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Prologue

All community input for this plan is deeply appreciated, including photos. Photos with no credits listed are by County staff.

*While there are many data sources for this plan, the maps deserve special note. Maps can be extremely effective at conveying vast amounts of information. Consequently, maps were drawn from a wide variety of sources. Most notably, several regional maps were used when Floyd County-only maps were not available. For example, the New River Valley maps show the Counties of Floyd, Giles, Montgomery and Pulaski as well as the City of Radford. Also, maps showing the Counties of Floyd and Patrick were used, courtesy of the Rocky Knob Sustainable Tourism Centerpiece Study by Virginia Tech and Clemson, 2009. Lastly, the New River Land Trust also shared maps it created in 2010. All of these maps significantly enhance the planning tools available in Floyd County. **Maps layers which together comprise the official County map are Map 27 Floyd County Facilities, Map 32 Floyd-Floyd County Public Water Expansion Areas, Map 33 Floyd-Floyd County Public Wastewater Expansion Area, Map 48 Future Property Use, and Appendix E Public Roads in Floyd County.***

Executive Summary

Planning is a responsibility and an opportunity for Virginia localities. Local government planning is designed to identify what needs to happen for the community's best long-term interests. The County Comprehensive Plan should improve public health, safety, convenience and welfare of its citizens and guide growth and development through policy and investments so that public resources are spent wisely and efficiently. It is a pro-active way to address change.

This Plan is written based on facts, analysis and community input received from a variety of forums. Protecting agriculture, forests and water were the top community concerns; on this desired outcome, there was remarkable consensus. Other priority items include increasing light industry, technology and innovation jobs, exploring alternative energy, promoting energy efficiency, and providing more assistance to small businesses, including increasing specialty crop production and local food processing. There was also great interest in developing assisted living in the County and improving recycling.

Floyd County sits atop the Blue Ridge Plateau and thus all water flows out. Water supplies are therefore limited to headwater streams and fractures of relatively young water underground. Floyd County is thus especially susceptible to drought. The flow of private wells are further jeopardized during drought by the addition of more wells nearby which may hit the same fracture network. Due to this sensitivity, major residential subdivisions should be directed to areas that are or can be served by centralized systems.

Over 1,800 residential parcels were created from 2002 to 2009. From 2007 to 2009 alone, over 2,000 acres of farmland were converted to residential-sized parcels. Rapid growth in residences has financial consequences for the County. Whereas, based on recent analysis it is estimated that farms and forests yield \$1 in local taxes for every \$0.35 they cost in services on average, residential development requires \$1.09 in services for every \$1 paid in local taxes. Moreover, recent residential developments have most often been on narrow, unimproved roads far removed from County services because they are cheaper for developers to acquire. This type of development adds considerable time and costs to public safety calls, solid waste transport and school transportation plus adds traffic to roads ill-prepared to handle it.

The protection and continuation of farming and forestry may require new markets and new techniques to keep or attract farmers. It will definitely require the availability and affordability of farm and forest land. Areas now identified via map layers as ideal for farms and forests should be actively preserved as such, or else they will continue being converted to residential parcels. Property use decisions on any given parcel can have immediate effects across neighboring properties and public roads. In the long run, those decisions affect the community at-large, from decreasing food and fiber supply to substantially increasing County service costs.

Historically, the County was first settled by people who enjoyed the mountains and the independence they engendered. Today, Floyd Countians of all types have a strong love of place; the farms and forest lands are still cherished by those who have chosen to stay or come here, as is the attitude of live-and-let-live. Yet, to protect the remaining treasured lands and landscape in much of the County, thoughtful limits need to be placed on development. For example, at present, the vast majority of land in the County could have the future use determined by the highest bidder, who may never live in the community; these uses could be very detrimental to working farms, water supplies, or existing homes and businesses. In short, new policies are needed to protect farm, forest and water resources.

Guiding development and limiting service cost escalations will require some difficult decisions. While preserving flexibility for land owners is important, those freedoms must be balanced by the responsibilities to adjacent landowners and the community at-large. Continuing with virtually unlimited development options has its risks and its costs, both now and later. Most citizens who participated in the community input sessions strongly favored the use of more planning tools over loss of farmland, haphazard development, depletion of water supplies and increasing costs of community services.

Identifying areas most appropriate for business development is also important. For the good of local residents and businesses, it is imperative that the number of good jobs be increased in the County. This might include processing of local foods. Growing local businesses is important, as is targeted tourism growth. Due to local and regional assets, other important opportunities include light manufacturing, technology and innovation. A diverse economy is essential for strength.

At present, the County faces notable financial challenges due, in part, to residential growth, unfunded mandates passed down from the State and Federal governments, and the poor economy. Prioritized strategies identified here include:

- Establishing a Farm and Forest Task Force to identify economic opportunities, prioritize and tap them.
- Establishing a Land Policy Task Force to conduct requisite analysis and draft specific land policy documents.
- Staff and the Economic Development Authority developing an Economic Development Strategic Plan to target best opportunities and coordinate efforts.
- Developing a list of capital needs based on growth trends and life expectancy of current assets, to help manage timing of future expenditures.

In summary, here is a plan for a creative, prosperous and resilient Floyd County that respects its people and protects its farms, forests and water for future generations.

CHAPTER 1.

WHAT IS A COMPREHENSIVE PLAN?

Planning is an everyday occurrence for most of us: deciding what we must get accomplished in a day or how much we can afford to spend on a home, a car or groceries. Planning is important, not just for individuals, but for communities. The Code of Virginia requires planning in all counties and towns (§15.2-2223); the declaration of legislative intent (§ 15.2-2200) states:

This chapter is intended to encourage localities to improve the public health, safety, convenience and welfare of its citizens and to plan for the future development of communities to the end that transportation systems be carefully planned; that new community centers be developed with adequate highway, utility, health, educational, and recreational facilities; that the need for mineral resources and the needs of agriculture, industry and business be recognized in future growth; that residential areas be provided with healthy surroundings for family life; that agricultural and forestal land be preserved; and that the growth of the community be consonant with the efficient and economical use of public funds.

See Early Planning in Virginia for information about how Jamestown was planned for the well-being of its inhabitants.

Early Planning in Virginia: Jamestown

Adapted from the Managing Growth and Development in Virginia, 2010

Planning is a dynamic process localities use to prepare for change. In Virginia, community planning is primarily the responsibility of local governments. The practice of land use planning in Virginia can be traced to the English settlement at Jamestown, 400 years ago. The fort that sprang up along the James River in 1607 was, in many respects, a planned community, though their foreknowledge of the New World and its dangers were limited. The schematic that became Jamestown featured principles long associated with the 20th century planning technique known as PUDs, or Planned Unit Developments. Planning concerns influencing the Jamestown of 1607 included security issues, access and internal movement considerations, the use and preservation of indigenous natural resources, the procurement and storage of drinking water, the collection and disposal of waste, as well as discernment regarding the location of residential areas within the fort in relationship to needed processing and manufacturing enterprises. On this point, standards governing the minimum distance separating residential areas from processing and manufacturing operations, as well as outdoor privies, were established and strictly enforced. In short, the settlement at Jamestown was designed, constructed and managed with full consideration given, based on their limited knowledge, to the well-being and general welfare needs of its inhabitants.

This document updates the Floyd-Floyd County Comprehensive Plan, originally prepared in 1977 and last updated in 2002, into the Floyd County Comprehensive Plan. This update evaluates the County's recent development trends, captures the vision of the future based on community input, and provides a guide for achieving that vision. The Plan addresses the governmental actions which need to be undertaken to encourage preferred development patterns, to foster and protect private investments, and to best manage resources.

Again according to The Code of Virginia §15.2-2223, the purpose of the comprehensive plan shall be "guiding and accomplishing a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants including the elderly and persons with disabilities." Note the emphasis on balancing things that are often at odds: present and future, health and prosperity, convenience and order.

In short, the Comprehensive Plan is a framework for the long-range allocation of community resources to meet identified needs. It is general in nature and focuses on the physical development of the jurisdiction in light of the natural, social and economic factors unique to Floyd County. In combination with ordinances, policies and a capital improvement plan, the Comprehensive Plan charts a course for the well-being of the community, from citizens' opportunities to meet basic needs to local government's ability to meet its obligations and achieve fiscal balance.

**What the Comprehensive Plan MAY Include
According to the Code of Virginia §15.2-2223**

The Plan, with the accompanying maps, plats, charts, and descriptive matter, shall show the locality's long-range recommendations for the general development of the territory covered by the plan. It may include, but need not be limited to:

1. The designation of areas for various types of public and private development and use, such as different kinds of residential, including age-restricted, housing; business; industrial; agricultural; mineral resources; conservation; active and passive recreation; public service; flood plain and drainage; and other areas;
2. The designation of a system of community service facilities such as parks, sports playing fields, forests, schools, playgrounds, public buildings and institutions, hospitals, nursing homes, assisted living facilities, community centers, waterworks, sewage disposal or waste disposal areas, and the like;
3. The designation of historical areas and areas for urban renewal or other treatment;
4. The designation of areas for the implementation of reasonable ground water protection measures;
5. A capital improvements program, a subdivision ordinance, a zoning ordinance and zoning district maps, mineral resource district maps and agricultural and forestal district maps, where applicable;
6. The location of existing or proposed recycling centers;
7. The location of military bases, military installations, and military airports and their adjacent safety areas; and
8. The designation of corridors or routes for electric transmission lines of 150 kilovolts or more.

Also, the County may designate an "urban development area" means an area designated by a locality that is (i) appropriate for higher density development due to its proximity to transportation facilities, the availability of a public or community water and sewer system, or a developed area and (ii) to the extent feasible, to be used for redevelopment or infill development.

**What the Comprehensive Plan MUST Include,
according to the Code of Virginia**

§15.2-2223 *(continued)*

The comprehensive plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement, shown on the plan and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use as the case may be.

As part of the comprehensive plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities. The plan should recognize and differentiate among a hierarchy of roads such as expressways, arterials, and collectors. The Virginia Department of Transportation shall, upon request, provide localities with technical assistance in preparing such transportation plan.

The plan shall include: the designation of areas and implementation of measures for the construction, rehabilitation and maintenance of affordable housing, which is 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.

The plan shall include: a map that shall show road improvements and transportation improvements, including the cost estimates of such road and transportation improvements as available from the Virginia Department of Transportation, taking into account the current and future needs of residents in the locality while considering the current and future needs of the planning district within which the locality is situated.

§15.2-2224

Studies or information on:

- *Use of land, preservation of agricultural and forestal land, production of food and fiber, characteristics and conditions of existing development, trends of growth or changes, natural resources, historic areas, ground water, surface water, geologic factors, population factors, employment, environmental and economic factors, existing public facilities, drainage, flood control and flood damage prevention measures, dam break inundation zones and potential impacts to downstream properties to the extent that information concerning such information exists and is available to the local planning authority, the transmission of electricity, road improvements, and any estimated cost thereof, transportation facilities, transportation improvements, and any cost thereof, the need for affordable housing in both the locality and planning district within which it is situated, and any other matters relating to the subject matter and general purposes of the comprehensive plan.*

- *Probable future economic and population growth of the territory and requirements therefor.*

This Comprehensive Plan Update is based on two foundations: (1) factual information about the County's present and past, and (2) attitudes and desires of the citizens concerning future development of their county as expressed ultimately through the elected officials and their appointees.

This Plan Update was drafted by the Planning Commission through citizen input and staff assistance. Final wording of the Plan is decided by the Board of Supervisors. The Plan strives to promote and protect agriculture and rural character, while encouraging other economic opportunities that fit the needs of the community. Specifically the plan seeks to prevent haphazard and incompatible land development, which have many high costs in the near and long term.

It further strives to respect private property rights. Private property rights include the right of the owner to use the property, exclude others from the property and sell the property. Private property rights also include fair protection from negative effects of certain potential changes to other properties in the community. That is to say, the right of one person to use their property extends only so far as it does not unduly inhibit the basic rights of other property owners. For example, the location of certain mining may be inappropriate near residences because of potential negative impacts on to the residences' wells.

In combination with future studies, policies, ordinances, and a capital improvement plan, the Comprehensive Plan will achieve the community priorities of:

- Protecting agriculture, forests, and water resources (by first identifying and classifying all areas of the County based on the physical landscape and natural resources; then identifying and evaluating all land policy tools available to help guide future growth to current or planned availability of services.)
- Promoting agriculture, including new opportunities for growth and value-added processing.
- Increasing job and income opportunities through strategic investments and policies (including protecting private investment), by supporting small businesses and increasing light industry, technology and innovation jobs.
- Exploring alternative energy systems as well as available resources for weatherizing homes in the County.
- Analyzing the various housing needs of the residents of the County and encourage collaboration to meet them, including supporting development of assisted living.
- Encouraging the development of pedestrian walkways, trails and bike lanes.
- Planning for cost-efficient and cost-effective provision of services, including study of waste collection options.

Chapter 1.
What is a Comprehensive Plan

Summary and Conclusion

- A Comprehensive Plan is required of Virginia localities. Its purpose is to improve the public health, safety, convenience and welfare of citizens through the planning of adequate land and resources for agriculture, forests, transportation, affordable housing, etc. and public facilities.
- Jamestown was in many ways a planned community, laid out to provide for the well-being of residents.
- A Comprehensive Plan can chart a course for accomplishing important community goals, including the efficient and economical use of public funds.

CHAPTER 2.

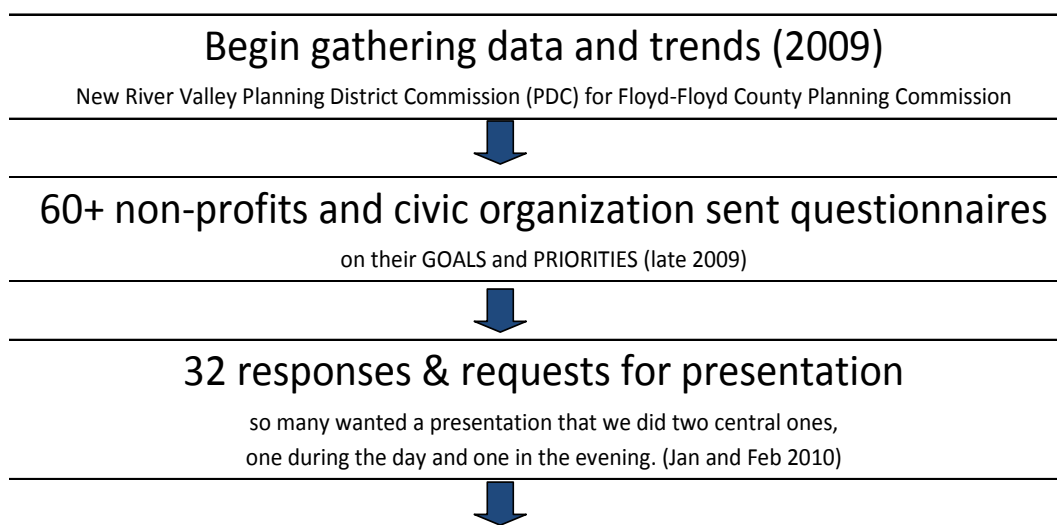
WHAT DOES OUR COMMUNITY WANT TO BE?

