Basic Education Center is available for students to upgrade or enhance their skills as well as prepare for the civil service test, the CDL test and the GED. Adult and community education classes, online open enrollment programs along with specialized business and industry seminars are also available.

Colleges

There is one college offering classes in the Pines Opportunity Center Building that is owned by the Morgan County Commission. This building is the site of the old War Memorial Hospital building on Fairfax Street.

Table 5-3 Local Colleges

College	Location	Distance	Degrees
Shepherd College	Shepherdstown, WV	34	Bachelor, Masters
Shenandoah University	Winchester, VA	28	Bachelor, Masters
Frostburg University	Frostburg, MD	56	Bachelor, Masters
Allegheny College	Cumberland, MD	48	Associate
WVU Eastern Division	Martinsburg, WV	22	Bachelor
Valley College of Technology	Martinsburg, WV	22	Associate
Mountain State University	Martinsburg, WV	22	Bachelor
Blue Ridge Community & Technical	Martinsburg, WV	22	Associate
Blue Ridge Community & Technical	Berkeley Springs, WV	1	Associate

Libraries

The Morgan County Library, which serves the entire County population, moved to its present location on Congress Street in 1998. It was originally opened in 1979 on Fairfax Street. It is served by 1 full-time and 3 part-time staff and 20 active volunteers. Circulation has increased from approximately 25,500 volumes reviewed by more than 15,000 patrons in 2001 to nearly 29,000 in 2015 being viewed by approximately 22,000 patrons. The local budget share, which supports funding of this important community resource, is \$18,000. The primary funding source, however, is from State funds of more than \$80,000 per year.

As circulation increases, the Library has determined that it will need additional future operating funds to cover the increasing costs for heating as well as additional shelf space for display of the increasing amount of materials made available to the public.

The Paw Paw Public Library serves western Morgan County and adjacent Maryland areas. The library moved from Winchester Street to Moser Avenue in Paw Paw in 1977 and consists of two part-time staff. Circulation has increased from approximately 4,981 patrons checking out 11,000 volumes in 2005 to 11,000 visits and over 1,300 registered borrowers circulating just over 27,800 items in 2015 with a budget of \$29,792 from local and state funds.

The building was expanded in 1997 and future plans for further expansion include an addition for a History Room. This will add to the number of resources offered by the library, which includes internet access, various reading and viewing media, story time and summer reading programs.

Police

There are three police departments that serve Morgan County. These departments include the Town of Bath Police Department, Morgan County Sheriff's Department and Paw Paw Police Department. There is also a West Virginia State Police Department office located in Berkeley Springs that provides additional service to the County. Although the Sheriff's Department serves the county as a whole the Town of Bath and Paw Paw police departments are limited to being the service provider for the jurisdictions and communities they are governed by.

The West Virginia State Police office provides 4 uniformed officers and 1 secretary to serve Morgan County for the purpose of law enforcement which includes investigation of criminal activity and accident reports. The field office is located on Valley Road in Berkeley Springs. There are no current plans for any future expansion to operations.

The Morgan County Sheriff's Department is located at 111 Fairfax Street next to the Morgan County Courthouse and provides 1 sheriff, 9 deputies and 2 secretaries. The department serves the entire County population both inside and out of the corporate limits of Bath and Paw Paw by providing such services as law enforcement, court security, transport of prisoner/mental health

detainees and serving of papers. There are no identified needs outlined by this department at the present time.

The Town of Bath Police Department is located on Wilkes Street in the Town of Bath. It serves an estimated town population of 650 residents as well as numerous businesses. There is no expansion planned for either personnel or construction.

The Paw Paw Police Department, originally located in the old jail on Lee Street in Paw Paw, dates as far back as 1891. It presently holds office on Winchester Street and consists of one full-time officer occasionally supported by a trainee. This department serves an estimated municipal population of 524 and has no identified plans for expansion in the foreseeable future.

Table 5-4 E-911 Dispatch Calls For Service

Calls for Service	2010	2011	2012	2013	2014	2015
Law Enforcement	8,991	8,142	8,265	8,249	8,644	7,811
Fire Department	1,075	1,032	1,107	1,166	1,142	1,362
Emergency Medical Service	1,670	1,699	1,783	1,957	2,020	2,085
Total	11,736	10,873	11,155	11,372	11,806	11,258

Source: E-911 Dispatch Reports

As population grows and development expands across the County, adequate staffing, especially for the Sheriff's department, is the primary concern. A policing standard of 1 police officer per 1,000 persons is typically used to measure police staffing levels. With a 2010 population of more than 17,000 people, being served by approximately 18 police personnel for all departments combined, staffing appears slightly inadequate at this time and additional personnel will be needed to address future growth.

To accomplish meeting the long-term needs, especially for the County Sheriff's Department, periodic review of police staffing levels should be conducted to maintain a sufficient number of officers in relation to a growing population. This will ensure that there is adequate staff to provide efficient response times in meeting police emergencies.

Fire & Emergency Medical Service

Morgan County is served by four Volunteer Fire Companies. These companies include Berkeley Springs Volunteer Fire Company, Great Cacapon VFC, Paw Paw Volunteer Fire Company, Inc. and South Morgan VFD. In addition to these companies providing some level of emergency rescue service, the County is also served by the Morgan County Rescue Service, which specializes in EMS operation throughout the County.

The Berkeley Springs Volunteer Fire Company, currently located on North Mercer Street in Berkeley Springs, originally opened in 1893. It moved to its present location and added a new building complete with 3 bays to house necessary equipment to serve approximately 12,000 of the County's 17,541 residents and numerous businesses. There are no paid personnel, but the

company has grown from 45 active volunteers in 1980 to 70 active volunteers now who provide fire suppression, emergency medical and other services to the community. The service area includes the Sleepy Creek region, much of the northern Central Valley region as well as the US Rt. 522 corridor.

The Great Cacapon Volunteer Fire Company is located on Spring Street in the unincorporated community of Great Cacapon. The facility originally opened in 1946 and was expanded in 1969 to add 2 engine bays to the west side of the original building, and again in 1977 to add 3 bays on the east side. It is served by 30 active volunteers who provide service from Bennett Lane to Fisher's Bridge and West of Cacapon Mountain to the Potomac River. This service area includes an approximate population of 2,000 residents and a small number of businesses in a mostly rural setting. Its facility and some of its equipment were destroyed by a fire in July of 2016. Planning and fundraising are underway to replace the building and equipment.

The Paw Paw Volunteer Fire Company Inc., located on Moser Avenue in Paw Paw serves approximately 2,500 to 3,000 residents and numerous businesses in the southwestern region of the County, as well as serving 1,500 to 2,000 residents in neighboring Hampshire County to the west. Service to this growing area and to the Town is accomplished by 29 active volunteers, most of whom are trained in both EMS and Fire response. Although the Company moved from its original 1938 location on Winchester Street, it has identified a need for a new station at its current Moser Avenue location. Active volunteers have almost doubled from 15 in 1980 to 29 in 2015.

The South Morgan County Volunteer Fire Dept. Inc., located on Winchester Grade Road in southern Morgan County, serves one of the fastest-growing areas in the county, which includes the Rock Gap and Timber Ridge districts. The company was created in 1970 and has since made building additions in 1980, 1988, and 1998, as well as added equipment and apparatus in keeping up with the changing regulatory requirements of State and Federal laws. It currently includes an active volunteer staff of 18.

The Morgan County Rescue Service moved from its original location to Valley Road in Berkeley Springs in 1998. It opened in 1969 with a Volunteer Board of Directors that went from overseeing more than 25 active volunteers to the current 32 career personnel and 4 active volunteers. Much of the decrease in volunteer participation over time was due to the increased changes in certifications required of career personnel responding to EMS scenes and the recognition by local government of the increased costs of this regulatory process. This department serves the entire County and provides 911 emergency medical service, emergency transport and limited routine transfers related to all emergency situations and scenes. Its calls for service have steadily increased from 1,670 in 2010 to 2,085 in 2015. As the need for this service becomes more specialized and additional personnel are required, the department has identified at minimum operational goals of a full 24/7 second crew and obtaining benefits for retention of employees from competitive counties. Although there may be additional needs for capital expansion of services and infrastructure, none have been identified at this time.

The Morgan County Office of Emergency Services (OES) is the central dispatch for all calls within the County. Opening in 1969, it is located at 38 Dispatch Lane at the Pines Opportunity

Center property which served as the old War Memorial Hospital complex. It includes a total staff of 15, one OES Director, one 911 Director, 8 full time and 5 part time employees. It receives and routes calls for fire, police, EMS, animal control and other miscellaneous requests for service. During the 2010 and 2015 period, the average call load was 11,366. A continuing need is adequate staffing to cover the call volume for full 24-hour operations. There have been discussions to move the 911 Center to a larger facility at the Pines Opportunity Center.

The County operates on a strong volunteer base for fire and a need to expand its paid personnel for rescue services. The major issues, as outlined by the various companies, include adequate staffing to provide timely response to emergencies and the basic gear and equipment to carry out their duties.

While staffing levels for fire companies appear sufficient to meet current demand in some areas there should be periodic review of service areas to ensure response times keep pace with projected growth. Operating on a system of volunteer service, it will be important for the County to ensure that there are a sufficient number of volunteers properly trained to respond. This could be accomplished through incentives for public employees to respond to daytime calls or retirees interested in supporting fire service.

As outlined by the County Rescue Service and Office of Emergency Service, the need for support of additional paid shifts will continue to increase as growth occurs. This is due in part to the location of new development approved in areas where response time is extended and to the lack of close-by facilities or to inadequate staffing during certain periods to respond to numerous areas at once. To address this issue, funding sources will need to be identified and the number of personnel necessary will need to be evaluated to plan for improvements to the overall network of emergency services.

Medical Services

The new Morgan County War Memorial Hospital opened in April, 2012 and is located along Fairview Drive in Berkeley Springs. The \$30 million, 87,000 square-foot facility includes upgraded technologies throughout, new operating rooms, outpatient rehab, a helipad and ample, convenient parking. It operates under Valley Health Services of Winchester, Virginia and is licensed by the State of West Virginia as a Critical Access Hospital (CAH). War Memorial Hospital has 25 inpatient beds (21 private rooms), 14 long-term care beds and a six-bed emergency department. Currently the hospital employs 150 full-time employees.

Services include a 24-hour emergency department with on-site physicians, inpatient and outpatient surgery, laboratory, radiology (including mammography, ultrasound, bone densitometry, CT, and mobile MRI), respiratory/cardiopulmonary services, rehabilitation services (including physical therapy, occupational therapy, speech therapy and cardiac rehab) and home health services. Sub-specialty services are also offered in cardiology, dermatology, ophthalmology, podiatry and urology on a weekly or monthly basis.

Community Physicians of War Memorial Hospital is a division of War Memorial Hospital which provides comprehensive healthcare for adults, including evaluation, diagnosis and treatment of acute illness and chronic conditions like heart disease, diabetes, cancer, kidney disease and related conditions.

Surgical Services of War Memorial Hospital is a division of War Memorial Hospital that provides consultation, diagnosis, surgical and follow-up care for a variety of general surgery, orthopedic surgery and podiatry services including the repair of injury from trauma, removal of diseased tissue/organs, correction of deformities, general orthopedics, sports medicine and surgical interventions for traumatic and chronic conditions and medical and surgical treatment of diseases, injuries and deformities of the foot and ankle.

War Memorial's Center for Rehab & Wellness is located at Berkmore Place in Berkeley Springs. The Center offers outpatient physical therapy, pool physical therapy, occupational therapy, speech therapy and therapeutic pool classes as well as personal training and fitness programs.

War Memorial operates two medical office practices, one in Morgan County, Berkeley Springs Internal Medicine and the other in Hancock, MD, Hancock Medical Practice. Other medical offices in Berkeley Springs include Family Medicine of Berkeley Springs, Pediatric and Family Physicians of Morgan County and Tri State Community Health Center. Mountaineer Community Health Center, a federally-qualified health center, operates in Paw Paw.

Other medical services in the community are available at the Morgan County Health Department, Rankin Physical Therapy, and through Shenandoah Valley Medical System. Three dental practices are located in Berkeley Springs. Nursing home care is provided at Berkeley Springs Center and assisted living is available at Autumn Acres Personal Care Center.

Other healthcare facilities in the area provide services to some Morgan county residents. These facilities include Tri-State Medical Center in Hancock, Md., Winchester Medical Center in Winchester, Va., City Hospital in Martinsburg, and Washington County Hospital in Hagerstown, Md.

There are also many regional medical centers that provide additional patient care to Morgan County residents. These centers include River Bend Family Medicine in Hancock, Tri-State Medical Center also in Hancock, Winchester Medical Center, Washington County Health Systems, Jefferson Memorial Hospital and Berkeley Medical Center (City Hospital) in Martinsburg.

Historic & Cultural

Community cultural groups include a history museum, active historical society, public library, quilt group and several community performance organizations including a concert band, quilters' guild and choir and theater groups. History-related activities and organizations are detailed in the Historic Preservation chapter. All of the rich cultural infrastructure, impressive for a small, rural area, is an important draw for the tourism industry.

Due to substantial arts activities instigated by the community-based Morgan Arts Council, founded in 1977, Berkeley Springs was named West Virginia's first certified arts community and has received abundant state, regional and national recognition as an art town. This reputation has in turn acted as a magnet for artists to relocate in the county and retirees and second home owners to choose Morgan County because of its "art scene". Nearly 1% of the population is working artists, musicians, dancers and writers. There are numerous opportunities for these folks to showcase their talents including county-wide studio tours, gallery shows, music venues and an annual book festival.

The award-winning Morgan Arts Council (MAC) currently has nearly 500 members and since its founding has delivered nearly 60,000 direct arts experiences including concerts, classes, gallery shows, community theater, performances, public art projects, digital media broadcasts, literary events and youth art programs in and out of the schools. Consistent with increased participation and expansion of programs, the organization has added full- and part-time professional staff and maintained an operational annual budget of nearly \$250,000.

MAC owns and is renovating the Ice House arts and community center, a four-story, former storage building constructed in 1911, located in downtown Berkeley Springs that was gifted to the council by US Silica in 1996. The currently renovated floors of the building provide a Great Hall, classrooms, dance studio, office, kitchen, media center and gallery. The building is located at the corner of Independence and Mercer Street.

Travel Berkeley Springs (TBS) is the convention and visitors bureau for the County, with its main office located in the Chamber of Commerce office on Fairfax Street in Berkeley Springs, and having nearly 100 members. Half of its budget is funded through hotel/motel tax revenues. From its 2004 report committee, members developed several goals and strategies centered around two distinct objectives: protecting the historic character of Berkeley Springs and preserving the scenic wilderness throughout the County.

In 2006 the Town of Bath established a volunteer Historic Landmark Commission to facilitate formal identification of historically eligible and significant sites in and around Berkeley Springs and to develop and implement strategies to preserve and protect them. After conducting an Historical Survey which identified 236 contributing structures within the town limits of Bath, the Bath Historic District was accepted onto the National Register of Historic Places in 2009. Identifying plaques were placed on more than 50 of the most prominent structures and several workshops have been conducted to educate property owners on historic tax credits available for restoration of properties within the district.

Local Government

Morgan County

Morgan County consists of a Commission form of government, which includes 3 commissioners elected every 6 years at large. It operates on an approximately 4 million-dollar budget which

includes many of the public services provided across the County. All other services such as schools and roads are covered by other entities or State funding sources.

Table 5-5 County Government Officials

Name	No. of Officials	Elected/Appointed	Term
County Commission	3	Elected	6 years
County Clerk	1	Elected	6 years
Assessor	1	Elected	4 years
Sheriff	1	Elected	4 years
Circuit Clerk	1	Elected	6 years
Prosecuting Attorney	1	Elected	4 years
Circuit Judges	2	Elected	8 years
Magistrates	2	Elected	4 years
Board of Education	5	Elected	6 years
Board of Health	5	Appointed	5 years
Public Service Commission	3	Appointed	6 years
Planning Commission	11	Appointed	3 years
Economic Development Corp.	15	Appointed	3 years
Hospital Board of Directors	9	Appointed	3 years
Parks and Rec. Commission	9	Appointed	3 years
Library Board	5	Appointed	5 years
Commission on Aging	20	Appointed	2 years
Farmland Preservation	7	Appointed	4 years
Local Emergency Planning Comm.	15	Appointed	3 years

Source: Morgan County Government

The Morgan County Board of Education and the Warm Springs Public Service District are considered part of special purpose local government. The elected Board of Education receives funding primarily from local property tax revenues collected by the State. The Warm Springs Public Service District Board is appointed by the Morgan County Commission and oversees the provision of sewer service within the Public Service District, which is supported by customer fees and by State and Federal grants and loans.

Judges of the Circuit Court and Magistrates are elected officials who are funded by the State. Other agencies receive some financial and in-kind assistance from the County Commission, but are primarily funded by other sources such as private donations and State and Federal funds.

Town of Bath

The Town of Bath is governed by a Mayor and five council members who are elected for two-year terms. The Town Recorder, who maintains town records and financial reports, is also elected for a two-year term. The Council is organized into seven functional committees, which are composed of three members each. The committees are finance, public works, water, ordinances, cemetery, grants and public safety. The Chief of Police is an appointed position

without a specified term. There is also an Historic Landmarks Commission made up of six appointed members.

Town of Paw Paw

The Town of Paw Paw is governed by a Mayor and five Council members who are elected for two-year terms. The Town Recorder is also elected for a two-year term. The Council is organized into five functional committees of three members each. These committees are police, water and sewer, streets and alleys, cemetery, ordinance and grievance. A sixth committee, the finance committee, is composed of all five Council members. A nine-member parks and recreation commission is appointed by the Town Council to oversee operation and maintenance of the municipal park.

Table 5-6 Municipal Government Officials

Name	No. of Officials	Elected/Appointed	Term
Town of Bath			
Mayor	1	Elected	2 years
Council	5	Elected	2 years
Town Recorder	1	Elected	2 years
Chief of Police	1	Appointed	N/A
Historic Landmark Commission	6	Appointed	1 year
Planning Commission	5	Appointed	N/A
Town of Paw Paw			
Mayor	1	Elected	2 years
Council	5	Elected	2 years
Town Recorder	1	Elected	2 years
Chief of Police	1	Appointed	N/A
Planning Commission	9	Appointed	N/A
Parks and Recreation Committee	9	Appointed	N/A

Source: Morgan County Government

Animal Control

The Morgan County Animal Control office is operated by the Morgan County Commission office and funded by Morgan County government. Officers are on duty 7 days a week, 8:00 a.m. until 9:00p.m. Their office is located at 5506 Martinsburg Road, Berkeley Springs. It consists of two full-time officers, 2 per diem officers and one part-time kennel/office assistant.

Goals and Objectives

Goals

The goals for enhancement of public services in Morgan County focus on education, public safety, general government and the health and welfare of its citizens. They include:

- Increasing educational opportunities across the spectrum of public schools, higher education and technical training institutions;
- Promoting the location of public schools in targeted growth areas;
- Ensuring adequate access to emergency services in areas of new development;
- Promoting expansion of local health care, including mental health services, and recognizing the need to serve both residents and visitors, as well as an aging population; and
- Supporting coordination among local government entities and regional planning organizations in efforts to identify, designate and plan for future public service needs.

Objectives

Furtherance of these goals can be attained by achieving the following objectives:

- Supporting the Morgan County Comprehensive Education Facilities Plan and encouraging the Morgan County Board of Education to consider the growth management goals and objectives in the Morgan County Planning Commission's Comprehensive Plan;
- Working with the library system to identify the need for expansion of library services and facilities;
- Evaluating and supporting appropriate recommendations from local public safety agencies relating to the integration of public safety services into new development;
- Continuing efforts in the expansion of a countywide emergency service system, while promoting smaller, more localized emergency services operational hubs to ensure adequate coverage throughout the jurisdiction;
- Supporting arrangements to improve working relationships among police, fire and EMS organizations both within the county and among local jurisdictions;
- Working toward adequate disaster planning by supporting efforts to provide all public safety services with current homeland security training, and citizens and public officials with necessary information about disaster planning and management;
- Continuing updating countywide hazard mitigation plans;
- Supporting development of a directory of local health care network providers and wellness offerings;
- Encouraging the improvement of medical transport access, and the referral process to major health care centers;
- Promoting the expansion of web-based access to local government information;
- Supporting use of public schools for non-school related activities consistent with the legal and generally accepted use of public buildings;

- Encouraging construction of an improved animal control facility and improvement in the county's animal control operations and regulatory system; and
- Continuing to support development of a global information system (GIS) mapping capability for Morgan County to create charts showing property boundaries, natural features, sensitive areas, infrastructure, and emergency services sites, etc.

CHAPTER 6 – SENSITIVE AREAS

Introduction

This chapter identifies those sensitive natural environmental features, which merit protection from development. These physical features are delineated based on steep slopes, floodplains, wetlands, sensitive soils, forests, rivers, prime agricultural land or mineral resources. It is obvious that the intensity of the use of the land is often dictated by the physical attributes of the property. As sensitive areas do not typically follow property lines, these attributes affect numerous adjoining properties, thus creating natural land use patterns. Protection of these attributes may be achieved through incorporation of these features into future development proposals.

Morgan County, by comparison to its adjacent counterparts, has some extensive physical constraints to land use. However, some of these constraints have been overcome or neglected in order to allow development to occur in locations where a more limited approach might be suggested by a site's natural features. This limited approach should require careful development design in order to protect sensitive features and correct existing negative encroachments or prohibitions on development. In order to provide the public with a justifiable understanding of this approach, the ecological and environmental benefits and the potential degradations should be clearly identified and defined. This may ultimately influence what land use types are appropriate for each development proposal.

Steep Slopes

Possibly the most notable and impacting physical feature influencing growth and development within Morgan County is the amount of land delineated with steep slopes. Nearly 47% of the County may be classified as having slopes greater than 25%, which is the maximum slope for installation of individual septic systems and thus the generally accepted limit for structural improvements to property. Another 21% falls within the 15% to 25% range; and nearly 30% is between 8% and 15%. Less than 5% of the County may be classified as relatively flat, containing a slope of less than 8%.

The region most affected by this topographic feature is split between the Cacapon and Central Valley planning regions, along the east and west Cacapon Mountain ridges. The benefit in the Cacapon Planning region exists in the large amount of relatively flat land through its northwest corridor, while the Central Valley Planning region benefits from major water, sewer, transportation and other available services.

While two-thirds of the State land is sloped more than 25%, Morgan County is just under one half, yet more severe than its two eastern panhandle neighbors to the east. The County is located in the physiographic region known as the Ridge and Valley Province. For purposes of describing the topographic conditions, the County may be divided into two types of areas: Mountain Area and Ridge Area.

Mountain Area

The Mountain Area from the west is a series of northeast-southwest rugged mountains separated by narrow valleys. The mountain slopes are gashed by steep runs giving a very rough topography, which continues on to the west.

At the western edge of the Mountain Area is the narrow Potomac Valley, which follows a northeast course parallel to the trend of ridges, but in a meandering channel. This valley is bounded on the Morgan County side by Spring Gap Mountain, Purslane Mountain and Sideling Hill, which have steep and highly dissected slopes down to the river. The fall from the top of these mountains to the river is 1,220 to 1,400 feet in a distance of one to one and a half miles. In the valley are numerous flat-topped hills rising 800 to 1,000 feet above the valley floor.

Spring Gap Mountain extends from Hampshire County into Morgan County for a distance of three-fourths mile, southeast of Paw Paw. It is a level-topped mountain of 1,800 feet elevation with steep slopes.

Purslane Mountain and Sideling Hill are separated by a high level valley drained by Rockwell Run. Purslane Mountain on the west side of the valley has a level top, 1,700 to 1,800 feet in altitude. The highest point on Sideling Hill is 2,029 feet above sea level located about three miles north of the Hampshire County line. Its west slope is deeply trenched by short steep runs forming very rugged slopes, while on the east, slope erosion has not been as prevalent. The valley on the east side of Sideling Hill is 200 to 300 feet higher than the Potomac on the west. The mountain is cut by a deep gap at the north where the Potomac cuts through.

The valley east of Sideling Hill is separated into two parts by a low transverse divide 800 to 900 feet above sea level. From this divide, the land slopes generally south to east to the Cacapon River and north for a distance of five miles to the Potomac River. This valley contains two northeast-southwest ridges, known as Bare and Road Ridges; whose level tops are about 800 feet above sea level.

The east side of the valley is bounded by Tonoloway Ridge, reaching a height of 1,000 to 1,100 feet. Its eastern slopes are almost perpendicular walls to the Cacapon River. It is cut by a wide gap at the south where the river passes through and by a gap three-fourths mile wide at the north where the Potomac cuts through.

The eastern limit of the Mountain Area of Morgan County is Cacapon Mountain, which is the highest mountain in the area. It begins southwest of Sir Johns Run, on the Potomac, as a ridge 600 feet high and rises over a distance of four miles to 1,545 feet at Prospect Rock. The mountain reaches its highest point in the northern area, at 2,196 feet, five miles southwest of Prospect Rock. It is 2,320 feet high at the Morgan County boundary with Hampshire County.

Ridge Area

The Ridge Area of Morgan County begins at the Cacapon Mountain and extends east across a broad valley broken by parallel low ridges which follow the same course as the mountain. This area exhibits long narrow valleys and ridges as does the area west of Cacapon Mountain, but is dissimilar in that Sleepy Creek cuts across the ridges creating a drainage area of transverse as well as longitudinal valleys. The result of these changes is a very different type of topography than that west of the mountain.

