

# Comprehensive Plan

2007-2009



Volume 1

PULASKI COUNTY  
COMPREHENSIVE PLAN  
VOLUME 1

PUBLIC HEARING DRAFT  
FOR PRESENTATION TO THE  
PULASKI COUNTY PLANNING COMMISSION

ON:

October 13, 2009

Created by the Pulaski County Planning Commission  
with assistance provided by the NRVPC

Table of Contents  
Volume 1

Section	Page #
<u>Introduction</u>	<u>1</u>
<u>Natural Resources</u>	<u>2</u>
Climate	2
Geology	3
Sinkholes	5
Faults	6
Mineral resources	6
Soils	7
Topography	13
Development Considerations	15
Water Resources	19
Forest	21
Recreation Potential of Forests	22
Wildlife	22
Endangered Wildlife, Lora, and Communities	22
Forest utilization	23
<u>Economy and Population</u>	<u>24</u>
Historic Population Growth	24
Race	25
Age Groups	25
Population Projections	26
Changes in Employment	28
Significance of Tourism	29
Income	29
Pulaski Economic Adjustment Strategy	30
Virginia Nanotechnology Park	32
<u>Housing</u>	<u>33</u>
Existing Housing Stock	33
Housing Quality	33
Cost of Housing	34
Housing Rehabilitation	35
<u>Community Facilities</u>	<u>36</u>
Pulaski County Government	36

Pulaski County School System	36
Parks and Recreation	37
Pulaski County Library	39
Police Protection	43
Fire Protection	45
Existing Fire Department Facilities	46
Alert Pulaski	47
Rescue Services	47
Rescue Services Personnel and Equipment	48
Water Supply and Treatment	49
Sewage Facilities	50
Refuse Collection	52
Solid Waste Disposal	52
Recycling and Composting	53
<b>Transportation</b>	<b>54</b>
Interstate, Primary, and Secondary Road Systems	54
Future Needs of Road Transportation	57
Air Transportation	57
Future Needs of Air Transportation	58
<b>Goals Objectives and Strategies</b>	<b>59</b>
Economy	60
Housing	63
Environment and Recreation	64
Land Use	67
Education	70
Public Utilities	73
Transportation	75
Government	77
Emergency Response and Medical Services	80

## List of Tables

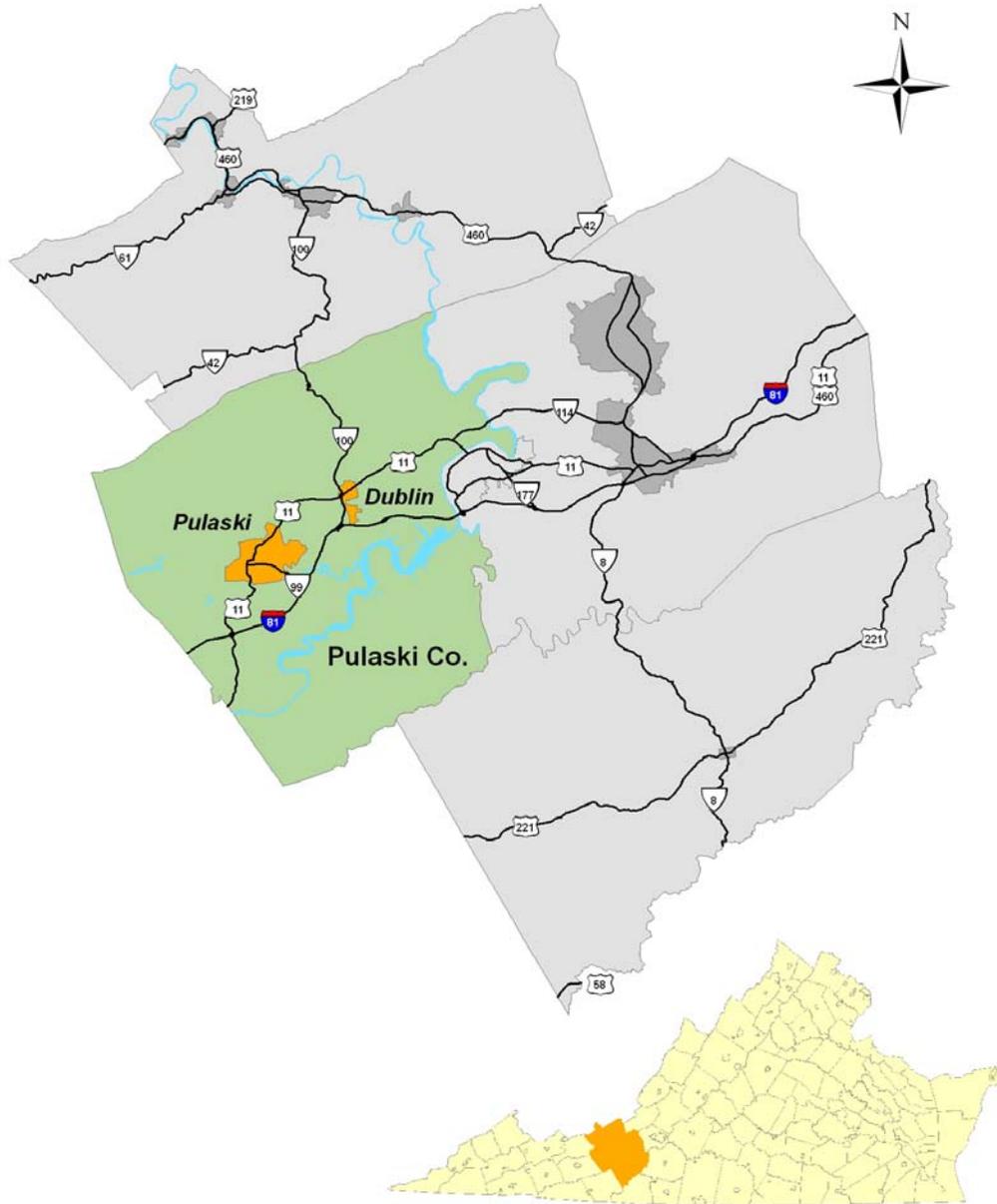
		Page #
Table 1	Average Temperatures by Month	2
Table 2	Average Precipitation by Month	3
Table 3	Limitations of Soils Associations for Structural Development	9
Table 4	Slope limitations for Development	15
Table 5	Population Comparison	24
Table 6	Average Annual Percent Population Change	25
Table 7	Pulaski County Age and Gender Population Change	26
Table 8	Population Projections	27
Table 9	2007 Industry Workforce Estimates	28
Table 10	2007 Employment Estimates	29
Table 11	2003-2007 Travel Industry Impact on Pulaski County	29
Table 12	2007 Pulaski County Household Income Data	30
Table 13	Pulaski County Single Family Housing Construction	33
Table 14	Pulaski County Housing	34
Table 15	2000 Comparison of Median Housing Value	34
Table 16	Pulaski County Recreation Department Owned and/or Utilized Facilities	39
Table 17	2008 Pulaski County Investigations for Group A Crimes	44
Table 18	2008 Town of Pulaski Crime Index for Group A Crimes	45
Table 19	Rescue Services Equipment	49
Table 20	Pulaski County Water Systems	50
Table 21	Pulaski County 2008 Sewage Data	51
Table 22	Endangered Flora, Fauna, and Communities	82

## List of Figures

Figure 1	Vicinity Map	v
Figure 2	Pulaski County Generalized Soils and Slopes	8
Figure 3	Pulaski County Generalized Elevation	14
Figure 4	Existing Land Use	17
Figure 5	Future Land Use	18
Figure 6	Pulaski County FEMA Flood Zones	20
Figure 7	Virginia's Nanotechnology Park	32
Figure 8	Community Facilities	42
Figure 9	Commuting Patterns in the NRV	55
Figure 10	Functional Classification of Roads in Pulaski County	56

**FIGURE 1**  
**VICINITY MAP**

# ***Pulaski County, Virginia***



# PULASKI COUNTY COMPREHENSIVE PLAN

## INTRODUCTION

This Comprehensive Plan is prepared in accordance with the Code of Virginia (Section 15.2). Its purpose is to guide and accomplish a coordinated, adjusted and harmonious development in accordance with present and probable future needs and resources and to best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants.

The Plan shall show the locality's long-range recommendations for the general development of the territory regarding designation of areas for:

- various types of public and private development, such as residential, business, industrial, agricultural, conservation, minerals, recreation, public service, flood plain and drainage;
- a system of transportation facilities;
- a system of community service facilities, such as parks, forests, schools, playgrounds, public buildings and institutions, hospitals, community centers, waterworks, sewage disposal or waste disposal;
- historical preservation and urban renewal or other treatment;
- implementation of reasonable ground water protection measures;
- existing or proposed recycling centers; and
- the implementation of measures to promote the construction and maintenance of affordable housing, sufficient to meet the current and future needs of residents of all levels of income in the locality while considering the current and future needs of the planning district within which the locality is situated.

In preparing a plan, the Planning Commission shall make careful and comprehensive surveys and studies of the existing conditions and trends of growth, and of the probable future requirements of the territory and its inhabitants.

The Pulaski County Comprehensive Plan is divided into two volumes. The first volume of the Plan documents Countywide Land Use, Transportation, and Economic planning elements. Volume One also includes overall Demographic, Housing, Natural Resources, Community Facilities Elements, and the Goals Objectives and Strategies for Pulaski County.

The second volume of the Pulaski County Comprehensive Plan includes detailed analysis of the five Planning Areas (North, Northwest, Central, South, and Draper). Volume Two details information relevant for these areas and includes Area specific data for the Comprehensive Plan Elements found in Volume 1.

## NATURAL RESOURCES

Probably no other factors influence development as much as the physical characteristics of the land, water resources and the climate. Responsible development requires a thorough awareness and understanding of the physical characteristics of the natural environment.

### Climate

The climate of Pulaski County is modified continental, with mild winters, and warm and humid summers. The County is located in the mean paths of winter North American storm tracks and moist tropical air from the Gulf of Mexico. Besides its location, the major controlling factors on temperatures in the County are elevation and the mountains. The mountains steer and modify storms and air masses. The higher elevations cause a flow of cooler air which tend to moderate summer nights.

TABLE 1

### AVERAGE TEMPERATURES

Month	Average High Temp. (°F)	Average Low Temp. (°F)
January	40	23
February	45	24
March	53	31
April	63	39
May	72	48
June	79	57
July	82	61
August	81	59
September	75	53
October	65	41
November	54	33
December	45	26

**Average Relative Humidity:** <70%

**Wind Patterns:** Prevailing From the Southwest

**Average Wind Speed:** 10 m.p.h.

The growing season is 150 days. The first frost usually occurs in early to mid October while the last frost usually occurs in late May. However, a number of local factors-such as elevation-can cause variation from the aforementioned general data.

**TABLE 2**

**AVERAGE PRECIPITATION BY MONTH**

<b>Month</b>	<b>Average Precipitation (inches)</b>
January	2.39
February	2.81
March	3.34
April	3.09
May	4.00
June	3.95
July	3.68
August	2.83
September	3.11
October	2.93
November	2.95
December	2.59

The average annual snowfall is 17 inches. Mean annual precipitation in Pulaski County is 39 inches. Intense rainfall may occur at any time, but generally occurs between December and April. The greatest amount of run-off also occurs between December and April, but no major flooding has been recorded during the winter months. Flash floods may occur when sudden storms concentrate their rainfall on a small watershed.

**Prevailing Winds:**

Pulaski County has a prevailing westerly-southwesterly wind during the warm season, and a prevailing north-easterly wind during the cold season. The year round average surface velocity is 8 miles per hour. Violent winds occasionally accompany severe storms, and gusts have been recorded in excess of 80 miles per hour.

**Geology**

Geology's importance to comprehensive planning lies in the identification of geologic structures which, if ignored, could be detrimental to public safety and welfare. Analysis of subsurface geologic conditions is a vital source of information on the conditions affecting any type of development. Rock strata serves as reservoirs for water and as a source of valuable minerals. Improper use can result in contaminated water supplies, septic tank failures, and damaged roads. There are eleven major rock types in Pulaski County. They include:

- Mississippi Shales and Sandstone

- Devonian and Silurian Ridge Making Formations
- Ordovician Shales and Sandstones
- Ordovician Limestones and Dolomites
- Cambrian Dolomites
- Cambrian Basal Quartzite
- Devonian Shales and Sandstones
- Devonian Limestone
- Ordovician Limestones and Shales
- Brecciated Dolomites
- Contorted Cambrian Shales

*Mississippian Shales and Sandstone* are chiefly sandstone and shale and it makes rough, deeply dissected, hilly country, which is dominated by steep slopes. The upper part is red in color, contains low-grade coal beds, and has a thin rocky soil cover. Percolating water and the thoroughly fractured rock in this formation can cause serious foundation problems. Water in this formation has high iron content. Septic infiltration varies from satisfactory to very unsatisfactory.

*Devonian Shales and Sandstones* are characterized by very steep slopes and a thin cover of poor soil. The formation is intricately dissected. High density residential use of these areas is not recommended because of excessive runoff. The burying of sewer and water lines would require considerable rock excavation because the soil is so thin and the bedrock is so impervious

*Devonian and Silurian Ridge Making Formations* have no significant geological constraints to development.

*Ordovician Shales and Sandstones* have mild to moderate geologic constraints to development. Steep grass and forest covered slopes are common in this formation. There is good soil cover and the formation is fair to good for residential wells.

*Ordovician Limestones and Shales* have mild to moderate constraints to development. Formations in the Draper Valley area yield water of only fair quality. Since the bedrock is riddled with crevices and solution

cavities, the circulation of water below the surface is open. Because of this, water from wells will very likely be unfit for domestic use without chlorination. If areas underlain by these formations are systematically developed for residential purposes, septic infiltration fields for dispersal of sanitary wastes may not be satisfactory.

Ordovician Limestones and Dolomites are interbedded blue gray limestone ledges and buff gray dolomites. Soil cover varies and there are numerous springs and wet weather streams. The soils are somewhat heavy, of poor tilth, and during dry weather the soils become very hard. In most of the areas underlain by this rock formation, the soils will be thick enough to excavate for basements. The subsoils are reasonably permeable and should provide suitable places for septic fields. Wells are of inferior quality and of limited yield.

Brecciated Dolomites are predominantly shaly dolomites. The soils are quite variable in weight. This geological formation has moderate to severe constraints for development. Rocks lying directly on the Pulaski Fault surface are pebbly and have been partially recrystallized to a firm solid rock. In some areas, the severely deformed nature of the bedrock, particularly the dolomitic zones in the thick succession of contorted strata, has created solution cavities. Shallow percolating subsurface water travels in these cavities and in low areas it appears as springs (Warden Springs, Thorn Springs). Fluctuations of the water table can make low ground unsuitable for construction sites. Cave-ins are not uncommon in this formation. Any large structures erected should be built only after intensive examination of foundation conditions. These rocks have a low density and low bearing strength. Hardness of water limits domestic use of well water in this formation.

Contorted Cambrian Shales are highly contorted, ridge making shales with thin soils. The characteristic rock type is red shale. None of these areas are very suitable for development. Streets and gutters laid upon such terrain tend to collect inordinately heavy runoff and lower lands tend to severely flood. Water wells contained in this geological formation are unpredictable and the water is generally of poor quality.

Cambrian Basal Quartzite has no significant constraints to development. It is a resistant ridge formation and its uplands are associated with very shallow soils.

## **Sinkholes**

Much of Pulaski County is underlain by carbonate bedrock and the surface topography is typical of a karst terrain. The carbonate bedrock provides a vast potential for ground water resources, but these resources are subject to contamination. As is typical of karst

terrain, soil cover is thin and rapid infiltration of surface water occurs through drainage into sinkholes. These characteristics dictate how surface activities can have a severe and widespread potential for adversely affecting groundwater quality. The folded, fractured and solubilized nature of carbonate bedrock can result in rapid and widespread distribution of contaminants once they are introduced into the groundwater.

In karst terrain, pinnacle erosion is common. Therefore, excavation costs may vary within a relatively small area. Since this erosion is irregular and unpredictable, professional on-site evaluation of depth to bedrock is encouraged. Small cave-ins are not uncommon and usually develop after heavy rains, when water enters the earth through deep cracks in the dried out soil. These cave-ins may cause the rupture of storm drains, water lines, and occasionally lead to surface cave-ins which may cause road or foundation failure.

## **Faults**

Pulaski is traversed by three major faults, one of which branches into several traces south of Claytor Lake

## **Mineral Resources** *(prepared by the Virginia Division of Mineral Resources, 1/97)*

Most of Pulaski County is in the Valley and Ridge province and is underlain by sedimentary rocks. The southeastern most part of the County is in the Blue Ridge province and is underlain by sedimentary and metamorphic rocks. During 1997, more than 495,468 short tons of iron-oxide pigments and limestone were produced by two quarries east of Dublin and east of Newbern, operated by Holston River Quarry, Inc., and by the Hoover Color Corporation, located near Hiwassee. The stone produced at the quarries is marketed as road stone, concrete aggregate, agricultural stone, and for other purposes.

Iron-oxide pigments are mined from pits south of (and processed at) Hiwassee. The finished product is marketed as a coloring agent in a variety of products. The largest market continues to be for paint; additional markets are art supplies (crayons, chalk, water colors) and building products (colored cinder blocks and bricks). Most recently, the Industrial Chemicals Division of Allied Chemical Corporation utilized pyrrhotite, mined intermittently near Galax, Carroll County, and in a plant process at Pulaski.

In the past, limestone and dolomite were quarried at various sites in Pulaski County for crushed-stone purposes. Sandstone was quarried for use as crushed stone and dimension stone, as well as sand and gravel. Semianthracite coal has been mined in the Little Walker Mountain fields in northern Pulaski County and in the Pulaski field near the Town of Pulaski. Coal refuse near Parrott has been crushed and marketed as lightweight aggregate. Iron ore was mined at several sites in the vicinity of Allisonia and on Draper Mountain in the western part of the County, and manganese minerals were also prospected and produced in Pulaski County. Zinc minerals were mined and prospected in the vicinity of Delton and Allisonia. Clay is obtained locally for the manufacture of brick.

Samples of Clay and shale from selected localities have been tested and found potentially suitable for use in the manufacture of brick, tile, and lightweight aggregate

## **Soils**

Soil science deals with the origin, form and structure of soil. Because of the large number of soil types, they are usually classified by associations. A soil association is comprised of a group of soils, each of which is defined and named, and all of which are associated in a consistent pattern within a described geographic area. There are eleven general soil associations in Pulaski County.

Variation in soils affect its productive capacity and its ability to support heavy loads, and how the soil holds its shape and slope after excavation. The soil properties can help determine the kind of management needed to obtain adequate crop yields. For example, soils low in plant nutrients require more fertilizer.

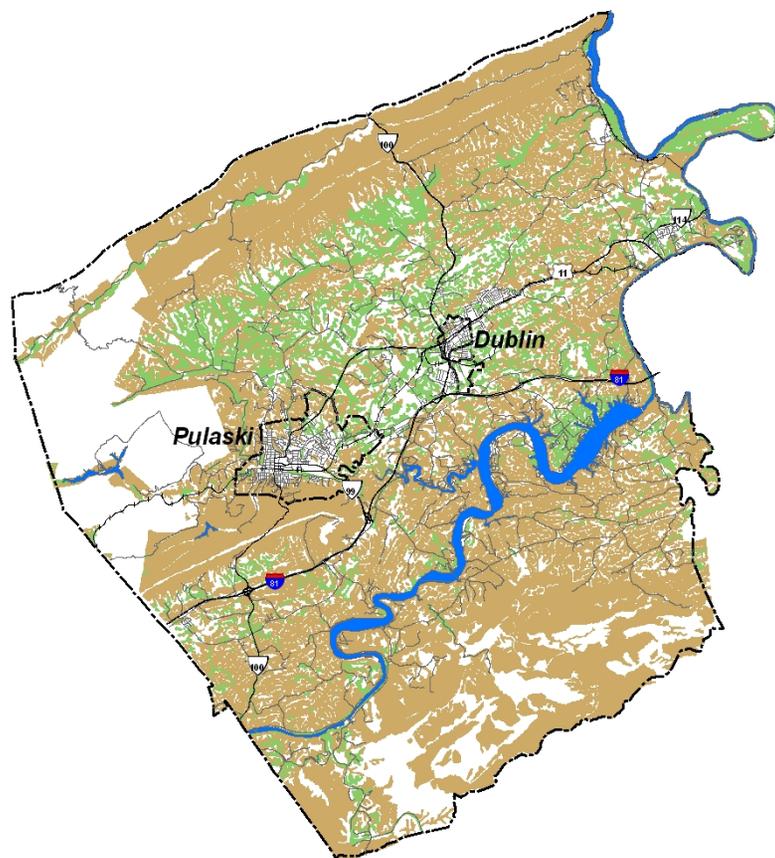
Soil properties also directly affect residential development. A seasonally high water table limits the location of residential development. If the water table rises close to the surface, basements may be flooded, septic tank absorption fields may fail, and plants may be damaged or killed. If a building is built on certain types of clayey soils, the foundation may shift or settle unevenly and the foundation may crack severely. A septic tank absorption field may not function where the soil absorbs the effluent too slowly or where bedrock is at a shallow depth.

