

Jefferson County, West Virginia, Comprehensive Plan 2003

Looking to the Past, Moving to the Future

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Jefferson County, West Virginia

2003

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Table of Contents

Chapter 1: Introduction

Jefferson County - A Sketch	1
Past Population Trends	1
Jefferson County Population 2000-2020	2
The Minority Community	2
Households, Families and Marital Status	3
Personal Income	3
An Aging Community	4
The Suburbanization of Jefferson County	5
The Dwindling Inventory of Buildable Lots	5
The Growing Influence of the Eastern Panhandle	6
Major Factors Affecting Growth	7

Chapter 2: Assessing Jefferson County's Future

Role of the Comprehensive Plan	11
Context	11
State Mandates	12
Organization of the Comprehensive Plan	12
Past Planning Efforts	13
The Basis for a Comprehensive Plan	14
The Elements of a Plan	15
The Issues Defined	15
Statement of Goals	18

Chapter 3: Management of the Natural and Built Environment

Introduction	21
Managing the Future Growth of the County	21
The Annexation Effect	23
Improving the Planning Process	25
Transportation	27
Water and Sewer Service	34
Natural Resources	45
Farmland and Open Space	49
Historic Preservation	53
Lighting, Signage and Noise	56
Housing Affordability	56
Economic Development	57
Jefferson County - 2020	66

Chapter 4: Excellence in Community Services

Introduction	79
Public Education	79
Post Secondary Education	85
Private Academic Schools & Home Schooling	85
Emergency Services	86
Law Enforcement	86
Fire and Rescue Services	89
Emergency Medical Services	89
Emergency Communications	91
Parks and Recreation	94
Libraries	100
Culture and the Arts	101
Solid Waste Management	103
County Facilities	104
Adjusting Services for an Aging Population	106
Financing Capital Improvements	107

Chapter 5: Implementation

Implementing and Monitoring This Plan	111
Implementation Priorities	111
Measuring the Implementation of Recommendations found in this Plan	112
Updating This Comprehensive Plan	132

Appendices

Appendix A: Demographic Analysis of Jefferson County	137
Appendix B: Statistical Tables and Sources	145

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Chapter One

Introduction

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Chapter 1:

JEFFERSON COUNTY -

A SKETCH

Jefferson County is the easternmost county in the State of West Virginia. It is bordered on the northwest by Berkeley County, WV, the east by the

Potomac River and Washington County, MD, to the southeast by the Blue Ridge and Loudoun County, VA, and to the southwest by Clarke County, VA. Jefferson County (then in Virginia) was created in 1801 when it was subdivided from Berkeley County. Charles Town was established as the county seat. On June 20, 1863, Jefferson, Berkeley and dozens of other counties were separated from Virginia into the new state of West Virginia. This new state was created due to the division of Virginia's people over loyalties in the Civil War.

The Jefferson County area had been the home of Native-American populations for several thousands of years prior to the arrival of the first European settlers in the early to mid 18th Century. Shepherdstown, located on the Potomac River, was chartered in 1762, making it the oldest settlement in what has become the State of West Virginia. The largely rural county grew slowly to a population of approximately 17,000 persons in the 1950s, and to around 21,200 in 1970. During the 1970s, a growth spurt increased the County's population by 42.3% to approximately 30,300 by the time of the 1980 census. Development slowed, with population increasing by 18.66% to 35,900 in 1990. According to the 2000 Census, Jefferson County was the home of 42,190 persons living in 16,165 households.

Jefferson County is somewhat of an island unto itself. Separated from Maryland by the Potomac River and from Virginia by the Blue Ridge, Jefferson County is further isolated in that no road connection at a county line is constructed to more than two lanes. The nearest interstate highway, I-81, parallels the County's northwestern border, five

western base of the Blue Ridge and the remaining four-fifths of the County is west of the Shenandoah. This region, part of the Great Limestone Valley, is gently rolling terrain underlain by limestone. Although there are many small streams in this region, much of the drainage is via solution channels in the limestone.

POPULATION TRENDS

Fluctuations in population are the result of two factors: natural rate of growth (number of births versus deaths) and migration (number of persons moving into the County, versus moving away). As a rural county, Jefferson County was the beneficiary of a relatively stable population base throughout the 19th Century and into the 1900s. The population grew slowly throughout the early and middle parts of the 20th Century, with the number of residents increasing from approximately 16,000 people to 21,280 over the fifty year period ending in 1970.

The 1970s saw a major spate of residential development, with the population increasing by 42.4 percent, as measured in the 1980 census which recorded a total of 30,300 County residents. Over the ten year period ending in 1990, the county population growth rate declined to 18.56 percent over the previous census, with a total of 35,926 residents. One statistical milestone was reached during the mid 1980s when the number of native born West Virginians residing in Jefferson County became outnumbered by those who have emigrated to the County from Maryland, Virginia and other locations.

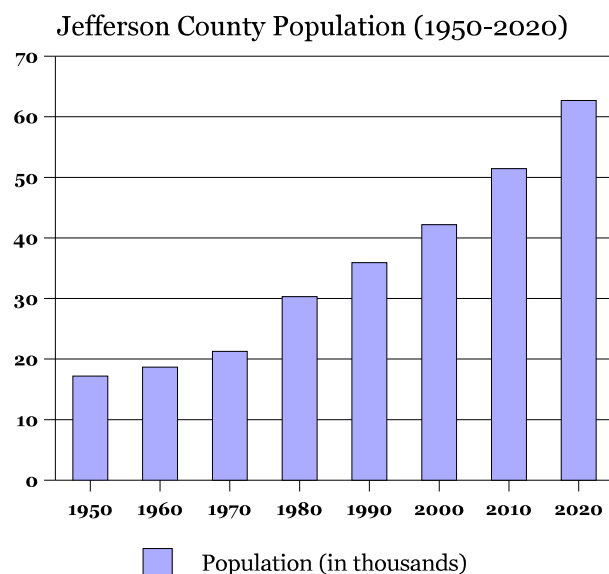
Introduction

miles into Berkeley County. Topographically, Jefferson County may be divided into two distinct regions. The eastern region consists of the Blue Ridge and its associated foothills. This region, occupying about one-fifth of the County, is composed of shales, sandstone and quartz formations. The Shenandoah River runs along the

The 1990s saw a similar rate of growth as the preceding decade, with an increase of 17.4 percent. According to the 2000 census, 42,190 persons resided in Jefferson County in 16,165 households.

JEFFERSON COUNTY POPULATION 2000-2020

Population forecasting is an inexact science. Since much of the County's increase in population is due to emigration from Maryland, Virginia and other locations, numerous variables will affect the demand for new housing in Jefferson County. While the natural rate of increase is fairly constant, migration patterns are considerably more difficult to project due to these elements which are discussed in greater detail later in this chapter.

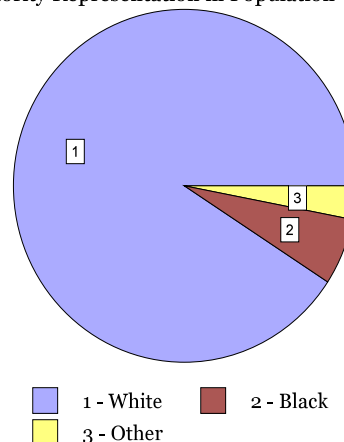


Source: U.S. Bureau of the Census and the Jefferson County Department of Planning, Zoning and Engineering

Based on data from the U.S. Census Bureau, the Regional Research Institute at West Virginia University, and in-house data, the Department of Planning, Zoning and Engineering projects that the population of the County will increase to a approximate total of 51,429 residents by the year 2010; a 21.9% increase over the population recorded

in the 2000 census. By 2020, the Department projects that the population will increase to 62,692; a 21.9% increase over 2010 and a 48.6% increase over 2000. For a more complete analysis of this issue, please refer to Appendix A.

Minority Representation in Population - 2000



Source: U.S. Bureau of the Census

THE MINORITY COMMUNITY

Recent data also illustrates what appears to be an ongoing erosion of the minority community in Jefferson County. According to the 1970 and 1980 Censuses, the percentage of African-Americans within the Jefferson County population decreased from 15% to 10% in one ten year period. In absolute numbers, the minority population remained almost unchanged during this time, but declined as a percentage of the whole due mostly to increased migration to the area during the 1970s by non-minorities leaving the metropolitan region for the rural outlying areas.

According to the 1990 Census, 2,661 African-Americans living in Jefferson County comprised 7.4% of the County's population. The 2000 Census revealed that 2,571 African-Americans lived in the County at that time, representing 6.1% of the County's population. In absolute numbers,

the African-American community experienced an approximate 10% decrease of their overall population count since 1980, and their presence as a percentage of the overall population decreased from approximately 15% to a little over 6%. The remaining 2.9% of the population recorded in the 2000 Census collectively represents all remaining minority groups; predominantly Hispanics, East Asians and Native Americans.

HOUSEHOLDS, FAMILIES AND MARITAL STATUS

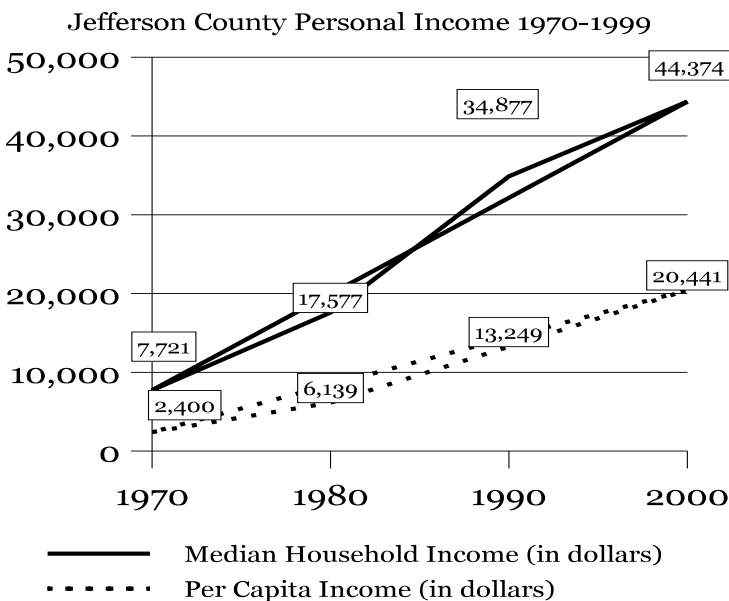
Changes in households, families and marital status provide an indication of the social structure in the County. Family households and householders are defined by the Bureau of the Census, and these definitions can be found in Appendix A of this Plan.

Due to the influx of retirees to Jefferson County and the aging of the “Baby Boom” generation, the size of the average household in the County has declined from 3.2 in 1970, to 2.9 (1980), to 2.68 (1990), to 2.54 in 2000. Statistical projections show that this figure should continue to decline to 2.45 by the next census.

The downward trend of the number of households occupied by families, as a percentage of the population, has slowed. In 1970, 83% of County households were occupied by families. By 1980, this figure declined to 78%. In 1990, this figure was down to 73% and the percentage of households in Jefferson County occupied by families in 2000 stood at 70%. Conversely, the percentage of households occupied by “non-families”, i.e. a single person or two or more unrelated persons, is at 30 percent of the total households in the County.

This analysis shows that while there is a demand for more housing units to serve a population that is not growing at a rate comparable with or exceeding demand, the market need appears to be more toward housing units that will be more conducive toward a population that is aging, with more households containing one or two persons. As such, the demand for more moderately priced and sized dwellings on smaller sized lots may increase at a greater rate than larger dwellings designed for families with multiple children.

PERSONAL INCOME



Source: U.S. Bureau of the Census

One significant trend for the County is the sizable increase in personal income levels experienced since 1970. While there has always been a certain number of persons willing to commute 60-90 minutes to Rockville, Fairfax and Washington, this substantial increase has really been felt since the outer suburbs of Washington (specifically Frederick, Leesburg and the Dulles Airport area) have become major employment centers in their own right. These areas are within a reasonable commute for Jefferson Countians to seek work, making the County a sensible choice in selecting a home for those who work in those areas. Given the number of quality employment opportunities in the region, the per capita income of Jefferson County residents has increased 333 percent from 1980 to 2000. When comparing the County’s \$44,374 median

household income to the State's \$29,696 and the Nation's \$41,994, Jefferson County can be described as a middle class county in a poor state.

Due to its proximity to the Washington metropolitan area and the booming economies of suburban Maryland and Virginia, Jefferson County consistently has one of the lowest unemployment rates in the State. Half of the County's workforce commutes out of the County to their workplaces.

AN AGING COMMUNITY

Over the last thirty years, Jefferson County has experienced a significant increase in the median age of the population, increasing a total of almost ten years over that time. The median age of the citizenry has increased with each Census since 1970, increasing from 27.1 to 29.1 to 32.7 and thence to 36.8 years of age in each census.

Median Age of Population (in years)			
	1980	1990	2000
Jefferson County	29.1	32.7	36.8
West Virginia	30.4	35.4	38.9
Maryland	30.3	33.0	36.0
Virginia	29.8	32.6	35.7
U.S. National	30.0	32.8	35.3

Source: U.S. Bureau of the Census

This significant increase over thirty years can be attributed to several factors. First, with the aging of the "Baby Boom" generation, the median population of the nation as a whole is experiencing a natural rate of increase.

Secondly, with limited employment opportunities available within the boundaries of the County, a significant percentage of recent high school and college graduates choose to leave the County to find employment.

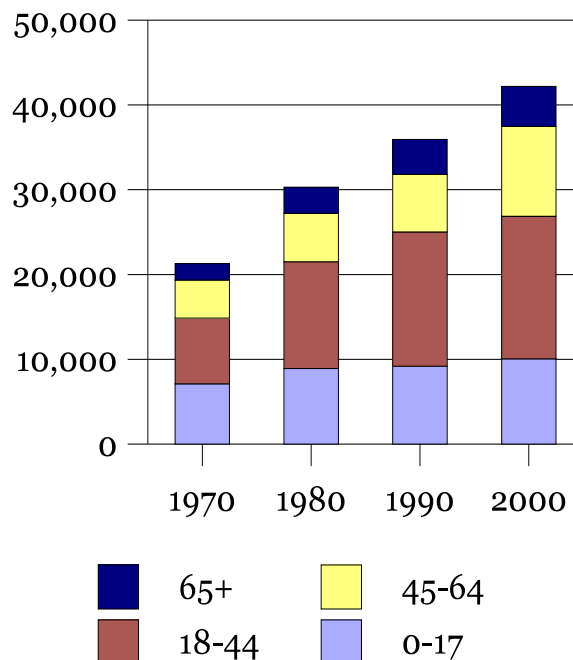
Thirdly, the population as a whole is experiencing a reduced fertility rate; families are growing smaller and parenthood is being delayed until later in life.

Lastly, since the State tax code exempts military pensions from the state income tax, and due to the County's proximity to a military employment-rich environment (Washington DC), Jefferson County has seen a significant influx of military retirees.

The median age of population in the State of West Virginia, at 38.9 years, is significantly above the national average. This is due to the same factors cited for the County, plus significant levels of out-migration from the rural parts of the State of young persons searching for quality employment.

The chart shown on the previous page illustrates the change in the composition of the County's population since 1970. The two most significant conclusions that can be drawn from this data are that, 1) as the County continues to grow, the number of school aged children in the county will continue to grow as well, and 2) the needs of the aging senior citizen element of the population need to be addressed as that group continues to grow as a percentage of the overall population.

Jefferson County Age Distribution



Source: U.S. Bureau of the Census

The percentage of the population that is age 17 and under, i.e. the school aged population, has declined as a percentage of the overall citizenry from 33.4 percent in 1970 to 23.9 percent of the population in 2000. While the population of Jefferson County nearly doubled from 1970 to 2000, the school aged population increased by a rate of 41.8 percent. This issue is discussed in greater detail in the section of Chapter 3 that discusses school planning.

At the same time that the rate of increase in the school aged population did not keep pace with the overall increase in population, the percentage of the population that was aged 45 and above increased their representation in the community from 30.1 percent of the population in 1970, to 35.3 percent of the population. This issue is discussed in greater detail in the section of Chapter 4 that addresses accommodating growth in the aging sector of the population.

THE SUBURBANIZATION OF JEFFERSON COUNTY

With each decennial census, statistics reveal that there is a steady redistribution of the County's population from its five municipalities to the unincorporated areas of the County. This redistribution of population is illustrated below:

Year	Municipal	Non-Municipal	Percentage
1960	5,957	10,708	57%
1970	8,266	13,014	61%
1980	8,152	22,150	73%
1990	8,620	27,306	76%
2000	8,491	33,699	80%

Percentage represents the proportion of the population that is in the unincorporated areas of the County versus the overall population.

This table illustrates that, while the overall population has increased by 253 percent from 1960 to 2000, the population of the municipalities have increased by only 142 percent during this same time period. This is due to a number of factors.

The principal reason for this redistribution is the fact that there has been far more developable land in the unincorporated areas than the previously defined corporate boundaries of the municipalities. Also, the land development trend in the last fifty years has been to develop suburban style developments with larger lots and curved subdivision road designs, which need land for construction that was not available within the municipalities. As the major municipal center of the County, Ranson and Charles Town have been affected by this national trend to suburbanize as market forces have driven developers to create suburban communities outside of the municipalities. Nationwide, this trend has resulted in the decline of urban centers of all sizes and types, which has become an issue of importance in the planning and political arenas in the last twenty years. If the recent annexations by Charles Town and Ranson bear the fruit expected, this trend may slow or reverse.

THE DWINDLING INVENTORY OF BUILDABLE LOTS

From 1984 until 2001, 6,479 Improvement Location Permits (ILPs) or building permits have been issued for construction of residential units. During that time, 4,932 residential building lots and apartments were approved by the Planning Commission; 1,547 fewer than permits issued. These numbers are based on a general review of figures found in the Commission's annual reports for this time period and are, therefore, not absolute. Most new lots being created are in large subdivisions, and the availability of individual building lots is rapidly evaporating. While efficient land management is essential, it cannot be understated that there *is* a need for new housing within the county and land on which to build it.

A chart on page 6 illustrates how the number of lots created has related to the number of building permits issued for new homes since 1988.

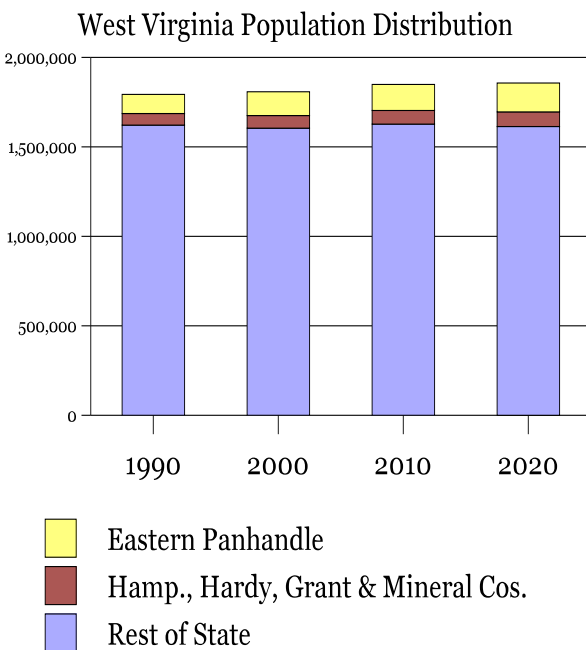
Lots Recorded vs. ILPs/BPs Issued - 1988-2001

	Permits Issued(1)	Lots Approved (2)
1988-92	2,097	2,098
1993-97	1,755	988
1998-01	2,038	1,136
Total	5,890	4,222

(1) Includes single family houses, townhouses, apartment units and mobile homes (new and replacement)

(2) Includes single family, townhouse and mobile home lots, and apartment units.

Source: Jefferson County DPZE.



Source: The U.S. Bureau of the Census and WVU-RRI

THE GROWING INFLUENCE OF THE EASTERN PANHANDLE

Since 1950, the total population of the State of West Virginia has declined from just over 2 million residents to a 2000 Census count of 1.808 million. Almost 200,000 fewer persons live in the State today than did fifty years ago. According to U.S.

Census Bureau projections, this trend is expected to stop, but no significant population growth statewide is expected to occur. Data from the Census Bureau projects that the statewide population will not exceed 1.86 million persons before the year 2025.

This stability of population, however, masks a significant redistribution of the population of the state. According to Census figures, 27 of the 55 counties in the state lost population between 1990 and 2000. Of the remaining 28, 14 had annual growth rates between 0 and 0.5% per annum; statistically static environments.

Fourteen counties grew by more than a total of 5 percent over that 10 year period. All of the seven easternmost counties in the state, except Mineral County, were on this list. On a percentage basis, Berkeley, Morgan and Hampshire Counties were the three fastest growing Counties in the state; Jefferson being the sixth fastest.

The chart shown in the next column illustrates that the seven easternmost counties in the state contained 9.6 percent of the state's residents in 1990, and 11.3 percent in 2000. In 2010, this proportion should increase to 12 percent, and to 13.1 percent in 2020.

Driving Distance from Charles Town to Nearest State Capitals (in miles)

Annapolis, MD	96	Raleigh, NC	326
Harrisburg, PA	99	Charleston, WV	329
Dover, DE	160	Columbus, OH	376
Richmond, VA	169	Hartford, CT	378
Trenton, NJ	208	Albany, NY	381

Source: Mapquest.com

Legislative representation, and therefore, influence, is reapportioned every ten years following the decennial census. In 2001, the state redistricting of legislative and senatorial districts was challenged in court by legislators from the Eastern Panhandle because the urban areas of Charleston and Huntington, which have lost population, were

allotted a greater number of legislators per capita than other parts of the state. Unfortunately, this action was unsuccessful and the redistricting plan was found to be constitutional.

Due to the perceived over-influence of the southern part of the State in the legislature and the physical distance of the County to the State capital, there is a perception within the community that the State government is out of touch with the needs of eastern counties to deal with projected population growth.

With the shift of the population trends in the state moving east, it is reasonable to presume that the eastern part of the state will modestly increase in its influence in State government when redistricting efforts are conducted in 2011 and 2021. This conclusion is reached on the presumption that the state legislature fairly apportions representation based on population in the future. In the short term, however, the County must make the best of its representation in Charleston, capitalizing as much as possible on its existing relationships and legislative representation.

MAJOR FACTORS AFFECTING GROWTH

As a result of the research that was conducted in the preparation of this plan, the Planning Commission has determined that the following five factors (in no particular order) are the dominant factors that will affect growth and land development in the County:

Perception of the Public Schools - The primary consideration of most young families in determining where they choose to live is the quality of public schools, in both facilities and curriculum. The school systems in Montgomery, Frederick and Howard Counties in Maryland and Loudon and Fairfax Counties in Virginia are rated among the best in their respective states. This may be one of the reasons why the school population in Jefferson County is growing at a much slower rate than the population as a whole. Many younger families considering moving to Jefferson County may

eliminate this option if they feel that the schools in Maryland and Virginia offer a better education for their children.

The Health of the Economy - The overall health of the national and local economy affects the rate at which housing (and commercial) development proceeds. When mortgage interest rates are high, the homebuilding industry slows. Fuel prices will also affect County development. Jefferson County is fairly remote from the Baltimore-Washington employment corridor. Significant increases in the price of gasoline will cause potential residents considering moving to the County and enduring a lengthy commute to work to reconsider the County as an option in their search for a home.

Access - Jefferson County is bypassed by the interstate highway system and currently has no road that is wider than two lanes at any county boundary. WV9 is planned to be widened to 4 lanes from Martinsburg to the Virginia line, providing better access to Interstate 81. As the population of the County increases and more residents commute to Maryland, the narrowing of US 340 at Harpers Ferry has become a bottleneck. The state of the State and Federal roads systems within the county will affect the County's development pattern and rate.

Land Use Decisions of Adjacent Counties - The decisions implemented by Frederick County, MD and Loudoun County, VA, will affect the development of Jefferson County. As Frederick, Leesburg and the Dulles area become major employment centers in their own right, Jefferson County is a viable residential option within a reasonable commute of these locations. Water service issues currently faced in Frederick County and Loudoun's 2001 decision to "downzone" more than half of that County, may displace some of their demand for housing to Jefferson County.

Quality of Life and Cost of Living - Jefferson County is the beneficiary of certain positive assets. First, Jefferson Countians enjoy significantly lower housing costs and lower property taxes than in

nearby states. The County's natural environment and smaller population also make it an attractive place to live. Also, due to provisions in the West Virginia Tax Code, Jefferson County has become a retirement destination for military veterans. Given to these factors, the demand for new housing in Jefferson County will continue.

Chapter Two

Assessing Jefferson County's Future

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Chapter 2:

THE ROLE OF THE COMPREHENSIVE PLAN

For a county government to implement land use regulations, the West Virginia Code requires that the County enact and maintain a Comprehensive Plan. This document is an assessment of the current conditions of the County, goals that the community desires to achieve, and lastly, recommendations that should be explored in attaining these goals. The land use recommendations of the Comprehensive Plan are not regulatory ordinances. The Comprehensive Plan is a document which lays the groundwork for the future amendment, revision or enactment of land use ordinances. A Comprehensive Plan is not a replacement for definite, specific guidelines in the Ordinances. Upon its adoption, this document will be used to guide the County, its land use and development, infrastructure, and public services until the County revises the Comprehensive Plan again. Proposals for appropriations, ordinances, and other functions of the County government will be evaluated for consistency with the recommendations contained in this document.

Its recommendations are (by their nature and intent) general and, as such, sometimes conflicting. It will not be difficult to find two that individually justify and conflict with many land use proposals. The controlling laws governing a proposal are the ordinances “on the books” at the time a proposal is submitted for review, which are the detailed implementation of the 1994 Plan, or ordinances that may be revised to implement the recommendations of this plan. The recommendations and goals of this Plan serve as a framework through which to filter and consider revisions or additions to existing ordinances or programs in order to implement the community’s goals, as enumerated in this Plan.

Assessing Jefferson

County’s Future

The most readily apparent example of this implementation is the adoption of the Zoning Ordinance in 1988. The Zoning Ordinance was adopted during the period when the County’s 1986 Comprehensive Plan was in effect. When the 1994 Comprehensive Plan was adopted, all subsequent amendments to the Zoning Ordinance should have conformed with the policies of the new Plan. The 1994 Comprehensive Plan should not have been, (nor should this Plan be), retroactively applied to regulations adopted prior to its effective date.

RULE OF CONSTRUCTION AND INTERPRETATION: This Comprehensive Plan is not intended to replace or supercede definite, specific ordinances that were in effect at the time of its adoption; instead, its purpose is to lay the foundation for the future enactment of land use ordinances. Proposals for future revisions, amendments or enactments of the land use and development ordinances should be reviewed for conformity with this Comprehensive Plan.

CONTEXT

Jefferson County’s last Comprehensive Plan was written in the context of the early 1990s, when the County was recovering from its first significant increases in subdivision activity and building permit applications, and while it was adjusting to the nationwide building slowdown that occurred at that time. With the upturn in the national economy in the latter half of the 1990s, Jefferson County has again seen a surge of subdivision activity and new housing starts. Fairfax County in Virginia and Montgomery and Howard Counties in Maryland have been on a protracted march toward build-out, and now count their populations in the hundreds of thousands. Over the last 15 years, Loudoun County, Virginia and Frederick County, Maryland, have been the target of significant development pressure due to lower land cost and greater land availability than was available in Fairfax and

Montgomery Counties. The Leesburg-Dulles area and Frederick City have become significant employment centers in their own right, and these areas are attempting to keep pace with the increases in residential and employment development they have experienced over the last 5-10 years.

Since both Frederick and Loudoun Counties have a significant number of development projects in process and reserves of raw land into which to direct future growth, Jefferson County may experience a rate of growth over the next decade similar to that which it has experienced in 2000 through 2002. Looking 10-20 years into the County's future, however, is not so certain, as trends will depend on numerous factors including the ultimate development patterns set by Frederick and Loudoun Counties resulting from political decisions and water supply issues in those counties, and access from those areas to Jefferson County.

It is within this perspective, a county that may continue to grow at a rate similar to current rates, but in need of bracing for significant development pressure, that this Plan has been prepared.

STATE MANDATES

Lying at the juncture of the boundaries of three states, Jefferson County finds itself at a disadvantage in regulating growth pressures as compared to the jurisdictions in the two adjacent states of Maryland and Virginia. Maryland has created a cabinet-level planning office to direct statewide planning policy, and their state law is written in such a way where counties have far broader power than those in West Virginia to regulate growth and development within their borders.

Although Virginia, like West Virginia, is a "Dillon Rule" state, it has had to deal with significant issues such as the explosive growth in the area around the nation's capital and environmental protection of the Chesapeake Bay. These challenges placed that state

farther along than West Virginia in cementing State and county roles in land use planning, and the authority the State delegates to local governments.

West Virginia, however, is in a much different political position than its neighbors to the east and south. Jefferson County is one of only two counties in West Virginia with a County-wide zoning ordinance, and one of only fifteen with regulations governing subdivision and site development. Given its largely mountainous, undeveloped, rural, and economically disadvantaged nature, West Virginia has generally not regulated the subdivision and development of land.

This is both positive and negative. There is little track record in the legislature or in the courts that could be used as state guidance in addressing the issue of growth. There are development tools viewed as commonplace in other states that are untested waters in West Virginia law.

Jefferson County has been looked upon in the state as a leader in this field since much of the case law created in the state regarding land use regulation has been spawned in Jefferson County. Undoubtedly, the County will continue to be the primary state proving ground in this area into the foreseeable future.

ORGANIZATION OF THE COMPREHENSIVE PLAN

This Plan is organized around three broad topics.

Assessing Jefferson County's Future is an assessment of the current state of affairs in the County as pertains to demographics, economy, development, and projections regarding these factors over the next decade. Reformatted from Part II of the 1994 Plan, this chapter has been shortened, and much of the statistical analysis has been moved to an appendix found at the back of this Plan.

Management of the Natural and Built Environment evaluates the development trends of

the county and suggests strategies for effectively managing the growth that will impact the existing natural and built environment over the next decade.

Excellence in Community Services addresses the numerous services provided by government, quasi-public and regulated single-source provided services, and the impact that the next decade will have on their operations.

A final chapter, *Implementation*, provides a summary of the policies, actions and priorities addressed and suggests implementation indicators and measurements for monitoring progress and effectiveness. The purpose for this chapter is to illustrate how the numerous elements found within this comprehensive plan are interrelated and need to be viewed as a whole and not as individual, isolated issues.

This Plan is the culmination of **INSERT NUMBER** months of work begun in late 1999, that involved:

1. Collection and interpretation of data;
2. Selection of a consultant to conduct research and analysis of land use issues and assist with the preparation of this plan;
3. Collection and evaluation of public comment held at several stages in the process through work groups, meetings and hearings and open comment periods when written testimony was accepted.
4. Collection and evaluation of issues of concern and analysis from interested and relevant County, State and Federal agencies.
5. Compiling and revising a draft comprehensive plan in preparation for final adoption by the County Commission.

Due to the changing nature of the County, this Comprehensive Plan has been reformatted from the

most recent Comprehensive Plan completed in 1994. As the face of the County has experienced significant change since the last Plan and will experience even more change over the next 10 to 20 years, the Plan must adapt and change to meet the changing needs of the community. When the next Comprehensive Plan process is initiated, it may be determined that the format of this plan may need to be again revised to best serve the needs of the community at that time.

PAST PLANNING EFFORTS

During the 1950s and early 1960s, citizens in the County saw the Federal Government acquire Harpers Ferry and express interest in using the banks of the Shenandoah and Potomac Rivers for a national parkway. Fifty miles to the east, the Washington Metropolitan Area was growing rapidly, as were most major urban areas on the eastern seaboard, and projections showed that eventually growth would move into Jefferson County. Citizens saw Dulles Airport as a particular nearby magnet for growth.

In response to these events, two groups of concerned citizens began meeting informally. These citizens felt that it was important for Jefferson County to plan its future with an emphasis on solving problems at the local level, particularly in light of the Federal presence in the County. In early 1967, these groups petitioned the Jefferson County Commission to appoint a planning commission and in March, 1967, the first planning commission was selected. It was composed of 11 members, including one county commissioner.

With the assistance of Federal funds, the Planning Commission hired a consultant, Michael Baker, Jr., Inc. to prepare a Comprehensive Plan in 1968. The plan was to serve as a guide to future growth in the County. After a series of public hearings, the plan was submitted to the County Commission. The Comprehensive Plan was formally adopted in June, 1972, along with the County's first Subdivision Ordinance, which regulated how land was divided

into lots. This Ordinance has since been substantially revised, first in 1973 and again in 1979.

In 1973, the Planning Commission began preparing a Zoning Plan for the County, following the recommendations of the Comprehensive Plan. This Zoning Plan was presented to the citizens through a series of public hearings. In May, 1976, the zoning plan was placed on the ballot for public referendum. The public decisively defeated the zoning plan by a three to one majority.

In July, 1985, the Planning Commission appointed a Citizen Advisory Committee to help update the existing Comprehensive Plan. The committee members were selected to represent not only specific areas of the County, but also broader concerns such as business, agriculture, education, transportation, public health and safety, land conservation, and historic preservation. Working independently with the help of State and County staff, the Committee completed that task at the end of 1986, and the document was approved by the County Commission in December, 1986.

In implementing this plan, a second attempt to implement a County-wide zoning ordinance was begun. In order to avoid the problems experienced in 1976, a flexible zoning system was proposed that allowed property owners a wide degree of latitude in planning the future development of their properties. A development review measure that considered denser development in rural areas if amenities are available was included in this proposal in order to obtain the support of rural land owners. This Zoning Ordinance was adopted in 1988, and it was not challenged at referendum. This Ordinance has been the subject of numerous amendments since its implementation in 1988.

In 1992 a citizens' committee was appointed by the County Commission to revise the 1986 Comprehensive Plan. After two years of public meetings and hearings, the County Commission adopted the new Comprehensive Plan in 1994. This Plan was in effect until the adoption of this

Comprehensive Plan on **INSERT DATE OF ADOPTION HERE.**

In late 1999, the County Commission requested the Planning Commission initiate a revision of the 1994 Comprehensive Plan. Since existing staff was overburdened, the County Commission allocated funds to retain a consultant to advise the Planning Commission in this process. After almost three years of public comment and testimony and work by the Planning Commission, this Plan was adopted by the County Commission on **INSERT DATE OF ADOPTION HERE.**

THE BASIS FOR A COMPREHENSIVE PLAN

Planning is a process found in most businesses, organizations and in the personal lives of many. It consists of finding out where you are, where you want to go, and determining how to get there. Just as the farmer or businessman must plan activities that affect the success of his business, so should a community plan the activities that affect its rational growth and development. Community planning gives elected and appointed officials a rational basis for making decisions based on complete information and desired result, what future conditions are likely to occur, and how various independent actions can relate to each other and be mutually beneficial.

There are many reasons for maintaining and updating the planning program in Jefferson County. The most prominent of these include the following:

Advanced and comprehensive planning will save money. Careful consideration of the many interrelated factors of the total community will help assure that every new development in the County is properly located and designed so that it will not unreasonably burden the location and provision of essential public and community services and assets. In other words, it will help ensure that the community receives the most product or service for the tax and community association dollar it pays.

A well-planned and developed community is more attractive to potential investors and employers.

Investors who plan for the future development of their businesses look with favor on governments that soundly plan for the future of their jurisdiction. Employers seek to expand their operations in communities that are pleasant and have good schools, hospitals, recreational facilities, community organizations, shops, restaurants, etc. In brief, a potential business investor will gravitate toward communities where there is an educated or educable workforce and a good quality of life to offer existing employees they will bring to the area.

Farsighted and innovative planning will preserve natural amenities and enhance property values.

Good planning, coupled with equitable enforcement of control measures, will provide a property location for all required uses of land in the County. It will also prevent undesirable intermingling of conflicting uses of land.

A sound plan that recognizes current land use and anticipated needs is essential to a smooth-flowing transportation system.

Transportation may be considered the link to overall development in the County. Industry, education, health, recreation, and housing depend on an efficient transportation system for development and survival.

Planning affords much-needed protection of unincorporated portions of the County surrounding existing communities.

Much of the new residential growth in the County is taking place outside of the boundaries of the five municipalities, however this distribution is expected to be affected as the recently annexed areas of Charles Town and Ranson are developed. An all embracing plan can prevent undesirable and costly scattered development that becomes a burden to the taxpayer when the County has reached saturation and new development slows.

THE ELEMENTS OF A PLAN

Although the process will vary among communities,

the following is a standard outline of the steps of the planning process:

1. Assess community values and identify problems and opportunities.
2. Determine overall goals and objectives.
3. Collect, update and analyze information.
4. Compare and choose alternatives.
5. Adopt a Comprehensive Plan
6. Develop implementation tools.
7. Adopt selected tools.
8. Monitor results and changing conditions.

It is very important to note at the beginning of this Plan that, although there are many recommendations included herein, most can only be implemented with the proper funding and political will. Therefore, prioritization of these policies is necessary.

THE ISSUES DEFINED

During the Comprehensive Plan process, numerous public and community forums were held around the County to gather input from the citizenry regarding issues that they believed to be pressing and in need of attention in this process. The administrators of County and pertinent State and Federal agencies, as well as the municipal governments and quasi-public agencies were also approached for their input. A list of issues was compiled as being topics of concern within the community that should be addressed in some form. Upon the conclusion of this process, the Commission identified 30 generalized issues of concern:

1. ***Definition of the Dillon Rule.*** The question is to what extent the Dillon Rule nature of the State's enabling legislation for planning and zoning limits the power of the County to consider adopting new and innovated planning and zoning mechanisms.
2. ***Pace of Change.*** The question is whether the forces at work in the regional land development market are speeding up the

rate of conversion of farmland and open space to residential and commercial development, and whether the current rate may be expected to remain stable, increase or decrease in the next ten years or so.

3. **Employment Location Patterns.** The question is how do present types of employment, and their locations in the County and region, match up to the County's labor force and its residential locations, and whether this is a desirable situation or not.
4. **Economic Development Strategies.** The question is what is the status of present County efforts to manage its economic base, and what are the prospects for achieving its objectives?
5. **Farmland and Farming.** The question is how serious are the market pressures on farmers in Jefferson County, whether creative adaptations to current practices offer potential for economic relief, and what efforts should be made to preserve farmland and farming in the County.
6. **Role of State and Federal Governments.** The question is to what degree state and federal agencies roles and grant monies affect the County, and how this factor should be assessed in updating the Comprehensive Plan.
7. **County-Municipal Relationships.** The question is to what degree the County should agree to the recommendations on land uses issues provided by the separate municipalities, and whether the Comprehensive Plan should address directly any ongoing process for coordination between the County and the municipalities.
8. **Cost/Quality of Schools.** The question is what level of quality should be expected from the school system, and what is the relevance of this public service to the updating of the Comprehensive Plan.
9. **Impact Fees.** The question is whether the County should establish impact fees on new development, and, if so, how it should design the fee structure.
10. **Local Powers Act.** The question is whether the possibility of the County seeking approval from the state legislature, to become the first county in the state to receive this delegation of taxing power, is relevant to this updating of the Comprehensive Plan, and if so, how.
11. **Traffic Congestion and Road Construction.** The question is how adequate the current transportation system is for future needs, and whether changes are needed to manage traffic congestion and safety as the growth area is built out.
12. **Water & Sewer System Extensions.** The question is whether the present method of taking care of water supply and waste are the most efficient and effective, and how they relate to the objectives of the Comprehensive Plan.
13. **Capacity/Quality of Groundwater.** The question is how adequate and safe is the aquifer that supplies fresh water to the County, and whether any additional precautions to protect it are warranted.
14. **Homeowner Association Maintenance.** The question is whether the present methods by which homeowner associations are established, and the protocols by which they relate to the county government and related agencies, are efficient and effective, or whether additional guidelines should be considered.
15. **Extent of Public Services.** The question is

what level of public services should be expected from a community like Jefferson County, and whether this factor should be addressed in the Comprehensive Plan.

16. ***PDR, TDR, APFOs and related tools.*** The question is how effective have these tools (purchase of development rights, transfer of development rights, adequate public facilities ordinances, etc.) proven to be in other places, and whether they could work well in Jefferson County's current situation.
17. ***Community Impact Statement System.*** The question is how well the CIS system has worked in practice, and whether it should be continued in its present form or modified further to complement the Comprehensive Plan.
18. ***LESA Analysis System.*** The question is how well the LESA system has worked in practice, and whether it should be continued in its present form or modified further to complement this Plan.
19. ***Historic Preservation.*** The question is what role historic preservation should play in the exercise of land use regulations such as zoning and subdivision, and whether more precise guidelines should be developed than exist at present.
20. ***Parks, Trails and Open Space.*** The question is whether it is necessary to make special plans to set aside certain areas for active and passive recreation, and for the protection of natural flora and fauna, or whether the relatively low density residential pattern under current zoning is sufficient to address these needs.
21. ***Scenic Vistas and Spatial Character.*** The question is whether the preservation of

existing scenic vistas and the shaping of the spatial character of the built environment are sufficiently important to the welfare of the community to warrant being addressed directly in the Comprehensive Plan.

22. ***Perception of Community.*** The question is how the pattern of new development, that is beginning to become perceptible under the current planning and zoning system, will affect the traditional community culture of the County, and whether this direction of change is desirable or not.
23. ***Adequacy of Plan to Meet Trends.*** The question is whether the existing Comprehensive Plan is adequate to respond to the issues raised by current trends, or whether it warrants significant updating and refinement.
24. ***Housing Density.*** The question is whether the density and character of new housing, within the planned growth areas, should be left to the decision of land developers, or be consciously designed in some way as part of the Comprehensive Plan.
25. ***Housing Affordability.*** The question is whether the price of housing in the County should be addressed in the Comprehensive Plan, and if so, how.
26. ***Smart Growth Concepts.*** The question is how to define what the term "smart growth" means, and whether to adopt or adapt any of the elements that have been proposed in other places under the banner of this term.
27. ***Role of the Plan (Guide or Control).*** The question is whether this Comprehensive Plan should act as a reference document that may be adhered to, or deviated from, at the discretion of the decision makers responsible for approving development projects, or as a more specifically

- controlling guide.
28. ***Tax Rates.*** The question is whether the Comprehensive Plan should address the effect of its land use policies on the fiscal resource base of the County.
29. ***Analytic Data Base.*** The question is what is the status of the County's present data base of information necessary for thorough land use analysis, and what specific additional items should be added to allow an updated Comprehensive Plan to function effectively.
30. ***Staff Capacity.*** The question is what is the relationship between the maintenance requirements of an Updated Comprehensive Plan and the available fiscal budget for staff resources.

From these 30 generalized issues, the Planning Commission has crafted this document to address the concerns of the citizenry, county agency administrators and other interested parties to form the basis of County policy regarding land development management and the provision of public services through the year 2010. It is from these *issues* that *goals* have been identified, and *recommendations* have been suggested within this Plan.