This written plan is the culmination of work that began over a year ago to understand and document where the community is and where it wants to go. To assure a broad cross-section of community concerns were gathered for this Comprehensive Plan update, several methods were used to invite citizen participation. Also, an online business survey was conducted and is summarized in Chapter 5.

First, a questionnaire was sent to over 60 civic groups and non-profits, inviting them to share their goals, plans and needs for the next few years. Over 30 shared their ideas and requested more information on the comprehensive planning process. Consequently, two meetings were held in early 2010, a day and evening meeting, to share background data and welcome input for the plan. From those meetings, key themes emerged and focus group meetings were set up.

Figure 1

FLOYD COUNTY COMPREHENSIVE PLANNING



Focus Groups

Focus group participants were sought by topic area: attendees from the above meetings were invited, as well as the public through newspaper articles, website notices and emails. See topics at right. Input received at these meetings prompted further research and analysis and provided the basis for ideas shared at the community input meetings.

Figure 2



Community Input Sessions

Four community input sessions were held in the summer of 2010: in Indian Valley, Willis, Floyd, and Check. Notice of the meetings was mailed to all property owners as well as published in the local paper and through flyers at stores.



Photo by Kevin Byrd

At these meetings development trends were presented, as were the ideas gathered at focus group meetings. Staff answered questions about the information presented and then attendees were given ranking sheets to help narrow focus and prioritize ideas for the Plan. People who attended multiple meetings were only allowed to submit one ranking sheet. Additional comments were also received at these sessions. Figure 3 lists the Top 10 highest response rankings from these meetings. These priorities were used as the foundation of this plan. Figure 4 shows sample comments. *A complete list of comments is available on request.*

Figure 3: Top 10 Ideas from Community Ranking Sheets

1. Preserve Agriculture and forest areas
2. Protect agricultural land and water resources through zoning
3. Increase light industry, technology, and innovation jobs
4. Increase opportunities to process local foods into more products
5. Explore Alternative Energy Systems
6. Provide more assistance to small business
7. Increase Vegetable and Specialty crop production
8. Develop an Assisted Living Facility in the County
9. Expand recycling and study waste collection options for cost efficiencies
10. Develop pedestrian walkways, trails, and bike lanes



Figure 4
**Sampling of Written Comments from Community Input Session that shaped
Floyd County's Goals and Objectives:**

~As the historical backbone of Floyd, loss of agricultural lands hurts our potential sustainability in future hard times (or everyone's) and robs us of our cultural roots.

~Absolute need for agricultural zoning to not only allow farming and continue here but also to maintain enough green space that wildlife is not forced into our yards, gardens, barns, and the middle of the road.

~We need industry in our county, we need to put people to work.

~We need zoning in the county to assure our growth respects our resources. We need to study cluster development.

~Encourage more farming and on-farm processing. Facilitate added value opportunities for farmers and home producers.

~No Zoning! Neighbors should be able to do whatever they want on their property and I can do what I wish with mine. This nation has always been like this and we've had no problems. All this property belongs to God, not us. He can take care of it and us. Amen.

~We need to put a priority on preserving agriculture in Floyd. Zoning and tax incentive program will be necessary to accomplish this. The farmer cannot make it here without organized support.

~Our kids need facilities (fields, movies, swimming etc.)

~Preserve marshes. Restore creeks back to marshes that have been destroyed by livestock. Marshes are very important for water replacement in aquifers.

~Must begin working towards a 'one stop shop' for all social services.

~Keep out large box stores.

~Bike lane from town of Floyd to Parkway would be great for tourism.

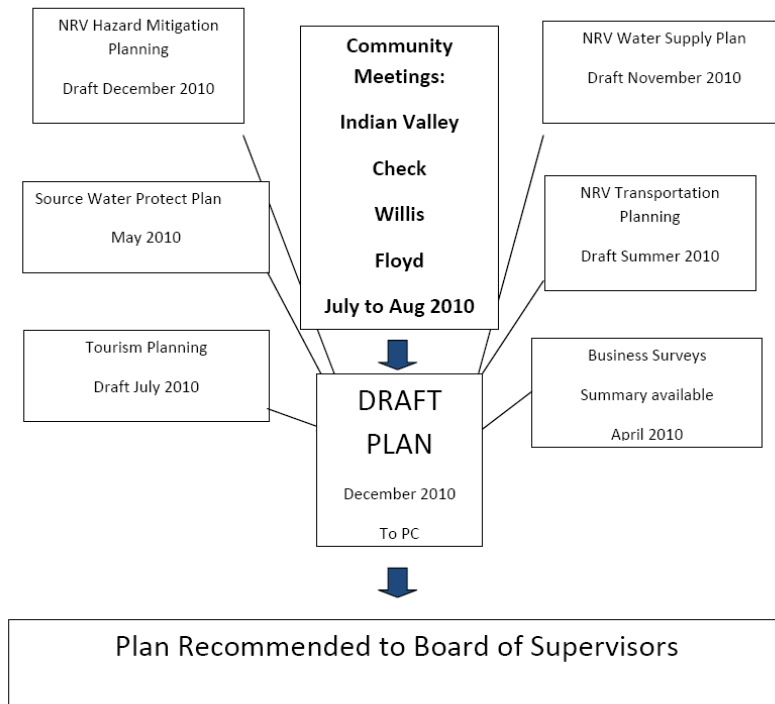
~Cluster low rent housing near services

~Affordable housing, and appropriate housing for elders is important.

In addition to the Focus Group meetings and the Community Input meetings in various parts of the County, a “Common Ground” meeting was held in July 2010 in conjunction with the Virginia Department of Conservation and Recreation and the New River Land Trust. Invitations were sent to farmers, and they were asked to share their concerns and ideas about the land in Floyd County. Many attended and expressed concern about the economic viability of farming. Specifically, concerns about increasing input costs, decreasing revenue, and access to financing and enough land were shared.

While factual data provides the background of the plan, the direction was set by the community input for this plan and other community-drive plans (see Figure 5.)

Figure 5 COMPREHENSIVE PLAN INPUTS, PART II



Chapter 2.
What Does Our Community Want to Be?

Summary and Conclusion

A lot of community input was gathered for this plan. The majority of the community input might be summarized in one simple “vision” statement:

Floyd County is a creative, prosperous, and resilient community that respects its people and protects its farms, forests and water for future generations.

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CHAPTER 3.

WHAT ARE OUR NATURAL RESOURCES?

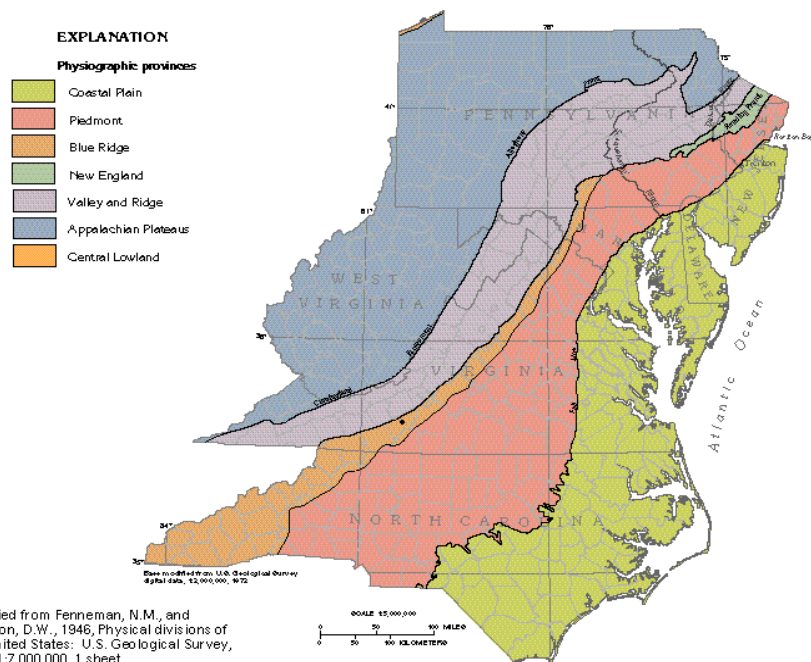
Technology allows for a high degree of change to the natural environment, yet smart development recognizes existing soils, geology, slope, water resources and climate as important determinants of carrying capacity and best uses. The following environmental and natural resource information thus help establish the basis for future land use planning: what land is ideal for agriculture and forests, how to protect ground water resources, and where development can best be supported.

General Physiographic Features

Floyd County consists of 382 square miles; 143,873 acres of forest land and 100,108 acres of non-forest land (Virginia Statistical Abstract). There is one municipality, the Town of Floyd. The Town of Floyd is 0.6 square mile in area, or about 384 acres (Virginia Review Directory of State and Local Government). The town is rectangle-shaped and is located in the central section of the County, at the crossroads of the main thoroughfares.

Floyd County is situated in the Blue Ridge Uplands, a part of the Blue Ridge Physiographic Province which extends from New York to northwestern Georgia (Map 1). The County is bordered on the southeast by the Blue Ridge Escarpment, the boundary between the Blue Ridge and Piedmont Physiographic Provinces. The change in elevation between the provinces may be as much as 1,300 feet.

Map 1 Physiographic Provinces



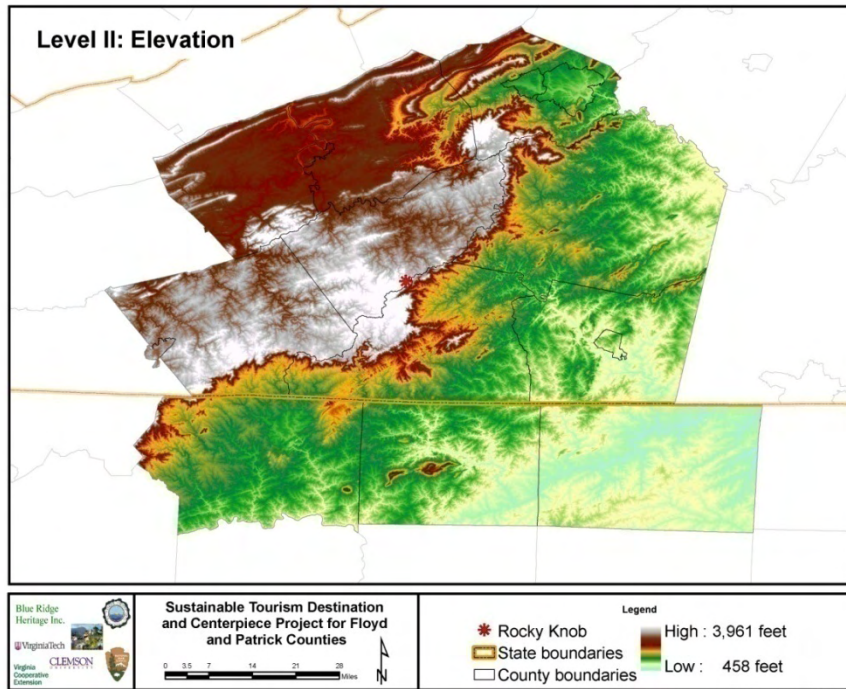
Elevations in the County generally range from 2,000 to 3,000 feet (see Map 2), significantly higher neighboring counties to the north, south, and east. This results in long distance views from ridge tops in Floyd County and especially from certain vantage points along the Blue Ridge Parkway.



Photo by Charlie Martin

From atop Buffalo Mountain, Indian Valley is visible on the left and Wills Ridge on the right.

Map 2



Source: U.S. Geological Survey, EROS Data Center, Sioux Falls, SD



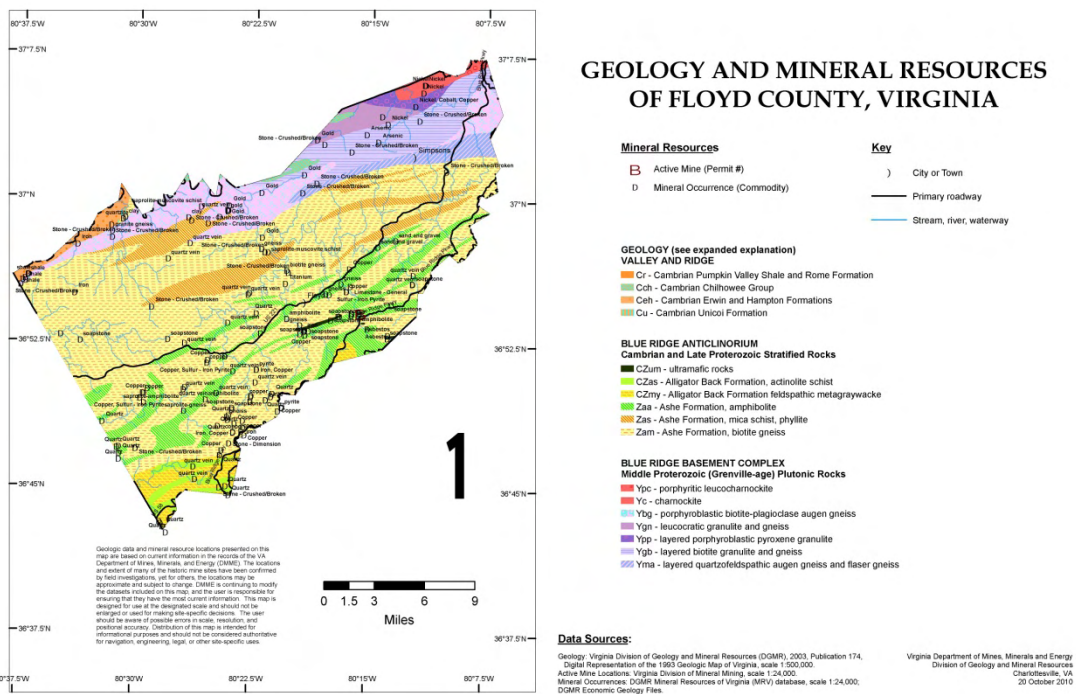
Buffalo Mountain is a monadnock, which rises nearly 1,000 feet above the surrounding upland. See photo at left. Its summit is 3,961 feet. Buffalo Mountain and approximately a thousand surrounding acres are now protected as a state Natural Area Preserve. Wills Ridge, a lesser monadnock, reaches 3,380 feet at its highest point.

The physiography of the County is characterized by gently rolling land. Most of the land is more suited to grazing and forestry than to large-scale cultivation and urban types of development. Nearly half of the County's total acreage is forested; however, there are no National Forest holdings. With the exception of a small number of acres in federal ownership along the Blue Ridge Parkway, all forest land is in private ownership.

Geology and Minerals

Almost all of Floyd County is underlain by Pre-Cambrian igneous and metamorphic rocks. They are complex, vary in age, and include the granites, gneisses and schists of the Leatherwood granite and Wissachickon and Lynchburg gneiss formations (see Map 3). A small portion of northwestern Floyd County is underlain by sedimentary materials, the quartzites, sandstones and shales of the Unicoi, Erwin and Hampton formations. The rock substrate of the County generally possesses load bearing capacities acceptable for development.