Soils high in clay content have limited space for holding effluent. If the soil is not porous, the effluent simply builds up and seeps to the surface. Steep slopes make it difficult to control the distribution of effluent. Effluent distributed into the soil in a steep slope may seep onto the ground surface at a lower level. Since septic tanks are the major method of domestic waste disposal in Pulaski County, the limitations of the soils must be thoroughly scrutinized when considering residential and industrial development.

Information about soil limitations for different land uses prevent major mistakes in land use and unnecessary costs to consumers and the community. Soil properties provide an important criteria in guiding development and locating specific types of uses. Table 3 illustrates soil associations which limit development.

The Pulaski County Soil Survey provides detailed soil data including overlaying the existing soils on aerial photographs of the County and specific limitations of soil types within the associations with regard to particular uses. If the soils are found to have serious limitations to development, development should either be discouraged if it endangers the environment, or alternative development designs should be encouraged as to overcome the limitations and reduce any adverse impact.

**FIGURE 2**  
**GENERALIZED SOILS AND SLOPES**



**Pulaski County, Virginia**  
**Soils & Slopes**



**Legend**

- Prime Agricultural Soils
- Slopes Over 15%
- Railroad
- Town Boundary



Map produced by the NRVPCD, 2009 using Pulaski Co. data

## Soil Descriptions

The Soils associations in Pulaski County fall into two general categories; sloping immediately and generally flat.

These map units consist mainly of loamy soils formed in materials weathered from sandstone and shale in mountainous areas. The units are on long, narrow ridge tops and long, smooth, convex side slopes. Numerous deep, parallel drainageways dissect the side slopes.

The soils in these map units are best suited to woodland. Many of the soils area too steep or too stony for cultivated crops. Some sloping and moderately steep areas are used for pasture and hay, generally poorly suited to most types of community development. The depth to bedrock and the slope are the main limitations. Figure 2 illustrates the generalized soils and slopes in Pulaski County.

**TABLE 3**

### **LIMITATIONS OF SOILS ASSOCAITIONS FOR STRUCTURAL DEVELOPMENT**

#### ***1. Nolichucky-Berks***

*Deep of moderately deep, sloping to steep soils that have a loamy subsoil; formed in colluvial material weathered from sandstone or in material weathered from shale*

This unit consists of a long, southeast-facing mountain ridge tops, side slopes, and valley floors. The ridge top is narrow and uniform in elevation. The upper part of the side slopes consists of steep, concave slopes and broad benches. The lower parts are dissected by many parallel drainageways. Slopes range from 7 to 65 percent.

Slope makes the soils generally unsuited to farming and is the main limitation for community development. This unit makes up 4 percent of the survey area.

#### ***2. Berks-Gilpin***

*Moderately deep, moderately steep to very steep soils that have a loamy subsoil; formed in material weathered from shale.*

This unit consists of a long, northwest-facing side slopes on Little Walker Mountain and Cloyd's Mountain and most of Draper Mountain, Chestnut Mountain, and Robinson Tract Mountain. The soils are dissected by many deep, V-shaped valleys. Slopes range from 15 to 65 percent.

Slope makes the soils generally unsuited to farming and is the main limitation for community development. The soil unit comprises about 9 percent of the County.

### **3. Leck Kill-Rayne-Gilpin**

*Deep and moderately deep, sloping to steep soils that have a loamy subsoil; formed in material weathered from shale.*

This unit consists of a long, southeast-facing mountain ridge tops, a side slope, and foot slopes. The ridge top is narrow and uniform in elevation. The side slope consists mainly of steep, convex slopes and heads of drainageways. The foot slopes have long, narrow benches cut by deep, parallel drainageways. Slopes range from 7 to 65 percent.

Slope limits the unit for farming and, along with the depth to bedrock, is a major limitation for community development. This soil unit makes up 9 percent of the County soils.

### **4. Klinsville-Berks**

*Shallow and moderately deep, sloping to steep soils that have a loamy subsoil; formed in material weathered from shale.*

This unit consists of ridge tops and side slopes and a few wide drainageways and small areas of bottom land. The ridge tops are long and have a wide range in size. The side slopes are steep and meet at narrow, V-shaped drainageways. Slopes range from 7 to 65 percent.

Slope is the major limitation of the unit for farming and, along with depth to bedrock and flooding in a few areas, is a major limitation for community development. Two percent of the County's soils are of this unit.

### **5. Rayne-Berks-Klinsville-Groseclose**

*Deep to shallow, sloping to steep soils that have a loamy or clayey subsoil; formed in material weathered from shale interbedded with limestone.*

This unit consists of long, narrow ridges and convex side slopes and is dissected by numerous U- and V-shaped drainageways. Slopes dominantly range from 15 to 65 percent.

Slope and an erosion hazard are the main limitations of this unit for cultivated crops. Slope, the depth to bedrock, and a seepage hazard are the main limitations for community development. Sixteen percent of the County lies in this soil unit classification.

### **6. Lily-Ramsey-Berks-Gilpin**

*Moderately deep or shallow, moderately steep to very steep soils that have a loamy subsoil; formed in material weathered from sandstone shale, quartzite, and phyllite.*

This map unit is along the Blue Ridge. It consists of very stony mountain ridges, side slopes, and narrow drainageways. Slopes dominantly range from 15 to 65 percent.

Slope makes the soils generally unsuitable for farming and, along with the depth to bedrock, is a major limitation for community development. This unit makes up about 16 percent of the County.

### **Dominantly undulating to steep soils that are deep or moderately deep**

These units consist of loamy and clayey soils formed in material weathered from limestone and shale in the valley areas of the County. The units are dominantly made up of broad ridge tops and smooth convex side slopes and are dissected by numerous U-shaped drainageways.

The soils in these units are suited to cultivated crops and to pasture and hay. The soils are dominantly used for farming, but have good potential productivity for woodland.

The soils in these units generally are poorly suited to community development. A seasonal high water table, a clay subsoil, and slope are the main limitations.

### **7. Groseclose-Poplimento-Frederick**

*Deep, undulating to hilly soils that have a clayey subsoil; formed in material weathered from limestone and shale.*

This unit consists of narrow and broad ridge tops and smooth, convex side slopes. Numerous U-shaped drainageways dissect the unit. Slopes range from 2 to 30 percent.

Moderately slow or moderate permeability, the clayey subsoil, a high or moderate shrink-swell potential, and slope are the main limitations of this unit for community development. This map unit makes up 17 percent of the County.

### **8. Carbo-Lowell-Groseclose**

*Moderately deep or deep, undulating to hilly soils that have a clayey subsoil; formed in material weathered from limestone and shale.*

This unit consists of narrow and broad ridge tops and hills and smooth, convex side slopes. Numerous U-shaped drainageways dissect the unit. Slopes range from 2 to 45 percent.

Moderately slow or slow permeability, the clayey subsoil, a high or moderately high shrink-swell potential, and slope are the main limitations of the unit for community development. This unit makes up about 22 percent of the County.

## **Dominantly nearly level to hilly soils that are deep**

These map units consist of loamy and clayey soils formed in alluvial sediments and from material weathered from limestone and shale.

The soils in these units are suited to cultivated crops and to pasture and hay. The soils are dominantly used for farming but have good potential productivity for woodland.

The soils in these units generally are poorly suited to community development. A seasonal high water table, a clay subsoil, and slope are the main limitations.

### ***9. Cotaco-Dunning-Groseclose***

*Deep, nearly level to hilly soils that have a loamy or clayey subsoil; formed in alluvium and in material weathered from limestone and shale.*

This unit consists of flood plains, terraces, and upland hills. Slopes range from 0 to 30 percent.

A seasonal high water table, moderately slow permeability, and slope are the major limitations of the unit for community development. This unit makes up about 2 percent of the County.

### ***10. Braddock***

*Deep, undulating to hilly soils that have a clayey subsoil; formed in alluvium.*

This unit consists of high terraces, broad ridge tops, and convex side slopes. Slopes range from 2 to 30 percent.

Permeability, a clayey subsoil, and slope are the main limitations for community development. A few areas have a seasonal high water table. This unit makes up about 4 percent of the County.

### ***11. Braddock-Wheeling***

*Deep, nearly level to hilly soils that have a clayey or loamy subsoil; formed in alluvium.*

This unit consists of high and low terraces. Slopes range from 0 to 30 percent.

Permeability, a clayey subsoil, and slope are the main limitations of the unit, especially the Braddock soils, for community development. This unit makes up about 3 percent of the survey area.

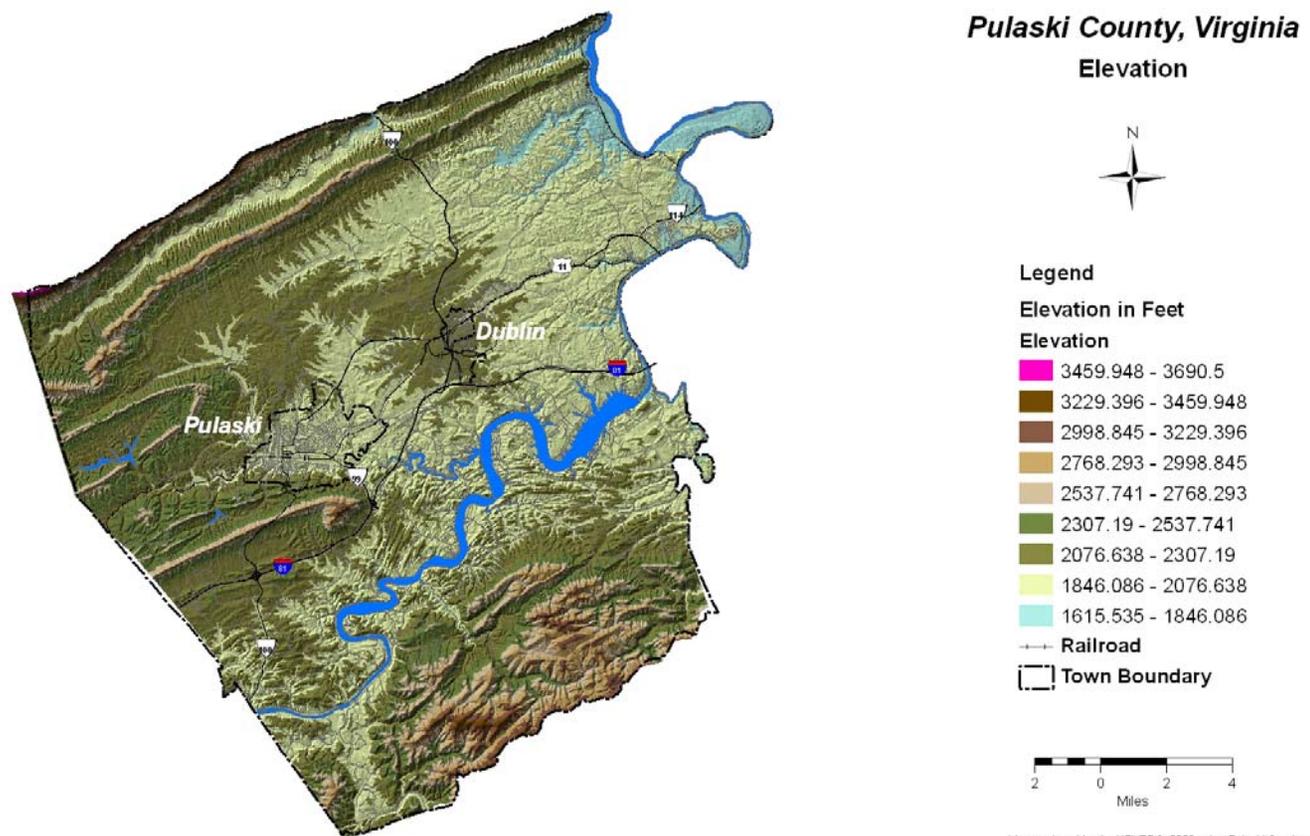
## **Topography**

The land area of Pulaski County is 327 square miles. Located on a plateau in southwest Virginia, the County is bordered by Bland, Carroll, Floyd, Giles, Montgomery, and Wythe Counties, and the City of Radford. The County lies within the Valley and Ridge and the Blue Ridge physiographic provinces. Pulaski County's elevation ranges from 1,800 to 2,850 feet above sea level. The area is drained by the New River which was dammed by Appalachian Power Company (American Electric Power) to form Claytor Lake.

Topographic information is important in planning because slope and topographic relief affect the suitability of land for development. Topography influences the type and cost of development, controls the direction and rate of water runoff, influences the weather and climate, and affects the type of vegetation and wildlife. Slope, then, can indicate those areas of the County which are best suited for particular types of development. See Figure 3 for a Generalized Elevation Map

**FIGURE 3**

**PULASKI COUNTY GENERALIZED ELEVATION**



**TABLE 4**

**SLOPE LIMITATIONS FOR DEVELOPMENT**

<b><u>Percent Slope</u></b>	<b><u>Description</u></b>	<b><u>Suitability</u></b>
0-5%	Flat	Drainage or Flood problems under 3%. A slope of 3% is generally ideal for industrial sites. Depending on other conditions, such as soil conditions, flat land is highly suitable for and tolerant to development.
5-20%	Low-Moderate	Fairly tolerant to development although excessive removal of ground cover may cause erosion. It has generally good sites for residential development. The upper practical limit for road and street grades is typically 8%. Very high construction costs can be incurred when slopes are over 8%. Loss of ground cover may cause erosion and land slippage in areas with more than an 8% slope.
>20%	Steep	Development causes major erosion problems by increasing runoff velocity. Major site engineering is necessary. This land is suitable for recreation, wildlife management, and watershed protection. It is generally unsuitable for cultivation.

**Development Considerations**

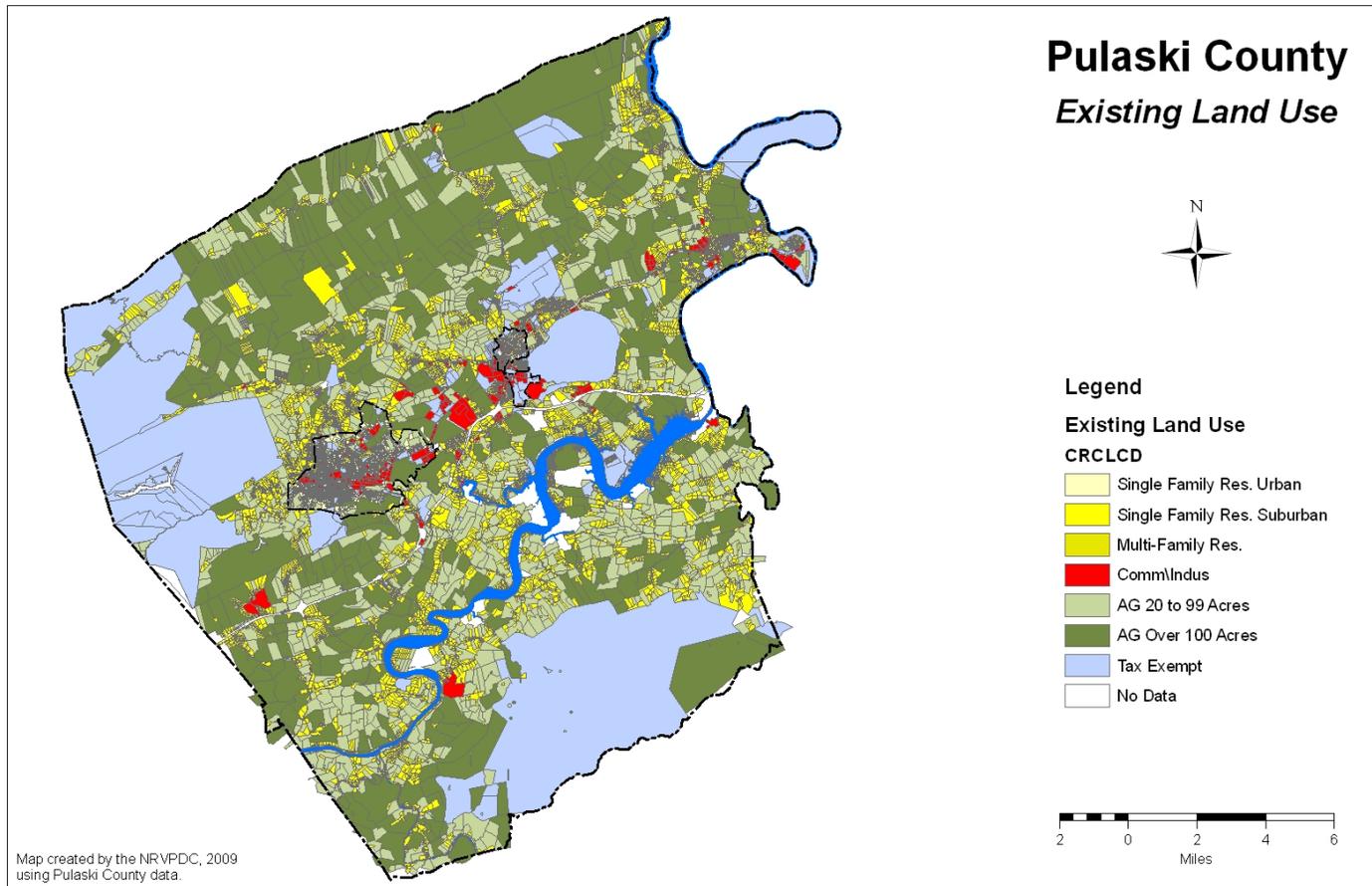
When developing residential units in slopes between 5 and 20 percent, there are several considerations that should be taken into account:

- South slopes receive more sunlight and, in hilly regions, are protected from prevailing northerly winds during the winter;
- Development below the crest of a hill reduces its visibility to others and increases the availability of water supply. Higher land also reduces the chance of problems with drainage and septic systems;
- The lay of the land can suggest where to construct access roads. Access roads that follow the lay of the land are more attractive, less steep, and "fit in" better with site;
- Avoiding steep slopes means lower construction costs, less chance of causing erosion and septic system problems;
- The lay of the land can suggest the most attractive and suitable locations for development. Areas that would be difficult, damaging, or too expensive to improve should be avoided. Areas of special interest can be selectively preserved in their natural states or carefully and slightly altered to reveal or enhance their presence;

- Cluster development should be encouraged on steeper slopes (up to 20 percent) because of the efficient use of land. It is less expensive to provide water and sewer, roads, and other infrastructure when the dwelling units are closer together. Cluster development utilizes limited developable land by conforming development with the lay of the land. Solar-assisted dwelling units are more effective in higher slopes because of the ability of the houses to exploit more of the sun when the units are located on the southern slopes;
- Careful review of the soils on steeper slopes will encourage residential development on slopes where soils are more suitable for development and less prone to erosion. Preserving as much of the natural environment (trees, vegetation) as possible when developing residential units on steep slopes greatly reduces the potential for erosion.

Figures 4 and 5 illustrate the current and future land uses that are further explained in Volume 2 of the Comprehensive Plan.

**FIGURE 4**  
**EXISTING LAND USE**





## **Water Resources**

The location and properties of water resources are determined by geology, soils, topography, and climate. Water is one of the most important variables in the selection of sites for development. Water may be categorized into surface water and groundwater.