STATEMENT OF GOALS

A list of general goals was adopted as guidelines for the preparation of the 1986 Comprehensive Plan. These goals were readopted unchanged and incorporated into the 1994 Comprehensive Plan. *Webster's Dictionary* defines a goal as "the end toward which effort is directed." Given the changing nature of the County, adjustment of these goals is necessary to meet anticipated challenges. Therefore, the County adopts the following goals as the guidelines for the 2003 Comprehensive Plan, with no particular purpose as to their order:

Encourage growth and development in areas where sewer, water, schools, and other public facilities are available or can be provided without unreasonable cost to the community.

Promote growth and development that are both economically and environmentally sound.

Promote the maintenance of an agricultural base in the County at a level sufficient to encourage the continued viability of farming in all its various forms.

Encourage and support commercial, industrial, and agricultural activities to provide a diversified and sound local economy,

Promote the conservation of the natural, cultural, and historical resources and the preservation of the County's scenic beauty.

Advocate the maintenance and improvement of transportation systems so that people and goods can move safely and efficiently throughout the County.

Promote a diversity of housing within the County.

Support and protect private property rights while supporting and protecting overall public health, safety and general welfare.

Promote a Planning and Zoning process that is understandable and straightforward, with ample opportunity for meaningful public input.

Promote pedestrian friendly, livable communities.

Promote inter-entity and inter-agency collection and exchange of information and cooperation on planning.

Chapter Three

Management of the Natural and Built Environment

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Chapter 3:

Environment

INTRODUCTION

This chapter of the Comprehensive Plan is dedicated to establishing recommendations that will affect the development of land and protection of the environment in Jefferson County for the next several years. While the Local Powers Act will require this document to be updated every five years, it is advisable that such a plan look beyond its own life span in order for continuity and reasoned decisions to occur. This is why the projections found in Chapter Two are projected out to the year 2020. Around the year 2010, when it is logical to assume that another significant reassessment of the County’s Comprehensive Plan will be initiated, that document should project to the year 2030.

Land and environmental quality are resources that are difficult to renew. Therefore, it is imperative that the County has a strategy in place to govern the development of the communities that will become the homes of immigrants to the County, and the youngsters currently growing up here. It is necessary for the County to establish predictable patterns of development that it can rely on in order to ensure that the environment is protected, communities are developed in a thoughtful manner, and essential services are provided at the minimum level of expense necessary. Therefore, this chapter is divided into the following sections:

Managing the Future	Natural Resources
Growth of the County	Farmland and Open Space
The Annexation Effect	Historic Preservation
Improving the Planning Process	Lighting, Signage and Noise
Transportation	Housing Affordability
Water & Sewer Service	Economic Development
	Jefferson County -2020

Management of the Natural and Built

This page reserved for County map showing tax districts.

MANAGING THE FUTURE GROWTH OF THE COUNTY

Jefferson County finds itself at this time at a crossroads in its own destiny. Based on U.S. Census data, the annual growth rate of the County’s population in the 1990s averaged approximately 1.74 percent per year (17.4 percent over the 10 year period). In 2001, the County population increased by approximately 1,084 persons, or approximately 2.56 percent. In comparison, the population of Loudoun County jumped by 98.6 percent and Frederick County, MD increased by 30 percent during the 1990s.

Distance from the urban growth corridors and natural barriers have protected the County to a point. Regardless, the Department of Planning, Zoning and Engineering estimates that the population of Jefferson County may increase by approximately 20,000 persons from the 2000 Census to the 2020 Census.

Depending on a number of variables, most notably the long-term effect of Loudoun County’s decision to remove 83,000 potential dwelling units from its comprehensive planning process, it is possible that there may be more. With Clarke County having set its zoning pattern with a very low permitted residential density, Jefferson County is the next logical place for the development community to look when attempting to meet new housing demand in the region. For a more detailed analysis of the population trends in the County, please consult Appendix A.

THE ANNEXATION EFFECT

Annexation of unincorporated land by the

municipalities is having a profound effect on land use planning at the County level. In 2001, West Virginia approved changes to the State Code as it pertains to municipal annexation. Most notably, if a municipality desires to annex property, and the property owner desires the annexation, the County cannot veto the decision.

This has two major effects on land use planning and effective government. First, State distribution of some revenues to municipalities is apportioned by the populations of the various jurisdictions. This encourages “growth wars” between towns and cities looking to maintain or enhance their positions in this equation. Second, it places the towns and the County in a competitive posture where developers and land owners maneuver for the path of least resistance and least expensive route for developing their properties and select the most favorable jurisdiction available. If the city offers better terms, etc., they request annexation. The 2001-2002 period illustrates this.

After processing through a highly contested Community Impact Statement process twice (following a court battle over the Planning Commission’s rejection of the first submission), Greenvest LLC requested that its 3,200 unit mixed use development be annexed in to the City of Charles Town. This development covers an area of 1,000 acres of unimproved farmland located more than a mile from what was the existing incorporated area. With no subdivision ordinance, full time town planner nor a city engineer, the City of Charles Town was poorly equipped to accept the annexation. Nonetheless, the annexation was approved.

Due to this annexation, the developer 1) avoids the scrutiny of the County Planning Commission, 2) avoids the oversight of full-time County staff and application of County Subdivision and Development Review Standards, and 3) circumvents the political opposition from community members who are not city residents. Non-city residents find it difficult to affect the vote of city decision makers. Also, it should be noted

that the city’s decision to allow major earthwork to begin before any plats were approved and recorded allowed the developer to begin their venture without adding to the taxable base by creating lots prior to the outset of construction.

A second event that occurred was the Comprehensive Plan revision process. Comprehensive Plan cycles generally see an upsurge in development activity by property owners due to the fear of the unknown. This trend, coupled with the recommendations of the consultant’s report and the timing of the Comprehensive Plan process, resulted in a “rush” of annexation requests to Charles Town and Ranson so significant that both towns stepped back from consideration of several requests in order to consider and adopt policies to govern consideration of future applications.

Ranson has adopted annexation policies with a stated “urban growth boundary” which includes a significant amount of the County’s designated growth corridor. As part of its stated annexation policy, that city has stated that it will not entertain annexation requests outside of that designated boundary. As of the publication of this Plan, Charles Town is considering an annexation policy, including a proposed municipal growth boundary. It is questionable at this point, however, whether the Charles Town City Council will adopt an urban growth boundary due to concerns of limiting future options. A map of the former and current municipal boundaries, and the existing and proposed municipal growth boundaries can be found on page 24.

Annexation to the extent that the adopted urban growth boundaries have extended is poor planning practice, especially without full-time professional staff to manage the responsibility of reviewing the increased land development process. Annexation to the extent envisioned by Charles Town and Ranson fosters sprawl.

This page reserved for map of Charles Town - Ranson Municipal growth areas.

While practically, many parties would prefer to see all dense development in municipalities and the County zoned almost exclusively for agriculture and rural residential uses, the County, as a legal subdivision, is required to accommodate all legal uses within its zoning code. Legally, Jefferson County cannot rely on the five municipalities to provide all (or the vast majority) of the townhouse, apartment, high-density single family and commercial development in the County.

As the annexation of land by the municipalities increases eight-fold, the County must evaluate its legal responsibilities to provide areas for all uses, and consider whether it may be required to extend the “designated growth area” to meet its legal obligations.

The annexation dilemma has unduly complicated the County’s Comprehensive Plan process. With higher densities and more “developer friendly” regulatory processes at the municipal level, adopting some recommendations (which would be later instituted as ordinance amendments) would only serve to foster more annexation requests, pulling more land beyond the County’s control.

In summary, the issue of annexation and the County’s inability to affect decisions on this topic has significantly damaged the County’s ability to bring “Smart Growth” principles to the unincorporated area.

RECOMMENDATION 3.01: When adjusting the Zoning Ordinance and Map to conform with the recommendations of this Plan, the County should pay particular attention to the permitted density in the Townscape area and within the urban growth areas to ensure that it is not set at a level to push property owners to request annexation.

RECOMMENDATION 3.02: When adjusting the Zoning Ordinance and Map to conform with the policies of this Plan, the County should study the impact of the adopted municipal growth boundaries and determine whether it is necessary to adjust the designated growth area to meet legal sufficiency.

RECOMMENDATION 3.03: The County should work with the municipalities to create a coordinated municipal growth boundary acceptable to all affected jurisdictions that allows for reasonable municipal growth while protecting the County’s ability to plan for the long term growth of the “designated growth area” and the County at large.

IMPROVING THE PLANNING PROCESS

Planning Commission Regulatory Processes, Information and Public Perception

The authority for counties to enact land development, subdivision and zoning regulations for land within their jurisdiction can be found in Section 8-24-1 of the West Virginia Code. The Dillon Rule nature of State government, coupled with the vague nature of much of this statute combine to create some degree of confusion in the planning process.

As development has begun to increase in the County, it is expected that the population of the County will increase by at least another 20,000 persons over the next two decades (See Appendix A). The County’s land use regulatory process and ordinances need to be readied to meet the challenges before us. Comprehensive review and updating of the Ordinances are necessary in order for the County to meet the expectations of land owners, developers and residents for services and regulations that address existing and anticipated land use issues.

Jefferson County Land Use Ordinances

<u>Ordinance</u>	<u>Date of Adoption</u>
Zoning and Develop. Review	July 7, 1988
Subdivision	July 18, 1979
Improvement Location Permit	Dec., 1975
Flood Plain Management	March, 1987
Salvage Yard	Aug. 23, 1984

The Planning Commission has determined that comprehensive revision of the Ordinances are necessary. The volume and nature of changes to the documents could cause the existing documents to become cumbersome and confusing.

When the package of Ordinance changes is prepared, particular attention should be paid to their structure and organization so that they are the most concise, effective development management tools that can be created. Such an effort cannot be done effectively in stages or piecemeal by ordinance. Cumbersome as such an effort may be, it should be undertaken as a single project so that all revisions can be coordinated into a well integrated set of ordinances.

When this process is complete, the average land owner, developer and citizen should be able to easily read and understand the revised and updated rules and processes. If this is successful, staff will be able to more efficiently review plats and plans and time spent explaining County processes (to both developers and citizens) should be reduced.

RECOMMENDATION 3.04: When considering amendments to the Ordinances and Zoning Map to incorporate decisions based on the recommendations of this Plan, the County should address the Ordinances in their entirety so that:

- a. They are written in clear, concise terms, reducing the need for interpretation.***
- b. They reduce the need for searching or cross-referencing of similar or same material throughout multiple ordinances.***
- c. Final adopted text is correct in all forms.***
- d. The zoning map is upgraded to a larger, clearer format, thereby reducing the need to interpret the document.***

Public Documents, Information and Outreach

It is the intent of the Planning Commission that, in order to meet anticipated demand for County land

regulation services (from both land owners and the citizenry in general), to restructure the existing land development review process to create a structure that is transparent, open, clear, factual and easily understood by all parties.

RECOMMENDATION 3.05: When revising the subdivision and zoning ordinances (regardless of form of zoning adopted), the County should revise and streamline its processes for meetings and hearings so that their opportunity for public participation is more meaningful and timely, reduces the number of steps and provides clear rules for the guidance of property owners.

RECOMMENDATION 3.06: The Planning and Zoning Commission should investigate producing visually appealing, reader friendly public information brochures explaining their various processes in order to improve public understanding of the planning process.

The 1990s have brought us the technological revolution where the use of computers has become pervasive in every day life. Traditionally, public information documents have been provided only in hard copy form. Hard copy documents are expensive to produce, bulky to store, and existing paper copies are useless if the contents are changed. Making these documents available on-line or in digital formats (such as read-only compact discs) would reduce printing expenses and reduce trips to the Planning Department's offices to obtain copies of documents.

RECOMMENDATION 3.07: The County should explore posting its land use ordinances, applications and other public information on the internet, and making copies of these documents available on such electronic media as searchable compact discs. The Planning Commission should also investigate the feasibility of requiring applicants to provide materials in a format that is ready for electronic posting.

Planning Resources

The technological revolution has had a direct effect on the planning industry. Computer programs, known as Geographic Information Systems (GIS) have been developed that allow the combination of high quality mapping with multi-layered database management. GIS is an integrated system by which spatial data can be stored, analyzed and manipulated, in addition to being plotted on maps by conversion of that data.

To date, the Emergency Communications Center and the Office of Emergency Services have implemented a GIS system to manage the County's emergency services and E-911 addressing system. Additional layers (databases) can be created that address such land use data sets such as zoning, land use, wetlands, topography, etc., which are all important data in effective land use planning.

As the County population grows toward the 50,000 mark, effective planning will require usable data collection and analysis. The recent adoption and implementation of building codes has shown the usefulness of such systems when a computerized database program was implemented to track the building permit program.

It is important that after the adoption of this Plan and before it must be reviewed or rewritten, sufficient systems be implemented to provide current usable data for future planning efforts.

RECOMMENDATION 3.08: The County should investigate building on existing computer data management and GIS systems to provide the necessary land use data management tools necessary for the Department of Planning, Zoning and Engineering to collect, analyze and plot spatial land use data for use in future planning activities and Comprehensive Plan reviews.

RECOMMENDATION 3.09: The County should explore the adoption of innovative planning concepts, such as transferrable development rights and traditional neighborhood designs.

TRANSPORTATION PLANNING

Introduction

Jefferson County had the first paved roads in West Virginia. But many of today's roads still follow the old carriage and wagon roads and, except for paving, have not been improved. Most of these improvements were made when the County was a much more rural environment and the roads were not used to the degree that they are today.

With the increase in population in the last three decades, Jefferson County's roads have had to bear the combined burden or increased traffic volume and heavier commercial vehicles. As a result, the deficiencies of the highway and road systems have become more critical. Inadequate funding and increased in transportation demand are conditions which probably will be facing the people of Jefferson County indefinitely.

General Goals

As defined earlier in this document, a goal is the end toward which effort is directed. Certain goals are established herein which are identified as the desired results of efforts regarding transportation planning associated with this Plan. The following are general goals set forth regarding transportation in Jefferson County:

1. Reduce the occurrence and severity of traffic accidents and eliminate conditions which either cause accidents or contribute to their severity.
2. Achieve and maintain efficient traffic flow.
3. Find creative solutions to funding and legislative limitations when solving transportation problems.
4. Seek a coordinated transportation plan among all levels of government and advocate and lobby for road improvements in the County.
5. Encourage alternate forms of transportation.

The transportation component of the 1994 Comprehensive Plan focused on problem areas, and general traffic volume. In general, maintenance and improvement of the existing road network are the responsibility of the State, homeowners associations and individual owners. Residents are often concerned about the volume and speed of traffic on neighborhood roadways and the state highways. This is perceived as both a safety and quality-of-life issue.

Planning for a Responsible Road Network

During the Comprehensive Plan process, citizens have expressed concerns with some of the roads in the County. The County has reached a critical turning point, as developable land is becoming committed to new subdivision and development. As more and more land becomes committed, options for planning future road improvements diminish. It is prudent for the State and County to plan for the future needs of the County now, while land is available and the improvements can be made, or at least land can be reserved, as part of the development process.

WVDOH Traffic Volume Counts 1996 and 1999			
Location	1996	1999	2002
US 340 at the VA line	15,500	20,000	22,000
US 340, W. of Bolivar	19,000	22,500	23,000
US 340 at WV 26	-----	30,500	33,500
WV 340/18, S. of Chas. Town	3,100	2,500	2,000
WV 9 at the VA line	6,900	7,300	8,844
WV 115, S. of Charles Town	5,300	-----	7,000
WV 115, N. of Charles Town	5,200	4,800	5,300
WV 9 at Berk. County Line	11,000	15,000	17,500
WV 51, W. of Charles Town	7,100	12,000	8,900
WV 45 at Berk. County Line	6,400	8,400	7,600
WV 45, W. of Shepherdstown	11,500	13,000	11,500
WV 480, S. of Shepherdstown	4,900	6,200	5,100
WV 230, S. of Shepherdstown	7,000	7,200	6,400
WV 230, S. of WV 17 fork	2,200	2,400	2,500
WV 17, S. of Duffields	2,500	3,400	3,900
Source: West Virginia Department of Highways.			

With a well planned transportation network, the subdivision ordinance can be amended to require developers to reserve land for new planned roads, and in some cases, the developers may determine that it is actually in their best interest to build these roads to provide better planning for and access to their communities.

RECOMMENDATION 3.10: The County should solicit the assistance and cooperation of the West Virginia Division of Highways to create and execute a transportation management plan (including mapped proposed alignments of new roads and improvements to existing roads) that sets the future road network of the County and emphasizes a network of state roads serving limited subdivision roads. This plan should be comprehensive, addressing road, rail and other forms of transportation.

State Roads Network

All roads in the unincorporated areas fall into the following categories: 1) those owned and maintained by the West Virginia Department of Highways, 2) private roads owned and maintained by individuals or homeowners' associations, and 3) "orphaned roads" where there is no assigned responsibility for maintenance. The County does not own or maintain roads. The Division of Highways classifies highway in five different ways:

- 1) By jurisdiction,
- 2) By Federal-aid system,
- 3) National Highway Functional Classification (NHFCS),
- 4) By sign system, and
- 5) By function within the State system.

The latter system is the only one of interest to the County planning process because it reflects function which in turn influences potential land use. There are three State-administered systems. They are:

This page reserved for comprehensive plan highways map.

This page reserved for map of highway problem areas.

- 1) A functional classification system (expressways, trunklines, feeders and State Local Service Roads),
- 2) Home access roads (which included certain orphaned roads into basic State maintenance) and
- 3) State Park and Forest Roads.

The distribution of road miles and vehicle miles traveled are found in Appendix B.

Traffic Volume on State Roads

The West Virginia Division of Highways maintains a traffic flow map. It shows the Average Daily Traffic (ADT) at counting stations around the County. The map is updated every three years. The table on Page 28 compares the ADTs for selected locations on State Highways in Jefferson County as measured in 1996 and 1999.

Accident Prone Locations

Based on accident analysis, the WVDOT has identified an inventory of road sections as having accident rates that exceed critical levels. This inventory can be found in Appendix B and is mapped on page 30.

State Transportation Improvement Program (TIP)

The WVDOT/DOH maintains a project list called the Transportation Improvement Program. A list of projects that were listed in July, 2000, as being under construction or being advanced to the construction phase pending funding is found in Appendix B.

Significant Impending WVDOH Improvements

Several significant projects are under way or impending within the County. These include:

- Upgrading WV 9 from Virginia to the Charles Town bypass to 4 lanes, with a new bridge over the Shenandoah River.
- Upgrading WV 9 from Berkeley County to the Charles Town bypass to 4 lanes.

Upgrading US 340 from the Clarke County, VA line to the Charles Town bypass.
Replacement of the James Rumsey Bridge at Shepherdstown.

With the completion of any one of the three road upgrade projects listed above, Jefferson County will achieve a milestone of completing its first four lane road at a County boundary. The upgrade of WV 9 from Charles Town to Martinsburg and the upgrade of US 340 from Charles Town to Clarke County will prove invaluable in attempting to lure new industry to the County as it will help connect the County to the important VA 7 and I-81 corridors, and will improve traffic safety in certain dangerous locations. Completion of the WV9 upgrade to the Virginia line will improve traffic safety and commuter access to Northern Virginia.

The Harpers Ferry Water Gap

The County is faced with a traffic flow bottleneck in the form of a major river crossing through a narrow gorge and National Park. US 340, which is a four lane limited access highway from Frederick, MD to Sandy Hook, narrows to two lanes as it crosses the Potomac River into Virginia. This road remains two lanes as it winds its way through the Shenandoah-Potomac River water gap at Harpers Ferry and crosses the Shenandoah River at Bolivar. At Bolivar, this highway again widens to four lanes for the approach to and from Charles Town.

Due to employment trends in the region, US 340 is the busiest highway used to access Jefferson County. On Fridays, commuter traffic has been known to back up from the Potomac as far as Brunswick, Maryland as County residents return from their jobs in Maryland and Washington. Holiday travel can also create weekend backups at this bottleneck.

Unfortunately, the only way to correct this problem is to widen the highway to four lanes. Given the major river crossings, interstate coordination necessary between three states, the impact on the National Park, and design difficulties (and resulting

extraordinary expense), it is unlikely that this will ever occur.

The County can turn this problem to its advantage, however. Significant daily traffic backups in Maryland that are likely to occur in the future where US 340 narrows to two lanes may impact some persons' decisions whether to move to Jefferson County and commute to jobs in Maryland. When persons employed in Frederick and the I-270 corridor consider purchasing homes in rural areas, continuing west on I-70 or north on US 15 will become a more attractive option than enduring a daily hour-plus backup approaching the Potomac River.

This also has a negative effect in that existing residents in the central and eastern parts of the County will find the commute to existing or desired jobs in Maryland burdensome. It is unreasonable to stop or severely restrict development of the County due to volume issues on one of several roads providing access to the County. Nonetheless, the overload of this highway may influence the housing market in the eastern part of the County when it becomes a negative consideration to home-seekers.

Nonetheless, this corridor should be studied to determine if there are intermediary measures that could be implemented to improve traffic flow.

TEA-21 and other Transportation Enhancement Programs

The scope of transportation related activities that are eligible for Federal funding was broadened by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Transportation Equity Act for the 21st Century (TEA-21). Flexibility as to how states use their Federal allocation is a major element of these acts. The County needs to keep abreast of these decisions and the potential for securing these funds for identified opportunities for application of these funds to the solution of local problems and enhance the County roadway network.

RECOMMENDATION 3.11: Advocate the improvement and development of the State Highway network in Jefferson County by:

- a. Promoting and actively advocating the construction and completion of the new James Rumsey Bridge, the four-lane upgrade of US 340 south of Charles Town and the four-lane upgrade of WV 9 from Berkeley County to the Charles Town Bypass.***
- b. Advocating the implementation of design corrections to dangerous locations on State Highways in order to reduce traffic accidents where they have reached critical levels.***
- c. Enacting measures and coordinate with the municipalities to ensure the reservation of road rights of way for a western bypass of the Charles Town/Ranson hub as development occurs in that corridor. (See Jefferson County - 2020).***
- d. Encouraging the WVDOH and VADOT to study US 340 from the Potomac River to Bolivar for possible improvements to help traffic flow through this bottleneck.***
- e. Pursuing and securing funding through the Federal TEA-21 program for transportation enhancement projects within Jefferson County (in coordination with the West Virginia Division of Highways), especially if such funds can be used for potential corridor improvements to US 340 east of Charles Town.***
- f. Promoting alternate and bicycle transportation.***

Private Roads

There are no county-owned roads in West Virginia. Unlike in adjacent Maryland where subdivision roads are dedicated to the County upon completion,

maintenance of the roads in subdivisions are the responsibility of a homeowner's association (HOA), supported, maintained and repaired through homeowner association dues.

The state of the private road network in the County is of concern, as older roads, noticeably "orphaned roads" where no specific ownership can be determined, are in need of repair. A cursory review by the Chief County Engineer has shown that some subdivision roads that have been constructed recently have developed maintenance problems. Subdivision roads have not held up to construction traffic.

Also, this review, in which the County's subdivision road standards have been compared to those of surrounding jurisdictions and may not be adequate. While the County's regulations have standards for vertical alignment, it does not address horizontal alignment (curve radius, minimum distance between intersections, etc.). The Department of Planning, Zoning and Engineering would need to conduct more in depth study of the existing County standards, and how they compare to the AASHTO Design Procedures, which are the treated as the national standard on such design.

The County should expect developments to be of the highest quality. As part of ordinance amendments that would follow the adoption of this Plan, the County needs to conduct more detailed analysis of its subdivision road standards to determine if their revision is necessary. All parties will benefit from this.

First, the developer will offer a better product to purchasers. If the roads are constructed to higher standards, the purchasers will benefit through lowered demand on their HOAs for repair of subdivision roads. The community as a whole will also benefit through the development of a road network that efficiently moves people and emergency equipment through the County's subdivisions without conflict, damage or danger.

RECOMMENDATION 3.12: The County should review the existing subdivision road design

standards for ways to improve roadway design to ensure that these standards are up to date and ensure that when roads are initially constructed, they are done so to a standard that extends their useful life before needing significant repair.

Commuter Rail

The MARC system provides commuter rail service in the Baltimore-Washington area and maintains a line from Washington to Martinsburg. Two stops on this line, Harpers Ferry and Duffields, are located in Jefferson County. The Harper's Ferry station is constrained by its location on National Park Service land, precluding expansion of the facility.

As has been determined in the Economic Development part of this Plan, Jefferson County is a bedroom community and due to a number of factors, it is expected to remain so into the foreseeable future. Therefore, it is prudent to explore new opportunities for commuter rail service to reduce the number of commuters driving on the County's roads during rush hour. The Charles Town - Huntfield - Ranson area is planned to be the hub around which most growth in the County will be directed over the next twenty years. The Norfolk-Western rail line bisects this area. Therefore it is advisable to investigate future commuter rail service along this corridor. Given that the appropriate location for this service would be within the boundaries of municipalities, this effort would best be led by those municipalities.

Public Transportation

The Eastern Panhandle Transit Authority (PAN-TRAN) provides bus service within the City of Martinsburg and between Martinsburg and other locations in Jefferson and Berkeley Counties, including Charles Town, Harpers Ferry, Shepherdstown and Inwood. Proposals to expand service in the Charles Town area are being considered. Service is available Monday through Friday between the hours of 6 a.m. and 7 p.m. on the Charles Town route, and two runs on the Shepherdstown route between 8 a.m. and 4 p.m.

There is no service in Jefferson County on the weekends. PAN-TRAN also offers route deviated service with prearrangement for up to 3/4 of a mile from its preset route. All PAN-TRAN buses are handicapped accessible.

RECOMMENDATION 3.13: Reduce dependence on the automobile for both intra-County and inter-County travel by:

- a. Promoting the use of PAN-TRAN transit, ride sharing, the MARC train program and other alternatives to single-occupant vehicles to reduce highway demand during peak hours.***
- b. Encouraging the municipalities of Charles Town and Ranson to investigate and, if it is found to be workable, support their efforts to secure MARC commuter rail service along the Norfolk-Western right of way, with stops in Ranson and Huntfield.***
- c. Encouraging and endorsing the extension of the PAN-TRAN Transit Service to areas of the County that will be developed with higher density housing concentrations.***
- d. Investigating whether the Department of Highways would be willing to initiate the construction of “park and ride” lots along its rights of way on US 340 and WV 9.***
- e. Investigate whether adding a requirement for pedestrian and bicycle paths in new residential subdivisions to the subdivision ordinance would be productive.***

WATER AND SEWER SERVICE

Introduction to Water Service Issues

The following sections present an analysis of the water resources and sewerage treatment facilities, an overview of current and anticipated problems, and recommendations for the future. In this chapter, as in virtually every section, the problems and resources of the municipalities must be considered when a Comprehensive Plan for the County is formulated, even though these municipalities have independent land use planning and regulation programs. Central water and sewer facilities are located in these towns and generally have the capacity to accommodate some adjacent development. Since future growth is expected to take place both in the municipalities, and in adjacent areas, municipal and County needs need to be coordinated.

All studies that have been conducted of the Karst issue in Jefferson County have come to the conclusion that there is a plentiful supply of groundwater to use as the major source of drinking water for County residents, although it should be managed so that the risk of potential pollution of the aquifer is minimized. As such, the issues of water supply and septic disposal are irrevocably tied in how they are addressed in the Comprehensive Plan and its policies for the future development of the County.

It should be noted that this section, addressing water and sewer services, addresses the single greatest concern raised in the preparation of this Plan: the impact of Karst geology upon development trends and requirements in the County. Therefore, for a better understanding of this issue, it is necessary to read this section in connection with the section later in this chapter describing natural resources.

Public and private water and sewer systems are expensive to construct and maintain and the ability

to provide them is an equation based on the number and density of the units to be served. It is advisable that, in order to protect the aquifer from contamination, the preferred means of development be that which is served by water and sewer systems. Therefore, the provision of these facilities should be a significant consideration when determining the density and design of development throughout the County.

Water Resources

The Potomac and Shenandoah Rivers are utilized to provide water to the five municipalities and the areas surrounding them. Groundwater from wells and springs provides water to industry, agriculture, private water systems and single-family homes. As of 1995, approximately 65% of Jefferson County residents relied on surface water for their needs, through three municipal systems. The remainder utilized ground water from wells and springs. It should be noted that this section pertaining to water resources should be read in conjunction with the previous section discussing water and sewer services, as these issues are unbreakably linked to the issue of surface and subsurface water resources in the County.

While use of ground and surface resources is fairly even, the greatest potential for future use is groundwater, and this is the County's challenge in planning for the future.

Much of Jefferson County (86%) lies on a geologic formation known as "Karst". Comprised predominantly of fractured limestone, this formation covers most of the County between the Shenandoah River and Opequon Creek. Topographically, this formation is characterized by fertile soils and sinkholes that are created when the subsurface structure erodes and collapses. This formation is very susceptible to the transmission of liquid from the surface of the soil to the aquifer below which provides most residents with their drinking water via wells.

The single greatest danger to the County's drinking water supply is the contamination of the aquifer by chemical and biological contaminants. Recent studies have shown that nitrates, E-Coli and other Fecal Coliform are present in the subsurface ground water. Given the rapid, uncharted and diffuse flow of water through the aquifer, the prominent reason or reasons for their presence or their origin may not be known. Among the many sources could be chemicals used in agriculture, animal waste from pastured areas, failing septic systems, landfills and improperly capped well heads.

It is this vulnerable resource, however, that has the greatest potential for providing for the water needs of future generations of Countians. The following table summarizes the findings of the U.S.G.S. in its 1991 study of the Karst aquifer of the County as pertains to groundwater yield:

<u>Formation</u>	<u>% of County</u>	<u>Yield Range*</u>
Chambersburg	4	1.3 - 1.5 million
Beekmantown	19	290,000-485,000
Conococheague	32	175,000-375,000

* Measured in gallons per day per square mile.

SOURCE: U.S.G.S. Water Resources Report 90-4118

This chart shows that the potential of this aquifer far exceeds the needs of the typical number of households within that square mile in a rural environment. These formations alone conservatively produce 34.6 million gallons of water per day or an average yield of 300,000 gallons per day per square mile, according to the U.S. Geological Survey. The U.S.G.S. study of the Potomac River Basin in West Virginia (Hobba and others, 1976) cites an average yield for the carbonate aquifers of 500,000 to 600,000 gallons per day per square mile, or 938 gallons per day per acre. This would suggest a total average yield from the carbonate aquifers of 90.7 million gallons per day.

Groundwater flow in the County is concentrated in secondary fractures in the rock, so there is a wide range of well yields depending, among other factors, on the depth of the wells and whether the well encounters significant fractures. It would not

be possible or desirable to recover all of the available groundwater through wells and under no circumstances should the groundwater withdrawal exceed the recharge rate to the aquifer. If the annual recharge to the carbonate aquifer is eight inches per year (Hobba et al, 1976) the total average daily groundwater recharge to the carbonate aquifers in the County is approximately 69.3 million gallons per day or 380,900 gallons per day per square mile. This is the figure that should be used to evaluate the impact of future development on the carbonate areas of the County.

The western flank of the Blue Ridge east of the Shenandoah River is an area that has been significantly developed for residential use. Many smaller lots were platted before modern subdivision standards were in place, and in many cases, several of these smaller lots are combined to make a single usable building lot that passes current County requirements for the installation of wells and septic systems. Numerous lots and blocks of lots remain unimproved in this area. There is much less potential for continued growth based on utilizing groundwater for individual homes.

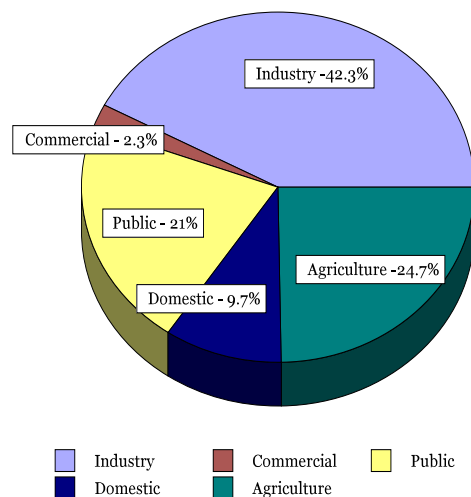
Groundwater recharges at a significantly lower rate on the steep slopes of and the poor aquifer of medasedimentary rock of which the Blue Ridge consists. Hobba (1976) cites a yield of 100,000 to 200,000 gallons per day per square mile or 312 gallons per day per acre for these aquifers. A liberal estimate would suggest that this is only a third of the water that is available from the carbonate aquifers in the County. The West Virginia Department of Health uses 70 gallons per person per day as a design standard. This suggests that a one acre lot on the Blue Ridge will have enough water for a family of 4 to 5 persons. As is with the carbonate aquifers, there is a wide range in the yield of wells drilled in these aquifers.

Water Use

The chart shown in the previous column illustrates the distribution of water use in Jefferson County over five use groups. This chart is replicated from

the 1994 Comprehensive Plan, and the data is from 1988. It should be noted that, other than the U.S.G.S. study published in 1991, there has been no new significant study of water resources in the County in fifteen years. As of the publication of this Plan, the County has agreed to cooperate with Berkeley County regarding a water study, but the findings will not become available for many months after the adoption of this Plan.

Jefferson County Groundwater Usage - 1988



Source: U.S. Geological Service.

Economies of Scale for Water and Sewer Service

The provision of water and sewer service to residential development create infrastructure construction cost that is passed onto the new home purchaser. Therefore, it is wise to make sure as many units are served by water and sewer infrastructure as possible in order to spread the construction cost across a greater number of units. This is known as “economies of scale”. Residential and commercial development on water and sewer facilities should, by nature and design, be more dense in order to keep the per-unit cost of developing and maintaining these services to the minimum level possible.

Due to the extraordinary overall cost to provide water and sewer service to the entire County, developing in this format county-wide is not

feasible. Land areas that are outside of the regions that can reasonably be expected to be served by water and sewer facilities should be developed at lower densities, with properties employing wells and drain fields. The issue of well and septic use in relation to the County's development patterns is discussed in greater detail in the section of this chapter entitled "Jefferson County - 2020" where issues of residential densities are addressed and coordinated.

Private Well Use

The installation of private wells is regulated by the Health Department and the Planning Commission. Many wells that were constructed before the adoption of current regulations offer a greater susceptibility to contamination of the water source from pollutants such as fertilizer and pesticides. This not only applies to wells located on farms, but also to the average homeowner who uses these same products to achieve a well maintained well or garden. A number of studies have shown that shallow, ungrouted wells have the greatest potential for contamination. It should be noted, however, that properly constructed wells, designed and grouted to current standards, pose little risk to the quality of the water supply.

Although the County possesses substantial ground water resources, these reserves are easily accessible and susceptible to damage. The geological formations of the County which provide abundant water fail to provide adequate protection. Sinkholes, rock outcroppings and fissures provide open channels for animal and human wastes, petroleum products, and storm water runoff to directly enter and contaminate groundwater resources. Nitrates, fecal coliform and fecal streptococcal bacteria have been mentioned in studies done by the USGS as a contaminant found in many of the wells surveyed.

Other work done by the Jefferson County Extension Office and the District Health Office showed that samples of wells taken over an eighteen month period on a quarterly basis resulted in data showing

a highly variable level of nitrates with no correlation to the time of year or rainfall. Levels above the drinking water standard for nitrates were found in grouted as well as ungrouted wells. It should be noted this is a characteristic of the particular water source (and the factors affecting it) and not the individual well's construction.

The 1991 study by the USGS did not show significant change in the water quality between samples taken in 1974 and samples taken in 1988. This is despite the fact that many of the wells surveyed were susceptible to surface water contamination. No recent data is available to determine whether there have been significant changes in the level of contamination since the 1988 study, although surveys are in progress, but the data will not be available until after the adoption of this Plan.

Protective Measures

The agriculture community, through the efforts of the Natural Resources Conservation Service (NRCS), began a program in the early 1990s to visibly mark sinkholes in fields and create a buffer zone of permanent vegetation to filter contaminants and keep the application of fertilizers and pesticides away from the sinkhole. The NRCS also explored a method of capping sinkholes to prevent infiltration of surface water. To this date, evidence showing the effectiveness of these caps in preventing infiltration is inconclusive. The WVU Extension Service in cooperation with the NRCS also assists agriculture producers to use less commercial fertilizers and give more credit to the nitrogen provided by animal manure. One producer lowered the potential for nitrate contamination by composting the animal manure which consumes a portion of the nitrogen in the breakdown of organic matter.

Groundwater has the greatest potential to be the primary water resource for the County's residents and businesses. Although the use of surface water by municipal water systems is on the rise, the water contained within the aquifer is the most abundant

source available. Policies adopted by the County and other agencies should provide for the optimum management and protection of groundwater. In addition, County and State agencies must recognize that presently, thousands of residents rely on surface water and must be aggressive in protecting these resources.

Rural Fire Protection

While the single most important resource in firefighting is well trained and dedicated personnel, adequate rural firefighting ability is greatly dependent on the accessibility of adequate water supplies. At present, there are several parts of the County where adequate, easily accessible water supplies are miles away. Of the 42 public, community and non-transient water systems, only fourteen have the capacity to provide fire protection for themselves or others by serving as a source from which fire department tank trucks can draw water. Other sources of water utilized in fighting fires include farm ponds and streams. There are six dry hydrants located around the County. The sixth was recently installed at Shannondale Lake, allowing equipment to pump without a loss of efficiency.

Recommendation 3.14: The County should investigate the feasibility of creating new dry hydrants throughout the County in order to enhance rural firefighting protection.

Analysis of Problems

This section needs to be read in conjunction with the section on wastewater treatment. Both of these areas are closely related and changes in one can effect the other. Improperly constructed and poorly functioning wastewater disposal facilities will reduce the amount of clean water available for other uses. All methods of wastewater treatment produce liquid waste. These liquid wastes must be disposed of properly to ensure a safe drinking water supply in the future.

According to the 1990 U.S. Census, approximately 46.5% of Jefferson County residents obtained their water from individual drilled or dug wells. Shallow

(less than 100 feet), ungrouted wells can be susceptible to contamination from surface pollutants and act as channels to pollute the groundwater. Wells, grouted and ungrouted, are also susceptible to groundwater degradation from contaminants entering from sinkholes, rock outcroppings, and other fissures. This hazard is particularly great in older communities and in homes with relatively shallow wells.

The results of 1991 USGS study shows that the groundwater supply in 86% of the County is adequate to sustain additional development with a reliance on individual wells. The challenge is to utilize this and subsequent studies to monitor what portion of a particular drainage area of the aquifer is being used and what constitutes an acceptable buffer in times of drought.

The use of private wells and septic systems has the potential to diminish groundwater resources, especially in small lot residential developments served by aquifers of limited yield. This would be more prevalent in the area of Berkeley Shale near the Opequon Creek and on the Blue Ridge.

In 1988-89, the U.S. Geological Service tested seventy wells and springs for nitrate, fecal coliform bacteria, fecal streptococci bacteria, chloride, manganese and sulfate. Eighty percent of the sites exceeded EPA Maximum Contamination Levels, Maximum Contamination Level Goals or Secondary Maximum Contamination Levels for at least one of these contaminants. For more detail, see the box on page 40.

According to data from the Jefferson County Health Department, approximately fifty percent of Jefferson County residents draw their drinking water from approximately 8,400 individual drilled and dug wells. Given the range of age in the housing stock in the County (which can loosely correlate to the age of most of the wells that serve them), a large percentage are new or relatively new, pressure grouted and constructed to modern standards. Many, however, are older and constructed before current standards were initiated.

This page reserved for map of water systems.

The majority of potential hazard to the aquifer posed by wells is not from properly constructed new wells, but by the existing and potential failings of older wells that were not installed to current standards.

It is noted here that certain contaminants have been found in samples drawn from wells and springs around the County. According analysis provided in the USGS study for which the sampling was conducted, the data implied that the predominant source of the bacterial presence in the aquifer was agricultural in origin. While development has contributed to the condition, analysis based on distribution and other factors showed that agriculture was the primary source.

Other methods must ensure that those who use existing wells or will drill wells in the future will obtain clean, potable water.

In Fiscal Year 2001-02, the Health Department issued 336 well permits. During the preparation of this Plan, the Mid-Atlantic area was experiencing drought conditions. According to the Northeast Regional Climate Center, the Jefferson County area experienced a 5 inch rainfall deficit during the first half of 2002.

During this period, the perception began circulating throughout the community that large numbers of wells ran dry due to the drought. This perception was vocalized in the public hearing process for this Plan. Property owners, fearful that their wells were next, spoke to this as a reason for limiting residential growth. During the fiscal year when 336 well permits were issued, 26 were “emergency permits” issued due to the need to replace failed wells.

Groundwater Contaminants		
Constituent	Number of Samples Exceeding MCL, SMCL or MCLG	Percentage of Samples Exceeding MCL, SMCL, MCLG
Nitrate as nitrogen (MCL)	18	25.7%
Fecal coliform bacteria (MCLG)	37	52.9%
Fecal streptococci bacteria* (MCLG)	48	69.6%
Chloride (SMCL)	1	1.4%
Manganese (SMCL)	8	11.4%
Sulfate (SMCL)	2	2.9%
MCL: Maximum Contaminant Level MCLG: Max. Contaminant Level Goals * One fecal streptococci sample was lost. SMCL: Secondary Maximum Contaminant Levels Source: U.S.G.S. Water Resources Report 90-4118		

Nonetheless, the potential for failure of individual wells and septic systems is a health issue affecting the long term quality of the aquifer and, as such, the issue of the construction of new wells and septic systems and how to provide public water and sewer services to as much of the populace as possible are cornerstones of this Plan.

The Effect of Drought on Well Yield

According to the Jefferson County Health Department, there are approximately 8,000 to 10,000 wells located throughout Jefferson County.

Public and Community Water Systems

At present, the District Office of the West Virginia Health Department monitors 26 community systems, 16 non-transient, non-community systems and 24 transient, non-community water systems in Jefferson County. Non-Transient, non-community systems provide water to at least 75 users at least 60 days per year. These systems include schools, Federal installations and the Bardane Industrial Park. Transient, non-community systems serve such uses as campgrounds, isolated stores and

restaurants and parks. The map on page 39 shows the locations of these systems and the service areas of public systems administered by the municipalities. A table describing these systems is found in Appendix B. Currently, community water systems serve approximately 19,400 persons.

Three major public systems supply approximately 65 percent of the population that is on public or community water systems. These public-operated central water systems serve the municipalities of Charles Town/Ranson (4,373 accounts), Shepherdstown (1,302 accounts) and Harpers Ferry (815 accounts). All three of these systems primarily draw their source from surface waters (the Potomac and Shenandoah Rivers). Water treatment by privately operated central systems constitutes the balance of the community systems. The 23 community systems (excluding the three municipal systems) serve approximately 7,100 people. They have an average service population of 310 people, ranging from 35 to 2,000 per system, Tuscarawilla Utilities and Jefferson Utilities being the two largest. The smaller systems are generally limited to chlorination to eliminate pathogenic organisms.