Map 3

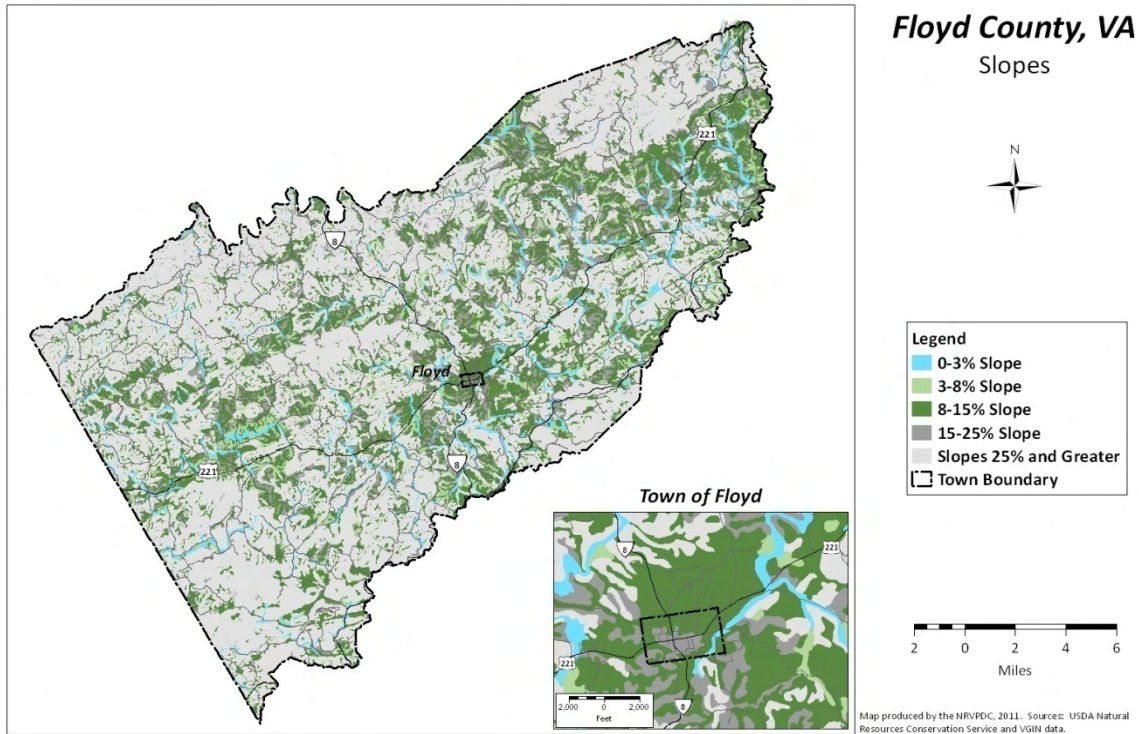


Currently, the only mineral being extracted in Floyd County is amphibolite (a rock quarry). Historically a variety of mineral extraction and processing sites and mineral occurrences have been reported in Floyd County to the Virginia Department of Mines, Minerals and Energy, including: quartz, sand and gravel, soapstone, biotite gneiss, sapolite-muscovite schist, gneiss, copper, iron, clay, gold, pyrite, shale, pig iron, nickel, cobalt, arsenic, stone-crushed/broken, asbestos, and titanium. Places like Copper Hill were named for minerals.

Old mines as well as abandoned wells pose considerable threats for groundwater contamination, with all drinking water coming from groundwater in the County. Essentially these sites can provide direct routes for any contaminants to reach groundwater unless they are properly closed off.

The Floyd County Slope Map (Map 4) highlights the effect of rock formations and the attributing slope conditions. This information is important when determining future growth locations as development is better suited to areas with limited slopes.

Map 4

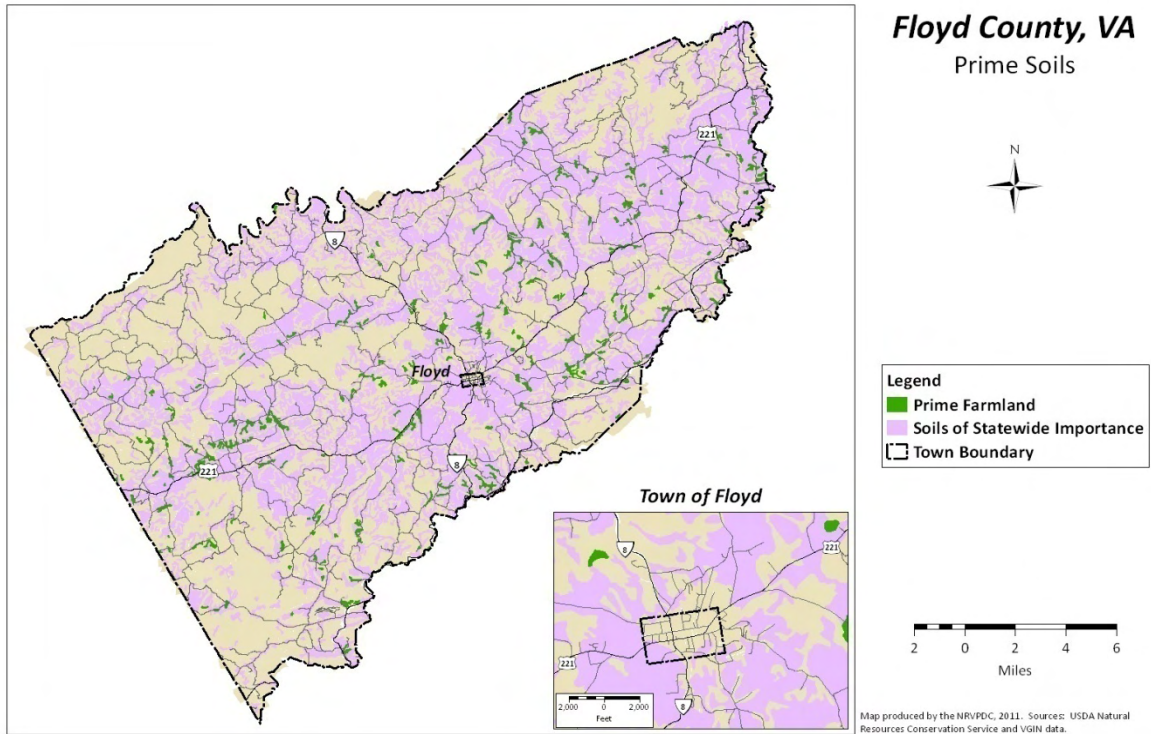


Soils

A detailed soil survey of Floyd County was completed by the USDA around 2008. Appendix A includes tables of soils in the County. Additionally, Appendix A includes soils that are broken down into two main categories when dealing with areas that would benefit from agricultural uses; these are Prime Farmland and Farmland of Statewide Importance. The Floyd County Agricultural Soils Map, Map 2, shows the soils in the County per the following categories:

- **Prime Farmland:** Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops.
- **Farmland of Statewide Importance:** Land in addition to prime that is of statewide significance for production and identified as such by state agencies (USDA-SCS and Extension Service).

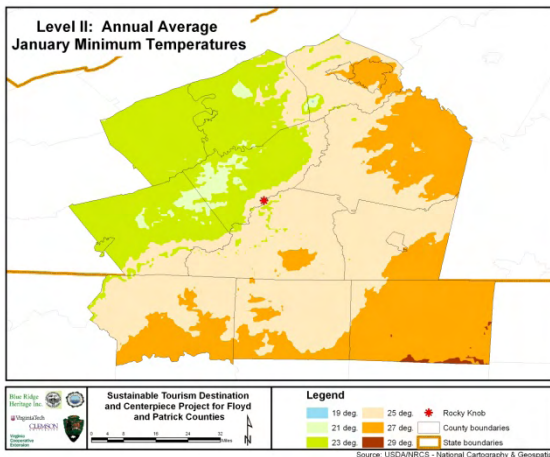
Map 5: Floyd County Agricultural Soils



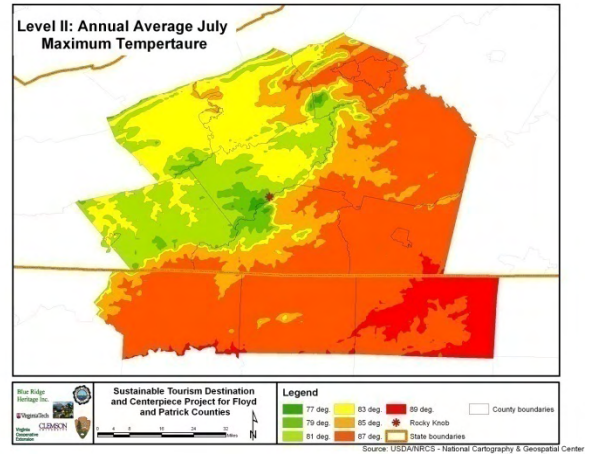
Climate

Floyd County's climate is characterized by moderately mild winters and warm summers. Average low temperatures range from 19 degrees Fahrenheit in January to 58 degrees Fahrenheit in July. Average high temperatures range from 41 degrees Fahrenheit in January to 83 degrees Fahrenheit in July. See average minimum and maximum temperature maps below (Maps 6 and 7). Note that summers tend to be somewhat cooler here than neighboring counties to the east, north and south.

Map 6



Map 7

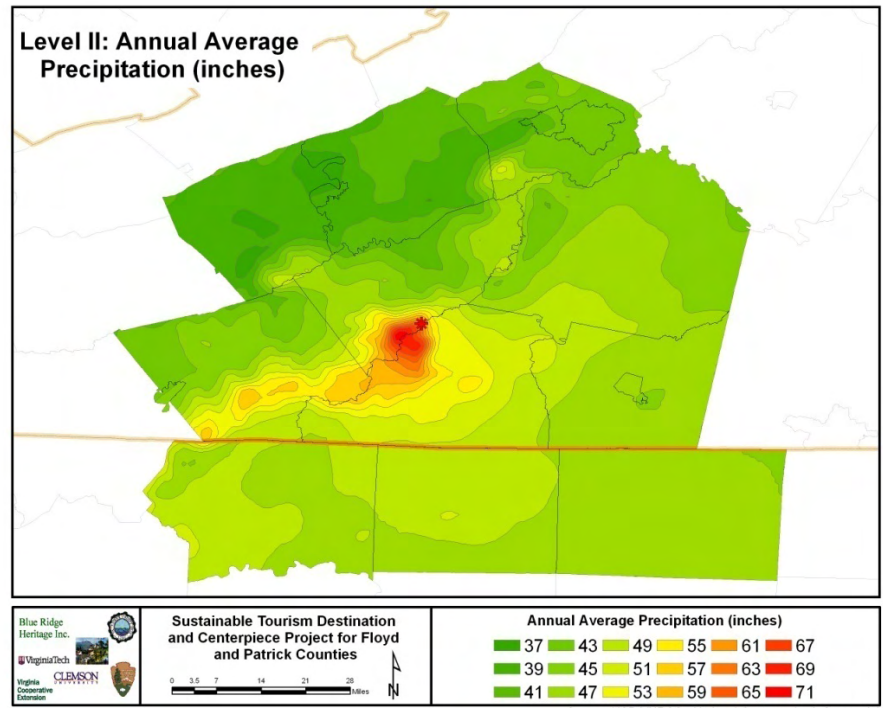




Precipitation patterns in Floyd County are determined generally by prevailing westerly winds which have a southerly component during fall and winter. Most moisture comes from storms spawned over the Atlantic Ocean. The average annual rainfall is 40.79 inches, though this varies within the County (see Map 8 below). Snowfall averages 15 inches annually, an amount which, due to road gradients, may impact on transportation and school operations in the County.

*Snowmelt atop Buffalo Mountain.
Photo by Charlie Martin.*

Map 8

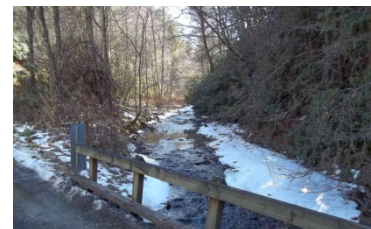


Source: USDA/NRCS - National Cartography & Geospatial Center

General Hydrologic Features

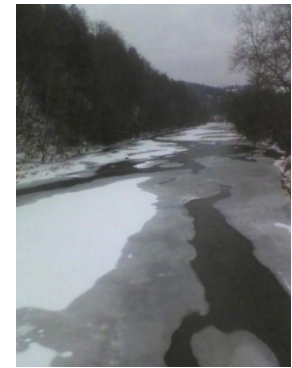
Surface Water

A number of streams originate in the County. These include major tributaries of the New River (Big Reed Island Creek and Little River) and headwater streams of the Dan, Smith, Pigg, Backwater and Roanoke Rivers. Most of the drainage ultimately



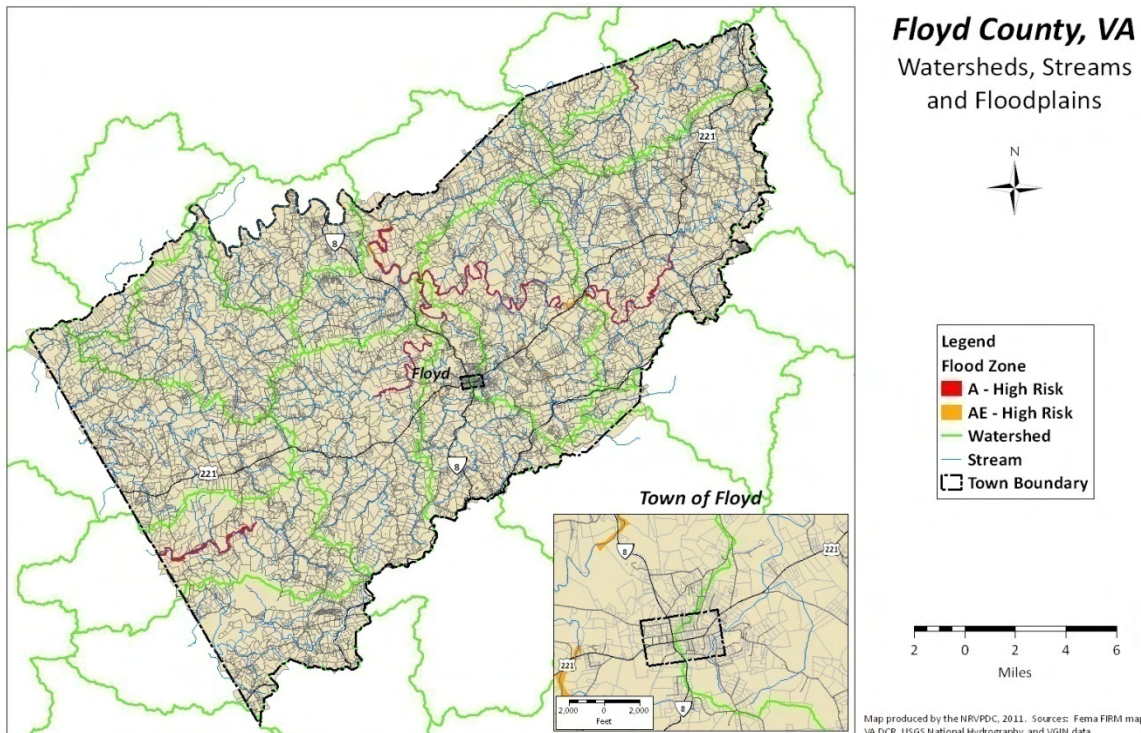
**Creek beside Sawmill Road,
Indian Valley**

goes to the Gulf of Mexico via the New River, Kanawha and Ohio into the Mississippi River system. The Eastern Continental Divide transects the northeastern part of the County, so tributaries there are of the Roanoke River and flow ultimately to the Atlantic Ocean. Watersheds, streams and floodplains are identified in Map 9.