Two examples of surface water are the New River and Claytor Lake. The New River is capable of supplying 3.2 billion gallons per day during average flow, and 457 million gallons per day during drought flow. Claytor Lake and two other smaller lakes (Gatewood and Hogan Lakes) provide 489.9 acres of surface water storage within the County. In 1988, the Virginia Water Control Board concluded that the available supply of surface water was adequate to meet projected demand over the 50 year study period.

As of July 1997, there were seventeen Virginia Pollutant Discharge Elimination System Permits in Pulaski County, excluding alternative home wastewater treatment processes. Six of these discharges are to the New River below Claytor Lake, while the remaining eleven are to Claytor Lake or one of its tributaries. Twelve of these discharges have been discontinued. In the past, discharges have exacerbated existing water quality problems, for example, the Town of Pulaski's wastewater discharge to Peak Creek contributed to eutrophication problems experienced in Claytor Lake. There are six surface water intakes in the County which include municipal and industrial water supply intakes.

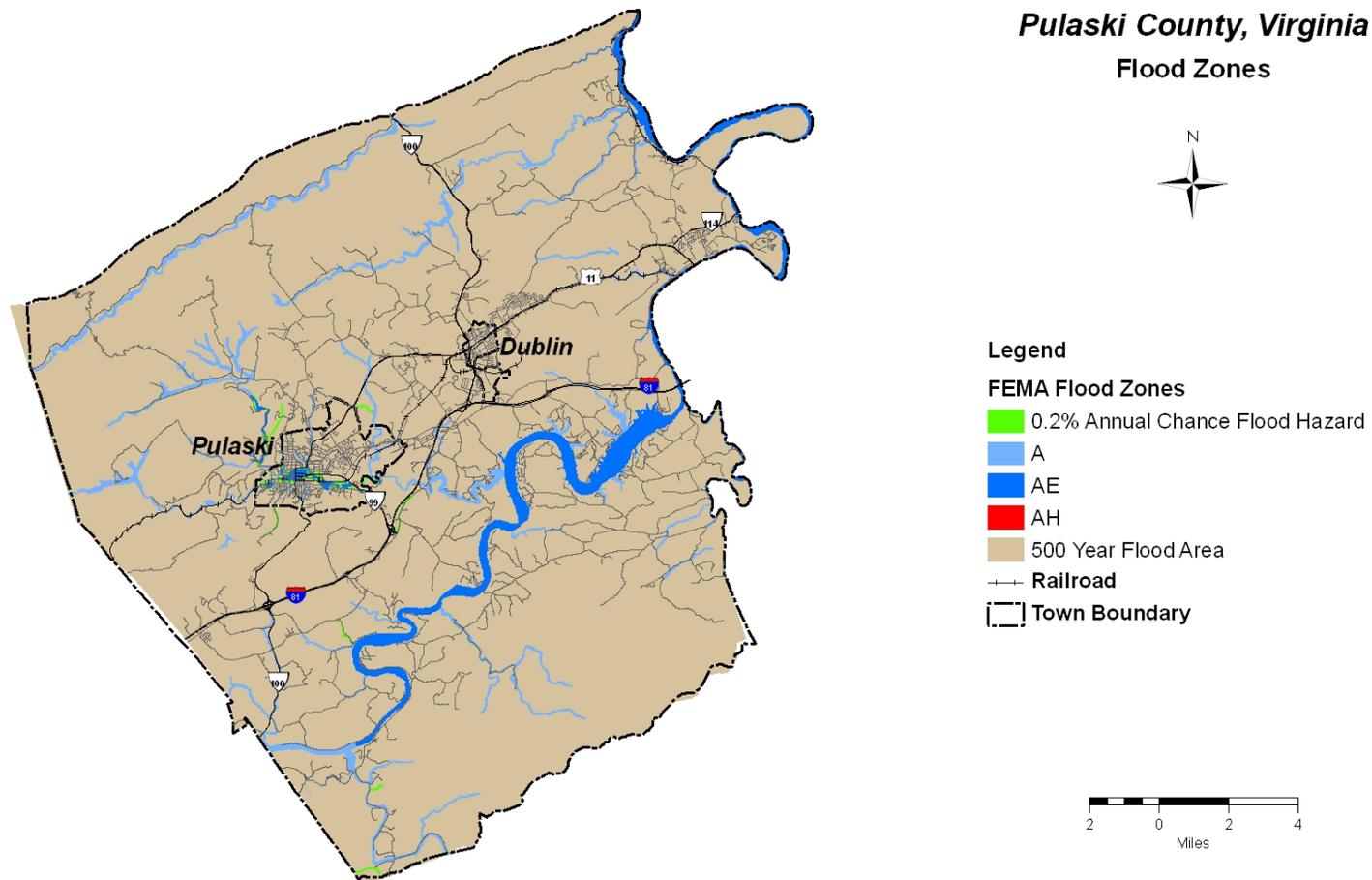
Groundwater is water which is present in rock strata. Supplies of groundwater are replenished at recharge areas. If the soil near these areas is contaminated, the aquifer may become contaminated. An additional constraint posed by recharge areas is that in many cases, only a small portion of total ground water can be replenished annually.

A large percentage of the water consumed in Pulaski County is obtained from wells. Wells drilled in limestone have a wide range of yield because of the irregular distribution and size of fractures and solution openings containing water. Typical well depth ranges from 50 to 225 feet deep and well yields average 20 to 30 gallons per minute. Some wells in the Shiloh area yield as much as 100 to 500 gallons per minute. Groundwater from limestone areas is typically hard but otherwise of good quality.

Floodplain is the land area which accommodates the flood flow of rivers and streams. Increasingly, the 100 year floodplain is being accepted as that area from which most development should be excluded. Uses that could be permitted are agriculture, forestry, recreation, institutional open space and open space for housing. The Federal Emergency Management Agency (FEMA) has developed floodplain maps of the County estimating the location of the 100 and 500 year floodplains. These maps serve as reference guides for local ordinances related to construction in floodplains. Figure 6 includes locations of FEMA flood zones found in the County.

**FIGURE 6**

**PULASKI COUNTY FEMA FLOOD ZONES**



## **Forest**

Pulaski County has 118,971 acres of forest land, comprising 58 percent of all land in the County (1992 Forest Survey). The forests have a significant impact upon the County's economy, social conditions, climate, and many diverse ecosystems.

## **General**

Since 1992, forest land in Pulaski County has increased by 1,730 acres. Gains in forest land evolve from the abandonment of former agricultural land following a natural successional change toward reforestation.

Eighty-one percent of all forest land in the County is privately owned. Miscellaneous private landowners showed a corresponding increase. This is similar to a statewide trend of non-farming private landowners steadily replacing farmers as major owners of forest land. This trend is important for County analysis of real estate taxation, evaluation of land use decisions, and resource availability for attracting forest industry.

Of the 22,858 acres of forest land held in public ownership, 83 percent, or 19,039 acres, is located in the Jefferson National Forest. These lands are managed under multiple-use principles for timber, fish and wildlife, recreation, water quality, and community development. The national Forest lands can be found in the northwest corner of the County.

Due to heavy timber cutting in the 1920s and 1930s, the age and size of the trees in the County are imbalanced. Fifty-five percent of all forest land is in pole timber stands, while only thirty percent is sawtimber size and fifteen percent is at the sapling and seedling stage.

Continuing to recover from the over cutting fifty years ago, the forest stands in the County are increasing in timber volume. The volume of sawtimber for all species has increased by nearly 110 million board feet since the 1980s and now totals 353.8 million board feet. Much of this expansion is in marketable hardwood and softwood sawtimber. The average net annual growth between 1986-1991 for Pulaski County was 16.19 million board feet of sawtimber; 1.75 million board feet of pine and other softwoods; 3.04 million board feet of soft hardwood; and 11.39 million board feet of hard hardwood.

The major conservation needs for the forest of Pulaski County are the improvement of the timber stands, to bring them up to full stocking with desirable trees. Recent reforestation efforts have resulted in the placement of 150,000 seedlings by 26 landowners in 1988. This includes the reforestation of 33 acres and the development of 146 acres of Christmas tree farms.

## **Recreation Potential of Forests**

The County's forest lands offer considerable recreational opportunities for residents in the local area and region. The 2006 Virginia Outdoors Plan identified over 36,000 acres of land in Pulaski open for recreational use. Much of this land consists of the 19,288 acres of the Jefferson National Forest and the 16,000-acre Blue Ridge Scout Reservation. The latter is owned by the Boy Scouts of America. Other forested recreation areas include Claytor Lake State Park (4,475 acres), Gatewood Reservoir (162 acres), Hogan Lake (40 acres), and a few private campgrounds and smaller facilities throughout the County..

## **Wildlife**

The overall diversity of land use and terrain in Pulaski County provides good habitats for a variety of fish and wildlife. The maintenance of forested areas, under a forest management program to create a balanced range of timber stand ages and size classes is important to continue or improve the abundance and diversity of wildlife. In addition, identification and proper management of the sites of rare and endangered species in the County are necessary to protect our natural heritage and provide a sufficient pool of biological resources to meet our future needs.

## **Endangered Wildlife, Flora, and Communities**

The Flora Fauna and Community table identifies flora and fauna found in Pulaski County that have been listed as endangered, threatened, extirpated, or special concern. In 1972, the Division of State Planning and Community Affairs' Critical Environmental Areas identified the New River as a relatively unspoiled natural area in the midst of rapidly growing, urbanizing area. The study noted that the New River afforded excellent recreational potential as well as adjoining historic sites such as Ingles Ferry. The New River met several criteria for designation including:

- Worthy of State protection;
- Crucial to an ecological system;
- Endangered by the activities of man.

Since the report was first published over forty years ago, the section of the New River south of Allisonia and north of Whitethorne has been identified as "desirable components" of the State's scenic rivers program. Big Reed Island Creek at the Carroll-Pulaski County line has been similarly identified. Ingles Ferry has been designated a potential historic preserve.

In July 1998, the New River was designated as one of fourteen "American Heritage Rivers." The grassroots effort to obtain national recognition for the New River's historical, cultural, and natural heritage has resulted in increased support for community-based programs and projects throughout the New River watershed.

## **Forestry Utilization**

The wildlife habitat condition of Pulaski's forests and role of the forest product industry in the local economy may be improved in the future by:

1. Increasing markets for forest products, particularly as the stands grow into the sawtimber size class.
2. Increasing recognition by landowners of the benefits of forest and wildlife management.

Besides the demand for timber, recreation, and wildlife, Pulaski's forests are becoming increasingly attractive as places to live. Trees and forests in residential areas have tremendous benefits. They provide shade, wildlife habitat, noise buffers, air and water purification, erosion and sediment control, and improve site aesthetics. Protecting trees during construction can increase the value of houses substantially. Wind protection and shade can reduce energy consumption in summer and winter. Builders and developers should be encouraged to plant trees and, when building in wooded areas, take the necessary steps to protect existing trees and critical areas where possible.

The visual enhancement provided by the County's trees and forests offer an aesthetic and economic attraction to people and businesses. The forests also play a vital role in producing clean water for household and industrial use, moderating run-off and stream flows, and in reducing potential flood levels.

Areas of high timber productivity also tend to be suitable for agriculture, and other land uses. It is anticipated that demand for these other uses will continue and forested areas will be primarily confined to steep slopes, streambanks, drainage and similar areas. Developments in this area should give the existing trees and vegetation careful consideration to prevent erosion, enhance property values, and promote the other advantages of trees in residential areas. Farmland and other land uses abandoned in this area should be promptly reforested with desirable tree seedlings. Areas lying in floodplains and other sites found unsuitable for residential or commercial/industrial building can be reforested.

Although less productive soils will not generate as large a timber crop, these areas are the best suited for forest cover since steep slopes and thin, erodible soils limit much of the areas' potential for other uses. Much of the County's existing forestland is within these areas. These woodlands have a vital role in protecting the County's water supply, producing wood, providing wildlife habitat and recreation, and influencing the air quality and aesthetics of the local area.

## ECONOMY AND POPULATION

The purpose of this chapter is to provide a review of past economic and population trends and examine current demographic information in order to make informed decisions about the future development of Pulaski County.

### Historic Population Growth

Pulaski County entered the twentieth century with a population of 14,609, and it steadily rose through the 1940s until the 1950s, when it began experiencing a slight decrease that would last until 1970. The 1970s was a time for resurgence in the population base which lasted into the early and mid 1980s, but began to decline in the late 1980s and lasted into the 1990s. From that time on the Population for Pulaski County has stayed steady in the area of 35,000 people. Table 6 contains historical and current population data of Pulaski County, the New River Valley, adjacent counties, and Virginia.

**TABLE 5**

### POPULATION COMPARISONS WITH OTHER NRV COUNTIES

Jurisdiction	1920	1930	1940	1950	1960	1970	1980	1990	2000	2007*
Pulaski County	17,111	20,566	27,767	27,758	27,258	29,564	35,229	34,496	35,127	34,306
Floyd County	13,115	11,698	11,967	11,351	10,462	9,775	11,563	11,965	13,874	15,017
Montgomery County	18,595	19,605	21,206	29,780	32,923	46,813	63,516	73,913	83,629	88,983
Radford City	6,000	7,000	12,000	9,026	9,371	11,597	13,225	15,940	15,859	15,418
Giles County	11,901	12,804	14,635	18,956	17,219	16,741	17,810	16,366	16,657	16,294
New River Valley	65,349	70,900	77,565	96,871	97,233	114,818	141,343	152,680	165,164	170,018
Virginia	2.3M	2.4M	2.6M	3.3M	4.0M	4.7M	5.3M	6.2M	7.1M	7.4M

\* Population Estimate

Source: US Census and Weldon Cooper Center

Table 7 presents data relating to the average annual change in population growth for Pulaski County, adjacent counties, the New River Valley region, and Virginia. Between 1920 and 1960, Pulaski County's population increased at an annual rate of 1.48 percent. This rate was slightly higher than the New River Valley as a region and adjacent localities. The only other county in the New River Valley region with a higher annual average growth rate for the same period was Montgomery County, which experienced an annual rate of 1.93 percent. Virginia's rate of growth for the same time period was 1.85 percent.

Between 1970 and 1980, Pulaski County's population grew at a rate faster than the state's population, 1.92 percent compared to 1.28 percent, yet slightly slower than the New River Valley 2.31 percent rate of growth between 1970 and 1980. The New River Valley's annual rate of growth was slightly skewed by an annual rate of growth of 3.57 percent in Montgomery County. The adjacent localities also experienced their largest respective annual growth rates during the period.

From the 1990's to 2009 the population has remained constant in the area of 35,000 people. This is evidenced on Table 7 and Housing Data Tables.

**TABLE 6**  
**AVERAGE ANNUAL PERCENTAGE**  
**CHANGE IN POPULATION GROWTH**

<b>Jurisdiction</b>	<b>1920-1960</b>	<b>1960-1970</b>	<b>1970-1980</b>	<b>1980-1990</b>	<b>1990-2000</b>
<b>Pulaski County</b>	1.48	0.85	1.92	-0.21	1.79
<b>Floyd County</b>	-0.51	-0.66	1.83	0.35	13.74
<b>Montgomery County</b>	1.93	4.22	3.57	1.63	11.62
<b>Radford City</b>	1.40	2.38	1.43	2.03	-0.50
<b>Giles County</b>	1.12	-0.28	0.64	-0.81	1.70
<b>New River Valley</b>	1.22	1.81	2.31	0.80	7.56
<b>Virginia</b>	1.85	1.75	1.28	1.70	12.68

Source: US Census

### **Race**

In 1990, 91.71 percent of the population in Pulaski County was White, 5.7 percent was Black, 0.20 percent was American Indian, and 0.31 percent of the population was Asian-Pacific Islander. By 2007 the racial demographics for Pulaski County had changed. 92.2 percent of the population was identified as White (including Hispanic populations), 6.3 percent was identified as Black, 0.17 percent was American Indian, and 0.42 percent of the population was Asian-Pacific Islander.

### **Age Groups**

Between 1970 and 1980, there was an overall population increase of 16 percent for the County. During this time period, the largest gains were found in ten out of fourteen age groups, with losses in four age groups. The largest increases were in the following four groups: "25 to 29" (30.83%); "30 to 34" (86.76%); "35 to 39" (54.64%); and "65 and Over" (34.49%). The two significant population decreases were in the "Under 5" (8.34%) and "45 to 49" (9.43%) age categories.

Between 1980 and 1990, nearly every age group decreased except four; "35 to 44", "45 to 54", "65 to 74", and "75 +". Again, the age group "75 +" lead all increases for the time period with a percent rate of change of 58 percent. From 1990 to 2000 data shows that the those aged 45 and above all have population increases. While the majority of those younger had decreases in population. These noticeable increases among the older population segments can be attributed to medical advances, healthier living styles, and in-migration increases, and decreases continue trends. This data can be utilized to understand the challenges facing Pulaski County from a growth perspective and also

highlight the need for providing services to an older population. Table 8 contains data regarding Pulaski County population for 1990 and 2000

**TABLE 7**  
**PULASKI COUNTY AGE AND GENDER POPULATION**  
**1990 AND 2000**

<b>1990 Data</b>	<b>Total Population</b>	<b>Percentage</b>	<b>2000 Data</b>	<b>Total Population</b>	<b>Percentage</b>
Male	16,688	48.4	Male	17,334	49.3
Female	17,768	51.6	Female	17,793	50.7
<b>Under 5 years</b>	2,019	5.9	Under 5 years	1,937	5.5
<b>5 to 9 years</b>	1,890	5.5	5 to 9 years	2,032	5.8
<b>10 to 14 years</b>	2,129	6.2	10 to 14 years	2,059	5.9
<b>15 to 19 years</b>	2,666	7.7	15 to 19 years	1,922	5.5
<b>20 to 24 years</b>	2,502	7.3	20 to 24 years	1,849	5.3
<b>25 to 34 years</b>	5,101	14.8	25 to 34 years	4,957	14.1
<b>35 to 44 years</b>	5,767	16.7	35 to 44 years	5,293	15.1
<b>45 to 54 years</b>	4,253	12.3	45 to 54 years	5,584	15.9
<b>55 to 59 years</b>	1,655	4.8	55 to 59 years	2,297	6.5
<b>60 to 64 years</b>	1,766	5.1	60 to 64 years	1,864	5.3
<b>65 to 74 years</b>	2,963	8.6	65 to 74 years	2,887	8.2
<b>75 to 84 years</b>	1,168	3.3	75 to 84 years	1,875	5.3
<b>85 years and over</b>	454	1.3	85 years and over	571	1.6

Source: US Census

### **Population Projections**

Table 9 contains population projections for Pulaski County and NRV localities from 2007 through 2050. New River Valley and State data provide additional comparison. This information should be utilized and updated periodically to provide information for residential development and other land use considerations.