Many of these systems were installed before the County had design standards for the construction of sewerage treatment plants. The aging and outdated systems will need to be upgraded and there is little or no Federal or State funds available to lessen the burden on the Public Service District or the users of the systems.

Much of this is being provided, however, by competition and private enterprise. The Charles Town Water System aggressively seeks out new clients and opportunities to extend its water service. Also, regulated private utilities, most notably Jefferson Utilities, has carved a significant presence into the water service market in the County. A majority of new proposals for residential development propose public water service, reducing the need for installing wells that, in the future, could potentially serve as a conduit for contaminants to the aquifer.

It should also be noted that proper design of water service systems is a necessary element in assuring that safe drinking water is provided to a system's customers. The design of such systems is regulated by the State of West Virginia, therefore discussing design standards for new facilities or updating existing facilities is beyond the purview of this Plan.

Introduction to Sewerage and Septic Service Issues

The following section presents an analysis of wastewater treatment, an overview of current and anticipated problems, and recommendations for the future. The issues discussed in this section are heavily influenced by the plans and actions of the municipalities. As discussed in the section on the environment, the effect of sewerage disposal is one of the most important issues that will confront the County for the foreseeable future.

As is discussed in more detail elsewhere in this Plan, 86 percent of the County is underlain by carbonate areas known as "Karst" geology, characterized by springs and sinkholes. This form of geology is very porous and laced with fissures. As a result, the aquifer beneath is susceptible to contamination from the surface. There are two primary sources of potential contamination of the aquifer through seepage into the aquifer: agricultural activity and other human activity.

Package Wastewater Collection/Treatment Plants

Residential development in rural areas has increased substantially during the last 25 years and many developments have installed package treatment facilities. There are 19 private and public systems located throughout Jefferson County. Nine of the nineteen would be considered transient systems if they were also providing water. These nine systems do not have permanent residents and fall into categories such as schools, motels and other employers.

Municipal Systems

The three main population centers – Charles Town/Ranson, Shepherdstown and Harpers Ferry/Bolivar, all have sewerage treatment plant that serve the municipalities and portions of surrounding areas. See the map on the next page for the locations of these systems throughout the County. According to each municipality, the number of customers served by each system is shown below.

Municipal Sewage Treatment Plants Total Number of Customer Accounts - 2002	
Charles Town/Ranson	4,373
Harpers Ferry/Bolivar	815
<u>Shepherdstown</u>	<u>696</u>
TOTAL SERVED:	5,884

The Charles Town system has aggressively sought new customers during the time leading up to the preparation of this report. With the annexation of the Hunt Field community into the City of Charles Town, approximately 3,200 new residential customers and 2,000,000 square feet of commercial development will be provided with sewer service by the City.

Jefferson County Public Service District

Jefferson County has a Public Service District (PSD) to collect sewerage outside of the municipalities. The PSD is managed by a three member board appointed by the County Commission, and is operated by a staff of seven.

Presently, the PSD has five collection lines:

1. Along WV 9, serving Burr/Bardane, Lowery Elementary School, Jefferson High School and the Job Corps Center.
2. Along WV 17, serving Briar Run, Walnut Grove, Breckenridge, Cambridge and Flowing Acres Road.
3. Along US 340, serving Jefferson Crossing Shopping Center, the Sheetz Convenience

Store and Prospect, Euclid and Jefferson Avenues.

4. Along WV 9 East, serving Crosswinds, Greenfield, Norborne Glebe and Hillside.
5. Along Cranes Lane, serving Orchard Hills and Cranes Meadow.

The PSD has one of the highest rates in West Virginia because of its limited number of users compared with the cost of infrastructure construction. New customers are being brought into the District on a regular basis, which may result in rate reductions if construction costs can be spread over a greater number of customers.

As of July, 2002, the Jefferson County Public Service District serves 1,500 residential units and 73 commercial and industrial customers, plus 111 water customers.

Private Sewerage Disposal Systems

According to information provided by the Jefferson County Health Department, approximately 50 percent of the homes in Jefferson County are currently served by individual sewerage disposal systems. Data from the Eastern Panhandle Regional Planning and Development Council places this number closer to 60 percent. Regardless, a majority of the homes in Jefferson County are served by private sewerage systems. These range from soil absorption systems, which consist of a septic tank and a drainfield, to complex mechanical systems.

Historically, pit privies and septic/drainfield systems provided the exclusive means of wastewater disposal for Jefferson County. Given the historically agricultural nature of the County and its accompanying low population density, these systems posed little or no danger to the community and natural environment. As the population of the County grows, with much of this development occurring in areas not served by municipal or community sewerage systems or the PSD, the issue of the growing numbers of septic systems must be studied for its potential impact on the quality of the aquifer.

This page reserved for map of sewage systems.

According to the Jefferson County Health Department, approximately 14,000 residential dwellings are served by private septic systems. 410 permits for new septic systems were issued by the Health Department in Fiscal Year 2002.

Herein lies the dilemma that the County finds itself at this juncture in the planning process. While it is generally accepted that a failing septic system has the *potential* of negatively impacting the aquifer via seepage, there has been no study of installed systems and how efficient these systems have been in relation to their age. At present, there is no economical way to determine if the effluent in drainfields may be entering channels that lead to the groundwater. The County Health Department, which is charged with safeguarding the public health through the permitting and regulation of septic systems, has been on record throughout this process defending its standards as being in conformance with all current accepted practices for sewerage disposal.

Although the science regarding this issue is inexact, it is generally accepted that 1) design and construction of wells and septic systems throughout the county should be in accordance with the most up-to-date standards available for development on Karst geology and 2) the preferred form of residential development is that contains a mix of high density development which utilizes public water and sewer facilities and low density development on wells and septic systems.

Given that the entire County cannot be sewerred, and given that construction of sewerage lines requires residential densities to be set at a level that makes their construction economically feasible, it is not advisable to sewer the entire County.

RECOMMENDATION 3.15: The County should endeavor to ensure that safe, clean drinking water is available to all citizens of Jefferson County by:

- a. Reviewing and, where necessary, revising all applicable County Ordinances to incorporate the most up-to-date standards for well and septic construction and***

requiring water quality testing as to allow the County to gather data.

- b. Investigating the creation of a public information brochure on the proper use and maintenance of wells and septic systems.***
- c. Reviewing and, where necessary, revising the Subdivision and Zoning Ordinance to incorporate the most up-to-date standards for stormwater management design.***
- d. Studying whether groundwater quantity and quality studies for rural subdivisions of 25 or more lots should be required as part of the subdivision process.***
- e. Investigating the development of a functional water resources management plan.***
- f. Investigating whether a new zoning classification or overlay district should be created for the protection of significant groundwater recharge areas.***

RECOMMENDATION 3.16: The County should explore strategies to safeguard the quality of the environment, with specific attention to the quality of the aquifer through such things as:

- a. Regularly reviewing applicable ordinances to ensure that the most up-to-date standards for septic system construction are used in Jefferson County.***
- b. Reviewing the Subdivision Ordinance for opportunities that would make the provision of municipal or public sewer service more desirable to developers of residential and commercial developments located in the designated growth area.***
- c. Promoting the efforts of the Public Service District and other utilities to provide service to all lands in the***

designated growth area and those areas of the County located on geological “problem areas”, without affecting the set residential density patterns of development.

- d. Exploring creative remedies to providing sewer service to the areas of the County where soils are poorly suited for septic system installation.*
- e. Promoting alternate methods of sewage disposal.*

Stormwater Management

Current engineering standards are important elements in the recharge cycle affecting the aquifer. In order to prevent and control flooding, Jefferson County’s subdivision and site plan standards require that a development result in no more stormwater runoff being generated on a property due to construction than was present before development began. Stormwater retention ponds found in many neighborhoods is the most noticeable element of this effort.

Retention of stormwater, diverting it from inundating the creeks and rivers, allows for more of this water to seep back into the water table, recharging the aquifer. It is important to note that these retention areas must be appropriately designed so that they do not also serve as a collection pool for potential contaminants any more than is necessary. Therefore, maintaining the highest and most up to date standards for stormwater management designs for quality as well as quantity should be maintained.

NATURAL RESOURCES

In terms of environmental resources, Jefferson County suffers from an embarrassment of riches. Located in the shadow of the Blue Ridge at the confluence of two major rivers, Jefferson County is also one of the most agriculturally productive counties in the State of West Virginia. If we are not careful, we could squander these resources. Effective planning is essential to preserving these resources for use and enjoyment of future generations.

Rivers, Streams and Drainage

Located at the confluence of the Potomac and Shenandoah Rivers, Jefferson County is separated into three major drainage divides by the County’s rolling topography. Between these divides are a network of streams that feed into the two aforementioned rivers and Opequon Creek. Most streams in the County flow in a northwest-southeast orientation toward the Opequon or Shenandoah. Almost all of these streams are spring fed, thus resulting in the intermingling of surface and subsurface waters.

Regardless of their origin, all waters ultimately flow into the lower Potomac River and the Chesapeake Bay. While West Virginia is not a signatory to the interstate cooperative effort to restore the Chesapeake, all runoff generated in Jefferson County ultimately affects that important national resource which is one of the world’s largest estuaries.

The Shenandoah River has been listed by both Virginia and West Virginia as one of their polluted rivers in need of corrective action. Through the Federally mandated Clean Water Act and EPA, guidelines for limiting nitrate and chemical levels in surface waters have been developed.

RECOMMENDATION 3.17: In order to protect the quality of the surface and subsurface waters of the County, the County should consider:

- a. ***Reviewing the Subdivision Ordinance to determine whether existing regulations meet standards for stormwater management practices and design, and amend the ordinance if necessary so that storm water management design is most effective in order to reduce runoff into surface watercourses.***
- b. ***Encouraging farming best practices to reduce agricultural runoff into surface watercourses and sinkholes.***

Sinkholes

Some may find it hard to consider pock-marks in the terrain of the County as a bona fide natural resource, yet sinkholes are an important part of the geologic formation of the County. Sinkholes are the most visibly apparent feature of the Karst geology that lays underneath much of the area. The map on page 47 of this report illustrates the location of known and recorded sinkholes throughout the County, but it should not be interpreted to be a complete inventory.

Sinkholes appear at the surface when the carbonate rock beneath is eroded by subsurface water to the point where the structure collapses, creating a crater on the land surface. The sinkhole itself is the “door” between the environment and use of the surface environment, and the underground water conduits that are part of the aquifer. These sinkholes, therefore, are important environmental features of the landscape as well as vulnerable portals that could inadvertently be used as contamination points to the aquifer, if the land in their immediate proximity is not effectively managed. As of the adoption of this Plan, the County subdivision ordinance lists setback requirements and standards for the protection of sinkholes.

Parkland and Land Reservations as a Means of Protecting Water Quality

The most efficient way to manage stream water quality is to plan for the protection of the natural

land alongside the stream bed. The preservation of interconnected corridors that straddle stream beds achieves a number of economies of scale in ecological terms. A natural flora setback area from the stream bank not only provides an efficient pollutant filter and cooling device for rainwater runoff, with its accumulated pollutants, that drain into the stream, and it also provides a natural corridor for the ecological habitat of native wildlife. If subjected to sensitive, limited amenity development, they also afford the opportunity to provide recreational hiker-biker trails to serve the residents of the area.

Preserving land along stream corridors in their natural state, therefore, is one of the most efficient ways to satisfy a variety of ecological and residential recreation needs, while still allowing tributary land to be developed. Of course, additional parkland throughout the County is necessary to serve the more active recreational needs of the residential population and it should be noted that the section pertaining to parks in Chapter 4 emphasizes that the most pressing priority of the Jefferson County Parks and Recreation Commission should be updating and expanding opportunities for active recreation within the County.

RECOMMENDATION 3.18: The County should investigate methods to protect surface water resources, such as:

- a. ***Reviewing the existing Ordinances regarding stream buffers for ways to enhance their effectiveness in protecting the quality of the streams that they border. This may include the possible use of conservation easements, stream valley open space areas held by homeowners’ associations, and/or possible inclusion of land in the County’s Recreation and Parks Department as part of the subdivision process.***
- b. ***Investigating whether a functional Recreation and Parks Master Plan connecting and supplementing the above, as well as planning for the active recrea-***

This page reserved for map of sinkholes.

This page reserved for map of natural resources.

tion needs of the citizens should be developed by the Parks and Recreation Commission.

- c. Reviewing the standards regarding the treatment of sinkholes in the existing Subdivision Ordinance for possible revision and update.*
- d. Explore opportunities for cooperation with land preservation organizations.*

Other Natural Resources

Caves, scenic vistas, wildlife corridors and cliff areas are just several examples of additional forms of natural resources that contribute to the environmental and cultural mix that is Jefferson County. The topography, geology, hydrology, and biological diversity of the environment is one of the hallmarks that makes Jefferson County the beautiful environment that it is. Unfortunately, not every form of natural resource can be discussed in detail within the context of a Comprehensive Plan.

Caves are generally located on private or protected property, and are beyond the purview of this Plan. Wildlife corridors have not been studied in detail as part of the preparation of this Plan, however effective clustering of rural residential development should have no impact on this element of the environment.

The protection of scenic vistas has been the subject of public comment during this process. During the life of the 1994 Plan, which stated that scenic vistas should be protected through the purchase of easements, the Circuit Court voided the issuance of a Improvement Location Permit (ILP) for a telecommunications tower near Alstadt's Hill, based on non-conformance with the Comprehensive Plan, although no easements were in place.

Should the County identify the protection of scenic vistas as an issue to address, this is best done through the adoption of standards within the ordinances, so that all parties are aware of their rights and responsibilities in this regard.

FARMLAND & OPEN SPACE

The Agricultural Context of the State and the County

Jefferson County is one of the most agriculturally productive counties in the State of West Virginia. According to the 1997 Census of Agriculture, Jefferson County was the fifth highest producing county in the State (as a percentage of statewide production), behind only Hardy, Pendleton, Greenbrier and Grant Counties. It is the second highest producer of crops (including nursery stock) and the seventh highest producer of livestock and poultry. Although it is the sixth smallest county in the state, its rolling, fertile farmland produces an abundant crop compared to much of the rest of the state which is rugged and mountainous.

The role of Jefferson County's farming community is important from a local character and land use sense, and is a significant element of the state agricultural industry. When compared to the rest of the nation in 23 production and land use measurements, the State rates in the bottom half in all but five categories. The state ranks 44th out of the 50 states in total value of agricultural products sold, and 47th in the value of crops (including nursery stock) sold.

Value of Agricultural Production (in dollars)



Source: USDA, 1997 Census of Agriculture.

The Current State of Agriculture in the County

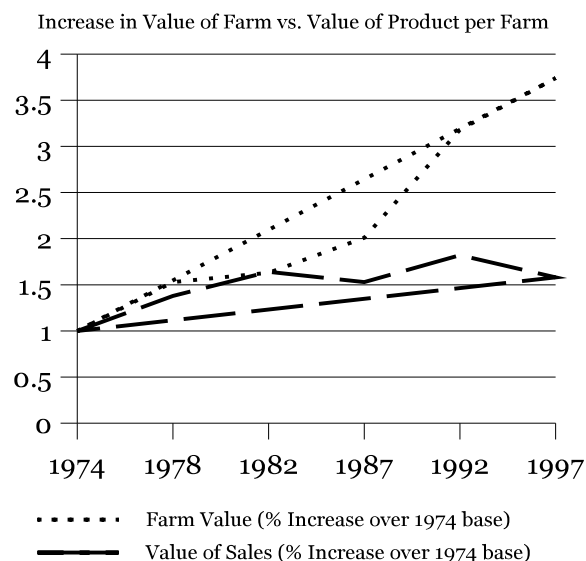
Agriculture has been a cornerstone of the County's historical context. Regardless of whether it is viewed as employment, open space or local heritage, it is safe to say that the role of the farming community is considered important to most County residents.

Two factors increasingly impact the local farm economy and have been squeezing Jefferson County's farmers. First, the growth of the outer suburbs of the Washington DC metro area toward the County has increased demand for land available to develop for housing. This has resulted in increases in the price of raw land in the County. The second is national and international market forces that have resulted in fluctuations in commodity prices that have not kept pace with local land appreciation and production expenses (See chart in Appendix B).

These figures can be summarized in the chart in the next column which shows that commodity prices have not kept pace with farmland prices in the County. Due to the increase in the value of the farmland for residential and commercial development, the return on farming operations has lagged sorely behind the increase in the value of the property on which the crops are grown.

The protection of farmland was an often raised public sentiment during the hearing process for this Plan. It is true that the farming community is concerned with the continuing viability of their industry within the County as land prices soar. It should also be noted, however, that some of this concern also comes from the non-farm community, some expressed their concern about protecting farms are more focused on the issue of open space conservation. In other words, their concern in this area is focused more on leaving the land in its current agriculture use and preserving open space, than direct concern with the commercial viability of farm businesses. If land is maintained in farmland, not only does the farm business continue to operate, but open space is maintained.

The preservation of a rural environment in much of the County (even if done in such a way to accommodate housing development) benefits all County residents. The rural and agricultural areas offer green space, pastoral scenes and some recreational opportunities. Farms contribute to the local economy and are statistically one segment of the economy that pays more in taxes than they use in services. Arguments that maintaining land in farm use helps protect the environment are debatable, however, in that farming operations offer their own unique impacts on the environment.



Source: USDA Census of Agriculture.

Surrendering the entire county entire County to urban or suburban style residential development, even if water and sewer facilities could be provided, is not in the County's long-term financial interest. It is important that the County manage its land use resources so that adequate portions of the County can be dedicated to revenue positive land uses; primarily agriculture and commercial development.

Farmland Protection Tools

One useful tool that has been implemented in other jurisdictions is the purchase of the development rights of targeted farms in order to create blocks of land that are protected from development, allowing

these properties to be available for farm use in perpetuity. Nearby successful examples can be found in Howard and Carroll Counties in Maryland and Lancaster County in Pennsylvania.

In 2002, the State of West Virginia passed enabling legislation that would allow counties to institute property transfer taxes (paid when new deeds are recorded) up to \$1.10 per \$500 of value (capped at \$1,000,000 of value) with the funds to be dedicated to farmland preservation programs.

PDR (Purchase of Development Rights) programs can be quite successful in protecting farmland, if managed properly. Strategies must be created that:

1. trigger grant funding from other sources, maximizing the effect of the funds raised.
2. direct efforts into areas where larger contiguous tracts can be targeted.
3. direct efforts into areas where the quality of soils is optimal, and
4. limit the program to the Rural District so that the County doesn't purchase easements on properties that is has already designated on the Zoning Map as an area targeted for growth.

In other words, these policies must get the most accomplished for the tax dollar spent.

In 2002, efforts to amend the State Code to allow the transfer of development rights from one property to another died in the legislature, but are expected to be resurrected in the future. Such programs, known as TDR programs, allow one property owner to sell the development rights from their property to another property owner, allowing the receiving land owner to increase the permitted density of their property and the development rights on the sending parcel are extinguished. Due to its potential importance to farmland preservation, this plan addresses this, with the understanding that authority for such a program must be delegated by the State Code.

RECOMMENDATION 3.19: The County should investigate mechanisms to foster the maintenance of land in farm uses and stem the erosion in the availability of the non-renewable resource of farmland. Specifically, the County should:

- a. ***Invest in farmland preservation by carefully targeting the purchase of (or receipt of donated) easements on farmland.***
- b. ***Explore the use of transferrable development rights (if authorized by State Code) in order to ensure some tracts are perpetually available for the farming use of future generations.***
- c. ***Support diversified rural land uses by exploring means by which to diversify farming operations. If farming is no longer economically viable, there will be no farms. Examples of this could include (but not be limited to) "value added" processing, landscape contracting businesses, equestrian facilities, agriculture education uses and bed-and breakfast inns.***
- d. ***Improving design of residential development in the Rural District, ensuring that cluster subdivisions are the preferred means by all parties when developing rural tracts.***
- e. ***Investigating the implementation of the property transfer tax authorized in 2002 in order to raise the funds necessary to purchase easements on significant farm properties for their perpetual preservation. Should this program be implemented, the Farmland Preservation Advisory Board should adopt a policy document that ensures that its efforts result in a critical mass of high quality, strategically located farmland is protected in the Rural District from development.***

A Diversified Agriculture Industry

Stewardship of farmland and protection of rural character are feasible only if farming is economically viable. The factors affecting the farm economy can be regional, national or international in scope. Nonetheless, policies implemented at the County level can play an important role in strengthening the farm industry.

Economic viability is key to the survival of farming. However, economic viability is contextual. The 1997 USDA Census of Agriculture reported that 47% of Jefferson County farmers have full-time jobs elsewhere and 57.7% of County farms produced less than \$10,000 in sales annually. Seventy-five percent posted sales of less than \$25,000. This is not unique to Jefferson County. Off-farm employment is becoming a way of life throughout the farming community. As farming is an “economy of scale”, it is the smaller, marginal operations that need attention in order to ensure their continued operation and deferral from development.

The equine industry is not surveyed in the Census of Agriculture. Given the number of horse farms around the County and the presence of a major horse racing venue in Charles Town, the impact of the horse-related element of the farming community is important. Horse farms are found throughout the County and are a critical element of the local agricultural industry, and the horse racing industry has generated many jobs and much tax revenue in the County. The Census also does not take into account agro-tourism, exotic crops and livestock and “value-added” production.

In order to further the agriculture industry, permitted farm-related uses in the Rural District should be liberalized to permit a wide variety of agriculture and horticulture related activities, short of industrial processing that creates hazardous wastes and excessive nuisances. Given Karst nature of the rural environment, and the growing presence of residential developments in the rural parts of the County, the need for environmental protection and protecting adjacent residential uses must be

balanced with the agricultural industry’s need to diversify operations.

Please note that the economic context of farming is addressed in more detail, separately in the section of this chapter pertaining to the economy.

Residential Growth Compatible with Farming

Current Zoning Regulations in the Rural District offer little direct consideration to the relationship of new housing developments to existing farming operations. Except for those properties developed under the LESA system, most lots in the Rural District are recorded with a lot size of three acres or larger. The current density parameters in the Rural District actually discourage clustered development. When a property is fully developed in accordance with the one lot per 10 acre provision, anywhere from a third to all of the parent tract is committed to building lots and infrastructure.

Clustering involves development on these properties with lots of 30,000 to 60,000 square feet located in less productive areas of a farmed parcel. At one lot per fifteen acres of land, however, the permitted density of a clustered subdivision is less than of a “by right” subdivision. Clustering would allow the owner of a farm or environmentally sensitive tract to develop his parcel to the maximum density permitted by the Ordinance while ensuring that less of the overall parcel is consumed compared to what the Ordinance currently requires. However, that such requirements should be flexible because it is not always practical to cluster on the lesser productive soils because these soils are also usually not very conducive to installation of septic systems.

While farmland can be better protected by clustering, clustering ordinances often are more geared toward rural landscape protection and not toward farmland protection. Many rural parcels with mature tree stands and other environmental features which are not farmed actually benefit more from cluster development than farmed parcels.

Use of natural features in the development area and perhaps dedicated open space lots could further buffer residential uses from the continued farming operation. Also, strategic location of clustered housing development can have a reduced visual impact on the agricultural area of the District.

RECOMMENDATION 3.20: In order to ensure that sufficient tracts remain available for open space considerations and continued or potential use for farming, the County should study and enact amendments to the Zoning Ordinance that make clustered development the means of developing properties that is favored by property owners and developers.

HISTORIC PRESERVATION

Jefferson County is an area rich in historical and archaeological interest. It has arguably been referred to as the most historic rural county in America. As part of our country's first western frontier, it was settled by Europeans before 1720 and was inhabited by Native Americans for several thousand years before.

Surveyed by a young George Washington and host to seven Washington family homes and three Revolutionary War generals' residences, Jefferson County's rich early history in the areas of transportation, farming, the military and industry are still evident in the structures and other resources that survive. As one of the major areas of military maneuver and the site of the John Brown Insurrection, the County's place at one of the cross-roads of the Civil War forever links it to many of the important events that occurred during our Nation's greatest test of endurance.

Given its size and population, Jefferson County has been fortunate in the amount of historic preservation projects that have been implemented around the County. The effort to preserve the fire engine house of the Harpers Ferry Armory (a.k.a. "John Brown's Fort) in the late 1890s is among some of the earlier concerted efforts at preserving a historic building in the United States. From Harpers Ferry National Historical Park to the historic districts of Shepherdstown and Middleway, Jefferson Countians can be proud of the number of historic resources that have been preserved here. The County has an active historical society and one of the finest county history museums in the area. Currently, 5 districts and 58 sites in the County are listed on the National Register of Historic Places. "Traveller's Rest", the home of General Horatio Gates, is the County's only officially designated National Historic Landmark.

Over the years, a "windshield survey" of historic and vernacular buildings was created, and is currently maintained by the Historic Landmarks Commission.

History tourism is a significant element of Jefferson County's economy. Harpers Ferry, the Appalchian Trail, Shepherdstown, Antietam and the C&O Canal all serve to draw visitors to the County and surrounding area. The Jefferson County Landmarks Commission was reestablished in 1980 to be a central clearinghouse for preservation activities in the County, from reviewing nominations to the County and National Registers of Historic Places, to restoring and interpreting the Peter Burr Farm, to providing input regarding developments.

Regardless of the successes of the past, as an increasing number of tracts are developed for residential, commercial or industrial uses, existing unprotected historic resources become endangered. Existing processes should be evaluated for their ability to address this growing issue.

RECOMMENDATION 3.21: The County should examine existing land use regulations and Planning Commission resources and explore regulation amendments and policies that encourage preservation of historic resources. Some amendments and policies the County may want to investigate may include:

- a. Rewarding the retention and restoration of historic buildings during the subdivision process with limited increased density to offset the expense of preservation.***
- b. Re-evaluating zoning restrictions on the adaptive reuse of historic buildings county-wide in order to encourage their continued occupancy and maintenance.***
- c. Requiring documentation of significant structures that are to be removed due to development activity, buffering of adjacent historic resources and provision of amenities that encourage continuity and context within a development located on land of historic significance.***
- d. Creating historic site development incentive guidelines within the***

Subdivision Ordinance pertaining to the development of the County's more significant historic properties that address the preservation and incorporation of landscape and man-made features in development plans.

RECOMMENDATION 3.22: The County should investigate creating and maintaining an inventory of known cemeteries in the County (in the context of the cemetery as a land use) and explore the adoption of amendments to the Subdivision Ordinance that afford protection, access and buffering of cemeteries when located on properties slated for development.

RECOMMENDATION 3.23: The County should promote the update and improvement of the "windshield survey" into a county-wide inventory of historic properties, with inclusion on the list being on a voluntary basis and utilizing volunteer efforts to complete the inventory.

RECOMMENDATION 3.24: Encourage and promote the use of Federal and State Tax Credits and grants from all available sources for the rehabilitation and reuse of historic structures within the County and endorse the efforts of property owners attempting to register their properties with the National Register of Historic Places.

This page reserved for a map of National Register of Historic Places properties.

LIGHTING, SIGNAGE AND NOISE

With the growth of commercial and residential development in the County in the 1990s, the issue of commercial lighting and business signs has been raised as an issue by elements of the community, with the concern that a proliferation of such utilities will damage the rural character of the County and the small town character of its municipalities.

Measures can be codified in the Ordinances which reduce the amount of glare, through the use of full cut-off light fixtures and revised sign regulations that permit businesses sufficient exposure without turning commercial areas into “neon orchards”. Due to property rights and enforcement volume concerns, this Plan specifically does not address lighting maintained by homeowners.

Often referred to as a “night sky ordinance”, amendments can be codified that address parking lot and other forms of commercial lighting, as well as illuminated signage, so that the County can maintain its rural nighttime environment.

Another issue in this area that has drawn attention in recent years as we grow physically closer to one another is that of noise. Currently, there is no noise ordinance in effect in the County. The generation of non-agricultural noise in all areas of the County, except the Industrial-Commercial District should be addressed by the County.

RECOMMENDATION 3.25: The County should evaluate the existing Ordinances for ways to tighten commercial lighting and sign regulations in order to reduce the effect of excessive lighting of commercial and institutional facilities on the nighttime environment and the visual impact of excessive signage along commercial corridors. The County should also consider reviewing its regulations pertaining to the use of street lights in subdivisions in the Rural District.

HOUSING AFFORDABILITY

Jefferson County has historically been a rural, agrarian community with a population center that contained a number of light manufacturing facilities. Land and housing values remained low for years. Beginning in the 1970s, however, Jefferson County became the destination of those who worked in the metropolitan areas, yet desired more reasonable housing costs.

This pattern has continued throughout the 1980s, 1990s and 2000, to the point where 50 percent of the County workforce commutes to destinations in Maryland and Virginia to their places of employment. Given the location and market factors of their workplaces, these County residents enjoy higher income levels, as reflected in 2000 census figures.

Housing cost, as a function of the free market, is based on 1) location and 2) available money versus available product. While previously considered a remote area, Jefferson County is quickly becoming an ex-urb of the urban corridors to the south and east. Therefore, Jefferson County’s distance from these corridors is becoming less and less of an issue as the suburban areas grow toward us, and more potential residents are willing to travel to Maryland and Virginia to work. As the importance of location is relevant to real estate prices, Jefferson County’s newfound proximity to major development corridors has increased its standing in relationship to location, affecting cost.

The second is simple economics. With the average County household having a higher income level than the national average, the average existing (or future) Jefferson County family can afford to spend more on housing. Therefore, builders have increasingly begun to accommodate this demand. As a result, real estate values, while still noticeably lower than in Maryland and Virginia, have been on a steady increase for years. For data on this issue, please refer to the housing cost chart found in Appendix A. In 2001, the average cost of a single family dwelling in the County was \$136,500.

As we plan for the future of the County's development, it is anticipated that home values will continue on a natural rate of growth. Also, effective planning usually impacts housing costs as well. Impact fees will be passed on to the home buyer. The cost incurred by a developer to provide additional amenities in a development will also be passed onto the home buyer. Reducing the number of houses that may be placed on a given property will also impact housing costs as construction and development cost is spread across fewer units.

While the County has an above average household income level, Jefferson County is still the home of lower income families; many of whom have been in Jefferson County for generations. The County's poverty rate, per the 2000 Census, stood at 10 percent. While this is the second lowest rate in the state (behind only Putnam County), one County resident in ten lives below the poverty level.

Not all Jefferson High School graduates move onto college, but locate work in the County, and attempt to build a future. Some aged citizens find it difficult to continue to maintain their homes due to property taxes that have increased due to the increased value of their homes and increased utility and maintenance costs. Unfortunately, the ever increasing cost of housing pushes more and more lower income Jefferson Countians farther from the American dream of home ownership.

The issue of housing affordability can only be indirectly addressed by the County. The County is not in the business of operating public housing facilities. Therefore, efforts must be directed within areas that the County has some latitude or authority to consider this matter.

RECOMMENDATION 3.26: The County should explore the possibility of incorporating provisions in an impact fee program (if one is adopted) that waives or reduces the fee for housing that is constructed to serve lower income level residents.

RECOMMENDATION 3.27: The County should encourage the creation of more affordable housing units.

ECONOMIC DEVELOPMENT

What is now Jefferson County was first settled by German, Dutch and Scottish pioneers in the early 1700s. These early settlers were farmers and craftsmen who carved a community out of wooded mountains, hills and valleys. One significant asset of the Shenandoah/ Potomac Water Gap is that it has historically been the crossroads of north-south traffic through the Cumberland/Shenandoah Valley and the east-west traffic for those traveling from the eastern states to the midwest. These factors influenced the decisions of railroad and canal companies to establish lines in or near Jefferson County in the early 1800s. This location meant employment for its citizens and ready market access for its farms and businesses.

Another significant factor during the early development of the County was the availability of native iron ore, which, together with the availability of good transportation, led to the selection of Harpers Ferry as the site for one of the first two United States Armories (the other being in Springfield, Massachusetts). This industry, the first indication of the prominent position manufacturing would have in the local economy, brought employment, prosperity and prestige to the County. During this time, the Shenandoah/Cumberland Valley area also served as the breadbasket of the nation. The destruction of this industrial base during the Civil War and the economy and demographic trends of the post war era seriously hampered economic growth in the County.

The second economic period can be said to have begun in 1880. Agricultural and livestock production became far more specialized and commercially oriented. Lime and stone quarrying along with their supporting processing industries became major employers. Textile mills and durable goods manufacturing also flourished during this period. The resulting diverse opportunities for employment and economic stability allowed the County to prosper.

In the modern era after World War II, manufacturing and agriculture have remained major industries, although some decline in these sectors and the quarrying and railroad sectors has occurred over the last 15 years. This period has seen the rise of tourism, warehousing and Federal installations as major players in the local economic mix.

Current statistical data pertaining to the economy of the County and the quality and quantity of its resident workforce can be found in Appendix A of this report.

Agriculture

This portion of the Comprehensive Plan addresses farming in its economic context. It should be noted that farming is a significant land use issue, and as such, is also addressed in that context elsewhere in this chapter.

In 1997, approximately 73,000 of the total 135,040 acres of land in Jefferson County were actively farmed. This acreage produced some 19.41 million dollars worth of farm products annually, which represents a minuscule increase over 1987 figures, on 10,000 acres less land under cultivation than was farmed in 1987. This change is a result of more efficient farming practices, coupled with stagnating or declining prices for farm products.

A table summarizing farm statistics for Jefferson County for the years 1974, 1978, 1982, 1987, 1992 and 1997 is found in Appendix B of this document. This data is taken from the U.S. Department of Commerce, Bureau of the Census. From 1982 to 1997, the amount of land in farms and the number of farms have declined by 16.7 percent and 10.3 percent, respectively.

Agriculture in the County is diverse. There is significant production in three different areas: dairy products, fruits and grains (principally corn). Generally, dairying and cattle farming has been on a decline over the last quarter century, with animal populations decreasing 38% and 24.2%,

respectively. Orchardring has been in serious decline, with the number of acres cultivated nosediving by 56.7% during the same period. Livestock and poultry production account for 57.3 percent of County agricultural production value, with crop production making up 42.7 of production.

A review of the information on farm operators in the Census of Agriculture show that most Jefferson County farms are family owned. The number of farmers who have lived on their farms for five or more years has been fairly steady, ranging from 85% to 88.6% (1997 figure). See table regarding "farm tenure" in Appendix B of this report for more detailed figures.

There are other changes in the characteristics of farms that may indicate future trends. An increasing number of farmers have listed their principal occupation as something other than farming. Between 1974 and 1997, this figure increased from 33.8% to 46.8%. 13,644 acres were removed from production during this 23 year period. This large proportion of farms being operated as a second occupation suggests that many farms are no longer economically viable and are vulnerable to conversion to non-farm use, which would add to this 13,644 acre figure, plus whatever amount of land that may have been converted since 1997.

Another factor that has a negative implication for farming is the increasing average age of West Virginia farm operators which, in 2000 stood at 57; a full year's increase over 1999. These and other related issues are more fully discussed in the Agriculture - Land Use section of this Plan.

To summarize, the agricultural economy of Jefferson County, like that of the region, has been struggling in recent years, due mostly to agricultural market forces and national policies, and the financial attraction to sell farmland for conversion to other use. The 1994 Comprehensive Plan noted with concern several trends reported in the U.S.D.A. Census of Agriculture; concerns which have been reiterated here in this section.

Declining sales value of farm products, an increase in idle and converted farmland, and the increasing difficulty in maintaining a farm that is financially viable. While some statistics of concern have stabilized since the 1982 and 1987 Censuses, declining production value and land conversion remain significant concerns about the future of agriculture in the region.

Economic viability is key to the survival of farming. However, economic viability must be understood in the context of the variety of farm enterprises in the County. The 1997 U.S.D.A. Census of Agriculture reported that almost half of Jefferson County farmers do so part-time and almost 58% of County farms had annual sales of less than \$10,000. This is not a phenomenon unique to Jefferson County as our farmers suffer from the same low commodity prices that affect farmers nationwide. Off-farm employment is becoming a way of life throughout the farming community. Part time farming may not have the economic impact of the more substantial operations, but it is essential to other goals of farm preservation - protection of the rural landscape and quality of life, and stewardship of agricultural land.

Since the agriculture industry has a significant “part time” element, its impact on the local economy may tend to be understated. The value of farm products sold in the County is underestimated in the Census of Agriculture as that program does not track the horse industry, a significant presence in this County.

Diversification of the Agriculture Industry

Simply being a “first stop” on the production chain will not sustain the Jefferson County agriculture industry indefinitely. Therefore, new and innovative ways of generating farm income are necessary to maintain the viability of many farms in the County.

The legacy of the County has been the symbiotic relationship between the farmed areas and the small scale merchant and service economies of the municipalities. Unfortunately, this relationship is

beginning to break down under the twin pressures of global market price constraints on small scale farming operations and increasing suburban-style residential and commercial land development. Thus, the result has been a decline in the agricultural industry in the last 15 years which shows no hint of reversing.

In spite of these problems, there remains an active core of farmers within the County who desire to retain and enhance the agrarian economy and are actively engaged at the time that this Plan was written in how best to bring this about. It is necessary, however to proceed with this Plan to reach some conclusions and recommendations without the benefit of this input.

Maintaining the agricultural industry should be a significant element in the economic strategy of the County. The single most significant step that the local farming industry can take to improve its market position is to explore “value added” opportunities.

Simply put, draw the processing of commodities into agricultural goods closer to or back onto the farms. In order to further the agriculture industry, permitted farm-related uses in the Rural District should be liberalized to permit a wide variety of agriculture and horticulture related activities, short of industrial processing that creates hazardous wastes and excessive nuisances.

RECOMMENDATION 3.28: In order to protect the long term viability of the agriculture industry in the County, The County should encourage the diversification of the industry in Jefferson County by:

- a. Reviewing the Zoning Ordinance for ways of permitting value-added and non-traditional agriculture-related activities on farmed properties.***
- b. Inserting language in the section of the Zoning Ordinance governing the Rural District that farming is a permitted land***

use in this district and with that use there will be side effects of such a use that are disturbing to residential development.

This section on the economic context of farming should be read in conjunction with the section of this chapter that deals with the land use implications of farming, as together they serve as a coordinated strategy for protecting the farming component of the community.

Employment and the Local Economy

One of the most important components of the Comprehensive Plan is discussion on the existing state of the local economy and strategies for effectively managing that economy into the future. The welfare and prosperity of local residents depends on the local and regional economy. This part of the report is broken down into three segments: 1) labor force; 2) business and industry, and 3) tourism.

Labor Force

As with other facets of the County, there have been some significant changes in employment characteristics due to the overall growth of the population. The total available labor force (persons between the ages of 16 and 65) in Jefferson County increased 58% between 1970 and 1980, and another 39% between 1980 and 1990. During the last decade of the 20th Century, this figure increased dramatically by over 67% to 27,400 persons (2000 Census figures). A table illustrating this distribution can be found in Appendix B.

Jefferson County has the second lowest unemployment rate in the State and its rate is significantly below that of the nation. This is due predominantly to the growth of employment centers within a manageable commute of the County (addressed elsewhere in this section). Previously remote from any large employment centers, only the most hearty commuter would live in Jefferson County and commute over an hour to

work. With the growth of Dulles and Frederick, major employment centers are within an hour's drive of most of the County. Over the last 25 years, the unemployment rate in Jefferson County has exceeded 8% only in four years and has been as low as 2.9%. As of the adoption of this Plan in **MONTH, YEAR**, the rate was **NUMBER** percent. Employment prospects of County residents are good, although dependent on neighboring areas.

Many of Jefferson County's residents are employed outside of the County, as reflected in the following chart. These figures are based on a study completed in 2001 by Shepherd College for the Jefferson County Development Authority.

Work Destinations of Jefferson County Residents	
Jefferson County:	50%
Other WV jurisdictions:	5%
Maryland:	18%
Washington County	12%
Frederick County	43%
Montgomery County	34%
Other MD jurisdictions	11%
Virginia:	21%
Loudoun County	50%
Fairfax County	32%
Clarke County	8%
Other VA jurisdictions	10%
District of Columbia:	6%
Source: Jefferson County Economic Development Authority.	

This statistic is bothersome to the economic mix in Jefferson County. The livelihood fully half of the County's work force is dependent on the economies and economic development policies of jurisdictions beyond the County's influence.

As this chart (and the table in Appendix B) shows, the percentage of Jefferson County's residents employed within the County has dropped from 59% in 1980 to 51% in 1990 to 50% in 2001. As was discussed in the 1994 Comprehensive Plan, the County, more and more, has become a bedroom

community. In 1980, four times as many workers left the County to find work as those that came into the County for the same purpose (4,912 to 1,176). This is indicative of a significant weakness in the economic base of the County.

Although new residential growth introduces new tax dollars into the public coffers, thus keeping the levy rate stable, existence as a bedroom community can be expected to have long range consequences if the circumstance is not managed properly. While new development and the revenues generated by that development keeps demand for new taxes to cover services lower, over time, in a growing County, demand for new taxes to meet service needs will increase. Housing generally uses more in government services than it pays for, while farming and commercial operations generally pay more in taxes than they consume in services. Some of the financial gain (business and commercial property tax revenues) is lost when the businesses that employ County residents are located in other jurisdictions.

Wages and Salaries

Each of the last three decades have seen significant shifts in the occupations and industries of residents in the County. Overall, white collar employment increased from 39% to 56% of all people employed, while blue collar employment declined from 38% to 26%. This shift from blue collar occupations to white collar generally coincided with national trends; the greatest change being during the 1990s due to the “new economy” and technological revolution. In 2000, the median household income in Jefferson County at \$39,607.

White collar workers accounted for 49% of the employed persons in Jefferson County, aged 16 and over, in 1990. In 2000, that figure stood at 56%. The one exception to this trend is the increase in sales workers, which increased almost 200% in the 1980s. For a more detailed breakdown of the means of employment of County residents, please refer to the table in Appendix B.

Business and Industry

Historically, small business development in the region has taken place in close proximity to housing and population growth. Earlier development and transportation trends created an economic mix that was geared to serve the needs of the local community. Hence, the older, more established small business firms are located in Charles Town and the other municipalities.

In recent years, population growth and transportation improvements have generated new markets for small businesses. Multi-purpose shopping centers have been built on the outskirts of Charles Town and Shepherdstown, thereby creating competition for downtown businesses. In some instances, shopping centers have attracted downtown merchants to suburban locations. In addition, relatively easy access to Maryland and Virginia fosters shopping in Hagerstown, Frederick, Martinsburg, Leesburg and Winchester, retarding small business development in the County.

Jefferson County's Largest Employers - 2002

(Employing 100 or more persons)

<u>Employer</u>	<u>In-County Employees</u>
Jefferson County Schools	800
Charles Town Races & Slots	640
Royal Vendors	600
AB&C Group, Inc.	450
Jefferson Mem. Hospital	400
Shepherd College	265
Dept. of the Interior - NPS	240
Norm Thompson Direct Mktg.	200
Halltown Paperboard Co.	175
Kidde Automated Sprinklers	150
Dept. of the Interior - NCTC	149
DALB, Inc.	134
Jefferson County Government	107
Clarion Conference Center	100

Source: Jefferson County Development Authority

While recent small business development on the fringe areas has helped increase the variety of goods and services available to area residents, it also heightened the competitive disadvantage of the traditional central business district, most notably Charles Town and Ranson. Although the municipalities are not within the planning jurisdiction of the County, it should be noted that having its major urban center handicapped by an abandoned, neglected or under-used commercial core is not in the County's best interest.