Frozen Little River.
Photo by Joshua Sowers

Map 9: Floyd County Watersheds, Stream and Floodplains



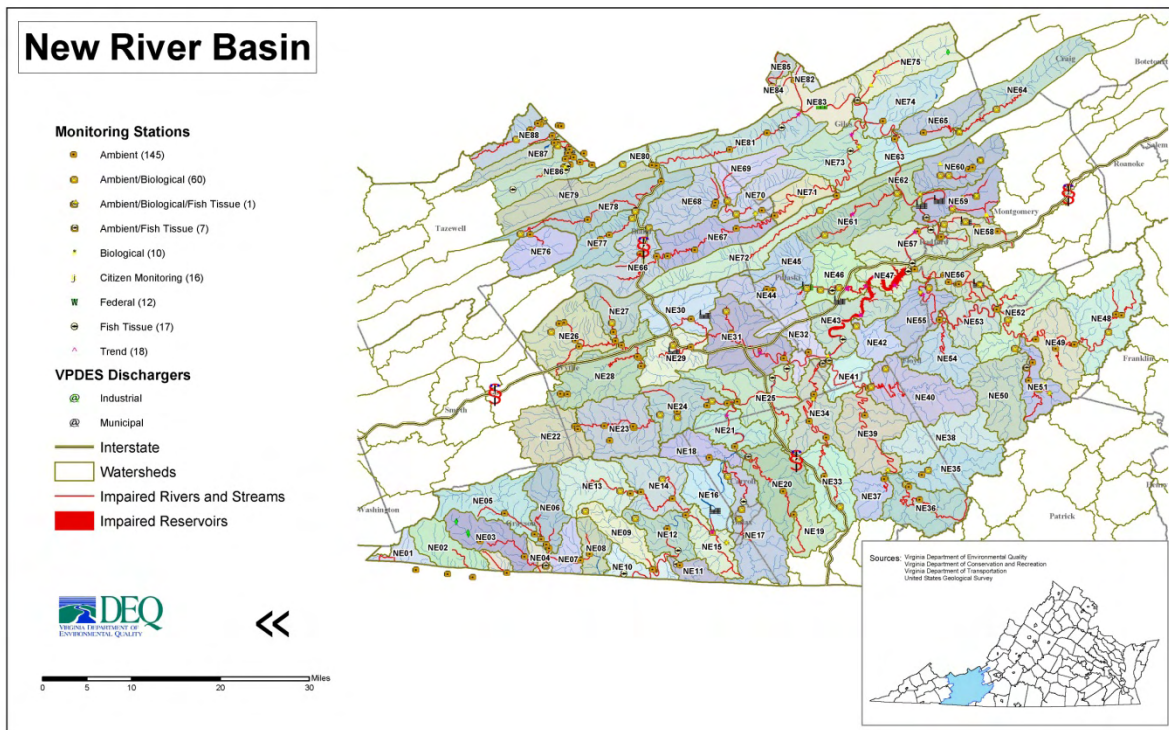
Portions of several streams in the County are now listed as impaired according to the Virginia Department of Environmental Quality (see streams in orange on Map 10). The streams, the impaired length in the County, and the impairment type/s are:

- Rennet Bag Creek, 9.04 miles, Water Temperature
- Shooting Creek, 6.94 miles, Water Temperature
- Little River (Upper), 33.55 miles, Escherichia Coli and Water Temperature
- Meadow Run, 3.7 miles, Escherichia Coli and Benthic-Macroinvertebrate Bioassessments
- Pine Creek, 3.66 miles, Escherichia Coli and Water Temperature
- Dodd Creek and West Fork of Dodd Creek, about 8 miles, though varies by impairment, Escherichia Coli, Fecal Coliform, and Water Temperature
- Little River (Lower), up to 33.56 miles, though varies by impairment, Escherichia Coli, Fecal Coliform, and Benthic-Macroinvertebrate Bioassessments
- Laurel Creek, 3.26 miles, Fecal Coliform
- Big Indian Creek, 7.56 miles, Escherichia Coli
- Greasy Creek, 13.12 miles, Escherichia Coli

Dodd Creek was the first stream identified as impaired, and an Implementation Plan was completed in 2006. The following were recommended to reduce the bacteria to eliminate all violations: exclusion of all livestock from streams, all straight pipes and failing septic systems need to be corrected, direct deposition of wildlife waste into streams needs to be reduced; and all other bacteria sources should be kept below current levels. The fencing of livestock out of streams and other best management practices (BMP's) , as well as residential septic BMP's and additional technical assistance needed were estimated to require \$2,192,272 in funding, according to the Implementation Plan (December 2006). According to the Skyline Soil and Water Conservation District, as of October 2011, they have distributed over \$237,000 in cost-share funds for 13 agricultural and 59 residential BMP's, across the Dodd and Mill Creek areas; this includes 50 septic tank pump outs, 6 septic repairs and 3 septic system replacements as well as 5 stream exclusion and grazing management, 2 loafing management, 1 permanent vegetative cover on critical area and 5 livestock exclusion with riparian buffer practices.

Likewise, the Water Quality Implementation Plan for the Little River and its Tributaries (May 2011) puts forth proposed actions to reduce bacteria, sediment and temperature in the water. The anticipated costs of Agricultural Control Measures (such as Livestock Exclusion with Riparian Buffers, Stream Protection Systems, Improved Pasture Management, Conservation Tillage, and Streamside Fencing Maintenance); Residential Control Measures (Sewer Connection, Alternative Waste Treatment System Installation/Replacement, and Erosion and Sediment Control), as well as Forestry best management practices and technical assistance are over \$29 million and anticipated to take many years.

Map 10 Impaired Streams



A wastewater treatment plant is located (downstream from aforementioned area) on Dodd Creek. This plant is operated by the Floyd-Floyd County Public Service Authority and serves the Town of Floyd and surrounding Floyd County. Additionally, there is a sewage treatment plant on Greasy Creek which served Camp 5; there is no longer a permitted facility.

See Figure 6 on hydrogeology, which relates to groundwater, to be discussed next.

Ground Water

Ground water is the source for all public water supplies serving Floyd County residents. Ground water supplies are divided into northwestern and southeastern sections according to the subsurface configuration and composition of the bedrock. Floyd County lacks true aquifers; it relies instead on water-filled fractures. The northwestern section is underlain by granite and granite gneiss that in most places have weathered to a sandy, granular soil seventy-five to one hundred feet in depth. Historically, wells terminating in this weathered zone or in the first one hundred feet of bedrock yielded about fifteen gallons per minute, but the risks of contamination in any shallow wells are significant. Yield from depths greater than two hundred feet tend to be less, unless substantial water-filled fractures are penetrated.

The southeastern section is underlain by gneisses and schists that are generally weathered to depths of twenty five to fifty feet. Historically, wells terminating in this zone and the upper seventy-five feet of bedrock averaged about eleven gallons per minute in yield, though again, these are at significant risk of contamination. Small increases were sometimes encountered at depths between one hundred and two hundred feet; however, unless water-filled openings were penetrated, significant increases are unlikely. A narrow zone of granitic bedrock bisects this section in a northeasterly direction and is weathered to a depth of less than twenty-five feet. Historically, wells no greater than seventy-five feet deep in this one to three mile-wide area yielded an average of approximately seven gallons per minute, but below that depth the granite has been virtually non-productive.

As became apparent in the drought of 1998 to 2002, when 500 replacement wells were drilled here, groundwater in Floyd County is very vulnerable to drought. These replacement wells were not clustered, but rather dispersed around the County, indicating widespread vulnerability to drought, and the importance of water conservation particularly during dry times. The young age of the groundwater here is another indication of drought vulnerability, since there is not long-term storage. Due to the complexity of the hydro-geology, it appears impossible to determine the carrying capacity of the groundwater—that is, how much development the groundwater in Floyd County can support and where. It is known that new wells punched in the ground can affect surrounding wells, particularly in drought conditions. Due to the limited flow of most private wells, it seems apparent that greater housing density can best be accommodated only through small central systems located near very good wells.

Figure 6

Floyd County Hydro-geology

Adapted from the Floyd Source Water Protection Plan (Gannon, 2010)

As Floyd County is located in the Blue Ridge physiographic province, groundwater is from fractured bedrock (Figure 1). Filtration of recharge water in this system is provided by the overburden, or top soil. This layer varies greatly in thickness. With this variation comes a variation in filtration capability. Generally in the Blue Ridge this layer of overburden is underlain by weathered bedrock called saprolite. This zone is made up of the same bulk rock as the bedrock below but has been weathered into a highly fractured material capable of storing and transmitting water. This layer of broken up rock does not have the filtration properties of the soil above it. Therefore, areas where this rock is exposed are extremely susceptible to contamination. Drainage such as storm water that can have high levels of contaminants should be kept away from these areas as much as possible.

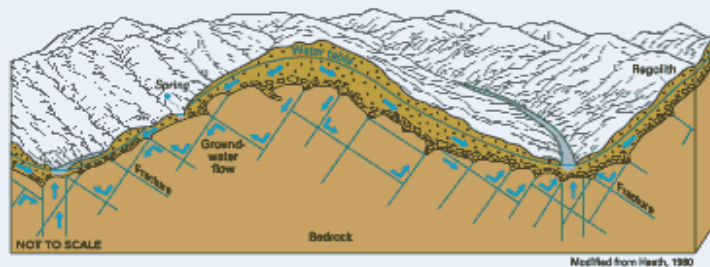
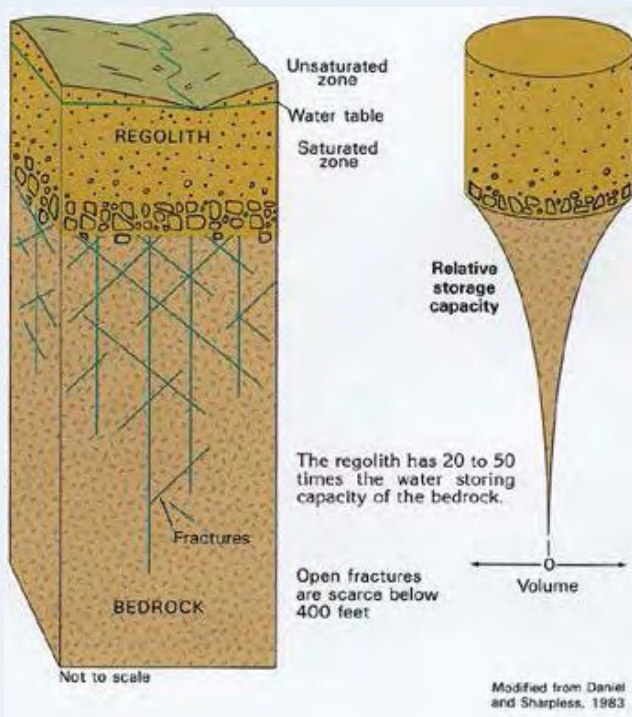


Figure 1: Typical fractured bedrock hydrogeology



Below the saprolite water exists in fractures in the bedrock (Figures 1 and 2). These fractures vary in both size and connectivity. Depending on their size and the size of the fracture network they belong to, they will produce greatly varying quantities of water. The extensively folded rocks in Floyd likely limit large scale connectivity of ground water systems in Floyd. This means it is likely that the Floyd-Floyd County Public Service Authority well draw groundwater from a number of isolated fracture networks rather than just one “aquifer”.

Figure 2: Available storage in fractured rock environments.

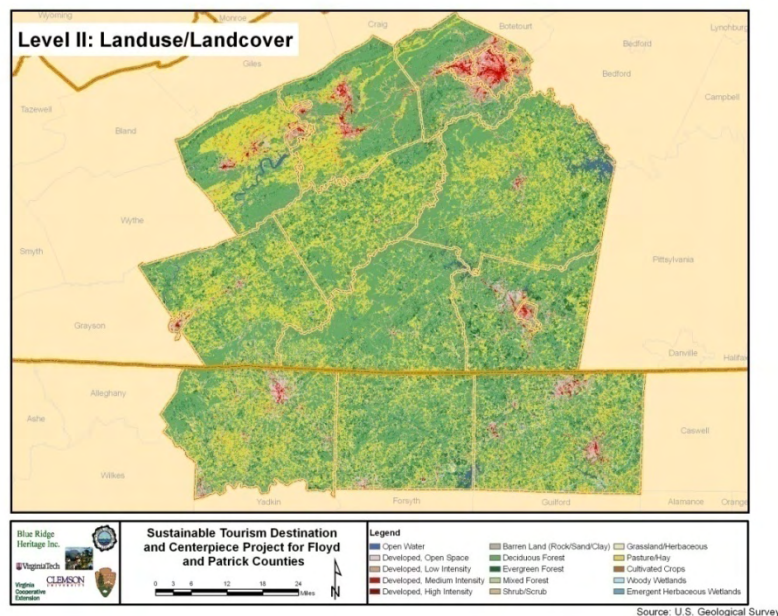
Drinking water wells are required to be cased through the saprolite zone and only pull water from the fractured bedrock below. This is due to the lower quality water present in the saprolite. The water present in the fractured bedrock is generally high quality, but as described below, it is also very susceptible to contamination.

In a study of the susceptibility of Virginia's aquifers, it was found that water supplies in the Blue Ridge are highly susceptible to contamination (Nelms, 2003). This determination was based partly on the age of water sampled from wells and springs in the Blue Ridge. When water falls as precipitation and enters the groundwater system, it holds a signature unique to the atmosphere it fell through to hit the ground. By testing gases present in groundwater, Floyd scientists are able to determine dates of recharge for water taken from wells and springs. In the Blue Ridge the age of the waters tested was very young. In many places ages younger than 20 years were common. This means that water entering the ground can find its way to drinking water sources in a relatively short amount of time and with minimal natural filtration. It is therefore imperative that places like Floyd act quickly to limit harmful chemicals from entering their groundwater.

Forests

Forested lands comprise a large portion of the County's land area. For a sense of the land cover, see Map 11 below. Eastern white pine, yellow poplar, hickory and oaks are the predominant species which provide a most valuable resource. The tree growth potential in the County is excellent due to the adequate rainfall and deep fertile soils. The forests support a diverse and changing forest industry including balled and burlapped nursery stock, Christmas trees, and products for the medical and floral industries.