**TABLE 8**

**POPULATION PROJECTIONS**

Evaluation	US Census		New River Valley Projected Populations						
	2002	2007	2008	2009	2010	2020	2030	2040	2050
Population	165,200	170,018	172,104	175,260	179,059	196,905	216,728	233,740	252,633
Eligible	79637	84692	87654	91325	96035	109172	124091	138942	155221
Employment	76342	17466	83797	87307	91809	104369	118631	132829	148391
Unemployed	3295	67226	3857	4018	4226	4804	5460	6113	6830
% Workforce	48.21	49.81	50.93	52.11	53.63	55.44	57.26	59.44	61.44
% Pop Inc.	NA	2.92%	1.23%	1.83%	2.17%	9.97%	10.07%	7.85%	8.08%
Evaluation	US Census		Pulaski County Projected Populations						
	2002	2007	2008	2009	2010	2020	2030	2040	2050
Population	34,400	34,306	34,391	34,500	35,250	38,500	42,000	44,500	47,560
Eligible	17114	18253	18915	19665	20445	22715	25200	28035	30914
Employment	16292	17466	18083	18800	19545	21716	24091	26801	29554
Unemployed	822	787	832	865	900	999	1109	1234	1360
% Workforce	49.75	53.21	55.00	57.00	58.00	59.00	60.00	63.00	65.00
% Pop Inc.	NA	-0.27%	0.25%	0.32%	2.17%	9.22%	9.09%	5.95%	6.88%
Evaluation	US Census		Giles County Projected Populations						
	2002	2007	2008	2009	2010	2020	2030	2040	2050
Population	16,600	16294	16,518	16,737	16,956	17,550	18,165	18,800	19,458
Eligible	7978	8442	8755	9038	9326	10004	10717	11468	12259
Employment	7456	8053	8369	8640	8915	9563	10246	10963	11719
Unemployed	522	389	385	398	410	440	472	505	539
% Workforce	48.06	51.81	53.00	54.00	55.00	57.00	59.00	61.00	63.00
% Pop Inc.	NA	-1.84%	1.37%	1.33%	1.31%	3.50%	3.50%	3.50%	3.50%
Evaluation	US Census		Floyd County Projected Populations						
	2002	2007	2008	2009	2010	2020	2030	2040	2050
Population	14,400	15017	15,094	15,593	16,093	16,897	17,742	18,629	19,560
Eligible	6664	7046	7245	7641	8047	8786	9581	10432	11345
Employment	6389	6802	6926	7304	7692	8400	9159	9973	10846
Unemployed	275	244	319	336	354	387	422	459	499
% Workforce	46.28	46.92	48.00	49.00	50.00	52.00	54.00	56.00	58.00
% Pop Inc.	NA	4.28%	0.51%	3.31%	3.21%	5.00%	5.00%	5.00%	5.00%
Evaluation	US Census		Montgomery County Projected Populations						
	2002	2007	2008	2009	2010	2020	2030	2040	2050
Population	84,400	88983	90,517	92,550	94,584	106,974	120,988	133,086	146,395
Eligible	40629	43654	45259	47201	50130	58836	68963	78521	89301
Employment	39301	42261	43267	45124	47924	56247	65929	75066	85372
Unemployed	1328	1393	1991	2077	2206	2589	3034	3455	3929
% Workforce	48.14	49.06	50.00	51.00	53.00	55.00	57.00	59.00	61.00
% Pop Inc.	NA	5.43%	1.72%	2.25%	2.20%	13.10%	13.10%	10.00%	10.00%
Evaluation	US Census		Radford City Projected Populations						
	2002	2007	2008	2009	2010	2020	2030	2040	2050
Population	15,400	15418	15,584	15,880	16,176	16,984	17,833	18,725	19,660
Eligible	7252	7297	7480	7781	8088	8832	9630	10486	11403
Employment	6904	7014	7151	7439	7732	8443	9206	10025	10901
Unemployed	348	283	329	342	356	389	424	461	502
% Workforce	47.09	47.33	48.00	49.00	50.00	52.00	54.00	56.00	58.00
% Pop Inc.	NA	0.12%	1.08%	1.90%	1.86%	5.00%	5.00%	5.00%	4.99%

Source: Central Pulaski Transportation and Land Use Master Plan

## Changes in Employment Sectors

Between 1980 and 1990, the total number of agricultural jobs in the local economy decreased by 38 percent, or 155 jobs. In 1980, Manufacturing accounted for 44 percent of the County's total employment base (6,621 manufacturing jobs). In 1990, manufacturing employment fell to 37 percent of the local employment base, down to 5,783 jobs. This shift represents a decrease of nearly 13 percent (838 jobs). From 1990 to 2007 there was a decrease of 1,686 manufacturing jobs from 5,783 to 4,097 or a 41 % decrease in the employment sector. Table 10 contains employment by sector data for the 2007.

**TABLE 9**  
**2007 INDUSTRY WORKFORCE ESTIMATES**

	Estimate	Margin of Error	Percentage	Margin of Error
<b>Civilian employed population 16 years and over</b>	<b>15,650</b>	<b>+/-745</b>	<b>100%</b>	<b>(X)</b>
<b>Agriculture, forestry, fishing and hunting, and mining</b>	215	+/-104	1.4%	+/-0.7
<b>Construction</b>	887	+/-232	5.7%	+/-1.5
<b>Manufacturing</b>	4,097	+/-448	26.2%	+/-2.6
<b>Wholesale trade</b>	375	+/-170	2.4%	+/-1.1
<b>Retail trade</b>	1,779	+/-369	11.4%	+/-2.2
<b>Transportation and warehousing, and utilities</b>	665	+/-230	4.2%	+/-1.5
<b>Information</b>	129	+/-81	0.8%	+/-0.5
<b>Finance and insurance, and real estate and rental and leasing</b>	624	+/-267	4.0%	+/-1.7
<b>Professional, scientific, and management, and administrative and waste management services</b>	1,152	+/-334	7.4%	+/-2.1
<b>Educational services, and health care and social assistance</b>	3,146	+/-487	20.1%	+/-2.9
<b>Arts, entertainment, and recreation, and accommodation, and food services</b>	724	+/-262	4.6%	+/-1.7
<b>Other services, except public administration</b>	948	+/-313	6.1%	+/-1.9
<b>Public administration</b>	909	+/-294	5.8%	+/-1.8

Source: US Census

Manufacturing is still the main employment sector for County residents, followed by educational services. This is a major change from previous decades. As a result, increasing the Industrial base of the County should be encouraged as well as increasing other sectors of employment to help offset additional losses. As Table 11 demonstrates the Majority of those aged 16 and over are in the labor force but this percentage is still much lower than the state average of 67.1% for the same time.

**TABLE 10****2007 EMPLOYMENT ESTIMATES**

	<b>Estimate</b>	<b>Margin of Error</b>	<b>Percentage</b>	<b>Margin of Error</b>
<b>Population 16 years and over</b>	28,886	+/-209	100%	(X)
<b>In labor force</b>	16,919	+/-752	58.6%	+/-2.5
<b>Civilian labor force</b>	16,900	+/-750	58.5%	+/-2.5
<b>Employed</b>	15,650	+/-745	54.2%	+/-2.5
<b>Unemployed</b>	1,250	+/-341	4.3%	+/-1.2
<b>Armed Forces</b>	19	+/-33	0.1%	+/-0.1

Source: US Census

**Significance Of Tourism**

Tourism is an active part of Pulaski County's economy. With I-81 traversing the County, the presence of the New River, Jefferson National Forest, Claytor Lake State Park, and the New River Trail (which is advertised in a national bicycling magazine), and numerous historic attractions, tourism can continue as a growth industry in Pulaski County. Table 12 contains information on the amount of tourist dollars expended, tourism-related jobs, and local and state revenue generated by the tourism industry.

**TABLE 11****2003-2007 TRAVEL INDUSTRY IMPACT ON PULASKI COUNTY**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Percent Change</b>
<b>Population</b>	34,748	34,748	34,688	34,789	34,998	0.6%
<b>Travel Impacts</b>						
<b>Expenditures</b>	\$30,474,704	\$33,488,496	\$35,992,035	\$40,354,507	\$44,317,459	9.8%
<b>Payroll</b>	\$7,699,929	\$8,097,588	\$8,384,318	\$8,840,976	\$9,283,960	5.0%
<b>Employment</b>	509	521	534	549	574	4.7%
<b>State Tax Receipts</b>	\$1,472,808	\$1,616,748	\$1,715,882	\$1,827,335	\$1,340,446	7.5%
<b>Local Tax Receipts</b>	\$961,885	\$1,056,084	\$1,135,365	\$1,226,428	\$1,340,446	9.3%
<b>Excise Tax Collection</b>						
<b>Lodging Excise Tax</b>	\$228,880	\$242,642	\$258,290	\$297,469	\$315,437	6.0%
<b>Food Service Excise Tax</b>	\$639,264	\$732,778	\$812,610	\$825,952	\$9,32,953	13.0%
<b>Excise Tax Rates</b>						
<b>Lodging Excise Tax Rate</b>	5.0%	5.0%	5.0%	5.0%	5.0%	n/a
<b>Food Service Excise Tax Rate</b>	4.0%	4.0%	4.0%	4.0%	4.0%	n/a

Source: Virginia Tourism Corporation

**Income**

In 2007, the Median Household Income for Pulaski County was \$36,397. In 2000 this amount was \$33,873. Incomes continue to increase over time in Pulaski County as the

employment base has shifted from agriculture to manufacturing toward the service and trade sectors. Median Household Incomes increased by 96 percent between 1970 and 1980, and then increased by 73 percent between 1980 and 1990. In 1990 Median Household Income was \$23,319. The increase from 1990 to 2000 was approximately 31 percent with an expected lower increase from 2000-2010 based on 2007 data found in Table 13.

**TABLE 12**  
**2007 COUNTY HOUSEHOLD INCOME DATA**

	<b>Estimate</b>	<b>Margin of Error</b>	<b>Percentage</b>	<b>Margin of Error</b>
<b>Total households</b>	14,887	+/-484	100%	(X)
<b>Less than \$10,000</b>	1,401	+/-341	9.4%	+/-2.3
<b>\$10,000 to \$14,999</b>	1,359	+/-322	9.1%	+/-2.1
<b>\$15,000 to \$24,999</b>	2,351	+/-470	15.8%	+/-3.1
<b>\$25,000 to \$34,999</b>	2,043	+/-404	13.7%	+/-2.8
<b>\$35,000 to \$49,999</b>	2,553	+/-421	17.1%	+/-2.8
<b>\$50,000 to \$74,999</b>	2,715	+/-424	18.2%	+/-2.8
<b>\$75,000 to \$99,999</b>	1,387	+/-254	9.3%	+/-1.7
<b>\$100,000 to \$149,999</b>	916	+/-261	6.2%	+/-1.7
<b>\$150,000 to \$199,999</b>	135	+/-95	0.9%	+/-0.6
<b>\$200,000 or more</b>	27	+/-27	0.2%	+/-0.2
<b>Median household income (dollars)</b>	36,397	+/-2,489	(X)	(X)
<b>Mean household income (dollars)</b>	44,380	+/-2,369	(X)	(X)

Source: US Census

### **Pulaski County Economic Adjustment Strategy**

During 2008 Pulaski County prepared its Economic Adjustment Strategy: “Pulaski a Community of Opportunity.” The Economic Adjustment Strategy was designed to analyze the County’s economic assets and develop a clear strategy for increasing employment with new job creation and retention. Historical data is presented along with analysis of similar Counties. That data combined with comparative modeling was conducted to develop the strategy.

Multiple Goals and Objectives were identified in the Economic Adjustment Strategy and are as follows

### **Vision: Business, We will be ready to meet the needs of 21<sup>st</sup> Century business and industry**

- Goal 1 Put Fully Developed Infrastructure in Place
- Goal 2 Streamline the development process
- Goal 3 Streamline the incentive process
- Goal 4 Create an integrated, streamlined workforce development process
- Goal 5 Develop a strategy to create technology infrastructure to capture future opportunities in business

- Goal 6 Develop/Implement customized small business assistance programs

**Vision: Education, We will be a first class location for learning.**

- Goal 1 Replace outdated facilities
- Goal 2 Develop a center for Excellence
- Goal 3 Enhance and market available apprenticeship programs
- Goal 4 Establish great counseling for career pathing

**Vision: Recreation, We will be a destination place for recreation**

- Goal 1 Develop one entity to develop/coordinate the promotion/marketing of recreation assets/events
- Goal 2 Develop/Implement consistent recreation marketing strategy and themes for all 3 jurisdictions
- Goal 3 Develop/Implement a strategy to insure that planned development preserves our natural resources
- Goal 4 Develop/Implement more diversified recreation activities so that the Pulaski area has appeal for all types of consumers
- Goal 5 Develop infrastructure and support activities

The Goals and implementation strategies found in the Economic Adjustment Strategy have been incorporated into the Comprehensive Plan for a complete and balanced approach to development in the County.

## Virginia's Nanotechnology Park

The Virginia Nanotechnology Park would feature a 58,280-square-foot, multi-tenant building for lease to energy, environmental and medical companies using nanotechnology. The 935-acre New River Valley Commerce Park in Pulaski County, which is owned by authority members is currently vacant. The vision is to put up nine buildings with a combined size of about 500,000 square feet on 35 of its acres.

FIGURE 7

### NANOTECHNOLOGY PARK LAYOUT



## HOUSING

The purpose of the housing component in the Comprehensive Plan is to aid in the promotion of efficient and rational development decision-making that stimulates the local economy and provides affordable and safe housing for all residents. The housing component should address policy issues which address and meet future housing needs.

### Existing Housing Stock

As highlighted by Table 14 from 2004-2007 there were generally 114 Single Family Housing Units (SFH) constructed. This trend may continue but will not be noticeable for sometime a result of the 2008 Subprime Mortgage Crisis and the effects that it had on the National Housing Markets. It is believed that eventually the market as a whole will stabilize and continue to grow with an increasing national population.

**TABLE 13**

### PULASKI COUNTY SINGLE FAMILY HOUSING CONSTRUCTION

<b>Year</b>	<b>Single Family Housing Units</b>
<b>2003</b>	<b>48</b>
<b>2004</b>	<b>117</b>
<b>2005</b>	<b>119</b>
<b>2006</b>	<b>101</b>
<b>2007</b>	<b>118</b>
<b>2008</b>	<b>61</b>

Source: Pulaski County

### Housing Quality

One method of determining housing quality in a community is to calculate the number of people per room in a dwelling, the presence of kitchen and bathroom facilities, and whether or not it meets local and state building standards, i.e. the soundness of the dwelling unit. Pulaski County has not conducted a recent survey of these housing structure characteristics to estimate the number of substandard housing units in the urban and rural parts of the County. Such a study is necessary to define target areas for rehabilitation, as it will be necessary to determine the areas of concentrated substandard housing to pursue state and federal funding. Table 15 examines Housing Units and Occupation Types. This information is useful because it allows a community to monitor the growth in the population and housing stock, the household size, the occupation status of a household (owner versus renter occupied), and the number of units lacking plumbing facilities.

**TABLE 14**

**PULASKI COUNTY HOUSING**

<b>Type of Housing Unit</b>	<b>1990</b>	<b>2000</b>	<b>2005-2007</b>
<b>All Housing Units</b>	14,740	16,325	17,034
<b>Owner-Occupied</b>	9,746	10,794	10,652
<b>Renter-Occupied</b>	3,603	3,849	4,235
<b>Total Occupied Units</b>	13,349	14,643	14,887

Source: U.S. Census Bureau

**Cost of Housing**

The value of housing is dependent on several general variables. The first of which is the supply of housing, the second variable is demand, and the third is location. In a tight housing market, the supply of housing is reduced, which creates a relative increase in housing costs in proportion to the demand. Of course, there are other factors, or sub-variables, which must be included when considering a community's housing costs. Some of these 'sub-variables' include economic conditions, vacancy rate, housing location, housing quality, style, and community facilities such as public water/sewer, distance to schools, etc.

Contract rent in Pulaski County is relatively comparable to select localities in and around the New River Valley. In 2007 the average contract rent in the County was \$413 per month compared to \$753 for the State average. These figures include all housing unit types.

Throughout the decade housing prices nationally, have increased. Table 16 describes the 2000 housing values in Pulaski County in contrast to other localities. This comparison is beneficial as recent data from the U.S. Census Bureau indicates that Housing values have remained similar in many of these jurisdictions.

**TABLE 15**

**2000 COMPARISON OF MEDIAN HOUSING VALUE**

<b>Locality</b>	<b>Median Housing Value</b>
Pulaski County	\$80,000
Bland County	\$71,500
Carroll County	\$68,900
Floyd County	\$79,700
Giles County	\$69,200
Montgomery County	\$114,600
Radford City	\$95,100
Wythe County	\$77,300
Virginia Average	\$125,400
United States Average	\$119,600

Source: U.S. Census Bureau

## **Housing rehab**

The County and Town of Pulaski are currently involved in projects that will replace and repair dilapidated housing. The goal of this program is to beautify a blighted area and also provide affordable housing. The County should strive to work with the municipalities to increase infill development and utilize multiple revenue streams to complete additional rehabilitation projects.

The County is currently preparing a Comprehensive Community Development Planning Grant for the Department of Housing and Community Development. The anticipated project area consists of the area between Baskerville, Cooks, and Dublin streets, known as the Baskerville neighborhood, an area of approximately 36.5 acres and bordering the Town of Dublin. This neighborhood contains 74 homes, with many well over 50 years old and in dire need of assistance.

The Baskerville project will focus on rehabilitating homes in the neighborhood, upgrading infrastructure, and acquiring and demolishing deteriorated structures to replace them with new, affordable homes to be sold to income-qualified homeowners. In addition, the project hopes to build a community playground for the neighborhood children.

The project will be able to leverage financing through the New River Valley HOME Consortium, Rural Development loans and grants, weatherization improvements funds, and in-kind leverage the County, and possibly other jurisdictions will provide with neighborhood infrastructure improvements.

The Town of Dublin provides the Baskerville community with public water service. The known age and type of these water lines have far exceeded their designed service life expectations and will be examined further for possible replacement. The Town of Dublin also provides public sewage collection services which due to age will most likely need to be improved as well.

## COMMUNITY FACILITIES

### **Pulaski County Government**

The general function of government is to protect the health, safety, and welfare of its citizens. Local government achieves this function through the provision of public services such as education, police, fire and rescue services, and water and sewer. In order for the government to provide these services to the public, each level of government (federal, state, and local) levies some form of taxation to generate revenue. Local government, for instance, relies on such taxes as real estate and personal property taxes, licensing fees, and business taxes.

Pulaski County is governed by a Supervisor/Administrator form of government, meaning that a Board of Supervisors, elected every four years, appoints a County Administrator to handle the administration of its policies. The County Administrator serves at the leisure of the Board of Supervisors. While the Administrator and staff manages the overall day to day operations of a community's public infrastructure, it is the Board of Supervisors and citizen-appointed advisory boards which formulate the policies which enables the government to function and protect the health, safety, and welfare of its citizenry.

### **Pulaski County School System**

Between 2002 and 2008, Pulaski County's school enrollment decreased by 11 percent. Pulaski County has joined the growing trend in southwestern Virginia of a shifting population base with declining school-aged children and an increasing elderly population base. As a result of this trend, per pupil expenditures have risen slightly in the past five years. For the school year 2001-2002, the Per-Pupil Expenditure was \$6,777. For the 2007-2008 school year, the Per-Pupil Expenditure was \$4,172, a decrease of 38.4 percent.

It is approximated that 78 percent of Pulaski County 9th graders graduate in four years. This is three percent above the statewide average but approximately four- percent below average for the region. The high school dropout rate for the County is 4.9 percent, which is one percent above the average dropout rate in adjacent counties. However, the dropout rate is approximately the same as the statewide average.

35 percent of Pulaski County graduates continue their education at a two-year college, and 41 percent attend a four-year college. Overall college enrollment for Pulaski County graduates is twenty percent below the statewide average, but is much higher than four of the seven adjacent jurisdictions.

In the early 1970s, the voters of Pulaski County agreed to consolidate their secondary schools and to issue a \$4 million general obligation bond to pay for the cost of building a consolidated high school. The current public school system consists of one high school, two middle schools and six elementary schools. Table 13 contains current information

regarding the schools, grades housed in each school, current enrollment figures, number of classrooms, and site size.

Most of the school facilities have a large portion of their acreage devoted to recreational facilities. Use of these facilities by the general public alleviate some of the pressure for dedicated public recreational facilities, and provide the County with an opportunity to be more innovative in developing additional recreational facilities.

## **Parks and Recreation**

Park Land and Recreation spaces are a vital resource to community and the general well being of the populace. Pulaski County has invested in Randolph and Harry DeHaven Parks and joined the Town of Pulaski in renovating Draper Mountain Overlook. The Town provides mountain recreation at Gatewood Reservoir. The County continues to seek open space areas and recreational facilities which offer year-round recreational opportunities with adequate accessibility and in sufficient quantity, quality, and variety for all of its citizens.

## **Existing Facilities**

The 1989 Virginia Outdoors Plan had the following recommendations for development of local and regional parks:

- Recreational providers should make an effort to increase public awareness of the facilities and programs they offer.
- Localities should work toward a fuller utilization of all available resources in the implementation of their programs.
- Emphasis needs to be placed on the development of adequate facilities at those areas already in public ownership.
- Localities should strive to achieve a balance of both indoor and outdoor programs and facilities.
- Emphasis should be placed on utilizing flood plains for recreational purposes and protecting them from inappropriate development.