Warm Spring Ridge extends from the south line of the County north to the Potomac River and beyond into Maryland. The ridge is level-topped at 800 to 900 feet at the north and 1,200 feet at the south. Its slopes are steeper on the east than on the west. The valley between this ridge and Cacapon Mountain is drained to the north by Sir Johns Run and to the south and east to Sleepy Creek Run by Rock Gap Creek. At the south, this valley is drained by Indian Run, which flows north and east to Sleepy Creek.

The eastern slope of Warm Spring Ridge is drained by the north flowing Warm Spring Run. The valley of this run at the north is bounded on the east by Horse Ridge, which is a long level ridge of 800 feet elevation. Further south, this ridge is continued in the form of isolated hills of 900 feet elevation, but natural erosion has destroyed the ridge as a continuous line in the topography.

East of Horse Ridge at the north is the valley of Dry Run, then Pious Ridge, 600 to 800 feet in elevation. The broken continuation of this ridge is Timber Ridge at 900 feet through which Sleepy Creek cuts a gap.

Sleepy Creek Mountain ranges in height from 1000 feet to 1700 feet at the north and to a height of 1800 feet toward the south end of Morgan County. The slopes of this mountain are steep and rugged, but are not cut by run valleys as are the mountains to the west.

Water

Morgan County is located entirely within the Potomac River Basin. All of Morgan County drains north to the Potomac except a small area in the southeast corner. The importance of the County's water resource must be emphasized and evaluated as it continues to become more limited in availability over time due to varying factors such as increased usage and other measurable impacts.

Rivers and Streams

The Potomac River forms the boundary line between Maryland and West Virginia along the northern line of Morgan County. The river is actually part of the State of Maryland and is under jurisdiction of the Maryland Department of Natural Resources for water quality and river use. From the southwestern corner of Morgan County, the river follows a strongly meandering course northeast 28 miles to the cut through Sideling Hill. The bends are very symmetrical and deeply trenched in the valley. The fall of the river in this section is low, averaging 2.5 feet per mile.

From Sideling Hill, the river flows east to Cacapon Mountain for 5 miles of straight channel with a fall of only 1.7 feet per mile. It then turns northeast to Hancock, curving in a small meander around the ridge near Roundtop on the Maryland side. This meander is nearly a half-mile wider than its former channel. From Hancock, the river flows southeast in a nearly straight channel for 10 miles to the mouth of Cherry Run. The fall of the river from Sir Johns to this point is 1.3 feet per mile.

Along the western end of Morgan County, the streams are small runs which rise on Purslane Mountain and reach the Potomac by short courses. Rockwell Run is the largest of these and follows the high level valley between Sideling Hill and Purslane Mountain at an elevation of 1,200 to 1,600 feet above sea level to a transverse gap at the north end of Purslane Mountain where it turns west toward the Potomac. Its total length is about 5 miles with a fall of 1,140 feet, or nearly 230 feet per mile. Like all of these mountain runs, Rockwell Run averages a relatively small volume of water fed by springs but in a period of rain becomes a roaring torrent which can cause rapid erosion.

The Cacapon River is the fourth largest tributary to the Potomac River. Its source is in the highlands of Hardy County, Virginia and it follows a northeasterly course across the eastern portion of Hampshire County through the western part of Morgan County to the Potomac River at Great Cacapon. The total length of its channel is 100 miles and the average fall is 11.8 feet per mile. Its upper reaches have a steep gradient with some falls and rapids, while the lower third is more sluggish and meandering. Within Morgan County, the Cacapon features a gentle gradient and numerous long pools as it transcribes huge, slow-flowing loops through the mountains. The land cover is primarily forested slopes and flood plain terraces. The Morgan County segment is the most developed and platted stretch of the river, with individual residences, vacation cottages and large subdivision developments dotting the banks.

Sleepy Creek has its source on the west slope of Timber Ridge in the northeastern part of Hampshire County and follows this ridge northeast to Rock Gap where it crosses the ridge in the southern part of Morgan County. The length of its channel is 42 miles and the average fall is 17 feet per mile. Its drainage basin is broad, extending from Sleepy Creek Mountain to Pious Ridge on the west for a width of 4 to 5 miles and covering nearly 93,000 acres. Its tributary creeks and runs on the west cut through transverse valleys in the ridges to join the main stream, as in the case of Rock Gap which has cut a deep gorge through Warm Spring Ridge. This watershed is nearly 50% forested with another third in active agriculture use. On the east side of the main creek, the large tributaries such as Mountain and Meadow Runs follow the rock structure.

Sir Johns Run drains the valley between Cacapon Mountain and Warm Spring Ridge. It follows a course parallel to these ridges for 8 miles at a fall of nearly 70 feet per mile. The valley is narrow, its branches short, and the volume of water is small except after rains.

Warm Spring Run drains the valley between Warm Spring Ridge and Horse Ridge. Its length of nearly 11 miles falls at a rate of nearly 40 feet per mile. It follows close to Warm Spring Ridge and is fed by various springs, especially by the warm springs at Berkeley Springs. On the east it has a number of short tributaries which extend into the divides separating them from the Sleepy Creek drainage area.

Surface Water Quality

As established above, Morgan County has numerous surface water bodies that traverse various parts of the County. Based on the collection of data over time, most of these surface water sources are in healthy condition. Water quality parameters that are evaluated include dissolved oxygen, pH (acid-alkaline balance) temperature, metals and conductivity. There have been occasional violations of State criteria for fecal coliform bacteria, which is indicative of either human or animal waste entering the stream from houses, septic systems or agricultural activities.

Specifically, in reference to the Cacapon River, water quality is considered excellent as evidenced by data collected by West Virginia Department of Environmental Protection. Like many of the streams in the Eastern Panhandle that are unaffected by mine drainage, the Cacapon has an excellent pH value. The average acidity, alkalinity and hardness values are also indicative of high water quality. Oxygen problems are virtually unknown. Only one instance has been recorded in which the fecal coliform standard was violated; and, other than minor infractions of copper, iron, lead, silver and cyanide levels, the parameters have never exceeded the acceptable limits for all other metals for which the State has standards. The Cacapon remains one of the State's highest quality streams.

A Sleepy Creek Watershed Assessment was completed in March 2006, a project made possible by the WV Stream partners Grant Program, Shepherd University Institute of Environmental Studies and the Eastern Panhandle Conservation District. The assessment found the lower portion of the watershed consisted of patterns of swift reaches, shallow riffles and deep pools. Most of this section of the creek is quiet with few houses in sight. The southern half of the creek shows more evidence of siltation. Potential problems here include direct livestock access, many road crossings and fords and areas with inadequate streambank buffer zones. The bed substrate in Sleepy Creek is largely comprised of chunky slabs of shale with large interstitial spaces for fish. Some reaches have severe sediment problems and bank erosion is common in bends and where steep slopes are adjacent to the stream. Aquatic vegetation varies from areas with lush vegetation to areas with a solid bedrock substrate and no vegetation at all.

The Cacapon Institute released its 2014-2015 final report on fecal coliform bacteria levels in the Sleepy Creek Watershed. These tests were done as a result of the Sleepy Creek 2007 designation as an "impaired" stream due to its high levels of fecal coliform bacteria. Current efforts in place to reduce the bacteria levels include the ongoing septic system pumping and repair cost-sharing program along with various tree planting projects to assist with buffering and reduce runoff into the stream.

The Cacapon Institute has also published many water quality studies over the years and has overseen many stream restoration projects. They are active in the agricultural and farming community, initiate tree planting projects and hold summer camps. They continue to monitor the Cacapon River, are a partner of the Potomac Watershed Partnership and engage schools across 14 counties and three states with their online Potomac Highlands Watershed School.

In October 2007, the Warm Springs Run Stream Corridor Assessment was completed, a project funded by a National Fish and Wildlife Foundation grant. This assessment reported many areas that have been impacted by runoff and stream corridor disturbance due to mowing, construction and channelization. Since the inception of the Warm Springs Watershed Association in 2008, the group has made great progress in the restoration of the run.

The potential exists in Morgan County for water quality problems due to sediment loadings which occur after heavy rains in areas of agricultural and increased construction activities. Sediment often includes organic and inorganic pollutants from fertilizers, pesticides, animal wastes and construction materials. Chemical pollutants may be toxic to fish and may be retained in fish which have eaten contaminated organisms. Over a period of time, sediment fills watercourses, covering bottom-dwelling organisms and contributing to increased flooding potential. By increasing turbidity, or cloudiness of the water, sediment reduces light available for growth of aquatic plants and animals. For all these reasons, sediment offers the potential to significantly reduce the scenic and recreational value of Morgan County.

West Virginia's water quality standards include a criterion for turbidity. This turbidity limitation applies to all earth disturbance activities by measuring stream quality directly above and below the area where drainage enters the affected stream.

Floodplains

Floodplain areas perform a number of critical ecological functions. They absorb, store and release large amounts of water to surrounding soils and groundwater systems. Natural vegetation supported by floodplains helps to trap sediment and absorb excess nutrients from upland surface runoff, stabilize stream banks and reduce soil erosion. Floodplains also provide habitat for terrestrial wildlife and influence stream conditions for aquatic life. Beyond their ecological value, many people value the scenic qualities of floodplain areas, particularly for their wildlife and waters.

In 2005, the West Virginia Flood Protection Task Force presented the first West Virginia Statewide Flood Protection Plan. The multi-agency task force was led by the WV Conservation Agency and the U.S. Army Corps of Engineers. The Plan was developed over a period of three years and spells out both long- and short-term goals, strategies and implementation schedules. The six specific goals the plan addresses are:

- Reduce the unnecessary loss of lives due to flooding;
- Reduce private and public property damages due to flooding;
- Develop technical and administrative tools to manage flood loss reduction and floodplain management;
- Promote technical and legislative tools that will reduce excessive runoff from land conversion activities;
- Reduce personal and economic loss due to flooding while supporting state economic growth; and
- Protect the state's waterways and floodplain environments.

These goals focus around 12 key issues:

- Floodplain management
- Flood Warning System
- Floodplain Mapping
- Flood Damage Assessment
- Impacts of Flooding
- Building Codes, Permitting and Enforcement
- Stream Crossings and Access Roads
- Dredging
- Resource Extraction
- Stormwater Management
- Education
- Existing Flood-prone Structures and Facilities

All floodplains in Morgan County are subject to floodplain regulations as delineated in the Flood Insurance maps developed by FEMA and the County's ordinances, which are updated to comply with State and Federal regulations. The Flood Insurance Program was established by the National Flood Insurance Act of 1968 and provides previously unavailable flood insurance to property owners within delineated areas. The Act prohibits Federal financial assistance for construction projects within non-participating communities.

Due to nearly annual flooding in the Berkeley Springs area from Warm Spring Run, the Town of Bath, in a joint effort with the Eastern Panhandle Soil Conservation District, completed a watershed flood prevention and protection project in 1962. The project applied conservation land treatment measures to 2,200 acres, changed land use on 2,720 acres, stabilized four miles of critically eroding streambanks and constructed eight single-purpose flood control dams. The eight dams were constructed upstream from the Town to control runoff of about 35% of the flood-producing area. Prior to this project the area experienced severely damaging floods in 1936 and 1954. Since that time, however, the project has reduced flood occurrences to minimal impacts of sediment and debris being deposited into yards and occasional water back-up through sewer lines into basements.

In addition to the instance described above, floodplain issues exist generally in three areas of the County. While less than 1% of the County land mass is covered by water, it does include a larger percentage covered by floodplain areas. These areas include the north-south corridor of the Cacapon River, the much wider north-south drainage area of Sleepy Creek, and the east-west shore of the Potomac River. Although much of this land is under private ownership, community efforts and regulatory measures have achieved some positive influence in protecting these sensitive areas.

Some positive effects in protection of these sensitive environmental areas, especially adjacent to the many rivers and streams, include promotion of riparian buffers through use of trees, shrubs and other vegetation. These buffers should be adequate in stabilizing banks, reducing erosion and filtering sediments.

Wetlands

Wetlands are unique environments that are transitional areas between land and water systems. As a component of both systems, they perform a variety of important functions and are in a state of

constant change. Wetlands help maintain surface stream flow and groundwater recharge. They moderate stormwater runoff and downstream flood crests because they are natural water storage areas. Wetlands provide important habitat for many species of plant and animal life. They also serve as natural filters for reducing pollution of various chemicals and sediment into the waterways.

There are multiple problems with developing on wetland soils. Wetlands located in floodplains are often flooded. Draining or filling-in of upland wetlands removes natural water storage, which yields increased water flows downstream. Wetland soils are sensitive in two ways. First, they are easily compacted, resulting in uneven settling of structures. Second, wetland soils with low permeability and high groundwater tables are not suitable for the installation of on-lot septic systems due to the risk of surface and groundwater contamination. Wetlands are protected by the U.S. Army Corp of Engineers and the West Virginia Department of Environmental Protection.

Groundwater

Precipitation is the main source of groundwater recharge in Morgan County. Although precipitation is intermittent, water is continually moving from storage in the underground rock structures. In general, groundwater movement parallels the land surface, moving from ridges to the valleys, where it discharges into springs and streams.

Water is found in practically all rock formations of the Potomac River Basin, of which Morgan County is a part. However, the quantity of water largely depends on the kind, size and degree of interconnection of the openings in the rock, called fractures. The largest groundwater supplies are available from areas underlain by sandstone and limestone bedrock, which contains fractures and solutional cavities through which groundwater can easily move. The least water is available from shale, which contains very few openings of this type. Shale is more brittle than sandstone or limestone and at greater depths the weight of overlying rock squeezes openings shut.

There are two linear strips of land area on either side of Cacapon Mountain in which groundwater availability is reflected in well yields from 100 to 200 gallons per minute. These areas are coincident with predominately limestone and sandstone bedrock. The remaining areas of the County, which report lower well yields of 1 to 70 gallons per minute, are mostly underlain by shale.

The most frequent groundwater quality problem in Morgan County is high mineral content. Groundwater beneath the ridges has a lower concentration of dissolved materials than beneath valleys because the ridges are mainly recharge areas and the valleys are mainly discharge areas. A well on a ridge draws relatively pure groundwater near the beginning of its flow path. A well in a valley draws comparatively impure groundwater which is near the end of its flow path, has been exposed to bedrock longer and has picked up dissolved materials along the way. Better water quality exists among the ridges west of Cacapon Mountain than in the Sleepy Creek Valley to the east. The area east of Cacapon Mountain, where groundwater is characterized as having excessive iron content and hardness, is mostly underlain by shale. Because shale is not very permeable, water moves through it slowly creating the opportunity to dissolve more mineral matter.

The highest possibility of groundwater contamination from surface sources is in limestone areas because of the presence of solutional cavities and sinkholes through which contaminated water can enter without being filtered through the soil mantle. This type of pollution is more frequently found in the Great Valley of which Berkeley and Jefferson Counties form a part. However, groundwater contamination is by no means limited to limestone areas. Studies in the Potomac River Basin have found high chloride concentrations in water from some wells tapping shale and sandstone near septic tanks and barnyards, indicating that the water may be polluted. Even so, in sparsely populated areas underlain by shale and sandstone, groundwater pollution does not appear to be a major problem.

Maintaining pure groundwater is important for the majority of Morgan County residents who rely on groundwater for drinking and domestic use. It is also important for industry and particularly for those enterprises which rely on pure spring water such as the water bottling companies in Berkeley Springs, the Ridge State Fish Hatchery and the baths of Berkeley Springs State Park.

Major Surface Water Bodies

Although there are no major surface water bodies in Morgan County, there are several minor lakes that range in size and are primarily used for recreational purposes.

Cacapon State Park Lake is located within the 6,000 acre park and offers stocked fishing and non-motorized boating. It is fed by the local stream systems into an impoundment that covers more than 6 acres.

Lake Siri, a 13-acre spring-fed lake, is located between two mountains adjacent to the former Coolfont's Treetop House. This private lake is well known for large big mouth bass fishing.

Water Source Protection Organizations

There are numerous residents and groups that recognize the importance of conserving and protecting the County's water resources. These individuals and organizations work to maintain watersheds, not only in Morgan County, but also throughout the region that impacts the Chesapeake Bay. Following is a brief list of some of these organizations.

- The Friends of Cacapon River serves as a resource to the community on issues affecting the Cacapon River watershed. They advocate the establishment of buffer areas along the river to support riparian plants that reduce runoff into the river. This is accomplished by educating land owners to the impact of altering riverbanks, encouraging developers, visitors, and landowners to participate in the stewardship of the river and its watershed and promoting active participation of area schools in developing student programs related to protecting their river. The group monitors activities in the lower Cacapon that could negatively impact the river.

- The Sleepy Creek Watershed Association was formed in July 2000. Its mission is to “protect and preserve Sleepy Creek and its watershed and to educate the community on the value of this precious natural resource in Morgan County, West Virginia.”
- The Warm Springs Watershed Association’s mission is to restore, protect and preserve Warm Springs Run. The youngest of Morgan County’s Watershed groups, organized in 2008, they realize the importance of community awareness of the stream and the impact people have on it. The group performs stream monitoring and cleanups, tree plantings and many community educational programs.
- The Cacapon Institute was formed in 1985 in response to concerns that increasing development, industry and agriculture were harming the Cacapon River. Over the years CI’s interests have expanded beyond the Cacapon River watershed to encompass a much larger region. Today, their mission to protect rivers and watersheds using science and education involves them in projects from the Cacapon River to the Chesapeake Bay. They serve county watershed associations by providing laboratory services and technical assistance. Their office is located in Great Cacapon, WV where they have a staff of 4 and a nine-member Board.
- The Interstate Commission of the Potomac River Basin strives to enhance, protect, and conserve the water and associated land resources of the Potomac River basin and its tributaries through regional and interstate cooperation.
- The Chesapeake Bay Foundation is a non-profit organization with a mission to improve the Chesapeake Bay watershed. It serves as a watchdog representing the Chesapeake conservation lobby to business, government and public entities. It also actively restores native habitats and filtering mechanisms such as oyster beds, forests and other riparian features.
- The Soil and Water Conservation Society fosters the science of art and natural resource conservation.
- The U.S. Fish and Wildlife Service works with others to conserve, protect and enhance fish, wildlife and plants in their habitats for continuing benefit of the public. The National Conservation Training Center is located on the banks of the Potomac River adjacent to Jefferson County.
- The West Virginia Rivers Coalition seeks conservation and restoration of West Virginia’s exceptional rivers and streams. It has worked with the WV DEP to help improve public participation components of the NPDES.
- The Potomac Water Watch, supported by Friends of Cacapon River, serves the Potomac River Watershed and its tributaries and focuses on fish kills, intersex, emerging contaminants and endocrine disrupters.

- The Eastern Panhandle Conservation District is the local extension of the West Virginia Conservation Agency which serves to conserve natural resources, control floods, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, conserve wildlife, protect the tax base, protect public lands and protect and promote the health, safety and general welfare of the people.
- Region 9 Planning and Development Council has represented Morgan County in several planning and implementation efforts including hazard mitigation, source water protection and the Chesapeake Bay Watershed implementation. The Council has one full-time environmental coordinator which provides technical assistance on pollution reduction strategies to all communities within the Eastern Panhandle.

Sensitive Soils

Soil associations delineate where two or more soil types occur together in a characteristic pattern over a geographic region. Soil types are often combined because the scale of a map does not provide for easy individual delineation of soils. For this reason delineating soil associations is useful for general planning purposes, but is not suitable for site-specific analysis unless additional site-specific analysis is conducted. Because soils within an association differ in slope, depth, stoniness, drainage and other characteristics, the actual location of physical improvements to property may differ from the general soils associations provided.

Soil Associations

The four major soil associations in Morgan County are classified by their suitability and limitations for various land uses. These limitations allow for flexibility as described above and are most notably measured by their appropriateness for septic systems and erosion control. These soil associations include: Huntington Weikart-Monongahela Association, Lehew-Berks-Dekalb Association, Berks-Litz-Weikert Association and Dekalb-Laidig-Buchanan Association.

Huntington Weikart-Monongahela - consists of deep and shallow, well and moderately well-drained, medium-textured and moderately fine-textured soils of the floodplains shale uplands and river terraces. Suitability for cropland is good and for woodland is mostly excellent to fair. There are severe limitations to permitting development in these areas with moderate limitations to roads due to the potential periodic flooding in lower areas.

Lehew-Berks-Dekalb - consists of moderately deep, well-drained, moderately coarse-textured and medium-textured soils of the uplands. Suitability for cropland is fair, though some soils are well suited to orchards. Suitability for woodlands is fair since dryness and low natural fertility cause severe seedling mortality. Limitations on development and roads are moderate primarily due to slope, limited depth to bedrock and susceptibility to frost action.

Berks-Litz-Weikert - consists of moderately deep and shallow, well-drained, medium-textured and moderately firm-textured soils of shale and siltstone hill uplands. Suitability for cropland is rated very poor and choice of crops is limited due to low water capacity. Suitability for woodland

is poor since dryness and low natural fertility cause severe seedling mortality. Limitations to development and roads are moderate to severe due to steep slopes, limitations to bedrock and susceptibility to frost.

Dekalb-Laidig-Buchanan - consists of moderately deep, well-drained and moderately well-drained, moderately coarse-textured to fine coarse-textured and mostly very stony soils of the uplands and colluvial slopes (slopes from which soil material, rock fragments, or both, have been moved by creep, slide or local wash and deposited at the base). Suitability for cropland is very poor because soils are very stony and slopes are mostly steep to very steep. Suitability for woodland is mostly good to fair, although it is poor in dry areas which create severe seedling mortality. Limitations to development and roads are mostly severe due to steep slopes.

Soil Limitations on Septic Systems

More specific than soil associations are the soil series and soil types within each series. Each soil type is rated according to agricultural productivity and according to properties which affect selected non-farm uses of land.

Chief among non-farm activities is the use of natural soil to renovate sewage effluent from septic drainage fields. The soil material between depths of 18" and 6' is evaluated for septic drain fields by means of a Soil Survey. The soils properties considered are those that affect absorption of effluent and construction and operation of the system. Properties that affect absorption are permeability (the quality that enables soil to transmit water and air), depth to water table or bedrock and susceptibility to flooding. Slope is a soil property that affects difficulty of layout and construction as well as the risk of soil erosion, lateral seepage and down-slope flow of effluent. Properties located within the 100-year floodplain as determined by the Federal Emergency Management Agency (FEMA) face potential restrictions with septic permitting and installation from the Morgan County Health Department.

Limitations on the suitability of a particular soil for septic systems are expressed as slight, moderate, or severe. A rating of severe indicates the soil has serious limitations that are difficult, though not impossible to overcome. A review of all soil-mapping units in Morgan County indicates a severe limitation on the use of septic systems for all but less than 1% of the County's land area.

In practice, the suitability of soil for septic systems is determined on a site-by-site basis by the Morgan County Health Department based upon standards of the State Department of Health. On-site testing includes a percolation test to determine permeability and a 5' excavation to determine depth to bedrock and water table. The excavation must be inspected by the County Health Department Sanitarian to ensure that at least 5' of soil covers the bedrock and seasonal water table. This standard is interpreted liberally in Morgan County where thin layers of soil cover unconsolidated shale, which is often difficult to distinguish from bedrock.

The State Department of Health also sets standards for the use of septic systems to serve subdivisions of two or more lots, and which are less than 2 acres in size with an average frontage

of less than 150'. Where a public water system is not available, each lot must be at least 20,000 square feet in area. A minimum 10,000 square foot disposal area must be set aside for installation of the initial absorption field, which includes enough area in reserve for additional absorption fields in case of failure of the initial installation. Disposal area may not be located on slopes exceeding 25%, nor within the limits of the 25-year floodplain. The latter standard has been difficult to evaluate since there is no current mapping of 25-year floodplains for Morgan County.

In 1980, 2,974, or nearly 66% of housing units were utilizing septic systems. An additional 9% or 410 housing units were listed as "other", including outhouses and no sewage disposal systems evident. Only 66 housing units remain without proper sewage systems evident, many of which many are listed as seasonal housing. Given the location of many of these dwelling units along waterways and atop steeper slope areas, it is important to monitor both the continued use of these units as well as the transition of these types of units from seasonal use to year-round, permanent occupancy.

The lack of adequate sewage disposal facilities usually comes to the attention of the Morgan County Health Department on a complaint basis. Many complaints involve structures without suitable methods of sewage disposal. The remaining complaints include systems in some degree of failure, generally evidenced by sewage coming to the surface of the ground. Methods to alleviate the impact of these issues include the use of either community or public sewerage systems or replacement with new septic systems.

It is well documented that septic systems which are properly installed following appropriate testing on environmentally suitable sites and which are regularly maintained will function properly for an indefinite period of time. Those septic systems within Morgan County that fail do so because of improper installation, poor soil conditions, high water table or insufficiently sized soil absorption fields. In Morgan County the site evaluation and septic system installation steps allow for practices which may contribute to future septic system problems. The deficiencies identified include: allowing construction prior to site testing for optimum absorption and percolation testing that is only reported to rather than directly observed by the County Health Department.

Where existing septic systems fail and cannot be replaced, and where new sites are found to be unsuitable, alternative individual systems may be appropriate. State regulations allow for alternative sewage disposal systems which compensate for severe soil conditions under certain circumstances. These systems, which include sand mounds and other types of alternative methods are more costly than standard septic systems.