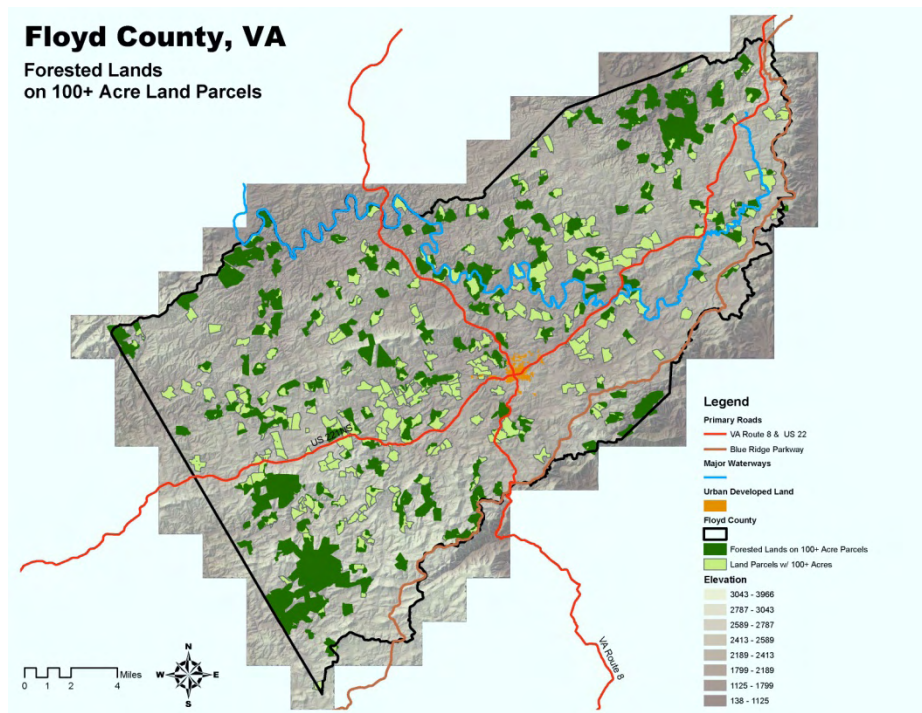
Map 11



In addition, the forests provide many intangible benefits which combine to make Floyd an attractive place to live and work. Moreover, forests recharge groundwater and prevent runoff. This is especially important given the County's dependence on groundwater and its location at the top of the watershed. Forest beauty, hunting, hiking, erosion control and wildlife are all benefits enjoyed by the residents and visitors to Floyd County.

Larger forest parcels are less susceptible to natural damage. The map below, provided by the New River Land Trust (2010), shows forested land on 100+ acre parcels (Map 12).

Map 12



Wetlands and Critical Habitats

Wetlands also help with groundwater recharge, as well as provide natural filtering. Wetlands are also home to some threatened or endangered species in the County. Many wetlands are not yet documented in the County (Courtois 2010), but some inventoried wetlands are shown in Map 13 below. Buffalo Mountain is now a state Natural Area Preserve, in part because of the presence of threatened or endangered species.

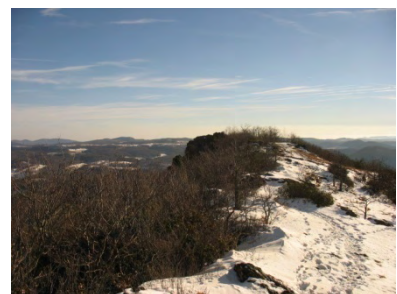


Photo by Charlie Martin

Map 13

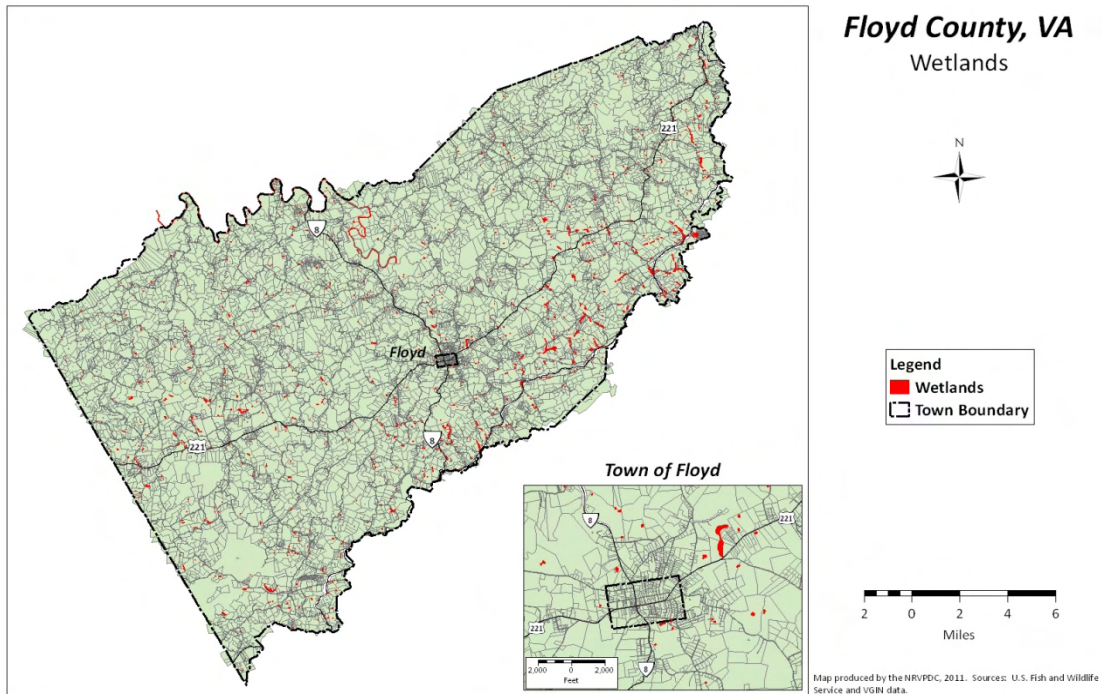


Table 1 lists species within 10 miles of Floyd which are federally endangered or threatened. For a complete list of all threatened, endangered or special concern species, see Appendix B.

Table 1 Federally Endangered or Threatened Species of the Floyd Area

<u>BOVA Code</u>	<u>Status*</u>	<u>Tier**</u>	<u>Common Name</u>	<u>Scientific Name</u>
010214	FESE	I	Logperch, Roanoke	<i>Percina rex</i>
050023	FESE	I	Bat, Indiana	<i>Myotis sodalis</i>
100780	FESE	I	Butterfly, Mitchell's satyr	<i>Neonympha mitchellii</i>
050035	FESE	II	Bat, Virginia big-eared	<i>Corynorhinus townsendii virginianus</i>
030061	FTSE	I	Turtle, bog (= Muhlenberg)	<i>Clemmys muhlenbergii</i>

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; SC=State Candidate; CC=Collection Concern; SS=State Special Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Source: Virginia Department of Game and Inland Fisheries, 2011

Land Suitability

The traditional agricultural economy of Floyd County is well-adapted to the local topography. The valleys have been cultivated for crops or cleared for grazing; the steeper slopes have been maintained in forest. Many areas are suitable for residences, from the standpoint of soil and geology. There is land containing both adequate soils and tolerant slopes to accommodate moderate growth, but care needs to be given to protect important farms and forests. In recent years, thousands of acres of important farmland have been converted to residential uses (very often narrow gravel roads far removed from schools, emergency services, and alternative water supplies.) A review of the geography reveals that existing structures are widely dispersed throughout the county along state roads. The few areas where structures are concentrated are in the Town of Floyd, plus the communities of Check and Willis.

Tables 2 and 3 below describe areas not suited for development and areas well suited for development. Note the areas not suited for development are generally defined by natural features. Land suitability will be further analyzed in the Property Use section.

**Table 2
Lands Not Suitable for Residential, Commercial, or Industrial Development**

Land Suitable for Agriculture	
	Currently used for agriculture
	Lands identified as prime and statewide importance farmland
Land with High Impact on Water	
	Lands with or near wetlands
	Large forest tracts (greater than 40 acres)
	Groundwater recharge areas
Land with High Hazard Risk	
	Lands in 100-year floodplain
	Lands with Wildfire Risk
	Lands with steep slope (greater than 25%)
	Lands with soils not suitable
Lands already Conserved	
	Lands with Natural Area Preserve or other parkland designation
	Lands within half-mile of Blue Ridge Parkway
	Lands in conservation easements

Table 3

Lands Suitable for Residential, Commercial and/or Light Industrial Development

Land near Infrastructure (and not on list above)	
	Lands within half-mile of municipality
	Lands within 2-4 miles of fire station
	Lands within 2 miles of school
	Lands proximal to road with adequate level of service
	Lands with economic development potential
	Lands near current or planned public water
	Lands near current or planned public sewer
	Lands near current or planned trails

Chapter 3.

What are Our Natural Resources?

Summary and Conclusion

Floyd County's natural resources are unique in the region. Located atop the Blue Ridge, all water flows out. Geology is complex, but generally supportive of structures. Groundwater is very young (20 years or less) and limited to fractures in rocks. Consequently, springs and wells are very vulnerable to drought here. About half of the County is forested, aiding groundwater recharge. Because some fracture systems are interconnected at the neighborhood level, a new well can substantially affect an existing well. Because of the special importance of water in Floyd County, it is important that good public well sites be identified and utilized for major development.

Groundwater is also very susceptible to contamination here. It is especially important that public source water areas be protected from potential contamination and that agencies be trained in proper response (See Floyd Source Water Protection Plan.)

Soils including important agricultural soils have now been mapped. Portions of Dodd Creek and Little River are impaired. It is important to use these natural factors (now available in electronic map form) to set future land use policies, including lands that should be protected as farms and forests.

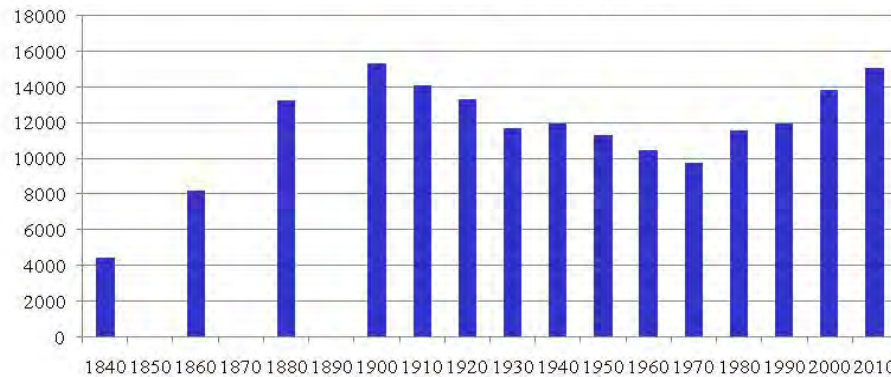
CHAPTER 4.

WHAT IS OUR POPULATION?

Floyd County has experienced a steady increase in population since the 1970's, with a 10.1% percent increase from 2000 to 2010 alone. This trend reverses the declining trend which characterized the 1950's and 1960's, when significant out-migration of persons of working age combined with a drop in the birth rate. The County's population in 2010 was 15,279, which approached our peak population of 15,388 in 1900 (see Figure 7).

Figure 7

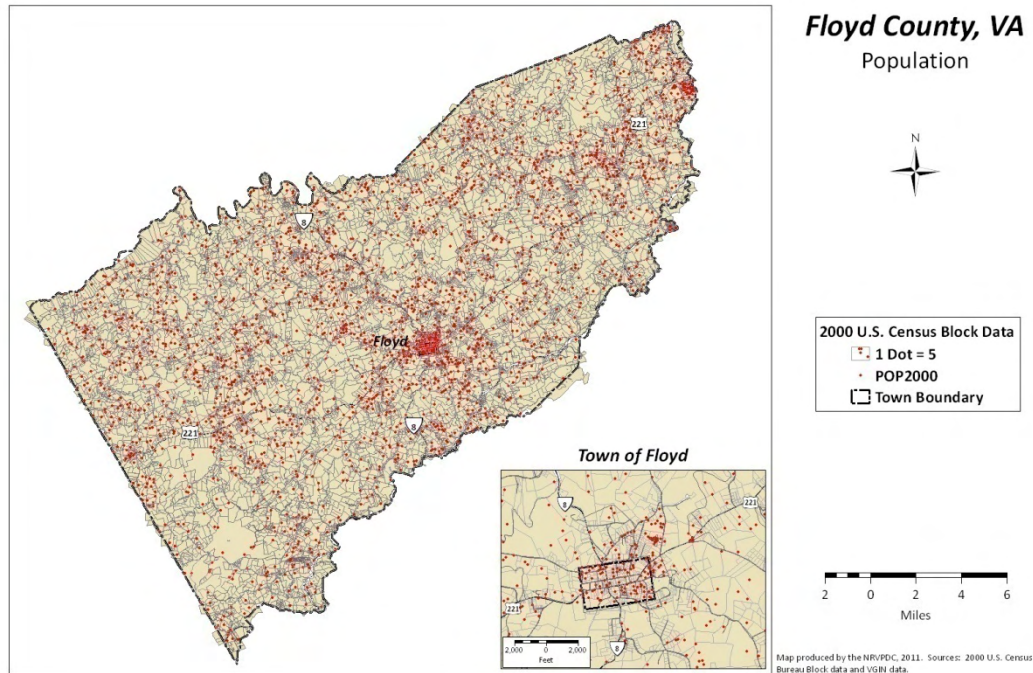
Population in Floyd Co.:
1840 to Present



Source: US Census Bureau

The population of Floyd County is widely dispersed, with the main cluster being in the Town of Floyd. See the map below of population density. Please note that while we have the main population number from the 2010 Census as of this writing, we do not have more detailed data yet. All other population and demographic information comes from other estimates.

Map 14



Population by Race

Floyd County’s population is predominantly white, though 1.8% is Black or African American and 0.9% lists themselves as two or more races. Additionally about 0.9% is American Indian (or Alaska Native.) Raw estimates are available in Table 4.

**Table 4
Floyd County Population by Race, 2005-09**

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	14,756	*****
Population of one race:	14,618	+/-60
White	14,214	+/-130
Black or African American	271	+/-71
American Indian and Alaska Native	133	+/-138
Asian alone	0	+/-127
Native Hawaiian and Other Pacific Islander	0	+/-127
Some other race	0	+/-127
Population of two or more races:	138	+/-60
Two races including Some other race	0	+/-127
Two races excluding Some other race, and three or more races	138	+/-60
Population of two races:	138	+/-60
White; Black or African American	57	+/-50
White; American Indian and Alaska Native	81	+/-59
White; Asian	0	+/-127
Black or African American; American Indian and Alaska Native	0	+/-127
All other two race combinations	0	+/-127
Population of three races	0	+/-127
Population of four or more races	0	+/-127

Source: U.S. Census Bureau, 2005-2009 American Community Survey

According to American Community Survey 2005-2009 data the Hispanic population is approximately 337 in Floyd County which is an 80% increase over the 187 from the 2000 Census (and that an even more dramatic increase from 59 persons in 1990.) Table 5 shows the Hispanic population estimate.

Table 5
Hispanic and Non-Hispanic Population in Floyd County, 2005-2009

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	14,756	*****
Not Hispanic or Latino	14,419	*****
Hispanic or Latino	337	*****

Source: U.S. Census Bureau, 2005-2009 American Community Survey

In 2000, 383 people reported speaking a language other than English at home (222 Spanish, 152 native European languages other than English); 152 speak English less than “very well.” An estimate of that data derived from 2005-2009, suggested only 242 people speak a language other than English at home. Other languages spoken at home, in order of occurrence, are Spanish, German, Hungarian, Other Native North American, Hebrew, Chinese, French, Portuguese and Arabic. All of these also reported speaking English well, except the Arabic speakers and a portion of the Spanish speakers. Part of this diversity arises from place of birth, as shown in Table 6 below.