The 1996 Virginia Outdoors Plan made several general and specific recommendations which have a direct impact on Pulaski County:

- Recreational initiatives should tie access to the New River with historic heritage.
- Extending the New River Trail State Park into the Town of Pulaski would enhance access to the trail, provide a good orientation to the area for visitors who

take advantage of the museum being developed in the Pulaski train station, and increase local residents' opportunities for recreation.

- The development of a dry storage boat facility and marina at Claytor Lake.
- The demand exists for guide and outfitter services throughout the region.

Pulaski County has two regional parks within its jurisdiction. One is Claytor Lake State Park which includes 472 land acres and is adjacent to the 5,000 water acres in Claytor Lake. The facility includes 3.1 miles of hiking trails, several miles of bridle trails which can be accessed via concession stand at the park, a beach area, a picnic area, rental cabins and a multitude of campsites. The second is the New River Trail State Park. This is a linear park developed under the greenway concept on an abandoned Norfolk-Western railway right-of-way. The Park's length is nearly 57 miles long. The park parallels the New River, offering recreational opportunities for hiking, off-road bicycling, horseback riding, and fishing. The New River Trail links the Town of Pulaski with the Town of Galax and the Mount Rogers Recreational Area in Carroll County.

Jefferson National Forest offers considerable recreational opportunities for County residents. At least 19,290 acres are available for public recreational use.

Another recreational opportunity in Pulaski County is the Transamerica Bike Route. This bike route is located on Virginia routes 626, 611, 658, and 654. The route is not marked throughout its length in the County. Coordinating additional bike routes with historic attractions, outdoor recreation opportunities, or other regional bike routes has not been actively pursued in the County but is included in other plans and should be considered with any transportation project.

Park facilities represent a considerable investment in land acquisition, capital costs, and continuing maintenance. It is important that site locations and designs not only be in keeping with the recommended state standards but that construction be based on expressed public demand or actual usage. There are various school facilities that could be opened to the general public, as well as improved to meet current demand. However, local school facilities should be used to supplement, not replace, dedicated recreational facilities. School facilities are occupied for school functions less than full time represents a substantial recreational opportunity. Community specific demand studies may indicate that schools fill particular recreational facility roles adequately, but are insufficient in other ways. County investment could then focus on those shortcomings.

Although economies of scale favor larger parks, a major number of park users are younger children who walk or bike to facilities. This would seem to encourage the use of neighborhood parks and pocket parks. Optimum park size can only be determined by a user study. User studies may also indicate that the general public would be best served by smaller scale investments, such as boat ramps, parking areas for the New River State Park Trail, or improved lighting at existing facilities.

There are a number of sites, buildings, and communities which have historic or picturesque qualities that could be preserved or enhanced. Historic preservation is another resource from which the County receives important recreational dividends. Preservation is much simpler and less costly if old buildings and old places are kept in use, rather than relegated as museum pieces. The Virginia Outdoors Plan recommends the coordination of historic landmarks with a recreation system, wherever possible. By coordinating these two goals, the County can promote open space planning, provide areas for group gatherings or picnicking, and maintain a valuable resource and educational tool, simultaneously.

**TABLE 16**

**PULASKI COUNTY RECREATION DEPARTMENT OWNED AND/OR UTILIZED FACILITIES**

Facility Name	Use	Location
Central Youth Center	Gym	Pulaski
Dublin Elementary School	Gym	Dublin
Dublin Middle School	Gym and fields	Dublin
Draper Elementary	Fields	Draper
Lion's Club	Field	Dublin
Loving Field	Fields	Pulaski
Pulaski Church of God	Gym	Pulaski
Pulaski Elementary	Gym and fields	Pulaski
Pulaski Middle School	Gym	Pulaski
Randolph Park	Fields	Dublin
Riverlawn Elementary	Gym and fields	Fairlawn
Snowville	Gym and fields	Snowville
Hiwassee	Field	Hiwassee
Facility Name	Use	Location
Central Youth Center	Gym	Pulaski

Source: Pulaski County Recreational Department 6/09

Other significant recreational and tourist-related points of interest in Pulaski County include Harry DeHaven Park at Claytor Lake, which offers swimming, boat slips and a boat ramp; Allisonia Landing, a boat ramp at Claytor Lake; Draper Mountain Overlook; and Randolph Park, a multi-purpose facility which is being developed by the Pulaski County Board of Supervisors. To date the County has spent more than \$500,000 on the Park.

**Pulaski County Library**

**Existing Facilities**

Pulaski County has one central library located on West Third Street in the Town of Pulaski, and a branch library located on Giles Avenue in Dublin. The Library also

operates an outreach service, delivering books and providing story time programs at a variety of locations in the County. The Commonwealth of Virginia has not set clear standards against which library systems can be measured, but has prepared a document titled, Planning for Library Excellence. This document recommends, among other goals, that rural libraries serving areas like Pulaski County strive to achieve the following minimum goals:

- Collection include at least 2 books per capita, 4.1 periodical or newspaper subscriptions per 1,000 population served, and that 0.15 volumes per capita be added to the collection annually.
- Annual circulation should be at least 3 volumes per capita and users should be able to find specific titles when they are searching for them at least 50 percent of the time. Users should be able to find material on a particular author or subject at least 60 percent of the time.
- Library facilities should be located with a 30 minute drive of all users. Alternatively, bookmobile stops within 15 minutes of user's residence at least once per month are considered a minimum service level (Level I).
- Aggregate building size of 0.6 feet<sup>2</sup> per person living in the service area with the main branch comprising at least 10,000 feet<sup>2</sup> or one half of the aggregate building space, whichever is larger.

The Pulaski County Library serves its county as a center of information and life-long learning in addition to providing recreation, cultural resources, and other services for its patrons. A special emphasis is placed on stimulating younger children's interests and appreciation for reading and learning. The library continually promotes and encourages reading, life-long learning, and the use of its various collections.

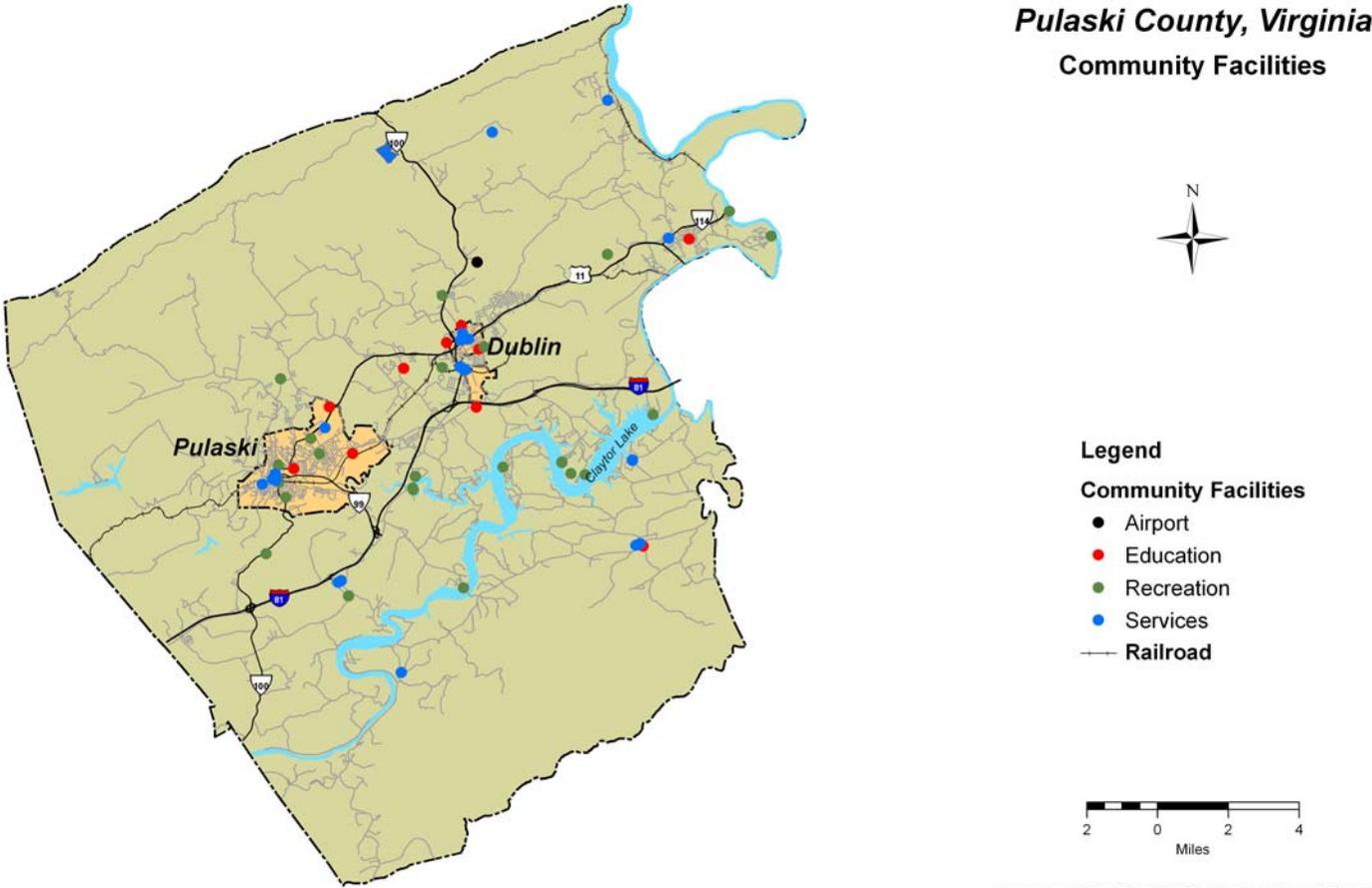
In 2009 the Library Board completed the 2009-2013 Strategic Plan. This documents includes the following goals:

- **FACILITIES:** To provide accessible and highly functional facilities that are well-maintained and inviting to the Community.
- **COLLECTION:** To provide and strengthen the library materials collection in various media/formats to provide a well-rounded collection that is timely and useful to meet the informational, educational and recreational needs of Pulaski County citizens of all ages.
- **STAFFING:** To recruit and retain sufficient, well-trained staff who are knowledgeable, willing and enthusiastic to meet the library needs of county residents.

- **SERVICES:** To encourage all Pulaski County Citizens of all ages to use the Library System and avail themselves of all library services while ensuring high-quality public services as patrons seek information, resources and assistance in achieving success in their schooling and life-long learning. To encourage a life-long appreciation of reading and a desire to learn that will enable Pulaski County citizens to be informed, productive and satisfied citizens through the provision of varied library services.
- **RESOURCES:** To seek and increase resources to adequately support library services and collection and to use all resources effectively to meet the community needs and interests.
- **TECHNOLOGY:** To continue to adopt new technologies and to upgrade current technologies to assist library patrons and area residents with their information needs and to assist library staff in being efficient in carrying out their duties to serve Pulaski County citizens.
- **MARKETING/PUBLIC RELATIONS:** To ensure that the community is informed about services and opportunities at the Pulaski County Library System.

In addition to the Goals that are listed numerous Objectives are found within the plan to facilitate their achievement. The Comprehensive Plan continues by including completion dates for specific projects. The Pulaski County Library Strategic Plan should be considered an important document that can be used in the near future to enhance the Library for all citizens of the County.

**FIGURE 8**  
**COMMUNITY FACILITY LOCATIONS**



## **Police Protection**

The Pulaski County Sheriff's Department provides protection through a force of 65 full-time employees, including 46 sworn officers and 14 support non-sworn staff employees. The Town of Pulaski provides police protection with 31 sworn officers with 27 staffed positions and 10 support non-sworn officers. The Dublin Police Department employs 8 sworn officers and 1 non-sworn, support employee. Additional assistance is provided by the Virginia State Police Department's Dublin field office.

Table 18 represents the Pulaski County Police Investigations for Group A Crimes in 2008 and Table 19 represents the Town of Pulaski's Crime Rate Index (Group A Crimes) for the 2008. The purpose of this data, is provide citizens and community leaders an idea of the crime trends in their locality. Further, to quote from the Crime In Virginia report, "[F]or practical purposes of measuring the trend and distribution of crime....the Uniform Crime Reporting program is based on a Crime Index. This index is composed of those crimes considered to represent the most local crime problem and the most serious by nature of motive or by the volume in which they occur. Essential also to the maintaining of uniform and consistent data is the establishment of standard definitions which are used for the State and National Programs.

**TABLE 17****2008 PULASKI COUNTY POLICE INVESTIGATIONS FOR GROUP A CRIMES**

Crime	Total Offenses Committed
Murder	1
Negligent Manslaughter	0
Justifiable Homicide	0
Abduction/Kidnapping	7
Forcible Rape	9
Forcible Sodomy	2
Sexual Assault with an Object	3
Forcible Fondling	21
Robbery	4
Aggravated Assault	43
Simple Assault	231
Intimidation	44
Incest	0
Statutory Rape	0
Arson	6
Burglary/Break and Enter	106
Pick Pocket	3
Purse Snatching	1
Shoplifting	151
Larceny from Building	11
Larceny from Coin Operated Machine	4
Larceny from Motor Vehicle	36
Larceny of Motor Vehicle Parts and Accessories	3
Larceny All Other	301
Motor Vehicle Theft	27
Counterfeit/Forgery	47
Fraud: False Pretense	68
Fraud: Credit Card Debit Card ATM	23
Fraud: Impersonation	14
Fraud: Welfare	0
Fraud: Wire	2
Embezzlement	13
Stolen Property	2
Destruction of Property/Vandalism	224
Bribery	0
Drug/Narcotics Violations	120
Drug Equipment Violation	6
Pornography/Obscene Material	3
Betting Wagering	0
Gambling: Operation/Promotion	0
Gambling Equipment Violations	0
Sports Tampering	0
Prostitution	0
Assisting/Promoting Prostitution	0
Weapons Law Violation	13
Total Group A Crimes	1,549

Source: Pulaski County Sheriffs Department

**TABLE 18**

**2008 TOWN OF PULASKI CRIME INDEX GROUP A CRIMES**

Offense	Attempt	Completed	Total	Rate per 100,000	Cleared by arrest	Cleared Except	Total Cleared	Percent Cleared	Former Years
Arson	0	4	4	44.21	0	0	0	0	0
Aggravated Assault	0	20	20	221.07	15	2	17	85	0
Simple Assault	0	100	100	1,105.34	79	11	90	90	3
Intimidation	0	12	12	132.64	3	1	4	33.3	0
Total Assault	0	132	132	1,459.05	97	14	111	84.1	3
Bribery	0	0	0	0.00	0	0	0	0	0
Burglary	9	80	89	983.75	26	5	31	34.8	2
Counterfeiting/Forgery	0	61	61	674.26	27	19	46	75.4	22
Destruction/Damage/Vandalism of Property	1	162	163	1,801.70	33	8	41	25.2	1
Drugs/Narcotics Violations	0	183	183	2,022.77	117	6	123	67.2	17
Drug Equipment Violations	0	14	14	154.75	6	1	7	50	1
Total Drugs/Narcotics Violations	0	197	197	2,177.52	123	7	130	66	18
Embezzlement	0	12	12	132.64	10	1	11	91.7	1
Extortion	0	0	0	0	0	0	0	0	0
False Pretense	5	119	124	1,370.62	92	16	108	87.1	15
Credit Card/ATM Fraud	0	8	8	88.43	2	2	4	50.0	1
Impersonation	1	1	2	22.11	0	0	0	0	0
Welfare Fraud	0	0	0	0	0	0	0	0	0
Wire Fraud	0	0	0	0	0	0	0	0	0
Total Fraud Offenses	6	128	134	1,481.15	94	18	112	83.6	16
Betting/Wagering	0	0	0	0	0	0	0	0	0
Operating/Promoting/Assisting Gambling	0	0	0	0	0	0	0	0	0
Gambling Equipment Violations	0	0	0	0	0	0	0	0	0
Sports Tampering	0	0	0	0	0	0	0	0	0
Total Gambling Offenses	0	0	0	0	0	0	0	0	0
Murder and Non-negligent Homicide	0	0	0	0	0	0	0	0	0
Negligent Homicide	0	0	0	0	0	0	0	0	0
Total Homicide Offenses	0	0	0	0	0	0	0	0	0
Kidnapping/Abduction	0	8	8	88.43	6	0	6	75	0
Pocket Picking	0	0	0	0	0	0	0	0	0
Purse Snatching	0	1	1	11.05	0	0	0	0	0
Shoplifting	0	40	40	442.14	30	3	33	82.5	1
Theft from Building	1	141	142	1,569.58	43	17	60	42.3	4
Theft from Coin-Operated Machine or Device	0	2	2	22.11	0	0	0	0	0
Theft from Motor Vehicle	0	37	37	408.98	4	4	8	21.6	0
Theft of Motor Vehicle Parts or Accessories	0	5	5	55.27	0	1	1	20	0
All other Larceny	0	75	75	829	22	4	27	36	6
Total Larceny/Theft Offenses	1	301	302	3,338.12	100	29	129	42.7	11
Motor Vehicle Theft	0	17	17	187.91	5	3	8	47.1	1
Pornography/Obscene Material	0	4	4	44.21	3	0	3	75	0
Prostitution	0	0	0	0	0	0	0	0	0
Assisting or Promoting Prostitution	0	0	0	0	0	0	0	0	0
Total Prostitution Offenses	0	0	0	0	0	0	0	0	0
Robbery	2	3	5	55.27	3	0	3	60	0
Forcible Rape	0	4	4	44.21	0	1	1	25	0
Forcible Sodomy	0	2	2	22.11	1	1	2	100	0
Sexual Assault with an Object	0	8	8	88.43	4	3	7	87.5	0
Forcible Fondling	0	8	8	88.43	0	2	2	25	0
Total Forcible Sex Offenses	0	22	22	243.17	5	7	12	54.5	0
Incest	0	0	0	0	0	0	0	0	0
Statutory Rape	0	2	2	22.11	1	1	2	100	0
Total Non-forcible Sex Offenses	0	2	2	22.11	1	1	2	100	0
Stolen Property	0	5	5	55.27	2	1	3	60	0
Weapon Law Violations	0	15	15	165.8	10	0	10	66.7	0

Source: Town of Pulaski

**Fire Protection**

The protection of citizens from fire is a public service generally offered by communities throughout the United States. In order for the services performed by a fire department to

be efficient and expedient, its personnel and equipment must be of the highest caliber. Efficiency is determined by various fire underwriting agencies through a deficiency point scale. All the fire departments in the County are certified by the Insurance Services Office.

### **Existing Facilities**

The County of Pulaski is protected by volunteer fire departments. The Town of Pulaski has its own paid fire department. The volunteer departments are:

Newbern	Draper
Dublin	Twin Community
Fairlawn	Hiwassee
Snowville	

There is no department headquarters location as each volunteer fire department works independently. The County Emergency Services Coordinator provides overall coordination of the independent stations. Dispatch is managed through the Pulaski County Sheriff's Department dispatcher.

The Newbern Volunteer Fire Department is located at 5297 Wilderness Road in the heart of Newbern. The station offers protection to Volvo Heavy Truck Corporation, Wurno Industrial Area, ten miles of U.S. Interstate 81, Claytor Lake State Park, and other business and residents.

The Dublin Fire station is located on Lee Highway (Route 11), in downtown Dublin. The Dublin Station serves the Dublin area and a large portion of Pulaski County and receives the most calls per year in the County.

The Fairlawn Volunteer Fire Department is located at Pepper's Ferry Boulevard (VA 114), near the intersection of Pepper's Ferry Boulevard (VA 114) and Belspring Road (VA 600). This station serves one of the fastest growing areas in the County and the commercial areas along U.S. Route 11 in Fairlawn.

The Snowville Volunteer Fire Department is located on Lead Mine Road (VA 693) near the Montgomery County line. This department is housed in a three bay fire station. There is also a substation on Little River Dam Road (VA 605).

The Hiwassee Volunteer Fire Department is located on Lead Mine Road (VA 693), adjacent to the old Hiwassee Elementary School building. The department is located in a new and modern fire station. Approximately 23 calls per year are responded to by the Hiwassee station.