RECOMMENDATION 3.29: The County should explore zoning mechanisms or other incentives by which larger, consumer oriented commercial ventures are encouraged to redevelop abandoned or underused parcels within the municipalities before building on undeveloped land outside of the urban centers, in order to help the redevelopment of the commercial core of those towns.

Nonetheless, the outlook for small business development in the region is promising. Trends in those sectors of the economy traditionally associated with the small business community, namely retail trade, wholesale trade and services, tend to follow residential development. Construction trades have grown to meet demand for residential construction. Retail and service businesses have grown to meet the increasing demands of a growing population base.

Existing County Economic Development Efforts

In the 1980s, the County purchased 380 acres of land between Ranson and Kearneysville to develop into an industrial park. In 1979, the County Commission created the Development Authority to oversee this process, and an executive director position was created and filled. In doing so, the County essentially became a player in the private sector, competing with other commercial land owners for potential clients. The Authority also serves a second purpose of promoting economic development. In fiscal year 2002, the Authority's annual budget was approximately \$200,000.

Mission of the Development Authority

"to provide an increased and diverse tax base for Jefferson County, and to provide new employment opportunities for our citizens through the attraction of medium-sized light manufacturing and other types of business, and through the retention and expansion of existing businesses."

Since its inception, the County's efforts to develop and market the Burr and Bardane Industrial Parks has resulted in the development of 231 acres of its 460 acre area. Of the 21 businesses that have located in the parks, 7 were existing County-based businesses which relocated (and/or) expanded within the Park. Fourteen businesses have been new operations moving into the County.

It is the conclusion of this plan that the County's efforts in this area to this date have been unsuccessful. While admittedly, the County has certain access and infrastructure issues that make efforts to lure new non-retail/service businesses to the County more of a challenge, more could have been made of the opportunities available and budget allotted to pursue this goal.

As the County more and more becomes a bedroom community, a new strategy for traditional economic development efforts is necessary. Continuing the existing strategy would be an egregious waste of tax dollars. Jefferson County needs to get out of the land development business. Since the land has been owned by the County and removed from the tax rolls anyway, there would be no harm to explore offering property tax waivers to potential new businesses in order to make the facility more attractive to potential developers. Essentially, the County should "cut its losses" and get out of the land development business, making the most of the existing resources as it exits.

Now, more than ever, it is important that new businesses be drawn to the County to offset the "taxable net-loss" residential development with

commercial and industrial development. As both a public sector promoter and a private sector player, the County is poorly coordinated and internally conflicted in this effort and should focus on the role of the promoter.

RECOMMENDATION 3.30: The County should explore reconstructing its current economic development efforts. As part of this exploration, the County should consider:

- a. Creating an “Economic Development Coordinator” position that is employed directly by and reporting directly to the County Commission with the sole mission of aggressively recruiting new business to the County, and***
- b. Placing the remaining land in the Burr Industrial Park for sale with a major regional commercial real estate marketing firm with the purpose of attracting a (or several) major employer(s) with possibility of “fire sale” land costs and property tax waivers so that the County can exit the land development business and draw major employers that could provide significant in-County employment opportunities to County residents.***

The Tourism Industry

History, culture and rural beauty combine to make Jefferson County an attractive area for travel and tourism. The area’s close proximity to the major population centers of Baltimore and Washington enhances this potential. The rural, mountainous confines of the Eastern Panhandle are viewed by many as a haven of rest and relaxation and an escape from the urban environment. In most cases, though, the visits have been one day trips to Harpers Ferry, the Charles Town Races and Slots, Summit Point Raceway or to the Mountain Heritage Arts and Crafts Festival.

The potential of the tourism industry is likely the single best pool of resources that the County could

draw on for economic development that creates employment and brings dollars into the local economy from the outside. With the pool of resources available, from the historic resources of the municipalities, Washington Heritage Trail and National Park, to the environmental resources of the Shenandoah and Potomac Rivers, and to the County’s racing circuits, the County has the basic building blocks around which an excellent tourism-based destination could be built.

Promotion, development and enhancement of these resources are necessary for this industry to blossom, as few persons equate that the various resources could be combined into a multi-day visit. Promotion is necessary to get the word out to the traveler of the many recreational opportunities available in Jefferson County. Development of existing recreational opportunities and introduction of new ones can only benefit the local tourism industry as a whole as it will draw a greater pool of visitors to the County. Enhancement (through the provision of better facilities, programs, etc.) is also part of this mix.

The County has several major advantages for the development of its tourism industry. The principal one of these is its location. A major segment of the U.S. population is within a one day drive, and the metropolitan areas of Washington, Baltimore, Philadelphia, Pittsburgh, New York, Cleveland, Richmond and Raleigh-Durham are within 300 miles of the County. Given the service driven nature of the tourism industry and the County’s proximity to so many people, coupled with the excellent resource base on which the County could develop this industry, the tourism industry is likely the brightest option for the emphasis of economic development efforts.

Since the 1994 Comprehensive Plan, the single most important change to this industry has been the introduction of state-regulated gaming machines at the Charles Town Race Track. This facility is undergoing a transformation where better and larger facilities are being constructed, including the first multi-level parking deck in Jefferson County

history. New hotels and gaming areas are planned, and this facility has become a major lynch pin in the local tourism economy. Improved facilities draw more visitors who stay longer, as evidenced by the one or more hotels that the racetrack plans, which will predominantly cater to the track clientele. It should also be noted that, given its nature as a state-regulated activity, the success of this facility has directly impacted the local economy and tax structure.

The active recreation (rafting, hiking), history, gaming and racing segments of the local tourist industry are quite diverse in their nature and, as such, could be better coordinated to perhaps capitalize on the visitor base drawn to the County. Perhaps a visitor who planned to come to Jefferson County for one day to visit one of the raceways would consider making a weekend of it by visiting Harpers Ferry or taking a rafting trip if these options were better known by the traveling public.

RECOMMENDATION 3.31: The County should endorse and assist (when possible) efforts to coordinate tourism marketing in the County in order to lengthen the stay of those visiting Jefferson County.

RECOMMENDATION 3.32: The County should emphasize the recruitment of new tourism based businesses to the County in order to expand the recreational offerings available to the traveling public.

Future Economic Development

While the tourism industry is the most readily developable industry within the County, this Plan by no means suggests that other elements of economic development should be ignored. A well diversified economy is an asset to a community. Any community that becomes dependent upon one or two industries realizes major economic and societal difficulties if its primary industry or industries fall on hard times, or if that industry is changed to a degree where it effects the economic mix. The mechanization of the coal industry (and subsequent reduction in the need for mine workers)

in southern West Virginia is an example of this problem.

It is equally important to note that the tourism industry, while the County's most workable option for a focus of its economic development strategy, is an industry dominated by lower wage service oriented jobs. As such, it is not wise to focus all economic development attention on this area. With an educated, trained workforce that daily leaves the County in large numbers for better paying, more technical jobs in Maryland and Virginia, the County should attempt to draw business and industry to the County so that its residents have more local options for employment to consider before commuting out of the County daily.

One industry that has a relatively low profile in the County, but nonetheless is a viable contributor is the information-technology industry. Operated from small home offices, these businesses "fly under the radar as a land use", but their circumstances make them a perfect fit in the local economy. With the advent of the internet, these types of businesses are not dependent on being in the close proximity of transportation hubs or major employers. These types of businesses are regulated by the cottage industry and home occupation standards set forth in the Zoning Ordinance.

RECOMMENDATION 3.33: The County should continue to court the introduction of new industrial and commercial development to the County in order to diversify its economy, mitigate possible long-term problems of being a bedroom community and provide quality employment opportunities to its well trained and educated workforce.

Up to this point, Jefferson County has been, somewhat the center of a ring of commercial and industrial development in the region. The I-81 corridor from Hagerstown to Winchester, The VA-7 corridor in Loudoun County, Dulles and Frederick areas have all experienced healthy industrial and commercial growth. Jefferson County needs draw similar development and fill in this ring.

As previously stated, lack of good highway access has been cited as a restraint on business growth in the County. The Charles Town bypass and reconstruction of the US 340 bridge over the Shenandoah River have been completed, but the completion of the widening of WV 9 to four lanes through the County has been slowed by a litany of lawsuits. Currently, no road within the County is greater than two lanes at any County boundary. Completion of WV9, in addition to the planned widening of US 340 from the bypass to the Clarke County line will significantly improve highway access to Jefferson County.

Rail access to the County is very good with a CSX line running from Harpers Ferry west through the County and with the Norfolk and Southern Railroad line running north-south through the County connecting Hagerstown, MD with Front Royal, VA, where the Commonwealth of Virginia operates an “inland port facility”. Other secondary rail lines are also located within the County. Air transportation of cargo is available through the Eastern West Virginia Regional Airport in Martinsburg. Access to this facility will be significantly improved with the improvements to WV 9.

RECOMMENDATION 3.34: The County should advocate the improvement of transportation links within the County in order to improve the County’s position to attract commercial and industrial development to offset growing residential development.

Industrial/Commercial Land Availability

The total acreage of property zoned for industrial and commercial uses is shown in the next column. Some 6,200 acres of land are located in these districts, which currently also permit residential development, thus placing development pressure on those properties, competing with residential development. While a small percentage of the County, this amount of land can provide a significant boost to local employment options if high employee-density type businesses (manufacturing, office uses, etc.) are procured for

these areas. The County, unlike most of the State, with its rolling terrain is most suitable for industrial development.

Currently, the Jefferson County Zoning Ordinance, embodied in the Land Evaluation and Site Assessment (LESA) System, provides for the issuance of a conditional use permit for industrial uses to properties outside of these zoning districts, if the process shows that the property meets the criteria set forth in the Ordinance. The amount of land that could potentially meet these requirements fluctuates based on 1) amendments to LESA criteria and 2) other development that might change the LESA point assignment to properties. As such, this number cannot be predicted.

If the County adopts a conventional zoning plan, industrial and commercial development would be limited to tracts specifically zoned for it. Should a need for more commercially and industrially zoned land become apparent, the zoning map could be amended by the County Commission to approve new tracts for these districts where infrastructure, access and services dictate that they would best be located.

Existing Industrial/Commercial Zones		
Zoning District	Acres in District	Percentage of County
Industrial/Commercial	3,000	2.2
Mixed Use (R-LI-C)	3,200	2.3
Source: Jefferson County Department of Planning, Zoning and Engineering		

Another possibility is perhaps considering creating conditional use permit criteria within a contemplated conventional zoning ordinance that would allow the approval of industrial sites in the Rural district based on hard standards (for example, requiring the facility to be adjacent to and utilize a rail line).

There are two organizations in the County promoting economic growth. They are the Jefferson County Development Authority and the Jefferson County Chamber of Commerce. The Development Authority was created in 1979 for the purpose of promoting, developing and advancing the prosperity and economic welfare of the County and to encourage and assist new businesses and industry. To this end, they foster and support applicants in their attempts to obtain economic development funds from the State government. In 2001, three projects received funds through the State Legislative Budget Digest.

Largest Industrially and Commercially Zoned Tracts - Undeveloped and Underdeveloped, 2002

<u>Name</u>	<u>Location</u>	<u>Acreage</u>
Rippon Indust. Tracts	Rippon	292
Burr Industrial Park	Kearneysville	229
Winchester Storage	Annexed to CT	198
Lloyd	Annexed to R'n.	153
Rhami Tract	Charles Town	136
Lloyd	Annexed to R'n.	130
Weller	Halltown	70

Tracts are in I-C and R-LI-C Districts, unless noted as annexed.
Acreages approximate. R'n. denotes City of Ranson.

Source: Jefferson County Development Authority, DPZ&E

The Development Authority has prepared brochures and advertisements in national trade publications, including *Plants, Sites and Parks*, *Business Facilities* and *Global Corporate Expansion* to promote industrial locations in the County. The Development Authority, however, following trends in the site selection process, has focused more recently on improving the Authority's website and encouraging access to it through such services as DestinationSouthlink.com and the National Association of Manufacturers. With offices in the Bardane Industrial Park, it has also been responsible for the marketing of County-owned industrial areas.

The Jefferson County Chamber of Commerce is a private organization of businesses funded through

its membership. Its objectives are to stimulate the expansion of business and employment opportunities, to promote economic activity and local prosperity. It also serves as a clearinghouse for information on the County.

RECOMMENDATION 3.35: The County should pursue potential users of industrially and commercially zoned land that are high "employee dense" businesses in order to maximize the employment potential of the amount of land the County has allocated for those uses.

RECOMMENDATION 3.36: The County should formulate a stated economic development and business recruitment strategy that emphasizes tourism development and industrial/commercial development that provides optimum levels of new employment opportunities for County residents, while also addressing the importance of maintaining the agrarian industry.

JEFFERSON COUNTY - 2020

This section consolidates the information contained in the rest of this Plan into recommendations regarding how the land use patterns of the County should be set in order to best implement the policies of this Plan. These materials and this advice include the input of concerned members of the community obtained throughout the Comprehensive Plan review process, the input of local, county and state agencies, and the findings made by the Planning Commission resulting from studies conducted by a consultant retained by the Planning Commission.

In order to protect the quality of the water supply, create a positive residential environment and safeguard the existing rights of landowners, this Plan recommends the following strategies that would affect the patterns of land use and residential development within the unincorporated areas of Jefferson County.

The Rural District

LESA-based Development in the Rural District

In 1988, Jefferson County adopted the first countywide zoning ordinance in West Virginia. After an initial proposal for conventional zoning was defeated at referendum in 1976, a more flexible system was implemented in 1988.

In order to accomplish this, a zoning ordinance was proposed that permitted certain uses in a small number of zoning districts, with a process that allowed property owners to propose many other types of uses on particular properties if they received a “conditional use” permit from the Planning Commission. This process also included a development review system in which higher density subdivisions may be permitted in the Rural District, provided that the site and the proposed development passed a weighted point-system which analyzed the proposal’s appropriateness for development based on size of the property, quality of soils, surrounding land uses and proximity to public services. Jefferson’s ordinance was patterned on one that was adopted by Hardin County, Kentucky in 1984 but replaced by a traditional zoning ordinance in 1995.

There are two variables that have arisen since the initial adoption of this process, however that have skewed development in the Rural District pursuant to the requirements of the LESA system. These variables have resulted in a “leapfrog” effect of properties qualifying for conditional use permits while several intervening properties between the site and existing developed areas remained undeveloped.

First, the growth of private water and sewer services coupled with the emphasis on providing those services in order to obtain a conditional use permit have essentially opened all of the Rural District to which these services can extend to a development density of one unit per one acre of land. The second is the soils assessment portion of the system as it relates to the areas east of the Shenandoah River and along the Opequon Creek.

These lower quality soils make these areas score well in the soils assessment portion of the evaluation. Coupling of these two issues would open areas that are inappropriate for significant levels of development to the pressure that they be used for major housing construction.

The LESA system has suffered from poor public perception in recent years. The Planning Commission finds the following problems with the use of the LESA system:

1. **Lack of Transparency** - The use of a numerical equation to evaluate whether zoning permission should be applied to a property is a process that is not “public friendly”, meaning that the complicated nature of the LESA system and subsequent hearings results in public misunderstanding with and frustration at the zoning process.
2. **Planning Practice** - Using a numeric equation on a property by property basis complicates the County’s ability to project the future development and population of much of the County. The existing conditional use format, with LESA as a major element, does not afford those shopping for a home a clear level of comfort regarding what can be expected to be constructed around a home that they buy. A conditional use permit can be requested for almost any use in most districts. Similarly, the property owner and developer cannot plan for the long term use of their land if the standards are subject to regular or occasional alteration (which has not occurred to this point), which would affect whether many properties would or would not qualify for a conditional use permit.
3. **Challenge** - As a conditional use subject to public hearings, the current political climate in the County has fostered an environment where most conditional use

permits issued for LESA approved residential land development are challenged in court. (See section on improving land use planning).

4. **Resentment** - The lack of public understanding of the neighborhood compatibility meeting procedure and the conditional use permit system as a whole appears to foster resentment in that it restricts discussion to limited issues and specific amenity requests at different phases of the review process.
5. **Perception of Sprawl and Incompatibility of Land Uses** - The recent approvals of conditional use permits for several large subdivisions on properties along major State routes have fostered a public perception that it promotes inappropriately dense development and sprawl in the Rural District. The LESA system allows more dense development in areas outside of areas in which it is designated to occur, resulting in suburban development to grow in an area designated in the Comprehensive Plan for rural uses. As time has passed, the public understanding that this was the intent of the LESA system has faded. The Planning Commission finds that, at this juncture, the Rural District should be reserved for agricultural and rural residential uses.

In addition to the public perception issue, the LESA system, as currently configured, theoretically allows this development without requiring it to be provided with water and sewer services. It should be noted that most conditional use subdivision proposals fail the LESA points assessment unless water and/or sewer services are provided. Given the fragile nature of the fractured limestone geology under much of the County, it is inadvisable to the protection of the aquifer to permit developers of large subdivisions to install septic systems at a ratio of one system for each acre of land. Should the existing conditional use permit

system be retained, all conditional use residential developments under the LESA system over a set number of lots should be required to provide public or community water and sewer services.

The choice of LESA vs. traditional systems are “value neutral” when assessing the competing interests of the landowner/developer and “no/slow growth” and preservation communities. How either of these two systems happen to be applied is where policy and regulation is created. It should be noted, however, that due to the differences in the systems, the existing zoning map and ordinance would need to be completely reworked if traditional zoning were adopted. The existing system has five districts. If traditional zoning is adopted, this number could increase.

It cannot be overlooked that much importance was placed on the proposed LESA system to ensure a zoning ordinance was approved in 1988. Simply put, the perception of the system at that time was that it allowed farmers to work the land indefinitely, but years in the future they would be able to sell their land for more dense development on the belief that the urban centers would have grown out to their more remote locations by that time. This should be considered when considering setting the base permitted residential development density in the Rural District in a post-LESA environment.

Also to be considered is that significant development of the Blue Ridge is not advisable due to environmental and access concerns. There are many small lots that exist on the mountain that cannot obtain septic system permits from the Health Department due to their size and must be combined with adjacent lots in order to meet current health requirements. Unchecked growth of private water and sewer systems in that area would open these lots to future development resulting in a population boom in an area poorly suited for dense residential development.

RECOMMENDATION 3.37: The County should investigate abandoning the LESA system for a “traditional” form of zoning, maintaining the

existing 1 lot per ten acre density and setting the density of permitted cluster subdivisions in the rural district at one unit per five acres, with a minimum of 50% of the site left in open space, in order to offset the lost potential of the LESA option and encourage development in clusters that preserve open space and encourage ordinance provisions to provide density incentives in return for additional amenities.

Agriculture as an Emphasis

The Rural District contains two predominant uses: agriculture and low density residential development. Agriculture and residential development tend to conflict due to objections to certain farming operations by neighbors, and the congestion of rural roads and trespass issues that are of concern to farmers regarding new housing.

This section does not offer significant recommendations on this issue as they would be redundant to the section that addresses agriculture. The reader should refer to the recommendations in that section as applicable to this.

RECOMMENDATION 3.38: In order to emphasize and assist the recommendations found in this Plan pertaining to the needs of maintaining the County's agricultural base, the County should investigate renaming the Rural District the "Rural-Agricultural District", with a purpose statement that emphasizes agriculture as a preferred land use in this District and provides cautionary wording that there are issues that cause conflict between these land uses.

Transferrable Development Rights

This Plan does not discuss transferrable development rights (TDRs) in great detail because the State Code does not currently authorize such programs. Nonetheless, it appears that such authorization may be approved in the foreseeable future. TDR programs can be effectively used to allow landowners in the far reaches of the County to benefit from the development potential of their property without actually developing the land,

while focusing the development the lots that would have been on that property in areas that are more appropriate for development. To avoid having to amend this Plan in the future to justify instituting a TDR program, this plan endorses investigating the creation of a TDR program in the Rural District. Further study will be required regarding how such a plan should be implemented and where the density receiving area should be.

RECOMMENDATION 3.39: Should the State government authorize counties to adopt Transferrable Development Right (TDR) programs, Jefferson County should investigate whether such a program and others like it are appropriate for Jefferson County and how such a program should be structured. Such investigation should identify the regions where the most appropriate receiving area(s) would be located.

RECOMMENDATION 3.40: The County should pursue the creation of a Purchase of Development Rights (PDR) program, utilizing the applicable County board and permitted funding mechanisms to secure funds for the purchase of protective easements on agricultural parcels.

Cluster Subdivision Planning

Since the adoption of the County's first zoning ordinance in 1988, development of the Rural District in accordance with the options provided (other than LESA) has been fairly random. Except for those properties developed pursuant to a conditional use permit through the LESA system, the Zoning Ordinance permits conventional subdivisions in the Rural District at a ratio one unit per ten acres, with lots created at a minimum lot size of three acres, or cluster subdivisions on lots of one acre, at a ratio of 1 unit per 15 acres.

With these two choices available, the vast majority of property owners have chosen to develop their lots pursuant to the 1:10 - 3 acre lot size option. This is due to three factors: 1) the additional review necessary for processing a cluster concept plan, 2) reluctance of property owners to allow staff to dictate (with Planning Commission

approval) the area of the property that would be most appropriate to subdivide, and 3) the perceived financial penalty of reduced lot yield and lot size for clustering the subdivision.

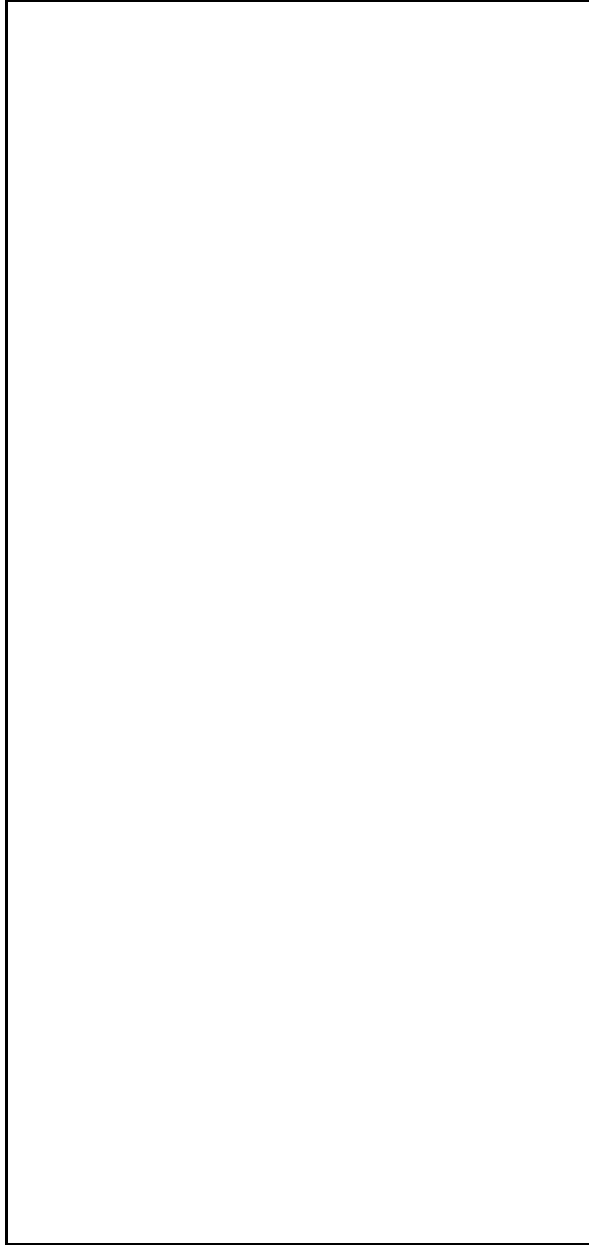


Illustration courtesy of Redman-Johnston and Associates, Easton, MD

The two plans illustrated above show an example of two potential development schemes developed for a property. The lot sizes and densities bear no

particular correlation to Jefferson County's existing zoning requirements. In the first plan, ten 5 acre lots are created, using 50% of the available land, with the remaining 50% left in open space and agricultural use. Plan B shows a cluster subdivision where twenty 1.5 acre lots are created on the same parcel, using only 30% of the site for the new building lots, with the remaining 70% left in open space and agricultural use.

Carving available rural lands into regular large lot sub-parcels is not effective planning and does not foster a sense of community among those living in the subdivision. Subdivisions covering larger amounts of land usually require more infrastructure in roads, etc. While the current arrangement of one lot per ten acres has resulted in significant numbers of residue parcels without further subdivision potential being created, this is a by-product of the market and the process.

The Ordinance does not require open space commitments for such subdivisions and the minimal market for 10 acre lots is the only reason why these unsubdividable residue lots have been created. In order to minimize the impact on the rural environment and preserve significant contiguous tracts of rural open space, the zoning ordinance should be amended so that clustered subdivisions are the indisputably preferred means of development of parcels in the Rural District.

Some rural areas are not appropriate for this proposal. The additional density that is offered by this proposal is not advisable in areas addressed in the Subdivision Ordinance as being subject to "hillside development" regulations. This includes all lands east of the Shenandoah River, and all lands in natural conditions within 1,000 feet of the Potomac River, Shenandoah River and Opequon Creek. This must be addressed during the Zoning Ordinance revision process by either wording the cluster provision to address this, or create a second rural zoning district, identified as the "Rural-Environmental" District, which would still allow the clustering, but keep the permitted density at one unit per ten acres.

RECOMMENDATION 3.41: The County should investigate amending the Zoning Ordinance so that cluster subdivisions are the means of housing development in the Rural District preferred by the property owner. When practical, these clustered developments should be encouraged to be served with public or community water and sewer services in order to protect the underground water source from damage from the use of wells and septic fields.

This recommendation should not be construed, however, to prohibit large lot subdivisions, as there is a limited market for such properties. This recommendation addresses adjusting current regulations so that when a property owner weighs his options for developing property, cluster subdivision is the most appealing option.

The Residential Growth District

The Residential Growth District currently allows development as outlined in the text box located in the next column.

The current Zoning Ordinance permits the development of parcels in this district under any of the circumstances shown above, without coordination of land use, or consideration of surrounding uses. This district is that which is nearest to the Rural District. This district and the “Residential Growth - Light Industrial - Commercial” Zoning District (the residential component of which develops in accordance with the Residential Growth standards), are co-mingled and comprise a strong majority of the “Designated Growth Area”.

Elsewhere in this Plan, the recommendation is made that the County adopt a conventional zoning plan. The adoption of such a plan would require that land currently located in this zoning classification (and the “mixed use” classification) would be subdivided into a number of new zoning classifications that would direct residential densities into areas most appropriate for their development. This would likely include a townhouse-apartment district, a high density

Residential Growth Zoning District	
Lots served by well and septic:	40,000 square foot MLA*
Lots served by well or septic:	20,000 square foot MLA
Lots served by water and sewer:	10,000 square foot ADU*
	6,000 square foot MLA
Townhouses (1) :	3,500 square foot ADU
	1,400 square foot MLA
Apartments (1) :	20,000 sq. foot MLA
	1 unit per 2,000 square feet of lot area
* MLA - Minimum Lot Area ADU - Area per Dwelling Unit (1) Town house and apartment development require provision of public or central water and sewer systems.	

single-family dwelling district and a medium density residential district located on the edges of the growth area. Further dividing the townhouse uses and apartment uses could also be considered, but the actual plan of new zoning districts would be determined in the process that would follow the adoption of this Plan.

Since this district would essentially cease to exist with the adoption of a conventional zoning plan, this Plan offers no specific recommendations regarding it.

Adoption of a conventional zoning plan, and the subsequent more detailed zoning assignments that would be part of that plan would be an important tool for the effective planning of the County’s land use development.

Industrial Commercial District

This district permits uses of a heavy or light industrial nature, including commercial uses, which include “manufacturing, processing, and commercial uses which may require extensive transportation and central or public water and sewer services”. Consumer oriented commercial uses are permitted but not encouraged. A set of specifically identified uses and activities,

presumably identified because of their potential toxic or other nuisance characteristics, are listed as permissible only if approved under the Development Review System. No standards are included in the text that apply to whether these conditional use permits should be issued; an issue easily corrected.

Should the County shift the nature of its Zoning Ordinance to a more traditional zoning plan, this district would be divided into commercial districts geared toward consumer oriented businesses (retail, service, restaurants, etc.) and those geared toward manufacturing and office type uses.

Regardless whether this district is continued in its current form or subdivided pursuant to a change in the zoning mechanism, this district offers no specific challenges requiring attention within this Plan.

Residential Growth - Light Industrial - Commercial District

This zone, commonly referred to as the “mixed use” zone, permits uses of a light industrial and commercial nature, as well as a spectrum of residential and institutional uses ranging from single-family dwelling units to multi-family apartments and group homes. Residential uses must conform to the standards set forth in the Residential Growth District, but industrial and commercial uses are required to conform to a set of specific performance criteria, which include numerical measurements of several factors for uses that may have nuisance effects on adjacent uses.

There are two issues regarding this district that should be studied as part of planned amendments to the Zoning Ordinance. First, most ordinances that have “mixed use” zones require certain minimum percentages of land usage in residential, commercial and dedicated open space. Jefferson County’s Ordinance doesn’t. Land in this district can be developed entirely for commercial or residential use or any combination thereof.

Land zoned for commercial and industrial use makes up approximately 5% of the County, which is almost evenly split between the I-C District and the mixed use district. With the County needing to maximize its potential for commercial development to offset the demands of residential development, every mixed use property developed entirely for residential use is a lost opportunity for much needed commercial development. For this reason, discussion should be held during the zoning amendment process regarding whether such standards should be incorporated into the ordinance or left to be determined by the market.

A second, less pressing issue is whether property that is in this district, but part of a larger tract under common ownership should be required to submit a concept plan for the development of the entire tract as part of the application for development of the initial phase of the project. By policy statement, the Planning Commission does ask for a concept plan, but it is nonbinding and advisory only. Requiring the approval of a concept plan (subject to revision if circumstances and needs change) would allow the Planning Commission to view how the development as a whole would affect the area and how the initial phase would coordinate with the proposed build out concept.

RECOMMENDATION 3.42: When updating the Zoning Ordinance, the County should evaluate whether the mixed use district should require set minimum percentages of a development to be dedicated to use types as a means of fostering the “mixed use” concept.

RECOMMENDATION 3.43: The County should evaluate whether a binding concept plan for an entire tract in this district and other districts should be required when submitting an application seeking to develop only a portion of that tract, including codified standards for what should appear on the concept plan.

In addition to these issues, it should be noted that if the residential development element of this district continues to defer to the Residential Growth District standards, and the Residential

Growth District is modified as recommended, these standards will no longer be appropriate as the mixed use district, by its nature, should allow for a greater housing density and mixture of housing types that would no longer be afforded in the Residential Growth District. New residential standards for the mixed use district would have to be created.

Village District

This District permits single family dwellings, duplexes, two-family dwellings and home occupations. Commercial uses may be permitted through the approval of a conditional use permit through the Development Review System. As a conditional use, the effect of a commercial use proposal can be evaluated for the use's and improvements' effect on the community.

This appears to be the best means of managing this district so that its rural village character is preserved while allowing limited commercial use as a convenience to those residing in the surrounding rural areas. This Plan offers no recommendations regarding the Village District.

New Initiatives

Townscape Area

The intent of the land use vision of this Plan, in concise terms, is to maintain the rural environment of most of the County (herein addressed in the section pertaining to the Rural District), provide a residential buffer between the urban core and the rural area (see the Residential Growth District) and to concentrate the greatest density of development around the Charles Town - Ranson urban area in a streetscape pattern that complements the existing grid development pattern set by the towns. This Plan is best illustrated on the Comprehensive Plan general policies map shown on the next page.

This section addresses the third land use area described above, which is located between the incorporated municipalities and the Residential Growth District. The townscape area would permit

a mixture of high density residential uses, with provisions for a limited amount of small scale service businesses, home occupations and community facilities that are compatible with the mixed use area, but predominantly residential in character adopting and blending with the street scale of the existing municipalities. Due to permitted density, all development in this district must be connected to water and sewer facilities. Development would be in accordance with townscape design standards that would be codified by the County within the land use Ordinances.

The purpose of these areas is to provide for a mixture of residential and compatible mixed uses that support community activities at a density and scale commensurate with that of the existing municipalities, to foster the integration of local street and pedestrian circulation between old and new areas so as to develop, over time, an overall coordinated townscape that compliments the existing historic character of the municipality, and assists the towns' "main street" to continue to play its historic role as the activity center of a pedestrian scale town.

This area would be comprised of tracts around the immediate boundaries of the two cities, consisting predominantly of lands currently located in the mixed use and Residential Growth districts. Transportation through this area would operate on two almost parallel axes: The existing WV 9/US 340 Bypass to the east, and a new western bypass, developed in conjunction with the spine road proposed through the center of the Huntfield Development, connecting to WV 9 north of Ranson.

RECOMMENDATION 3.44: In order to accommodate additional traffic demand anticipated through the enlargement of Charles Town and Ranson, the County should promote the design and construction of an at-grade western arterial road west of Charles Town - Ranson, which incorporates the Huntfield spine road as the southern third of this new road.

When this concept was initially proposed, it should be noted that the area designated for this Townscape concept was located entirely within what has become an area designated by Charles Town and Ranson as their designated municipal growth areas, and it appears that this area will be annexed almost entirely into the two towns. For this reason, a specific Townscape area is not illustrated on the accompanying Policies Map located on the next page.

Also, this plan specifically avoids recommending densities for this area as the issue of municipal annexation, its extent, and effect on land use planning by the County is not fully clear. It may be necessary to abandon this concept if municipal annexation becomes onerous. Also, the density of this proposed district could be a variable that the County may be able to use as a tool to contain annexation by allowing residential density at a level comparable to or greater than that which would be permitted by the towns.

RECOMMENDATION 3.45: The County should investigate reallocating land adjacent to the municipalities into a “Townscape Design” area which blends with the grid-like design of the towns and permits a greater density and mixture of residential uses than the Residential Growth district.

Historic Gateway Special Study Area

The US 340 corridor from the Shenandoah River bridge to the Charles Town bypass serves many purposes. It is the major transportation spine in the eastern part of the County. It is from this road that one views the panorama of the rest of the County from Alstadt’s Hill. It serves as a collector for several secondary State highways which serve significant numbers of houses and businesses, and it serves as the eastern gateway to West Virginia. Traffic is ever increasing on this road, as are development pressures.

This segment of US 340 is the most identifiable and visible artery in the County. Without effective study and management, this corridor could

deteriorate into a strip of housing developments indistinguishable in character, and commercial development rivaling “strips” in nearby larger cities.

RECOMMENDATION 3.46: The County should study the US 340 corridor, including land use, viewscape, economic development and traffic design and management in order to create an effective strategy for the long term management of this important mixed-use corridor.

Shepherdstown Area

Most of the attention to municipalities in this section of the Plan has been paid to the central county hub. Shepherdstown, nonetheless, is a substantial municipality subject to annexation issues and development pressures. No specific issues, however, have been identified in this area in the recent past. Traffic issues associated with left turning truck traffic on WV 45 southbound has been addressed with the recent opening of the Shepherdstown bypass. Unless Shepherdstown decides to annex lands that are not contiguous to the town (similar to Charles Town’s annexation of Huntfield), further enlargement of the town is not likely.

It should also be noted that next to the main central corridor of the County, the area around Shepherdstown is the second largest designated growth area, containing significant tracts of land zoned “Residential Growth” and “Mixed Use”. The historic development trends of the designated growth area around Shepherdstown show that these areas have developed at densities less than that permitted by the Zoning Ordinance. Essentially, the area around Shepherdstown is “under developed” for the zoning districts in which it is located.

Most land immediately adjacent to the town has been committed to development in accordance with County standards or to State institutional use. Therefore, annexation of those lands are unlikely. With the presence of a municipal sewer and water system, much of the potential development that

This page reserved for Comprehensive Plan Recommendations Map.

may occur in the vicinity of Shepherdstown would likely be served by these facilities, addressing aquifer protection issues.

Generally, tracts around Shepherdstown have been developed at a density less than what is permitted by the Zoning Ordinance. Nonetheless, this Plan acknowledges the need to address planning issues in Shepherdstown area if the need arises.

A Vision for the Shepherdstown Area, a status report on planning and land use in the Shepherdstown area, was completed in December, 2000. Prepared by "Shepherdstown Vision 20/20" (a regional citizens' group open to all who wished to participate), those who participated concluded that there is a need for additional development in the Shepherdstown area, but it needs to be closely managed and monitored so that it doesn't affect the small town environment of Shepherdstown, and does not contribute to suburban sprawl and the loss of agricultural resources.

Given the unique nature of the Shepherdstown area, the town must be cautious in its approach to development. Likewise, when reviewing the subdivision and zoning ordinances and zoning maps that affect those areas surrounding the town, the County should consider the impacts of those decisions on the long term economic health and environmental character of the Shepherdstown area.

RECOMMENDATION 3.47: Should it become necessary, the County should be open to studying the land use and zoning patterns and other planning issues around Shepherdstown and addressing those issues accordingly.

Charles Town - Ranson Study Area

Numerous issues regarding annexation, land use and development in the immediate proximity of Charles Town and Ranson have been discussed elsewhere in this report and will not be restated here. The issues presented to the County in this area are among the most important issues faced by the County during the period covered by this Plan. Any attempts to study this issue and foster

cooperation with the municipalities will occur quickly during this time frame, and as an inter-jurisdictional issue.

RECOMMENDATION 3.48: The County Commission should study the impact of current development trends and issues, and the issue of municipal annexation and attempt to gain the cooperation of the municipalities to create a long term annexation strategy acceptable to all three jurisdictions.

Cattail Run Valley Study

With the completion of the new four-lane WV 9 from Charles Town to the Blue Ridge, the character of this area west of the Shenandoah will be altered. With topography draining toward the Shenandoah to a location that is eyed for the possible construction of new sewer facilities, the options for the future use of this area are numerous. This area has numerous inherent recreational opportunities due to the river. An example of this potential could be that it may be the best location to target as a receiving area for transferred density from other locations in the Rural District (due to its improved access yet continuing rural nature), should the State authorize such programs. It should be noted that, other than a proposed interchange at Cattail Road providing access to the new highway, the existing road network in this area providing access to existing WV 9 and US 340 is rather problematic.

RECOMMENDATION 3.49: The area straddling new WV 9 from Charles Town to the Shenandoah River should be studied as part of the Zoning Ordinance and map amendment process to address its changing nature and re-evaluated role in the overall land development scheme of the County.

Chapter Four

Excellence in Community Services

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Chapter 4:

INTRODUCTION

Two goals of this Plan are to have an appropriate balance of land uses, and an appropriate balance between private property rights and growth management. As that balance is found, it then

becomes important to assure that community services are available to serve the needs of the population. One of the primary indicators of the quality of life of residents of an area is the sufficiency of essential public services in the community. Schools, roads, recreational facilities, and fire and police protection are some of the more obvious examples of these services. Communities with poor schools, inadequate police protection and failing infrastructure do not draw investment.

RECOMMENDATION 4.01: It is the vision of this Comprehensive Plan that development will be concentrated in as much as possible within the area served by public water and sewer facilities, that measures be taken to ensure that the growing community is provided with essential services it needs.

PUBLIC EDUCATION

Maintaining and improving Jefferson County's education system is one of the most important and urgent challenges that will be faced during the implementation of this Plan. Although we address this issue here, the responsibility for implementing and administering the public education system per the State Code (Sec. 18-5-9(1)) rests with the Board of Education; the authority of which is beyond that of this Plan. Nonetheless, this Plan does provide some analysis and recommendations in relation to land development.

Excellence in Community Services

As of the 2001-2002 school year, the Jefferson County Public School System provided instruction to a total of 7,064 County children, on a budget of

\$50.242 million and with a staff of 800. The School System operates one high school, one 9th grade complex adjacent to the high school, three middle schools and eight elementary schools (Page Jackson Elementary School and Wright Denny Intermediate, function as one kindergarten through sixth grade elementary school). Vocational students attend the James Rumsey Vocational School in Martinsburg.

Jefferson County Board of Education Demand for Services 1980 - 2002	
Enrollment - 1980:	6,239 students
Enrollment - 2002:	7,277 students
Total increase over 23 years:	1,038 students
Percent increase:	16.64%
Avg. annual growth rate:	0.72%
Avg. annual real increase:	45 persons

Due to a number of factors discussed in Chapter 2, the School Board has been the beneficiary of conditions resulting in a school population growth rate that is less than the general population growth rate. From 1980 to 2002, the student population of the school system increased from 6,239 students to 7,277. This represents an increase of only 16.64% over a 23 year period for an annual growth rate of 0.72% or 45 students per year. If not for a 200 student jump in population in 2002, these numbers would be even lower. Until the 2002 opening of the 9th grade complex, the School Board has not built a new school since T.A. Lowery Elementary School in 1992. The ability to maintain the status quo in existing facilities, however, is ending.

2002-2003 School Year Enrollment Projections

	1*	2*	3*	*4
Jefferson HS	1,349	1,459	-110	8.2%
9 th Grade Complex	600	618	-18	3.0%
Charles Town MS	742	847	-105	14.2%
Harpers Ferry MS	326	469	-143	43.9%
Shepherdstown MS	420	451	-31	7.4%
Blue Ridge ES	441	330	111	
C.W. Shipley ES	357	387	-30	8.4%
North Jefferson ES	378	301	77	
Page Jackson ES	504	464	40	
Ranson ES	357	383	-26	
Shepherdstown ES	399	295	104	
South Jefferson ES	399	329	70	
T.A. Lowery ES	477	526	-49	10.3%
Wright Denny IS	399	418	-19	
TOTAL	7,148	7,277	-129	

1 - Program Capacity 2 - 2002-03 Enrollment (Official)
3 - Available Seats 4 - Over capacity (percent)
Source: Jefferson County Board of Education

From public comment solicited during the process of developing this Plan, and from concerns expressed at Planning and Zoning Commission hearings regarding new subdivisions, it is apparent that the current state of the school system is a major concern to County residents. There is an unfortunate public perception that development that has occurred in the County since 1980 has put an unreasonable strain on the Board of Education regarding the provision of adequate school facilities for the County's children.

A study of the data illustrated in the text box on the preceding page, however, shows that the average annual growth rate of the enrollment in Jefferson County schools was less than three quarters of one percent (or 45 new students) on average each year for a period exceeding two decades. Therefore, the residential growth rate cannot be blamed for overcrowded schools. Rather, the Board of Education not keeping pace with a very modest rate of growth in its enrollment would be a more reasonable target to focus concern.