Table 6
Place of Birth of Floyd County Residents, 2005-2009

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	14,756	*****
Native:	14,648	+/-87
Born in state of residence	10,416	+/-621
Born in other state in the United States:	4,147	+/-616
Northeast	1,509	+/-574
Midwest	310	+/-144
South	1,869	+/-383
West	459	+/-203
Born outside the United States:	85	+/-66
Puerto Rico	6	+/-14
U.S. Island Areas	0	+/-127
Born abroad of American parent(s)	79	+/-63
Foreign born:	108	+/-87
Naturalized U.S. citizen	58	+/-76
Not a U.S. citizen	50	+/-41

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Based on the mobility information below, no residents in the County reported living abroad 12 months earlier. Of those living in Floyd County, about 88% were living in the same house as of 1 year ago.

Table 7
Mobility of Those Now Living in Floyd County, 2005-2009

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	14,630	+/-89
Same house 1 year ago	13,070	+/-509
Different house in United States 1 year ago:	1,560	+/-516
Metropolitan Statistical Area:	425	+/-213
Moved from principal city	205	+/-204
Moved from remainder of Metropolitan Statistical Area	220	+/-132
Micropolitan Statistical Area	22	+/-36
Not in a Metropolitan or Micropolitan Statistical Area 1 year ago	1,113	+/-468
Abroad 1 year ago	0	+/-127

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Population by Age

Understanding the number of citizens in each age range is essential for planning service provision such as schools. Table 8 below shows estimates of people in various age brackets under 18. Table 9 also reveals that 150 grandparents are responsible for their grandchildren under 18 in Floyd County.

Table 8
Population Under 18 in Floyd County, 2005-09

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	3,220	+/-92
In households:	3,220	+/-92
Under 3 years	462	+/-101
3 and 4 years	354	+/-87
5 years	175	+/-77
6 to 8 years	538	+/-179
9 to 11 years	541	+/-128
12 to 14 years	567	+/-189
15 to 17 years	583	+/-44
In group quarters	0	+/-127

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Table 9
Population Living with Own Grandchildren in Floyd County, 2005-09

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	9,724	+/-75
Living with own grandchildren under 18 years:	221	+/-138
Grandparent responsible for own grandchildren under 18 years:	150	+/-127
Grandparent responsible less than 6 months	0	+/-127
Grandparent responsible 6 to 11 months	0	+/-127
Grandparent responsible 1 or 2 years	79	+/-105
Grandparent responsible 3 or 4 years	43	+/-51
Grandparent responsible 5 years or more	28	+/-47
Grandparent not responsible for own grandchildren under 18 years	71	+/-53
Not living with own grandchildren under 18 years	9,503	+/-145

Source: U.S. Census Bureau, 2005-2009 American Community Survey

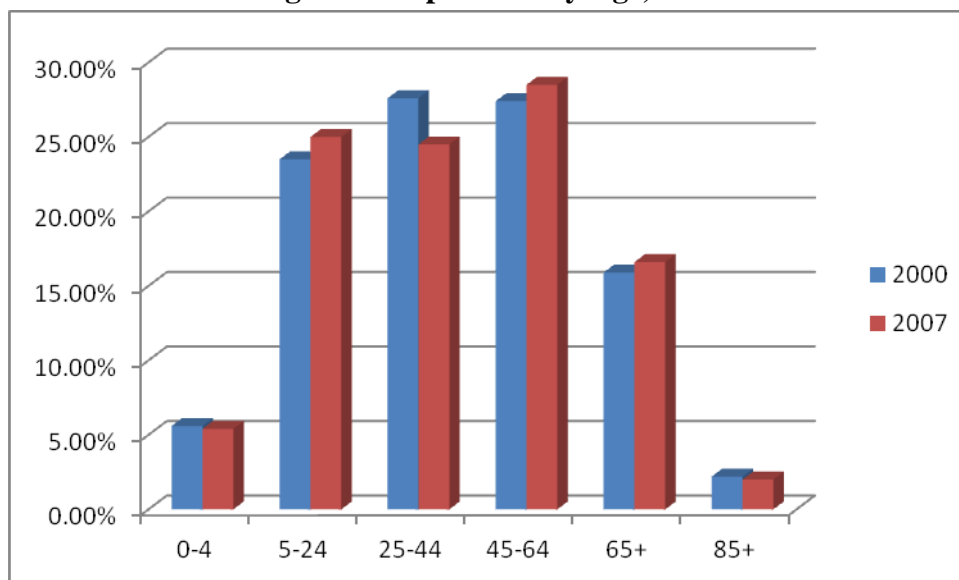
Table 10 provides a comparison of the population distribution for 1990, 2000 and 2007; with Figure 8 highlighting the distribution of ages within the County. The table illustrates that the County had sizable population gains in most age categories, with only a couple being flat. For example, the 0-4 years of age category grew by 15.4 percent in the 1990's, while only having a minimal gain of 4.7% in the 2000's. Young people (ages 5 to 24) had a net 5.5% gain in the 1990's, this increased to 15.5% in the 2000's. Though not indicated in this table, the number of school-age children (ages 5-17) also increased from 2,310 in 2000 to 2,594 in 2007.

Table 10
Floyd County Population by Age Groups: 1990-2007

		% Pop		% Pop		% Pop	% Change	% Change
	1990	1990	2000	2000	2007	2007	90-00	00-07
0-4	675	5.60%	779	5.60%	816	5.40%	15.40%	4.70%
5-24	3,092	25.80%	3,263	23.50%	3,769	25%	5.50%	15.50%
25-44	3,486	29.90%	3,831	27.60%	3,708	24.50%	9.90%	-3.20%
45-64	2,659	22.10%	3,795	27.40%	4,307	28.50%	42.70%	13.50%
65+	1,993	16.60%	2,206	15.90%	2,508	16.60%	10.70%	13.70%
85+	214	1.80%	299	2.20%	302	2%	39.70%	1%
Total	12,005		13,874		15,108		15.60%	8.80%

Source: 1990 and 2000 Census Bureau and the Weldon Cooper Center for Public Service

Figure 8: Population by Age, 2007



The number of people in the 25-44 age category netted the only decrease from 2000 to 2007. It is noted that the median age in Floyd County in 2000 was 40.5 years, while it was only 35.7 in Virginia. In 1980, the median age in Floyd County was 33.9. This trend of an aging population is identified with growth in the 45-64 age range, largely due to the baby-boomer generation.

The 45-64 age range showed extreme growth from 1990-2000 with a 42.75 growth rate. This number slowed to 13.5% from 2000 to 2007. One effect of the additional 389 people in the 25-44 and 45-64 categories between 1990 and 2000 indicated increases in job demand. Some in the 45-65 group may be retired or semi-retired, yet seeking supplemental.

The 13.7% decennial growth rate in the 65+ age category from 2000 to 2007 is a slight increase the previous decade. Within the 65+ category, the 85+ group has historically had a higher growth rate (more than three times that, or 39.7% from 1990 to 2000). This appears to have peaked with the actual number of people only increasing by 3 in the seven year span (although this number may increase with official Census results in 2010). While 85+ is still a very small segment of the overall population (2 %) in Floyd County, it is a much larger percentage than for Virginia at large (where only 1.2% of the population is 85+).

In the next few years, the older population, especially this eldest group, will require extensive health and housing services as it follows the likely “aging in place,” to assisted-living, to full-supportive care continuum. Currently, many people must leave the community to receive assisted-living services, so there is need for and interest in assisted living in the County. (Table 11 below shows 1,680 householders living alone; 756 of these are 65 and older.

Table 11
Households by Family Types in Floyd County, 2005-2009

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	6,009	+/-218
Family households:	4,098	+/-286
Married-couple family	3,428	+/-286
Other family:	670	+/-185
Male householder, no wife present	93	+/-64
Female householder, no husband present	577	+/-175
Nonfamily households:	1,911	+/-262
Householder living alone	1,680	+/-243
Householder not living alone	231	+/-101

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Total Population Changes

Historically population in Floyd County had minor changes, but from 1990 to 2000 Floyd County experienced expansive population growth of approximately 16%, and then 10.1% growth in the last decade (2000 to 2010). The pace of population growth in Floyd County in the 2000's (8.8% through 2008) was on pace with the Virginia average, and outpaced the growth rate in the New River Valley Planning District Region. Among Counties in the New River Valley Region, Floyd outpaced every county and the City of Radford as shown in Table 12.

Table 12: Floyd County and Town Population Summary: 1980-2008

Jurisdiction	1980	1990	2000	2008	Change 1980- 1990	Change 1990- 2000	Change 2000- 2008
Floyd County	11,563	11,965	13,874	15,094	3.5%	16.0%	8.8%
Floyd Town	411	396	432	438	-3.6%	9.1%	1.4%
New River Valley	141,343	152,680	165,146	172,295	8.0%	8.2%	4.3%
Virginia	5,346,818	6,189,197	7,078,515	7,795,424	15.8%	14.4%	10.1%

Source: 1980, 1990, and 2000 Census Bureau and the Weldon Cooper Center for Public Service

Population Projections

Based on the recent trends, it is expected that growth will continue in Floyd County. Table 13 shows a projection of the County's population from the Virginia Workforce Connection in 2010, prior to the 2010 Census. This appears to be a low-to-moderate projection (8.2% growth). It would result in 17,796 people by 2030. Using the previous decennial growth rate of 15.57% for Floyd County produces a much higher estimate; by 2030, there would be 21,416 people in Floyd County. (There is some suggestion that population growth has slowed in late 2010, as the school attendance numbers slipped and the number of houses for sale is substantial. It is not clear if this is temporary; possible factors include the strained economy and the harshness of last winter.)

Table 13
Floyd County Population Projections

Year	Floyd County	% Change	Virginia	% Change
1990	12,005		6,187,358	
2000	13,874	15.57 %	7,078,515	14.40 %
2010 (low est)	15,201	9.56 %	8,010,239	13.16 %
2010 (high est)	16,034	15.57%		
2020 (low est)	16,448	8.20 %	8,917,396	11.32 %
2020 (high est)	18,531	15.57%		
2030 (low est)	17,796	8.20 %	9,825,019	10.18 %
2030 (high est)	21,416	15.57%		

Source: Virginia Workforce Connection, U.S. Census

The Town of Floyd, like many small towns, had experienced population declines. However, this decline appears to have reversed by the 1990's. This was due in part to the addition of a multi-family housing complex. Investment in additional housing, particularly affordable housing, within the Town could have a significant impact upon the Town population.

Chapter 4. What is Our Population?

Summary and Conclusion

Floyd County's population has grown by over 25% in the past 20 years, the fastest rate in the region. This has included large increases in the school-age population and the 45 and older population, both of which tend to require substantial services (much more so than in 1900 when population was slightly higher than it is now.) Some of this recent growth is spillover from neighboring counties that have taken steps to limit growth. Floyd County currently has no land regulations to guide or limit growth. If population growth continues at the same rate, the population will be between 17,800 and 21,400 by 2030. Population growth may have slowed temporarily in the past year due to the recession, but this is not clear.

With the growing older population, there is need for a diversity of housing choices, including assisted living.

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CHAPTER 5.

HOW DO PEOPLE MAKE A LIVING IN FLOYD COUNTY?

A local economy has many inter-related components such as businesses, employment, wages and income. These will all be analyzed here.

Historically, agriculture has given life and form to the Floyd County economy, despite the relatively small size of farms and their inherent struggles. During the mid part of the 1900's, textile plants located in Floyd, provided hundreds of jobs; but by 2001, most of these jobs had been shipped overseas. Also, in the 1970's, artisans and "back-to-the-landers" discovered Floyd County and added their skill sets and small businesses to the local economy. Indicative of national trends, there was also an increase in service jobs, such as health care and finance jobs.

Employment

Jobs have always been relatively limited in Floyd County. Historic out-migration accounts attest to the limited employment opportunities in Floyd County relative to other areas throughout the twentieth century (Cox, 2007). Moreover, the jobs that exist in Floyd County have tended toward low wages. The disparity has further widened in the 21st century, despite a growing number and variety of businesses. Recent local employment and business trends will be discussed below, followed by commuting patterns.

Major Employers

The top 50 employers within the County as of early 2010 are shown on the following page. Note that the public sector--School Board and the County--are two of the three largest employers, indicating that Floyd County has no single mega-employer, but numerous small-to medium-sized employers. Also prominent on the list are manufacturing, nursery farms, restaurants and retail, health care, construction, transportation and federal government, and various services including financial and telecommunications.

Table 14: Top 50 Employers in Floyd County for 1st Quarter 2010

1. Floyd County School Board	26. Clark Gas and Oil Company Inc.
2. Hollingsworth and Vose Company	27. Homes Plus Custom Building Inc
3. County of Floyd	28. Floyd County Country Store LLC
4. Alphastaff Inc	29. Reed Construction Inc
5. Strengthening Our System Inc	30. U.S. National Park Service
6. Bank of Floyd	31. Will's Ridge Supply
7. Chateau Morrisette	32. Primary Care Associates
8. Riverbend Nursery	33. The Harvest Moon Food Store
9. Citizens' Telephone Co-operative	34. Alum Ridge Auto Repair
10. Wall Residences	35. Carilion Healthcare
11. Slaughter's Supermarket	36. Phillips and Turman Tree Farm
12. Crenshaw Lighting Corporation	37. Copper Hill Child Care
13. Food Lion	38. Jim's Grill
14. Postal Service	39. Paul R Shively Inc
15. Sino American Trading Company	40. The Bread Basket
16. Hardee's	41. C H Harman & Son Inc
17. Blue Ridge Restaurant	42. County of Montgomery
18. Floyd Pharmacy	43. Healthcare Services Group
19. Willis Village Mart	44. King Concrete Company
20. Arrow Truck Sales Inc	45. Milestones Childcare LLC
21. Harvey Chrysler Dodge Jeep Inc	46. New River Community Action
22. Apple Ridge Farm	47. S & S Paving Company Inc.
23. Blue Mountain Organics LLC	48. Subway
24. Floyd Xpress Market	49. The Barter Clinic
25. R & S Stone Inc	50. The Pine Tavern

Source: Virginia Employment Commission, Quarterly Census of Employment and Wages (QCEW), 1st Quarter (January, February, March) 2010.

As previously stated, most traditional manufacturing jobs, such as cut-and-sew textile plants have left the County for cheaper labor outside the United States (Table 7). Yet important manufacturing companies remain; they tend to be highly advanced and/or specialized:

- Hollingsworth & Vose is the largest private employer in Floyd County; it manufactures advanced composite materials for use in hundreds of products such as environmental filtering.
- Chateau Morrisette Winery combines agriculture, manufacturing and retail.
- Crenshaw Lighting makes hand-crafted lighting for fine and historic buildings around the United States.
- Arrow Truck Sales/Dex truck parts reconditions used Mack and Volvo truck parts for distribution through the Volvo/Arrow Truck dealer network.



- Blue Mountain Organics makes organic, raw “superfoods” for high-end retail stores around the United States.