The Draper Fire Department is located in Draper on Old Baltimore Road (VA 658). A new fire station for the Draper Fire Department was built in 1991. This station offers protection to residents of Draper Valley and travelers on Interstate 81.

The Twin Community Volunteer Fire Department is located on Parrott River Road (Route 600) in the Community of Parrott, but serves the areas surrounding Parrott and Belspring. The building has been expanded to double its original storage area.

Pulaski County supports the volunteer units through insurance coverage, assistance with vehicle purchase, assistance with facility construction and vehicle maintenance. The Fire Protection Committee oversees equipment purchases and capital improvements for the County fire departments. This committee, which is composed of County staff and representatives from the volunteer fire departments, is the focal point of long-range planning for fire program development in the County.

Additional facilities, equipment, and staff/volunteers will be needed with future growth in the County. Examples include Dublin Volunteer Fire Department which would benefit from a substation in the Little Creek Area and additional equipment to have adequate coverage for the New River Valley Airport. In addition planning tools and different funding mechanisms should be examined to help pay for new facilities and equipment.

### **Alert Pulaski**

The County of Pulaski, in partnership with Twenty First Century Communications, Inc., instituted a regional notification system that sends telephone notifications to residents and businesses within Pulaski County impacted by, or in danger of being impacted by, an emergency or disaster. This system, called AlertPulaski, is used by emergency response personnel to notify those homes and businesses at risk with information detailing the emergency including actions to be taken. The system utilizes the region's 911 database and is able to contact land-line telephones whether listed or unlisted. The system has the ability to leave messages on Voice-mailboxes and redial in the event of a busy signal. In addition, citizens utilizing Voice over Internet Protocol (VoIP), or cell phones for telephone services are able to sign up over the Internet to be included in the service. Email support can also be included for those citizens wishing to receive information online.

### **Rescue Services**

Rescue services in Pulaski County is provided by Regional Emergency Medical Services Inc. (REMSI). REMSI was incorporated in 1994 in response to a series of recommendations made by a consulting firm after local rescue squad leaders, hospital personnel and government officials realized that the volunteer squads in the County were have difficulty meeting the emergency medical transportation needs of the community.

Three major outcomes arose as a result of the consultants' recommendations; the first recommendation was to combine departments, where career and volunteer personnel

work together, which was recognized as absolutely essential in improving care in rural communities. Career personnel provide advanced clinical capabilities and response time performance that the previous all-volunteer system was unable to furnish. Volunteer and career personnel work side by side, stay in the same stations and use the same ambulance and rescue vehicles.

The second implemented recommendation was changing the corporate structure. The local rescue squads were based on the popular election of crew officers and there was little long term planning. The squads were constantly in a reactive mode and struggling to meet service needs. The new corporation is directed by representatives of the health care systems and local government. The focus of the new organization is the long-term delivery of high quality services to the public.

The third implemented recommendation was charging patients for services. Charging for services provided was and continues to be a very divisive issue for agencies that have traditionally provided services without billing patients. In Pulaski County's situation, it was determined preferable to take advantage of any potential revenue sources before requesting additional local government funding. All patients are charged, even patients transported by all volunteer ambulance crews. The results from the changes has been remarkable.

Overall, the effect of implementing corrective measures as recommended by the consultants has been positive. Response times have decreased County-wide, while the availability of mobile intensive care services has increased.

### **Rescue Services Personnel and Equipment**

Rescue squads are housed in the Towns of Dublin and Pulaski as well as the communities of Fairlawn, Hiwassee and Snowville. The following table outlines currently available equipment and personnel.

**TABLE 19**

**RESCUE SERVICES EQUIPMENT**

Dublin Station	20 volunteer staff members
	2 advanced life support ambulances
	1 medium duty extraction unit
Fairlawn Station	20 volunteer staff members
	1 advanced life support ambulance
	1 basic life support ambulance
	1 light duty extraction unit
Snowville Station	14 volunteer staff members
	1 advanced life support ambulance
Hiwassee Station	8 volunteer staff members
	1 advanced life support ambulance
Pulaski Station	12 volunteer staff members
	2 advanced life support ambulances
	1 basic life support ambulance
	1 light duty extraction vehicle
Career Staffers	14 (includes a mix of full-time and part-time personnel)

Source: REMSI

**Water Supply And Treatment**

Potable water serving Pulaski County is pumped from several sources and treated at two treatment plants with a combined capacity of 5.7 million gallons per day. While the water systems are essentially separate, interconnections are provided at various points in the distribution system.

The Town of Pulaski pumps water from Hogan and Gatewood reservoirs, 300 million gallons and 1.1 billion gallons capacities respectively. The Town system has the capacity

to pump 2.7 million gallons per day. Currently, 2.1 million gallons per day or 77 percent of this daily capacity is being consumed. The water treatment plant for the Town of Pulaski was expanded by two million gallons per day in 1989. The Town of Pulaski water system consists of approximately 45 miles of water line.

The Pulaski County Public Service Authority pumps water from Claytor Lake. The PSA is currently using 1.5 million gallons per day of the 3 million-gallon per day capacity at the existing water plant. Water is stored in ten tanks having a combined capacity of 5.7 million gallons. This information is simplified in the following Table 20.

**TABLE 20**

**PULASKI COUNTY WATER SYSTEMS**

<b><u>Jurisdiction</u></b>	<b><u>Source</u></b>	<b><u>Usage</u></b>	<b><u>Storage</u></b>
Pulaski County	Claytor Lake & New River	1.6mgd*	6 mg**
Pulaski Town	Peak Creek Gatewood & Hogan Reservoirs	2.7mgd	5 mg
Dublin Town	Pulaski County PSA	600,000 gpd	1 mg
*mgd = million gallons per day			
**mg = million gallons			

Source: Virginia's New River Valley Regional Data Book. July 2008

Figure 8 illustrates the PSA water system in the County. The availability of potable water in karst areas of the County is an important step in protecting the health of County residents. It is also an important component of promoting economic development while supporting nodes of centralized growth.

Over the next five years, the PSA anticipates improvements in Fairlawn and Bella Vista; distribution systems will be installed on VA 623, VA 679, Brookmont, and Canterbury. Improvements to the water treatment plant are also anticipated. Extension of the water system beyond these planned improvements will also result from the County's mandatory hook-on policy, which requires developers to connect new homes to the distribution system if the development is within 300 feet of the system lines.

**Sewage Facilities**

Central sewage collection and treatment systems serve the Towns of Dublin and Pulaski and the community of Fairlawn. The majority of the remaining households in the County rely upon septic tank systems for sewage disposal. Additionally, there are thirty four centralized and five decentralized projects projected for Pulaski County with a total funding cost of \$142,284,965 (source: New River Valley Regional Wastewater Study, May 2009)

Septic tanks depend on drainage in the soil and require deep, well-drained soils to operate properly. Only about 10 percent of the soils in the County have moderate or slight limitations for a septic tank-drainfield system. The remaining areas are even less suitable.

There are also areas in the County where a septic system will function adequately for five or six years, but will eventually saturate the soil, causing the waste to come to the soil surface. Placement of septic tanks in such areas is unacceptable to the Virginia Department of Health, which bases its regulations on a minimum system lifetime of 10 years.

In concentrated residential areas, septic systems have failed because the ground is expected to hold more liquid than actually possible. These problems are occurring throughout the County especially in areas near Dublin, Newbern, and Draper.

To some extent these problems can be avoided or reduced through cooperation with the Virginia Department of Health and its septic tank permit process, and by over designing or restricting septic tank placement to larger lots. However, investment in provision of public sewer is the most effective solution to this situation. These measures protect the homeowner and the community from long term environmental damage and potential health concerns.

### **Existing Sewage Facilities**

There are two existing sewage systems in the County. The Pulaski County Sewerage Authority operates a system which serves the Fairlawn Community. Pulaski County Public Service Authority, serves portions of the Town of Dublin and the Town of Pulaski. Both systems rely on the Peppers Ferry Wastewater Treatment Facility for treatment of its effluent. The treatment facility is owned and operated by the Pepper's Ferry Regional Wastewater Treatment Authority (PFRWTA). PFRWTA began operations in February, 1987. It owns and operates a nine million-gallon per day treatment facility, Radford Pump Station, New River Pump Station, and associated force mains, main lines, and user flow meter systems. Table 21 shows Sewage capacity data.

**TABLE 21**

### **PULASKI COUNTY 2008 SEWAGE DATA**

<b>Location</b>	<b>Type of Treatment</b>	<b>Capacity Available</b>	<b>Excess Capacity</b>
<b>Pulaski County</b>	Secondary	N/A	3.0 mgd
<b>Town of Pulaski</b>	Secondary	14mgd	12 mgd
<b>Town of Dublin</b>	Secondary	N/A	30,000 gpd

Source: Virginia's New River Valley Regional Data Book. July 2008

## **Future Sewage System Expansion**

Currently, 4.5 million gallons per day are being treated at the Pepper's Ferry Wastewater Treatment Facility. The additional 4.5 gallons per day in unused capacity was built into the facility in anticipation of future demand on the system and excessive wet weather flow. Approximately 2.6 million gallons per day of unused capacity is owned by Pulaski County. Future sale of this capacity is possible. The Town of Dublin, as well as other members, are reaching their contracted capacities, and will find it necessary to expand their portion of the plant capacity.

The availability of this excess treatment capacity is one of the County's economic development lures to industrial prospects. Sewer service has already been extended to the Corporate Research Center, Volvo Heavy Truck Corporation, the Commerce Park, and New River Industrial Park. The existing manufacturing facilities in the Town of Pulaski are served through the Town system.

Under the current waste treatment management system in the County, PFRWTA is responsible for establishing pretreatment requirements for industrial discharges into the sewer system. The current membership in the Authority also incorporates minimization of inflow/infiltration into the participation requirements. This has led to and will continue to insure adequate maintenance of the sewer line system.

## **Solid Waste Management**

The New River Resource Authority (NRRA) manages solid waste disposal for the City of Radford, and the counties of Giles, Montgomery, and Pulaski, including the towns of Dublin and Pulaski. Disposal facility administration, management, engineering, construction, and operation are managed by Authority personnel and contractors.

## **Refuse Collection**

Curbside garbage pick-up is available throughout the County. The Pulaski County Public Service Authority has contracted with the Town of Pulaski to provide collection within the Town. The Town of Dublin operates its own refuse collection program. Commercial/industrial green box pick-up is available throughout the County through either public or private haulers. The Public Service Authority periodically sponsors clean up weeks, when leaves and other trash is then disposed.

## **Solid Waste Disposal**

Solid Waste disposal for Pulaski County is provided by the New River Resource Authority at the New River Solid Waste Management Area located on the eastern side of Cloyd's Mountain. All disposal cell development and operation shall comply with United States Environmental Protection Agency Subtitle D standards and the Virginia Department of Environmental Quality.

The disposal operation is only part of the integrated solid waste management system the New River Resource Authority is proposing for the area. With regards to waste reduction efforts, the Authority is working to develop and operate a municipal solid waste composting program along with a recycling drop box program to meet and exceed the waste reduction goals established by the Commonwealth of Virginia.

### **Recycling and Composting**

Pulaski County is embracing recycling through volunteer efforts and the NRRA. The New River Resource Authority has developed two programs which will reduce the domestic and commercial waste-stream in the County and extend the life of the New River Solid Waste Management Facility landfill on Cloyd's Mountain.

To extend the life of the landfill, the Resource Recovery Committee has been working to expand the recycling opportunities for the area's residents. The NRRA's initial drop box recycling program began on November 1, 1990, at the Pulaski Kroger Store. Since that time, operation of the new Material Recovery Facility in Christiansburg, has accepted mixed paper, cardboard, office paper, and old magazines, increasing the recycling rate for the area. Along with these expanded materials, the Committee is exploring the option to have these drop sites manned to aid citizens in their use and offer disposal bins for waste material. These types of facilities in adjacent counties have increased the quantity of recyclables collected and aided in eliminating illegal dumping along the roads. Three drop centers are currently located in the County with locations in Fairlawn, and the towns of Pulaski and Dublin.

## TRANSPORTATION

### Interstate, Primary, and Secondary Road Systems

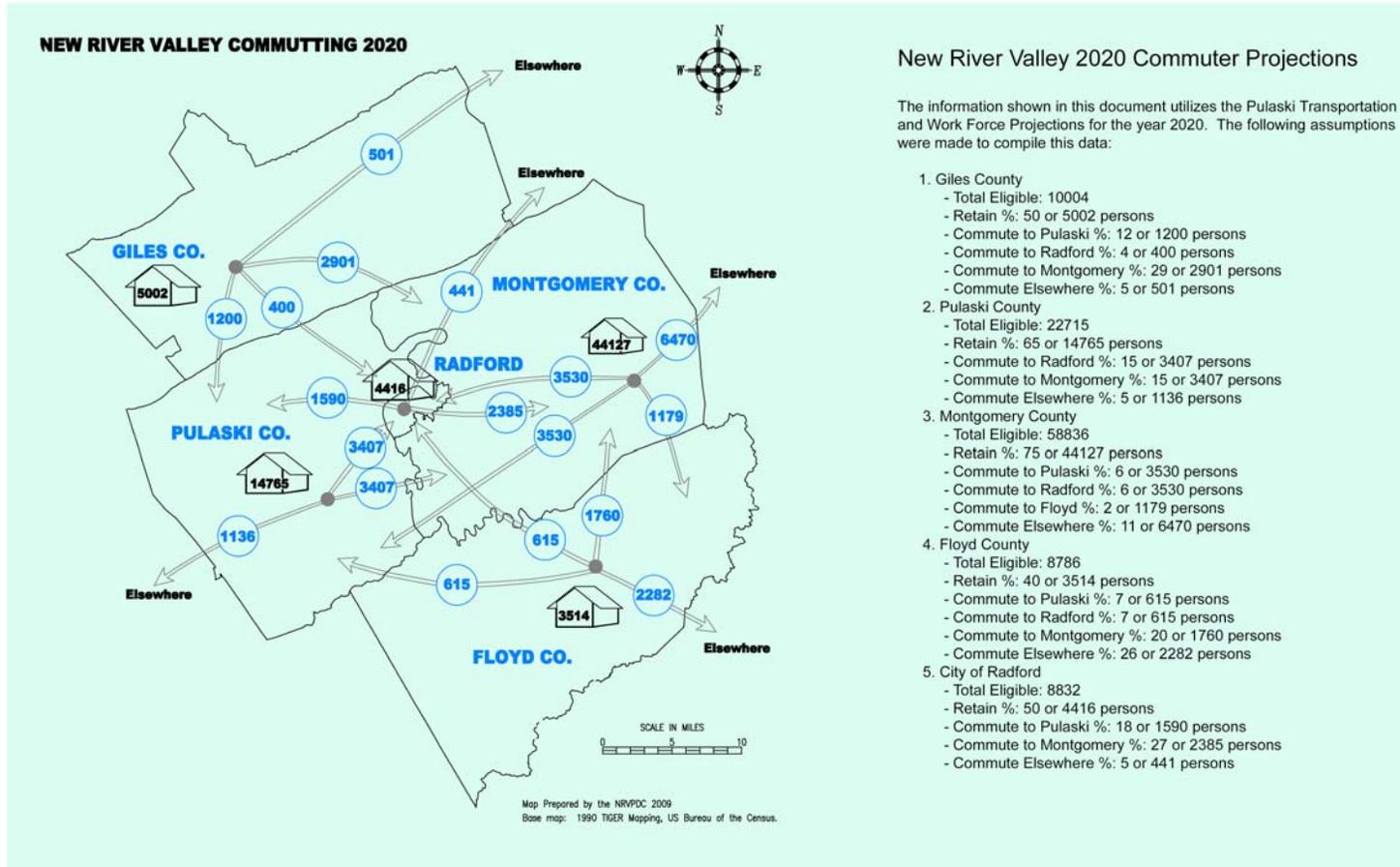
One interstate highway, U.S. Interstate 81, passes through Pulaski County. U.S. Interstate 81 provides access to the City of Roanoke and the Shenandoah Valley to the northeast and to Bristol, Virginia, to the southwest. Just south of Pulaski County, U.S. Interstate 81 connects with U.S. Interstate 77 which provides access to Charlotte, North Carolina, and Charleston, West Virginia. Within the immediate area, U.S. Interstate 81 provides a limited-access link between Christiansburg, Radford, and Pulaski.

The primary highways in Pulaski County are as follows:

1. VA 99 from the I-81 service road (F047) to the corporate limits of the Town of Pulaski.
2. US 11 from Memorial Bridge at Radford to I-81 at Exit 89.
3. VA 100 from Interstate 81 at Exit 98 to the Giles County line, and from the Wythe County line to Interstate 81 at Exit 89.
4. VA 114 from US 11 at Fairlawn to the Montgomery County line.

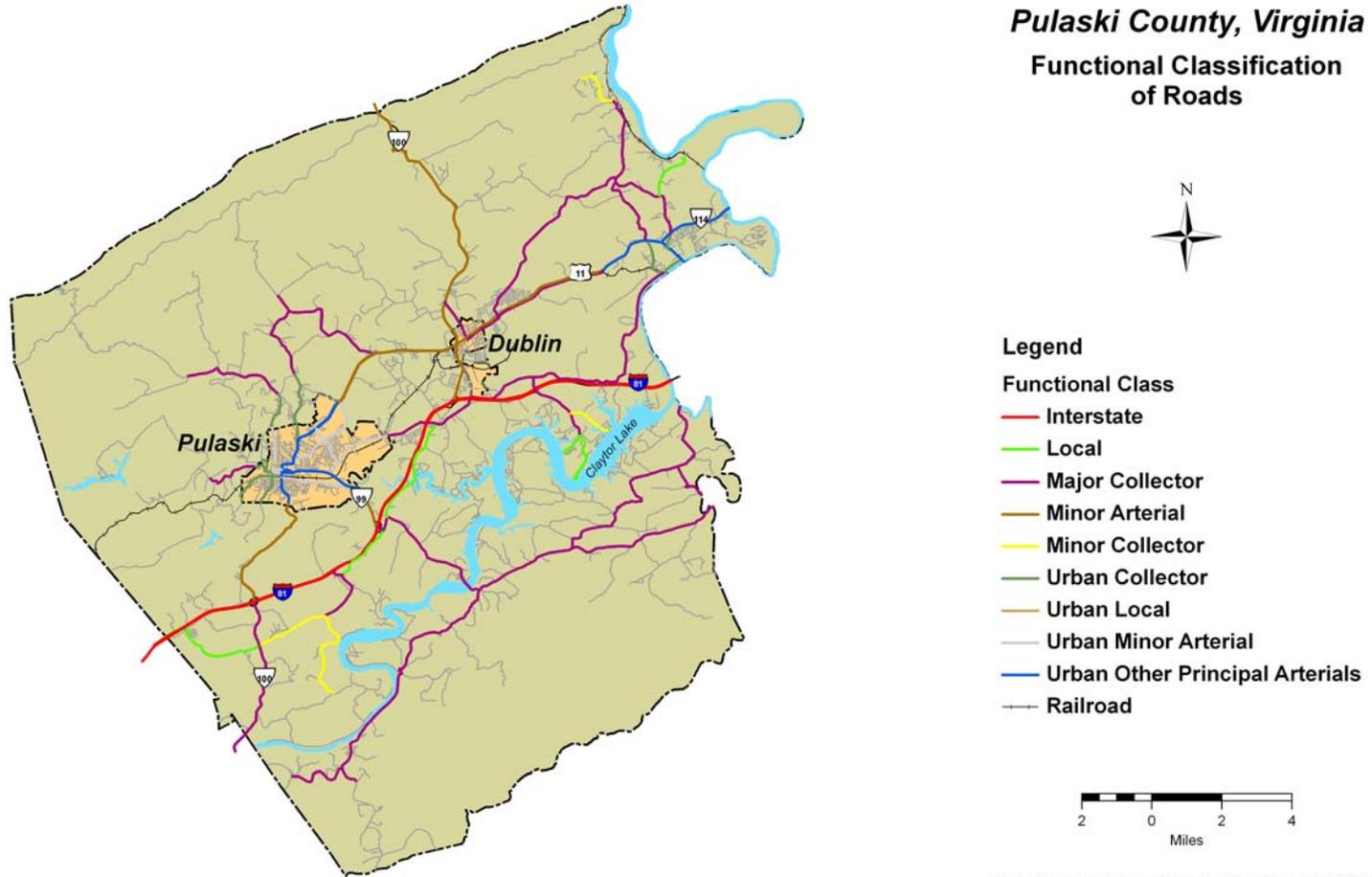
During the Completion of the Pulaski County Volume 2 Planning Area's a separate Planning document was created to identify the Transportation and Land Use needs for the area or the central portions of Pulaski County and encompassing the two municipalities. This is a major growth area for the County which contains a mixture of intense industrial, commercial and expanding residential developments that suffers from an inefficient transportation network. Major transportation users include Volvo Trucks of North America, New River Community College, the NRV International Airport, and the New River Valley Commerce Park, a joint venture of eleven (11) New River and Roanoke Valley governments. Recent additions have been the construction of the James Hardie plant, with an estimated four hundred (400) truck trips per day, and a Wal-Mart shopping center. The New River Trail has a trail head in Pulaski and connecting to the Huckleberry Trail in Blacksburg through the area is a regional goal. Figure 10 illustrates commuting patterns in the Region. These trends should be utilized in the planning stages of new road construction to achieve the maximum amount of utilization and utility

**FIGURE 9**  
**COMMUTING PATTERNS IN THE NRV**



**FIGURE 10**

**FUNCTIONAL CLASSIFICATION OF ROADS IN PULASKI COUNTY**



## **Future Needs of Road Transportation**

Based on the evaluation of the existing transportation system and future land use projections; the following projects have been identified as priority transportation projects for the Pulaski County:

1. The redesign of Exit 98: on U.S. Interstate 81 in order to ensure access to industrial and commercial areas while providing safer travel conditions the limit lane congestion.
2. Route F47 connector to Route 611: Providing a new gateway to the Town of Pulaski and primary access to industrial facilities directly from Interstate 81.
3. Exit 101 Connector: Providing direct access to the Veterans Cemetery and U.S. Route 11 from Interstate 81.
4. Bagging Plant Road: Upgrading the existing roadway to an urban typical and serve as the primary transportation route to the Veterans Cemetery off I-81 until the Exit 101 Connector is constructed.
5. Route 611 improvements: Future land use plans show expansion of commercial and industrial lands within the vicinity of exit 98. Route 611 will become a primary access route to new business, residential areas, and industries removing truck use of Alexander Road and improve the operation of Route 100 in the vicinity of I-81, Exit 98.
6. Cougar Trail (southern portion): improving the existing corridor adjacent to the Volvo Truck industrial site to a 4-lane urban typical from an existing 2-lane rural typical to provide increased accessibility to the facility.
7. Recommended intersection improvements to enhance the operational efficiencies of the existing network. These improvements are mostly at intersections of primary routes and heavily used local roadways.