Soil Erosion

The major types of soil erosion in Morgan County are sheet and rill, streambank and roadbank. Sheet and rill erosion occurs when water flows over a slope without a defined channel. It is a dominant erosive factor for cropland, pasture, surface mine spoils and refuse piles and various construction activities. Sheet and rill erosion is accelerated by poor vegetative cover and steep topography.

Streambank erosion is the lateral recession of channel banks due to stream conditions. A stream which has not reached its load capacity will obtain sediment from the channel bottom and banks. Lack of channel bank vegetation increases streambank erosion.

Roadbank erosion results from sheet, rill and gully erosion of the bank and channel erosion in the adjoining ditch. Poor vegetation on the bank accelerates roadbank erosion.

Factors affecting soil erosion are the natural erodibility of the soil, slope, rainfall patterns, length of slope, and perhaps most importantly, land cover conditions. Compared to other areas in West Virginia, the Eastern Panhandle has soils with slight erodibility, a low rainfall climate, and gentle topography. However, erosion problems in Morgan County appear to be more severe than in the other two Panhandle counties. More than 20% of the land area in Morgan County is defined as having severely eroded soil.

Severely eroding areas were identified in the Comprehensive Survey of the Potomac River Basin prepared by the West Virginia Department of Natural Resources and the U.S. Department of Agriculture in 1981. Areas identified in Morgan County were streambank erosion along the Cacapon River, Sleepy Creek, Sir John's Run and Warm Spring Run, and sheet and rill erosion from mining activity.

Other sources of sheet and rill erosion include farmlands and construction sites. The Agriculture Water Quality Management Plan outlined in the 1985 Plan, identified severely eroding farmlands in Morgan County, including 1,341 acres of cropland, 795 acres of permanent pasture, and 53,300 feet of farm roads. Construction sites for new housing and subdivision roads have also contributed to soil erosion in the County, especially where proper erosion control techniques have been neglected or ignored. Erosion from these activities has increased from an average of approximately 10 tons per year as development has increased. This has also increased the previous estimate of 100 tons per year under extreme conditions.

Air Quality

The Clean Air Act provides the principal framework for national, state and local efforts to protect air quality. Under the Clean Air Act, the U.S. EPA is responsible for setting standards, also known as national ambient air quality standards (NAAQS), for pollutants such as mercury from coal-fired electric generating plants to the west, which are considered harmful to people and the environment. These pollutants also include ozone, particulate matter, sulfur dioxide, carbon monoxide and nitrogen dioxide. The major sources of these pollutants are cars, power plants and heavy industry. The EPA is also responsible for ensuring that these air quality standards are attained through national standards and strategies to control pollutant emissions from automobiles, factories and other sources.

The EPA Air Quality Index (AQI) reports on levels of the NAAQS pollutants present in the air. An AQI value is given for each monitoring site and pollutant. The overall AQI for a site is the highest index value of any of the pollutants. Exposure to these pollutants can make it difficult for some people to breathe, especially people with asthma and other respiratory problems. As the

level of any of these air pollutants rises beyond health standards, precautionary health warnings are triggered.

In January 2015, the Region 9 Air Quality Management Plan (AQMP or Plan) was developed to set forth a comprehensive and integrated program that will assure the Region's commitments towards complying with the federal Ozone air quality standard. The Plan will serve as a resource document of the Region's voluntary education, engagement and implementation strategies to allow for a healthy environment, attracting new businesses and controlling its own regulatory regime.

Forest Resources

Forest resources in Morgan County are valuable in several respects. They provide an attractive and healthy environment for many recreational activities such as camping and hiking, around which many public and private recreational and tourism features in the County are established. Forests provide the necessary habitat for wildlife to thrive. They are also superior to both developed and agricultural land in controlling storm water runoff, which is essential to the natural management of watersheds.

Based on inventories conducted by the U.S. Geological Survey in 1975, there were 121,650 acres of forest in Morgan County, which made up more than 80% of the total County land mass. Of this total, there were nearly 7,000 acres of non-commercial and 114,000 acres of commercial forestland. Commercial forestland is that which is producing or capable of producing crops for industrial wood which is not withdrawn from timber utilization. A comparison of the 1975 and 1980 aerial photographs indicated further areas of early growth forests on land previously devoted to agricultural use, especially in the Sleepy Creek and Central Valley planning regions. By 2000 the total forested areas within the County decreased by merely 1% to 79% or 117,000 acres and out of approximately 1,130 acres harvested per year, it is estimated that only 130 acres are clear-cut for development and agricultural uses.

The Chesapeake Bay Program and USGS have completed the Chesapeake Bay High Resolution Land Cover Project, a landmark initiative to improve information about the features of the Bay watershed landscape. The new high-resolution data on land cover will assist in determining forested acres within the county.

While forest areas have increased at the expense of active cropland in the areas east of Cacapon Mountain, forestland has continued to be lost to both permanent and seasonal housing, especially in the southern areas of the Central Valley region. Larger residential subdivisions have cleared forestland for access roads, which has divided forests and created erosion problems.

As losses due to development pressure have continued to increase, the number and funding of various state and federal programs has also increased. One such program that may affect Morgan County in the near future is the U.S. Forest Service's Forest Legacy Program. This program currently includes in its 2006 budget, a total of \$1.8 million for the Potomac River Hills project.

From a commercial standpoint, most woodland in Morgan County is considered of low productivity, more suitable for pulpwood than for saw timber. The Oak Site Index for Morgan County soil averages from 45 to 60. This index is the average height, in feet, of a well-stocked oak stand 50 years of age. More than 110,000 acres of the County's land area is classified as having an Oak Stand Index of 65 or less.

There are 32 active tree farms in Morgan County that are certified by the American Tree Farm System. These farms account for the majority of commercial harvesting and include several Christmas tree farms. However, there are just over 20 people employed in Morgan County in this industry.

Christmas tree production offers significant potential for commercial development. In 1980 there were approximately 12 Christmas tree growers with 2 or more acres of production, accounting for a total of nearly 100 acres. As of 2000 that acreage had increased to more than 100 acres. The Soils Survey indicates that over 70,000 acres in the County are suitable for Christmas tree growing.

There are 3 active sawmills in Morgan County which purchase stumpage and sawlogs of mixed hardwoods and produce lumber, railroad ties and pallets. This includes one on Poole Road, Pious Ridge and another on Gloyd Lane.

Mineral Resources

The predominant bedrock in the County consists of various types of shale. They outcrop on long narrow bands on both sides of Cacapon Mountain and are also exposed by erosion on the summit. The USGS Survey indicates that some of these shales may be adaptable to brick manufacture but careful testing would be required to prove the different locations best suited to this endeavor. Also, given the change in environmental regulations, most sites may prove both cost-prohibitive and detrimental to preserving the county's quality of life.

Limestone outcrops are present along the east side of Tonoloway Ridge and the upper west slope of Warm Spring Ridge. This limestone was once quarried and crushed at a small plant on the west slope of Warm Spring Ridge near Berkeley Springs. It made good quality lime and also excellent road material. The USGS Survey indicates several places along Warm Spring Ridge where this stone could produce a large tonnage.

The most important glass-sand district in West Virginia is near Berkeley Springs where the Oriskany Sandstone is quarried. This sandstone outcrops on a number of ridges in Morgan County, being usually much iron stained, impure and often quite hard. However, in Warm Spring Ridge it is a snow-white crumbly sandstone especially adapted to use as glass sand and, through subsidiary companies, attapulgate clay. The company's existing mine and additional land holdings total 2,786 acres in Morgan County.

The Baird Field is a small area of gas production in western Morgan County. Two producing gas wells were completed in 1967 in an area just west of Hansrote and since that time

additional wells have been completed. These wells are listed by the USGS Survey as producing 800,000 to 1.2 million cubic feet per day at depths of more than 4,800 feet in some places.

Unlike most of West Virginia, Morgan County has very limited potential for coal production. Coal seams on Sideling Hill are quite thin and the coal is high in ash and very crumbly on exposure. Small mines were once opened to supply a small local trade, but even these did not produce enough to continue operations. Coal deposits of the Meadow Branch Field now lie within the Sleepy Creek Public Hunting Area. These deposits are in thicker veins than those on Sideling Hill and are of very good quality except for a close admixture of slate.

Agricultural Resources

Agriculture is the second largest land use with nearly 23,000 acres or roughly 16% of the County area. Beef cattle, horses, hay, corn, wheat and pasture are the principal products. About 250 acres remain in apple and peach orchards. Vegetable production is increasing due to a strong local demand for fresh produce and the close proximity to the Washington, D.C. market. The number of farms with horses has also been increasing steadily.

There are approximately 800 agricultural tracts being farmed by 178 agricultural producers. The average tract size is 129 acres with most producers farming several rented tracts to create an economically viable unit. The 2002 Census of Agriculture lists 84 full time farmers in the County. There are 9,500 acres of cropland including annually-produced commodity crops and forage crops in rotation. Another 9,000 acres are used for pasture for livestock with the remaining acreage used for farm buildings, barnyards or idle land. Farm woodlots cover an additional 9,600 acres. Many of the farm tracts are owned by part-time residents and are leased to residents who farm full- or part-time.

Soils in Morgan County farmland vary from thin, droughty shales on ridge tops to rich, deep floodplains and terrace soils. Seasonal high-water tables are common on ridge tops and at the base of slopes. The shallow shale soils are moderately productive for forage crops although soil amendments are required to maximize production. The Morgan County Soil Survey published in 2006 shows 6,630 acres of prime farmland. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and is available for these uses. The soil quality, growing season and moisture supply are those needed for the soil to produce sustained high yields of crops. Soils on 7,758 acres have been identified as soils of statewide importance. Generally, this land nearly meets the requirements for prime farmland and can economically produce high yields of crops; however additional management must be utilized because of landscape position or some other limiting factor. An additional 56,540 acres have been designated as locally important farmland by the Morgan County Commission. This designation was made at the request of the Morgan County Farmland Preservation Board with concurrence by the USDA Natural Resources Conservation Service (NRCS) and includes soils that are generally used as pasture and hayland in the Eastern Panhandle of West Virginia.

The Morgan County Farmland Protection Program was established on December 2, 2002 under the authority granted to the Morgan County Commission by WV Code 8A-12. The Morgan County Farmland Protection Board administers the program, which is designed to hold permanent easements that prevent further subdivision of property and prohibit uses of the property that are incompatible with agricultural enterprise. The program goal is to preserve prime and important farmland, encourage stewardship of natural resources and protect the historical and scenic features of the county. The program is funded through property transfer fees and matching grants from NRCS. Currently twelve farms have committed to permanent agricultural easements totaling 860.68 acres.

Agriculture as a viable land use is increasingly under pressure by adjoining residential development of rural land. The loss of open space forces farmers to utilize marginal lands, which generally are more erodible, droughty, less productive and cannot be easily cultivated. Residential development in close proximity to agriculture raises the concerns of incompatible land use resulting from dust, livestock and livestock waste and the presence of chemicals typically used by farmers in the production of crops.

Local residents and organizations recognize and support the agricultural industry in Morgan County for its contribution to the nature and character of the community. The following are some of the groups that provide assistance and services to farmers:

- Morgan County Farm Bureau
- Eastern Panhandle Conservation District
- Morgan County Fair Board
- Morgan County Farmers Market
- Potomac Headwater Resource Conservation and Development Council
- WV Cooperative Extension
- WV University Davis College of Agriculture
- WV Department of Agriculture
- WV Conservation Agency
- USDA Farm Service Agency
- USDA Natural Resource Conservation Agency

Rare & Endangered Species

Morgan County's rare plant and animal species are found in the Sleepy Creek and Cacapon River watersheds. This is also where the county's only endangered species continues to survive. Through the help of such groups as the Sleepy Creek Watershed Association and Friends of the Cacapon River, both protection and education of this sensitive environment remains a priority in dealing with the pressures of increased development.

The Sleepy Creek watershed is home to 23 rare plant and animal species as well as one endangered flower species. These rare species have been monitored by the West Virginia Department of Natural Resources over the past several years and additional measures have been taken to protect the endangered wood turtle, which is found in only eight counties throughout the

State. The endangered wildflower *Harperella* also manages to survive in these watersheds. Only nine other known populations of this species exist between Alabama and Maine.

Table 6-1 Rare and Endangered Species

Scientific Name	District	Common Name	2004 Sighting
<i>Acris crepitans crepitans</i>	Sleepy Creek	Eastern Cricket Frog	2
<i>Catocola herodius gerhardi</i>	Sleepy Creek	Pine Barrens Underwing	1
<i>Coragyps atratus</i>	Sleepy Creek	Black Vulture	3
<i>Coreopsis verticillata</i>	Sleepy Creek	Whorled Coreopsis	2
<i>Euchlaena milnei</i>	Sleepy Creek	A Looper Moth	2
<i>Glyceria laxa</i>	Sleepy Creek	Northern Manna Grass	1
<i>Glyptemys insculpta</i>	Sleepy Creek	Wood Turtle	6
<i>Heterodon platirhinos</i>	Sleepy Creek	Eastern Hog Nosed Snake	3
<i>Liparis loeselii</i>	Sleepy Creek	Loesel's Twayblade	2
<i>Neotoma magister</i>	Sleepy Creek	Allegheny Woodrat	2
<i>Oenothera argillicola</i>	Sleepy Creek	Shale Barren Evening Primrose	2
<i>Pandion haliaetus</i>	Sleepy Creek	Osprey	1
<i>Piptochaetium</i>	Sleepy Creek	Blackseed Needlegrass	1
<i>Potamogeton pulcher</i>	Sleepy Creek	Spotted Pondweed	1
<i>Pseudacris triseriata feriarum</i>	Sleepy Creek	Upland Chorus Frog	1
<i>Pseudotriton ruber</i>	Sleepy Creek	Northern Red Salamander	1
<i>Ptilimnium fluviatile</i>	Sleepy Creek	Harperella	1
<i>Pycnanthemum muticum</i>	Sleepy Creek	Blunt-Mountain Mint	1
<i>Schoenoplectus purshianus</i>	Sleepy Creek	Weakstalk Bulrush	1
<i>Solidago arguta var harrisii</i>	Sleepy Creek	Shale Barren Goldenrod	2
<i>Sorex hoyi winnemana</i>	Sleepy Creek	Southern Pygmy Shrew	2
<i>Sylvilagus obscurus</i>	Sleepy Creek	Appalachian Cottontail	1
<i>Veronica scutellata</i>	Sleepy Creek	Marsh Speedwell	1

Source: Sleepy Creek Watershed Association

Although not rare, Sleepy Creek is also home to at least eight species of mussels, which are typically more prevalent near the confluence of the Potomac River.

Goals & Objectives

The natural environment and the physical factors affecting it are important to the local quality of life and the local economy. If new development is most efficiently concentrated around existing population centers which provide basic public service and infrastructure, development can occur in the most cost-effective way, while preserving the rural open space and sensitive areas.

Unplanned growth, loss of farmland and open space and subdivision of rural land are among the top concerns for Morgan County residents. Since preventive measures to protect the environment are preferable to corrective measures, this Plan should accentuate goals and objectives which will prevent scattered sprawl in the rural areas, loss of open space and degradation of the environment.

Goals

The main goals concerning natural resources focus on protecting sensitive areas and the wise use of land. They include:

- Encouraging reduction of the contamination of ground water and protection of the recharge areas for the natural springs in the Town of Bath;
- Protecting rivers and streams and the Chesapeake Bay watershed by promoting riparian buffer zones and minimizing the impact of runoff and erosion on stream systems; and
- Working to protect and discourage growth in sensitive areas such as those containing steep slopes, prime agricultural soils, flood plains and waterways or endangered species of flora and fauna.

Objectives

Accomplishing the following objectives will ensure progress toward these goals:

- Promoting best resource management practices in farming, including riparian buffers, native landscaping, and forest management techniques;
- Encouraging landowners to preserve land along waterways by committing these areas to land trusts, and to protect farmlands and woodlands through agricultural and preservation easements;
- Participating in the development of programs to curtail erosion and limit the release of sediment and nutrients into streams, and increase public awareness of this issue;
- Supporting implementation of the strategies of the Morgan County Water Resource Study;
- Encouraging maintenance of the National Floodplain Insurance Program 100 year floodplain mapping to reflect more recent knowledge of the designated areas, and promote enforcement of the regulations regarding use of these areas;
- Promoting protection of groundwater by guiding residential and commercial development away from recharge areas;
- Supporting programs to educate the public about responsible care of the county's natural areas that serve as natural passive and active open space;
- Encouraging development of a long term park, recreation and environmental resource protection plan focusing on areas where there is increasing development pressure;
- Preparing to react to the Air Quality Early Action Compact, and
- Review and revise local codes and ordinances to assist in protecting source water and mitigating local hazards as necessary and to maintain conformance with state and federal requirements.

CHAPTER 7 – RECREATION AND TOURISM

Introduction

As the metropolitan areas to the north, south and east continue to become more heavily populated, Morgan County will feel the pressure of overflow residents. At the same time, the county's recreational, cultural and tourism features will continue to attract a growing number of seasonal and transient users. It is important that such growth be guided in recognition of how these amenities support a high quality of life for existing residents.

Adequate parks and recreation areas and abundant cultural activities serve as successful tools for marketing the county's rich tourism heritage. It is crucial to both identify our recreational and cultural resources and to strive to maintain a balance among the needs of residents, businesses and visitors.

Parks

Morgan County is fortunate to have an abundance of natural, scenic and historic resources which make it an ideal setting for outdoor recreational activities. With a relatively small and concentrated population, local and state parks and recreation facilities comprise a large part of the county land mass. A number of local groups are actively involved in preserving, protecting and promoting the value of such spaces to both residents and visitors.

Federal Parks

The most important federal facility in the area is the Chesapeake and Ohio Canal National Historic Park, a part of which parallels the Potomac River across from Morgan County on the Maryland side. Although the National Park Service owns a few acres in Morgan County along the abandoned B & O Railroad right of way, the C & O Canal recreational historic attractions are all located in Maryland. Recreation opportunities along this section of the Canal include camping, hiking, biking and boating. Boat ramps are located at Hancock, Maryland and at Fifteen Mile Creek, located across from Orleans Cross Roads.

One of the most significant attractions of the C & O Canal is the Paw Paw Tunnel, a 3,118 foot brick-lined excavation located across the Potomac River in Maryland, just north of the town of Paw Paw. The tunnel was constructed from 1828 to 1850 to provide passage for the canal through a six-mile set of river bends. The National Park Service estimates national visitation of the Tunnel has continued to increase from 10,000 in 1980. There are continuing efforts at the local level to support extending the rail trail from Pearre to Cumberland, which would include numerous crossings into Morgan County, for increased recreational use.

State Parks

There are three state parks within Morgan County that total 11,120 acres. Although these parks are owned, operated and maintained by the State of West Virginia, county residents and businesses enjoy both the local use and commercial value that these natural areas offer.

The Berkeley Springs State Park is the current incarnation of what has traditionally been considered to be public ground surrounding the warm springs. It was formalized as public ground in 1776 when the Virginia House of Burgesses established a town around the springs on land that formerly belonged to Lord Fairfax. Designated in the 1776 law as Bath Square, the public space over the years was also known as The Grove. Governed for more than a century by state-appointed Bath Trustees, it eventually became state-run property in the early 1920s. In 1970, it was integrated into the state park system.

The small 4.5-acre park still serves as “village green” in the center of the Town of Bath and is the site of a series of natural warm springs which have been used since pre-colonial times as a health spa. It is a popular location for various community activities. Unusual among the mineral springs of the Blue Ridge are the expansive open pools and channels of the spring water. The Museum of the Berkeley Springs, established and operated as a membership organization by volunteers, is located on the second floor of the 1815 Roman Bath House and features exhibits explaining the hydraulics and geology of the famous springs as well as the culture of more than two centuries of bathing. Today, the park’s spa activities include both the Historic Roman Bath House dating to 1815 and still used for daily baths, the main bathhouse with Roman Baths, steams and massage treatments and an outdoor swimming pool. Visitors to the baths have continued to increase and in 2015, 128,963 people were counted. In addition, a public pump is available 24/7 for people to come and take the spring water without charge.

Cacapon State Park is the largest in the county, covering a long narrow preserve of approximately 6,115 acres and extending from Virginia north almost to the Potomac River. The park centers around the Cacapon Mountain on which hiking and bridle trails climb 1,400 feet from the activities center to the summit. The park includes a large six-acre lake with a sand beach, a small second lake and reservoir, an 18-hole golf course, a guest lodge, cabins and facilities for picnicking, tennis, fishing, boating and swimming. It also is home to a volunteer-built Nature Center which houses exhibits and education activities on the geology, flora and fauna of the area. Local sandstone boulders and blocks were used in many of the buildings, walls and gateposts, some of which were built by the Civilian Conservation Corps in the 1930s. The total number of annual users has decreased from 350,000 in 1980 to 237,146 in 2015.

The Sleepy Creek Public Hunting and Fishing Area is a diverse 23,000 acre state preserve, of which approximately 5,000 acres are located in eastern Morgan County, the remainder in Berkeley County. There is a 205-acre lake, camping sites and other rustic outdoor amenities.

Sideling Hill Wildlife Management area (2,507 acres) is located near Largent in Morgan County. Prior to acquisition by the state, the land had previously been leased to a well-established hunting club with three generations of hunters who had been stewards of the tract for many years. The WMA can be accessed from Milo School Road (CR 9/14), Magnolia Road (CR 18), and State Route 9.

Although not considered a State Park, West Virginia owns a second hunting ground -- the 400-acre Widmyer Public Hunting Area just west of Berkeley Springs.

County Parks

There are four county parks that total 43 acres. These parks include space for both passive and active recreational activities and serve to supplement larger state recreational areas.

The largest county owned park is the Morgan County Recreation Area located along US 522 south of Berkeley Springs. It consists of 16 developed acres that encompass several baseball fields, a concession structure, parking area, pavilion and playground. It also includes 16 undeveloped acres that are currently under review by the Parks and Recreation Commission for future proposed uses. Across US 522 is the Alex Rickli Memorial Park which encompasses a 9.92-acre lot that is currently being developed as a soccer field complex.

The county also owns three smaller parks that provide active recreational value. The first is the David Henry Memorial Park, which is a one acre park with basketball, volleyball and tennis courts within the Town of Bath. The second, also about an acre and also in town, is Harmison Field, currently developed and used as a skateboard park. The third, North Berkeley Park, is owned and maintained by Parks and Recreation. It has a playground and walking trail.

Other Parks

The town of Paw Paw owns and operates a seven-acre municipal park which provides a pavilion, baseball field and playground area. There are plans to expand the uses in this park as funding is made available. It also owns a festival ground and a small recreation area along the Potomac River that provides a boat launch as well as serving as a location for occasional community festivals. Both areas are administered by Paw Paw Town Council committees.

The Spruce Pine Hollow Park, a roadside park with a pavilion along WV 9 is owned by the Sons of the Revolution and maintained by Morgan County. It provides access to the Tuscarora Trail which connects to the Appalachian Trail. The Meadow Branch of Sleepy Creek, which runs along the property boundary, shows archeological remains of a mill run. James Rumsey's brother Edward owned this land and legend has it that this is the site of a bloomery and sawmill where James Rumsey may have sawed boards for the summer home Washington contracted with him to build in 1784 on lots Washington owned in Bath. About a year later, Rumsey reported to Washington that his mill burned and the boards for the house along with it. Washington would have ridden past here traveling to Bath, another 12 miles west. Today's WV 9 is the modern version of the noted 18th century Warm Springs Road which went from Alexandria, Virginia to the country's first spa in Bath. Spruce Pine Hollow is a site on the Washington Heritage Trail National Scenic Byway.

Eidolon Nature Preserve is a 354-acre track along Sideling Hill west of Berkeley Springs. It is owned by the Nature Conservancy and co-managed by the Potomac Valley Audubon Society. It offers developed trails and has been open to the public since 2007.

Board of Education Property

Given that many of the Morgan County schools are located both within close proximity to a majority of the population and include a large amount of field and active open space which is available for public use, it is important to include this acreage within the overall parks and recreation system. These facilities are outlined in Chapter 5 of this plan and include a total of 150 acres spread throughout the county.

The most heavily utilized area within the Board of Education as it relates to active recreational park value to the local residents is the walking track located at the Widmeyer Elementary School.

Commercial Activities

Although it is state-owned, the public golf course located in Cacapon State Park is included in this category. It is an 18-hole, 72-par championship golf course designed by Robert Trent Jones in the mid 1960s. The course is meticulously maintained and is one of the region's most popular public courses open for year-round play. It includes carts, driving range, picturesque putting green, pro-shop, clubhouse and challenging play which has deer as obstacles, all part of the course appeal.

The outdoor Triple B Arena, located just west of Berkeley Springs, is available for various public events. It hosts a Haunted Hay Ride attraction during the month of October.

Park Organizations

The Morgan County Parks and Recreation Commission was formed in 1973. The Commission consists of 11 members appointed by the County Commissioners to oversee all of the county parks.

The Paw Paw Parks and Recreation Board is an appointed board created to oversee the operations of the Paw Paw municipal parks. The Board consists of 9 members.

Three important civic organization which volunteer efforts to maintain various park and recreational amenities are Friends of the Cacapon River, Sleepy Creek Watershed Association and Warm Springs Watershed Association. All three groups were formed to serve to protect their respective rivers and streams which empty into the Potomac and form part of the Chesapeake Bay watershed.