Also of note in the Top 50 Employer list is the growth in private health/quality of life related services like Strengthening Our System, Wall Residences, and Apple Ridge Farm.

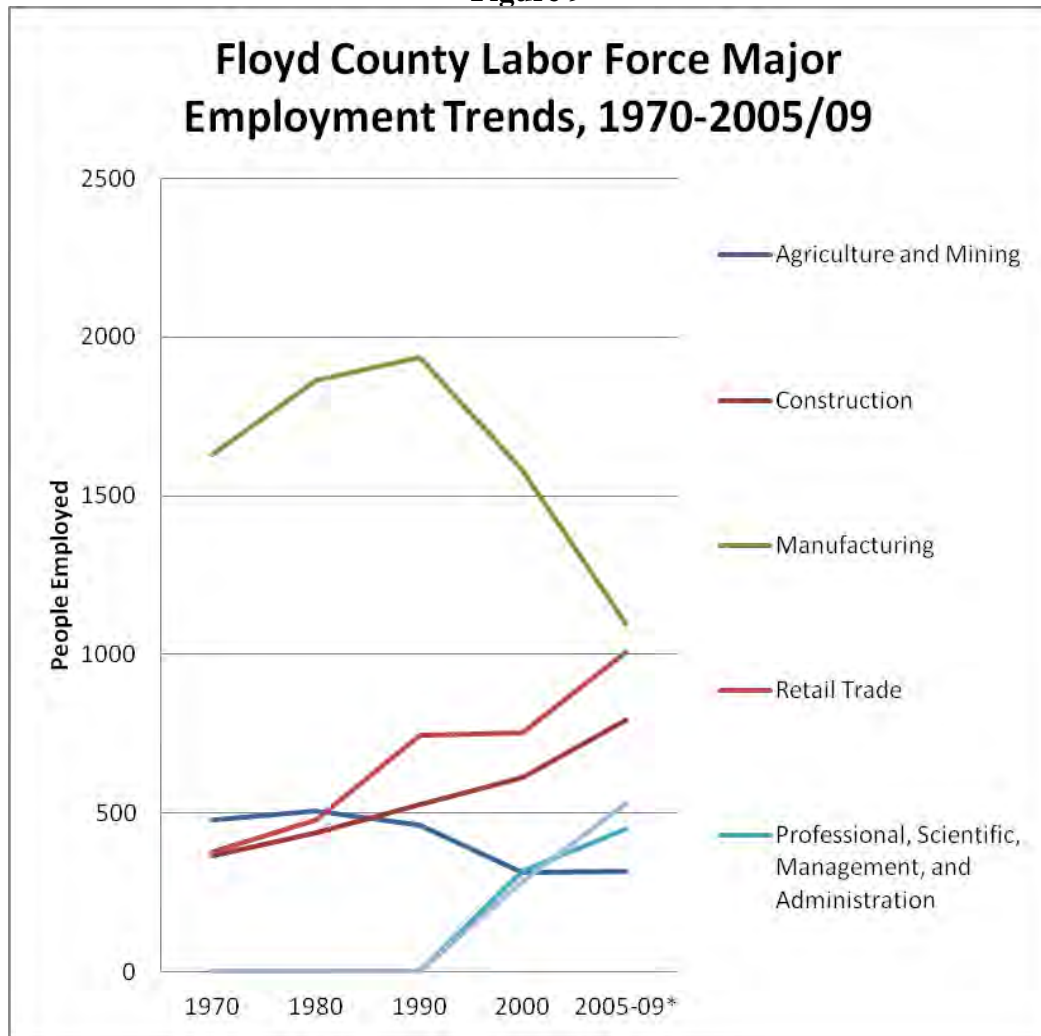
A broader look at the labor force in Floyd County reveals important sector trends. Please note that Table 15 and Figure 9 are about those employed both inside and outside the County. Table 15 shows a breakdown of the Floyd County labor force by industry over the past 5 decades. Figure 8 highlights significant reductions in manufacturing and agriculture, and increases in retail, construction, arts related and professional.

Table 15
Floyd County Employment by Industry 1970-2009

	1970	1980	1990	2000	2005-09*
Agriculture and Mining	479	507	462	314	315
Construction	364	439	526	611	793
Manufacturing	1631	1863	1936	1580	1095
Transportation, Communication, and Pub. Utilities	158	218	322	N/A	N/A
Transportation, Warehousing, and Utilities	N/A	N/A	N/A	341	249
Information	N/A	N/A	N/A	113	56
Wholesale Trade	33	103	122	288	121
Retail Trade	376	477	745	753	1006
Finance, Insurance, and Real Estate	39	183	215	230	324
Services (see Educational, etc. below)	189	898	1181	N/A	N/A
Professional, Scientific, Management, and Administration	N/A	N/A	N/A	316	451
Educational, Health, and Social Services	N/A	N/A	N/A	1249	1473
Arts, Entertainment, Recreation, Accommodation, and Food Services	N/A	N/A	N/A	285	532
Other Services	N/A	N/A	N/A	339	345
Public Admin.	306**	137	104	193	273

Source: US Census Bureau including American Community Survey 2005-2009

Figure 9



With limited local jobs, residents of Floyd County have become more dependent upon regional employers or creating their own work. This high percentage of out-commuters reflects the availability of jobs in the localities surrounding Floyd. Also, the 2000 Census recorded 411 persons as “worked at home.” 2000 census data shows that over 10% of the Floyd County labor force is self-employed (non-incorporated), vs. 5.5% in Virginia.

As Figure 10 and Table 16 show the majority of workers from Floyd County work outside of Floyd County. Of workers leaving the County, the largest portion goes to Montgomery County or the Roanoke Valley (see Table 17). Also, of relatively small number of people commuting into the County to work, the largest portion is from Montgomery County (see Figure 11). The Floyd County American Community Survey 2005-09 continue to show the out-commuting rate at over 50%. While it is not unusual for Virginians to live in a different locality than they work, it is unusual to have so many more going out than coming in.

Figure 10: Commuting Patterns



**Table 16
Floyd County Commuting Patterns, 2000**

People who live and work in the County	2,824
In-Commuters	640
Out-Commuters	3,746
Net In-Commuters (In-Commuters minus Out-Commuters)	-3,106

Source: Virginia Employment Commission 2000 Census Data

**Table 17
Floyd County Residents Place of Employment**

Place of Work	1980	1990	2000
Carroll County	103	190	169
Floyd County	2,565	2,973	2,824
Franklin County	46	23	47
Montgomery County	384	473	1,252
Patrick County	95	131	260
Pulaski County	24	122	237
Radford City	174	74	284
Roanoke City	398	439	646
Roanoke County	124	293	372
Salem City	203	112	241

Source: Virginia Employment Commission 2000 Census Data

**Figure 11
Top 5 Jurisdictions Supplying Employees for Floyd County Employers**

- Montgomery County, VA 249 employees
- Carroll County, VA 85 employees
- Patrick County, VA 52 employees
- Roanoke County, VA 51 employees
- Radford city, VA 47 employees

Source: Virginia Employment Commission 2000 Census Data

Floyd Countians spend over 200,000 minutes driving to work daily. Males spend about 75%

more time commuting than females.

Table 18
Total Travel Time to Work, Floyd County 2005-2009

	Floyd County, Virginia	
	Estimate	Margin of Error
Aggregate travel time to work (in minutes):	212,705	+/-16,797
Male	135,560	+/-13,282
Female	77,145	+/-11,322

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Carpooling rates in Floyd County are 16.4% compared to 11% in Virginia overall. Floyd County has the 8th highest carpooling rate of any county in Virginia. The table below shows that 79% of commuting time by Floyd Countians is spent by people driving alone.

Table 19
Total Travel Time to Work by Travel Type, Floyd County 2005-09

	Floyd County, Virginia	
	Estimate	Margin of Error
Aggregate travel time to work (in minutes):	212,705	+/-16,797
Car, truck, or van - drove alone	168,220	+/-18,816
Car, truck, or van - carpoled	37,980	+/-10,356
Public transportation (excluding taxicab)	3,055	+/-2,598
Taxicab, motorcycle, bicycle, walked, or other means	3,450	+/-4,528

Source: U.S. Census Bureau, 2005-2009 American Community Survey

As mentioned before, over half of Floyd County workers commute outside the County to work. As a final note on commuting, the following numbers are derived from the Floyd County Community Survey in 2005 completed by Blue Ridge Institute for Community (Ryan, 2005). Based on this, it seems likely that a somewhat higher percentage of people who work out of the county have insurance than those who work in the County. So in addition to lower wages in the County, benefits appear less, too.

Table 20			
Employment Location and Health Insurance			
	Have Health Insurance		
	Yes	No	Total
Employed in Floyd County	79%	21%	100%
Employed Out of County	87%	13%	100%
No Employed	84%	16%	100%

In addition to those employed by others in Floyd County and outside the County, there is a high (over 1,000 people) and increasing number of people who are self-employed (see Figure 12 below). These are referred to as “Nonemployer firms,” defined as firms “without paid employees that are subject to federal income tax. Most nonemployers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner's principal source of income. These firms are excluded from most other business statistics” (Source: US Census Bureau.) Based on the table below, the average annual receipts for the self-employed in 2008 was \$34,577. Also, based on the number of households reporting self-employment income, it appears that 200 or more households had more than one business (see Table 21),

Figure 12

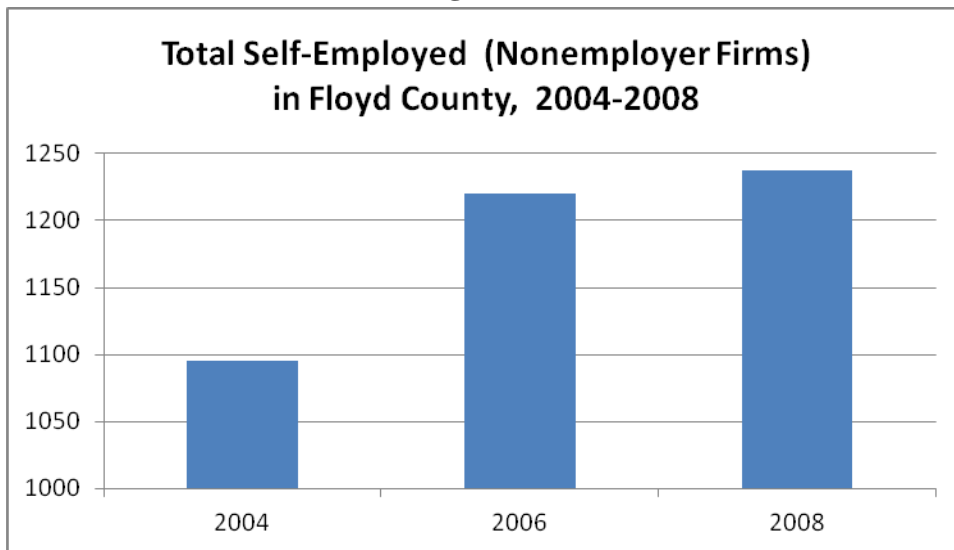


Table 21
Households According to Self-Employment Income in Past 12 Months, 2005-2009

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	6,009	+/-218
With self-employment income	842	+/-194
No self-employment income	5,167	+/-249

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Table 22
Self-Employed (Nonemployer Firms) and Receipts in Floyd County 2004 to 2008

NAIC Code	Description	2004	2004	2006	2006	2008	2008
		Firms	Receipts (\$1,000)	Firms	Receipts (\$1,000)	Firms	Receipts (\$1,000)
'11'	Agriculture, forestry, fishing and hunting	71	3,175	67	3,467	64	3,272
'21'	Mining	-	-	D	D	D	D
'22'	Utilities	D	D	D	D	D	D
'23'	Construction	244	8,967	263	12,274	246	14,271
'31-33'	Manufacturing	58	1,870	52	2,891	47	1,340
'42'	Wholesale trade	12	1,164	13	1,388	7	113
'44-45'	Retail trade	110	3,423	113	3,746	145	5,825
'48-49'	Transportation and warehousing	49	2,531	55	3,565	57	4,048
'51'	Information	16	1,509	15	1,155	15	602
'52'	Finance and insurance	24	492	34	647	28	473
'53'	Real estate and rental and leasing	61	2,911	96	4,474	86	2,492
'54'	Professional, scientific, and technical services	98	3,751	116	2,364	101	2,152
'56'	Administrative & support; waste mgmt & remediation	61	520	69	877	76	1,244
'61'	Educational services	15	196	24	277	22	425
'62'	Health care and social assistance	71	984	85	2,216	82	2,170
'71'	Arts, entertainment, and recreation	52	537	60	966	74	1,261
'72'	Accommodation and food services	D	D	12	177	18	473
'81'	Other services (except public administration)	141	3,080	143	3,273	166	2,552
'00'	Total for all sectors	1,095	35,240	1,220	43,795	1,237	42,772

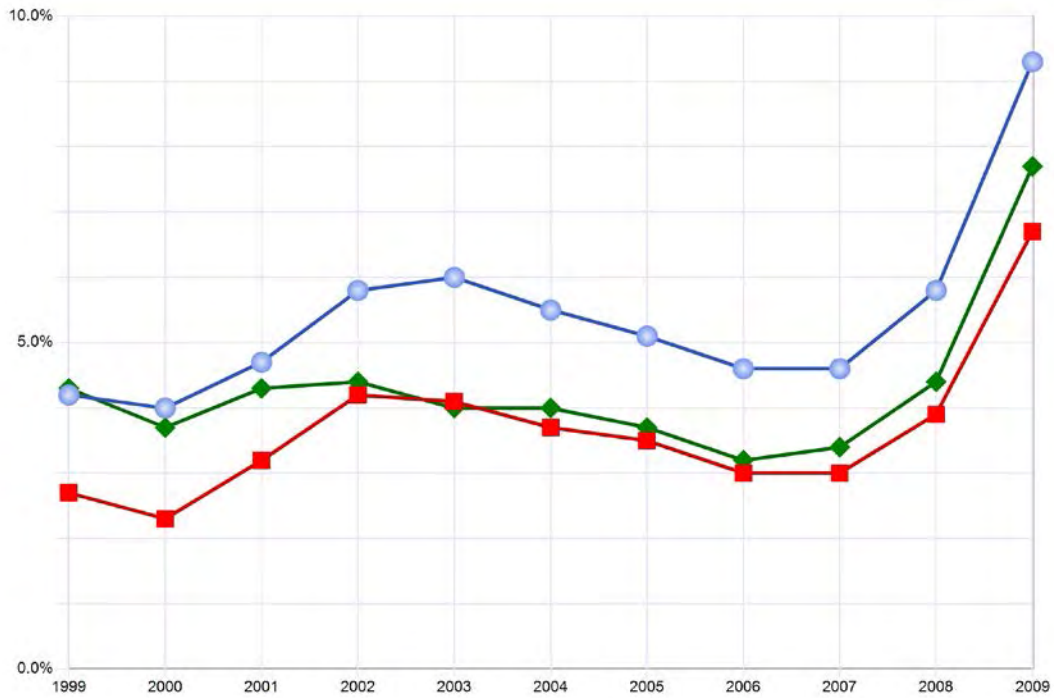
Source: U.S. Census Bureau

Note: "D" indicates data suppressed to protect privacy given small number of firms.