While the majority of the Road improvements identified in the Central Pulaski Transportation and Land Use Master Plan are within the central area of the County, additional road and trailways should be encouraged outside of this area. The Six Year Capital Improvements Plan should be updated and funded accordingly for the completion of all transportation projects in the County.

## **Air Transportation**

The New River Valley Airport is located just north of Dublin on VA 100. The asphalt runway measures approximately 6,200 feet in length. The Airport is funded by localities in the New River Valley region and operated by the New River Valley Airport

Commission. Other services offered at the Airport are U.S. Customs support, aviation fuel sales (including jet fuel) and aircraft rental and sales.

Although commercial carrier usage of the Airport has not developed due to the presence of other more urban transportation hubs (i.e., Greensboro, NC and Roanoke, VA), there is a scarcity of airport facilities across the nation. This scarcity is expected to become critical in the future.

The Airport, with its associated Free Trade Zone and Customs Entry Port, is an important economic development tool for the New River Valley region. The Airport is also significant because of its impacts on area land uses. A regional Commerce Park is planned in the vicinity of the airport.

The Airport as a regulated facility has an immediate impact on area land use through height restrictions imposed on construction around the Airport. These restrictions are required by the Federal Aviation Administration (FAA), and are implemented through local zoning regulations with FAA oversight.

### **Future Needs of Air Transportation**

Designation of the Airport as a General Purpose Foreign Trade Zone and as a User Fee Airport has been approved. The Airport has become a Port of Entry and a U.S. Customs Service officer has been stationed at the Airport.

What this means is that Free Trade Zones are treated, for the purposes of the tariff laws and Customs entry procedures, as being outside the Customs territory of the United States. Under FTZ procedures, foreign and domestic merchandise may be admitted into zones for operations such as storage, exhibition, assembly, manufacture and processing, without being subject to formal Customs entry procedures, the payment of Customs duties or the payment of federal excise taxes.

When merchandise is removed from a foreign trade zone, Customs, duties are eliminated if the goods are then exported from the United States. If the merchandise is formally entered into U.S. commerce, Customs duties and excise taxes are due at the time of transfer from the foreign trade zone.

The County should coordinate with the New River Valley Airport Commission to ensure that land use and zoning policies for the area around the Airport provide for the following: Future expansion of airport facilities and runways, development and land use which is consistent with airport operations/uses that would not be in contrast to an airport zone; and an adequate buffer between the Airport and residential development to reduce noise nuisance concerns.

## GOALS AND OBJECTIVES

The primary responsibility of Pulaski County is to promote and protect the health, safety and welfare of the individual citizens of the county. In addressing this responsibility the County has established the following goals. Subsequent text outlines the actions the County will pursue over the next five years to reach these goals:

- Goal 1: Strengthen the county's **economy** through stabilization and diversification.
- Goal 2: Provide adequate **housing** opportunities for all segments of the community.
- Goal 3: Protect the natural **environment** for the health and benefit of the citizens of the County and provide adequate and varied **recreational** opportunities.
- Goal 4: Provide the best possible distribution of **land uses** through land use management regulations, education & service provision.
- Goal 5: Strengthen the county's **education** system.
- Goal 6: Insure that adequate and efficient **public utilities** are provided to county citizens.
- Goal 7: Improve existing **transportation** facilities and undertake necessary new road construction in the county.
- Goal 8: Provide efficient and effective county **government**.
- Goal 9: Provide high quality and timely **emergency response** services and promote and strengthen **medical services** in the County.

## **COMPONENT GOAL 1:**

### **STRENGTHEN THE COUNTY'S ECONOMY THROUGH STABILIZATION AND DIVERSIFICATION**

#### **OBJECTIVE 1.1: Encourage new and expanded agricultural, commercial and industrial activities to increase and diversify the county's economic base.**

##### **Recommended Strategies:**

1.1-1. The Board of Supervisors should actively support a countywide economic development program to attract new industry to the New River Valley and Pulaski County.

1.1-2. The Board of Supervisors should communicate and continue work with other jurisdictions in the New River Valley to develop a regional industrial park that will enhance the current inventory of available industrial land.

1.1-3. The County should maintain its leadership position in seeking and participation in industrial development opportunities in the New River Valley and beyond as they provide positive impact on the county's economic strength

1.1-4. The County's economic development efforts should promote improved wages and more job training opportunities for the residents of the County.

1.1-5 The County should strive to be a leader in the NRV for support of farms and other self-sustaining community business and educational projects.

1.1-6 The County should encourage public and private initiatives that support the local farm industry including local foods programs, agricultural education, and incentives for local farmers to continue active production.

#### **OBJECTIVE 1.2: Encourage the retention and expansion of existing firms.**

##### **Recommended Strategies:**

1.2-1. County officials involved in economic development should conduct business visitation on a periodic basis to provide a conduit for business concerns to reach community leaders.

1.2-2. The Board of Supervisors should encourage the continuation programs that recognize the contributions existing businesses make to Pulaski County.

1.2-3. The Board of Supervisors and Pulaski Encouraging Progress should encourage existing business to participate in surveys of wages and benefits to provide a database for new location and expansion decisions.

1.2-4. The County should facilitate efforts to foster inter-business cooperation with the Board of Supervisors and the Industrial Development Authority.

1.2-5. Pulaski Encouraging Progress and the Board of Supervisors should develop programs to encourage vendor and service businesses that are complimentary to existing businesses and employment in Pulaski County.

### **OBJECTIVE 1.3 Provide facilities and services required to attract new plant location and expansion decisions.**

#### **Recommended Strategies:**

1.3-1. The Board of Supervisors and Pulaski Encouraging Progress should continue to support economic development programs focused on increasing retail and commercial businesses and employment in Pulaski County.

1.3-2. The Board of Supervisors should continue to work with the towns of Pulaski and Dublin in their revitalization efforts.

1.3-3. The County should work with multiple partners in the Public and Private sectors to encourage small business development.

### **OBJECTIVE 1.4 Support the provision of appropriate resources to allow the location and expansion of business in the county.**

#### **Recommended Strategies:**

1.4-1. The County and Pulaski Encouraging Progress should update information available to new and expanding businesses on financial assistance from both the public and private sector.

1.4-2. Pulaski Encouraging Progress and Industrial Development Authority should encourage the utilization of the loans and other financial programs provided for the creation of new business and the expansion of existing businesses.

1.4-3 Continue efforts to track economic indicators, and provide current information and assist in the development of facilities and services.

1.4-4 The County should take a leadership role to maintain the valuable elements of the old Virginia Certified Communities program.

1.4-5. Coordinate site development and related information with other industrial development organizations, including the Virginia Department of Economic Development, New River Valley Economic Development Alliance, Appalachian Power Company, Norfolk Southern Railroad and New River Valley Planning District Commission.

1.4-6. Develop industrial park sites to provide for continued industrial expansion in the County.

1.4-7. The Industrial Development Authority should develop an exclusive option for holding potential industrial sites. Such an option will pre-determine the sale conditions for site acquisition and deter possible speculation delaying the site selection process.

1.4-8. The County through the efforts of Pulaski Encouraging Progress and the Industrial Development Authority should maintain a diverse inventory of available commercial and industrial land and buildings.

1.4.9. The County should support the development of commercial and industrial properties by applying for state and federal funding for the infrastructure necessary to support such development.

### **Objective 1.5: Diversify the County's Economy**

**Recommended Strategies:**

1.5-1. Pulaski County's economic development efforts should utilize Claytor Lake and the New River as economic development tools which could lead to the development of a water oriented convention center.

1.5-2. Pulaski Encouraging Progress and the County should work with State agencies and tourism organization to promote Claytor Lake and the New River Trail State Park as tourist destinations.

1.5-3. The Board of Supervisors should promote economic development at a variety of locations throughout the County.

1.5-4. The County should promote the location of Bio-technical and Green Industries in addition to manufacturing.

1.5-5 The County should work with other organizations to develop and support entrepreneurial local agricultural and energy efficient economies and educational activities.

**OBJECTIVE 1.6 Support the Agricultural Business Community.**

**Recommended Strategies:**

1.6-1 Provide information related to programs offered by Regional, State, and Federal Agencies to allow additional business opportunities for the farming community.

1.6-2 Explore alternative partnerships to increase the profitability of local farms, including eat local incentives utilizing County produced foods.

1.6-3. Provide incentives allow for the continued operation of farms in the County.

1.6-4 Encourage Cluster Development in areas where prime soils and other important soils may be located to provide for continued farming activities.

## **COMPONENT GOAL 2**

### **PROVIDE ADEQUATE HOUSING OPPORTUNITIES FOR ALL SEGMENTS OF THE COMMUNITY**

#### **OBJECTIVE 2.1: Address housing needs particularly those for low to moderate income families.**

##### **Recommended Strategies:**

2.1-1. The Planning Commission and Board of Supervisors should encourage construction of housing for residents of all levels.

2.1-2. The Building Inspector should continue to apply housing code enforcement to reduce sub-standard housing.

2.1-3. Board of Supervisors, Planning Commission and Public Service Authority should work to develop services and utilities necessary to support a diversity of housing including high-end single family housing within the County,

2.1-4 The Planning Commission and the Board of Supervisors should encourage local builders to build accessible housing for the disabled citizens of Pulaski County.

2.1-5. The County should work with non-profit and government organizations for the consolidation of services to provide accurate information regarding low income housing programs available.

#### **OBJECTIVE 2.2: Promote fair and open housing for all.**

##### **Recommended Strategies:**

2.2-1. The Housing Office should establish public information and educational programs related to housing. Devise and administer programs designed to inform all citizens about housing and housing related programs that are available at all levels of government, but particularly at the local level.

#### **OBJECTIVE 2.3: Promote energy efficient development in the County.**

##### **Recommended Strategies:**

2.3-1 The County should encourage land development that is energy efficient and utilizes green technologies.

## **COMPONENT GOAL 3**

### **PROTECT THE NATURAL ENVIRONMENT FOR THE HEALTH AND BENEFIT OF THE CITIZENS OF THE COUNTY, AND PROVIDE VARIED RECREATION ACTIVITIES.**

#### **OBJECTIVE 3.1: Protect the County's groundwater resource.**

##### **Recommended Strategies:**

3.1-1. Encourage implementation of Best Management Practices particularly in areas adjacent to existing sinkholes.

3.1-2. The County should encourage installation of the best available storage and monitoring technologies for storage of fuels and other toxic materials through cooperative efforts with the Virginia Water Control Board, Pulaski County Building Inspections Department, and the Planning Commission.

3.1-3. The Pulaski County Sheriff's Department and Commonwealth's Attorney should actively pursue legal charges against open dumps, particularly those in sinkholes.

#### **OBJECTIVE 3.2: Reduce erosion and sedimentation of the County's streams, rivers and lakes.**

##### **Recommended Strategies:**

3.2-1. Continue to implement the Erosion and Sediment Control Ordinance of Pulaski County. Utilize, require and enforce implementation of best management practices for stormwater, erosion and sedimentation through the Pulaski County Building Inspector and the Pulaski County Engineer.

3.2-2. Continue to actively participate in and support the Skyline Soil and Water Conservation District.

3.2-3. Conduct periodic watershed management studies of the major streams in the County.

3.2-4 The County should continue efforts to assess erosion and water quality issues.

3.2-5 The County should conduct a cost benefit analysis to determine the feasibility of best practice on site waste treatment options south of Claytor Lake.

3.2-6 Encourage the utilization of best management practices on lands adjacent to tributary streams.

3.2-7 The County should work with other organizations to provide buffering around surface water areas to reduces erosion and runoff associated with land development.

#### **OBJECTIVE 3.3: Protect air quality in the County.**

##### **Recommended Strategies:**

3.3-1. The County Garage should keep the County vehicle fleet in good working order and undertake fuel and maintenance efforts necessary to protect air quality.

3.3-2. The County should consider the purchase of high efficiency low emission gas or diesel hybrid vehicles to reduce emissions from County vehicles and lower operating costs.

**OBJECTIVE 3.4: Preservation of the County's heritage as illustrated in its historic structures and sites as educational tools, recreational areas, and economic development tools.**

**Recommended Strategies:**

3.4-1. The County should develop a Pulaski County Historic Register be created so as to identify and take the necessary steps to place historical sites on the National Register of Historic Places.

3.4-2. The Planning Commission should develop a historic site-zoning district that meets the Virginia Department of Historic Resources standards.

3.4-3. The Planning Commission should designate areas to apply the historic site-zoning district and develop logos and brochures, etc. about these areas.

3.4-4 The County should utilize planning documents from other organizations to protect scenic areas.

**OBJECTIVE 3.5: Develop a county-wide park and recreation program that meets the needs of all Pulaski County residents.**

**Recommended Strategies:**

3.5-1. The New River Trail and Claytor Lake State parks should be protected from encroachment through land use controls and the County should work with these state parks to enhance recreational opportunities at and associated with the parks.

3.5-2. Support the County-wide Recreation Committee and conduct a pilot county-wide program based on the Committee's recommendations.

3.5-3. Cooperate with adjoining jurisdictions to develop regional park facilities.

3.5-4. Continue to encourage an active arts program in Pulaski County.

3.5-5. Develop facilities for meetings and community events.

3.5-6. Improve existing boat access and increase the number of access points to the New River and Claytor Lake.

3.5-7. Develop public access to the New River at the New River Industrial Park.

3.5-8. Continue support for Randolph Park, Harry DeHaven Park, Allisonia Boat Ramp, the Draper Mountain Overlook, and other developed County recreation sites.

**OBJECTIVE 3.6: Pulaski County recreational facilities should be distributed throughout the County and easily accessible. Play areas should be planned and coordinated throughout the living areas of the County. Multiple uses of facilities, such as schools, should be encouraged as an efficient use of public resources.**

**Recommended Strategies:**

3.6-1. Utilize the guidance provided by the Pulaski Recreation Study in evaluating park and conservation corridor locations and coordinate for a revised and updated study.

3.6-2. Acquire park sites that are located on the fringes of existing development.

3.6-3. Use local school facilities to supplement, not replace County recreational facilities.

3.6-4. Encourage subdivision developers to provide recreation sites and facilities for the use of the residents.

3.6-5. Base park planning on the Virginia Outdoors Plan Guidelines.

3.6-6. Prepare an open space and recreation plan for the County.

## COMPONENT GOAL 4

### PROVIDE THE BEST POSSIBLE DISTRIBUTION OF LAND USES THROUGH LAND USE MANAGEMENT REGULATIONS, EDUCATION & SERVICE PROVISION

#### OBJECTIVE 4.1: Retention of open space and scenic vistas.

##### Recommended Strategies:

4.1-1. Wherever possible, greenbelts should be retained, particularly: in flood prone areas, on ridgelines, in historic resources, and to protect scenic vistas. The Planning Commission should evaluate preservation measures to be used to retain open space such as:

- Agricultural/forestall districts
- Prime farmland identification
- Land banking
- Conservation easements
- Private/Non-profit conservation programs

This evaluation should be in the context of an open space plan in accordance with guidelines prepared by the Department of Conservation and Recreation Resources, Division of Planning.

The Board of Supervisors should then take appropriate actions identified by the Open Space Plan to retain open space.

4.1-2. The County should continually evaluate land practices, promoting those that are beneficial to the environment or are low impact uses, for property tax purposes and through other incentives.

#### OBJECTIVE 4.2: Protect sensitive habitat within the County.

##### Recommended Strategies:

4.2-1. The Planning Commission should prohibit development in particularly sensitive natural areas through application of its Conservation Zoning District.

4.2-2. The Planning Commission should carefully plan and manage the density of development which occurs in close proximity to Claytor Lake through Planned Unit Development, conservation easements, and other mechanisms.

**OBJECTIVE 4.3: Place high value on the County's rural character, environment, and quality of life and ensure its long-term protection.**

**Recommended Strategies:**

4.3-1. Pulaski Encouraging Progress Quality of Life Committee or a similar Committee should monitor key areas:

- Education
- Health Care
- Retail Services
- Recreation
- Hospitality
- Housing

4.3-2. The Board of Supervisors and County agencies should encourage and undertake:

- Governmental cooperation on service delivery
- Long range planning
- Addressing the County's medical service needs.

4.3-3. The County Zoning Ordinance should be updated and revised periodically to account for changes within the different Zoning districts.

**OBJECTIVE 4.4: Encourage growth in existing population nodes and focus future development into serviceable areas of the County.**

**Recommended Strategies:**

4.4-1. Limit urban expansion to those areas most suitable for new development on the basis of accessibility, extension of services, terrain, soils, and other criteria directed toward preserving Pulaski County's natural resources as indicated in the Pulaski County Future Land Use Plan and Official Zoning Map.

4.4-2. The Planning Commission should encourage the use of cluster development along major transportation routes.

4.4-3. The Planning Commission will discourage strip commercial and residential development along major transportation routes and encourage the use of clustered development.

4.4-4. The County should facilitate the incorporation of Urban Development Areas or areas designated by a locality that are appropriate for higher density development due to proximity to transportation facilities, the availability of a public or community water and sewer system, or proximity to a city, town, or other developed area.

4.4-5. The County should continue to update and amend ordinances to facilitate orderly growth.

**OBJECTIVE 4.5: Encourage the Use of Conservation or Open Space Easements in appropriate areas.**

4.5-1. The Planning Commission should facilitate the use Conservation or Open Space Easements in predetermined or assigned receiving areas.