The Friends of the Cacapon River is a grassroots environmental group whose mission is to preserve, protect and promote the Cacapon River, a major feeder of the Potomac River. In addition to monitoring activities, it sponsors an environmental camp for kids, educational seminars and tours.

The Sleepy Creek Watershed Association works to protect and preserve Sleepy Creek and to educate the community about the value of the precious natural resources that abound around the

creek. Sleepy Creek, a meandering tributary of the Potomac River, is host to a federally- listed endangered plant called Harperella.

The Warm Springs Watershed Association was formed by citizens in 2008. It works to protect, preserve and educate about Warm Springs Run which empties into the Potomac River and, after passing through Berkeley Springs State Park, includes overflow from the springs. Regular stream monitoring has revealed steadily worsening conditions in the Run. WSWA is focused on installing green stormwater best management practices.

Other local parks and recreation organizations include the Berkeley Springs State Park Foundation, Cacapon State Park Foundation and Potomac Trails Association, all of which focus on volunteer efforts to protect and promote the county's recreational amenities.

Table 7-1 Parks and Recreation Sites

<u>Park</u>	<u>Activities</u>	<u>Owner</u>	<u>District</u>	<u>Acres</u>
C&O National Historic Park	hiking/biking, camping boating, fishing	US Park Service	Numerous	N/A
Cacapon State Park	basketball, cross country skiing, golf, hiking, tennis, picnics, volleyball, lake, swimming, playground	West Virginia	Numerous	6,115
Berkeley Springs State Park	spa, tubs, bath house, spring house, outdoor pool	West Virginia	Bath	5
Sleepy Creek Hunting Area	hiking, fishing, camping, hunting, boating	West Virginia	Sleepy Creek	5,000
Widmeyer Hunting Area	hunting	West Virginia	Bath	400
Morgan County Rec. Area	ball fields, playground	Morgan County	Timber Ridge	32
Alex Rickli Memorial Park	future soccer	Morgan County	Timber Ridge	9.92
David Henry Mem. Park	Tennis, volleyball, basketball	Morgan County	Bath	1
Harmison Field	skateboard	Morgan County	Bath	1
North Berkeley Recreation	hiking, playground	MC Parks	Bath	1
Spruce Pine Hollow Park	pavilion, picnics, hiking	Private	Sleepy Creek	2
Paw Paw Municipal Park	ball fields, picnics	Paw Paw	Cacapon	7
Paw Paw Festival Grounds	boat launch, events	Paw Paw	Cacapon	2
Sidling Hill WMA	hunting	West Virginia	Cacapon	2,507

Total 15 Parks**14,437 acres**

Source: National Park Service, WV Department of Natural Resources, Morgan County Government

Park facilities range from one acre to more than 6,000 acres, with ownership at all levels of government. They provide activities that are both passive and active for residents and visitors. The park areas are widely spread throughout the county providing the opportunity for a healthy mixture of recreational activities that are within reasonable distance of existing and proposed development. National Parks Association standards suggest there should be 10 acres of park land for every 1,000 residents. However, there are many factors to consider in developing this ratio which should account for the type of park amenities being provided. At nearly 12,000 acres in 10 parks, not including other open space such as schools, the C&O Canal National Park, or private recreational locations, the amount of park space per 1,000 residents is adequate in meeting current and future demands.

Recreational Activities

The county includes a number of community-based organizations and commercial entities that provide recreational and cultural activities to serve the growing population. These activities include a variety of active, passive and resort-style settings.

Hunting & Fishing

There are three state-owned locations which offer hunting and fishing on more than 22,000 acres in three wildlife management areas providing opportunities for hunting everything from white-tailed deer to roaming flocks of wild turkey. There are both spring and fall seasons for various game. These areas include Sleepy Creek Hunting and Fishing Area, Sidling Hill Wildlife Management Area and Widmeyer Hunting Area. Fishing locations are even more varied with settings for canoeing, fishing and boating found on the Potomac and Cacapon rivers, on area streams and on lakes at Cacapon State Park and Sleepy Creek Hunting and Fishing Area, some stocked by the Ridge Fish Hatchery.

The Cacapon River provides one public river access site. A self-guided boating tour extends from Largent to Great Cacapon where the Cacapon joins the Potomac River. This tour passes many natural and man-made features including historic bridges and unique rock outcrops. This tour is administered by the Friends of Cacapon River, a local nonprofit group that works to preserve, protect and promote the Cacapon River watershed.

Berkeley Springs includes two pedestrian scenic byways for those who choose to walk to see the sites of this historic area. These walking tours include the Treasure Tour of Berkeley Springs State Park, which features 16 points of interest centered around the nearly five-acre park that houses the original Berkeley springs, and the Walking Tour of Berkeley Springs, which includes the sites and structures of 28 locally historic landmarks, within the Bath Historic District.

Morgan County also provides numerous mountain trail rides originating from Cacapon State Park and the former Coolfont Resort. One of the most popular rides starts in the state park and crosses along the top of Cacapon Mountain for 10 miles to the historically and geologically prominent Cacapon Rocks. This ride offers spectacular views of the Cacapon River Valley.

Swimming and other water recreation include the lake at Cacapon State Park which offers paddle boating and sand beaches. There are boat launches to the Potomac River and Sleepy Creek Lake in the wildlife management area and canoeing, kayaking and tubing on the Cacapon River. The public swimming pool in Berkeley Springs State Park is open from Memorial Day through Labor Day.

Other major recreational activities spread throughout the county include hiking and biking trails along Cacapon Mountain accessible from both Cacapon State Park and the former Coolfont Resort. Other trails include the Tuscarora Trail which connects to the Appalachian Trail, and the C & O Canal which provides easy hiking as well as biking.

The Morgan County Observatory houses a rare Cassegrain telescope in a cedar-sided observatory with rotating dome that is open for education programs, public viewing and star shows. This unique structure, which was built in 2001, is located on a ridge about 10 miles south of Berkeley Springs on Winchester Grade Road.

The Ridge Fish Hatchery is only one of seven in the state, producing both cold and warm water fish including trout and muskies. The hatchery is owned and operated by the West Virginia Department of Natural Resources and has been in existence since 1929. It is located about 12 miles south of Berkeley Springs on US Rt. 522 and is fed by the Breakneck Run Springs.

The Sidling Hill Mountain and Visitor Center is located on US I-68 just west of Berkeley Springs in Maryland and was created when a cut was blasted through the mountain in order to make way for I-68. The cut reveals an impressive cross-section of geosyncline-concave layers of sedimentary rock at various layers of the earth's crust.

There are shooting range activities available at three locations in the county. This includes sporting clays and trap shooting at Sleepy Creek Sports, which is a National Sporting Clays Association member. This wooded range is located near Berkeley Springs and is fully equipped and staffed. The Sleepy Creek Wildlife Area, which is a state-owned facility, has an unattended shooting range. Cacapon State Park has a sporting clay shooting range.

Recreation Organizations

The Morgan County Master Gardeners is a group of volunteers who serve to beautify and enhance the area with butterfly gardens and other plantings. The West Virginia University Extension Service sponsors this group.

Berkeley Springs Farmers Market operates seasonally on Sundays and Thursday afternoons in the center of the Town of Bath.

The Potomac Valley Audubon Society is a civic organization that serves Morgan County and other nearby areas. Services include sponsoring area children to summer camps for environmental education and establishing local nature preserves.

Throughout the county, there are numerous youth and adult athletic organizations that operate independently of the county but utilize many of the county's fields and spaces for recreational sports activities.

Cultural Activities and Facilities

Community cultural groups include a history museum, active historical society, public library, quilt group and several community performance organizations including a concert band, quilters guild, choir and theater group. History-related activities and organizations are detailed in the Historic Preservation chapter. All of this rich cultural infrastructure, impressive for a small, rural area, is an important draw for the tourism industry.

Due to substantial arts activities instigated by the community-based Morgan Arts Council, founded in 1977, Berkeley Springs was named West Virginia's first certified arts community and has received abundant state, regional and national recognition as an art town. This reputation has in turn acted as a magnet for artists to relocate to the county and retirees and second home owners to choose Morgan County because of its "art scene". Nearly 1% of the population is made up of working artists, musicians, dancers and writers showcasing their talents in county-wide studio tours, gallery shows, music venues and an annual book festival.

The award-winning Morgan Arts Council (MAC) currently has nearly 500 members and since its founding has delivered nearly 600,00 direct arts experiences including concerts, classes, gallery shows, community theater performances, public art projects, digital media broadcasts, literary events and youth art programs in and out of the schools. Consistent with increased participation and expansion of programs, the organization has added full- and part-time professional staff and maintained an operational budget of nearly \$250,000.

MAC owns and is renovating the Ice House arts and community center, a four-story, former storage building constructed in 1911 and located in downtown Berkeley Springs that was gifted to the council by US Silica in 1996. The currently renovated floors of the building provide a Great Hall, classrooms, dance studio, office, kitchen, media center and gallery. The building is located at the corner of Independence and Mercer Streets.

The Granary is a non-profit arts venue providing opportunities primarily for local musicians.

The Morgan County Public Library is open daily except for Sundays and Wednesdays. It has a computer center, weekly and summer children's programs and houses the Morgan County Historical and Genealogical Center. There is also a public library in Paw Paw.

Commercial Arts Facilities

The active local music scene has a number of commercial venues including The Country Inn, Black Cat Music, Hillbilly Heaven, Bath Brewpub and The Troubadour Lounge which is also home to the West Virginia Country Music Hall of Fame.

The Star Theatre is an operating vintage movie house listed on the West Virginia Historic Theater Tour.

There are several galleries and shops exhibiting and selling local, regional and American art. Twice a year there are Art Studio Tours. Monthly in summer, Art in the Park features a selection of regional artists with booths set up in the park in Berkeley Springs.

Tourism

For nearly 300 years, visitors have come to Berkeley Springs for the healing waters of the famed warm mineral springs. Beginning in the 20th century, other tourism-related activities have developed, including golf.

As noted by the Travel Berkeley Springs annual economic impact statement of FY15, tourism is a more than \$47 million industry in Morgan County, consisting of more than 100 businesses that employ more than 500 people including working owners. Travel Berkeley Springs (TBS) is the official convention and visitors bureau, with its main office located in downtown Berkeley Springs and having nearly 100 members. By law, TBS receives half the hotel/motel tax revenues collected by the county and town. Since its inception in 1989, TBS has consistently maintained several goals and strategies centered around two distinct objectives: protecting the historic character of Berkeley Springs and preserving the scenic wilderness throughout the county by promoting the tourism ambience of a place “caught in time”.

Marketed as Berkeley Springs, although the area includes the entire county, attractions are numerous including the unique appeal of the local spa industry built around the warm springs, Berkeley Springs State Park, local spas and individual practitioners of healing arts. As noted above, cultural attraction and Berkeley Springs’ national reputation as an art town are important draws. The historic town is an attraction with distinctive shops and notable restaurants while the surrounding countryside and wilderness add appeal to increasingly popular outdoor adventure travelers. Location has been and remains the prime attraction with major metropolitan areas ranging from 90 minutes to 2.5 hours away. There are nearly a dozen bed and breakfasts and inns as well as cabins, vacation homes, suites and lodges offering more than 100 lodging choices from elegant rooms to rustic cabins. These and all other tourism related activities are heavily promoted through the Travel Berkeley Springs website and joint Visitors Center and Chamber of Commerce office.

The Washington Heritage Trail was developed in 1998 and includes a tour of the many locations throughout Morgan County which are associated with the rich historical link it shares with

George Washington. The tour covers at least 15 points of interest within the county, from the Town of Paw Paw to a small park in the Sleepy Creek region. The tour is defined as “following his footsteps on the Washington Heritage Trail National Scenic Byway and takes you on a tour of the county’s most historic locations” associated with George Washington, who “from the time he was sixteen through the reading of his will in 1799, ate, slept, owned land, and bathed in and around Berkeley Springs”. The tour follows closely along WV Rt. 9, and includes some locations along the southern portion of US Rt. 522.

Also associated with the George Washington Heritage Trail is a boating and a driving tour of the Cacapon River. The boating tour extends from the small hamlet of Largent, located off of WV Rt. 9, east of Paw Paw and ends at Great Cacapon, where the Cacapon joins the Potomac River. This tour passes many natural and man-made features including historic bridges and unique rock outcrops. The self-guided driving tour follows much the same route, traveling in either direction along WV Rt. 9, which hugs and crosses the river for its entirety through the county. Both tours are administered by the Friends of Cacapon River which is a local nonprofit group that works to preserve, protect and promote the Cacapon River watershed.

The appeal of a small, historic, culture-rich town with vast amounts of acreage either preserved in public parks or promoted through private recreational venture plus the county’s relatively rural character and scenic view, makes it popular with weekend travelers from nearby cities as well as those looking to build or purchase a weekend home with potential for eventual retirement

Goals and Objectives

Goals

Morgan County’s special topography with its mountains, rivers, forests, parks and open land offers appealing recreational options that attract significant numbers of tourists. Goals to help maximize recreational opportunities include:

- Preserving the county’s beauty for the benefit of residents as well as tourists;
- Promoting the creation and protection of parks, open and natural spaces and a variety of recreational and cultural facilities concomitant with new development; and
- Encouraging and providing opportunities for active recreation to enhance physical fitness and enable more people to enjoy what Morgan County has to offer.

Objectives

These goals will be advanced by achieving the following objectives:

- Encouraging the creation of neighborhood parks within developments, and the linking of open spaces among residential developments to create larger, contiguous undeveloped areas;
- Supporting acquisition of additional park land as well as rights of way for hiking and biking trails;

- Protecting existing sites and facilities such as the Widmeyer Running and Walking Track, the Observatory, and the Rt. 522 Ball Complex;
- Encouraging development of a countywide parks and recreation plan to assess future demand for various types of recreation (e.g. golf, swimming, bowling, a community recreation center with an indoor pool, and a separate, safe trail system for recreational ATV's) and prioritize the identified needs;
- Supporting expansion of recreational activities along the county's waterways;
- Encouraging local governments and the school system to coordinate sports activities to ensure efficient use of field space;
- Supporting further development of the Ice House as a site for cultural activities;
- Supporting completion of the Paw Paw community park and consideration of the creation of an interpretive center and trail system in Paw Paw;
- Supporting the Travel Berkeley Springs Convention and Visitors' Bureau as a means of advancing tourism;
- Increase pedestrian opportunities throughout Morgan County;
- Protecting open lands, forests and rivers as wildlife habitats for hunting and fishing;
- Recognizing the concept of viewsheds as a consideration in development regulations;
- Encouraging buffer areas and limits on riverside development to protect purity of Potomac River, the Cacapon River and streams in the Sleepy Creek system; and
- Encouraging best practices "green" stormwater management.

Recreation and Tourism Map Identification List

The following list corresponds to those parks and recreation locations identified on the Recreation and Tourism Map, Map RT-A, included in the following attachment in this Chapter.

<u>Parks</u>		<u>Recreation</u>	
1	C&O Canal	11	Cacapon State Park Golf Course
2	Paw Paw Municipal Park	12	The Ice House
3	Berkeley Springs State Park	13	Morgan County Observatory
4	Cacapon State Park	14	Ridge Fish Hatchery
5	Sleepy Creek Hunting Area	15	Sidling Hill Mountain Pass
6	Widmyer Wildlife Mngt. Area	16	Sleepy Creek Shooting Range
7	Morgan County Recreation	17	Cacapon River Access
8	David Henry Park	18	Sleepy Creek Sports
9	Harmison Field	19	Washington Heritage Trail
10	Spruce Pine Hollow Park	20	Paw Paw Tunnel

CHAPTER 8 – ECONOMIC DEVELOPMENT

Introduction

Economic development efforts in Morgan County are an ongoing process of adapting to the changes experienced by the community through demographic growth and employment locally as well as to economic conditions on the regional, state and national levels. The role of public policy in the economic development arena is to build capacities that are beyond the ability of the market to provide and that enable economic agents, individuals, firms or communities to realize their potential.

In an effort to promote and maintain a stable and growing economy, the planning process must be flexible enough to allow for various types of enterprises and employment opportunity, but also be cognizant of the placement of these uses where infrastructure requirements are sustainable and are in compatible areas that compliment neighboring citizens and businesses.

There are several types of individual commercial and industrial economic development entities in Morgan County. There are also several locations within the county that have been developed and are promoted as business or industrial parks to provide needed infrastructure and generate a concentration of employment opportunity. However, it appears that the largest economic development impacts that exist within the county currently come from the solid growth in several existing manufacturing operations and perceptible increases in tourism revenue and activities.

Growth of the economy over the next decade requires infrastructure development especially in the area of technology, and targeting of new areas for development based on the availability of resources, primarily water.

The most significant impact on employment and new industry locating in the county is expected to come from the remarkable growth in jobs in neighboring Berkeley County arising from the recent location of several major employers there. This development provides opportunities for Morgan County to be a lower-cost location for peripheral industries. The availability of well-paying jobs nearby is both a benefit and potential problem as it may threaten the stable employment pool for industries in Morgan County. Solid economic development requires attention to both attracting new businesses and working to sustain and grow existing ones.

Assets and Liabilities

Successful economic development efforts require a clear and accurate understanding of both the assets that lead to enterprises locating here and liabilities that make that unlikely. Some of these same characteristics also impact existing businesses.

Location in West Virginia's Eastern Panhandle is the county's primary asset. Every corner of the county is within 30 miles of a nexus of Interstates including I-81, I-70 and I-68. The northern end of the county has the most opportune location just six miles from I-70 and I-68.

There is an active CSX rail line along the Potomac River in the north end of the county although there are no facilities for stopping. Rail service is available through the intermodal Inland Port at Winchester, VA and piggyback services are available in Cumberland, MD. The closest commuter rail is located in Cumberland, MD and Martinsburg, WV (both are 45 minutes away west and east, respectively).

Site availability is good in Morgan County with low-cost lots in both business parks as well as lower land and rental costs in private hands. The county's renovation of the Pines Opportunity Center offers the potential for business/office/educational enterprises. Development of the Morgan Arts Council's Ice House also could provide space for in-town office/arts related enterprises.

Available and affordable infrastructure for various industries is crucial. A proposed natural gas pipeline that would be accessible to the northern end of the county could be developed within the next couple of years. Natural gas is a highly desirable infrastructure asset. Broadband and reliable cell service are essential through as much of the county as possible with a commitment to upgrade electronic services. High-demand electric power is currently available only in certain locations which do not include the 522 Business Park.

Water and sewer are traditional infrastructure requirements. Both business parks have available water and sewer; the park in Paw Paw uses town systems. During the final years of the 20th century, there were successful efforts to extend water and sewer south on US 522 several miles from town. Any major industrial growth outside the established business parks would require development of new water sources besides the warm springs in town. Sources may include additional springs, deep wells or the Potomac River. Preservation of the warm springs water both for residential and commercial uses such as bottling and spas is necessary.

The Eastern Economic District, made up of the eight eastern most counties in West Virginia, which include Morgan County, continues to fare better than other parts of the state in such categories as wages and benefits, income earnings and labor management relationships. Unlike other areas of the state, it has not experienced the dominant influence of the unionized coal industry. It continues to produce a labor pool of high productivity, good mechanical skill and work discipline and low absenteeism and turnover rates.

Access to the major transportation network continues to be improved as it relates to freight transportation and access to metropolitan government employers. Housing costs remain relatively low with a healthy percentage of vacant land and structures for new residents and businesses.

Infrastructure has been improved recently and growth is projected because of these improvements.

The improvements to the Warm Springs Public Service District sewer facility help the community meet the Chesapeake Bay pollution mandates required by federal law. The Bath Water Department continues to work on Phase II of the water line replacement project which is alleviating massive underground water loss from corroding older lines. The new water tank

project and the Storm Water Management project in the Rt. 522 Business Park are alleviating financial burdens from potential businesses while increasing the square footage allowable. Increasing efficiency and decreasing pollution assist greatly in enticing new businesses.

Telecommunications have experienced a surge including a new cell tower in Paw Paw providing wide coverage for residents and improved emergency services communication.

A new emergency radio system provides the first Statewide Interoperability Network for Morgan County allowing all emergency service personnel to communicate throughout the county with no “dead zones” as well as to communicate with State Emergency Services.

Labor Force Characteristics

Availability of skilled labor and its relative cost are among the top characteristics considered when industry and businesses look to select an area in which to locate. Morgan County’s small population requires augmentation by nearby areas within a 50-mile range to provide the scale of workforce required to attract many industries.

Migration

Between 1980 and 2010 the population increased from 10,687 to 17,541 growing by nearly 40% but has held steady in recent years. During that same time, the number of persons eligible to enter the work force (16 years of age and older) increased from 8,005 to 14,309, or a 78% increase. In 2014, the percent of persons 16 and older in the labor force was 53.9% or 7,712. The unemployment rate in March 2016 was 5.3% with slightly less than 400 persons unemployed. This indicates to potential employers a tight labor market. With the future growth of jobs in Berkeley County, the Morgan County labor market can be expected to grow even tighter.

In further review of the changes in employment demographics, the number of females in the labor force increased from 38% in 1980 to 47.5% in 2014. This is slightly lower than the state average of 49.4% but the same as the national average of 47%.

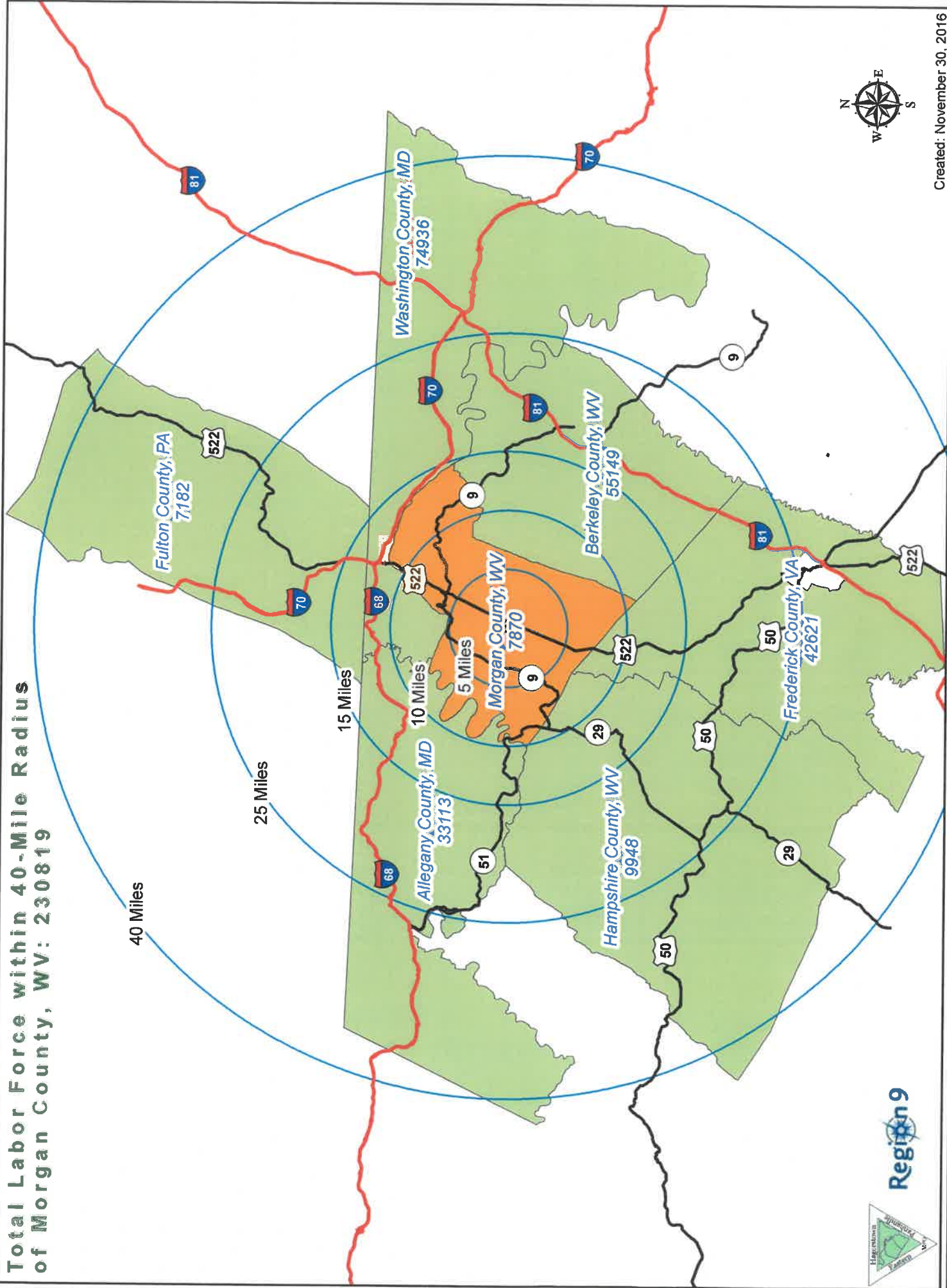
Table 8-1 Labor Force Characteristics

Statistic	1980	1990	2000	3/2016
Persons over 16	8,005	9,652	11,962	14,309
Labor Force	4,587	5,605	6,953	7,350
Employed	4,231	5,269	6,659	6,960
Unemployed	193	356	336	390
Not in Labor Force	2,914	3,418	4,047	6,959

Source: US Census Reports & Workforce WV

Labor Force of Morgan County, WV and Surrounding Counties

Total Labor Force within 40-Mile Radius of Morgan County, WV: 230819



Although there is anecdotal evidence that a significant portion of the workforce living in Morgan County commutes to jobs outside of the county, there is no hard data indicating the number of out-of-county commuters or the areas to which they commute. An average commute time of 30 minutes is possible without leaving the county. Significant population centers in two adjacent states and an adjacent WV county make out-of-county commutes logical. The future development in Berkeley County for construction and industrial jobs will increase the number of commuters.