As of the adoption of this Plan, Jefferson High School and the three middle schools are overcrowded. With a program capacity of 1,349, high school enrollment was at an all time high of 1,459 during the 2002-2003 school year. Given existing enrollment and anticipated growth over the next 20 years, a second high school is sorely needed to alleviate existing overcrowding. The School Board is currently negotiating to accept the donation of a tract of land within the proposed Huntfield Subdivision, located in the City of Charles Town. Given the site's location in the southern half of the County and in a development that is slated to become the County's predominant center of population, securing this site for the construction of a new high school would be very beneficial from the standpoint of community planning.

In 2002, A new 9th grade building was constructed and opened adjacent to Jefferson High School which allowed the Board of Education to convert the three junior high schools to middle schools. This conversion freed space in the County's nine elementary schools for the system's growing primary school enrollment. Should the second high school be constructed, the Board of Education is studying the conversion of this school to a fourth middle school.

According to the Office of the Superintendent of Schools, construction of a new high school and conversion of the 9th grade complex to a fourth middle school will solve the Board of Education's short term capacity needs for the next several years. Therefore, the School Board will need to enact effective long range planning so that it can meet the needs of a growing population.

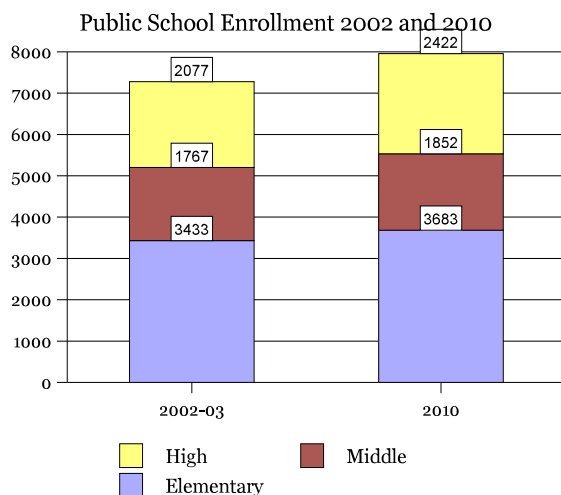
RECOMMENDATION 4.02: This Comprehensive Plan endorses the construction of a second high school, preferably within the Huntfield development, as soon as the land and funding can be secured. Construction of a new high school is imperative in order to alleviate existing overcrowding at Jefferson High School and

convert the 9th grade complex to a fourth middle school to accommodate anticipated short term growth. The County should support the School Board wherever appropriate in its attempt to bring this to fruition and the School Board should proceed diligently with this project.

School Planning for Future Needs

Communities construct new facilities based on immediate need to alleviate overcrowding at existing schools. School boards and districts do not construct new schools in anticipation of demand, leaving newly constructed schools to sit half-used, waiting for development to be approved and constructed to fill them. Based on this standard practice and 2002 systemic changes that converted the junior high schools to middle schools, Jefferson County has generally kept pace with current needs at the elementary level, but not as it pertains to the high school and three middle schools, which are over capacity by from 6.7 to 38.9 percent.

Based on current population projections (plotted on the graph below) the Board of Education estimates that the enrollment in Jefferson County Public Schools will increase by 9.3 percent above 2002 enrollment figures to approximately 7,957 students by 2010. Their Plan offers no projections beyond the year 2010.



Source: Jefferson County Public Schools

Based on recent enrollment figures, it appears that the Board of Education is currently beginning to experience an upsurge in demand for County schools. At the beginning of the 2002-03 school year, an increase of over 200 new students was experienced, which was larger than expected. This appears to be the beginning of a trend which must be addressed through effective school planning.

The Board of Education has a “Comprehensive Educational Facilities Plan”, however other than proposing to construct a new high school at an undisclosed location by 2004, it does not contain a capital improvements component projecting when and where new school facilities should be planned. The Plan appears to be indecisive regarding whether the new 9th grade complex should be permanently used as a fourth middle school (see page V-3 of that document). Such planning is an essential element in assuring that the school system grows commensurate to its responsibilities to educate the youth of Jefferson County.

RECOMMENDATION 4.03: The responsibility of the Jefferson County Board of Education is to program adequate infrastructure renovation and new development to provide for anticipated school system growth. Such programming should include:

- a. Adoption of a short term and long-range capital improvement plan, including identification of targeted areas that should be the location of new school buildings.***
- b. Soliciting and encouraging donations of future school sites from the developers of large subdivisions in order to minimize land costs for new school construction.***
- c. Providing sufficient funding to maintain and renovate school facilities and to allow for systemic adaptation to changing school needs and technology.***

What if the second high school had opened in 2002?

An analysis of school system overcrowding

School	Enrollment	Capacity
Jefferson HS	1,100	1,349
New HS	978	1,200
CT MS	627	742
HF MS	276	326
ST MS	357	420
New MS *	507	600

* New middle school would be created by converting the existing 9th grade complex.

Analysis assumes that school district lines are adjusted so that additional capacity is equally distributed among the schools.

Adequate School Facilities to Meet Demand

In recent years, the issue of the Planning Commission's authority to address school capacity when reviewing proposed subdivisions has become a flashpoint of controversy. Although actual student population has grown quite slowly, there is a public perception of serious overcrowding due to residential development.

Household Generation of Public School Demand

	Elem.	Jr. High	Sr. High	All
Single Family	.27	.12	.11	.5
Townhouse	.11	.04	.03	.18
Apartment	.18	.05	.05	.28
Mobile home	.48	.13	.06	.67

Source: Tischler & Associates Study and JCBoE Survey, 1990

The Office of the Prosecuting Attorney, in its role as legal advisor to the County Commission and the Planning and Zoning Commission has consistently advised that, based on case law and the "Dillon Rule", subdivision plats cannot be denied based on school capacity unless specifically authorized by State Code and objective standards are incorporated into the Subdivision Ordinance. Article 24 of the State Code mentions school capacity in the first

chapter, but no specific role within the body of the Article.

The Subdivision Ordinance does not currently contain objective standards to address school capacity. According to its legal advisor, any decision by the Planning Commission to deny a development based on schools, especially without codified standards, is rife for legal challenge.

In the period of 1999-2002, several contentious lawsuits regarding land use proposals have been heard by the Circuit Court of Jefferson County. Legal decisions have addressed this issue and the decisions indicate that the Court believed planning commissions do have this authority and if amendments to the ordinances were enacted to address this issue, the Court would be inclined to uphold such standards if they were legally sufficient [See Decisions in Jefferson County Circuit Court Cases 00-P-53 ("Greenvest") and 01-C-139 ("Harvest Hills")]. In order for the land use regulatory mechanisms to work properly, it is necessary to have this issue resolved so there is no disagreement on where the Planning Commission's authority lies.

RECOMMENDATION 4.04: The County should obtain legislative clarification of the authority of the Planning Commission to address school capacity when reviewing subdivision proposals by:

- a. ***Requesting the State Legislature to clarify the authority delegated by the provisions of Article 24 of the State Code regarding school capacity and its affect on community planning.***
- b. ***If the State Legislature clarifies that planning commissions have the authority to address this issue when reviewing development proposals, the County should then explore incorporating provisions into the subdivision ordinance that provide for adequate timing of development as it relates to sufficiency of public school facilities, including codified***

This page reserved for map of middle schools.

This page reserved for map of elementary schools.

standards that allow developers and citizens alike to assess whether a development would meet these standards before entering the development process.

Conclusion

In summary, this Plan calls for the Board of Education to make the opening of a new high school at or near the Huntfield site as its single greatest priority. Such a project will take several years to fund, design and construct. As the above chart illustrates, even if the school had been completed in 2002, the high schools and middle schools would have opened this year at an average of 81% and 84% of program capacity, respectively. With each year that is lost in accomplishing this task, these percentages will increase closer toward the 100% mark. Building schools to be at capacity when they open their doors for the first time is poor planning. It is imperative that the School Board sufficiently plan for anticipated growth, both in capacity and strategic selection of future school sites.

POST-SECONDARY EDUCATION

Jefferson County is fortunate to be the home of Shepherd College, located in Shepherdstown. Established in 1871, Shepherd is a four year, State funded liberal arts college with a student body numbering approximately 4,000. This institution is the primary destination for the Jefferson County student who desires to continue his or her education within the State system. Additional colleges in the surrounding area with four-year programs include Shenandoah University in Winchester, Hood College in Frederick and the Hagerstown campus of Frostburg State University.

Although it focuses on a four-year program, Shepherd College offers several two-year programs. Other than this opportunity, the nearest such in-state facilities are the Valley College of Technology and the Shepherd Community and Technical College,

both located in Martinsburg. Two junior colleges are located in the adjoining counties in Maryland (Frederick Community College and Hagerstown Community College).

Shepherd College is regularly profiled in *Barron's 300 Best Buys in College Education*. Only the top 10 percent of America's colleges and universities achieve that distinction. Shepherd's close proximity to the Washington-Baltimore area allows students to combine educational opportunities and internships with cultural and social resources.

Although planning for collegiate level education is beyond the purview of this Plan, a well educated populace is an essential factor when attempting to entice new business to locate in the County. As such, the state of collegiate education in the County does effect the community.

RECOMMENDATION 4.05: The County should support the expansion of opportunities for junior college, four year and other post-secondary education within Jefferson County by supporting initiatives by Shepherd College that expand the program offerings at that facility.

PRIVATE ACADEMIC SCHOOLS & HOME SCHOOLING

There are four private academic schools in Jefferson County: The Claymont School, located on Huyett Road, the Country Day School of Jefferson County located in Middleway, the Rainbow Montessori School in Charles Town and the Bolivar Christian Academy in Bolivar. There are no Catholic parochial schools in the County and the Bolivar Christian Academy is the only religiously affiliated academic school in the jurisdiction. These four schools have a combined enrollment of 224 students.

Jefferson County Private Academic Schools

	<u>2002 Enrollment</u>	<u>Grades</u>
Claymont	20	PreK - 6
Country Day Sch.	136	PreK - 9
Bolivar Christian	40	PreK - 5
Rainbow Montessori	28	PreK - K

Source: Individual School Administrations.

Generally, private schools are not tax-supported, yet they provide a substantial benefit to the community in that they relieve the public school system of the obligation to provide for the education of those students it enrolls, thus reducing school board expense and allowing those dollars to be redistributed to the student body at large. The presence of private schools also afford parents a wider selection of educational choices for their children. Also, private schools also are stable employers and tend to be valuable and respected corporate members of the community.

According to the Jefferson County School Board, there are 236 students that are home schooled within the County. The State requires that parents who home school register their status with the School Board. Home schooling also provides a community benefit as the funding that would have been used to educate those children who are not partaking in the public system to be redistributed within the system.

In total, as of 2002, 460 students who would have otherwise been enrolled in the Jefferson County Public Schools are educated through private means.

RECOMMENDATION 4.06: The County should encourage the creation of new private school opportunities by reviewing existing County ordinances for possible amendments that would make it easier for private schools to start up and for existing private schools to expand their facilities within Jefferson County.

EMERGENCY SERVICES

Law Enforcement

Police protection is the most visible component of the criminal justice system. The citizens of Jefferson County are served by the West Virginia State Police, the Jefferson County Sheriff's Department and municipal police departments in Charles Town, Ranson, Shepherdstown and Bolivar/Harpers Ferry. Also, the U.S. National Park Service employs park rangers with Federal law enforcement commissions to protect the Federal facilities at Harpers Ferry National Historical Park and nearby N.P.S. support facilities. Shepherd College also has its own police force responsible for security on campus.

Law Enforcement Staffing in Jefferson County

	<u>Supervisors</u>	<u>Officers</u>
WV State Police*	3	10
Sheriff's Department	3	12
Charles Town PD	4	9
Ranson PD	4	5
Shepherdstown PD	1	4 FT / 7 PT
Bolivar/Harpers Fy. PD	1	2
National Park Service	1	5
Shepherd College	<u>2</u>	<u>6 FT / 6 PT</u>
TOTAL	19	53 FT/13 PT

* Reflects those assigned specifically to Jefferson County.
Numbers reflect total authorized positions.
Source: Referenced Police Departments

West Virginia State Police

The local State Police Barracks is located in the Bardane Industrial Park. This modern facility was occupied by the local detachment in 2000. It consists of office space, evidence storage, vehicle maintenance facilities and other operations of the barracks. This post is staffed by two supervisors and ten troopers. Each uniformed officer is assigned a patrol vehicle and the barracks has a four wheel drive vehicle for off road use, for a total of thirteen vehicles. A district sergeant assigned to

this post oversees the operations of the State Police in the three county area. Optimal staffing of this post has been as high as 15 uniformed personnel, however the State Police is experiencing a manpower shortage, being over 100 uniformed personnel short of its state-wide staffing needs.

This barracks also houses the State Police I-81 patrol unit which is comprised of three troopers. The headquarters for Troop 2, which supervises State Police functions in the three panhandle counties plus Mineral, Grant, Hampshire and Hardy Counties, is also housed at the Bardane facility. The headquarters staff consists of 3 lieutenants and a captain. Seven dispatchers at this facility dispatch WVSP units in the Eastern Panhandle Counties.

The detachment commander estimates that five to seven additional troopers may be needed in the next five to ten years in order to maintain existing service levels as the population of the County grows. Assignment of recent State Police training class graduates are arranged by the Colonel of the State Police based on feedback from regional State Police staff officers.

RECOMMENDATION 4.07: The County should enhance police protection by supporting Troop B's efforts to obtain additional personnel, if requested, in order for the local barracks to attain its appropriate staffing levels and obtain additional staff to meet the growing needs of the community.

Jefferson County Sheriff's Department

The Sheriff's Department was relocated from the "old jail" to its current headquarters at 116 East Washington Street in Charles Town in 1996. This department consists of one Sheriff, 1 Chief Deputy, 1 Lieutenant, 12 sworn deputy sheriffs, 1 court special deputy, 6 part time bailiffs, and 1 special deputy. The Sheriff's Department also has a deputy reserve program with 16 active members. Deputy reserves are volunteer uniformed personnel that support the mission and services of the Department. The Sheriff's Department maintains 18 patrol vehicles.

The Sheriff's Department shares with the State Police the responsibility of providing police protection and investigative services throughout the County. Provisions for constables and justices of the peace were abolished by the State in 1977, which were incorporated into the Sheriff's Department. In addition, the Department provides support services to the County Court system, including the service of subpoenas, writs of process, warrants and transportation of prisoners and mental hygiene patients.

The Sheriff also serves as the County Treasurer per requirement of the State Constitution. Tax deputies at the Sheriff's Tax office are responsible for the collection of taxes and assist the West Virginia Department of Motor Vehicles with the registration of motor vehicles.

As the distribution of population from municipalities has shifted to the unincorporated areas of the County, so has the burden of the majority of law enforcement fallen on the State Police and the Sheriff's Department.

Much growth in the County is expected to take place in the unincorporated areas. Thus, the State and County police forces, which share joint jurisdiction outside the corporate limits, bear the burden of providing police services. Continued close cooperation between the State, County and local police departments will be essential as the demand for services increases.

Projections and Needs

The U.S. Census for the year 2000 showed that the eastern panhandle is continuing to prosper and to grow at a significant rate. While other parts of the State's population remained flat during this period, Jefferson County experienced a population growth rate of 17.4% from the 1990 census count of 35,926 to the 2000 census count of 42,190 residents. Unfortunately, the number of troopers and deputies have not increased in order to meet the public demands from this growth and in order to provide the appropriate level of service.

The needs and size of the rural population must also be evaluated to determine if the current level of service is adequate. It has been projected that during the next census period (2000-2010) Jefferson County will exceed the population growth that was realized during the previous ten year period.

The data on State and County police services, like those for local police services, are not predictive. Many factors could change the desired level of service, including changes in State funding for the State Police force and redefinition of the services performed by the County Sheriff's Department. If population growth alone is used to project law enforcement needs for the year 2010, the State Police would need to double their staff and the Sheriff's Department would need at least 14 more deputies and vehicles just to maintain the current levels of services to the unincorporated areas of the County while the number of officers and vehicles within the municipalities would increase slightly. Statistics indicate that the need for police services outside of the municipalities will increase substantially faster than the population because of the additional needs brought on by population density.

Jefferson County is approximately 60 miles from Washington DC and other large cities and has become a desirable bedroom community in which to live and commute to these outside locations. This type of growth creates high-density traffic at key periods of the day that loads our highways and enhances the chances of vehicular accidents. The demand for law enforcement response to vehicular accidents create a drain upon an already taxed resource for prolonged periods of time.

Additionally, Jefferson County is the home of the Harpers Ferry National Historical Park, the Mountain Heritage Arts and Crafts Festival (held twice per year), the Charles Town Races and Slots, the Summit Point Raceway, and Shepherd College, which hosts all high school graduations for Jefferson and Berkeley Counties and the annual Shepfest, and the Clarion Hotel and Conference Center. The National Conservation Training Center

host governmental training and is a secondary home for the U.S. Office of Personnel Management (OPM). All of these facilities bring large volumes of visitors and traffic to the County on a daily basis.

Residential developments outside of municipalities have continued to experience law enforcement problems that will only continue and grow as additional private roads are developed. Heavy traffic and speeding on private roads are frequent concerns of property owners' associations in the County. State Police and the Sheriff's Department are being called increasingly for problems/crimes such as burglaries, destruction of property, trespassing, littering, domestic situations, intoxication, four-wheeler complaints and disturbing the peace in residential developments. At present, police patrol private subdivisions on a limited basis due to a lack of authority and personnel, unless a major crime has been committed.

RECOMMENDATION 4.08: The County should enhance police protection by:

- a. exploring mechanisms and programs that would assist in enabling the Sheriff's Department to be sufficiently staffed and equipped in order to provide adequate resources based on levels of crime and demand for services.***
- b. Adjusting services and programs to accommodate an increasingly elderly, diverse and geographically diffused population.***

Municipal Police Departments

The municipal police departments are funded by and serve the populations of their respective towns. Mutual assistance agreements between the municipalities and the Sheriff's Department allow for these agencies to assist one another in emergency situations. Due to the concentrated nature of these services and jurisdictional concerns, this plan adopts only the following recommendation regarding municipal police departments:

RECOMMENDATION 4.09: The County should maintain and encourage the continued cooperation of the various police departments through the ongoing use of mutual assistance agreements.

Fire and Rescue Services

Jefferson County has five all-volunteer fire companies: Company #1: Friendship (Harpers Ferry/Bolivar), Company #2: Citizens' (Charles Town), Company #3: Shepherdstown (Shepherdstown), Company #4: Independent (Ranson) and Company #5: Blue Ridge (Key's Ferry Acres). Blue Ridge Fire Company also maintains a substation (Station #6) on Mission Road. These companies are equipped with apparatus as described in the box in the next column.

Recent improvements to firefighting facilities include the opening of a new station house by Citizens' Fire Company near the Charles Town bypass. Blue Ridge Fire Company has also recently replaced its principal station house.

The volunteer firefighting community is the major social backbone of most rural communities. This group within Jefferson County is no exception. The members of the volunteer fire companies provide protective services that are invaluable to the community, as well as serving as community social hubs. Unfortunately, at the national level, volunteerism is generally on the decline in rural areas experiencing growth.

Jefferson County is totally dependent on volunteers to provide fire and rescue services. The Jefferson County Ambulance Authority supports the volunteers in the ambulance service. As more people choose to live in the County and work elsewhere, the number of residents available for emergency volunteer services, decreases, especially during traditional work hours. When this phenomenon is coupled with a lack of business opportunities within the area, bedroom communities develop that are incapable of providing their own volunteer emergency services.

Inventory of Fire Equipment and Personnel

Company:	1	2	3	4	5
Engine	2	2	2	2	2
Tanker	1	0	1	1	2
Ladder	0	1	1	0	0
Rescue Unit	1	1	1	1	0
Ambulance	2	0	2	2	2
Brush Unit	1	1	1	0	1
Boat	0	0	0	1	1
Members	30	30	40	30	25

Source: Jefferson County Volunteer Firemans' Association

This situation currently exists in several areas of the County and is likely to continue. Within the next decade, it may be necessary to consider supplementing the Fire Service with professional personnel similar to the Ambulance Authority. For statistics pertaining to the growth in demand for fire and rescue services, see Appendix B.

RECOMMENDATION 4.10: As the County grows and the need for additional fire protection appears to become necessary, the County should investigate the feasibility of creating a paid fire service, similar to the ambulance authority, in order to augment the volunteer service so that uninterrupted fire fighting service is available during the work day when most volunteers are unavailable to respond to fire calls due to work commitments.

Emergency Medical Services

Emergency medical services are provided through four of the five fire departments. Each of these companies maintains two ambulances. These units provide medical assistance at the scene of emergencies and transport persons to hospitals, and from nursing homes and residences.

To provide emergency medical care, fire company personnel must be Emergency Medical Technicians (EMTs). Certification as an EMT requires 110 hours of training. In addition, the County has app-

This page reserved for map of fire services.

roximately 20 paramedics trained through Shepherd College.

During 2001, County ambulances responded to approximately 3,463 calls. Of these, the Independent Fire Company of Ranson answered 1,885. At present, the number of ambulances is adequate for normal daily operation. The number of trained personnel, however, is not adequate to meet the County's needs. Increased certification requirements have put a strain on available trained personnel. As the County grows, the ambulance service will experience increased demand as the population both grows and ages. Fire Service officers believe that the WV 1 corridor will need an EMS station in the near future due to its growing population and distance from existing facilities.

The Ambulance Authority was established in 1994. In 1998, a program was initiated that supplemented the existing ambulance service during times when volunteer availability was minimal. Eight paramedics (four full time), eight EMTs (four full time) and one part time manager were authorized as part of this program. The Ambulance Authority's service includes 1 paramedic on duty 24 hours per day, one EMT at each station and a paramedic at Station #4 eight hours per day, Monday through Friday. Ambulance Authority personnel ride on the volunteer company ambulances, and operate a "chase unit", identified as "Station 11", to supplement this program.

For statistics regarding demand for emergency medical services, please refer to Appendix B.

RECOMMENDATION 4.11: The County should strive to maintain current levels of service by:

- a. Attempting to obtain levy approval for permanent funding of the Ambulance Authority.***
- b. Assisting the Fireman's Association in exploring new ways to recruit volunteers into the fire service, if requested.***

Emergency Communications

The Jefferson County Emergency Communications Center (JCECC) exists to provide contemporary emergency dispatching services for Jefferson County. As the Primary Public Safety Answering Point (PSAP) for Jefferson County, the JCECC answers all emergency 911 calls from those residents located within the bounds of the County. Additionally, the JCECC also answers wireless 911 calls, as well as all administrative telephone calls. The JCECC is currently located in the Jefferson County Public Services Center at Bardane.

The center is authorized twelve Public Safety Dispatchers, two Supervising Public Safety Dispatchers, one EMD Coordinator, one Deputy Director, and one Director. In fiscal year 2003, the JCECC will be migrating two public safety dispatcher positions to Supervising Public Safety Dispatcher for a total of four Supervising PSD's and ten PSD's. Minimum staffing is currently set at two. Oftentimes three or four people are required to staff the center due to the volume of telephone and radio traffic. With analysis of the Emergency Communications systems, staffing may need to be increased upon recommendations received.

Telephone System and Call Volume

The Emergency Telephone System is a Motorola Centralink telephone system. The JCECC is required to house the E911 database due to the lack of Frontier Communications to provide database services. A statistical gathering module has been discovered and the JCECC is now collecting inbound and outbound call statistics as of April 2002. The statistics for April, May, and June 2002 are noted on the next page. Due to the requirements of FCC regulations, the telephone system is being analyzed by the Public Safety System Consultant and it may not be complaint to this FCC mandate. The analysis for the upgrade or replacement of the telephone system by the Public Safety Systems Consultant is underway and the need to position Jefferson County to accept wireless 911 calls, as mandated by the FCC is and the County is awaiting the results of their study.

The figures below are the total calls inbound and outbound for the entire month.

Month (2002)	April	May	June
E-911	1,174	1,168	1,275
Wireless 911	629	672	620
Abandoned 911	185	140	169
7-digit Inbound	7,343	7,769	7,151
Admin. Outbound	3,210	3,487	4,119
Wireless Outbound	107	124	135
Total (in and out)	11,912	12,564	12,714

Wireless trunks are 7-digit trunks. Wireless figures are part of the 7-digit figures, but separated to show the amount of wireless calls JCECC receives.

These figures provide a good average of the amount of telephone activity per month, with May 2002 being the best figure. If an average of 12,564 is used, the JCECC could estimate approximately 150,768 inbound and outbound telephone calls for calendar year 2002.

Radio System

When a power outage occurs, the JCECC depends upon the power of an emergency generator to supply all mission critical equipment. The Communications Center utilizes a VHF radio system using Motorola radio equipment for all communications with law enforcement, fire and EMS personnel. The communications equipment is aging and has served its useful lifespan. The user agencies have requested procurement of additional radio channels due to workload issues and short-term work to procure additional frequencies has proven fruitless due to the location of the JCECC in the Eastern Panhandle in relation to the communications systems of neighboring states.

The Public Safety Systems Consultant has been tasked to perform needs analysis for the upgrade or replacement of the entire radio infrastructure and the County is currently awaiting those results and recommendations.

Computer Systems

Although the E911 center is an “enhanced” 911 center, the data that is received is often corrupted. The E911 database utilizes the telephone records of the telephone company and because the County does not have addressing standards in place yet, the database often yields incorrect data that is displayed to the 911 dispatcher. The migration to urban style addressing (see Addressing) and the implementation of a Master Street Address Guide (MSAG) will alleviate these problems.

The County currently lacks automated dispatch systems such as Computer-Aided Dispatch (CAD) and Mobile Data systems for the response units. The Public Safety Systems Consultant is tasked with assisting the County in the procurement of CAD and mobile data solutions and the County is awaiting recommendations on the results of the needs analysis. Currently, the JCECC staff uses a manual method of gathering information and dispatching.

Facilities

The lack of 911 and radio positions is apparent. The JCECC currently has only two radio consoles for the dispatchers to work from and where the primary dispatching takes place. The current configuration of the radio consoles prevents more than two dispatchers to efficiently work in the center. The Public Safety Systems Consultant has been tasked to perform needs analysis for the upgrade or replacement of the facility and the County is awaiting the results. Additionally, the requirement for administrative workspace, adequate break and training facilities, a back-up facility, an emergency operations center (EOC), and other elements found in communications center designs is a desire that the County wants to pursue.

The County does not have agreements in place to support the information systems in use by the departments of the County. The JCECC does have service maintenance agreements in place with vendors to support the specific systems installed however a front-line IT support department does not

exist which requires upper management to trouble shoot (and repair) the equipment for their departments. With the procurement of automated solutions in the dispatch center, the JCECC will be investigating the full-time need of IT support as either contractual support or County staff.

The Public Safety Systems Consultant has been tasked to identify this need and the County is awaiting the results. Jefferson County Emergency Communications Center identified a need to install automated solutions and the Director of Communications was given the authorization to hire a consulting firm specializing in Emergency Communications. In February 2002, the JCECC hired Concepts to Operations, Inc. (CTO) as the preferred consultant.

Emergency Medical Dispatching

As of June 15, 2001, the emergency communications center formally implemented an Emergency Medical Dispatching program that allows the dispatcher to provide medical instructions via the telephone. This system is known as a “zero-second” response program and through the course of the EMD protocols, the dispatcher can ask a series of questions dependent upon the nature of the call, and can provide post-dispatch or pre-arrival instructions to the calling party. NFPA-1221 requires a minimum of two persons to be duty when an EMD program is in place.

The JCECC and JCAA operate under the medical direction of a physician. This physician routinely provides instruction and guidance to the Communications Director and EMD Coordinator in the pursuit of delivery for efficient EMS services. The EMD program has a component of case review and feedback so the EMD’s are aware of how they performed in the incidents that they handled. The Medical Director required the JCECC to perform case review on twenty-five cases per month and required compliance to protocol scores of 70% or greater.

The EMD Coordinator randomly selects calls and these cases are reviewed to determine compliance to protocols. In March 2002, the Medical Director required stricter compliance to protocol scores of 85% or greater. For FY 2002, the total compliance to protocol scores for the center was at 91.60% with 417 cases reviewed and since March 2002, the compliance to protocol was 94.25% with 220 cases reviewed. The these scores are as follows:

Month	Number of Cases Reviewed	Compliance to Protocol
July, 2001	23	75.69%
August	27	92.00%
September	25	86.25%
October	30	88.32%
November	17	89.84%
December	27	92.03%
January, 2002	25	93.90%
February	54	92.29%
March	65	94.13%
April	53	92.81%
May	34	96.28%
June	37	94.95%
FY 2002	417	91.60%

Another component of EMD is the continuing dispatch education necessary for the EMD to maintain certification through the NAED. The NAED requires 24 hours of continuing dispatch education every two years. CPR Certification is also required as part of the CDE process.

Coordinated, Uniform Street Addressing

An independent addressing consultant has assisted the County with developing comprehensive maps of the County for eventual use as a baseline to GIS, the

development of the addressing standards and departure of the rural route mailing system moving towards an urban style addressing system using the NENA II standard of 5.28 feet. The County Addressing Coordinator has identified numerous roads which required re-naming due to duplicate or confusingly similar names and the County's Communications Director has developed an Addressing Ordinance which outlines the requirements of re-addressing of the County. This ordinance was adopted on April 14, 2002 and became effective July 1, 2002. Developing the old address/new address database is a task required of the addressing consultant and being able to identify an address married to the telephone number is a national standard.

The procurement of mapping products such as map books for the fire, EMS and law enforcement units will assist the responding units with the ability to quickly and efficiently locate an emergency. The procurement of software products for the dispatch center will allow the dispatchers to quickly identify the location of the incident, and relay this information to the responding units.

RECOMMENDATION 4.12: The County should see its current emergency addressing project through to completion, which would result in a state of the art, county-wide unified address system which would assist emergency service providers to provide the most efficient, timely service possible.

RECREATION AND PARKS

The following sections present an analysis of the parks and recreation system in Jefferson County. They also address the recommendations and goals of Jefferson County Parks and Recreation Commission.

The Jefferson County Parks and Recreation Commission

The Jefferson County Parks and Recreation Commission (JCPRC) was formed on July 1, 1970, and consists of an eleven member volunteer board that is appointed by the County Commission. The JCPRC is responsible for setting specific park procedures and hiring the employees who administer the commission's policies and procedures and maintain the commission's property and facilities.

The JCPRC employs a Director, Recreation Specialist, Parks Supervisor, and five full-time season Parks Maintenance Staff. Other part-time personnel, including instructors, counselors, and others, are hired on an as-needed basis for seasonal program needs.

Recreation Councils have been developed at a number of parks. These councils consist of volunteers who sponsor additional programming and community events, plan fundraisers, and make suggestions regarding policies and procedures. One member of each recreation council serves as a liaison to the JCPRC, and attends the meetings on a regular basis.

The JCPRC has formed relationships with local area business and community groups, including banks, Boy Scouts, school groups, and others. Banks or other businesses have sponsored some events, like concerts. The Boy Scouts use an area of one park for camping, and do many of their service projects at different parks, including building bridges, birdhouses, and so forth. School groups sometimes conduct "Community Days," and have planted flowers and performed other

maintenance at the parks. One business sponsored a “Send a Child to Camp” program, and paid for several underprivileged children to attend a summer day camp. By building these “community relationships,” the JCPRC believes that it is building ties, which are beneficial to the community.

The JCPRC has pursued grants and other sources of public funding for the benefit of the department and the community. Most recently, the JCPRC has received a grant from the State of West Virginia for the construction of an amphitheater at Sam Michael’s Park, which will provide value for other community events, including the Mountain Heritage Arts and Crafts Festival, and other musical programs and concerts.

Recreational Programs

The JCPRC offers a wide variety of year-round recreational programming and special events for the citizens of Jefferson County, including:

Swimming	Seasonal Events
Gymnastics	Fishing Derby
Concert Series	Sports Camps &
Arts and Crafts	Workshops
Workshops	Summer Day Camps

Programs are held at primarily at JCPRC facilities, as well as various community schools and other facilities (Athletic Clubs, KOA grounds, churches, etc.).

Seasonal Brochures listing available programs are printed three times each year, and are distributed through the Jefferson County Elementary Schools, public libraries, day care centers, and so forth. The JCPRC also has a web page, where the Program Brochure is available on-line. For some programs, the JCPRC advertises in local papers and on local radio stations.

Parks and Athletic Fields

The JCPRC owns 7 parks, and maintains Morgans Grove Park which is owned by the Shepherdstown

Men’s Club, for a total of 250 acres, including athletic fields, walking trails, camp grounds, pavilions and other structures. Currently, JCPRC maintains 12 baseball/softball fields, 4 volleyball courts, 5 tennis courts, and 10 soccer fields. These fields are available for rental by community athletic groups and others who wish to engage in organized recreational leagues. Groups are issued a permit for use by the JCPRC office.

The JCPRC has agreements with many area teams and sports leagues, including: Jefferson County Youth Soccer Organization, Shepherd College, Jefferson County Youth Football League, Summit Point Little League, Jefferson County Church Softball, and the AAU Youth Baseball League.

In 1996, the JCPRC entered into a long-term agreement with the Charles Town Ranson Little League (CTRL). The CTRL has funded the construction of two little league fields, and is currently constructing a senior league field, at Sam Michael’s Park.

Facility Rentals and Camping

The JCPRC maintains 5 pavilions, 5 kitchens, and 6 bathroom facilities, which are available for rental throughout the year. The pavilions have been used for weddings, family reunions, birthday parties, company picnics and other community events. Moulton Park (along the river) has primitive camping sites available for use. Permits are issued by the JCPRC office.

Park Maintenance

With 250 acres in 8 parks, Park Maintenance is one of the largest areas of operation. Fields and other grassy areas need to be mowed, athletic fields need to be prepared, buildings need to be kept clean and in good working order, and so forth. As required by the County, the JCPRC has to implement a storm water management plan at all of its parks. These plans must be engineered and built by the JCPRC.

Parks Information

The JCPRC has developed a Park Brochure, which is available at libraries, post offices, and other community centers, as well as on-line, to provide the citizens of Jefferson County with information about the Park resources available throughout the County. The brochure contains pictures, maps and descriptions of each park.

Jefferson County Parks Facilities Inventory

An inventory of parkland facilities owned and/or maintained by the JCPRC is found in Appendix B of this Plan.

The Need for Parks and Recreation Programming

As the County continues to grow, the need for additional park space and recreational facilities also grows. Many of the new residents come from more urban areas, where resources for recreational opportunities may have been more readily available. Additional facilities will be needed, as well as the need to maintain older, existing facilities.

Indoor recreational space is at a premium in the County. Currently, the JCPRC rents space from private businesses for many of its programs. Facilities at the County Schools are frequently unavailable, due to competition with athletic teams, school functions, and other events.

RECOMMENDATION 4.13: The County should explore constructing a centrally located County Community Recreation Center.

As stated in its mission, the JCPRC's organizational goal is to provide citizens of Jefferson County with "recreational activities and comprehensive programs for youth." In order for the JCPRC to continue to offer quality youth programs, it must provide a recreational facility to the residents of the County. For this reason, the JCPRC proposes to build a community center at Sam Michael's Park. A community center at Sam Michael's Park would be central to all towns in the county and would benefit all residents.

As cited in the 1994 Comprehensive Plan "Jefferson County is steadily growing and many of the new residents come from communities that may have resources for recreation. As Jefferson County becomes more urban, the need for larger facilities and more recreational programs will also grow. This will require additional facilities to be built and maintained...". From 1990 to 2000, the population of Jefferson County has increased by 17.4%. Many of these residents are moving in from surrounding counties such as Loudoun, Montgomery, and Frederick that have well established facilities and programming for children and adults. Currently, in Jefferson County there are no indoor facilities available to County residents for recreational purposes on a regular basis. Local schools are not readily available for use because they are filled to capacity with school related activities and community events.

In order for the JCPRC to offer recreational programs for youth such as swimming, gymnastics, basketball, volleyball, summer camps, and special events throughout the year, it is required to rent and use facilities that cost as much as \$35 an hour. Furthermore, the JCPRC does not have the capability to offer year round art and humanity classes such as pottery, drawing, and painting due to the lack of a community center. In order to expand and continue to offer quality programs for Jefferson County citizens at an affordable price, acquisition of a community center is essential.

A community center would not only benefit the youth of Jefferson County, but all of its residents. With an increasingly growing population there is and will continue to be a need for indoor recreation space. A community center would allow the JCPRC to offer numerous programs including basketball, volleyball, indoor soccer, floor hockey, indoor track, and other fitness programs. Programs could be established to benefit adults as well as seniors as a rapidly growing portion of the population, will play an increasing role in the demand for government services as the County grows. In addition, a community center would benefit other organizations and schools in the

county. School funded programs such as the swim team, basketball, and cheerleading are currently looking outside of the school system for space to practice and compete. In some cases, basketball teams are practicing at 7:00 a.m. to obtain gym space. Cheerleaders and the swim team are renting privately owned facilities to obtain practice space as well. As the county grows, problem will only grown in severity unless addressed.

Finally, a community center would offer an attractive place for community banquets, weddings and other activities that need a large meeting area. With a community center available to County residents, local organizations could hold special events like trade shows and concerts.

RECOMMENDATION 4.14: The County should increase relationships with community groups and area businesses and implement a community sponsor plan.

Community and corporate support is essential for the operation of the JCPRC. As such, new strategies should be studied and initiated to foster and develop this relationship.

RECOMMENDATION 4.15: The County should strive to provide recreational opportunities for all citizens.

A growing and increasingly diverse community requires more diverse recreational offerings. Efforts should be made to ensure the offerings made by the JCPRC keeps pace with community demand.

RECOMMENDATION 4.16: The County should allocate resources necessary to provide appropriate maintenance to park facilities.

One of the most visible and readily apparent clues as to the quality of government services is the appearance and maintenance of its schools and parks. Maintenance of Jefferson County as a quality place to live and to travel to requires that its parks be maintained in such a way that they reflect positively on the County and its residents.

RECOMMENDATION 4.17: The County should explore all available avenues to acquire parkland that is usable for active recreational activities to meet increasing and future demand for such facilities.

Jefferson County needs more parkland and needs to develop more places for active recreation. The current demand for fields for soccer, basketball, tennis, softball, little league and regular baseball far exceeds the available facilities in the county. National standards recommend that to serve the local needs, the ratio of parks and recreation space should be approximately ten acres of land for each 1,000 residents. Jefferson County has only 240 acres of local parks to serve the estimated 45,000 residents in the county. At least 210 additional acres that would be in parcels of adequate size, shape and arrangement to be efficiently managed and equally distributed through out the county are needed to meet the increased demand that has built up over the last ten years. This demand will only increase as time goes on unless this issue is addressed. These tracts should be of sufficient size and in suitable locations that can be developed with playing fields, parking and other amenities that will make them suitable for public use. They should be provided with adequate water supply and sewage disposal.

Currently lacking in the County are facilities to provide organized recreation such as swimming lessons, gymnastics, day camps and other activities. New facilities with gymnasiums, swimming pools and meeting rooms are needed to meet the existing and anticipated demand for organized programs.

One of the opportunities to acquire suitable parcels of land would be to encourage or require developers of new subdivisions to donate to the County, appropriate parcels that could be used for park purposes. This would be an acceptable approach only if the JCPRC deems the donated land suitable for development as a park. If a new development encompasses a stream valley, suitable land to provide a buffer for the stream should also be provided but not as a substitute for developable parkland.

This page reserved for map of parks and recreational areas.

An alternative would be to include the need for parkland acquisition in calculations of impact fees, should such a fee program be adopted by the County. Achieving this goal through the partial use of impact fees would allow flexibility on the County's part in locating acceptable tracts instead of relying on the market and residential development trends. In-kind donations of usable land in lieu of paying the segment of the impact fee that is targeted for the parks department may be a painless way of obtaining new parks that are located within communities, to meet the sports needs of the citizenry.

The emphasis for the immediate future should be on acquiring land suitable for developing facilities for active recreation. The acquisition of stream valleys should be done on an opportunity basis.

Stream Valley Protection

Not all forms of recreation are active. Parkland dedication can serve the dual purpose of protecting sensitive environmental features while allowing for passive recreation opportunities. Many jurisdictions have implemented plans that require the dedication of sensitive environmental areas along rivers and streams to their parks departments as part of the development process. This is a relatively painless way to protect the environmental health of the County's streams while providing for walking paths and areas where natural features can be appreciated.

RECOMMENDATION 4.18: The County should investigate the legal and fiscal feasibility of requiring the dedication of stream buffer areas to the Department of Recreation and Parks during the subdivision process for the purpose of beginning a linear park system within the County.

While such dedication is desirable, it should be secondary to the immediate need of catching up with the demand for facilities that serve the active recreation needs of County residents.

RECOMMENDATION 4.19: In order to plan for the needs of a growing population, which results

in fewer tracts of land being available to provide for those needs, the Department of Recreation and Parks should devise and adopt a Master Plan for Parks and Recreation in Jefferson County.

All major development undertakings require coordination and planning. The JCPRC should adopt a master plan and create a strategy for meeting the recreational needs of existing and future County residents.

Parks Planning

In 2000, the County Commission approved the Sam Michael's Park Site Plan. This plan provided the groundwork for the future development of recreational facilities at the park, including a swimming pool, soccer complex, tennis courts, community center, amphitheatre, baseball fields, picnic pavilions and a walking/biking trail.

The South Jefferson Park Master Plan was created in 1997 and the Site Plan for Phase I construction was approved by the County Commission. Phase I included a concession/ restroom facility, baseball fields, playgrounds and parking areas. Future improvements are to include tennis courts, community building, parking, soccer fields, swimming pool, and maintenance facilities.

The JCPRC is currently working on Master Plans for all its facilities. Based on its participation in the County's Capital Improvement Plan (CIP) budgeting process, the JCPRC has determined the following construction and improvement priorities:

- a. Leetown Park: Renovate structures, athletic facilities and replace playground equipment.
- b. Evitts Run Park: Renovate restroom facilities, athletic facilities and replace playground equipment.
- c. Mount Mission Park: Renovate athletic facilities and replace playground equipment.
- d. Sam Michaels Park: Construct a Community Center.

As the JCPRC acquires additional property for parks and recreational facilities, additional Master Plans will be formalized and presented to the County Commission.

The Role of National Parkland to the County

Jefferson County is fortunate to be the site of two major national recreational facilities. The Appalachian Trail traverses the eastern boundary of the County, and Harpers Ferry National Historical Park is located along the Potomac and Shenandoah Rivers. As national attractions, however, they offer little regarding the team sports needs of the Jefferson County community.

The standard established by the National Recreation and Parks Association (NRPA) for land set aside for environmental preservation is 60 acres for every 1,000 population. Jefferson County fares much better in this area due to the presence of Harpers Ferry National Historical Park, the Appalachian Trail the Shannondale Springs Wildlife Management Area, and a number of properties that are protected from further development via preservation easements.

Much of this land is remote and unaccessable. In 2002, the National Park Service (NPS) conducted a boundary realignment study that, if approved by Congress, would expand the boundaries of the National Park by several hundred acres. This would allow the NPS to purchase lands within the expanded boundaries for incorporation into the Park.