4.5-2. The Planning Commission and applicants for Conservation or Open Space Easements should have an open dialogue in relation to future needs in the area of the easement, including but not limited to utility placement, transportation needs, and suitability in relation to future development, while still encouraging easement placement for preservation of the County's rural character, environment, and quality of life.

4.5-3. Amendments to the Comprehensive Plan that will promote the best placement of an Easement should be considered by the applicant and the Planning Commission.

**OBJECTIVE 4.6: Insuring that development occurring on karst terrain is within the limitations posed by the underlying geology particularly with respect to stormwater management and groundwater protection.**

**Recommended Strategies:**

4.6-1. The Planning Commission should restrict permitted uses allowed in the zoning ordinance to reflect the limitations of karst terrain.

4.6-2. Planning Commission should actively encourage the use of the planned unit ordinance.

## COMPONENT GOAL 5

### STRENGTHEN THE COUNTY'S EDUCATION SYSTEM

#### **OBJECTIVE 5.1: Provide an educational program that will allow the children of Pulaski County to be competitive with their peers across the state and nation.**

##### **Recommended Strategies:**

5.1-1. The County should pursue the education recommendations outlined by the Southwest Virginia Economic Development Commission, including:

- Local governments shall continue to support local spending on elementary and secondary education.
- General Assembly should fund a community college adult literacy program.
- Community colleges should focus on training and retraining the work force.

5.1-2 The County should develop and support educational and mentoring programs for all education levels for the advancement of newer technologies in the County and Region.

#### **OBJECTIVE 5.2: Strive to reach and exceed the national average in measures of academic achievement.**

##### **Recommended Strategies:**

5.2-1. The School Board and administration should in cooperation with the faculty initiate programs targeted at increasing achievement test scores at the elementary level to at least the 70th percentile.

5.2-2. The School Board and administration should in cooperation with the faculty initiate programs and activities necessary to increase achievement test scores at the middle and secondary level to at least the 70th percentile.

5.2-3. The school system shall strive to achieve an increase in the percent of students who achieve above the 60th percentile while also decreasing the percent of students who achieve below the 40th percentile.

5.2-4. School system faculty and staff should promote and encourage students at all levels to participate and achieve in academic contests, honors, SAT testing, merit scholar programs, and other academic programs.

#### **OBJECTIVE 5.3: Reduce the school drop-out rate by one-half so that ninety percent of students entering the ninth grade will graduate from high school.**

5.3-1. School system faculty and staff should set higher academic standards for both college preparatory and vocational programs of study and adopt a philosophy emphasizing the success of all students.

#### **OBJECTIVE 5.4: Address adult illiteracy and education needs.**

**Recommended Strategies:**

5.4-1. The School Board in cooperation with area industry and businesses should initiate a large-scale adult education campaign, which will significantly increase the school system's literacy and adult program offerings.

5.4-2. The school system should cooperate in developing this education campaign with the New River Community College and County business community.

5.4-3. The School Board in cooperation with area industry and businesses should undertake a program focused on increasing the number of GED (High School Graduate Equivalent Diploma) diplomas awarded in the County.

5.4-4. The School Board and staff should pursue implementation of community-based initiatives.

**OBJECTIVE 5.5: Expand and improve communication between parents, teachers, administrators, school board, and superintendent.**

**OBJECTIVE 5.6: Promote the County library system that provides a learning resource and recreational opportunity for all age groups of Pulaski County's citizens.**

**Recommended Strategies:**

5.6-1. Study future expansion of the Pulaski County Library in association with the Public schools library system.

5.6-2. Develop adequate parking space for the library facility.

5.6-3. Base planning for the library on standards of the Virginia State Library Board and the American Library Association.

5.6-4. Encourage the joint use of school and public libraries by the general public.

**OBJECTIVE 5.7: Encourage the education of the County's young people and labor force in those emerging skills required to maintain their employability in the changing work place.**

**Recommended Strategies:**

5.7-1. Pulaski Encouraging Progress should support training opportunities through New River Community College, local universities and School Board.

5.7-2. Pulaski Encouraging Progress should seek to utilize the high school and vocational school programs to encourage small business development as a part of their educational program.

5.7-3. Pulaski County should encourage and support the New River Community College in the implementation of the Workkeys assessment of students and members of the labor force to evaluate training needs and participate in changing economic conditions.

5.7-4. Provide leadership by having County Government and associated organizations have their jobs evaluated under the Workkeys Program as a model to encourage business and industry within the County to evaluate their jobs to allow the revision of the education and workforce training to support Pulaski County's employee training needs.

5.7-5. Provide job shadowing opportunities for young people in the County.

## COMPONENT GOAL 6

### INSURE THAT ADEQUATE AND EFFICIENT PUBLIC UTILITIES ARE PROVIDED TO COUNTY CITIZENS

#### **OBJECTIVE 6.1: Insure that appropriate utilities are coordinated with development and available to the citizens of Pulaski County.**

##### **Recommended Strategies:**

6.1-1. Pulaski County Public Service Authority (PSA) should implement the water supply and wastewater study.

6.1-2. The PSA should provide top priority to areas of the County planned for high-density cluster development in the construction of new community facilities, water, and sewer.

6.1-3. The PSA should prioritize alternative methods of wastewater treatment, such as modern on-site treatment options, to encourage cluster development and bring the benefits on waste treatment to more areas of the county.

6.1-4. Provide public facilities at the most efficient scale, and plan for them together with citizen choice and participation, and encourage the provision of such services to maximize total benefits. The inter-jurisdictional cooperation in developing the Pepper's Ferry Wastewater Treatment facility has been very beneficial to the County. This effort and cooperative efforts with other jurisdictions should be supported.

6.1-5. Base expansion of the water system on user studies and trends in population growth.

6.1-6. Make every attempt to guarantee that residential, commercial and industrial development discharges are to the Public Service Authority sewer system and Pepper's Ferry Wastewater Treatment facility where access is feasible.

6.1-7. Facilitate additional utilities such as high speed broadband through private public partnerships, to provide low cost service for citizens.

#### **OBJECTIVE 6.2: Meet the sewer service needs present in the County.**

##### **Recommended Strategies:**

6.2-1. The PSA should establish provision of necessary sewer service as its top priority.

6.2-2. The PSA should undertake a feasibility study of sewer service to the Claytor Lake Area.

6.2-3. The PSA should establish sewer service based on the following criteria:

1. Protection of groundwater in karst areas.
2. Development of necessary infrastructure for economic development.
3. Prevent contamination of surface waters.

6.2-4. Guide development by structuring where service will be provided rather than responding to demands for service.

## COMPONENT GOAL 7

### IMPROVE EXISTING TRANSPORTATION FACILITIES AND UNDERTAKE NECESSARY NEW ROAD CONSTRUCTION IN THE COUNTY.

**OBJECTIVE 7.1: The transportation system for the County should be developed and maintained in a manner so as to adequately serve anticipated future travel demands.**

**Recommended Strategies:**

7.1-1. The Planning Commission should limit access points on arterial highways through its Subdivision Ordinance, Zoning Ordinance, and site plan review.

7.1-2. The Planning Commission should encourage combined accesses rather than excessive numbers of entrances per use through its Zoning Ordinance.

7.1-3. The Board of Supervisors should encourage landowners to upgrade private roads to public street standards and petition for inclusion in the State Highway System; and discourage developers from constructing private roads by:

1. Linking service provision to road status.
2. Assisting landowners in understanding the public street standards for inclusion in the State Highway System.

7.1-4. The Board of Supervisors should study public transit options, particularly with respect to special populations within the County such as the elderly, handicapped and unemployed. Such a study should include participation in regional options for service provision.

7.1-6. The Board of Supervisors should evaluate the recommendations and support the provision of public transit services particularly with respect to special populations within the County such as the elderly and handicapped and to increase employment mobility.

7.1-7. The Board of Supervisors should undertake the protection of the economic development corridors between existing four lane roadways and industrial park lands.

**OBJECTIVE 7.2: Incorporate necessary road improvements into the Six-Year Improvements Program and other planning documents.**

**Recommended Strategies:**

7.2-1. The Board of Supervisors should work with the Virginia Department of Transportation and support the improvements to arterial highways entering the Pulaski County.

7.2-2. The Board of Supervisors should actively pursue incorporation of proposed projects in the Six-Year Capital Improvements Program.

7.2-3. The Board of Supervisors should actively seek improvement and maintenance for Pulaski County rural roads. The County should encourage and pursue available means to hard surface all public roads in Pulaski County.

**OBJECTIVE 7.3: Undertake road improvements that provide recreational opportunities, promote tourism and improve the County's "quality of life".**

**Recommended Strategies:**

7.3-1. The Board of Supervisors should work with the Virginia Department of Transportation to develop bike lanes in conjunction with upgrades of existing and construction of new road facilities where appropriate such as areas designated by the Central Pulaski Transportation and Land Use Master Plan.

7.3-2. Assistance should be sought from Virginia Department of Transportation and the Department of Game and Inland Fisheries to formally establish a boat landing and parking facilities along New River, particularly at the Rt. 114 Bridge.

**OBJECTIVE 7.4: Address the future needs of the New River Valley Airport in order for it to be a viable regional facility.**

**Recommended Strategies:**

7.4-1. The New River Valley Airport Commission should continue to pursue efforts to maintain the airport facility, particularly pavement maintenance and development of an advanced weather station.

7.4-2. The New River Valley Airport Commission should perform a user study and update the airport master plan so that the Commission will have a plan for continuing growth and a basis for future requests for state and federal funding.

7.4-3. The Airport Commission should pursue the strengthening of the airport's runway.

**OBJECTIVE 7.5: Support transportation improvements to provide national and international connectivity.**

7.5-1. Support the recommendations found in the Central Pulaski Transportation and Land Use Master Plan.

7.5-2. Continue to work with other localities and organizations in the region to take advantage of the transportation assets which come together at Dublin through support for continued work on the development of an intermodal transportation center

7.5-3 Continue to support passenger rail transportation for the New River Valley.

## COMPONENT GOAL 8

### PROVIDE EFFICIENT AND EFFECTIVE COUNTY GOVERNMENT

#### **OBJECTIVE 9.1: Plans made in County government should involve citizen participation and input during the entire process.**

##### **Recommended Strategies:**

- 9.1-1. All County agencies should conduct citizen surveys on relevant topics.
- 9.1-2. All County agencies should have a broad notification program prior to opportunities for public comment.
- 9.1-3. The County staff should continue to involve citizens in Committees guiding County projects.
- 9.1-4. The Board of Supervisors should continue to provide for citizen comments.
- 9.1-5. The County staff should continue to support development of events calendars, listings of community organizations, publicizing community events and educational opportunities, and publicizing additional programs.

#### **OBJECTIVE 9.2: Develop effective tools for implementing the Comprehensive Plan.**

##### **Recommended Strategies:**

- 9.2-1. The Planning Commission should keep the Comprehensive Plan current and realistic. The plan must always protect the public health, safety, and welfare of all the citizens of Pulaski County.
- 9.2-2. The Planning Commission and County staff should endeavor to insure that land transfers and development are in keeping with the requirements of the County's land use management ordinances.

#### **OBJECTIVE 9.3: Provide government services as efficiently and effectively as possible; maintaining a constant commitment to providing the highest quality of administration and service provision at the lowest cost possible.**

##### **Recommended Strategies:**

- 9.3-1. Public Service Authority, School Board and other County agencies should develop a complete maintenance program for County facilities that is based on equipment life costing and includes preventative maintenance.
- 9.3-2. All County agencies should provide timely response to citizen complaints about service; courteous response to such complaints and track the occurrence of trends in complaints as to type service, frequency and location.
- 9.3-3. Coordinate inter-agency and inter-department communication and cooperation.
- 9.3-4. Expand Information Systems to improve services to the public and improve efficiency of governmental services.

9.3-5. The County staff should insure that ordinances and regulations are updated and refined on a regular basis.

9.3-6. The County staff should maintain an active grantsmanship program.

**OBJECTIVE 9.4: Whenever possible, support government services through rate structures that allows the service to be self-supporting and so that the beneficiaries of the service bear the cost of service provision.**

**Recommended Strategies:**

9.4-1. The Public Service Authority should maintain its mandatory usage policy for water and sewer and solid waste collection.

**OBJECTIVE 9.5: Encourage Volunteerism.**

**Recommended Strategies:**

9.5-1. The County staff should identify and list community projects that are needed.

9.5-2. County government should assist in coordinating civic group participation in community projects.

**OBJECTIVE 9.6: Balance the need for regulation with resulting costs and delays.**

**Recommended Strategies:**

9.6-1. The Planning Commission should review land development regulations so that resulting costs and delays are balanced against and justified by the public purposes achieved.

9.6-2. County projects should set the example for quality, appearance and functionality, so that the citizenry have high quality services and facilities and the development community understands what is expected of them.

**OBJECTIVE 9.7: Develop adequate administration facilities.**

**Recommended Strategies:**

9.7-1. The County staff should coordinate development of a plan for utilizing vacant facilities for new uses. This will include:

1. An overview of facility replacement time schedule.
2. Identification of ways to improve utilization of currently under-utilized structures.
3. Prioritized space needs and identify locations that are best suited to particular activities.
4. Estimate renovation costs and budget for necessary expenditures.

**OBJECTIVE 9.8: Reduce the volume of solid waste reaching the landfill.**

**Recommended Strategies:**

9.8-1. The New River Resource Authority should continue to encourage a recycling strategy in cooperation with its member jurisdictions, including Pulaski County that will result in increased recycling rates.

9.8-2. The Board of Supervisors should require all County departments and agencies to implement internal recycling programs and modify procurement policies to promote the purchase of recycled products.

9.8-3. All County agencies should work with the Clean Community Council, PTO, New River Resource Authority and other agencies and organizations to develop programs that make all County citizens aware of the need to recycle and how to recycle.

9.8-4. The Board of Supervisors should continue the requirement of mandatory garbage pick up in Pulaski County.

9.8-5. The Board of Supervisors should support programs and legislative initiatives that reduce the per capita production of solid waste by discouraging superfluous packaging and by encouraging the use of recyclable packaging materials.

9.8-6. The County should explore additional recycling efforts such as composting, and curb side single-stream recycling.

## COMPONENT GOAL 10

### **PROVIDE HIGH QUALITY AND TIMELY EMERGENCY RESPONSE SERVICES AND PROMOTE AND STRENGTHEN MEDICAL SERVICES IN THE COUNTY**

**OBJECTIVE 10.1: All possible efforts should be applied to lowering the ISO ratings in the County.**

**Recommended Strategies:**

10.1-1. The Emergency Services Coordinator should maintain a complete and up-to-date appraisal of fire station and fire protection adequacy.

10.1-2. The Fire Protection Committee should support and facilitate developing a comprehensive training program for all fire response personnel.

**OBJECTIVE 10.2: Insure that emergency services agencies are properly equipped to meet the County's emergency response needs.**

**Recommended Strategies:**

10.2-1. The Board of Supervisors should continue the planned equipment replacement program.

10.2-2. The County Emergency Services Coordinator should assist the Emergency Medical Services Council to coordinate providing necessary equipment and facilities to the County's rescue squads.

**OBJECTIVE 10.3: Provide a well prepared and organized emergency response.**

**Recommended Strategies:**

10.3-1. The Board of Supervisors, business community and the emergency response community should fully support the Pulaski County Local Emergency Planning Committee and Fire Prevention Committee.

10.3-2 The Emergency Services Coordinator should implement and maintain the all permissible technologies including Emergency Awareness systems and updates E-911 systems.

**OBJECTIVE 10.4: Recognize the County's volunteer emergency responders as committed and important individuals to both their communities and the County as a whole.**

**OBJECTIVE 10.5: Continue to provide and strive for increased access to medical facilities for County Citizens.**

**Recommended Strategies:**

10.5-1 The County should conduct a study to determine the current and future Medical needs for County Residents.

10.5-2 Additional Services for the Elderly, low income, handicapped, and other need based groups should be provided at a manageable cost.

10.5-3 Addiction treatment services should be encouraged by the County.

10.5-4 Information related to medical services provided by the County, State, and Federal governments, and non-profit and private business should be available to all citizens in a simple to use and understandable format

TABLE 22

ENDANGERED FLORA, FAUNA, AND COMMUNITIES.

Scientific Name	Common Name	<u>Global Rank</u>	<u>State Rank</u>	<u>Federal Status</u>	<u>State Status</u>	Last Year Observed
<b>Pulaski</b>						
AMPHIBIANS						
<a href="#"><u><i>Cryptobranchus alleganiensis</i></u></a>	Hellbender	G3G4	S2S3		SC	1969
ARACHNIDA (SPIDERS & PSEUDOSCORPIONS)						
<a href="#"><u><i>Rhagidia varia</i></u></a>	A Cave Mite	G5	S2?			pre1
BIRDS						
<a href="#"><u><i>Ammodramus henslowii</i></u></a>	Henslow's Sparrow	G4	S1B		LT	2001
<a href="#"><u><i>Haliaeetus leucocephalus</i></u></a>	Bald Eagle	G5	S2S3B,S3N		LT	2007
BIVALVIA (MUSSELS)						
<a href="#"><u><i>Lasmigona subviridis</i></u></a>	Green Floater	G3	S2		LT	1981
COLEOPTERA (BEETLES)						
<a href="#"><u><i>Pseudanophthalmus sp.</i></u></a> <a href="#"><u>7</u></a>	A Cave Beetle	G1	S1	SOC		pre1
COMMUNITIES						
Natural Community	Montane Dry Calcareous Forest /	G2	SNR			2001

	Woodland					
Natural Community	Rich Cove / Slope Forest	G3G4	SNR			2008

CRUSTACEA  
(AMPHIPODS,  
ISOPODS &  
DECAPODS)

<a href="#"><i>Caecidotea henroti</i></a>	Henrot's Cave Isopod	G1G2	S1S2	SOC		1978
<a href="#"><i>Stygebromus abditus</i></a>	James Cave Amphipod	G2G3	S2	SOC		1998

DIPLOPODA  
(MILLIPEDES)

<a href="#"><i>Trichopetalum packardi</i></a>	Packard's Blind Cave Millipede	G4	S2			pre1
---	--------------------------------	----	----	--	--	------

DIPLURA  
(DIPLURANS)

<a href="#"><i>Litocampa sp. 3</i></a>	A Cave Dipluran	G2	S2	SOC		1979
--	-----------------	----	----	-----	--	------

FISH

<a href="#"><i>Etheostoma osburni</i></a>	Candy Darter	G3	S1		SC	1954
<a href="#"><i>Phenacobius teretulus</i></a>	Kanawha Minnow	G3G4	S2S3			1972

GASTROPODA  
(SNAILS)

<a href="#"><i>Polygyriscus virginianus</i></a>	Virginia Fringed Mountain Snail(=Virginia coil)	G1	S1	LE	LE	1989
---	---	----	----	----	----	------

LEPIDOPTERA

(BUTTERFLIES & MOTHS)

[Speyeria idalia](#) Regal Fritillary G3 S1 2006

ODONATA  
(DRAGONFLIES & DAMSELFLIES)

[Aeshna tuberculifera](#) Black-tipped Darner G4 S2S3 1999

SIGNIFICANT CAVES

Significant cave Significant Cave G3 SNR 2004

VASCULAR PLANTS

[Buckleya distichophylla](#) Piratebush G2 S2 SOC 1987

[Cardamine flagellifera](#) A Bittercress G3 S1 1939

[Cheilanthes eatonii](#) Chestnut Lipfern G5? S2 1981

[Cheilanthes feei](#) Fee's Lipfern G5 S1 1998

[Echinacea laevigata](#) Smooth Coneflower G2G3 S2 LE LT 2001

[Eurybia surculosa](#) Creeping Aster G4G5 S1 1974

[Hasteola suaveolens](#) Sweet-scented Indian-plantain G4 S2 1976

[Muhlenbergia cuspidata](#) Plains Muhly G4 S2 1991

[Oligoneuron rigidum var. rigidum](#) Stiff Goldenrod G5T5 S2 1991

[Paxistima canbyi](#) Canby's Mountain-lover G2 S2 SOC 1991

[Phlox buckleyi](#) Sword-leaved Phlox G2 S2 SOC 1986

[Viola walteri](#) Prostrate Blue Violet G4G5 S2 1991