While commuting is made easier over time, there will be a limit to both the amount of new residents the county may adequately provide services for, as well as a finite capacity for the number of people willing to commute to work elsewhere. For these and many other reasons it is important that the county grow, sustain and diversify its basic economic development industries.

Educational and Skill Levels

Those over 25 who are high school graduates or higher were 82.1% of the county's population in 2014, just slightly lower than the percentage for all West Virginia. Those over 25 with a bachelor's degree or higher were 16.5%, again slightly lower than the state average. Currently, nearly 95% of secondary students graduate and 68% of local high school graduates continue on to higher education.

Easily accessible higher education and vocational training are essential for having a prepared workforce. Recently, Blue Ridge Community and Technical College (BRCTC) opened a Morgan County Campus at the Pines Opportunity Center (the old War Memorial Hospital site). Blue Ridge is currently offering adult education, WorkForce and college general studies courses. Morgan County High School seniors are being offered free general studies courses beginning fall 2015. Continued effort is needed to assure expansion of training made available at both BRCTC in Morgan County and transportation to the Berkeley County Campus. Both health-related and hospitality industry training and education fit into long-term development goals and should be supported.

Other education and training institutions are available nearby including Shepherd University, Hagerstown Community College, Shenandoah University and James Rumsey Vocational Center. Preliminary outreach efforts have been made to Potomac State College for sustainable agriculture programs. In addition, support for enhancing the quality of secondary education in Morgan County is crucial for any workforce development. A solid high school education is often all that is needed for enterprises that conduct their own technical training of employees.

Employment Trends

While the number of employed persons nearly doubled from 1980 to 2016, employment trends within specific sectors of the economy showed little change since 2009. The most significant changes came from an increase in health and education and a decrease in governmental employment.

Table 8-2 Industry of Employed Persons

<u>Industry</u>	<u>2009</u>	<u>2014</u>
Agriculture		184
Mining		114
Construction	80	87
Manufacturing	190	180
Transportation, Warehouse, and Utilities	460	436
Wholesale Trade	20	29
Retail Trade	390	372
Financial activities	130	106
Professional and Management Services	90	111
Educational, Health	380	555
Hospitality	370	331
Other Services	260	77
Public Administration (gov't)	1030	756

Source: Workforce WV- County Profile

Employment Earnings

The economic success and viability of the county employment capacity depends not only on the creation of jobs, but also the increase in terms of total earnings. Given the apparent increase in costs associated with housing and services, it is important for the county to sustain economic opportunities for employment in all sectors that will provide earnings sufficient for the local population to live in the county in which they work. As reflected in Chapter 2 of the Comprehensive Plan, per capita and household income have increased over time, climbing above the state average with 12% and 9%, respectively. Due to the county's location in close proximity to employment markets of four other states, higher levels of income in those areas can increase pressure on county employers to provide comparable wages or lose their employees.

Income characteristics are economic indicators, which are most useful when compared to characteristics of like areas. As defined in the 1985 Comprehensive Plan, Morgan County, which is situated within the Cumberland Valley/Shenandoah Valley quad-state region, may be compared to the other 11 counties in this region with respect to median household income, per capita income, percent of the population below poverty level and other statistical economic demographic measurements.

Morgan County ranks third among the five West Virginia counties and eleventh overall for median household income with only Mineral County, WV ranking lower. It also ranks third and seventh in per capita income. At the same time it ranks third and fourth respectively for percent of persons with income below the poverty level. All are significant positive changes over its rankings in 1980. However, as its per capita income has climbed over the average during the past two decades, making it one of the fastest growing counties within the region for individual

income earnings, the county remains somewhat behind in comparison to the region for median household income. Perhaps the most significant change and success of the county income characteristics has been the ability for Morgan County to go from the second highest poverty level in the region, in 1980, to the fourth lowest in 2014.

Although trailing substantially behind the other two counties in the Eastern Panhandle, Morgan County made modest gains in per capita income between 1980 and 2014, increasing from 73% of the US average to 78% in 2014. One factor not displayed as part of the Table 8-3 is the county's regional ranking in terms of total income comprised of transfer income such as welfare and social security payments.

Table 8-3 Regional Income Characteristics

State County	Med. Household Income		Per Capita Income		% Below Poverty	
	1980	2014	1980	2014	1980	2014
West Virginia						
Berkeley County	15,390	55,100	6,376	26,516	13.9	13.2
Hampshire County	11,926	26,828	5,125	17,652	16.9	21.2
Jefferson County	15,803	66,205	6,139	29,861	13.4	10.2
Mineral County	14,662	30,713	5,697	19,055	13.3	16.1
Morgan County	13,632	37,406	6,242	22,770	16.7	13
Virginia						
Clarke County	16,649	75,508	7,473	38,590	9.8	8.2
Frederick County	17,110	68,719	6,503	30,764	9.8	7.7
Maryland						
Allegany County	13,885	39,794	6,049	21,653	12.2	18.5
Washington County	16,623	56,477	6,765	27,173	10.8	13.8
Pennsylvania						
Bedford County	13,167	44,692	5,403	23,075	14.7	13.6
Franklin County	16,911	53,394	6,675	25,540	7.4	11.9
Fulton County	13,573	48,452	5,402	23,192	14.4	13.3

Source: US Census Reports

Although the local economy is growing and population is increasing, Morgan County residents continue to spend much of their income outside of the county. This includes residents in the northern part of the county traveling to larger retail centers for food stuffs, essential and secondary needs and durable and non-durable goods in Washington County, MD and Berkeley County, WV. It also includes the growing southern central valley region residents continuing to shop for such goods and services in Winchester, VA. Further, due to geographic proximity of the Paw Paw/Cacapon area, most residents in this western part of the county shop and seek employment in Frederick County, VA and Allegheny County, MD.

Major Employers

Export industries, or “basic industries”, are an important component to an area’s economy. Basic industries are considered to drive the area’s economy because the goods and services are sold elsewhere, thus bringing “new” revenue into the area. This revenue then supports the non-basic or service-oriented industries in the local economy. There is a hierarchy within basic industries with those that use local resources as their raw material as the most desirable since they are not expending money purchasing raw materials from outside the county. One excellent example of such an industry is the water bottling plant which bottles Berkeley Springs water for distribution throughout the region and even produces some of its own containers.

As noted above, basic industry businesses, which make up 20% of county jobs, are of great importance to the long-term sustainability of the area’s economy, driving the local economy with goods and services being sold elsewhere, thus causing dollars to flow back into the local area through consumer exchange in non-basic purchases. As a general rule, it is estimated that a healthy ratio exists when there are two to three jobs created in non-basic services for every one job in basic industries.

Basic industries in Morgan County include mining, lodging, agriculture, fabrication and manufacturing. Since 1980, both basic and non-basic industries, as they relate to major employers, have changed as indicated on the following comparative table.

Table 8-4 Major Employers 1984 and 2015

Rank	1984	# of employees F/P	2015	# of employees F/P
1	Pennsylvania Glass Sand	290	MC Board of Education	400
2	MC Board of Education	250	Valley Health	168
3	Coolfont Recreation	105/40	Berkeley Springs Center	150
4	Vanguard Products	120	Caperton Furniture (Seely’s)	103
5	Valley View Nurse Home	102	Morgan County Commission	88
6	Morgan County Hospital	75/21	Senior Life Services	77
7	Consolidated Orchards	60/50	U.S. Silica (PGS)	72
8	Cacapon State Park	60/20	Food Lion	68
9	Country Inn & Spa	59/9	CNB Bank	68
10	Seely’s Pine Furniture	62		
Total		1,183/140		1,101

Source: Morgan County Government

The above table would indicate that over time, while general government employment has grown to include additional jobs, especially in the public education and health fields, overall major employment entities, especially in the manufacturing, mining and service industry sectors, have continued to decline losing approximately 300 jobs among the top 10 employers mostly from the closing of key businesses. Given that the smaller non-basic employment sectors, is an integral part of the success of the local economic employment industry as a whole, it is important to

explore further the make-up of those employment opportunities not included in the top ten listed in Table 8-6 as those industries combined produce a significant amount of the labor force.

Specific Economic Sectors

Real estate, Construction and Retail

Non-basic or commercial development includes those general types of retail and service trades that tend to reflect the growing or declining pace of residential growth.

Real estate trends indicate the market is rebounding after a prolonged decline in home sales and values. Short sales and foreclosures are no longer prevalent, housing prices have begun to increase and banks are providing mortgages more readily. The second/retirement home market which began developing in the 1980's has returned to Morgan County after several years of decline. Washington, D.C., Baltimore and Pittsburgh provide an abundance of potential clients for the second home market.

Construction has also slowly increased after a near crash in 2008. New home building permits are being issued more frequently as are home improvement permits. Construction companies which had suffered from a major decline in revenue have begun hiring again. Many contractors are again hiring subcontractors for the first time in nearly a decade.

The Proctor & Gamble facility expects to hire approximately 1,000 construction workers during the initial phase of work in Berkeley County and it is anticipated that Morgan County residents and businesses can benefit from this activity.

All this activity suggests that the near stagnant population numbers after more than two decades of rapid growth are on the increase. This bodes well for the general commercial types of development, especially retail, that are dependent on population. Recent additions of another Dollar General store and a Tractor Supply store are positive indicators of returning economic health.

Thanks to the success and expansion of Mountain View Solar, alternative energy has the potential to be a major business activity. Retaining this enterprise and assisting it to grow requires state and national solar energy tax credits. In addition, encouraging Blue Ridge Community Technical College to provide the needed alternative energy training programs and certifications would further encourage growth.

Tourism and Arts

Morgan County, as outlined in Chapters 2 and 7, is unique from its surrounding neighbors, with nearly 15% of its housing units designated as recreational homes, and a larger per capita share of tourism-related activity. The economic benefits of these elements have grown over time as reflected by the increase in employment opportunities, which include the addition of at least one major employer, the Country Inn, to the list above. The fact that the tourism industry continued

to have measureable growth with both the closing of Coolfont Resort and the general economic decline after 2008 is a tribute to its underlying health. The imposition of hotel/motel tax gives an accurate basis for projecting the overall value of the industry as well as provides resources for both essential marketing efforts and support of tourism-related attractions. Efforts must continue to protect the natural assets that underlie the tourism industry. Continued promotion of the county as a destination for tourists and new tourism-related employers is essential to nurture the potential for small business growth within the community.

Although tourism is not traditionally listed as a “basic industry”, it does share the crucial characteristic of bringing “new” revenue into the county. In addition, tourism provides significant opportunities for locally-owned enterprises, a hallmark of the industry in the county.

The nationally recognized arts community in Morgan County both provides an important attraction for the tourism industry as well as being a stand-alone economic sector. Berkeley Springs continues to be listed among the most vibrant and successful arts communities in the country and a premier arts destination. Scores of artists working professionally in various media have made their home in Morgan County and contribute to the local economy. Centerpoint of this activity is the Ice House art and community center owned by the nearly 40-year-old Morgan Arts Council. Over more than a decade, more than \$1 million has been spent on renovating the facility which now provides galleries, classrooms and performance space. The recently established Digital Media Center houses freelance production work and offers technical training. It is engaged in a pilot project with Comcast to operate a website – BerkeleySpringsCommunityMatter -- that aims to provide an alternative to cable television studios in rural areas.

Local Specialty Agriculture

The growing trend in local food promises to continue development in Morgan County. The county is especially well positioned for robust growth in specialty agriculture with easy access to metropolitan retail markets, several local restaurants featuring local foods, a thriving Farmers Market and two major growers plus numerous smaller ones. There is a Farm Directory and an active coalition of agriculture related groups including an Economic Development Authority task force. As mentioned above, preliminary outreach efforts have been made to Potomac State College for sustainable agriculture programs.

Mock’s Greenhouses is one of West Virginia’s largest hydroponic vegetable producers and recently undertook a major expansion project. Glascock’s has also added indoor growing as well as maintaining major production in traditional crops.

Like tourism, specialty agriculture qualifies as a “basic industry” in that it has the crucial characteristic of bringing “new” revenue into the county. And significantly, the success of the agriculture sector does not rely on outflows of revenue for raw materials or products to sell.

Education

Serving as both a major employer and a crucial attraction for locating businesses, education in Morgan County is currently in a challenged position. Public education suffered a major financial

crisis during 2014 when an excess school levy, which provides additional funds for programming, salaries and building maintenance, was initially defeated by county voters then was ultimately successful but at a much reduced amount. At the same time, state funding was reduced due to declining enrollment. While public school officials remain positive and work diligently to find alternative funding opportunities, the result of decreased funding has been a closed school and the loss of many experienced teachers. A successful and thriving public education system is essential for successful business recruitment.

Higher education has seen some improvement but much more is needed if Morgan County is to be economically competitive. Blue Ridge Community and Technical College now has a Morgan County campus located in the Pines Opportunity Center. Efforts are on-going to expand and enhance programming there especially in employment training sectors. The current dire financial situation at the state level does not look encouraging for increased funding of Blue Ridge or other community colleges. Adult education, workforce training and general education credits are among the variety of programs offered.

Manufacturing:

Manufacturing continues to show evidence of growth within the region. Proctor & Gamble locating their new manufacturing facility in neighboring Berkeley County will bring a multitude of opportunities for Morgan County.

Ancillary businesses are one area of focus. The P&G facility will have specific needs for services and Morgan County is poised to benefit from those needs. Secondary supply businesses are also an area of focus. Morgan County provides a lower cost of living, more affordable business park lots and lower housing prices than any area within 30 miles of the P&G site.

Continued support of current businesses is always a priority. Gat Creek, a niche manufacturer of fine quality furniture, has expanded within the last three years to international exporting. The second largest homeopathic manufacturer in the U.S. is located in the 522 Business Park and continues to grow their operation. Wholesale, retail and online diversity has proven a successful business model. This business recently modernized its technology and expanded its product line.

Health and Senior Services:

The health and senior services sector offers an impressive opportunity for expansion. Berkeley Springs has a long tradition of healing related to the warm mineral springs and this can be developed through a variety of treatments both traditional and non-traditional. Several full-service spas offer massage, acupuncture and other therapies. Rankin Fitness Center offers physical therapy, massage and weight training as well as classes in yoga, tai chi, judo and kempo. Traditional medical services are available from many board-certified physicians countywide.

Valley Health Systems opened a new critical-access hospital on an 80-acre medical campus in May 2012. The \$30+ million investment is located on Fairview Drive in Berkeley Springs. There is potential for ancillary services plus training programs at the hospital.

The Morgan County Senior Life Services Center expanded to a new location in 2013 close by the hospital. The new facility is larger and presents many opportunities for growth in programming and services. The site is now located outside of the town limits but transportation services continue to be provided and growth is forecasted.

Both these facilities are located such that they would benefit from a connector road between Rte. 522 North and Fairview Drive. Not only would the hospital and senior center benefit from improved access, but the road would support economic development in the northern portion of Morgan County. Many medical services, businesses, senior health services and a senior living facility are viewed as potential development opportunities associated with the location as well as more traditional retail and consumer enterprises.

The Berkeley Springs Center, Nursing and Rehabilitation is the third-largest employer in the county and expansion is possible, especially considering the county's extensive aging population -- more than 22% of residents are 65 years old or older.

Industrial Sites

Of the nine industrial sites identified in the 1985 Morgan County Comprehensive Plan, few exist in the Economic Development Authority (EDA) index today. Factors facilitating this change in direction include: previous sites identified being too small or incompatible with surrounding uses, environmental regulations that have changed over time limiting the intensity of uses, and outside funding promoting the development of alternative locations.

One of the most prevalent factors in the change in the index from 1985 is community outlook on defining what an industrial site should be. This is highly evident in both citizen feedback during public review of the Plan update as well as the identifier used by the EDA office in promoting the current list of sites on the Index. As citizens appear to be pressing large industrial and manufacturing employers to become both more environmentally aware and aesthetically appealing, the EDA promotes areas identified in Table 8-5 as Business Parks. These identified business parks offer more natural surroundings, well landscaped entrance and parking areas, and more environmentally friendly and community compatible practices.

Table 8-5 Industrial Business Park Site Index

Site	District	Total Acres	Acres Available
Robert C Byrd	Cacapon	30	17
522 Business Park	Timber Ridge	102	41.9
Shirley Farms West Site	Bath	43.7	43.7
Vanguard Building	Rock Gap	10	10
Pines Opportunity Center	Bath	7	7
Total Acres		192.7	119.6

Source: Morgan County Government

The Robert C. Byrd Industrial Park is located along WV Rt. 9 on the southeastern side of Paw Paw. It consists of 30 total acres divided into 8 lots with 6 lots on 17 acres remaining to be developed. Benefits to this site include the extension of available municipal water and sewer service from the Town of Paw Paw.

The 522 Business Park is located along US Rt. 522 in the Timber Ridge District, which is in the Central Valley Planning Region. It is a large Business Park consisting of 102 acres, with 70 acres available for development on 9 of the 12 total lots. However, given its close proximity to surrounding rural land and natural waterways, not all land within this park is suitable for heavy use. It is served by private on-site water and sewer systems. A recent project replaced an aging underground water tank. The larger, above ground, gravity-fed tank significantly improves marketability of the business park by providing fire suppression service to sprinkler systems required by the State Fire Marshall for larger tenants.

A Storm Water Management Project is also underway at the 522 Business Park.

Recently, Shentel® installed fiber optic lines leading up the Rte. 522 corridor into the town of Berkeley Springs and ending at the Pines Opportunity Center. The installation of these lines in the 522 Business Park makes possible the location of a potential Data Center there.

The Shirley Farms West site is located along US Rt. 522 in the Bath District, and includes 40 acres of undeveloped property being marketed for industrial business park use. It is served by a private well and septic systems and does not currently have internal access roads.

By far the largest single industrial site in Morgan County is corporately owned. US Silica, which has changed names and ownership over its decades of existence, provides the most potential for continued and future major employment opportunity. Of the 2,786 acres owned by this single entity, only a small percentage is utilized for its major mining operations of Oriskany sand. However, as this natural mineral resource is depleted, it is expected that the company may only have approximately 20 years of productive mining remaining, although current plans are to continue using the site for processing of sand mined in nearby Maryland. Given the location and importance of this industry within Morgan County, future use of this property must be taken into account in order to ensure that whatever reuse may evolve from this transition it is complimentary to the surrounding community and the goals of the Comprehensive Plan.

Economic Organizations

The Morgan County Economic Development Authority monitors the economic climate of the county. It uses the information to identify barriers and promote positive economic growth through both marketing and policy perspectives. Positive factors include proximity to the metropolitan areas, relatively low real estate taxes and rent, low crime rate, available workforce and available structures for new industries. Some barriers that exist include the State Business and Occupation tax on gross income, lack of large, accessible parcels of land served by public

water, sewer and roads, limited broadband service throughout the county and lack of state programs offering tax package incentives.

The EDA is primarily responsible for promoting job development of major employers seeking to locate in the industrial business parks listed in Table 8-7. Job creation and retention through specific efforts in business finance, marketing, neighborhood development, workforce development, small business development, business retention and expansion, technology transfer and real estate development are also activities of the EDA.

The Authority's strategy in attracting new industry involves a system of priorities in marketing to potential employers. First priority is given to county-owned and developed industrial and business parks and structures. These industrial business parks as identified in Table 8-7 have been developed to group major employers in similar areas, which allows for sharing of necessary service and infrastructure costs, assurance of compatibility of uses and larger eligible employment base. Having several business park settings also allows the county to meet its goal of diversifying employment opportunity by offering locations for several smaller employers rather than few large ones, thus protecting the county from the impacts of major layoffs. Second priority is vacant and available buildings in the Berkeley Springs area. These locations are close to existing services, population, businesses and infrastructure. Next priority is given to privately-owned identified sites outside of the urban area, most of which are located along US Rt. 522 that have some level of water and sewer services.

The Morgan County Economic Development Authority outlines several strategies in accomplishing sustainable economic growth, including:

- Provide support in accessing funds for community development projects that serve to develop infrastructure and attract business, commercial and technology industries;
- Encourage, recognize and assist the growth of the existing business base;
- Successfully attract new employment opportunities to Morgan County;
- Support the efforts to promote tourism throughout the county;
- Partner with regional organizations in planning economic development activities;
- Provide support to private enterprise in placement of business tenants in sites and buildings and maintain an inventory of available locations;
- Maintain the position of the county's economic development organization; and
- Expand educational and workforce opportunities for citizens and employees living and working in Morgan County.

In addition to the above strategies of the EDA to build the employment base within the county, the Authority has also outlined priorities on a regional level, including:

- Developing strong alliances with counties of the Eastern Panhandle to promote causes that need a regional perspective and effort to achieve;
- Providing attention to the needs of existing businesses within the county through various entrepreneurial assistance initiatives;

- Using limited county marketing resources in an efficient manner to attract new businesses to the area that provide quality pay and sustainable job growth;
- Maintaining a comprehensive list of properties available for business development and evaluating the need for additional land as properties are developed; and
- Working to become one of the premier economic development organizations in the state and region while developing a reputation as a community that supports business and industry growth.

The Morgan County Chamber of Commerce, located on Fairfax Street in Berkeley Springs was established in 1952. However, it was not until 1978 that the Chamber became fully active with a full-time staff person and dedicated office space. Since that time, membership in this nonprofit entity has grown to 190 businesses, with services dedicated to a wide array of projects and informational tools that include an information-rich website with membership and civic organization directory, mapping and relocation information and many other community efforts such as new teacher mentoring and volunteer recognition. The Chamber co-operates with Travel Berkeley Springs in promoting tourism especially through its production of the annual Apple Butter Festival, the county's largest event.

Travel Berkeley Springs (TBS) is the convention and visitors bureau for the county, sharing an office with the Chamber of Commerce, and having nearly 100 industry members. By law, it receives half of all hotel/motel tax revenues collected by the town and the county. Promotion of the area as a destination is TBS's prime mission with goals and strategies centered around two distinct objectives: protecting the historic character and cultural attractions of Berkeley Springs and preserving the scenic wilderness throughout the county.

Goals and Objectives

Goals

The vitality of Morgan County is directly related to the health of its business and industry. The commercial sector provides jobs, as well as goods and services, to local residents. The following economic development goals support business and contribute to the well being of the county as a whole:

- Using incentives to locate businesses in appropriate areas with adequate access, including on unimproved land suitable for a range of compatible uses, as infill in existing commercial zones and in vacant commercial properties and industrial sites suitable for redevelopment;
- Mapping and promoting infrastructure improvements in transportation, public services, communications and utilities to attract and retain businesses with an intensive focus on technology including broadband and reliable wireless service;
- Facilitating construction of a connector road from US522 to Fairview Dr. and opening new areas for commercial development;
- Encouraging a strong and diverse local economy that motivates residents to spend more of their disposable income at businesses in the county;

- Working to attract a variety of new businesses—basic and non-basic—to meet the county’s growing needs, and draw in out-of-county dollars;
- Focusing on locating and developing secondary water sources in addition to the warm springs; and
- Encouraging protection of the viability of tourism assets and developing new public resources.

Objectives

These goals may be met by accomplishing the following objectives:

- Maintaining an updated list of sites that could be developed by major employers and promoting incentives for locating on those sites;
- Encouraging programs for redevelopment and revitalization of underutilized vacant commercial properties and industrial sites;
- Encouraging incentive programs and tax credits with the state to retain and attract target employers and large and small businesses;
- Working to enhance the resources of the Morgan County Economic Development Authority and similar groups;
- Coordinating efforts between local government, business associations and private property owners seeking small business endeavors;
- Encouraging the development of plans that address such issues as marketing, research, financing and location to assist in business start up and retention efforts;
- Promoting secondary and higher education and training opportunities to meet skill requirements and technology needs of existing and potential businesses;
- Supporting efforts to identify economic growth opportunities for retention and expansion of existing employers;
- Enhancing opportunities to establish cultural and recreational tourism-related businesses including developing the North Berkeley Rail Trail;
- Promoting businesses focused on ‘green’ industry;
- Encouraging creation of an eco-industrial park;
- Promoting the health and wellness industry, the hospital and senior services including targeting development of a senior living facility; and
- Working with the farming community to encourage and support the role of agriculture and agribusiness industries in Morgan County.

CHAPTER 9 – COMMUNITY DESIGN

Introduction

Historically, there were numerous small communities spread throughout Morgan County along the rivers and railroad. They were often marked by a Post Office, school and some commercial activity. Several remain on maps today although there is no community remaining in the traditional sense of the term. Economic forces continually drive the closing of small schools, Greenwood being the latest example, and the centralization of postal services again leading to closings of historic post offices like Unger.

The need to preserve some cultural memory of these communities can be addressed through Historic Preservation efforts aimed at particular structures or clusters of structures. “Downtown” Sleepy Creek village is an example with several historic houses and a church. Greenwood is a different template with the activities of community now focused on the South Morgan Fire Hall. There are no commercial activities in either of these locales.

These preservation efforts should first include an assessment of the more prominent features that make up the unique character of Morgan County’s various communities, and from that assessment provide direction for outlining measures that will support some legacy of the past pattern.

Currently, and for the foreseeable future, there are virtually no trends that indicate the revival of such traditional communities and certainly not ones that include any economic activity such as general stores. The creation of their 21st century versions produces a very different type of population center, one that requires planning guidelines.