RECOMMENDATION 4.20: The County should support the expansion and enlargement of the facilities and programming of Harpers Ferry National Historical Park and the Appalachian Trail, as these facilities are economically beneficial for the County, while respecting private property rights.

LIBRARIES

Libraries are of inestimable, yet intangible value to a community. They offer a community center where families and acquaintances casually meet or check notices for local activities and services. Libraries, like parks, historic sites and scenic areas, contribute to the quality of life of a community.

There are four tax supported libraries in Jefferson County, all of which are included in those independent services that are outside of the direct supervision of the County Administration. These are the Bolivar-Harpers Ferry Public Library, the Shepherdstown Public Library and the South Jefferson Public Library in Summit Point. The fourth facility is the Ruth Scarborough Library at Shepherd College, a State facility, which is available for use by residents who are not otherwise involved in the college organization.

Each of the three community libraries, created under public law, operates autonomously by a five member board of trustees. Each falls under the State category of “affiliate” library, whereby there is an administrative and fiscal tie to the Martinsburg Public Library. While geared toward their individual communities, these libraries serve the County as a whole. These libraries are part of the West Virginia statewide library system, thereby providing such services as inter-library material loans and internet service. In Fiscal Year 2002-03, the Jefferson County Commission dedicated \$100,000 in support for the libraries.

A fifth library, the Old Charles Town Library, is funded through a private endowment fund and fees charged for services rendered. Due to increased costs, this Library has had to revise its membership fee schedule in 2001 in order to meet expenses without damaging its endowment.

The West Virginia Library Working Standards (1992), set the following minimum standards to which a community should strive in providing library services to its citizens:

- 0.6 square feet of library space, per capita.
- between 2.13 and 2.53 volumes per capita.
- a minimum of 96 hours of operation per library, per week.

Currently, the three public libraries occupy space totaling less than 5,000 square feet, or 20% of the recommended minimum, and hold approximately 49,000 volumes, or only 46% of the recommended minimum. This significantly offset by the Scarborough and Old Charles Town Libraries, the facilities of which are open to Jefferson County residents. Some of this deficit in space is being addressed with the planned construction of a new South Jefferson Public Library in Summit Point in late 2002, which replaced the existing library which operated from an office trailer located in a rural area at the intersection of WV 13 and WV 11.

Jefferson County Library Resources			
Jefferson County Public Libraries*:			
Building area:	5,000 s.f.		
Volumes:	49,000		
Operating Hours:	50/week		
Old Charles Town Library:			
Building area:	7,930 s.f.		
Volumes:	40,000		
Operating Hours:	50/week		
Total, all libraries:		Percent of State Standard:	
Building area:	12,930 s.f.	49%	
Volumes:	89,000	81%	
Operating Hours:	50 per site	54%	
Scarborough Library, Shepherd College:			
Building area:	85,000 s.f.		
Volumes:	459,000		
Operating Hours:	60/week		
*Public Libraries include Bolivar, Summit Point and Shepherdstown. Source: Surveyed Libraries. Percent of State Standard based on 2001 county population estimate of 44,000 persons.			

RECOMMENDATION 4.21: The County should support the libraries in Jefferson County by continuing to contribute financially to the public libraries and exploring assisting the libraries in maintaining State recommended levels of service, provided that the facilities of Scarborough and Old Charles Town Libraries are considered in determining that level of service.

CULTURE AND THE ARTS

The wide variety of activities collectively discussed under the topic of culture and the arts is important to the quality of life of County residents. The accompanying box lists some of the major arts and cultural facilities and events in the County. As might be expected, Jefferson County's well educated and well employed population takes an active part in cultural activities and educational programs. Due to Jefferson County's distance to major metro areas, a strong local network of programs and facilities have developed here.

Non-profit groups present the majority of the dance programs, concerts, plays and art exhibits County residents enjoy. They offer workshops, performances and instruction in the arts for children and adults - making the arts accessible to all Jefferson Countians. Shepherd College and the Mountain Heritage Arts and Crafts Festival draw significant regional attention to Jefferson County and its cultural offerings. Jefferson County Public Schools, the National Park Service and the Department of Parks and Recreation also provide arts and cultural programs in addition to many private and non-profit organizations.

Non-profit organizations provide a wide range of programs and services on very modest budgets, relying on the enthusiasm and dedication of volunteers. Many receive support from Jefferson County through grants awarded during its annual budget cycle.

Heritage tourism is the fastest growing segment of the tourism industry. As such, historic preservation

efforts and cultural and artistic venues are closely linked when creating a tourism-based economy.

A wide network of organizations and programs, such as historic house tours, ethnic festivals, concerts, special interest groups, service organizations and others serve to weave a web of culture throughout the community that benefits not only County residents, but visitors to Jefferson County. Therefore, the cultural and artistic elements of the community are vital, not only in the intangible form of entertainment and personal growth, but the very tangible form of tourism dollars.

- b. Exploring ways to integrate lesser visible cultural facilities and events into plans geared toward increasing tourism in the County.***

<i>A Sampling of Jefferson County Arts and Cultural Facilities and Events</i>		
Shepherd College	Old Opera House	Shepherd College Performing Arts Series
Harpers Ferry	Jefferson Co. Museum	Appalachian Heritage Festival
Mountain Heritage	Shepherdstown Museum	National Conservation Training Center
Arts & Crafts Festival	Jefferson County Fair	Shepherd College Sports
Arts & Humanities Alliance	Community and Ethnic Heritage Associations	Apple Butter Festival
Genealogical/ancestral groups	Jefferson County Historical Society	G.T. Moore Center for the Study of the Civil War
George Washington Heritage Trail	Garden Clubs	Old Tyme Christmas
Peter Burr House	Civil War Heritage Trail	Christmas in Historic Shep'town
Historic Courthouse	Isaak Walton League	Election Day 1860 (Harper's Ferry National Historic Park)
Scouting groups	Book clubs	Exhibits at Harpers Fy. Park
Church groups	Veterans' Organizations	
	Jefferson H.S. Sports	

A complete listing of all possible cultural and artistic venues in the County would be quite difficult to complete for this Plan; a mere sampling and generalization of their depth and breadth are represented above.

RECOMMENDATION 4.22: The County should encourage the community to provide a wide variety of arts and cultural activities for County residents by:

- a. Continuing to support community based cultural and arts organizations and activities.***

SOLID WASTE MANAGEMENT

In 1991, the West Virginia Division of Natural Resources (DNR) directed that the Leetown landfill cease accepting solid wastes for burial. The closure order was based on DNR's determination that continued operation of the unlined landfill created potential health and safety problems.

A month after the order to close the landfill was issued, the State enacted the "West Virginia Recycling Act"; a law which closely regulated every major aspect of solid waste collection and disposal in the state. The legislation also set statewide standards and goals for recycling. Its most important feature, however, was that it established a closure assistance fund financed by a tax on tipping fees. The County Solid Waste Authority (SWA) received funds to assist in the closure, capping, monitoring and remediation of the landfill.

Given the limestone "Karst" geology which lies beneath much of the County and the \$500,000 per acre cost of constructing a state of the art landfill, Jefferson County has had to look toward a regional approach regarding solid waste disposal. Jefferson County residents and businesses currently dispose of their solid waste through private billing arrangements with Waste Management of the Shenandoah Valley (WMSV), which removes solid waste in the county to the L.C.S. landfill in Hedgesville (Berkeley County). WMSV provides this service at \$41.70 per ton, which greatly exceeds the pre-closure tipping fees charged at the Leetown landfill. As nearby landfills close and alternate disposal sites must be found, disposal costs can only be expected to increase.

For waste disposal costs to remain stable, the community must continually reduce the tonnage of materials destined for burial in landfills. An effective recycling program is one of the easiest and most direct ways of reducing the waste stream. An effective recycling program has at least two major

elements. First, we must achieve a high level of participation by all generators of solid wastes. Second, we must maximize the range of materials that are recycled.

A County-wide curbside recycling program was started in July, 1993. At present, the program provides residents with the opportunity to recycle newspaper, plastic bottles, glass bottles, aluminum and bi-metal cans. The curbside waste hauler, (WMSV) estimates collection of 32 tons of these materials per week from Jefferson County households. Waste generators that need to develop a full range of recycling programs participation are: the five municipalities, County, State and Federal government agencies within the County, the County school system and all commercial and industrial generators. All municipalities in the County offer a curbside recycling pick-up. Government agencies and commercial/industrial concerns are required to participate in a recycling program by the West Virginia Recycling Act and the County's recycling ordinance.

In 2001, the SWA began full service recycling at its Transfer Station located at the site of the closed landfill. The Authority has been operating a wood and yard waste recycling facility at this site since 1993. This operation grinds the wood and yard waste into mulch and compost products which are then sold producing an income stream. In 1999, 1,348 tons of wood and yard wastes were collected (39% of solid wastes collected at the Transfer Station) and 517 tons of mulch were sold. Ten tons of the mixed compost product have been sold since the inception of compost production in August, 1999.

The Authority also collected and recycled 2,975 gallons of used lubricants, 141 tons of scrap metal and white goods (appliances) and 543 tires in 1999. A newspaper recycling service began in August 1999 and 8 tons have been recycled in the past year. In 2001, the SWA initiated a plan to provide consumer product recycling (glass and plastic containers and metal cans) at the Transfer Station. It is estimated that it will further reduce the waste

stream by about 60 tons per year. As the complete program is successfully developed, the County has met the reasonable waste reduction goals of 30% by January 1, 2000 and should meet the goal of a 50% reduction by January 1, 2010 (calculated on a percentage basis of the waste generated per capita in 1991).

Keep Jefferson Beautiful

Keep Jefferson Beautiful (KJB) was formed in April, 1997 when a group of citizens decided to augment the ongoing voluntary and public efforts to control litter in the County. KJB was incorporated that same year as an all-volunteer, non-profit corporation with the expressed purpose of promoting and supporting programs leading to the elimination of trash and litter in the County. Its goals are to promote specific programs leading to the elimination of trash and litter; identify and eliminate open dumps and hazardous abandoned buildings; lessen the burdens of government responsibility for trash and litter control; educate and encourage citizens to keep Jefferson County beautiful; and preserve the County's scenic beauty.

Among its efforts, KJB is recruiting individuals and groups to participate in the Adopt-a-Highway program and is working with judicial and law enforcement agencies to use community service and trustee programs for clean-up of open dumps and litter. This organization has been instrumental in satisfying the County's and SWA's responsibilities in this area.

Other Issues that Need to be Addressed

Littering and illegal dumping is a chronic and persistent problem in the County. The SWA and KJB are coordinating their efforts to address these problems. The County Commission funds a "free dump day" once per month which provides residents with no cost disposal of up to 300 pounds of their solid wastes at the Transfer Station. While current State law provides that every household must either subscribe to a waste hauling service or furnish evidence that their wastes have been deposited in a legally established facility, it is a

difficult law to enforce. WMSV estimates that 1,664 tons of curbside recyclables are collected per year and deposited 26,500 tons in the Hedgesville landfill in 1999. This represents only a 6% recycling rate, which is inadequate.

For all of the above reasons, it is in the self interest of every household, business and public agency in the County to fully participate in the recycling program. The best way to reduce the cost of disposing of solid waste is by decreasing the volume that we generate.

RECOMMENDATION 4.23: The County should continue to support and endorse a regional approach to landfills and recycling due to cost factors and the geologic unsuitability of the vast majority of the County's surface area for a waste disposal facility.

RECOMMENDATION 4.24: The County should increasingly emphasize programs to maximize recycling efforts in the County in order to extend the life of nearby landfills, and remain responsive to changing trends in waste generation and management, and recyclable end use markets.

COUNTY FACILITIES

Jefferson County employs approximately 125 persons, the majority of whom are stationed in a complex of existing retrofitted structures in the downtown commercial area of Charles Town, the county seat. The centerpiece of this complex is the historic County Courthouse which houses the circuit court, the County Commission hearing room and the Clerk of the Court's offices. The County Commission, Department of Recreation and Parks, Sheriff's Department, Emergency Services, Facilities Maintenance, the Tax Assessor's Office and the Department of Planning, Zoning and Engineering are all housed in outdated structures (former storefronts, a house and an old office building), on East Washington Street. A map of the County's building complex is located on page 105.

This page reserved for map of county office complex.

In 2000, the County took possession of the Jefferson County Judicial Center; a wonderfully restored building with an architecturally compatible addition located across George Street from the Courthouse. This acquisition provided much needed additional, state of the art space for the magistrate courts and the offices of the prosecuting attorney. Even with this major acquisition, the court system is still in need of additional space. As the County government grows to meet demand, additional space will be required.

As the County's population grows, so must the County's workforce, work spaces and resources in order to keep up with the demand for services. Unfortunately, the County faces a dilemma in that there is limited space within the existing complex (bounded by George, Washington, Liberty and Samuel Streets) that is available to expand County government facilities.

The complex is located in the Charles Town Historic District, where preservation of historic structures is a sensitive issue. All parties agree that any new construction must be initiated without damaging or displacing the historic courthouse. These competing circumstances; a growing need for workforce and work space to serve the expanding needs of County citizens versus a very small campus constrained with historical considerations and a variety of existing structures, some of which cannot be removed, place the County government in the unenviable circumstance of finding some accommodation with the local community that meets the County's need for efficient, usable and flexible space, or removing all government operations except the judiciary from the current campus to a location more conducive to the needs of the County government.

In 2000, the County initiated a Capital Improvements Plan (CIP). Creation and implementation of this plan is one of the steps necessary to enact impact fees (see next section). A CIP is an essential element in planning for and implementing the construction of government facilities in a timely and cost effective manner.

RECOMMENDATION 4.25: The County should maintain its Capital Improvement Plan so that the growing needs of the County government for resources necessary to provide the expanded services required by a growing populace are in place when necessary.

RECOMMENDATION 4.26: The County should work with the local community to determine how the County's long-term needs for space to expand governmental operations and structures can be economically and efficiently met with minimal effect on the historic district and with support from the community. In case this initiative does not bear fruit, the County should also assess alternative sites within Charles Town for possible relocation of all non-judicial operations in order to meet organizational needs.

RECOMMENDATION 4.27: Should the County adopt an impact fee program, considerations for public facilities should be included in this program, if found to be in conformance with the State Code.

ADJUSTING PUBLIC SERVICES FOR AN AGING POPULATION

Elsewhere in this Plan, it has been noted that the overall population of the County, like that of the nation, has been aging. Over the 20 year period ending in 2000, the median age of Jefferson County's populace increased 7.4 years to 36.5 years. This is a result of the national aging trend created by the "Baby Boom" generation reaching its middle-aged years, and West Virginia's status as a retirement destination for retired military personnel. Also, an additional trend that effects this formula is that overall life expectancy is increasing across the board.

Demographics affect planning for government services every bit as much as land development planning. The most obvious example of this is how

demographics are used to plan for sufficient school capacity, yet children are not the only demographic that needs to be considered in service planning.

Government must consider the aging population when developing management plans for the future. Proportionally, older residents rely on emergency medical services more than other demographic groups. Crimes against the elderly (and prevention thereof) is a specific area of study within the law enforcement community. The retired element of the community have free time and money available and search for activities, many times turning to the local recreation and parks department to fill this need.

Land planning, for example, can be affected by these trends, by the need to review zoning ordinances for how they affect the construction of senior housing communities.

As the demographic of the community changes, the administrators of the various County government agencies will need to keep in mind the changing nature of the community and adjust their services, if necessary, to address the changing needs of Jefferson Countians.

RECOMMENDATION 4.28: Relevant County government agencies should be aware of the changing age demographic within the community, and adjust their operations, if necessary.

RECOMMENDATION 4.29: When revising the land development regulations, particular attention should be paid to how those changes can be made to improve services to and enhance the lives of the aging population.

FINANCING CAPITAL IMPROVEMENTS

The construction of new housing developments place increased burden upon the capital infrastructure of the County, which results in reduced service and/or increased taxes.

The issue of the financial impact on infrastructure is a very complicated issue. Many elements are interwoven to create a web of public services, and the potential impacts on those services are just as intertwined.

Thus far, new development, coupled with the County's share of State gambling revenue has kept property tax levies steady. Any increase in property tax bills has been due to reassessments that take into account the increased market value of properties. In other words, increases in property taxes in recent years has been due to the appreciation of the value of the owner's property, not the cost of providing more services to more residents.

This cannot last forever, though. With the County in need of a new high school and other existing government facilities and services taxed to their limits, new and creative ways must be found to make sure that the County's ability to keep pace with demand is maintained. As of the adoption of this Plan, the County Commission is studying whether it should impose impact fees for new development, and if so, how.

Impact fees are calculated based on the type of structure (single family home, multi-family home, commercial, etc.) and the fair share that the owner of that new structure must pay to maintain existing levels of service for Government activities. *Impact fees, by law, cannot be used to improve current levels of service.* Also, if the County does not use the fees for set purposes within a specific amount of time, the fee is returned to the property owner.

In reality, developers do not pay the impact fees. These fees are passed onto their customers in increased housing costs, regardless of whether the purchaser is a "newcomer" or a long-time County resident who desires to purchase a new home within the County. Someone moving to the County who purchases an existing home would escape the impact fee, while the existing County resident "trading up" to a new house would be subject to the fee. Also, while there are no studies available to

confirm this, it is reasonable to surmise that if fees significantly increase the cost of new housing, it may force some home buyers to look only at the existing housing stock. Demand for existing housing may increase, thereby affecting the price of existing housing stock.

Nonetheless, the imposition of impact fees will be necessary to ensure that the County has the financial resources to construct schools and other capital improvements to keep pace with new development. Adoption of these fees are advisable now because:

- a. Jefferson County real estate prices continue to be less than in Maryland and Virginia. Therefore, the fee can be implemented without seriously impacting the cost-competitive edge the County has over neighboring states in the housing market.
- b. Fees passed on to the consumer may have a residual impact of slightly slowing development by increasing the retail cost of new housing by narrowing the inter-state new housing cost gap.
- c. There is a general reluctance in the Community to increase taxes to pay for expanded government services and facilities. Implementation of impact fees reduces the need to increase taxes.
- d. The “use it or lose it” nature of the laws authorizing the fees will encourage the timely and efficient use of these funds.

RECOMMENDATION 4.30: The County should institute a development impact fee program to help finance the construction of new schools and other government facilities needed to maintain existing service levels.

Chapter Five

Implementation

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Chapter 5:

IMPLEMENTING AND

MONITORING THIS PLAN

This section of this Plan addresses all of the recommendations set forth earlier in this plan and identifies goals or measurements that should be used to determine whether the recommendation is implemented. First, it identifies the most important initiatives based on relevance to the environment, community planning and the effective operation of government. The second lists the particular recommendations in the plan and the measure of their implementation.

IMPLEMENTATION PRIORITIES

There are 79 specific recommendations set forth in this Plan. Not all can be accomplished, nor should all be attempted simultaneously. Prioritization is necessary so that the most efficient use of County funds, staff time and relative time is accomplished. In some instances, the results of some of these recommendations must be in place in order to pursue other recommendations. In order to efficiently address the needs and recommendations identified in this Plan, the following are identified as priority issues, as reflected in Chapters 2, 3 and 4 of this Plan.

1. *County Land Use Ordinances and Zoning Map*

Numerous recommendations in this Plan specifically pertain to the content and construction of the existing Jefferson County land use ordinances (Zoning and Development Review, Subdivision, Salvage Yard, Flood Plain and Improvement Location Permit Ordinances). These recommendations address new regulatory content, reviewing and upgrading existing design and

IMPLEMENTATION

construction standards, restructuring the land use pattern in the County and re-crafting the very

format of the documents themselves. Upon the adoption of a new Comprehensive Plan, it is required by law and common planning practice to revise existing ordinances to bring them into compliance with the policies and recommendations of this Plan. This must be the first priority of the implementation of this Plan. It should be initiated immediately upon the adoption of this Plan and pursued expeditiously.

2. *Municipal Cooperation*

The ability of the County to cooperate with the municipalities (and the municipalities to cooperate with the County) will be a determining factor whether the County grows in a coordinated fashion, with decisions being made for the greater good, or competition will generate an environment where property owners shop their properties among jurisdictions for the “best deal”. The issue of cooperation needs to be explored and defined.

3. *Implement Impact Fees*

The use of effective, legally defensible impact fees may be the single greatest tool that can be employed to help finance the creation of government facilities to serve the growing community. These fees should be adopted as soon as possible and, since it will be the first County in the state to adopt these fees, they should be initiated in a manner that the County is comfortable in defending the program in the courts.

4. *Defining and Improving Affordable Housing*

As the County grows, available land in the growth area becomes committed, impact fees are adopted, and land use regulations are tightened, the issue of affordable housing is going to become more of an issues. The County needs to define what “affordable housing” is, and then evaluate strategies to ensure affordable housing is available.

5. *Consolidated Transportation Plan*

The creation and adoption of a consolidated transportation plan, with the participation and

cooperation of the West Virginia Division of Highways is a very important implementation of this Plan. As more land becomes committed to development and development patterns become fixed, the efforts of the State to obtain right-of-way for the widening or realignment of existing roads and the construction of new roads (such as the recommended western bypass) become more difficult and expensive. Recommendation 3.10 of this Plan recommends that a transportation management plan be pursued and adopted that includes mapping of designated rights-of-way for future land acquisition to correct road deficiencies.

Once this transportation plan is approved, provisions can be incorporated into the Subdivision Ordinance that require developers to dedicate rights-of-way in their developments that may appear on this map so that deficiencies in the existing highway network that their project may adjoin can be corrected. This would save the County and State taxpayer thousands upon thousands, if not millions of dollars over the time that the County proceeds toward “build-out”.

In order to implement this suggested ordinance requirement, a transportation plan map must be established showing where the State needs new or additional right of way to accomplish highway deficiency corrections in order for the ordinance requirement to have the full force and effect of being supported by the Comprehensive Plan.

In larger subdivisions, it is likely that many developers, when presented with the need to dedicate rights-of-way for state highway improvements, will design and incorporate those corrections into their proposed subdivision scheme, in order to provide their buyers with homes in a quality subdivision that addresses adjacent roadway deficiency needs.

MEASURING THE IMPLEMENTATION OF RECOMMENDATIONS

FOUND IN THIS PLAN

Contained over the next several pages is a chart which restates each recommendation of this Plan. On the chart, measures are identified that will identify how this recommendation will be implemented, and measures of the effectiveness of the implementation.

RULE OF CONSTRUCTION AND INTERPRETATION: This Comprehensive Plan is not intended to replace or supercede definite, specific ordinances that were in effect at the time of its adoption; instead, its purpose is to lay the foundation for the future enactment of land use ordinances. Proposals for future revisions, amendments or enactments of the land use and development ordinances should be reviewed for conformity with this Comprehensive Plan.

Through the statement of this rule of construction and interpretation, this Plan gives specific guidance to all readers that this Plan is general and advisory in nature, containing goals that may or may not ultimately be implemented, depending upon time, funding, political will and other factors. When the background discussion of this text or the stated goals of this Plan conflict with the Ordinances, the Ordinances, as an adopted element (and the specific implementation) of the 1994 Plan (and subsequent ordinance amendments being implementation of the recommendations found in this Plan) shall take precedence over the text and recommendations when reviewing land use development proposals.

The success of including this rule will be measured in two ways: First, a renewed focus on conformance with the requirements of the Ordinances as the measure of whether land use proposals are approved or disapproved. Second; a reduction in the use of minor references or nuances of this document as grounds for the appeal of decisions regarding plans found by the appropriate Board or Commission to conform with the regulatory requirements of the Ordinances.

Implementation Indicators and Measurements

<i>REC.. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
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This chapter concentrates all of the recommendations found in Chapters 3 and 4 into one focused location within this Plan. This encapsulation is formatted in chart format. The first column identifies the specific recommendation by number and page reference for easy referral back to supporting text. The second column simply repeats the wording of the recommendation, verbatim, from earlier in the document.

The third and fourth columns, however, are new to the reader. The third column, entitled “Implementation” identifies an activity, program, project, or other initiative that can be used to illustrate that the recommendation is being pursued in some way or form. For example, one recommendation found in this Plan is that the County explore the possibility of creating new dry hydrants throughout the County (see Recommendation 3.14). The implementation indicator is the study and identification of potential sites for new dry hydrants. The fourth column, “Measurement” identifies ways to tell how successful the implementation of the recommendation may be. Using the above example, the measurement would be an increase in the number of dry hydrants around the County. This measurement would result in a benefit to fire fighting efforts.

IMPORTANT NOTE: Through this notice, this Plan notifies the reader that “Implementation Indicators” and “Measurements” are not, nor should they be interpreted to be required or mandated initiatives or results, but rather suggestions of how to track and evaluate the County’s success or difficulty in exploring the recommendations contained herein.

<i>REC.. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
3.01 Page 25	<i>When adjusting the Zoning Ordinance and Map to conform with the recommendations of this Plan, the County should pay particular attention to the permitted density in the Townscape area and within the urban growth areas to ensure that it is not set at a level to push property owners to request annexation.</i>	<i>Reviewing and revising the Ordinances and Zoning Map.</i>	<i>Undeveloped areas around the central population hub of the County would be developed in a townscape format to compliment the existing municipalities.</i>
3.02 Page 25	<i>When adjusting the Zoning Ordinance and Map to conform with the policies of this Plan, the County should study the impact of the adopted municipal growth boundaries and determine whether it is necessary to adjust the designated growth area to meet legal sufficiency.</i>	<i>Perform legal analysis of the designated growth area and determine whether it will remain sufficient to maintain legal adequacy.</i>	<i>Based on results, leave the designated growth areas as-is or adjust its boundaries as may be necessary to maintain its legal sufficiency.</i>
3.03 Page 25	<i>The County should work with the municipalities to create a coordinated municipal growth boundary acceptable to all affected jurisdictions that allows for reasonable municipal growth while protecting the County's ability to plan for the long term growth of the "designated growth area" and the County at large.</i>	<i>Ongoing interaction and cooperation between the County Government and the elected officials of the municipalities that results in a designated municipal growth area for the towns that is acceptable to the County.</i>	<i>Municipal growth limits would be set in a manner acceptable to the County and the towns, thereby allowing the County to adequately plan for the areas surrounding the incorporated limits of the towns.</i>
3.04 Page 26	<p><i>When considering amendments to the Ordinances and Zoning Map to incorporate decisions based on the recommendations of this Plan, the County should address the Ordinances in their entirety so that:</i></p> <ul style="list-style-type: none"> <i>a. They are written in clear, concise terms, reducing the need for interpretation.</i> <i>b. They reduce the need for searching or cross-referencing of similar or same material throughout multiple ordinances,</i> <i>c. Final adopted text is correct in all forms.</i> <i>d. The zoning map is upgraded to a larger, clearer format, thereby reducing the need to interpret the document.</i> 	<p><i>Comprehensive review and revision of the Ordinances to incorporate the goals of this Plan and correct existing problems with the Ordinances.</i></p> <p><i>Zoning Map is reconstructed.</i></p>	<p><i>The County ordinances would be updated to incorporate the newest design standards where necessary, developer and public understanding of the documents improves, and they are written in the most concise terms possible to reduce the number of appeals generated by differing interpretations of text.</i></p> <p><i>The map will be so clear that all parties will be able to determine the zoning of properties without inordinate interpretation.</i></p>
3.05 Page 26	<i>When revising the subdivision and zoning ordinances (regardless of form of zoning adopted), the County should revise and streamline its processes for meetings and hearings so that their opportunity for public participation is more meaningful and timely, reduces the number of steps and provides clear rules for the guidance of property owners.</i>	<i>Review and revise the Subdivision Ordinance and the Zoning and Land Development Ordinance to streamline hearing processes.</i>	<i>A simplified hearings plan that streamlines plan review of conditional use developments.</i>

REC.. NO.	RECOMMENDATION	IMPLEMENTATION	MEASUREMENT
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3.06 Page 26	<i>The Planning and Zoning Commission should investigate producing visually appealing, reader friendly public information brochures explaining their various processes in order to improve public understanding of the planning process.</i>	<i>Creating public with information brochures regarding the various processes managed by the Department of Planning, Zoning and Engineering.</i>	<i>Improved public understanding of the development review process without a corresponding need for staff time and an enhanced public image of the Department of Planning, Zoning and Engineering.</i>
3.07 Page 26	<p><i>The County should explore posting its land use ordinances, applications and other public information on the internet, and making copies of these documents available on such electronic media as searchable compact discs.</i></p> <p><i>The Planning Commission should also investigate the feasibility of requiring applicants to provide materials in a format that is ready for electronic posting.</i></p>	<p><i>Posting of ordinances and forms on-line and in CD-rom or other electronic formats.</i></p> <p><i>Pending applications are posted on-line.</i></p>	<p><i>Staff time spent on routine public contact, copying documents and other similar activities improves. Greater public access to County planning ordinances and forms.</i></p> <p><i>Reduction in office visits by persons who can now download information they desire about applications from a web site.</i></p>
3.08 Page 27	<i>The County should investigate building on existing computer data management and GIS systems to provide the necessary land use data management tools necessary for the Department of Planning, Zoning and Engineering to collect, analyze and plot spatial land use data for use in future planning activities and Comprehensive Plan reviews.</i>	<i>Planning Department is provided access to GIS resources.</i>	<i>Improved DPZ&E ability to provide spatial analysis for future comprehensive plans, local plans, ordinance and map amendments and other planning activities.</i>
3.09 Page 27	<i>The County should explore the adoption of innovative planning concepts, such as transferrable development rights and traditional neighborhood designs.</i>	<i>Research of, and where authorized by State Code, adoption of appropriate ordinance amendments.</i>	<i>New ordinance amendments result in the increase in the amount of land protected from development.</i>
3.10 Page 28	<i>The County should solicit the assistance and cooperation of the West Virginia Division of Highways to create and execute a transportation management plan (including mapped proposed alignments of new roads and improvements to existing roads) that sets the future road network of the County and emphasizes a network of state roads serving limited subdivision roads. This plan should be comprehensive, addressing road, rail and other forms of transportation.</i>	<p><i>Coordinating with WV DOH, drafting a transportation master plan and adopting the plan, with a map of targeted road alignments, as amendment to this document.</i></p> <p><i>Adoption of ordinance text that requires dedication of highway alignments as shown on the Transportation Plan map in the development process.</i></p>	<p><i>Developments recorded with rights of way reserved to meet future road construction and realignment needs.</i></p> <p><i>Reduction of land acquisition cost incurred by the State for Department of Highways projects.</i></p> <p><i>Developer construction of new roads and reconstruction of existing roads to State standards for dedication to the State.</i></p> <p><i>Increased use of MARC, PAN-TRAN and other alternatives to the single-occupant vehicle.</i></p>

<p>3.11</p> <p>Page 32</p>	<p><i>Advocate the improvement and development of the State Highway network in Jefferson County by:</i></p> <p><i>a. Promoting and actively advocating the construction and completion of the new James Rumsey Bridge, the four-lane up-grade of US 340 south of Charles Town and the four-lane upgrade of WV 9 from Berkeley County to the Charles Town By-pass.</i></p> <p><i>b. Advocating the implementation of design corrections to dangerous locations on State Highways in order to reduce traffic accidents where they have reached critical levels.</i></p> <p><i>c. Enacting measures and coordinate with the municipalities to ensure the reservation of road rights of way for a western bypass of the Charles Town/Ranson hub as development occurs in that corridor. (See Jefferson County - 2020).</i></p> <p><i>d. Encouraging the WVDOH and VADOT to study US 340 from the Potomac River to Bolivar for possible improvements to help traffic flow through this bottleneck.</i></p> <p><i>e. Pursuing and securing funding through the Federal TEA-21 program for transportation enhancement projects within Jefferson County (in coordination with the West Virginia Division of Highways), especially if such funds can be used for potential corridor improvements to US 340 east of Charles Town.</i></p> <p><i>f. Promoting alternate and bicycle transportation.</i></p>	<p><i>Direct and ongoing communication between the County Commission and the WV DOH pertaining to the status State highway projects in the County.</i></p> <p><i>See 3.1 above. Also, adoption of a transportation master plan map illustrating required realignment dedications in problem areas.</i></p> <p><i>Improved communication and coordination with Charles Town and Ranson regarding their planning processes that may affect the alignment of a proposed bypass.</i></p> <p><i>Formal study of the highways in the Harpers Ferry water gap by VA DOT and WV DOH.</i></p> <p><i>Obtaining TEA-21 funding for corridor improvements to US 340 and other transportation oriented projects.</i></p> <p><i>Adoption of ordinance amendments that promote the construction of bike paths in subdivisions.</i></p>	<p><i>Completion of the three WV DOH projects identified in the recommendation at the earliest dates possible.</i></p> <p><i>Existing highway problem areas such as curves, blind spots, etc. are retrofitted with corrective improvements to improve traveler safety.</i></p> <p><i>Construction of a four-lane boulevard around the west side of Charles Town and Ranson along anticipated subdivision road alignments.</i></p> <p><i>Road alignment, signaling and other changes along US 340 from the Potomac River to Bolivar Heights that improve traffic flow through the gap.</i></p> <p><i>Improvement projects completed along transportation routes that enhance the rural and historic character of the community.</i></p> <p><i>Increased use of means of transportation other than the automobile.</i></p>
<p>3.12</p> <p>Page 33</p>	<p><i>The County should review the existing subdivision road design standards for ways to improve roadway design to ensure that these standards are up to date and ensure that when roads are initially constructed, they are done so to a standard that extends their useful life before needing significant repair.</i></p>	<p><i>Review and revision of the Subdivision Ordinance and site plan standards.</i></p>	<p><i>Construction of subdivision roadways that comply with the most up to date construction and design standards.</i></p>

<p>3.13</p> <p>Page 34</p>	<p><i>Reduce dependence on the automobile for both intra-County and inter-County travel by:</i></p> <p><i>a. Promoting the use of PAN-TRAN transit, ride sharing, the MARC train program and other alternatives to single-occupant vehicles to reduce highway demand during peak hours.</i></p> <p><i>b. Encouraging the municipalities of Charles Town and Ranson to investigate and, if it is found to be workable, support their efforts to secure MARC commuter rail service along the Norfolk-Western right of way, with stops in Ranson and Huntfield.</i></p> <p><i>c. Encouraging and endorsing the extension of the PAN-TRAN Transit Service to areas of the County that will be developed with higher density housing concentrations.</i></p> <p><i>d. Investigating whether the Department of Highways would be willing to initiate the construction of "park and ride" lots along its rights of way on US 340 and WV 9.</i></p> <p><i>e. Investigate whether adding a requirement for pedestrian and bicycle paths in new residential subdivisions to the subdivision ordinance would be productive.</i></p>	<p><i>Increased public awareness of public transit opportunities within the County.</i></p> <p><i>Agreements between appropriate parties (developers, railroads, municipalities) for the provision of commuter rail service to Charles Town - Ranson - Huntfield.</i></p> <p><i>Increased PAN-TRAN service within Jefferson County, especially the designated growth areas.</i></p> <p><i>WV DOH designs and installs commuter "park and ride" lots along major State highways in the eastern and southern parts of the County.</i></p> <p><i>Review and revision of the Subdivision Ordinance.</i></p>	<p><i>Increased PAN-TRAN ridership within Jefferson County.</i></p> <p><i>Commuter rail access available for Charles Town and Ranson residents within those towns.</i></p> <p><i>Increased PAN-TRAN ridership within Jefferson County.</i></p> <p><i>Peak hour highway traffic growth slows by providing car poolers adequate and appropriate locations to leave cars before carpooling out of the County for work.</i></p> <p><i>Residential subdivision improves as pertains to pedestrian and bicycle friendliness.</i></p>
<p>3.14</p> <p>Page 38</p>	<p><i>The County should investigate the feasibility of creating new dry hydrants throughout the County in order to enhance rural firefighting protection.</i></p>	<p><i>Department of Emergency Services studies and identifies potential locations for new dry hydrants.</i></p>	<p><i>Number of dry hydrants throughout the County increases.</i></p>
<p>3.15</p> <p>Page 44</p>	<p><i>The County should endeavor to ensure that safe, clean drinking water is available to all citizens of Jefferson County by:</i></p> <p><i>a. Reviewing and, where necessary, revising all applicable County Ordinances to incorporate the most up-to-date standards for well and septic construction and requiring water quality testing as to allow the County to gather data.</i></p> <p><i>b. Investigating the creation of a public information brochure on the proper use and maintenance of wells and septic systems.</i></p>	<p><i>Review and revision of the Subdivision Ordinance standards as pertains to well and septic construction and storm water management design, where necessary.</i></p> <p><i>Brochure is produced.</i></p>	<p><i>Improved design standards which improve the quality of groundwater resources in the County (or slows its rate of deterioration).</i></p> <p><i>Fewer wells and septic systems are mismanaged by homeowners.</i></p>

<i>REC.. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
3.15 (con.)	<p><i>c. Reviewing and, where necessary, revising the Subdivision and Zoning Ordinance to incorporate the most up-to-date standards for stormwater management design.</i></p> <p><i>d. Studying whether groundwater quantity and quality studies for rural subdivisions of 25 or more lots should be required as part of the subdivision process.</i></p> <p><i>e. Investigating the development of a functional water resources management plan.</i></p> <p><i>f. Investigating whether a new zoning classification or overlay district should be created for the protection of significant groundwater recharge areas.</i></p>	<p><i>Improved knowledge of ground water resources serving larger rural subdivisions.</i></p> <p><i>Inclusion of a water resources master plan as an addendum to this plan at a later date.</i></p> <p><i>Implementing a new zoning classification on significant recharge areas.</i></p>	<p><i>Improved design of rural subdivisions which improve the quality of groundwater resources in the County (or slows its rate of deterioration).</i></p> <p><i>A better understanding of the role and efficient use of water resources for planning purposes.</i></p>
3.16 Page 44	<p><i>The County should explore strategies to safeguard the quality of the environment, with specific attention to the quality of the aquifer through such things as:</i></p> <p><i>a. Regularly reviewing applicable ordinances to ensure that the most up-to-date standards for septic system construction are used in Jefferson County.</i></p> <p><i>b. Reviewing the Subdivision Ordinance for opportunities that would make the provision of municipal or public sewer service more desirable to developers of residential and commercial developments located in the designated growth area.</i></p> <p><i>c. Promoting the efforts of the Public Service District and other utilities to provide service to all lands in the designated growth area and those areas of the County located on geological "problem areas", without affecting the set residential density patterns of development.</i></p> <p><i>d. Exploring creative remedies to providing sewer service to the areas of the County where soils are poorly suited for septic system installation.</i></p> <p><i>e. Promoting alternate methods of sewage disposal.</i></p>	<p><i>Review and revision of the Subdivision Ordinance, if necessary.</i></p> <p><i>Same as above.</i></p> <p><i>Same as above.</i></p> <p><i>Same as above and possible use of localized water and sewer systems in problem areas.</i></p> <p><i>Exploring alternatives to individual septic systems</i></p>	<p><i>Maintaining state of the art design standards.</i></p> <p><i>The percentage of houses built on public water and sewer services increases in relation to the total number of dwellings constructed.</i></p> <p><i>Same as above.</i></p> <p><i>Environment protected in problem areas.</i></p> <p><i>Reduced dependence on individual septic systems.</i></p>

REC.. NO. RECOMMENDATION IMPLEMENTATION MEASUREMENT

<p>3.17 Page 45</p>	<p><i>In order to protect the quality of the surface and subsurface waters of the County, the County should consider:</i></p> <p><i>a. Reviewing the Subdivision Ordinance to determine whether existing regulations meet standards for stormwater management practices and design, and amend the ordinance if necessary so that storm water management design is most effective in order to reduce runoff into surface watercourses.</i></p> <p><i>b. Encouraging farming best practices to reduce agricultural runoff into surface watercourses and sinkholes.</i></p>	<p><i>Review and revision of Subdivision Ordinance and site plan standards</i></p> <p><i>Cooperation and public outreach provided by the Natural Resources Conservation Service.</i></p>	<p><i>Soil runoff into surface waters would decrease.</i></p> <p><i>Soil runoff into surface waters would decrease.</i></p>
<p>3.18 Page 46</p>	<p><i>The County should investigate methods to protect surface water resources, such as:</i></p> <p><i>a. Reviewing the existing Ordinances regarding stream buffers for ways to enhance their effectiveness in protecting the quality of the streams that they border. This may include the possible use of conservation easements, stream valley open space areas held by homeowners' associations, and/or possible inclusion of land in the County's Recreation and Parks Department as part of the subdivision process.</i></p> <p><i>b. Investigating whether a functional Recreation and Parks Master Plan connecting and supplementing the above, as well as planning for the active recreation needs of the citizens should be developed by the Parks and Recreation Commission.</i></p> <p><i>c. Reviewing the standards regarding the treatment of sinkholes in the existing Subdivision Ordinance for possible revision and update.</i></p> <p><i>d. Explore opportunities for cooperation with land preservation organizations.</i></p>	<p><i>Review and revise the Subdivision Ordinance and the Zoning and Land Development Ordinance.</i></p> <p><i>Planning study regarding the inclusion of stream valley areas set aside in the development process in the Department of Parks and Recreation.</i></p> <p><i>Review and revise the Subdivision Ordinance for ways to improve the protection of sinkholes during the development process.</i></p> <p><i>Outreach efforts are made to land preservation organizations in order to maximize impact.</i></p>	<p><i>Quality of surface waters would improve due to increased stream setbacks, less erosion and lower turbidity.</i></p> <p><i>See above.</i></p> <p><i>Use of sinkholes as an access point to the aquifer will improve.</i></p> <p><i>Impact of efforts increases and more land is set aside for conservation purposes.</i></p>

<p>3.19</p> <p>Page 51</p>	<p><i>The County should investigate mechanisms to foster the maintenance of land in farm uses and stem the erosion in the availability of the non-renewable resource of farmland. Specifically, the County should:</i></p> <p><i>a. Invest in farmland preservation by carefully targeting the purchase of (or receipt of donated) easements on farmland.</i></p> <p><i>b. Explore the use of transferrable development rights (if authorized by State Code) in order to ensure some tracts are perpetually available for the farming use of future generations.</i></p> <p><i>c. Support diversified rural land uses by exploring means by which to diversify farming operations. If farming is no longer economically viable, there will be no farms. Examples of this could include (but not be limited to) "value added" processing, landscape contracting businesses, equestrian facilities, agriculture education uses and bed-and breakfast inns.</i></p> <p><i>d. Improving design of residential development in the Rural District, ensuring that cluster subdivisions are the preferred means by all parties when developing rural tracts.</i></p> <p><i>e. Investigating the implementation of the property transfer tax authorized in 2002 in order to raise the funds necessary to purchase easements on significant farm properties for their perpetual preservation. Should this program be implemented, the Farmland Preservation Advisory Board should adopt a policy document that ensures that its efforts result in a critical mass of high quality, strategically located farmland is protected in the Rural District from development.</i></p>	<p><i>Implementation of a farmland protection program with adequate funding.</i></p> <p><i>Implementing a transferrable development rights program within the Zoning Ordinance, should it be authorized by the State Legislature.</i></p> <p><i>Review and revise the Zoning and Development Review Ordinance in order to allow more diverse use of farm properties, thereby diversifying the farming economy.</i></p> <p><i>Review and revise the Zoning and Land Development Ordinance and the Zoning Ordinance to adjust permitted densities based on subdivision design.</i></p> <p><i>Implementation of the property transfer tax for the purpose of purchasing easements on farm properties.</i></p>	<p><i>Perpetual easements are purchased on selected farm properties, precluding their development and maintaining open space.</i></p> <p><i>Development on multiple properties is concentrated on one property while precluding development on another, concentrating population and preserving the second property in open space.</i></p> <p><i>Conversion of farmland may slow as farmers find ways of diversifying operations and improving their market positions.</i></p> <p><i>Open space is gained by the emphasis of clustered subdivisions over large lot subdivisions.</i></p> <p><i>Easements are purchased on farm properties, protecting them in perpetuity and conserving open space.</i></p>
<p>3.20</p> <p>Page 53</p>	<p><i>In order to ensure that sufficient tracts remain available for open space considerations and continued or potential use for farming, the County should study and enact amendments to the Zoning Ordinance that make clustered development the means of developing properties that is favored by property owners and developers.</i></p>	<p><i>Review and revision of the subdivision and zoning and development review ordinances.</i></p>	<p><i>Retained open space would increase as less land is used for rural developments.</i></p>