The scale required for a 21st century community center was visible in the potential Coolfont development of the early 21st century that was proposed by the Freeman Company. A “perfect storm” of negative forces caused this potential to be unrealized and in 2016 the property was sold off in parcels that would guarantee such a plan would never re-emerge. It became evident that scale is crucial – hundreds of homes and a major commercial activity like a planned resort are essential to encourage and support the type of community activity once experienced throughout the county.

Today, we have other directions for community design:

- enhancing the remaining population centers;
- molding subdivisions into something reflecting a community concept; and
- encouraging development areas based on new technology and environmental principles.

The potential for enhancement of existing population centers will be detailed further in Chapters 10 and 11: Redevelopment and Renewal and Preferred Areas of Development respectively.

Currently, design criteria constitute a minimal regulatory issue in developing a subdivision. A commonality of design is generally the decision of either the developer or the individual

homeowner. However, community design principles that go beyond the look of housing or landscaping should be considered including designated common greenspace and pedestrian amenities.

Encouraging development areas based on environmental principles such as green stormwater technology, landscaping for heat and cold moderation as well as best use of water and construction of entire developments using solar energy or electric cars are entirely new directions. Another new design concept that could be considered, possibly as a redevelopment tool, is a community of “small” houses.

Communities

There are several dominant communities outlined within this plan that make up much of the population base. These include the towns of Bath and Paw Paw, as well as unincorporated areas such as Great Cacapon.

Small Towns

The most notable community center is the Berkeley Springs area which surrounds the historic Town of Bath and serves as the county seat. This area, which includes a large concentration of the total county population and a single postal address, is easily identified through several distinct community features. These features, which appear in both natural sites and architectural style, draw much of their attention from the tourism-driven industries of the famous natural warm spring spas and baths, historic inns, and small town shopping appeal as well as from governmental activities like the courthouse.

Considering the nature of this area as the cultural and political hub within the county, residential and commercial growth are projected to continue, especially along the US Rt. 522 corridor both north and south of the town proper in a type of “urban spawl” that alters its composition from historic tourism town to shopping center as it proceeds away from the central core. To preserve and promote the existing cultural character which makes this community a uniquely defined area, there is a need for commitment to a comprehensive approach by all stakeholders especially in the area of housing.

The second major area within the county defined as a community of distinct social and cultural activity is the town of Paw Paw. Unlike Bath, Paw Paw is not heavily surrounded by a larger urban area. While this provides the town a greater sense of place, it also imposes limitations especially on commercial activity. This sense of place comes through such features as a shared school campus for all grades, community-provided parks, libraries and local public safety services making it less dependent than other areas of the county on the Berkeley Springs area to provide public services. However, the lack of population growth in the town area and increased cost of many of these public services make it a challenge to consider how it can be maintained. This is already seen in the constant pressure to close Paw Paw High School and the new ambulance plan that would move that emergency service further east to Largent.

Paw Paw straddles WV 9 along the Potomac River at the southwestern edge of the county on the opposite side of Cacapon Mountain from Berkeley Springs. With proximity to some natural recreational amenities, it is much more rural in character than communities in the eastern sector of the county.

Paw Paw's singular position is underscored by its nearly equal distances from four urban areas in three states. Cumberland, MD and Berkeley Springs are approximately the same distance but Berkeley Springs is a smaller center and requires a trip over a mountainous area to reach. Many residents and businesses of Paw Paw are more accustomed to seeking opportunity and basic needs from the Cumberland area especially since historically – although not currently – Paw Paw was connected to Cumberland by railroad including passenger travel. Romney, WV is just a few miles farther than Berkeley Springs and Cumberland, requires no mountain crossing and shares a common state. The most prosperous and largest nearby area is Winchester, VA which is about 10 miles further than either Cumberland or Berkeley Springs. Without major housing development and the subsequent commercial activity to serve the additional population, it is a challenge to see a growth future for Paw Paw.

Unincorporated Areas

Great Cacapon is the largest unincorporated community in Morgan County which includes a surrounding population of more than 1,000 residents and businesses. Great Cacapon takes its name from the Cacapon River which empties into the Potomac River on the town's eastern fringe.

Great Cacapon has a long history with parcels of land that were originally surveyed by George Washington. It was once known as the Cacapon Depot on the Baltimore and Ohio Railroad mainline and draws much of its history from its location along the Potomac and Cacapon rivers as well as the railroad system. Its name was changed in 1876 to Great Cacapon to differentiate it from Little Cacapon which was also on the B & O mainline. Located four miles to the west of the Panorama Overlook on Cacapon Mountain, along WV9/Cacapon Road, it is sufficiently separated from Berkeley Springs by Cacapon Mountain to have established its own identity over time. Public sewer and water systems were developed in the 1990s mostly centralized in the small town center. Although there has been extensive population growth, especially in retirement and second homes along the Cacapon River and in surrounding countryside, commercial and community development have not proceeded apace. Like Paw Paw, it would take a significant addition of clustered housing and increased population to “grow” Great Cacapon.

Unger is a smaller unincorporated community located in southern Morgan County. It was distinguished among the other communities for retaining an operating post office since one was established in 1853. There was also a mill and a general store. From 1857 to 1935, it was known as Unger's Store until its name was shortened to Unger. Although the Post Office recently closed and the general store has reduced its activities, the community established in this area is experiencing population growth with new neighboring developments. The South Morgan Fire Company is to the north on Rte. 13. Like other former communities, there is no trend towards

establishing any commercial activity. It is located at the crossroads of Winchester Grade Road (CR 13) and Unger's Store Road (CR 11).

Largent is a unique community located along the Cacapon River. Originally called Hopyard and later Enon, its population increases on weekends and during summer months due to the hundreds of cabins and camps located in the hills around the river. Also located in Largent is the 120-year-old Enon Primitive Baptist Church where the Cacapon is still used for baptisms. There is currently a general store and a proposal to build an emergency services structure that may provide some basis for the establishment of a functioning community.

Other Historic Neighborhoods and Villages

The first three neighborhoods listed are now seamless parts of what people would consider Berkeley Springs although they are not within the town limits except for Greenway Cemetery which was recently annexed into the town although not the residential areas around it.

Berryville is a former independent community located south of downtown Berkeley Springs. It sprouted up along US Rt. 522 at the beginning of the 20th Century, first as a farming community and then as a residential extension of a growing Berkeley Springs. It remains outside the Bath town limits. Berryville includes Berkeley Springs High School, Widmyer Elementary School, and Greenway Cemetery.

Jimstown is another community located in close proximity to the Town of Bath corporate limits and generally considered a neighborhood of Berkeley Springs. The community is located just north of town.

Between the Town of Bath and Jimstown is the neighborhood of North Berkeley. Like Jimstown, North Berkeley does not lie within the limits of Bath, but it is generally considered a neighborhood of the town. The community includes the location of the Board of Education main offices. The area around the BOE facility and the adjacent park was recently annexed into Bath.

Rural Villages

Virtually all of these areas, some of which formerly had schools and post offices, are now indistinguishable from residential areas along the roadways. Their residents may refer to living in a specific area and often variations of the area name are found in subdivisions.

Omps is a small unincorporated community that lies along US Rt. 522. Omps previously had its own post office in operation between 1887 and 1973.

Ridersville is an unincorporated community between Berkeley Springs and Stohrs Crossroads along WV 9 on Pious Ridge where Pious Ridge Road (CR 4) and Peter Yost Road (CR 9/8) intersect with WV 9. Ridersville sprang up in the 19th Century as a small farming community along the Martinsburg Road with a general store. It had its own operating post office until it was closed in 1903 due to the community's close proximity to Berkeley Springs. During its period as

an independent agrarian town, it was known as Friendship, Rider Store, Riderville and finally as Ridersville. Today, it is merely a growing residential area of Berkeley Springs.

Rock Gap is a small community along Valley Road located between Omps to its south and Berkeley Springs to its north. Situated between Warm Springs Ridge (1,086 feet) to its west and Timber Ridge (1,355 feet) to its east, Rock Gap takes its name from the "Rock Gap" in Warm Springs Ridge, carved out by Rock Gap Run, a tributary stream of Sleepy Creek. Rock Gap began as a small farming community along Valley Road. It had a post office in operation from 1884 to 1907 and again between 1921 and 1925. Residents of Rock Gap currently have a Berkeley Springs address. Rock Gap is the site of the old Mount Garfield School and Mount Tabor Church.

Sir Johns Run is an unincorporated community at the mouth of Sir Johns Run on the Potomac River northwest of Berkeley Springs. It is bound to its west by the Widmeyer Wildlife Management Area and to its east by Warm Springs Ridge (1,086 feet). While Sir Johns Run was once an operating station on the old B & O mainline as an early passenger station for Berkeley Springs, it is primarily a residential community of Berkeley Springs accessible by Sir Johns Run Road (County Route 3). Sir Johns Run had its own post office in operation from 1850 to 1938. Today, the stream and its namesake confluence with the Potomac River are a site on the Washington Heritage Trail.

Cherry Run is a small village located along the B & O mainline on the Potomac River. The community is named for the stream, Cherry Run, that meets the Potomac in its vicinity. It was originally known as Cherry Run Depot because of the important interchange between the B&O and the Western Maryland Railroad there. Across the Potomac from Cherry Run lies Big Pool on the C & O Canal. Cherry Run is reached by Householder Road (CR 10) from the west and both Cherry Run Road (CR 5) and Fulton Road (CR 1/5) from Martinsburg Road (WV 9) to the south. On the B & O mainline, Cherry Run is located between Hancock to its west and Little Georgetown in Berkeley County to its east.

Doe Gully is an older community along the Potomac River located along the old B & O Railroad where it bisects a bend in the Potomac by way of the Randolph Tunnel. Doe Gully is only accessible by way of Doe Gully Lane (CR 8/2) from Orleans Road (CR 18/1). It is located southwest of Orleans Cross Roads. The C & O Canal National Park crosses the Potomac River onto the West Virginia side to Doe Gully's west and it also lies directly across the river from it.

Hancock (WV) is located off of US 522 on River Road (CR 1) along the Potomac River north of Berkeley Springs. Originally known as Brosius, its post office's name was changed to Hancock in 1948 to reflect its location on the B & O mainline across the river from Hancock, Maryland. Located along River Road from US 522, Hancock is also accessible by way of Fairview Drive (CR 2) from Berkeley Springs and also Pious Ridge Road (CR 4) from Ridersville on WV 9. Today it is distinguished as the location of a railway structure and the Potomac Airpark.

Hansrote is a small village located along the old B & O mainline on the Potomac River. Hansrote is northeast of Magnolia and southwest of Doe Gully. Stuart Tunnel connected Hansrote with

Magnolia by railroad, but today Hansrote is accessible by way of Hansrote Road (CR12/2) from Magnolia Road (CR 12).

Holton is a small community in northeastern Morgan County, located on Martinsburg Road (WV 9) at its junction with Cherry Run Road (CR 5) along Cherry Run and the Berkeley County line. Holton had its own post office in operation between 1889 and 1903.

Johnson's Mill is an unincorporated area in eastern Morgan County on Johnson's Mill Road (CR 26). It is centrally located between three other small rural villages along Sleepy Creek and is named for the "Johnson's Mill" that once operated here. Smith Crossroads on Winchester Grade Road (CR 13) is to its west by way of Autumn Acres Road (CR 26), New Hope is to its north by way of Spohr's Road (CR 8), and Duckwall is located to its east on Johnson's Mill Road along the western flanks of Sleepy Creek Mountain.

Magnolia is located northeast of Paw Paw along the Potomac River and the B & O mainline and east of where the Western Maryland Railroad right-of-way crosses the Potomac, bypassing a series of bends in the river. As a depot and water station on the B & O, Magnolia has been known by a number of names including Magnolia Dale, Magnolia Vale, and sometimes as Water Station Number 12 on the railroad. The community had its own school, Magnolia School, until it was closed in 1952, in favor of sending students from the Magnolia area to attend the schools in Paw Paw. Magnolia also had its own post office in operation from 1867 to 1868 as Magnolia Vale, and then again in 1871 to 1943 as Magnolia, when it was closed and the residents of Magnolia were assigned Paw Paw addresses. Magnolia can be accessed by way of Magnolia Road (CR 12). It is located between Paw Paw to the southwest and Jerome to the northwest.

Oakland is an unincorporated community located along Virginia Line Road (CR 8) north of Unger and south of Stotlers Crossroads. Oakland is connected to Valley Road (US 522) by Oakland and Morton Grove Roads (CR 26). Oakland sprouted up as a small farming community in the 19th century and established the second post office in Morgan County as well as a school which were both in operation until the early 20th century. The Oakland United Methodist Church was the oldest continuous congregation in Morgan County until it merged with Greenwood United Methodist Church.

Orleans Cross Roads lies on the western flanks of Sideling Hill. To its south, Rockwell Run, a mountain stream fed by springs, empties into the Potomac. Orleans Cross Roads lies along the old B & O Railroad directly across the river from Little Orleans. It is accessible by way of Orleans Road (CR 18/1) from Cacapon Road (WV 9) via Detour Road (CR 18). Once the site of a functioning station on the B & O, Orleans Cross Roads also had its own operating post office. The community and post office were often known as Orleans Cross Roads or Orleans Crossroads while its station was known as Orleans Road Station. It is the site of the historic Orleans Cross Roads Methodist Episcopal Church, built in the 1850s.

Sleepy Creek is a small community on the Potomac River, at the mouth of Sleepy Creek. By 1860, Sleepy Creek had a post office and functioned as an important station on the B & O Railroad. Sleepy Creek is located along River Road (CR 1) east of Hancock and is accessible from Cherry Run to its east by way of Householder Road (CR 10).

Stohrs Crossroads is located along Martinsburg Road (WV 9) to the west of Sleepy Creek. Originally named Spohrs Cross Roads for the Spohr family, its name was eventually changed over the 19th century to "Stohrs". Stohrs "Crossroads" is formed by Martinsburg Road's intersection with the Potomac-Virginia Line Road (CR 8). North of Stohrs Crossroads, CR 8 is known as Potomac Road and south of the crossroads, it is known as Spohr's Road. It reaches the Virginia state line at Unger where it is known as Virginia Line Road.

Stotler's Crossroads is a small community in southeastern Morgan County, situated along Winchester Grade Road (CR 13) between the South and Middle Forks of Sleepy Creek on the eastern flanks of Highland Ridge (942 feet). A post office was established here in 1885 and took the name of the Stotler family, a prevalent family in the immediate area. Stotler's Crossroads is the home to several historic sites including the Mount Olivet United Methodist Church (1888) and Ambrose Chapel, which is listed on the National Register of Historic Places. Stotler's Crossroads is at a junction of Winchester Grade Road (CR 13) with the Virginia Line and Highland Ridge Roads (CR 8).

Woodrow lies south of Paw Paw along WV 9 in both Hampshire and Morgan Counties. Woodrow lies on the eastern flanks of Spring Gap Mountain with Sideling Hill to its east. Woodrow Union Church has served the community since the late 19th Century.

Woodmont is a small community on the Potomac River located immediately to the west of the community of Great Cacapon.

Several other small neighborhoods and crossroads include Duckwall, located in Sleepy Creek just east of Johnson's Mill, Greenwood in southeastern Morgan County, Mount Trimble situated around the crossroads at Michael's Chapel near the confluence of Sleepy Creek and Meadow Branch, New Hope located at the confluence of Yellow Spring Run and Sleepy Creek, Redrock Crossing located on River Road (CR 1) between the communities of Hancock and Sleepy Creek, and Smith Crossroads at the crossroads of the Winchester Grade Road (CR 13) and CR 26 and 13/1.

Seasonal Home Clusters

Largent lies partly in Hampshire County and is located on the Cacapon River, about 18 miles southwest of Berkeley Springs along Cacapon Road (WV 9). Its post office was in operation from 1906 until the 1950s. Residences and businesses in Largent are currently serviced by Paw Paw's post office, therefore, bear Paw Paw addresses.

Lineburg is an unincorporated area located on the western flanks of Sideling Hill on the Turkey Foot Bend of the Potomac River. The community originally served as a station on the B & O Railroad, but has since become a location for vacationing weekenders from the Washington, D.C. area.

There are several “new” communities that are large subdivisions often populated originally by second-home owners that have evolved into permanent residences for retirees or resale for permanent residences. These include Cacapon South and Cacapon East along US 522 near Cacapon State Park and the Coolfont Mountainside developed as part of the Coolfont Resort beginning in the late 1960s. Cacapon South has a type of central sewer where individual septic tanks empty into a communal treatment system. Coolfont Mountainside has both self-contained community water and sewer systems. On the western side of the county, River Ridge may fit into this category although it does not have central water or sewer systems.

As with most contemporary subdivisions of whatever size, common design features – if they exist at all – are regulated by the specific homeowners’ association as well as by owner choice.

Vacated Communities

Green Ridge is now an uninhabited railroad community located along the old B & O mainline where the Western Maryland Railroad crossed the Potomac River from the Stickpike Tunnel in Maryland. Green Ridge was originally known as Baird and was an operating station on the B & O. Today, it is located within the C & O National Park. A stretch of the Western Maryland's right-of-way from Green Ridge to Jerome is listed on the National Register of Historic Places. Green Ridge is accessible by way of Baird Lane (CR 12/3) from Hansrote Road (CR 12/2) at Hansrote. It can also be reached by a number of residential roads in the Nixon Tracts development on Magnolia Ridge from Magnolia to the south.

Jerome is an uninhabited community along the old B & O mainline on the Potomac River. Jerome is also the site of a stretch of the Western Maryland Railroad right-of-way from milepost 126 to milepost 160 listed on the National Register. At Jerome, the train-order office was in use until it was closed on September 1, 1959. When it was abandoned by the Chessie System in May 1975, the office was not torn down and is one of the few buildings that remain today in Jerome. There was also an operating connection with the B & O low line at milepost 137 but it was later removed when the B & O abandoned the lowline in 1961. The community and its station on the railroad are rumored to have been named for Jerome Boneparte.

Significant Features

Not all unique design trends can be found in roughly structured community centers and in some cases they may exist as a grouping along waterways, single estates of some grandeur, or even publicly owned properties that offer features integral to the character of the community.

Community Themes

The Washington Heritage Trail, developed in 1998, includes a tour of the many locations throughout Morgan County which are associated with the rich historical link it shares with George Washington. This includes at least 15 points of interest within the county, from the town of Paw Paw to Spruce Pine Hollow Park in the east. These points of interest serve as significant community focal features for the area in which they are located. Just as much of the growth

within the county has occurred along US Rt. 522 and WV Rt. 9, the trail follows closely along these routes accentuating the collective historic or natural importance each site shares in contributing to the identity of these areas.

Numerous communities sprouted up along the Chesapeake and Ohio Canal and Baltimore and Ohio Railroad. Both being located along the Potomac River during different periods in time fueled the existence of several historic communities that have established identities lasting well beyond the existence of either transportation system. Much of the C & O route parallels the Potomac River across from Morgan County on the Maryland side while the B & O route ran more on the Morgan County side. Since their abandonment, only remnants of the communities remain. Instead, recreational opportunities have been created along the Canal and the Potomac River, which provide value to preserving the pristine character of this area.

Other communities grew up around crossroads on old roads as well as around local schools and/or post offices (see list above). Virtually none had any other distinguishing design feature that identified them as a community beyond location and these public facilities. Most of these are no longer distinguishable as separate areas.

Significant Sites

By far the largest single industrial site in Morgan County, US Silica, which has changed names and ownership over its decades of existence, has had a profound affect on the employment and development of the Berkeley Springs area as a county hub. This property consists of more than 2,800 acres owned by a single entity and utilized for its major mining operations of Oriskany sand. However, as this natural mineral resource is depleted, it is expected that the company may have only approximately 20 years of mining productivity remaining. Given the location and importance of this industry within Morgan County, future use of this property must be taken into account in order to ensure that whatever reuse may evolve from this transition it is complimentary to the surrounding community.

The Ridge Fish Hatchery is only one of seven in the State, producing both cold and warm water fish including trout and muskies. The Hatchery is owned and operated by the West Virginia Department of Natural Resources and has been in existence since 1929. It is located about 12 miles south of Berkeley Springs on US Rt. 522 and is fed by the Breakneck Run Springs.

The 6000-acre Cacapon Resort State Park provides a nexus for development in the surrounding area. It is easily accessed by US 522 about 10 miles south of Berkeley Springs. It is a site on the Washington Heritage Trail.

Coolfont Manor House is one of the few structures outside the Town of Bath listed on the National Register of Historic Places. It is also a site on the Washington Heritage Trail. In 1756, a British veteran of General Edward Braddock's defeat during the French and Indian War built a cabin near cool springs in the Sir John's Run Valley along the eastern slope of Cacapon Mountain. More than 150 years later, prolific author, ecologist and presidential appointee, Herbert Quick, chose the same site to live out his "back-to-the-farm" philosophy. In 1910, Quick built the stately Manor House, pond and several outbuildings as the centerpiece of his

experimental farm. He called it Coolfont in honor of the springs. It served as residence for the owner of Coolfont Resort from the mid-1960s through the sale of the resort in 2006. It is currently uninhabited.

Goals and Objectives

Goals

The “identity” of a community is shaped by its design. The proximity and integration of neighborhoods, shopping, and recreational and cultural activities will determine the extent to which a sense of community evolves. To support the growth of real communities, the following goals are offered:

- Encouraging the formation of pedestrian-friendly rural village centers amid residential development and subdivisions to serve as hubs for community life, reduce the need for auto travel and keep consumer dollars in the local economy;
- Encouraging consideration of design principles that are environmentally friendly and sustainable;
- Supporting the enforcement of meaningful building codes to protect the health, safety and welfare of citizens and businesses; and
- Enabling multi-generational community wide activities that involve significant and diverse segments of the population.

Objectives

These objectives will ensure progress in accomplishing the community design goals:

- Discouraging the proliferation of strip-mall style commercial centers that create traffic congestion and sprawl;
- Encouraging centralized and improved communication with the public about local amenities and activities;
- Encouraging cluster housing development with provision of expansive green space and walking areas;
- Encouraging lower costs for utilities and preserving natural resources including water; and
- Supporting development of commercial activities in existing town centers and Great Cacapon.

CHAPTER 10 – PREFERRED DEVELOPMENT AREAS

Introduction

There are several areas where development is preferred due in large part to the existence of available public infrastructure features to serve additional growth. These preferred development areas, especially for commercial development, include incorporated towns, existing rural villages and newer subdivisions that increasingly serve as self-contained communities.

Promoting growth within these preferred development areas must first take into account the ability of the Comprehensive Plan to outline how much additional growth each area may receive based on the adequacy of services to support it. Unlike those areas defined in Chapters 6 and 7 of this plan, this chapter serves to identify areas in which growth may be promoted through the provision of services to areas attractive to redevelopment, and, most importantly, preserving those areas of significant cultural heritage and recreational value needing protection.

If managed properly, growth will have positive benefits for current and future residents. This will require coordination with transportation improvements and the provision of public utilities, as well as with sensitivity for the county's natural resources.

Incorporated Towns

The most obvious location for future growth is in and around existing municipalities. This is due in large part to the availability of existing public services and infrastructure. They are also the primary locations for employment opportunities, social organizations and other public amenities. There are two incorporated towns within Morgan County that should be promoted as preferred areas for future development, both residential and commercial, to occur.

Town of Bath

The Town of Bath encompasses approximately 384 acres and is surrounded by the greater urban area commonly referred to as Berkeley Springs. This larger area of primarily developed land stretches north and south along US Rt. 522 and east and west along WV Rt. 9. It is located primarily within the Bath district of the Central Valley Region and includes nearly 5% of the total county population. The two most significant features that define the reason for the existence of the population center are the warm mineral springs in Berkeley Springs State Park and the Morgan County Courthouse. The preferred development areas within this greater Berkeley Springs should focus on those areas where municipal water and county sewer have already been developed. These areas include south through the US 522 corridor a few miles and along Fairview Drive.

Town of Paw Paw

The town of Paw Paw, located at the southwest tip of Morgan County along WV 9, encompasses approximately 320 acres and a population of more than 500, with several small businesses and other employment industries. Paw Paw developed because of its location on the C&O Canal just across the Potomac River and later the B&O Railroad. The lack of “urban development” around the incorporated municipality contributes to its isolation. With both municipal water and sewer, plus a designated industrial park, Paw Paw and its immediate surroundings should be a priority area for both residential and commercial development.

Table 10-1 Municipal Annexations

Property	Town	Location	Acres	Year
Tritapoe	Bath	Martinsburg Road	0.98	1997
Omps	Bath	Cornelius Avenue	29.241	2000
Gyerik	Bath	Whisner Avenue	0.25	2000
Goller	Bath	Cornelius Avenue	0.2118	2000
Board of Ed	Bath	N. Berkeley School	2.75	2000
Seely	Bath	US522	0.9	2000
Rt. 9 West Greenway	Paw Paw	West side WV9	3.81	2002
Cemetery	Bath	S. Washington St.	6.0~	2008
Train Depot lot & p/o Williams	Bath	Williams St.	2.4~	2013

Source: Morgan County Government

As reflected in the housing and population information, located in Chapter 2, as well as in Table 10-1 above, neither Bath nor Paw Paw has experienced significant increases within the boundaries of the municipalities during the past decade in either land being added to their incorporated limits or population increases due to new growth or redevelopment efforts. As reflected in Chapter 2, population for both towns has continued to decrease since 1980 and there are no current plans for additional major subdivision activity in either corporate limits. However, as both towns provide the necessary public services to promote growth, development will continue to occur in close proximity to these urban centers. Targeted redevelopment in Bath has great potential for making the area thrive as outlined in Chapter 11.