<p>3.21</p> <p>Page 54</p>	<p><i>The County should examine existing land use regulations and Planning Commission resources and explore regulation amendments and policies that encourage preservation of historic resources. Some amendments and policies the County may want to investigate may include:</i></p> <p><i>a. Rewarding the retention and restoration of historic buildings during the subdivision process with limited increased density to offset the expense of preservation.</i></p> <p><i>b. Re-evaluating zoning restrictions on the adaptive reuse of historic buildings county-wide in order to encourage their continued occupancy and maintenance.</i></p> <p><i>c. Requiring documentation of significant structures that are to be removed due to development activity, buffering of adjacent historic resources and provision of amenities that encourage continuity and context within a development located on land of historic significance.</i></p> <p><i>d. Creating historic site development incentive guidelines within the Subdivision Ordinance pertaining to the development of the County's more significant historic properties that address the preservation and incorporation of landscape and man-made features in development plans.</i></p>	<p><i>Review and revision of the Subdivision Ordinance and the Zoning and Land Development Ordinance.</i></p> <p><i>Review and revision of the Zoning Ordinance as pertains to uses of historic buildings and the adaptive reuse of buildings no longer suitable for their original use.</i></p> <p><i>Review and revision of the Subdivision Ordinance as pertains to documentation of existing buildings in the development process.</i></p> <p><i>Review and revision of the Subdivision Ordinance to create historic site development standards and adoption of a list of properties that would be subject to such additional regulation.</i></p>	<p><i>Fewer endangered, deteriorated historic structures are lost due to development pressure.</i></p> <p><i>Fewer endangered, historic structures are lost due to inability to reuse them for uses more conducive to their size and arrangement.</i></p> <p><i>Greater documentation of older structures before their demolition and during the subdivision process.</i></p> <p><i>Design of developments on sites of historic significance and with structures of historic significance will improve with respect to their treatment of existing structures and settings.</i></p>
<p>3.22</p> <p>Page 54</p>	<p><i>The County should investigate creating and maintaining an inventory of known cemeteries in the County (in the context of the cemetery as a land use) and explore the adoption of amendments to the Subdivision Ordinance that afford protection, access and buffering of cemeteries when located on properties slated for development.</i></p>	<p><i>Creation of a County cemetery inventory by the Department of Planning and Zoning as a land use database with the assistance of volunteers in the historic preservation community.</i></p>	<p><i>Improved awareness of cemetery locations so that cemetery issues are not raised by the community when a development is already going through the development process.</i></p>
<p>3.23</p> <p>Page 54</p>	<p><i>The County should promote the update and improvement of the "windshield survey" into a county-wide inventory of historic properties, with inclusion on the list being on a voluntary basis and utilizing volunteer efforts to complete the inventory.</i></p>	<p><i>Volunteer effort is initiated by the Historic Landmarks Commission to update and revise the existing "windshield survey."</i></p>	<p><i>New, updated County-wide historic properties inventory is created that is comprehensive and complete.</i></p>

REC.. NO.	RECOMMENDATION	IMPLEMENTATION	MEASUREMENT
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3.24 Page 54	<i>Encourage and promote the use of Federal and State Tax Credits and grants from all available sources for the rehabilitation and reuse of historic structures within the County and endorse the efforts of property owners attempting to register their properties with the National Register of Historic Places.</i>	<i>Providing letters of support to or other appropriate assistance that would help property owners have their properties listed on the National Register of Historic Places. The Department of Planning and Zoning produce a public information brochure that explains tools available on the Federal, State and County level and how historic preservation can be accomplished in the land development process.</i>	<i>More County properties are entered on the National Register of Historic Places, thereby making these properties eligible for tax credits for preservation activities. The condition and maintenance of the County's historic buildings would improve, and loss of historic resources is slowed.</i>
3.25 Page 56	<i>The County should evaluate the existing Ordinances for ways to tighten commercial lighting and sign regulations in order to reduce the effect of excessive lighting of commercial and institutional facilities on the nighttime environment and the visual impact of excessive signage along commercial corridors. The County should also consider reviewing its regulations pertaining to the use of street lights in subdivisions in the Rural District.</i>	<i>Review and Revision of the Subdivision Ordinance and site plan standards.</i>	<i>Commercial signage blight should diminish County-wide, and new commercial lighting would be constructed to standards that reduce their affect on nearby properties and the nighttime sky.</i>
3.26 Page 57	<i>The County should explore the possibility of incorporating provisions in an impact fee program (if one is adopted) that waives or reduces the fee for housing that is constructed to serve lower income level residents.</i>	<i>Impact fees are waived or reduced for designated affordable housing.</i>	<i>Impact fee considerations are not included in setting prices for designated affordable housing units.</i>
3.27 Page 57	<i>The County should encourage the creation of more affordable housing units.</i>	<i>Review and revise Subdivision and Zoning Ordinances and amend them, if applicable.</i>	<i>The number of affordable housing units in the County increases.</i>
3.28 Page 59	<i>In order to protect the long term viability of the agriculture industry in the County, The County should encourage the diversification of the industry in Jefferson County by:</i> <i>a. Reviewing the Zoning Ordinance for ways of permitting value-added and non-traditional agriculture-related activities on farmed properties.</i> <i>b. Inserting language in the section of the Zoning Ordinance governing the Rural District that farming is a permitted land use in this district and with that use there will be side effects of such a use that are disturbing to residential development.</i>	<i>Review and revision of the Zoning Ordinance.</i> <i>Reviewing and revising the Zoning Ordinance.</i>	<i>Diversified activities would improve the financial viability of farms.</i> <i>Greater public awareness by the rural community of the benefits and drawbacks of living in a farming community.</i>

REC.. NO. RECOMMENDATION IMPLEMENTATION MEASUREMENT

3.29 Page 62	<i>The County should explore zoning mechanisms or other incentives by which larger, consumer oriented commercial ventures are encouraged to redevelop abandoned or underused parcels within the municipalities before building on undeveloped land outside of the urban centers, in order to help the redevelopment of the commercial core of those towns.</i>	<i>Review and revise the Zoning and Land Development Ordinance.</i>	<i>Developers of large new commercial ventures would investigate redevelopment of town areas before resorting to construction on undeveloped land in the County.</i>
3.30 Page 63	<p><i>The County should explore reconstructing its current economic development efforts. As part of this exploration, the County should consider:</i></p> <p><i>a. Creating an “Economic Development Coordinator” position that is employed directly by and reporting directly to the County Commission with the sole mission of aggressively recruiting <u>new</u> business to the County, and</i></p> <p><i>b. Placing the remaining land in the Burr Industrial Park for sale with a major regional commercial real estate marketing firm with the purpose of attracting a (or several) major employer(s) with possibility of “fire sale” land costs and property tax waivers so that the County can exit the land development business and draw major employers that could provide significant in-County employment opportunities to County residents.</i></p>	<p><i>Restructuring Economic Develop-ment efforts. Hiring a development recruiter with the sole mission to draw new commercial development into the County.</i></p> <p><i>Sale of the remaining inventories of land in the Burr Industrial Parks.</i></p>	<p><i>County focus on the role of “promoter” in economic development.</i></p> <p><i>County ends its role as a land owner/competitor in the commercial development environment.</i></p>
3.31 Page 64	<i>The County should endorse and assist (when possible) efforts to coordinate tourism marketing in the County in order to lengthen the stay of those visiting Jefferson County.</i>	<i>Enter into discussions with leaders of the County’s tourism industry, chamber of commerce and other interested parties.</i>	<i>Tax revenue generated by tourism activities would increase.</i>
3.32 Page 64	<i>The County should emphasize the recruitment of new tourism based businesses to the County in order to expand the recreational offerings available to the traveling public.</i>	<i>Focused economic development recruiting.</i>	<i>Increase in the number of tourism-based businesses in the County increases, thereby improving tax revenue generated by these businesses.</i>
3.33 Page 64	<i>The County should continue to court the introduction of new industrial and commercial development to the County in order to diversify its economy, mitigate possible long-term problems of being a bedroom community and provide quality employment opportunities to its well trained and educated workforce.</i>	<i>Active recruitment of new industrial and commercial development by new economic development recruiter.</i>	<i>New commercial and industrial ventures move to the County, improving employment opportunities for County residents.</i>

REC.. NO.	RECOMMENDATION	IMPLEMENTATION	MEASUREMENT
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3.34 Page 65	<i>The County should advocate the improvement of transportation links within the County in order to improve the County's position to attract commercial and industrial development to offset growing residential development.</i>	<i>See Recommendation 3.11.</i>	<i>See Recommendation 3.11.</i>
3.35 Page 66	<i>The County should pursue potential users of industrially and commercially zoned land that are high "employee dense" businesses in order to maximize the employment potential of the amount of land the County has allocated for those uses.</i>	<i>See Recommendation 3.33.</i>	<i>See Recommendation 3.33.</i>
3.36 Page 66	<i>The County should formulate a stated economic development and business recruitment strategy that emphasizes tourism development and industrial/commercial development that provides optimum levels of new employment opportunities for County residents, while also addressing the importance of maintaining the agrarian industry.</i>	<i>See Recommendations 3.31 through 3.33.</i>	<i>See Recommendations 3.31 through 3.33.</i>
3.37 Page 68	<i>The County should investigate abandoning the LESA system for a "traditional" form of zoning, maintaining the existing 1 lot per ten acre density and setting the density of permitted cluster subdivisions in the rural district at one unit per five acres, with a minimum of 50% of the site left in open space, in order to offset the lost potential of the LESA option and encourage development in clusters that preserve open space and encourage ordinance provisions to provide density incentives in return for additional amenities.</i>	<i>Review and revise the Zoning Ordinance.</i>	<i>Land development trends within the County would become more predictable, and the land development process in the County would cease using a significant review and hearing process.</i>
3.38 Page 69	<i>In order to emphasize and assist the recommendations found in this Plan pertaining to the needs of maintaining the County's agricultural base, the County should investigate renaming the Rural District the "Rural-Agricultural District", with a purpose statement that emphasizes agriculture as a preferred land use in this District and provides cautionary wording that there are issues that cause conflict between these land uses.</i>	<i>Review and revise the Zoning Ordinance.</i>	<i>The Zoning Ordinance would emphasize the importance of agriculture as a land use.</i>

REC.. NO.	RECOMMENDATION	IMPLEMENTATION	MEASUREMENT
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3.39 Page 69	<i>Should the State government authorize counties to adopt Transferrable Development Right (TDR) programs, Jefferson County should investigate whether such a program and others like it are appropriate for Jefferson County and how such a program should be structured. Such investigation should identify the regions where the most appropriate receiving area(s) would be located.</i>	<i>Study conducted regarding the feasibility of implementing a TDR program. If found to be desirable, zoning ordinance and map amendments would be adopted.</i>	<i>If adopted, farm tracts would be preserved through the transfer of their development rights, and population would be concentrated onto another property that would be developed at greater density.</i>
3.40 Page 69	<i>The County should pursue the creation of a Purchase of Development Rights (PDR) program, utilizing the applicable County board and permitted funding mechanisms to secure funds for the purchase of protective easements on agricultural parcels.</i>	<i>System is constructed and funding obtained to purchase the development rights from the owners of selected rural parcels.</i>	<i>Development rights are extinguished on selected parcels, protecting them from development in perpetuity.</i>
3.41 Page 71	<i>The County should investigate amending the Zoning Ordinance so that cluster subdivisions are the means of housing development in the Rural District preferred by the property owner. When practical, these clustered developments should be encouraged to be served with public or community water and sewer services in order to protect the underground water source from damage from the use of wells and septic fields.</i>	<i>Review and revise the Subdivision Ordinance and the Zoning Ordinance.</i>	<i>Less land would be used for the creation of subdivisions and more land would remain in open space in the form of undevelopable residue parcels.</i>
3.42 Page 72	<i>When updating the Zoning Ordinance, the County should evaluate whether the mixed use district should require set minimum percentages of a development to be dedicated to use types as a means of fostering the “mixed use” concept.</i>	<i>Review and revise Zoning Ordinance.</i>	<i>Minimum percentages would ensure the use of the “mixed use” concept, and could be used to require some open space in mixed use developments.</i>
3.43 Page 72	<i>The County should evaluate whether a binding concept plan for an entire tract in this district and other districts should be required when submitting an application seeking to develop only a portion of that tract, including codified standards for what should appear on the concept plan.</i>	<i>Review and Revise Zoning Ordinance and Subdivision Ordinance.</i>	<i>Planning for mixed use areas would improve.</i>
3.44 Page 73	<i>In order to accommodate additional traffic demand anticipated through the enlargement of Charles Town and Ranson, the County should promote the design and construction of an at-grade western arterial road west of Charles Town - Ranson, which incorporates the Hunfield spine road as the southern third of this new road.</i>	<i>See Recommendation 3.11c.</i>	<i>See Recommendation 3.11c.</i>

<i>REC.. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
3.45 Page 74	<i>The County should investigate reallocating land adjacent to the municipalities into a “Townscape Design” area which blends with the grid-like design of the towns and permits a greater density and mixture of residential uses than the Residential Growth district.</i>	<i>See Recommendation 3.01</i>	<i>See Recommendation 3.01</i>
3.46 Page 74	<i>The County should study the US 340 corridor, including land use, viewscape, economic development and traffic design and management in order to create an effective strategy for the long term management of this important mixed-use corridor.</i>	<i>Initiate a cooperative planning effort with the WV DOT to improve the US 340 corridor.</i>	<i>Improved traffic flow, appearance and land use coordination in the US 340 corridor east of Charles Town.</i>
3.47 Page 76	<i>Should it become necessary, the County should be open to studying the land use and zoning patterns and other planning issues around Shepherdstown and addressing those issues accordingly.</i>	<i>Study of land use issues, when necessary, in the Shepherdstown area.</i>	<i>Shepherdstown area planning needs are addressed.</i>
3.48 Page 76	<i>The County Commission should study the impact of current development trends and issues, and the issue of municipal annexation and attempt to gain the cooperation of the municipalities to create a long term annexation strategy acceptable to all three jurisdictions.</i>	<i>See Recommendation 3.03.</i>	<i>See Recommendation 3.03.</i>
3.49 Page 76	<i>The area straddling new WV 9 from Charles Town to the Shenandoah River should be studied as part of the Zoning Ordinance and map amendment process to address its changing nature and re-evaluated role in the overall land development scheme of the County.</i>	<i>Conduct study of this issue and possible amendment of the zoning map.</i>	<i>Effective planning of the land uses that may be developed as a result of the changing nature of this area.</i>
	CHAPTER FOUR: EXCELLENCE IN COMMUNITY SERVICES		
4.01 Page 79	<i>It is the vision of this Comprehensive Plan that development will be concentrated in as much as possible within the area served by public water and sewer facilities, that measures be taken to ensure that the growing community is provided with essential services it needs.</i>	<i>Review and revision of the Subdivision and Zoning and Land Development Regulations.</i>	<i>The proportion of new homes developed in the county that are developed in the designated growth area and on public or community water and sewer systems increases.</i>

REC.. NO. **RECOMMENDATION** **IMPLEMENTATION** **MEASUREMENT**

<p>4.02 <i>Page 80</i></p>	<p><i>This Comprehensive Plan endorses the construction of a second high school, preferably within the Huntfield development, as soon as the land and funding can be secured. Construction of a new high school is imperative in order to alleviate existing overcrowding at Jefferson High School and convert the 9th grade complex to a fourth middle school to accommodate anticipated short term growth. The County should support the School Board wherever appropriate in its attempt to bring this to fruition and the School Board should proceed diligently with this project.</i></p>	<p><i>Funding, design and construction of a new high school at or near the Huntfield site.</i></p>	<p><i>New high school opened no later than 2006.</i></p>
<p>4.03 <i>Page 81</i></p>	<p><i>The responsibility of the Jefferson County Board of Education is to program adequate infrastructure renovation and new development to provide for anticipated school system growth. Such programming should include:</i></p> <p><i>a. Adoption of a short term and long-range capital improvement plan, including identification of targeted areas that should be the location of new school buildings.</i></p> <p><i>b. Soliciting and encouraging donations of future school sites from the developers of large subdivisions in order to minimize land costs for new school construction.</i></p> <p><i>c. Providing sufficient funding to maintain and renovate school facilities and to allow for systemic adaptation to changing school needs and technology.</i></p>	<p><i>Adopt detailed short term and long range capital improvement plan.</i></p> <p><i>Receipt of donated land for future school sites.</i></p> <p><i>See a) above.</i></p>	<p><i>Schools adequately planned for and constructed at appropriate locations before overcrowding hits critical levels.</i></p> <p><i>Land cost for new school sites is reduced.</i></p> <p><i>Existing schools are systemically maintained and renovated to meet changing conditions.</i></p>

REC.. NO.	RECOMMENDATION	IMPLEMENTATION	MEASUREMENT
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<p>4.04</p> <p>Page 82</p>	<p><i>The County should obtain legislative clarification of the authority of the Planning Commission to address school capacity when reviewing subdivision proposals by:</i></p> <p><i>a. requesting the State Legislature to clarify the authority delegated by the provisions of Article 24 of the State Code regarding school capacity and its affect on community planning.</i></p> <p><i>b. If the State Legislature clarifies that planning commissions have the authority to address this issue when reviewing development proposals, the County should then explore incorporating provisions into the subdivision ordinance that pro vide for adequate timing of development as it relates to sufficiency of public school facilities, including codified standards that allow developers and citizens alike to assess whether a development would meet these standards before entering the development process.</i></p>	<p><i>State Code amendments adopted clarifying Planning Commission authority and limitations.</i></p> <p><i>If authorized, incorporate amendments in the Subdivision Ordinance that set objective standards for adequate school facilities.</i></p>	<p><i>Controversy over the relationship between the responsibilities of the Board of Education and the Planning Commission are resolved.</i></p> <p><i>If authorized, Ordinance amendments instituting adequate schools provisions would assist the Board of Education in keeping pace with development.</i></p>
<p>4.05</p> <p>Page 85</p>	<p><i>The County should support the expansion of opportunities for junior college, four year and other post-secondary education within Jefferson County by supporting initiatives by Shepherd College that expand the program offerings at that facility.</i></p>	<p><i>Constructive responsiveness to overtures or requests made by the College for support in expanding its programs.</i></p>	<p><i>A greater array of programs and facilities is offered by Shepherd College.</i></p>
<p>4.06</p> <p>Page 86</p>	<p><i>The County should encourage the creation of new private school opportunities by reviewing existing County ordinances for possible amendments that would make it easier for private schools to start up and for existing private schools to expand their facilities within Jefferson County.</i></p>	<p><i>Review and Revise the Zoning and Land Development Ordinance, if applicable.</i></p>	<p><i>Jefferson County is made a more conducive environment for new private schools to open.</i></p>
<p>4.07</p> <p>Page 87</p>	<p><i>The County should enhance police protection by supporting Troop B's efforts to obtain additional personnel, if requested, in order for the local barracks to attain its appropriate staffing levels and obtain additional staff to meet the growing needs of the community.</i></p>	<p><i>If requested, lobby the administration of the WVSP for adequate staffing assignments from police academy graduating classes.</i></p>	<p><i>The local barracks of the West Virginia State Police would be fully staffed.</i></p>
<p>4.08</p> <p>Page 88</p>	<p><i>The County should enhance police protection by:</i></p> <p><i>a. exploring mechanisms and programs that would assist in enabling the Sheriff's Department to be sufficiently staffed and equipped in order to provide adequate resources based on levels of crime and demand for services.</i></p>	<p><i>Ongoing review and adjustment of Sheriff's Department procedures and operations to maintain efficient law enforcement services in the County.</i></p>	<p><i>Sheriff's Department maintains necessary levels of service to the community.</i></p>

<i>REC.. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
4.08 (con.)	<i>b. Adjusting services and programs to accommodate an increasingly elderly, diverse and geographically diffused population.</i>	<i>Review crime prevention techniques to help make the aging population more crime resistant.</i>	<i>Aging population is more resistant to crime, and need for law enforcement service decreases.</i>
4.09 Page 89	<i>The County should maintain and encourage the continued cooperation of the various police departments through the ongoing use of mutual assistance agreements.</i>	<i>Existing cooperating agreements are maintained.</i>	<i>Ongoing cooperation between police departments.</i>
4.10 Page 89	<i>As the County grows and the need for additional fire protection appears to become necessary, the County should investigate the feasibility of creating a paid fire service, similar to the ambulance authority, in order to augment the volunteer service so that uninterrupted fire fighting service is available during the work day when most volunteers are unavailable to respond to fire calls due to work commitments.</i>	<i>County initiates study of cost and benefit of creating a paid fire service, with a projection of when (and if) adopting such a program is economically desirable and feasible, then implementing such a program when it becomes justified.</i>	<i>Decision is made by County and implemented. If program is adopted, success is measured in improved response times and reduction in number of dropped calls during hours that the paid staff is responsible for providing fire response.</i>
4.11 Page 91	<i>The County should strive to maintain current levels of service by:</i> <i>a. Attempting to obtain levy approval for permanent funding of the Ambulance Authority.</i> <i>b. Assisting the Fireman's Association in exploring new ways to recruit volunteers into the fire service, if requested.</i>	<i>Placing levy proposal on ballot.</i> <i>Positive response to overtures made by the Firemens' Association, where appropriate.</i>	<i>Permanent funding source for the ambulance authority secured.</i> <i>New volunteers are recruited into the fire service.</i>
4.12 Page 94	<i>The County should see its current emergency addressing project through to completion, which would result in a state of the art, county-wide unified address system which would assist emergency service providers to provide the most efficient, timely service possible.</i>	<i>Ongoing implementation of the emergency addressing project.</i>	<i>Improved response time for police, fire and emergency medical personnel.</i>
4.13 Page 96	<i>The County should explore constructing a centrally located County Community Recreation Center.</i>	<i>New community center is constructed at Sam Michaels Park.</i>	<i>Recreation opportunities for County residents improved.</i>
4.14 Page 97	<i>The County should increase relationships with community groups and area businesses and implement a community sponsor plan.</i>	<i>Community support outreach program initiated by the Department of Parks and Recreation.</i>	<i>Increased corporate support for the programs and activities of the Department of Parks and Recreation.</i>
4.15 Page 97	<i>The County should strive to provide recreational opportunities for all citizens.</i>	<i>Review of the programs and offerings of the Department of Parks and Recreation for ways to expand recreational opportunities.</i>	<i>Greater array of services offered by the Department of Parks and Recreation.</i>

<i>REC.. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
4.16 Page 97	<i>The County should allocate resources necessary to provide appropriate maintenance to park facilities.</i>	<i>Resources allocated to provide sufficient maintenance.</i>	<i>Parks facilities will be maintained in a manner to positively reflect on the County and community.</i>
4.17 Page 97	<i>The County should explore all available avenues to acquire parkland that is usable for active recreational activities to meet increasing and future demand for such facilities.</i>	<i>All options are explored for obtaining new parkland usable for active recreation needs.</i>	<i>New tracts with areas usable for active recreation are taken into the Department of Parks and Recreation.</i>
4.18 Page 99	<i>The County should investigate the legal and fiscal feasibility of requiring the dedication of stream buffer areas to the Department of Recreation and Parks during the subdivision process for the purpose of beginning a linear park system within the County.</i>	<i>New tracts of undeveloped land along streams are incorporated into the Recreation and Parks Department.</i>	<i>Streams are protected. Opportunities for linear parks are created.</i>
4.19 Page 99	<i>In order to plan for the needs of a growing population, which results in fewer tracts of land being available to provide for those needs, the Department of Recreation and Parks should devise and adopt a Master Plan for Parks and Recreation in Jefferson County.</i>	<i>Master Plan adopted.</i>	<i>Department of Parks and Recreation keeps pace with the needs of a growing community.</i>
4.20 Page 100	<i>The County should support the expansion and enlargement of the facilities and programming of Harpers Ferry National Historical Park and the Appalachian Trail, as these facilities are economically beneficial for the County, while respecting private property rights.</i>	<i>The County endorses the efforts of the NPS and preservation groups to purchase land around Harpers Ferry to protect historic and park resources.</i>	<i>Increased protection of the National Park, resulting in increased visitation and tourism spending.</i>
4.21 Page 101	<i>The County should support the libraries in Jefferson County by continuing to contribute financially to the public libraries and exploring assisting the libraries in maintaining State recommended levels of service, provided that the facilities of Scarborough and Old Charles Town Libraries are considered in determining that level of service.</i>	<i>Ongoing public support of the Jefferson County Public Libraries.</i>	<i>Libraries in the County would meet state recommended standards for library service.</i>
4.22 Page 102	<i>The County should encourage the community to provide a wide variety of arts and cultural activities for County residents by:</i> <i>a. Continuing to support community based cultural and arts organizations and activities.</i> <i>b. Exploring ways to integrate lesser visible cultural facilities and events into plans geared toward increasing tourism in the County.</i>	<i>Ongoing financial support of community based cultural and arts activities.</i>	<i>The presence and selection of arts and cultural activities available within the County would increase, and lesser visible programs would be integrated more into this mix.</i>

<i>REC. NO.</i>	<i>RECOMMENDATION</i>	<i>IMPLEMENTATION</i>	<i>MEASUREMENT</i>
4.23 Page 104	<i>The County should continue to support and endorse a regional approach to landfills and recycling due to cost factors and the geologic unsuitability of the vast majority of the County's surface area for a waste disposal facility.</i>	<i>Ongoing support for current waste management plans.</i>	<i>Waste is transported to facilities in areas that are more geologically suitable for its disposal.</i>
4.24 Page 104	<i>The County should increasingly emphasize programs to maximize recycling efforts in the County in order to extend the life of nearby landfills, and remain responsive to changing trends in waste generation and management, and recyclable end use markets.</i>	<i>Increase efforts to generate public awareness of recycling.</i>	<i>The per-person volume of recyclables collected would increase.</i>
4.25 Page 106	<i>The County should maintain its Capital Improvement Plan so that the growing needs of the County government for resources necessary to provide the expanded services required by a growing populace are in place when necessary.</i>	<i>Maintain Capital Improvements Plan.</i>	<i>Capital expenditures effectively made when most appropriate and needed.</i>
4.26 Page 106	<i>The County should work with the local community to determine how the County's long-term needs for space to expand governmental operations and structures can be economically and efficiently met with minimal effect on the historic district and with support from the community. In case this initiative does not bear fruit, the County should also assess alternative sites within Charles Town for possible relocation of all non-judicial operations in order to meet organizational needs.</i>	<i>Plan for the long term design and management of the County government complex and reach consensus with the community.</i> <i>Identify and enter into development options with property owners for the possible creation of a new government campus.</i>	<i>A well designed integrated government campus on the existing site that meets the needs of the County to provide space for growing government services.</i> <i>Construction of a new government campus elsewhere in Charles Town that meets the spatial needs of a growing government.</i>
4.27 Page 106	<i>Should the County adopt an impact fee program, considerations for public facilities should be included in this program, if found to be in conformance with the State Code.</i>	<i>Include the need to expand government office space into calculations when developing an impact fee program.</i>	<i>Significant funding for providing adequate facilities for increased demand for government services would be generated.</i>
4.28 Page 107	<i>Relevant County government agencies should be aware of the changing age demographic within the community, and adjust their operations, if necessary.</i>	<i>Departments review their operations for ways to adjust services to serve the aging population, if necessary.</i>	<i>County government adjusts to changing demographic concerns.</i>
4.29 Page 107	<i>When revising the land development regulations, particular attention should be paid to how those changes can be made to improve services to and enhance the lives of the aging population.</i>	<i>Review and, where necessary, revision of the Zoning and Subdivision Ordinances.</i>	<i>Development of more "senior-friendly" residential development and facilities.</i>
4.30 Page 108	<i>The County should institute a development impact fee program to help finance the construction of new schools and other government facilities needed to maintain existing service levels.</i>	<i>Adopt and implement a development impact fee program.</i>	<i>Significant funding for providing adequate facilities for increased demand for government services would be generated.</i>

UPDATING THIS COMPREHENSIVE PLAN

The 1994 Comprehensive Plan process began in June, 1992 and took approximately 30 months to complete. The 2002 Comprehensive Plan process began in late 1999 and took approximately **NUMBER** months to complete. Should impact fees be imposed by the County, the State Code requires that the County update its Comprehensive Plan every five years, with a comprehensive review every ten.

If the County is mandated to update this Plan based on State Code requirements for maintaining the impact fee program, it must impose set time frames within which to review and revise this Plan so that this work is done in a timely and expeditious manner. The County cannot continue to spend blocks of time that exceed three years performing a task that will be required to be performed every five years. Therefore, in order to remain in conformance with State Code requirements for the imposition and maintenance of impact fees, and to promote good and timely planning within Jefferson County, this Plan mandates that the schedule shown on the following page be adhered to when reviewing and revising this Plan.

Task	Duration and Comments
Public Announcement	2 weeks - inform members of the public and heads of all County departments that the Plan update process is about to begin. Deposit copies of the current Plan in all libraries and indicate the internet location of the electronic format version.
Public Hearings- Development of issues	3 weeks - Schedule 3 public hearings whereby members of the public are invited to provide comments on the current Plan. Provide copies of the current objectives and ask specific comments regarding which objectives require rework / amendment / abandonment.
Public Hearings - County gov't. entities	2 weeks - Schedule 3 public hearings whereby various County governmental concerns may provide specific comments on the current Plan. Ask for specific comments regarding the current objectives with the intent of indicating which ones require rework/amendment/abandonment.
Public Meeting - Prioritize input from public meetings	3 meetings (2 weeks) - Planning Commission orders the specific recommendations and builds a work list to address the upgrade of the Plan. Formation of subgroups to address issues by topic. Subgroups will meet publicly and with staff to lay out changes.
Public Hearings	2 weeks - Schedule 2 public hearings for comment on the proposed work list.
Public Meeting	1 meeting (1 week) - Finalize proposed work list.
Work Phase	2 months - Staff and sub-committees work on making the modifications as indicated on the work list.
Public Meeting	3 - 6 meetings (2 - 4 weeks) - Planning Commission adopts draft changes to Comprehensive Plan.
Work Phase	1 month - Draft document created per instructions from previous public meetings.

Public Meeting	1 meeting (1 week) - Planning Commission adopts draft changes to Comprehensive Plan.
Public Announcement	2 weeks - Announcement made to inform public and County government concerns that the draft Plan is ready for review. Deposit copies of the draft in all libraries and announce the internet locatoin of the electronic version.
Public Hearings	2 weeks - Schedule 2 public hearings to receive comments about the draft Plan.
Public Meeting	1 meeting (1 week) - Staff, having created a report on the comments from the previous process, presents comments to the Planning Commission. The Commission acts on each recommendation to incorporate it in the revised plan (or not).
Work Phase	2 weeks - Incorporate any changes to the draft plan per the previous task.
Public Meeting	1 meeting (1 week) - Planning Commission adopts the draft changes and formally releases the plan to the public and the County Commission.

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Appendix A

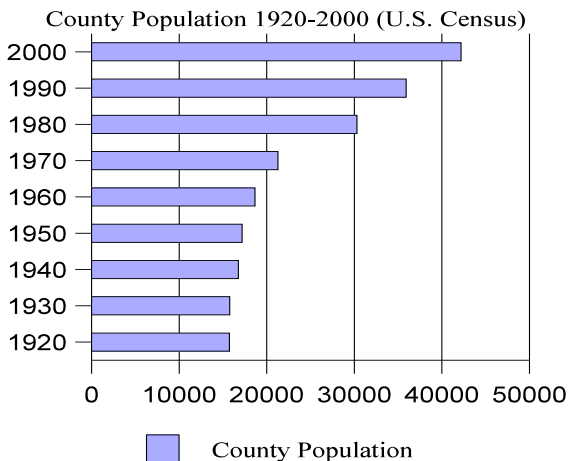
Demographic Analysis of Jefferson County

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Appendix A:

Demographic Analysis

This element of the Comprehensive Plan analyzes trends and characteristics of past and current populations and presents projections of future population growth.



Analysis of Projections in 1994 Plan

Projections of population by five year increments were prepared for the 1994 Comprehensive Plan using the average of three projections. The first two are figures based on short term and long term migration patterns developed by the West Virginia University Regional Research Institute (RRI-WVU). The third was developed by the Jefferson County Planning Commission, based on the following three assumptions: 1) long-term trends in dwelling unit construction will continue, 2) persons per dwelling unit will continue to decline and (3) fluctuations will occur due to economic cycles.

These figures that were developed for the 1994 Plan are as follows:

Source:	Projected 2000 Population:
RRI, WVU - Series M:	41,457
RRI, WVU - Series A:	42,137
Jeff. Co. Planning Commission:	44,121
Average:	42,571

The resulting enumeration from the U.S. Census Bureau for the year 2000 showed a population of 42,190. This is very close to the Series A figure, within 0.13%. The average value fell within 0.9%. The Jefferson County Planning Commission's figure exceeded actual growth by 4.6%, which is still a relatively close estimate.

Although Series A was most accurate, a review of the curves for the various estimates shows that the JCPC curve with the larger percentage of growth than the other curves. The Series A curve is flattening with time whereas Series M has an increasing slope. Based on the present conditions in the Region, high rates of immigration and increasing demand for housing, it is reasonable to anticipate that future growth would follow more along the JCPC curve than the RRI-WVU curves.

Population Growth

Census Bureau population statistics for Jefferson County from 1920 to 2000 are plotted to the left. During the first half of the 20th Century, the population of the County ranged between 15,000 and 17,000 persons. Beginning in the 1950s, the population of the County began to grow. Between 1960 and 1970, the population increased from 18,665 to 21,280 residents; an increase of only 14.5%. Between 1970 and 1980, the population exploded to 30,302, increasing 42.3% during that ten year period. In the 1980s, the population increase slowed to 18.6%, to 35,926 persons. Over the 1990s, the rate of increase slowed to 17.4%, when 42,190 persons called the County home in 2000.

Population is affected by two factors: natural increase and migration. Natural increase is the net addition (or deletion) of population when the number of births and deaths in the County are

tabulated. Migration figures are obtained when the number of persons moving to the County is tabulated versus the number leaving the County. Obtaining migration figures involves removing the net natural increase (or decrease) figure from the overall total population.

Jefferson County is part of the “Washington Metropolitan Fringe” as defined by the Greater Washington Research Center. Growth in the County is influenced by what is happening in the Washington Metropolitan Region as a whole.

Population Projections

Population projections are maintained on an ongoing basis by the Regional Research Institute of West Virginia University (RRI/WVU). The Jefferson County Planning Commission Staff also formulates projections based on locally known factors. The WVU projections present two scenarios. Series M is based on current rates of birth, survival and migration, whereas Series A is based on long term averages which portend more growth than current averages.

The Jefferson County Planning Commission staff projections are predicated on assumptions that (1) long term trends in dwelling unit construction will continue, (2) persons per dwelling unit will continue to decline to approximately 2.45 persons per dwelling unit and (3) fluctuations will occur due to economic cycles.

Population Growth Projections through 2020				
Year	RRI Ser. A	RRI Ser. M	JCPC	Average
2000			Census	42,190
2005	45,836	45,988	46,581	46,135
2010	48,870	49,314	51,429	49,871
2015	51,444	52,312	56,782	53,512
2020	53,755	54,979	62,692	57,142
Source: WVU - Regional Research Institute, 2002, and JCDPZ&E.				

Staff also analyzed trends in building permits for new home construction and subdivision approvals and proposals. With these factors considered, the Planning Commission estimates that the population will grow at an average rate of 2% per year, compounded.

In the 1986 Comprehensive Plan, a population projection of 50,000 was used for the year 2000. This number exceeds all of the projections cited in the 1994 Plan. In 1999, 2000 and 2001, 439, 505 and 605 building permits were issued for single family detached and attached houses and mobile homes, respectively. These numbers suggest that the Planning Commission projection, although higher than those from the RRI/WVU, may be more reflective of current trends. The Department’s projection is used throughout the text of this plan as the basis for computing population related trends.

The growth of the 1980s and 1990s was not reflected in public school enrollment figures, which grew at a much slower pace than the overall population. This suggests that much of this growth came from immigration of households with no school-aged children; perhaps primarily retirees. Unless the County experiences an increase in middle-class salaried jobs, the type of growth probably will continue to in a similar manner. The trade off of luring quality employers to the County may be an increase in the proportion of families migrating into the County having with more school-aged children. From the 1970s to the present, the difference between property values in Jefferson County and the rest of the Washington Region has been on a continual march toward equalization, although properties in Jefferson County continue to be noticeably more moderately priced compared to neighboring jurisdictions.

Increased employment opportunities in Frederick, the Dulles Corridor, Hagerstown and Berkeley County have mitigated the loss of certain significant County employers in the past 20 years. The ongoing development of these areas impacts the County as Jefferson County is no longer an

Population - Households					
	<u>Total</u>	<u>Residing in Group Quarters</u>	<u>Residing in Households</u>	<u>Persons per Household</u>	<u>Total Households</u>
Actual 1970	21,280	800	28,480	3.21	6,374
Actual 1980	30,302	1,487	28,815	2.89	9,980
Actual 1990	35,926	1,362	34,564	2.68	12,914
Actual 2000	42,190	1,131	41,059	2.54	16,165

Source: U.S. Bureau of the Census

hour-plus drive to major employment centers. With the commercial growth of the Dulles region and Frederick, Jefferson County has become a 30-45 minute commute to some major regional employment centers, which it has not been in previous times.

The conclusion can be drawn that the impact of external employment opportunities will continue to grow, which will continue to impact the County as it is an attractive “bedroom community” for those areas. This will result in enhanced appeal of the County as a residential location, increasing immigration pressure to the County. While local economic development is on the upswing, which also results for employment demand within the County to be filled by existing residents or immigrants, the principal influence will be immigrant residents working outside the County. Population growth is forecast to pick up compared to the projections found in the 1994 Comprehensive Plan, with County population to top the 50,000 mark around 2010.

Housing Analysis

This section is based on the “Housing Analysis, Eastern Panhandle Counties of Berkeley, Jefferson and Morgan” published in January, 1992 by the West Virginia Housing Development Fund and information from the U.S. Bureau of the Census and data analyses by Jefferson County personnel. The data presented includes characteristics of

households, characteristics of housing and an assessment of the specific issues of substandard housing and affordable housing. In 2000, there were 17,623 housing units in Jefferson County, according to the Census. During the 1980s, the County’s population increased by 18.5%, yet the number of housing units increased by 26.5%. During the 1970's, the increase in the housing units outpaced population growth by 55.7% to 42.4%. In the 1990s, the increase in population was again outpaced by growth in the number of housing units by 20.7% versus 17.4%, respectively.

Decennial Change in Number of Households		
<u>Period</u>	<u>Total</u>	<u>Annual Average</u>
1970-1980	3,606	361
1980-1990	2,934	293
1990-2000	3,251	325

While the gap is narrowing, this trend is consistent with regional and national trends and is related to a declining number of persons per household. The closing of this gap is due to the shrinking of the size of the typical family, plus the influx of migration. As the number of persons moving into the County increases, and the average size of the typical household declines, the result is a more pronounced increase in the rate of housing construction than population growth. This is a factor that needs to be kept in context, however,

because no amount of planning or strategic implementation of land use regulation can dictate to a free citizenry the size of their household.

The Community Impact Statement as an indicator of Residential Growth

The chart shown on Page 142 illustrates the number of units proposed via community impact statements since 1972, charted against the number of lots actually recorded. This chart shows that far more units have been proposed than actually came to fruition. Therefore, CISs are not a reasonable barometer of anticipated development activity. There are a number of factors that make CIS

Increase in Housing Units - 1970 - 2000	
The number of housing units has grown as follows:	
Total - 1970	7,411
<u>Increase in 1970s</u>	<u>4,131</u>
Total in 1980 (% increase)	11,542
	(55.7%)
<u>Increase in 1980s</u>	<u>3,064</u>
Total in 1990 (% increase)	14,606
	(26.5%)
<u>Increase in 1990s</u>	<u>3,017</u>
Total in 2000 (% increase)	17,623
	(20.7%)
Source: U.S. Bureau of the Census	

proposal trends unacceptable to use as an indicator of growth. Numerous projects have received approval of a CIS, but have not progressed beyond that point. Some projects develop noticeably fewer lots than were approved in the CIS. Also, with the permitted time frames within which a developer has to progress through the land development review process, it is impossible to predict how quickly a project will progress through the review process and be constructed. For all these reasons, review of CISs as an indicator of growth is ill advised.

Distribution of Housing Between Municipalities and Unincorporated Areas of the County

The following chart illustrates the distribution of housing units between the towns and the County, and how the number of units in the unincorporated areas has increased substantially as a percentage of the overall inventory of housing stock.