Other Communities

Although there are only two incorporated municipalities in Morgan County, there are numerous other small communities which have been in the past or currently are defined by some centrally located area. These areas typically evolve from the location of some group of services, which in turn creates some concentration of residents who develop additional types of public services over time and thus become somewhat self-supporting communities.

This evolution, as is the case for many small communities in Morgan County, appears to locate around transportation networks such as the Potomac River or the railroad system. However, over

time, these networks have been replaced by other types of transportation such as highways-- particularly US 522 and WV 9. With the exception of those absorbed into greater Berkeley Springs, population and commercial enterprises have failed to expand significantly in any of these historic communities. In virtually all cases even if residential population increases, commercial and governmental activity have disappeared or experienced substantial decline.

Recently, some of these areas have been supported and changed by the demand from outside interests to purchase and utilize the residences within these older areas for vacation and recreational purposes. This has been especially prevalent in those areas located closest to the county's many natural and scenic waterways and mountains. Even more recent is the increasing interest of larger development plans that are proposed for the more rural undeveloped areas, especially the southern valley area of the Central Valley region. However, both of these examples are areas of concern as the county must account for the ability to provide necessary public services where such services may not have been planned to be extended.

Unincorporated Towns

Great Cacapon is the largest unincorporated community in Morgan County which includes a surrounding population of more than 1,300 residents. Great Cacapon takes its name from the Cacapon River which empties into the Potomac River to the town's east. It was originally known as Cacapon Depot on the Baltimore and Ohio Railroad mainline when a post office was established there in 1848. In 1876, its name was changed to Great Cacapon to differentiate it from Little Cacapon which was also on the B & O mainline. It lies four miles down Cacapon Mountain from the Panorama Overlook along WV9, west of Berkeley Springs. It is also a short distance from the Town of Bath and the surrounding Berkeley Springs area, providing convenient access to public services and other daily needs. Great Cacapon has managed to retain several public features including a post office and fire company. Its elementary school closed. There is also a commercial operation in a local deli. A public sewer system was established in 1999.

Unger is an unincorporated community in southern Morgan County distinguished amongst other communities in Morgan County for retaining an operating post office since one was established here in 1853. From 1857 to 1935, it was known as Unger's Store until its name was shortened to Unger. Although the Post Office recently closed and the store decreased its hours and products, the community established in this area thrives with the potential for new neighboring developments. It is located at the crossroads of Winchester Grade Road (CR 13) and Unger's Store Road (CR 11). As new development proposals continue to occur in this area, there will be increasing need for the county to anticipate the provision of services to the entire South Morgan County community. Greenwood School's closing in 2016 shifts public-use facilities to the South Morgan Fire Company and the Morgan County Observatory.

Largent is a unique community located along the Cacapon River and WV 9 with population increases on weekends and during summer months due to the hundreds of cabins and camps located in the hills around the river. There is currently a general store and a proposal to build an

emergency services structure that may provide some basis for the establishment of a functioning community.

Commercial Areas

The area with the greatest potential for new commercial, industrial and population growth is the north end of the county especially around the U.S. Silica site and the unincorporated area of Burnt Factory. U.S. Silica is a leading producer of high-quality ground and unground silica sand, kaolin clay and aplite. At the Berkeley Springs site, these materials are mostly extracted from Warm Springs Ridge directly across US 522 from the processing facility in Burnt Factory.

The north end is the richest in infrastructure, which would appeal to potential commercial and industrial development. It is only a couple miles from I-70 and I-68 as well as offering fiber networks developed by Maryland in that corridor. The airport, now in private hands, is located in this area. There is potential access to the Potomac River as a water source, especially industrial, and this is the area targeted by the natural gas pipeline. Plans for a connector road from the Silica site on US 522 to War Memorial Hospital just a few miles away on Fairview Drive and the existence of the Senior Life Services building, make this area prime for new community development.

Ridge is located along Valley Road at its intersection with Fish Hatchery Road (CR 38/10) near the Frederick County, Virginia line. Sleepy Creek cuts through the area and Unger lies to its east. It was originally known as Birch Grove, then as Timber Ridge, and then finally as Ridge. Its post office was in operation from 1860 to 1953. Ridge is the home to the Ridge State Fish Hatchery which breeds West Virginia trout used to stock local lakes, such as nearby Sleepy Creek Lake. The 522 Business Park is less than a mile north. Although not immediately adjacent to the former Unger community, any development in this area would serve to anchor the growing South Morgan community.

Other areas with potential for development of 21st century communities include the area on US 522 encompassing Cacapon State Park and the subdivisions of Cacapon South and East. Although there is some public resistance to increased commercial development in this area as demonstrated by opposition to proposed construction of a Dollar General, it seems inevitable that community growth will continue. There is already the beginnings of public sewer treatment in the Cacapon South subdivision and several springs in the area have the potential to serve as a secondary water source.

For more than 30 years, Coolfont was a growing community along Cold Run Valley Rd. that was part of Coolfont Resort. The residential area, Coolfont Mountainside, developed self-contained community water and sewer systems. When the resort property (but not the Mountainside) was sold to Carl M. Freeman Company in 2006, an intensive planning effort was undertaken to develop an expanded resort, additional residential and supporting retail activity. When a convergence of forces caused the collapse of that plan, the area lay fallow except for the Mountainside which experienced limited growth. The continued existence of community water and sewer systems in the former resort area as well as the population of the Coolfont Mountainside make this a preferred area for future development.

The far eastern segment of the county is anchored by the Pleasant View Elementary School and the Pleasant View Community Center. There is also commercial activity along WV 9 and population growth that promises to be dramatic as pressure rises from adjacent Berkeley County and its anticipated explosive growth from new industrial activity. The increased commercial growth in Berkeley County's Hedgesville – shopping center, banks, Department of Motor Vehicles – are all closer to the Pleasant View area of Morgan County than to Berkeley Springs. This indicates that the growth in Morgan County may be primarily residential.

Goals and Objectives

Goals

Although market demand is the primary factor influencing development, it is important for government to guide growth in a way that makes the most efficient use of public services and infrastructure. Goals that strive to balance planning efforts and development pressures include:

- Supporting the direction of development toward appropriate locations and where there are existing available resources and public services;
- Fostering development initiatives that reduce the need to extend these public services in inefficient ways when such extensions are required;
- Encouraging creation of neighborhood centers in densely populated areas;
- Encouraging the location of community activities (e.g. parks and recreation facilities) where proper access and services are located;
- Prioritizing road construction and expansion to be most cost effective and located in areas identified as preferred for development; and
- Establishing a countywide concerted effort to locate secondary water sources needed for commercial and industrial development.

Objectives

Progress toward achievement of these goals may be accomplished by the following objectives:

- Supporting efficient community designs that minimize infrastructure costs;
- Encouraging the creation and use of incentives and disincentives to direct development to locations where public services are already available or may be readily provided;
- Promoting development such that growth and access to public services will be concurrent; and
- Encouraging opportunities for compatible mixed-use development.

CHAPTER 11 – RENEWAL AND REDEVELOPMENT

Introduction

With nearly 14% of the total housing stock within Morgan County constructed prior to 1939, it is a fair assessment that a certain percentage of this aging stock is in need of some revitalization strategy. However, some of these structures are in rural areas that do not lend themselves to collective redevelopment effort. Any renewal activity in these areas would need to be directed to assisting individual property owners with renovation efforts.

Given the historic character and changing employment opportunities within the county, it is also fair to assume that there are underutilized commercial properties and cultural sites that would benefit from redevelopment and preservation programs.

The primary areas for redevelopment efforts aimed at downtown livability are the two municipalities and their outlying neighborhoods and the unincorporated area of Great Cacapon. In these areas, infill development may be most appropriate as a catalyst for community revitalization and enhanced performance of existing land use especially in areas with existing infrastructure.

In order to develop appropriate programs, policies and incentives to assist in the redevelopment of these sites and structures, it is important first to outline the qualifying criteria for including specific structures for redevelopment.

Preservation of Town Centers

The term “town centers” used broadly here should apply to certain areas outlined in Chapters 9 and 10 that provide various places within the county with a sense of community in addition to the two incorporated municipalities.

In defining these areas, communities can better proceed with the preservation and improvement of their existing neighborhoods. While property maintenance may be the responsibility of each individual property owner, some properties for a variety of reasons deteriorate and detract from the neighborhood community. These blighted properties may discourage investment in the neighborhood, thus creating blighted areas.

Berkeley Springs

Berkeley Springs, being the larger urban area surrounding the Town of Bath, serves as the county seat for Morgan County and includes the largest concentration of public activity in a defined area. This includes a large percentage of the county’s population, much of its historic resources, many of its governmental functions and a healthy mixture of residential and commercial properties. Because Berkeley Springs is the largest defined town center within Morgan County, having both major state routes that cross the county pass through its main

streets, many planning tools for redevelopment may be used to focus on this area and then duplicated for use in other town or community centers.

Two other town centers where revitalization and redevelopment strategies should be focused, utilizing tools developed to address efforts in Berkeley Springs, are Paw Paw and the large unincorporated community of Great Cacapon. As these town centers share similar needs for redevelopment and include many of the same social and physical attributes as Berkeley Springs, efforts for revitalization of these three major areas may be interchangeable for their respective properties.

The shifting demographics in the county, with the over age-55 category continually increasing and youth categories decreasing, it is crucial to consider redevelopment and revitalization of town areas to provide accessible and affordable housing and to limit sprawl. This increased density would also contribute to economic development activity in these areas.

Revitalization of Individual Properties

In addition to the generally outlined town centers, there are also a number of significant individual properties within these areas and elsewhere throughout the county that can be identified for redevelopment or revitalization. These properties include residential, commercial and recreational structures and sites that may provide some immediate and long-term public good such as architectural or historic preservation or opportunities for increased employment.

Residential

To facilitate the revitalization and redevelopment efforts of residential properties throughout Morgan County, an inventory to assess the available housing stock that exists within this category should be conducted. As outlined in Chapter 2, this inventory would include various housing types, most of which are classified as vacant. However, in review of this information it is important to understand that some structures listed as vacant may be recently built homes or rental properties simply available for occupancy. There are also structures currently in partial or full occupancy in need of significant revitalization efforts. Further, there are some properties which are either neglected or abandoned that may require additional regulatory involvement.

Commercial Property

Much like the residential structure analysis, there are also commercial sites and structures that would benefit from the creation, implementation and promotion of redevelopment initiatives. Unlike residential properties, which are promoted through revitalization programs, commercial properties are often classified as vacant or underutilized and are more often affected by the larger regional economic climate and interests of consumer demand.

As outlined in Chapter 8 of this Plan, existing vacant and underutilized commercial properties are a major priority of the county Economic Development Authority. This is due in part to the fact that many of the vacant structures are located within urban areas where services are more

readily available and opportunities for employment would be placed closer to existing population. The EDA also gives priority to vacant tracts in existing industrial and business park settings, thus promoting areas for compatible use and in underutilized buildings in urban settings that “fill out” the central business districts of towns and rural communities.

One area that requires long-range consideration surrounds US Silica on the north end of the county. A decrease in mining activities combined with development of a connector road from US 522 to Fairview Drive would involve a focused plan for both redevelopment of existing commercial structures and infill of new development. This effort could also stretch to include redevelopment of the entire North Berkeley and Jimstown neighborhoods. Development of infrastructure like the North Berkeley Rail Trail would also act as a catalyst for community revitalization and growth. This would qualify as a combination of residential and commercial redevelopment.

Paw Paw has several obsolete commercial properties and vacancies in the industrial park located close to the town center that would benefit the town greatly if they were redeveloped.

The growth of vacation and retirement homes along the Cacapon River and areas near Great Cacapon make redevelopment in the “town” area ripe for commercial and residential properties.

Cultural Sites

In addition to the need to promote the revitalization efforts of residential and commercial structures typically located within the more urban areas of Morgan County, it is especially important for a county that includes tourism and recreation as integral parts of its economic base to develop an approach to ensure the viability of historically significant sites and structures located throughout the county. This includes both private and publicly-owned properties that are often best supported through grassroots efforts that recognize the long-term benefit and value each plays for the identity and heritage of each community.

Table 11-1 Inventory of Property for Redevelopment

Property	District	Description
Residential		
Berkeley Springs	Bath	urban redevelopment area
Paw Paw	Cacapon	urban redevelopment area
Great Cacapon	Cacapon	urban redevelopment area
Commercial		
Morgan County Landfill	Cacapon	undeveloped county owned property
Coolfont Resort	Cacapon	underutilized private recreational area
Cultural		
Ice House	Bath	underutilized community resource structure

Tools for Redevelopment and Revitalization

Tools for redevelopment and revitalization for the purposes of attracting appropriate investment should be implemented through the collective efforts of local governments. These tools may be applied through broad programs to address long-range improvements to a town center or other defined area, or may be focused on the efforts of individual projects of either public or private investment to revitalize a single property.

- **Redevelopment Planning and Implementation Programs** - establish planning and implementation programs that focus on redevelopment and improvement. Business groups, property owners and local government would work together to plan and implement redevelopment programs such as street and pedestrian improvements, streetscape improvements, façade treatments and similar improvements meant to create a theme and provide visual improvement to the neighborhood.
- **Linking mobility and access with development patterns and design** - provide for movement of goods, services and people, while at the same time providing convenient access to the downtown areas. Access management tools should be used to provide coordinated access, along with protected crosswalk areas and traffic calming principles. Also, provide for adequate parking.
- **Promote pedestrian access** - make the area safe for pedestrians by providing well-marked crosswalk areas and improving sidewalk systems. Institute good streetscapes that beautify and also provide well-marked pedestrian ways that link to parking areas. Use traffic calming principles to slow down vehicular traffic in areas where they are in contact with pedestrians. Develop in-town walking trails.
- **Infill with new buildings that are sensitive to their surroundings** - provide design guidelines for new buildings that will enhance community themes. Also, provide guidance for these areas to manage the visual impacts new structures may have on older neighboring structures.
- **Promote mixed use development to create livelier communities** - encourage the mixed uses and traditional neighborhood design principles to guide redevelopment near older neighboring urban areas. While these centers function as business and cultural centers, they should also provide opportunities for inclusive residential and commercial needs.
- **Brownfield/land recycling** - establish a core group of planning and land use techniques that facilitate recycling and redevelopment of former commercial and industrial sites. These sites should be identified, inventoried and prioritized with the top sites selected for more detailed planning analysis to successfully partner in redevelopment efforts.
- **Reinvestment** - direct public and private investment of funds and resources into neighborhoods to spark revitalization.

- Tax Increment Financing (TIF) - utilize tax increment financing to stimulate the reuse of vacant and underutilized buildings.
- State and Federal programs - leverage appropriate state and federal funding sources related to community economic development to stimulate revitalization efforts.
- * Explore the use of the state dilapidated buildings program to create incentives for individual property owners to improve their property in municipalities and the county.

Goals and Objectives

Goals

The appeal of a community is strongly influenced by the 'look' of its neighborhoods. As communities age, this 'look' can change dramatically if buildings are allowed to deteriorate. The result can be a downward spiral reflecting the declining spirit of a once vibrant community. The way to avoid this blight is to promote conditions that foster the preservation and improvement of existing neighborhoods. Goals toward this end include:

- Encouraging owners to maintain their properties;
- Supporting the removal of unsafe or dilapidated structures;
- Encouraging active use of and development in older structures and neighborhoods; and
- Limiting sprawl.

Objectives

These objectives will further the aforementioned goals:

- Supporting the development of incentives to motivate owners to keep up their properties;
- Considering the development of regulations providing for the removal of deteriorated and unsafe structures;
- Promoting programs to upgrade substandard housing;
- Fostering movement of residents and businesses to urban centers, particularly those in decline;
- Establishing cooperative programs between the county and municipalities to address areas of common concern;
- Promoting ways to reuse vacant and underutilized industrial parks;
- Motivating and supporting efforts to clean up illegal dump sites;
- Providing guidance for redeveloping and revitalizing 'brownfield' areas as a means of preserving 'greenfield' areas;
- Promoting taking advantage of existing infrastructure rather than requiring construction of expensive new infrastructure;
- Encouraging adaptive reuse of historic or culturally significant buildings;
- Addressing potential oversupply of land for new development;

- Encouraging long-term economic sustainability; and
- Improving or restore natural systems such as streambeds, drainage courses, wetlands, rivers, ambient air quality and other ecological features.

CHAPTER 12 - FINANCING

Introduction

The County Commission, by WV Code, is responsible for maintaining annual fiscal stability to address the service needs that must be met through the revenue and expenditure process. Accurately monitoring this process serves to provide more efficient operations, prioritize anticipated projects and better coordinate scheduled improvements that may involve additional funding from other sources including the state, federal or other local governments. Increased growth and the demands of the populace require the identification of necessary or desired improvements and appropriate and allowable funding sources.

The Planning Commission's role as it relates to the fiscal budgetary process should be limited to the planning purposes in which such budgetary priorities may be affected. This chapter will identify the structural make-up of funding revenues, operational expenses and capital outlay that primarily make up the budget as it relates to services and resources that largely affect current and future planning and development-related activities.

County Finances

Although financing is primarily a function of the governing body and its annual review of revenue and expenses as it relates to providing services to the tax base at an affordable rate, it also plays a significant role as Morgan County seeks to enhance its current circumstances and encourage future growth. In order to ensure that required and desired services stimulated by growth are adequately funded, it is desirable to develop and maintain a method of planned capital improvements with methods of collecting funds over time that include costs associated with both operations as well as capital outlay.

Revenues

The Comprehensive Plan component that relates to finances requires understanding revenue generation in the county. There are generally two types of revenue: those funds collected from taxes, fees and shared tax revenues which cover costs associated with general fund services; and those funds collected from necessary public facilities, which cover costs associated with those specific public enterprise systems. A third smaller fund is the Coal Severance Fund received from the state.

General fund revenue includes funds collected from property taxes, fees, commissions, rents and interest, with property tax making up the largest portion. The Coal Severance Fund, received from the state, also goes into the county general fund, much like other shared revenues received.

Property taxes make up a large part of the total annual revenue. However, the County Commission receives only a portion (24%) of the property tax collected. The remaining amount

is distributed primarily to the Board of Education (75%), with a small amount (1%) going to the state and municipalities.

Currently, the property tax rate is at the ceiling defined by law. Taxes simply cannot be raised. Therefore, property tax revenue may increase in only two ways: actual increase in general property values as defined by market forces and/or an increase in the number of commercial properties that are assessed at a higher rate.

Other general funds, which include other taxes, fees, commission, rent, interest and any other miscellaneous revenue, make up the second-largest part of the county general fund revenues. If development, employment and population once again begin to increase, this category should increase as well. It is also possible for the County Commission to increase or add various fees for services although they are limited by code to fees in the area of public safety: fire fee; ambulance fee and 911 fee.

A much smaller portion of the revenue stream includes various funds the federal government may make available as well as revenue provided by the state through the Coal Severance Fund. This fund is paid to the state which in turn provides each county with a portion of the funds received. This fund has been in significant decline over recent years.

Table 12-1 General Fund Revenues

<u>Revenue Type</u>	<u>Fiscal 2015</u>	<u>% of Total</u>
Property Tax	\$3,843,439	53%
Other General Funds	\$2,797,826	38%
Shared Revenue Fund	\$550,567	8%
<u>Coal Severance Fund</u>	<u>\$59,518</u>	<u>1%</u>
Total	\$7,251,350	100%

Source: Morgan County Government

Expenses

There are several general categories for expenditures which are further broken down in the fiscal budget. These areas of general operational expenses include general government, public safety, health and sanitation and culture and recreation. As the need and demand for increased services have occurred over time, additional line item expenses have been created to account for such services.

The two primary areas of expense continue to be general government and the various functions that make up public safety. Public safety includes law enforcement as well as some portion of judiciary and other related services like bailiffs. One further line item that has been added to the general fund expenses is the capital projects expenses. Additional funds may be found to fund new projects by shifting expense priorities.

Table 12-2 General Fund Expense

<u>Expense Type</u>	<u>Fiscal 2015 (millions)</u>	<u>% of Total</u>
General Government	\$5,197,080	66%
Public Safety	\$2,237,391	28%
Health and Sanitation	\$35,000	1%
Culture and Recreation	\$169,225	2%
Capital Projects	\$175,982	2%
Total	\$7,814,678	100%

Source: Morgan County Government

Municipal Finances

Although there are numerous locations that serve as community centers for neighborhoods throughout the county, there are only two municipalities that are incorporated local government jurisdictions. These two municipalities are the Town of Bath, located in the Berkeley Springs postal service area, and the town of Paw Paw, located along the Potomac River in the Cacapon region. Unlike other communities in the county, these towns operate under their own charters, which allow them to create ordinances and levy taxes within the corporate limits. This ability also requires that the towns provide necessary public services, which in some cases either duplicate or replace services provided to all county residents by the Morgan County Commission.

Town of Bath

The Town of Bath is governed by a mayor and five council members who are elected for two-year terms. The town recorder, who maintains town records and financial reports, is also elected for a two-year term. The council is organized into seven functional committees, which are composed of three members each. The committees are finance, public works, water, ordinances, cemetery, grants and public safety.

Revenues for the Town of Bath include a designated portion of property taxes collected by the county, licenses and fees, other taxes, state and federal funds and miscellaneous sources. Of these revenues, property and other taxes are 39% and licenses and fees are 31%, fines and parking meter revenues 18%.

Current primary expenditures are approximately: administrative 20%, public safety 29%, garbage department 24% and streets 15%.

Town of Paw Paw

Paw Paw is governed by a mayor and five council members who are elected for two-year terms. The town recorder is also elected for a two-year term. The council is organized into five functional committees of three members each. These committees are police, water and sewer, streets and alleys, cemetery, and ordinance and grievance. A sixth committee, the finance committee, is composed of all five council members. A nine-member Parks and Recreation

Commission is appointed by the Town Council to oversee operation and maintenance of the municipal park.

Revenues for Paw Paw include a designated portion of property taxes collected by the county, licenses and fees, other taxes, state and federal funds and miscellaneous sources.

Expenditures include administration as the largest portion, followed by streets and police; the remainder being used for street lighting.

Capital Outlay

Each local government is charged with the responsibility to oversee the maintenance and operation of local services. This process includes the replacement or expansion of local services due to either age of equipment and infrastructure or increase in need. These costs are typically associated with larger expenditures of public funds that are not considered part of the general operations expected to be covered within the fiscal budget. Therefore, most local governments prioritize these items in a long-term capital improvement plan.

Capital improvements should be planned separately from the annual operating budget due to the high cost of such items. Special funds must be borrowed, sought from grants or otherwise set aside in advance. In addition, facilities and major equipment can often be amortized over time, allowing for improvements or replacements to be planned in advance. These projects typically include more permanent facilities such as public buildings, roads, bridges and water and sewer systems. They may also include larger vehicle purchases such as fire and emergency service apparatus or police cruisers.

The method by which these purchases are scheduled is the Capital Improvement Plan, which covers a six-year period. The first year is the budget year under review for funding approval followed by five subsequent years in which funds are prioritized and set aside for future expenses. This plan is designed for review and update as part of the annual budget review and approval process. As each project is implemented, the remaining projects may be re-evaluated. This process allows for annual removal of completed projects and addition of new projects, which may alter priorities based on need. Morgan County does not have a Capital Improvement Plan at this time although such development is included in the objectives.

Morgan County

Buildings which are owned and operated by the Morgan County Commission for general government purposes are the Court House Complex and the Community Services Center in Berkeley Springs. The county also owns The Pines Opportunity Center and its campus (the former War Memorial Hospital building) which includes other buildings that provide the public with various services. In addition, the county has increased its participation in addressing the capital needs of other necessary public services that improve the health safety and welfare of its residents.

Municipal

The Town of Bath owns the Town Hall, which is located on the corner of Wilkes and Union Streets. This building provides a meeting room for the mayor and council and office space for the Police Department, Town Clerk and Water Department. Additional office space not used by the Town is rented out. Located behind the Town Hall is a garage used for equipment storage by the streets department. The Town owns the water department facilities of the Berkeley Springs Water Works on Wilkes Street. The Town also owns three cemeteries as well as property outside of the town limits.

Paw Paw operates most of its municipal services out of its town hall. This includes offices for the mayor and for council meetings, Police Department, Water Department and other administrative services. The town also owns the water and sewer treatment facilities and the historic mayor's office and jail.

Other Government Entities

There are numerous other necessary services as well as public amenities provided throughout the county, which are identified as either private, volunteer or public, that must be recognized as part of the financial process. These facilities may not be owned, operated or funded directly by local government, but may exist through volunteer and donated efforts and/or public funds received through designated taxes like the hotel/motel tax or state and federal sources. Although their make-up and operational characteristics are outlined in Chapters 4 and 5, it is important to identify capital outlay expenses that may require future funding consideration and possible alternative funding opportunities within the fabric of the government financing process.

These services and amenities can be divided into two distinct categories, which include those enterprise services such as water, sewer and solid waste which do typically operate on a fee-for-service basis, and those general services such as libraries, emergency services, schools and parks which do not typically operate on a fee-for-service structure.