HOUSING GROWTH - TOWN VS. COUNTY

Source: U.S. Bureau of the Census

		<u>Towns</u>	<u>County</u>
1970	Total Units	2,640	4,762
	Percentage	35.7%	64.3%
1980	Total Units	2,962	8,580
	Percentage	25.7%	74.3%
1990	Total Units	3,609	10,997
	Percentage	24.7%	75.3%
2000	Total Units	3,814	13,809
	Percentage	21.6%	78.4%

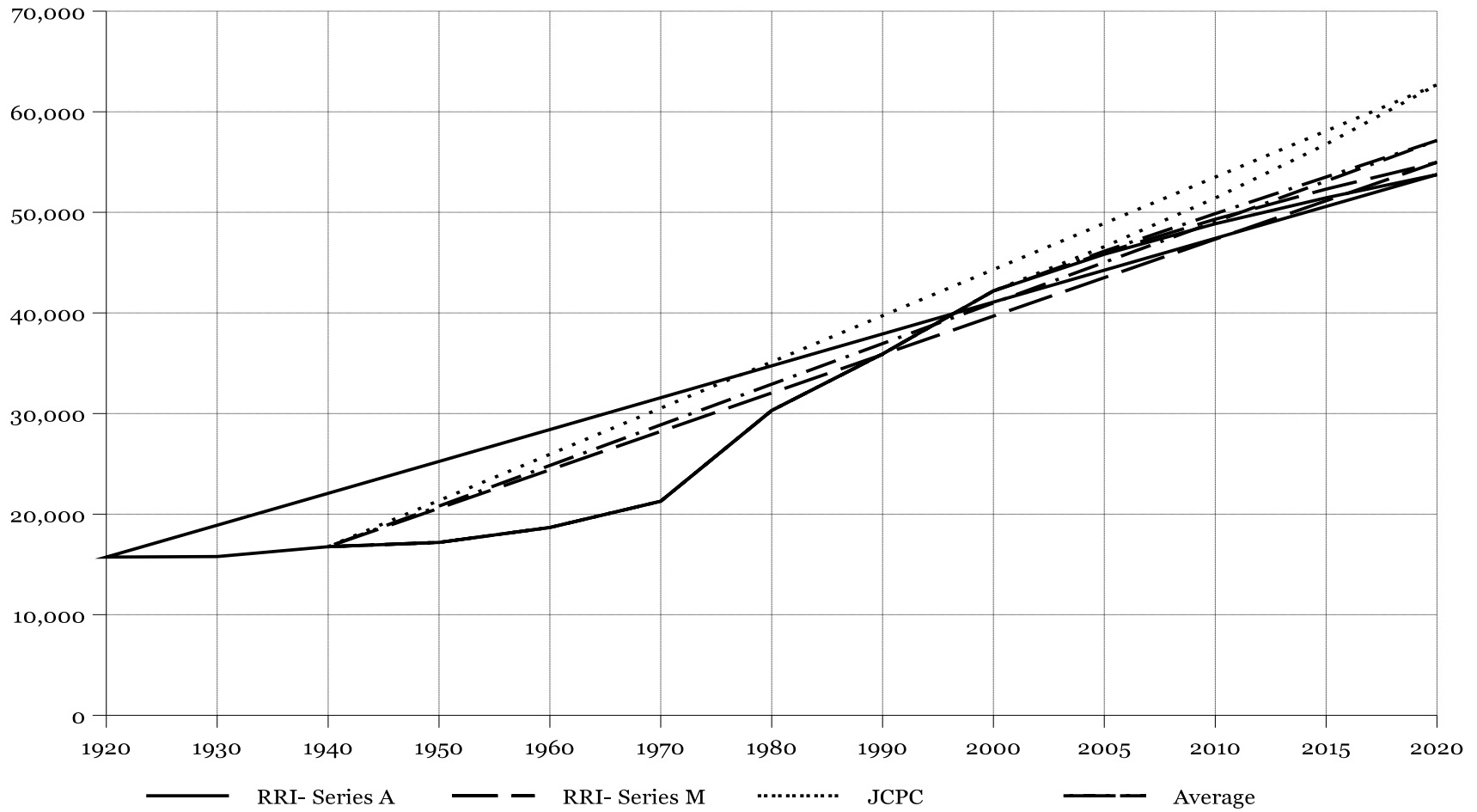
Source: U.S. Bureau of the Census.

Housing Cost

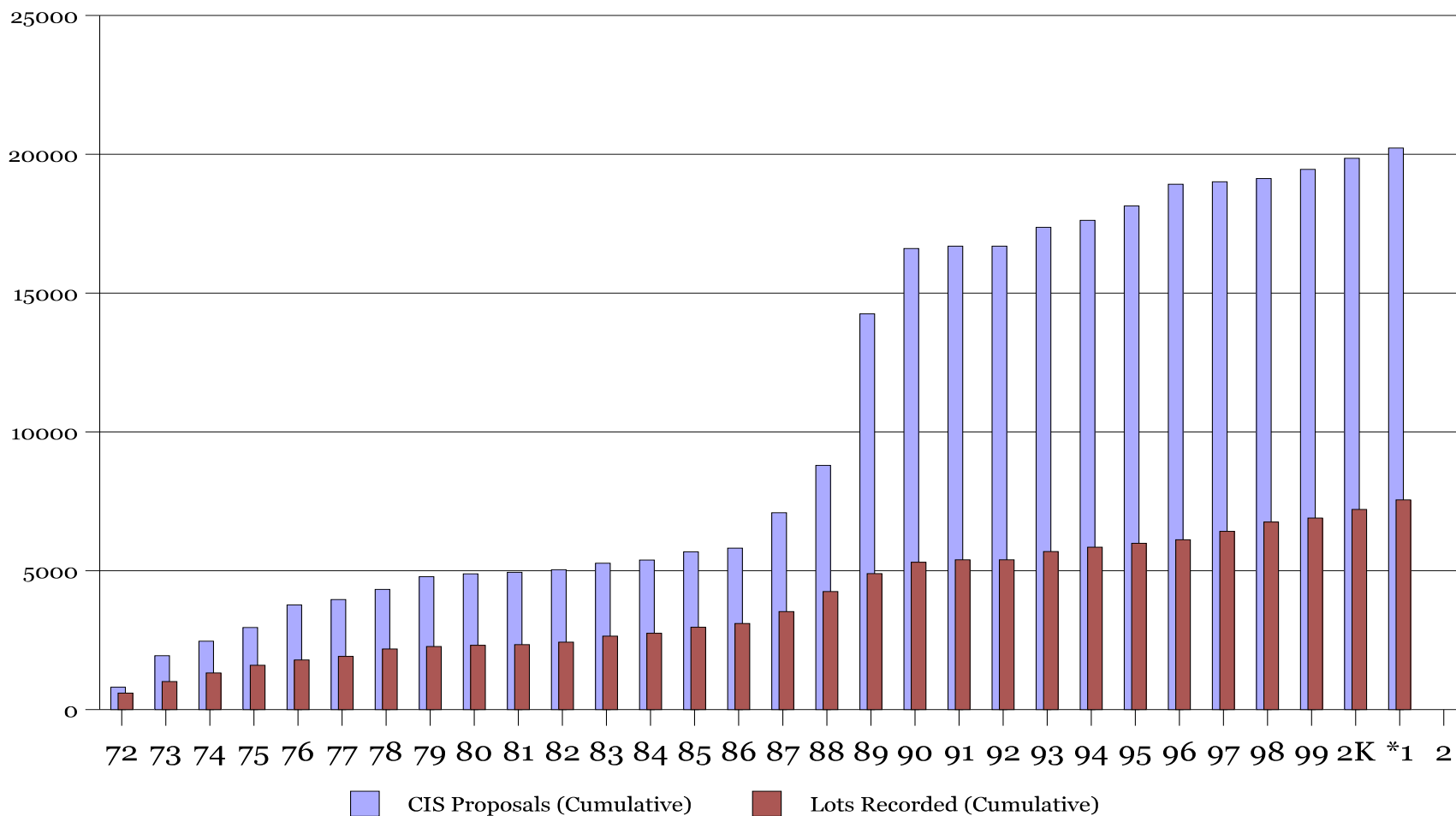
Cost of housing compared to surrounding areas is a significant factor that affects. As in all free-market arrangements, competition is the controlling factor. Competition in this area is controlled by location, and price. Jefferson County has been at a disadvantage to surrounding jurisdictions due to location (distance to employment centers, etc.), but advantaged when it comes to price (including property tax rates).

The table on Page 143 illustrates the average sales price of properties sold in Jefferson County and the average time on market, compared with the same data for nearby jurisdictions during calendar year 2001. Median house prices and number of units sold were derived from the Board of Realtors Multiple List Service. Regionally, not all realtors report all units sold and it is not known if there is significant deviation from this figure. Also, builders sometimes do not use realtors in selling new homes. Consequently, the data presented above is not absolute, but representative.

Jefferson County Population Projections 2000 - 2020



Lots Recorded vs. Lots Proposed via CIS Proposals (1972 - 2002)



NOTE: Data is cumulative. Actual real increase is depicted as the difference in the height of each bar compared to the year previous.
 2001 Approval of the Huntfield CIS has been edited from this chart, since the project was annexed into the City of Charles Town and no plats will be processed through Jefferson County's processes, thus skewing the chart.

Housing Profile 1990 and 2000				
Category	1990 Number	1990 Percent of Total	2000 Number	2000 Percent of Total
Occupied Housing Units:	12,914	88.4	16,165	91.7
Owner Occupied:	9,286	71.9	12,253	75.8
Rental Unit:	3,628	24.8	3,912	24.2
Vacant Housing Units:	1,692	11.6	1,458	8.3
Seasonal or Other				
Occasional Use:	628	4.3	491	2.8
Homeowner Vacancy Rate:		2.7		1.5
Rental Vacancy Rate:		6.2		4.4
Persons Per Owner Occupied Unit:		2.75		2.62
Persons Per Rental Unit:		2.48		2.29
Units with More Than 1 Person per Room:		330		335

Source: U.S. Census Bureau

The Department of Planning, Zoning and Engineering requests applicants to provide an estimate of the value of the structure to be built when applicants file for a building permit. The table on the next page illustrates the mean average of these estimated values for each year from 1980 to 2001.

These figures do not include land costs, and are self-reported by applicants. However, over the period of 1980 to 1990, the estimated values increased by 81%, 57% (1984 - 1990) and 78% for single family detached dwellings, single family attached dwellings and mobile homes, respectively. During the period of 1990 to 2000, these estimated values increased by approximately 46%, 96% and 68% for the same construction.

The period of the 1990s reflected the best and worst of economic variables.

Recession struck the national economy in the early 1990s, only to have it rebound with one of the most robust recoveries in American history. As such, figures for the early 1990s reflected a slower trend due in part to:

1. Recessionary pressure lowering construction cost.
2. Decreased demand for single family dwellings forced prices lower.
3. High-end single family attached units outpaced more moderately priced offerings.
4. The number of permits for single family attached housing was too small for statistical significance, and
5. The variation in mobile home values is within an acceptable variation and does not have significance as a trend.

Average Sales Price, All Housing Sales
Jefferson County and Surrounding Counties
January 1, 2001 through December 31, 2001

<u>County</u>	<u>Total Units Sold</u>	<u>Average Days on Market</u>	<u>Average Price</u>
Berkeley, WV	1,010	126	\$106,900
Jefferson, WV	688	90	\$136,500
Morgan, WV	207	150	\$90,000
Frederick, VA	1,294	73	\$142,100
Loudoun, VA	6,179	32	\$278,333
Clarke, VA	169	57	\$220,000
Washington, MD	1,412	120	\$136,302
Frederick, MD	3,795	59	\$160,000

Sources: Eastern Panhandle Board of Realtors, Pen-Mar Regional Association of Realtors, Blue Ridge Board of Realtors, Dulles Area Association of Realtors and Robert Giles, Mackintosh Realtors, Frederick, MD.

Estimated Average Value of Single Family Residential Construction in Jefferson County 1980 - 2001

<u>Year</u>	<u>Single-Family Detached</u>	<u>Single-Family Attached</u>	<u>Mobile Homes</u>
1980	\$50,770	No Data	\$8,840
1981	\$49,110	No Data	\$6,920
1982	\$39,750	No Data	\$8,690
1983	\$45,300	No Data	\$9,300
1984	\$45,960	\$34,730	\$8,420
1985	\$54,040	\$36,880	\$10,100
1986	\$65,130	\$52,500	\$12,280
1987	\$66,510	\$54,830	\$12,350
1988	\$74,290	\$52,860	\$16,840
1989	\$91,200	\$56,620	\$14,070
1990	\$91,980	\$54,450	\$15,700
1991	\$82,825	\$81,111	\$13,795
1992	\$82,843	\$97,667	\$14,713
1993	\$88,102	\$90,154	\$15,487
1994	\$98,317	\$71,235	\$14,149
1995	\$101,384	\$68,917	\$14,242
1996	\$98,100	\$90,000	\$14,602
1997	\$114,554	\$82,125	\$16,356
1998	\$116,762	\$192,500	\$15,388
1999	\$118,941	\$107,000	\$20,775
2000	\$134,264	\$51,925	\$26,438
2001	\$146,101	\$90,902	\$24,429
2002	To be determined	TBD	TBD

Source: Jefferson County Department of Planning, Zoning and Engineering

Appendix B

Statistical Tables and Sources

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Improvement Location Permits (ILPs) and Building Permits Issued versus Lots Approved for Recordation - 1984 to 2002

<i>ILP AND BUILDING PERMIT ACTIVITY</i>					<i>PLANNING COMMISSION ACTION</i>		
<i>YEAR</i>	<i>APT. BLDGS.</i>	<i>APT. UNITS</i>	<i>DWELLINGS(1)</i>	<i>MOBILE HOMES</i>	<i>RES. LOTS(3)</i>	<i>APARTMENTS</i>	
2002	TBD	TBD	TBD	TBD	TBD	TBD	
2001	0	0	535	70	346		
2000	0	0	412	93	307		
1999	8	57	365	74	145		
1998	0	0	374	58	288	50	
1997	8	58	313	58	231	64	
1996	1	1	231	49	108		
1995	0	0	227	59	138		
1994	0	0	301	49	151		
1993(2)	2	45	296	68	256	40	
1992	0	0	343	63	147		
1991	0	0	337	91	370		
1990	0	0	423	93	384		
1989	3	16	331	41	867		
1988	7	60	268	31	330		
1987	1	28	209	41	144		
1986	4	36	206	47	85	64	
1985	12	104	137	33	116	44	
1984	6	46	130	23	85	172	
52 451 5,438 1,041 TOTAL = 6,930					4,498	434	TOTAL = 4,932

- (1) "Dwellings" is a total of the ILPs issued for single family detached dwellings, duplex units and townhomes.
- (2) With the annual report filed on December 31, 1993, annual reports were converted from summarizing the fiscal year to the calendar year. As a result, the figure for Residential Lots recorded in this row reflects the 18 month period of July 1, 1992 to December 31, 1993.
- (3) Parent to child conveyances were not included in this figure.

NOTE: 2002 data will be added when end of year figures are calculated.

SOURCE: Jefferson County Planning Commission Annual Reports, 1984 through 2000, and 2001 and 2002 data on file with the Department of Planning, Zoning and Engineering.

West Virginia State Division of Highways

Road Mileage by Class - State System

<u>Class</u>	<u>Roadway Miles</u>	<u>% of County Total</u>	<u>Annual Vehicle Miles Traveled</u>	<u>% of County Total</u>
Expressway	0.0	0.0	0	0.00
Trunkline	32.50	7.71	175,881,000	50.77
Feeder	31.26	7.42	74,364,000	21.47
Essential Arterial	64.40	15.29	48,866,000	14.11
Collectors	86.41	20.49	30,781,000	8.88
Land Access	206.84	49.09	16,549,000	4.78
Local (unclassified)	0.0	0.0	0	0.00
TOTAL	421.31	100.00	346,441,000	100.00

Source: West Virginia Department of Highways Traffic Count Summary Tables.

WEST VIRGINIA DEPARTMENT OF HIGHWAYS

JEFFERSON COUNTY TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

(all projects not completed as of January 1, 2002)

1.	WV 9	WV45 to US340	DES Report
2.	WV 9	WV 45 to US340	EIS Report
3.	WV9	Berkeley Co. line to Kearneysville	Preliminary Engineering & Right of Way
4.	WV9	Berkeley Co. line to WV 1	Upgrade to 4 lanes, plus 4 bridges
5.	WV 1/8	Middleway cattle pass	Replace drainage structure
6.	WV 8, 8/1, 8/2	Burr - Bardane Industrial Park	Resurfacing
7.	WV 8/4	Burr - Bardane Industrial Park	Construct new road
8.	WV 9	Kearneysville to Charles Town	PE RW
9.	WV 9	Kearneysville to Bardane	GR & DR
10.	WV 9	S. of WV 8 to US 340	Upgrade to 4 lanes, construct bridge
11.	WV 9	Vicinity of WV 8	Pave 4 lane road
12.	WV 9	Bardane to Kearneysville	Pave 4 lane road
13.	WV 9	Martinsburg to VA line	Legal services for environmental issues
14.	WV 9	Charles Town to VA line	RTE Species study
15.	WV 9	US 340 to VA line	Preliminary Engineering & Right of Way
16.	WV 9	WV 9/3 to WV 27	GR, DR, BR
17.	WV 9	US 340 to Cattail Run	Clear, grub and erosion control
18.	WV 9	US 340 to Cattail Run	Grading, BR
19.	WV 9	US 340 & Frontage Roads	Construct frontage roads
20.	WV 11	North of Summit Point	Install signal at railroad crossing
21.	WV 16	WV 18 to WV 16/3	Resurfacing
22.	WV 16	WV 16/3 to WV 480	Resurfacing
23.	WV 16/5	Morgans Grove RR crossing	Elevate railroad crossing
24.	WV 17	N. of WV 17/8 to N. of RR crossing	Improve alignment, install box culvert
25.	WV 17	N. of WV 17/8 to N. of RR crossing	DES Report/CC
26.	WV 17	N. of 17/8 to WV 18	Resurfacing
27.	WV 17	WV 18 to WV 20	Resurfacing

28.	WV 20/2	Shenandoah Junction	Access road to new middle school
29.	WV 28	Bridge	Scour rep
30.	WV 38	Smith Road Bridge	replace bridge
31.	WV 45	Berkeley Co. line to Shepherdstown	Resurfacing
32.	WV 45 bypass	WV 480 to Heatherfield	Construct bike trail
33.	WV 45/2	Lowe Products Access Road	Construct new road
34.	WV 51	Charles Town	Washington Corridor Revitalizatioj
35.	WV 51	Charles Town	Streetscape Plan
36.	WV 51	S. of 340/8 to 340/8	Resurfacing
37.	WV 51/1	Railroad Crossing	Install signal
38.	Harpers Ferry	Railroad Depot	Acquire and Restore Railroad Depot
39.	US 340	VA State line to Charles Town	Preparation of Public Information
40.	Ranson	5 th and 6 th Streets and Mildred St.	Sidewalks and beautification
41.	WV 25/5	None	Resurfacing
42.	WV 25/5, 30/6, 1/18, 25,6	Multiple	Resurfacing
43.	WV 115	WV 17/4 to N. of 9/2	Resurfacing
44.	WV 115/3	RC Bottling Co. Site	Paving and stabilization
45.	WV 230	N. and S. of WV 33	Sight distance improvements
46.	US 340	VA Line to Charles Town	DES RPT
47.	US 340	VA line to WV 21/1	Upgrade to 4 lanes
48.	US 340	VA line to S. of 340/4	EIS
49.	US 340	VA line to S. of 340/3	Resurfacing
50.	US 340 and WV 9	S. Of WV 340/3	Rep. inst. RPMS
51.	US 340	Country Club Road	Install traffic signal
52.	US 340	Charles Town to Harpers Ferry	Resurfacing
53.	WV 340/2	E. of 13/2	Correct slide (fill bench)
54.	WV 480	Shepherdstown Bridge	Repair Deck
55.	WV 480	Shepherdstown Bridge	Replace Bridge
56.	WV 480	Shepherdstown Bridge	Const. temp. relocation of city water line
57.	Lakeside Drive	Shannondale	Replace culverts

Community, Transient and Non-Transient Water Systems

(For locations of municipal and community water systems,
please reference the map found on page 39 of this Plan.)

System Name	Population Served	Provides Fire Protection?
COMMUNITY WATER SYSTEMS		
1. Cave Quarter Estates	80	No
2. Charles Town City(1)	7,500	Yes
3. Fox Glen Utilities	720	No
4. Glen Haven Utilities	205	No
5. Green Acres MHP	42	No
6. Harpers Ferry City(1)	2,000	Yes
7. Harpers Ferry Job Corps	215	Yes
8. Keyes Ferry Acres	450	No
9. Kratz MHP	35	No
10. Leights MHP	45	No
11. Russell's MHP	60	No
12. Shenandoah Junction	550	Yes, From Burr Ind. Park
13. Shepherdstown City(2)	2,800	Yes
14. Tuscowilla Utilities	2,000	Yes
15. Valley View MHP	42	No
16. Walnut Grove Utilities	1,115	Yes
17. Westridge Water Dept.	200	No
18. Potomac Farms	62	No
19. Oak Hill MHP	125	No
20. Harpers Ferry Campsites	400	No
21. Parkview Woodland	280	No
22. Shenandoah Plantation	45	No
23. Cavaland	80	No
24. Shenandoah Mini Homes	60	No
25. Potomac Terrace	50	No
26. Meadowbrook	230	Yes, from Walnut Grove
(1) Drawn from ground and surface		
(2) Drawn from surface water		No note- drawn from groundwater.

TRANSIENT WATER SYSTEMS

- (3) Rainbow Road Club
- (4) Jefferson Orchard
- (5) John's Family Restaurant
- (6) Leetown Park
- (7) Country Roads General Store
- (8) St. Andrews Country Club
- (9) Mountain Lake Lodge
- (10) Summit Point Raceway
- (11) Rainbow Diner
- (12) Priest Field Pastoral Center
- (13) Images
- (14) Spice Garden
- (15) Sheetz Store #137
- (16) Blue Ridge Outfitters

- (17) EZ Mart
- (18) Morgan Grove Park
- (19) Hillbrook Inn
- (20) Mountaineer Mini Mart
- (21) Summit Point Park
- (22) Sam Michaels Park
- (23) FLOC
- (24) Claymont Society
- (25) Bakerton Market
- (26) Allen's Wonderland

All transient water systems serve 25 or fewer customers and use groundwater as their source.

NON-TRANSIENT WATER SYSTEMS

- 51. Cave Quarters #2
- 52. Cave Quarters #3
- 53. Fox Glenn Well #3
- 54. Fox Glen Well #4
- 55. Fox Glen Well #5
- 56. Keyes Ferry Acres Primary
- 57. Keyes Ferry Acres Central
- 58. Keyes Ferry Acres South
- 59. Leight's Well #2
- 60. Shenandoah Junction #2
- 61. Shenandoah Junction #3
- 62. Walnut Grove #3
- 63. Walnut Grove #4
- 64. Walnut Grove #5
- 65. Potomac Farms Back up
- 66. Harpers Ferry Campsites
- 67. Harpers Ferry Campsites A&B
- 68. Parkview Woodland #2
- 69. Parkview Woodland #3
- 70. Meadowbrook #2
- 71. Appalachian Fruit (USDA)
- 72. Blue Ridge Elementary School
- 73. C.W. Shipley Elementary School
- 74. Halltown Paperboard
- 75. North Jefferson Elementary School
- 76. Page Jackson Elementary School
- 77. South Jefferson Elementary School
- 78. Spectra Tech
- 79. Leetown Science Center
- 80. Jefferson County DOH Center
- 81. Country Day School
- 82. Burr Industrial Park
- 83. Penn National Gaming
- 84. U.S. Fish and Wildlife Service 3
- 85. Grammy's Place
- 86. Country Day School Expansion

Source: West Virginia Bureau for Public Health

FIRE COMPANY DISPATCHES 1995 - 2001

	1995	1996	1997	1998	1999	2000	2001
Friendship (Harper's Ferry)	149	157	116	179	217	271	238
Citizens' (Charles Town)	436	385	407	442	493	428	436
Shepherdstown (Shepherdstown)	204	206	227	227	231	188	207
Independent (Ranson)	416	386	395	415	435	387	405
Blue Ridge (Key's Ferry Acres)*	88	121	111	143	240	119	130
Other**	-----	-----	-----	-----	-----	239	174
TOTAL DISPATCHES	1,293	1,255	1,256	1,406	1,616	1,632	1,590
TOTAL CALLS**	719	690	684	787	804	689	729

* Includes all calls answered by both stations.

** Other includes responses by out of county units.

*** Does not correlate to total dispatches. A single call can result in dispatches from multiple companies.

EMERGENCY MEDICAL ASSISTANCE DISPATCHES 1995 - 2001

	1995	1996	1997	1998	1999	2000	2001
Jefferson Co. Ambulance Authority	----	----	----	----	----	**	1,854*
Friendship (Harper's Ferry)	560	623	518	470	398	498	471
Shepherdstown (Shepherdstown)	574	617	629	649	644	608	575
Independent (Ranson)	1,471	1,498	1,452	1,452	1,603	1,864	1,885
Blue Ridge (Key's Ferry Acres)	268	295	487	626	540	526	425
Other (check this)	-----	-----	-----	-----	-----	175	107
TOTAL	2,873	3,033	3,086	3,197	3,185	3,671	3,463

* Not included in EMS response total.

** Data not available.

POLICE DISPATCHES 1998 - 2001

	1998	1999	2000	2001
West Virginia State Police	4,982	3,771	4,374	3,683
Jefferson County Sheriff's Department	7,795	6,168	5,954	6,746
Charles Town Police Department	3,378	2,985	3,114	5,154
Ranson Police Department	4,380	4,380	3,375	3,124
Shepherdstown Police Department	1,197	1,454	1,283	1,127
Harper's Ferry/Bolivar Police Dept.	1,927	1,470	1,468	1,053
Other*	580	690	652	514
TOTAL	24,218	20,088	20,182	21,401

**"Other" includes WV DNR, US NPS and Shepherd College law enforcement units.

Source: Jefferson County Emergency Communications Center

JEFFERSON COUNTY AGRICULTURAL STATISTICS - 1974-1997

Statistic	1974	1978	1982	1987	1992	1997
<u>Land Use and Value</u>						
Number of Farms	381	370	398	363	334	357
Land in Farms (acres)	86,642	84,985	87,648	83,079	74,268	72,978
Percentage in Farms	64	63	65	62	55	54
Average Farm Size (acres)	227	230	220	229	222	204
Average Value Per Farm	\$191,369	\$294,270	\$312,631	\$385,413	\$608,207	\$715,807
Average Value Per Acre	\$842	\$1,285	\$1,442	\$1,684	\$2,875	\$3,722
<u>Inventory</u>						
Cattle and Cows (all)	22,233	20,896	20,213	17,925	18,286	16,854
Dairy Cows	5,325	5,948	5,780	4,692	4,539	3,305
Poultry	76,203	37,831	not avail.	39,190	not avail.	not avail.
Crops, All (acres)	36,310	41,790	48,024	39,190	37,226	39,536
Orchards, All (acres)	3,443	4,009	4,466	3,354	2,497	1,490
Corn (acres)	Not avail.	16,514	21,884	10,953	10,140	10,374
<u>Sale of Farm Products</u>						
Total Value	\$12,794,000	\$17,222,000	\$22,166,000	\$18,813,000	\$20,737,000	\$19,412,000
Average Per Farm	\$34,000	\$47,000	\$56,000	\$52,000	\$62,000	\$54,000
All Crops	\$4,312,000	\$6,432,000	\$9,619,000	\$7,164,000	\$7,609,000	\$8,290,000
All Livestock & Poultry	\$8,452,000	\$10,790,000	\$12,547,000	\$11,652,000	\$13,128,000	\$11,122,000

Source: Census of Agriculture, 1974, 1978, 1982, 1987, 1992 and 1997.

JEFFERSON COUNTY FARM OWNERSHIP AND MANAGEMENT TENURE
Counting Unit: Number of Farms

1978 - 1997

	1978	1982	1987	1992	1997
Type of Organization					
Family Farms	300	328	293	277	298
Partnerships	45	42	40	29	29
Corporations					
Family Held	20	23	27	20	25
Non-Family	4	2	1	5	1
TOTAL	369	395	361	331	353
Operator Residence					
On Farm	262	292	282	260	277
Off Farm	84	85	61	74	80
Operator's Principal Occupation					
Farming	213	217	204	179	190
Other	157	181	159	155	167
Years on Farm					
Four or Less	-	41	48	38	37
Five or More	-	289	271	256	288
Age					
Less than 44 years	137	129	88	19	21
45 to 64 years	172	156	161	220	230
65 years and over	77	97	114	95	106

Source: Census of Agriculture, 1978, 1982, 1987, 1992 and 1997.

Jefferson County Parks and Recreation Commission Facilities

Bolivar Nature Park	Located on Primrose Alley, near Harpers Ferry, this natural and untapped 7-acre park is filled with plenty of botanical delights. A walking trail takes you through the park where you can relax on a bench and watch the deer graze. A gazebo and picnic tables are available for your convenience at the parks entrance.
Evitt's Run Park	This one-acre park is located in downtown Charles Town at the intersection of Liberty and West Washington Streets. Named for the stream that borders it, the parks facilities include a picnic pavilion, restrooms, playground, swings, and a tennis court and basketball court. Evitt's Run has played host to many community events and activities and is one of the few remaining public fishing access available.
Leetown Park	Located 1.5 miles East of Leetown, this ten-acre park has been a gathering place for softball games since the 1970's. On the grounds are lighted softball fields, basketball court, a playground, and picnic pavilion and restroom facility. This park is a great place to host your company's softball league or just play a pick-up game of baseball.
Moulton Park	On the shore of the Shenandoah River just north of the Bloomery Bridge, this half-mile of river frontage features camping and other recreational opportunities. The well-shaded, quiet hammock of foliage creates an inviting habitat for squirrels, birds, and waterfowl. A public boat ramp offers access to fishing on the river.
Morgan Grove Park	With over twenty acres of shade trees, meadows, playgrounds and spring-fed streams, this popular park serves as an idyllic site for community gatherings and events. A 1,500 square foot covered picnic pavilion with full kitchen and restrooms offers the perfect place to hold family events as well as corporate functions. Other features of the park include playground equipment, swings, soccer fields, baseball diamond, sand volleyball, horseshoe pits, and a 3/4 mile walking trail.
Mt. Mission Park	This picturesque three and one-half acre park is located on Mission Road. Shaded by oak and maple trees, the picnic pavilion, complete with restroom and kitchen facilities has played host to family reunions, weddings, and the like. Scattered picnic tables, playground, sand volleyball and a basketball court make this park a convenient site for neighborhood get-togethers.
Sam Michael's Park	The entrance to this one hundred and thirty acre park is located on Job Corp Road, near Harpers Ferry. The private setting of this park offers the perfect place to host weddings, receptions, or other family events. The well-shaded picnic pavilion offers adjacent kitchen and restroom facilities. Nestled with-in the park is little league fields, playground, horseshoe pits, and a sand volleyball court. Future plans for the park include additional athletic fields and a community center.
South Jefferson Park	Located between Summit Point and Middleway, this seventy-one acre park accommodates six baseball fields, a playground, sand volleyball court, basketball court, and picnic pavilion. Future plans call for a tennis court.

Source: Jefferson County Parks and Recreation Commission

PARKS AND RECREATION FACILITIES IN JEFFERSON COUNTY

Map Ref.	Site	Type	Notes and Facilities
1.	Harpers Ferry Nat'l. Historic Park	Scenic, Historic	Hiking available
2.	Leetown Fish Hatchery	Scenic, Historic, Nature	National fish laboratory
3.	Charles Town Races and Slots		Horse racing, gaming
4.	Summit Point Raceway		Motor Vehicle Racing
5.	Appalachian Trail	Scenic, Historic, Nature	Camping, hiking
6.	Morgan Grove park	Local	Playground, ballfields, picnicing
7.	James Rumsey Park	Local, Scenic, Historic	
8.	Liberty Street Park	Local	Tennis Courts, basketball
9.	Jefferson Memorial Park	Local	Pool, playground, Tennis, basketball, Picnicing
10.	Jefferson County Community Center	Local	Picnicing
11.	Potomac Edison Park (Millville)	Local, Scenic	Fishing, boating, picnicing
12.	Potomac Edison Park (Harpers Ferry)	Local, Scenic	Fishing, boating, picnicing
13.	Leetown County Park	Local	Tennis, ballfields, picnicing
14.	Mountain Mission County Park	Local	Playground, ballfields, basketball
15.	Riverside Park	Local, Scenic	Fishing, boating
16.	Ranson Park	Local	Playground, tennis, ballfields
17.	Summit Point Park	Local	Ballfields
18.	Princess Street Fishing Access	Local	Fishing, boating
19.	Dam #4 Boat Ramp	Local	Fishing, boating
20.	Sam Michaels Park	Local	Picnicing, playground
21.	Shannondale Springs	State, Scenic	Unimproved
22.	Cress Creek Golf Course	Private	Golf
23.	Locust Hill Golf Course	Private	Golf
24.	Isaak Walton League	Private	Fishing, Shooting Range, picnicing
25.	Sleepy Hollow Golf Course	Private	Golf
26.	Shannondale Club	Private	Lake, pool, fishing, boating, picnicing
27.	Fairgrounds	Private	County fair site
28.	Ruritan Athletic Fields	Local	Ballfields
29.	Leetown Athletic Fields	Local	Ballfields
30.	Ranson Athletic Fields	Local	Ballfields

JEFFERSON COUNTY LABOR FORCE BY GENDER (AGE 16 AND OLDER)

1980 - 2000

Year	Armed Forces	Employed		Unemployed		Not in Labor Force	
		Male	Female	Male	Female	Male	Female
1980	12	7,410	4,887	489	513	3,093	6,082
1990	20	9,864	7,767	514	375	3,081	6,130
2000	58	11,947	9,634	462	568	3,934	6,751

Source: 1980, 1990 and 2000 Censuses

JEFFERSON COUNTY WORKFORCE MOBILITY

1980 - 2000

	Number of Workers			Percentage of Workers		
	1980	1990	2000	1980	1990	2000*
<u>Residents Working in:</u>						
Jefferson County	7,012	9,000	9,452	58.8	51.0	44.9
Another WV County	1,056	1,326	1,872	8.9	7.5	8.9
Another State	1,495		9,742	12.5		46.3
Other Areas	1,434	7,058		12.0	40.0	
<u>Not Reported</u>	<u>935</u>	<u>247</u>		<u>7.8</u>	<u>1.5</u>	
Worked outside County	4,912	17,631	21,066	41.2	49.0	55.1

Source: 1980, 1990 and 2000 Census

PERSONS EMPLOYED (AGE 16 AND OVER) BY OCCUPATION ----JEFFERSON COUNTY, WV - 1970 THROUGH 2000

Occupation	1970		1980		1990		2000	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Professional & Tech.	1227	15.0	2179	17.7	2675	15.2	Data not yet released by Census Bureau.	
Health Practitioners	46	0.6	87	0.7	**	**		
Health Workers	73	0.9	224	1.8	**	**		
Teachers	352	4.3	947	7.7	**	**		
Technicians, non-health	99	1.2	205	1.7	533	3.0		
Other Professional	657	8.1	716	5.8	**	**		
Managers & Administrative	618	7.6	969	7.9	1731	9.8		
Sales Workers	401	4.9	539	4.4	1549	8.8		
Clerical and Kindred	960	11.8	1943	15.8	2708	15.4		
Craftsman and Kindred	1181	14.5	1742	14.2	2676	15.2		
Mechanics & Repairs	231	2.8	485	3.9	**	**		
Construction Trades	486	6.0	831	6.8	**	**		
Other Craftsman	464	5.7	426	3.5	**	**		
Operatives, except								
Transportation	1051	12.9	1059	8.6	1124	6.4		
Transportation Equip.								
Operators	348	4.3	627	5.1	838	4.8		
Laborers (non Farm)	498	6.1	618	5.0	962	5.5		
Construction Laborer	183	2.2	128	1.0	**	**		
Material Handlers	94	1.2	116	0.9	**	**		
Other Laborers	221	2.7	374	3.0	**	**		
Farmers & Farm Managers	283	3.5	320	2.6	954	5.4		
Farm Laborers & Foremen	396	4.9	447	3.6				
Service Workers	978	12.0	1733	14.1	2280	12.9		
Cleaning Services	253	3.1	415	3.4	**	**		
Food Services	321	3.9	590	4.8	**	**		
Protective Services	72	0.9	204	1.7	217	1.2		
Other Service Workers	332	4.1	524	4.3	2063	11.7		
<u>Private Household Workers</u>	<u>214</u>	<u>2.6</u>	<u>121</u>	<u>1.0</u>	<u>134</u>	<u>0.7</u>		
TOTAL	8,155		12,297		17,631			

This chart is based on Census "place of residence" data. Although Jefferson County residents may be working in a particular field, many of these jobs are located outside of Jefferson County.

** Category title for the 1990 Census differ from those of the 1970 and 1980 Census.

Source: 1970, 1980, 1990 and 2000 Census.

NATIONAL REGISTER SITES IN JEFFERSON COUNTY

NHS ID NUMBER	NAME OF SITE
759	Gibson-Todd House
760	Morgan-Bedinger-Dandridge House
762	Van Swearingen-Shepherd House
765	Jacks-Manning Farm
768	Belvedere
769	Harewood
770	Jefferson County Courthouse
771	Richwood Hall
772	Rion Hall
773	Worthington
774	Beall Air
776	Prato Rio
777	Middleway Historic District
778	Burr
779	Lucas
789	New Opera House
790	Lee-Longworth House
791	White House Farm
792	Cold Spring
793	Blakeley
794	Aspen Hill
811	Hillside
812	Traveller's Rest
814	Shepherd's Mill
815	Rumsey Hall
816	Beverley
817 & 819	Shepherdstown Historic District and Historic District Boundary Increase
818	Halltown Union Colored Sunday School
820	Strider Farm
825	Cedar Lawn
826	Washington
827	Bower
828	Hazelfield
829	Woodbury
830	Elmwood
833	Elmwood
834	Fruit Hill
835	Glen Burnie
836	Claymont Court
837	Balling Spring - Morgans Grove
838	Rockland
839	Rose Hill Farm
846	Grubb
847	Media Farm
850	The Hermitage
851	Hopewell
854	Tackley Farm
860	Jefferson County Almshouse
862	Altona
863	Gap View Farm

WHERE ARE THE “30 ISSUES ADDRESSED IN THE PLAN?”

No.	Issue	Addressed on page(s)
1.	Dillon Rule	12, 81-82
2.	Rate of Development	2, 5, 7, 21, 23, 137-143
3.	Employment Location Patterns	57-65
4.	Economic Base	49-52, 57-65, 137-143
5.	Farmland Preservation	49-52, 67-72
6.	State and Federal Role and Grants	6
7.	Municipal Cooperation	23-25
8.	Level of Service and Quality of Schools	7, 79-85
9.	Impact Fees	56, 107-108
10.	Local Powers Act	None. See below.
11.	Adequacy of Transportation System	27-34
12.	Public Water and Sewer Systems	34-45
13.	Aquifer Quality and Capacity	34-37, 45-47, 103-104
14.	Homeowners' Associations	None. See below.
15.	Level of Government Service	25-26 and all of Chapter 4
16.	Land Development Management Tools	49-50, 53-54, 66-77
17.	Community Impact Statement System	25-26
18.	LESA System	66-69
19.	Historic Preservation	53-55
20.	Land Dedication for Rec. & Open Space	46-49, 66-70, 94-99
21.	Scenic Vistas	49, 74
22.	Public Perception	7, 13, 25-26, 66-70
23.	Adequacy of Existing Plan	None. See below.
24.	Density - Left to Developer or Regulate?	66-74
25.	Housing Cost	7, 56
26.	Definition of Smart Growth?	23-25
27.	Advisory or Regulatory Role of Plan	11
28.	Effect of Plan on Fiscal Resources	49-51, 57-65, 107-108
29.	Sufficiency of Current Data	25-27, 44
30.	Relationship between Recommendations and Funding for them	107-108, 111-112

Issue 10 was not addressed since the County is well on the way to implementing the Local Powers Act. Issue 14 was not addressed because the County has no authority or control over homeowners's associations. Issue 23 was not addressed as it is irrelevant to this plan how adequate the 1994 plan was or was not.

Comprehensive Plan Recommendations New vs. Restated from Previous Plan

REC. NO.	NEW?		REC. NO.	NEW?
3.01	YES		3.31	YES
3.02	YES		3.32	YES
3.03	YES		3.33	NO
3.04	YES		3.34	YES
3.05	YES		3.35	YES
3.06	YES		3.36	YES
3.07	YES		3.37	YES
3.08	YES		3.38	YES
3.09	YES		3.39	YES
3.10	YES		3.40	YES
3.11	YES		3.41	YES
3.12	YES		3.42	YES
3.13	YES		3.43	YES
3.14	YES		3.44	YES
3.15	YES		3.45	YES
3.16	YES		3.46	NO
3.17	YES		3.47	YES
3.18	YES		3.48	YES
3.19	YES		3.49	YES
3.20	YES		4.01	NO
3.21	YES		4.02	YES
3.22	YES		4.03	YES
3.23	YES/NO		4.04	YES
3.24	YES		4.05	YES
3.25	YES		4.06	YES
3.26	YES		4.07	YES
3.27	YES		4.08	NO
3.28	YES		4.09	YES
3.29	YES		4.10	YES
3.30	YES		4.11	YES

REC. NO.	NEW?		REC. NO.	NEW?
4.12	YES		4.22	YES
4.13	YES		4.23	YES
4.14	YES		4.24	YES
4.15	YES		4.25	YES
4.16	NO		4.26	YES
4.17	NO		4.27	YES
4.18	NO		4.28	YES
4.19	NO		4.29	YES
4.20	YES		4.30	YES
4.21	YES			

NOTE: These recommendations were compared against those in the 1994 Comprehensive Plan for general compatibility, and not whether the recommendations in this Plan are (or are not) duplication of text found in the earlier plan.

SOURCES AND RESOURCES CONSULTED IN THE PREPARATION OF THIS PLAN

Decennial Census of the United States, 1960, 1970, 1980, 1990, 2000.

Jefferson County Comprehensive Plan - 1994, Jefferson County Planning Commission, Charles Town, WV, 1994.

Kozar, M.D. with W.A. Hobba, Jr., and J.A. Macy, Geohydrology, Water Availability, and Water Quality of Jefferson County, West Virginia, With Emphasis on the Carbonate Area, U.S. Geological Survey, Water Resources Investigations Report 90-4118, Morgantown, WV, 1994.

Census of Agriculture, U.S. Department of Agriculture, 1974, 1978, 1982, 1987, 1992 and 1997.

Comprehensive Educational Facilities Plan, 2000-2010 for Jefferson County Schools, Jefferson County Board of Education, Charles Town, WV, 2000.

Arendt, Randall, Rural by Design; Maintaining Small Town Character, American Planning Association, Chicago, IL, 1994.

Economic Summary, (monthly report), West Virginia Bureau of Employment Programs, Charleston, WV, 2002.

Howard County General Plan, 2000, Howard County Government, Ellicott City, MD 2000.

Jefferson County Countywide Water Needs Study, Jefferson County Public Service District, Charles Town, WV 2001.

Jefferson County Countywide Wastewater Facilities Plan, Jefferson County Public Service District, Charles Town, WV, 2001.

Jefferson County Subdivision Ordinance, Jefferson County Commission, Charles Town, WV, as enacted and amended through DATE OF ADOPTION OF THIS PLAN.

Jefferson County Zoning and Land Development Ordinance, Jefferson County Commission, Charles Town, WV, as enacted and amended through DATE OF ADOPTION OF THIS PLAN.

Tustian, Richard B. and Associates, Jefferson County Comprehensive Plan Report, Bethesda, MD 2002.

Annexation Policy and Growth Area Map, City of Ranson, WV, Adopted 2002.

Proposed Annexation Policy and Growth Area Map, City of Charles Town, 2002 (action pending).