Budgetary Trends

Trends in Assessed Valuation and Financing Capacity

Trends in assessed valuation are important in projecting the potential for revenue to fund current and future budgetary expenses. Valuation is the sum of personal property, real estate and public utility valuations. The total, which is taxable, is determined by subtracting the valuation of all property which qualifies for the Homestead Exemption. Under the 1982 Tax Exemption Amendment, the first \$20,000 of assessed value is exempted from ad valorem taxes for resident owners who are age 65 or over or who are certified as permanently and totally disabled.

In comparing valuation over time, it appears it has increased steadily since 1980, primarily as a result of increased assessments due to regional market demand. The taxable total, however, increased less rapidly due to the Homestead Exemption. Property which qualifies for the

exemption has been expanded over this period from the first \$5,000 to the maximum of \$20,000 of assessed valuation for qualifying properties.

Assessed valuation of public utility property represents the smallest component of the total. In 1980, Morgan County was 53rd among 55 West Virginia counties in property owned by public utilities. This ranking has increased since that time. There was actually a decline in 1980 of nearly \$53,000 in utility property valuation due in large part to the discontinuation of over 30 miles of Western Maryland Railroad track in Morgan County. Since that time public utility valuation has increased.

Personal property valuation increased more rapidly than real estate. This increase has been due in large part to a higher disposable income from the in-migration of population. This component is subject at times to significant fluctuation due to its dependence on the availability and variation of the average consumer's expendable income.

The most consistently increasing and influential component of total valuation is the value of real estate property. In 1980 the valuation for Morgan County was set at 63% of appraised value. Actual value has continued to increase since 1980 except for the decline in the national real estate market beginning in 2008 and only recently experiencing increases. Appraised value is periodically reviewed and updated by the County Assessor's Office.

Trends in Revenues and Expenditures

The change in general trends of revenues and expenditures over time is most accurately reflected in terms of annual budgetary comparisons and end-fund balance. In looking at simply one side of the budgetary process there may appear to be large increases in revenue or expense, but those numbers should be compared within the budget year to understand how the county has balanced the budget for a given period. Further, it is important to note in this review how much budgeted income is actually being collected as well as to what expenditures they are being applied.

Revenues

In reviewing revenue trends for the census years between 1980 and 2010, it appears the revenues from property taxes have produced an increasing proportion of total revenues. The primary reason for the increase in this period was due to increased valuation in the region and Morgan County. However, all sources have combined for an increase in total revenues for each census period as well as the most recent five years (2010-15). During this most recent five year period, Morgan County has seen a decline in property values which put financial pressure on the county to raise the levy rate to compensate for the lost revenue from the drop in valuations. The increase in property tax revenue is thus due to an increase in the tax rate as set by the County Commission. The fiscal health, however, is much better defined when real estate market trends, levy rates and the county reserves are considered as well as the consistency between annual revenues and expenses.

“Other” includes contributions and donations along with other miscellaneous revenue. Shared funds include grants, hotel/motel tax revenues and capital loans; and fluctuates depending on capital outlay and the debt needed to finance projects.

Expenditures

All expenditures are covered by annual revenues collected which are projected as part of the budgetary process. The General Fund, having the most revenue available, is used to cover most of the county’s expenses. This includes a large number of line items within administration and other services provided by the county.

Table 12-3 Trends in Revenues and Expenditures

Type	FY 89-90	%	FY 99-00	%	FY 14-15	%	Change
Revenue							
Property tax	1,027,779	26	1,731,448	53	3,843,439	53	27
Other	323,100	8	828,022	25	2,797,826	38	30
Coal Severance	N/A	0	N/A	0	59,518	1	1
Shared Funds	2,646,966	66	701,354	22	550,567	8	-58
Total Revenue	3,997,845	100	3,260,824	100	7,251,350	100	
Expenditures							
General Government	1,138,779	31	1,677,634	55	5,197,080	66	35
Public Safety	271,559	7	730,152	24	2,237,391	28	21
Health and Sanitation	24,392	3	54,961	2	35,000	1	-2
Culture & Recreation	52,503	1	106,796	4	169,225	2	1
Capital	2,193,492	59	441,575	15	175,982	2	-57
Total Expense	3,782,670	100	3,011,118	100	7,814,678	100	

Source: Morgan County Government

Bonding Capacity

Morgan County, through its County Commission, is empowered by the West Virginia Code to issue general obligation bonds “for the purposes of acquiring, constructing and erecting, enlarging, extending, reconstructing, or improving any building, work, utility, or undertaking, or for certain other specific purposes relative to libraries, museums, schools, parks, civic arenas, auditoriums, exhibitions halls and theaters.” The Code further states that “the power to acquire or construct any building, work, or improvement as herein provided shall be deemed to include the power to acquire the necessary lands, sites and rights-of-way therefore”.

The county is authorized by the Code to become indebted to an amount equal to or more than two and one-half percent of the value of its taxable property as shown by the last assessment. However, an additional debt equal to no more than two and one-half percent of the value of the taxable property may be incurred for the erection and equipment of a courthouse or jail with funds from the government of the United States or any federal or state government agency. Since

the repayment of general obligation bonds is made from local tax revenues, this debt may not be incurred unless it is approved by three-fifths of all votes cast at public referendum.

Pursuant to the Industrial Development and Commercial Development Bond Act, the county is authorized to issue revenue bonds to provide funds to finance commercial and industrial development projects. These bonds are limited obligations of the county, which are payable from revenues received from the financed projects. The amount of bonds issued by the county in each fiscal year is determined by the programmed need for such funds.

Alternative Funding Sources

The Governor's Partnership Grant Program provides funding for local capital improvement projects which have received primary funding from other sources and need a secondary allocation from the state to complete the financing. Eligible improvements include labor and construction costs for improvements such as water, sewer, community buildings and recreation facilities.

The Governor's Emergency Water and Sewer Systems Program is used for emergency equipment and repairs to water and sewer systems that experience disruption in service due to accidents or natural occurrence. Funds are available for 100% of the eligible costs up to a maximum dollar amount.

The Community Development Block Grant Program (CDBG) is provided to small cities to be used for a number of objectives aimed at improving the community character of primarily low and moderate-income neighborhoods. This may be accomplished through acquisition, construction, reconstruction, installation of necessary services or other site improvements. For Morgan County, these funds are limited to improvements made in certified CDBG areas.

The Land and Water Conservation Fund is a Federal program under the National Parks Service that provides grants for eligible costs for such projects as parks, playgrounds, swimming pools, ice arenas and similar outdoor recreational facilities. Eligible costs are limited to those that provide a direct recreation benefit and do not include accessory costs for fencing, stormwater management or other required improvements.

Tax Increment Financing (TIF) is secured by property taxes to fund economic development and job creation. TIF captures the projected increase in property tax revenue gained by developing a discrete geographic area and uses that increase to assist in paying for the project. This funding makes it possible to go forward with projects that otherwise would not be built. Projects can be the county's own development projects or projects brought to them by private developers. Establishment of a TIF requires County Commission approval. The additional tax dollars the county would receive from a TIF would be used to provide needed public services such as water, sewer, roads or fire department funding. Tax Increment Financing bonds or notes may be issued with the obligations paid back by the tax increment over a period of up to 30 years.

A Community Enhancement District (CED) may be established by the County Commission to provide a financing tool related to new development within a specific set of boundaries. In order to establish a CED, the owners of at least 61% of the property petition the County Commission to establish a CED. The CED is established as a public corporation that has the power to design and construct projects and assess the cost of the projects to the owners of the real property. Property owners in the CED are assessed an annual fee which is administered through the local taxing authority. These assessments are ordinarily done over a number of years and are applied to servicing debt such as bonds or other financing vehicles selected by the CED. Once the bonds are paid down, the fees are no longer assessed.

Revenues and expenses related to the above alternative funding sources are included in the budget category of Shared Funds.

Goals & Objectives

Goals

The key to achieving the goals outlined in this Comprehensive Plan is financing. Revenue and expense budgets, as well as capital improvement budgets, grants and loans and other fiscal strategies, are the means by which progress will be made. Goals include:

- Promoting methods of funding growth;
- Working to create a sound local economy as the fiscal foundation that will underwrite growth; and
- Evaluating on-going cost-effectiveness of all budgetary expenses.

Objectives

Steps to advance these goals include the following objectives:

- Supporting the implementation of programs that will increase government efficiency such as using more fuel-efficient vehicles in public transit (government cars and trucks, school buses, etc.);
- Encouraging the development of local employment opportunities and work-force housing to ensure a broad local economic base;
- Considering how land that is set aside is calculated for promotion of farm easements; and
- Supporting the County Commission in developing a Capital Improvement Plan for capital project outlay.

CHAPTER 13 – HISTORIC PRESERVATION

Introduction

The State of West Virginia has established the State Historic Preservation Office in the Division of Culture and History. This office administers both the state and federal historic preservation programs. Its programs encourage, inform, support and participate in the efforts of the people of West Virginia to identify, recognize, preserve and protect the state's prehistoric and historic structures, objects and sites. This effort can stabilize neighborhoods, stimulate private investment, provide affordable housing, revitalize downtown activities, attract tourists and enhance community pride in the sense of place that historically significant features create.

Morgan County, settled by the earliest of European colonists, boasts numerous historically significant features particularly in the Bath Historic District, the core of the prominent 18th century town known to the world by its postal name of Berkeley Springs. In order to achieve the greatest exposure through this plan to both the potential of available government funds and easy identification to tourist travelers, these features collected in this section are separated into their intrinsic values: scenic, archaeological, architectural and other significant lands or buildings.

Scenic Areas and Natural Features

The West Virginia Department of Natural Resources maintains responsibility for the Wildlife Diversity and Natural Heritage Program. This program identifies unique natural areas and serves as a clearinghouse for general information on the state's natural history.
<http://www.wvdnr.gov/Wildlife/Wildlife.shtm>

Prominent physical features which expose rock structures and provide unique vantage points for scenic views are identified as Special Landforms. The Washington Heritage Trail National Scenic Byway also identifies scenic areas along its 54 miles throughout Morgan County as part of the intrinsic values of the trail.

The most accessible and well-known vista is Panorama Overlook, a scenic view of three states: Maryland, West Virginia and Pennsylvania and two rivers: the Potomac and Cacapon. The view was rated by National Geographic as one of the five best in the east. It is located along WV 9 three miles west of Berkeley Springs at the point where Cacapon Mountain plunges nearly 1000 feet into the Potomac River. Higher on Cacapon Mountain, Prospect Rock (also called Cacapon Rock) offers the same spectacular view to the east. The cluster of unique rock formations that mark this area may be reached by a 12-mile fire road and flat hiking trail across Cacapon Mountain accessed from Cacapon State Park.

Another overlook that provides panoramic views of three states is "Lovers Leap", a high ledge near US 522 north of Berkeley Springs on US Silica property. It has been closed to the public since the mid-1990s. A lesser known, but equally inspiring scenic view is "Fluted Rocks", which

overlooks the Potomac and Cacapon rivers at an elevation of 852 feet. It is not easily accessible to the public.

The topography of Morgan County as part of the Ridge and Valley section of the Appalachians provides a plethora of impressive views along virtually every county road. One of the more significant landforms in Morgan County is “Devil’s Nose”. This feature, which lies on private property, is part of Short Mountain. It is located in the eastern part of the county and projects at nearly and 800 foot elevation into a nose-like structure that overlooks the Meadow Branch.

“Eades Fort” is an historically significant rock formation along the bank of the Cacapon River, named for Thomas Eades, an early settler and farmer who escaped to the rock formation when Indians attacked and burned his barn.

Rock Gap Cave is believed to be the only significant cave in Morgan County. It is located at the north end of a small quarry on the southwest side of Rock Gap. It includes a partially-blocked passage that leads to a thirteen-foot by six-foot crawlway. It is not accessible to the public.

Archeological Features

Archeological studies done in the 1980s and 90s confirm prehistoric settlements in Paw Paw near Brosius (where the Hancock Bridge crosses the Potomac River) and in Great Cacapon. Arrowheads are still found along Sir Johns Run. These were typical year-round settlements based on agriculture supplemented with wild food and hunting.

Local discoveries of different color flint arrowheads suggest nearby native trade routes from Pittsburgh and Ohio to Virginia. A well-documented large village was discovered in Great Cacapon where the Cacapon River empties into the Potomac convenient for river travel both north/south and east/west. Hundreds of artifacts including ceramics date the village to about 1300AD. It is known to be the only site of its type and period in eastern West Virginia and one of only a few in the region.

Natural Spring Areas

Morgan County is most well known in the region for its natural spring areas, the most important of which is the “fam’d warm springs” of Berkeley Springs today part of Berkeley Springs State Park in the center of Bath. Located at about 800 ft. above sea level, the springs emerge at the base of Warm Springs Ridge, which rises nearly 450 ft. above the Warm Springs valley. The springs’ discharge area encompasses five principal sources and numerous smaller ones, all within one hundred yards of one another, producing from 1,000 to 2,000 gallons per minute of clear water at a constant temperature of 74.3 degrees Fahrenheit. The springs have been used since pre-colonial times for health spa activities that continue today.

A second important set of springs is the Breakneck Run Springs located at Ridge in the southern area of the county. The combined flow of these springs measures nearly 1,000 gallons per minute, and supplies water for the Ridge State Fish Hatchery. This is the only fish hatchery in

the state that is a combination warm and cold water hatchery, producing cold water golden, rainbow and brook trout as well as warm water large and small mouth bass and muskies. These free-flowing springs are the only source of high quality, pollution free water in the state conducive to the production of trout.

Additional major flow springs include the following.

Ziler Spring along the western bank of the Cacapon River has a greater flow than Ladies Spring in Berkeley Springs State Park which provides the source water for the town of Bath water system. Ziler Spring is privately owned.

Tonoloway Spring is near the headwaters of Sir Johns Run off of Cold Run Valley Rd. Privately owned, it is also called Suburban Bottling Spring. High Spring and Mountainside Spring are also in the Cold Run Valley area on Coolfont property.

Neely Spring and Webber Spring are limestone springs in Cacapon State Park.

A major water source study was conducted by the county in 2006. The final report can be found at <http://morgancountywv.gov/Planning/Documents/HRC3-MorganCounty-FinalReport2006.pdf>

Historic Sites

The most important federal property in the area is the Chesapeake and Ohio Canal National Historic Park, a part of which parallels the Potomac River across from Morgan County on the Maryland side. Although the National Park Service owns a few acres in Morgan County along the abandoned B & O Railroad right-of-way, the C & O Canal recreational historic attractions are all located in Maryland.

One of the most significant attractions of the C & O Canal is the Paw Paw Tunnel, a 3,118 foot brick-lined excavation located on the Maryland side of the Potomac River, just north of the town of Paw Paw. The tunnel was constructed from 1828 to 1850 to provide passage for the canal through a six-mile set of river bends. The C & O Canal was added the National Register in 1966.

The 34-mile long abandoned Western Maryland Railroad right-of-way from Long Ridge in Washington County, Maryland to Maryland Route 51 was added to the National Register in 1981. Construction of this stretch of the Western Maryland Railroad began in 1903, closely following the C & O Canal and the Potomac River on the northern (Maryland) side. At the Great River Bends between Hancock, Maryland and Paw Paw, West Virginia the railroad cut through the mountains of Maryland and across the river by means of three tunnels and six bridges, transferring seven miles of the right-of-way onto the West Virginia side in Morgan County. Following abandonment of the right-of-way in 1975, it was acquired by the National Park Service in 1980. At the time of purchase, the NPS agreed to relinquish fee title to the right-of-way in Morgan County subject to suitable development controls. Attempts to develop a trail along the right-of-way in Morgan County were blocked by the presence of endangered species of bats in the tunnels.

The most prominent historic site in Morgan County is Berkeley Springs State Park, location of the warm mineral springs, which was added to the National Register in 1976. The park includes a concentration of historic buildings centering on the mineral springs which since the 1780s have formed the core of the spa attracting countless millions of people both famous and obscure over nearly three centuries beginning with some of the highest officials and socialites in early colonial times. The springs drew so many health seekers and other visitors during colonial times that in 1776, the Virginia legislature established the Town of Bath on nearly 50 acres adjoining the springs. Although always public land, the park did not achieve its current 4.5 acres until 1881 when several lodging buildings were razed and the land sold to the Bath Trustees for the park.

In 2009, the core of the Town of Bath within its colonial boundaries was designated a National Historic District with 236 buildings and sites designated contributing structures. This designation makes all contributing structures within the district eligible for various tax credits.

Additional historic sites outside the town limits were identified as designated sites on the Washington Heritage Trail National Scenic Byway including Spruce Pine Hollow Park, Cacapon State Park, Sir Johns Run, Great Cacapon, Camp Hill Cemetery in Paw Paw and the town of Paw Paw.

Historic Structures on the National Register

In addition to the Bath Historic District, there are several individual structures both in and out of town that are individually listed on the National Historic Register. Possibly the most prominent single structure in Morgan County is Berkeley Castle, a two-story stone structure built in the Romantic tradition of the 19th century and positioned against the Warm Springs Ridge along WV 9 overlooking the springs and park. Also known as Suit Cottage, it was built as a summer home by Colonel Samuel Taylor Suit, a successful Maryland businessman who earned his fortune in whiskey and railroads. Construction of the castle began in 1885 and was occupied by Suit and his young third wife, Rosa, and their three children in 1887. Suit died in 1888 and Rosa completed work on the structure including the addition of a gatehouse in 1893 that today is separated from the main structure by WV 9. The castle was added to the National Register in 1980. Today it serves as a private residence.

The T.H.B. Dawson House is a large red brick Italianate 19th century residence located on a hillside lot at the corner of Green and Market Streets in the Town of Bath. It is a significant and meticulously restored example of a substantial house type once commonly assigned to upper middle class businessmen and professionals of America's Gilded Age. The house was built in 1880 for Mr. Thomas Hart Benton Dawson, a native of the community who served in the Union Army during the Civil War, was elected County Clerk in 1886, and was active in the legal profession and insurance business. The house was placed on the National Register in 1983. It is one of several structures designed by self-taught local architect, Henry Harrison Hunter and constructed by his family business. It is privately owned and occupied as a residence.

The Manor, also known as the Sloat-Horn-Rossell House, is a large two-story Empire style residence located on Fairfax Street in the town of Bath, the only remaining example of this style in the area. Constructed in 1879, it is also a Henry Harrison Hunter structure. Well restored for reuse as a bed and breakfast inn, The Manor was accepted onto the National Register in 1984.

The John Herbert Quick House, popularly known as “Coolfont Manor House”, was also placed on the National Register in 1984. A 2 ½ story mansion of Colonial Revival style that was built in 1913, it is significant for its architecture. More importantly though, it is known as the home of John Herbert Quick, a noted late 19th and early 20th century literary figure and social reformer of national renown. The house served as a private residence for the owner of the now defunct Coolfont Resort located in Cold Run Valley between Cacapon Mountain and Warm Springs Ridge, just south of Berkeley Springs. It is currently vacant.

The Berkeley Springs Train Depot, located on North Washington Street at the northern boundary of the town, was constructed in 1914 for use by the B & O Railroad replacing an earlier depot. It is a decorative brick structure that was built in the Spanish Revival style and used by the railroad until 1935. The depot was purchased by the town government and used variously as City Hall and rented for commercial enterprises. The exterior was restored in 2014-15 and is currently vacant awaiting interior renovation.

The Clarence Hovermale House, located on Wilkes Street in the town of Bath, was also built by the Hunter family in 1884 and restored in the 1990s. Also known as the Allen Mendenhall House, it represents the Queen Anne style period. The house currently serves as a private single residence and was added to the National Register in 2003.

Wisteria Cottage, built in 1872, was home to Judge John W. Wright, a Lincoln appointee to the U.S. Court of Appeals. It is a cubical cottage in Tuscan style located on South Green Street in the town of Bath. The cottage was added to the National Register in 1986, and is currently a private residence.

Ambrose Chapel is a single religious structure located on 15 acres along Winchester Grade Road. It was placed on the National Register in 1998.

The Morgan County Courthouse, the third in a series, was added to the register in 2005. It was severely damaged by fire and demolished in 2006.

Table 13-1 Historic Register Sites and Structures

<u>Listing</u>	<u>Type</u>	<u>Year Built</u>	<u>Year Listed</u>	<u>Owned</u>
C&O National Historic Park	Site	N/A	1966	Public
Berkeley Springs State Park	Site	N/A	1976	Public
Western Maryland Railroad	Site	1903	1981	Public
Berkeley Castle	Structure	1885	1980	Private
T.H.B. Dawson House	Structure	1880	1982	Vacant
Manor (Sloat-Horn-Rossell house)	Structure	1879	1984	Private

John Herbert Quick House	Structure	1913	1984	Private
Berkeley Springs Train Depot	Structure	1914	2001	Public
Clarence Hovermale House	Structure	1884	2003	Private
Wisteria Cottage	Structure	1872	1986	Private
Ambrose Chapel	Structure	1850	1998	Private

Source: National Register of Historic Places

Aside from the sites already on the National Register, there are numerous additional sites that have been identified for eligible inclusion due to their significance as part of the historic architectural and cultural resources within the county. Most of the sites include structures located within the Berkeley Springs area and 236 of those became contributing structures to the Bath Historic District added to the National Register in 2009.

Historic Sites and Structures Eligible for the National Register

Although there are detailed guidelines for determining properties eligible to be listed on the National Historic Register, the primary ones include being more than 50 years old with limited modifications and possessing historic or architectural significance. An historic survey of the entire county would be a daunting undertaking although there are numerous small historic communities that could yield significant results.

Historic Preservation Organizations

There are several organizations at various levels of government actively involved in the preservation efforts of Morgan County. The government organizations serve as the procedural mechanism for grassroots groups seeking direction on preservation and restoration of significant community structures and sites and often are sources of financial assistance including grants.

National Register of Historic Places

The National Register of Historic Places is the nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures and objects that are significant in American history, architecture, archeology, engineering and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

Listing in the National Register contributes to preserving historic properties in a number of ways:

- Recognition that a property is of significance to the nation, the state or the community;
- Consideration in the planning for federal or federally assisted projects;
- Eligibility for federal tax benefits; and
- Qualification for federal assistance for historic preservation, if funds are available.

Like many state and federal preservation programs, the interest in National Register listing originates with the property owner. Once approved by the state, the state historic preservation agencies can nominate the property to the national level. Listing does not interfere with a private property owner's right to alter, manage or dispose of the property. However, it often changes the way communities perceive their historic resources and gives credibility to efforts to preserve these resources as irreplaceable aspects of the community.

West Virginia State Historic Preservation Office

The mission of the Division of Culture and History's State Historic Preservation Office (SHPO) is to encourage, inform, support and participate in the efforts of the people of West Virginia to identify, recognize, preserve and protect West Virginia's prehistoric and historic structures, objects and sites. SHPO administers both the state and federal historic preservation programs and grants including placement of properties on the National Register. It aids federal and state agencies, local governments and the general public in identifying and preserving the physical historic and prehistoric resources of West Virginia.

Bath Historic Landmark Commission

In 2006 the Town of Bath established a volunteer Historic Landmark Commission to facilitate formal identification of historically eligible and significant sites in and around Berkeley Springs and to develop and implement strategies to preserve and protect them. After conducting an Historical Survey which identified 236 contributing structures within the town limits of Bath, the Bath Historic District was accepted onto the National Register of Historic Places in 2009. Identifying plaques were placed on more than 50 of the most prominent structures and several workshops have been conducted to educate property owners on historic tax credits available for restoration of properties within the district.

Bath-Romney Campaign Historical and Preservation Association

This group is based out of Berkeley Springs, West Virginia. The primary purpose of the organization is to continue the research and study of the Civil War campaign; provide a forum that encourages an ongoing exchange of ideas and dialogue; educate the public by organizing and hosting living history events and other educational forums; document associated sites, structures, and artifacts, and to assist in preserving and interpreting those sites, structures and artifacts.

Morgan County Historical and Genealogical Society

A volunteer group dedicated to maintaining and developing various records, information and photographs related to the history and families of Morgan County. It has an office in the Morgan County Public Library and has produced several significant compendiums of local information including books on graveyards and schools.

Museum of the Berkeley Springs

Established and maintained by volunteers since 1984 and supported by professional staff and docents, the museum showcases the story of the famous warm mineral springs and their continuing impact on the life and people around them through exhibits, publications and activities. Open to the public from March through December, the museum is housed on the second floor of the 1815 Roman Bath House in Berkeley Springs State Park, the oldest public building in the historic town.

Goals and Objectives

Goals

Given the age and rich history of Morgan County, historic preservation is an important and widely supported aspect of the local ethos. The following goals will foster this important trend:

- Promoting the preservation of historic sites and structures that define the unique historical and cultural character of the County;
- Encouraging community development occurring in the vicinity of identified cultural and historic resources to be sensitive to the special nature of the surrounding area; and
- Being sensitive to the contribution viewsheds make to the overall quality of life in the county.

Objectives

These goals are supported by the following objectives:

- Exploring creation of a tax district with strict regulation of historic preservation efforts;
- Promoting the old Paw Paw train depot as a community museum;
- Fostering programs offering “learning vacations” to unique historic areas of the county;
- Supporting development of an inventory of cultural and historic landmarks and resources and identifying sites to be earmarked for National Register status and/or local protective regulations in the county;
- Promoting creation of an Historic Landmarks Commission for the county;
- Evaluating establishment of a dedicated funding stream to purchase and renovate historically significant structures; and
- Supporting efforts of various local historic preservation groups to promote the county’s historic and cultural assets.