Despite high out-commuting and high self-employment, due to the national downturn in the economy, numerous workers are currently unemployed. The unemployment rate in Floyd County as of September 2010 was 7.1%. This value is higher than the Virginia unemployment rate but less than the national average as shown in Figures 13 and 14 and Tables 23 and 24.

Figure 13: Unemployment Trends by Year

◆ Floyd County ■ Virginia ● United States



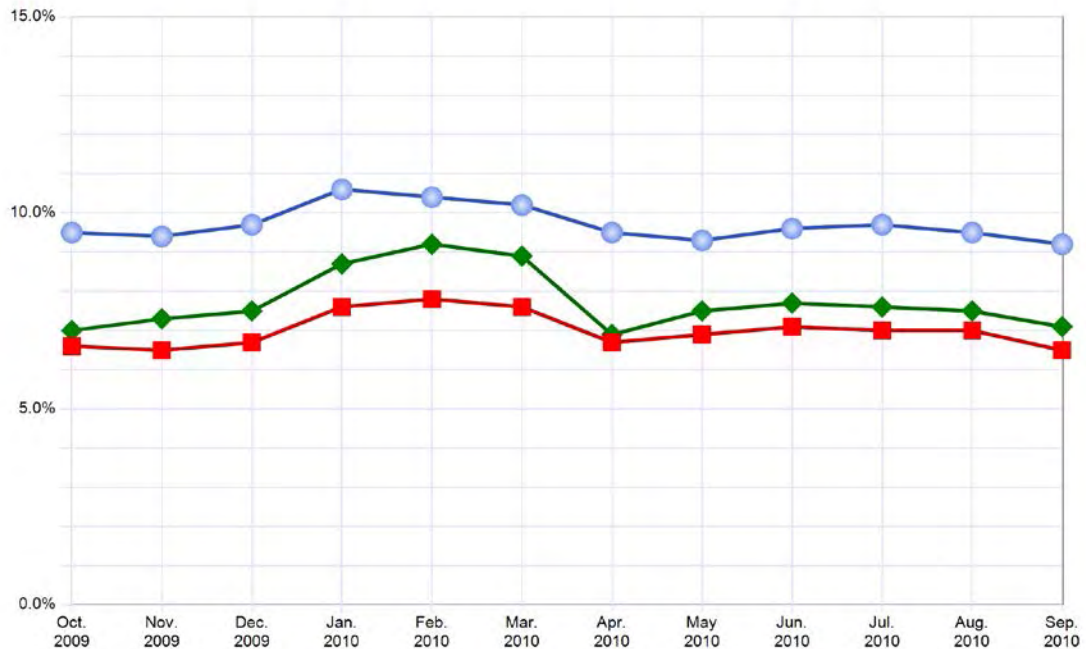
**Table 23
Unemployment 2000-2009**

Year	Floyd County	Virginia	United States
2000	3.7%	2.3%	4.0%
2001	4.3%	3.2%	4.7%
2002	4.4%	4.2%	6.0%
2003	4.0%	3.7%	5.5%
2004	4.0%	3.5%	5.1%
2005	3.7%	3.5%	5.1%
2006	3.2%	3.0%	4.6%
2007	3.4%	3.0%	4.6%
2008	4.4%	3.9%	5.8%
2009	7.7%	6.7%	9.3%

Source: Virginia Employment Commission

Figure 14: Unemployment Trends for October 2009 to September 2010

◆ Floyd County ■ Virginia ● United States



**Table 24
Recent Monthly Unemployment**

Month	Floyd County	Virginia	United States
Oct. 2009	7.00%	6.60%	9.50%
Nov. 2009	7.30%	6.50%	9.40%
Dec. 2009	7.50%	6.70%	9.70%
Jan. 2010	8.70%	7.60%	10.60%
Feb. 2010	9.20%	7.80%	10.40%
Mar. 2010	8.90%	7.60%	10.20%
Apr. 2010	6.90%	6.70%	9.50%
May 2010	7.50%	6.90%	9.30%
Jun. 2010	7.70%	7.10%	9.60%
Jul. 2010	7.60%	7.00%	9.70%
Aug. 2010	7.50%	7.00%	9.50%
Sep. 2010	7.10%	6.50%	9.20%

Source: Virginia Employment Commission

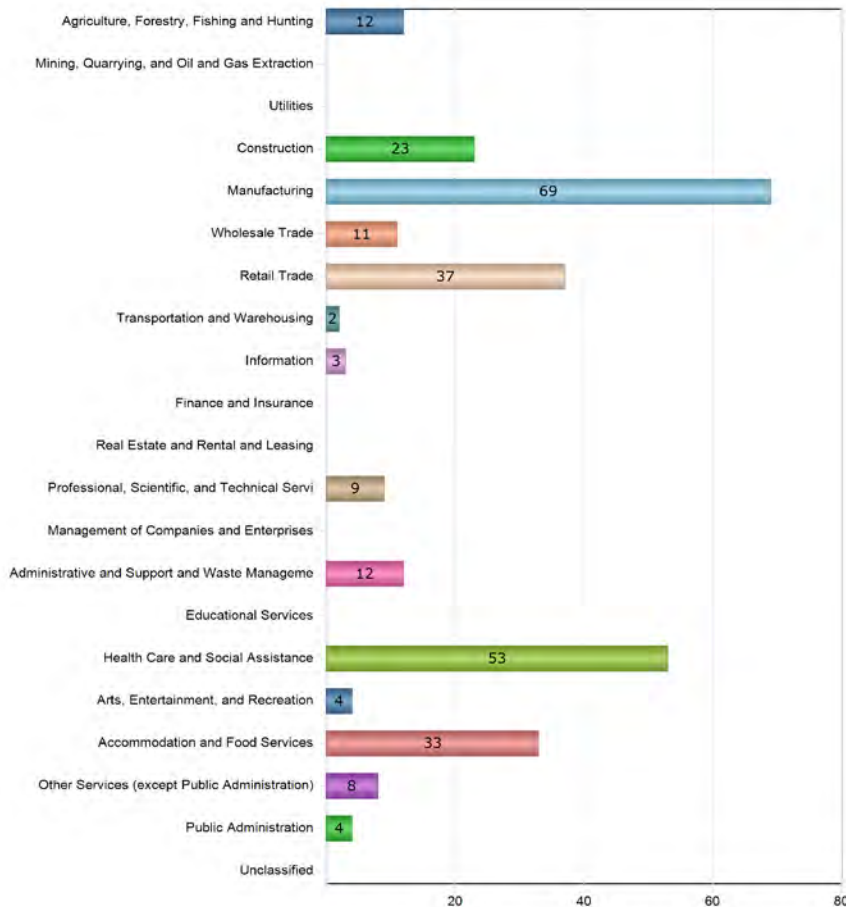
Moreover, the unemployment rate understates the County’s employment needs. It does not account for the significant number of people in the County who are underemployed (working one or more part-time jobs, often seasonal and without benefits.)

New Jobs

Noticeably, the current jobs in the County are generally locally-based companies that are filling important global (environmental filtering, lighting, nursery goods, food, and software) and local/regional niches (finance, health care, food, tourism, and telecommunications) using local assets from agriculture (grapes and landscaping plants) to creative, hand-crafting, and technology skills. The continued development of local entrepreneurs and enterprises is extremely important in diversifying the local economy and job base.

It is interesting that amidst the dire economy in the 4th quarter of 2009, 69 manufacturing jobs were added, the most of any sector (see Figure 15 below.) It is not clear if this trend is sustainable.

Figure 15: New Hires by Industry in Floyd County, 4th Quarter 2009



Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 4th Quarter (October, November, December) 2009, all ownerships.

It is imperative that more jobs be created in the County to prevent decrease net out-commuting and/or the unemployment rate. Not only are out-commuters saddled with high transportation costs and a corresponding loss of disposable income, but they often do much of their shopping near work, meaning a loss of revenue for Floyd County and county merchants. Furthermore, commuting causes a significant loss of personal time which might otherwise be devoted to personal health, family and civic responsibilities. The addition of higher wage jobs in the County would have great ripple effects for the employees and community.

County staff and its Economic Development Authority (EDA) work to increase the quantity and quality of jobs in the County—by nurturing small businesses through workshops, a new low interest loan program and referrals to a network of free business planning and marketing assistance. The County also welcomes right-fit companies such as innovation, technology and light manufacturing firms who will add-to and not degrade the environment or community. One limitation for local businesses currently, including farms, is the limited financing available, even for those with good credit.

As Table 25 shows below, from 1998 to 2008, the number of businesses and jobs in Floyd County increased substantially, 37% and 15.8% respectively. However, the effective wage rate dropped 9% in that time period in Floyd County, unlike most of our neighbors. Again, this emphasizes the need for higher wage jobs in this community. Incomes will be discussed more next.

Table 25
County Economic Trends in Southwest Virginia, 1998-2008

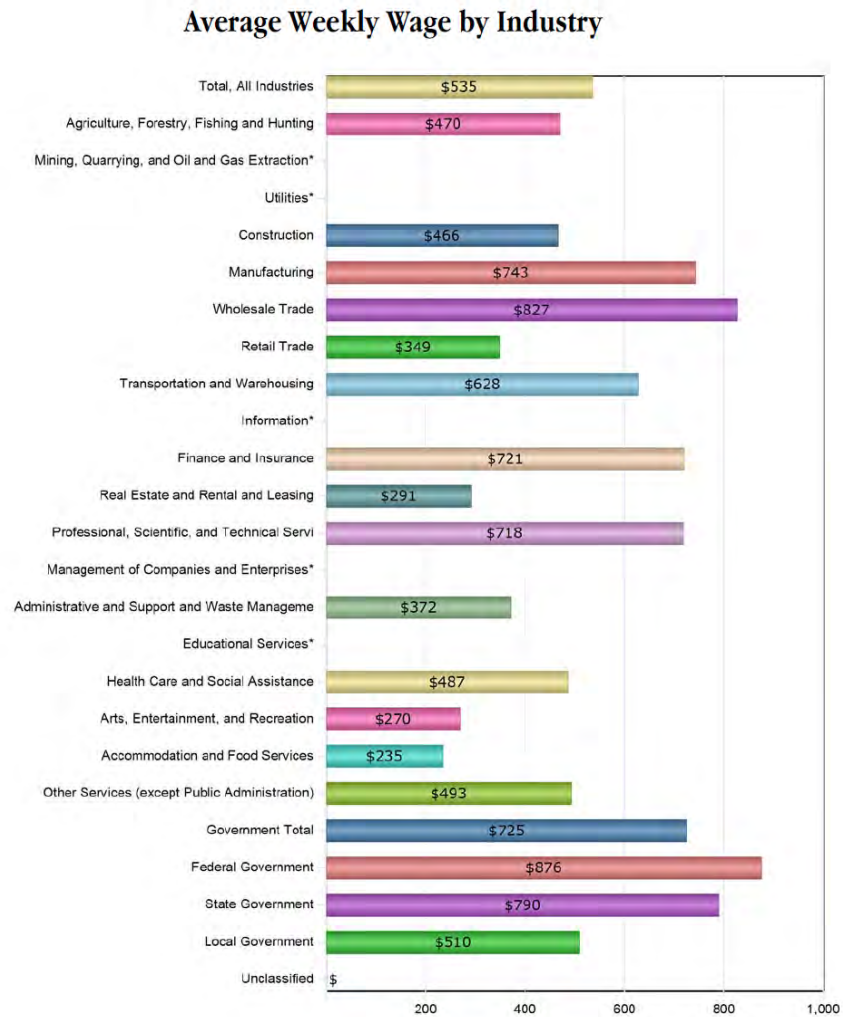
County	Establi- hments	10-Year Percent change	Jobs	10-Year Percent change	Average Wage Per Job (*adj)	10-Year Percent change	Rank in U.S.	% of U.S. Avg Wage
Carroll	559	22.6%	6,438	-9.4%	\$26,364	6.1%	2,792	57.9%
Dickenson	326	-2.1%	3,711	14.7%	\$35,766	18.3%	834	78.5%
Floyd	377	37.1%	2,814	15.8%	\$25,237	-9.0%	2,961	55.4%
Giles	364	13.8%	4,802	-14.0%	\$33,571	-4.9%	1,166	73.7%
Grayson	304	45.5%	2,464	-4.2%	\$25,137	-8.9%	2,972	55.2%
Lee	454	10.5%	5,459	4.3%	\$29,963	3.9%	1,956	65.8%
Montgomery	2213	27.0%	40,007	25.1%	\$35,744	11.8%	839	78.5%
Patrick	371	9.1%	5,247	-4.5%	\$24,428	-7.7%	3,035	53.6%
Pulaski	734	6.2%	13,303	-13.0%	\$33,276	-2.3%	1,224	73.0%
Radford City	354	-10.8%	6,524	25.9%	\$37,902	5.7%	621	83.2%
Russell	572	2.3%	7,567	-7.8%	\$31,606	5.8%	1,592	69.4%

Income

Given the seasonal and part-time nature of many Floyd County jobs and the previous loss of manufacturing jobs, it is not surprising that income levels are lower than the State and surrounding areas. The overall average weekly wage in Floyd County as of the 3rd quarter,

2009, was only \$495, compared to \$897 for the State of Virginia. In 1999 the Floyd County weekly wage was \$359 resulting in an increase of \$37 a week when accounting for inflation, however this does not compare well to Virginia which in 1999 had a weekly wage value of \$620 which results in an increase of \$107 a week when accounting for inflation. Figure 16 below lists job sectors and average weekly wages in Floyd County. Also see Map 15.

Figure 16
Floyd County



Note: Asterisk (*) indicates non-disclosable data.

Source: Virginia Employment Commission, Quarterly Census of Employment and Wages (QCEW), 4th Quarter (October, November, December) 2009.

Median family income (MFI) and median household income (MHI) are also lower in Floyd County than in Virginia at large. MFI was \$50,474 on average in Floyd County from 2005-2009 compared to \$72,193. MHI was \$40,539 in Floyd County in that time period compared to \$60,316. All of those figures were inflation adjusted to 2009 dollars. Though family

income has grown in Floyd County, it has not grown as fast as in Virginia overall.

Table 26: Floyd County Median Family Income, 1980-2005/09

Jurisdiction	1980	1990	2000	2005-09*
Floyd County	\$14,585	\$27,439	\$38,128	\$50,474
NRV	\$16,444	\$30,163		
Virginia	\$20,018	\$38,213	\$54,169	\$72,193
Floyd Co % of VA	72.9%	71.8%	70.4%	69.9%

**estimate from American Community Survey*

**Table 27
Floyd County Annual Household Income, 2005-2009
(inflation adjusted to 2009 dollars)**

	Floyd County, Virginia	
	Estimate	Margin of Error
Total:	6,009	+/-218
Less than \$10,000	641	+/-182
\$10,000 to \$14,999	612	+/-148
\$15,000 to \$19,999	326	+/-125
\$20,000 to \$24,999	481	+/-146
\$25,000 to \$29,999	215	+/-85
\$30,000 to \$34,999	364	+/-116
\$35,000 to \$39,999	328	+/-109
\$40,000 to \$44,999	291	+/-96
\$45,000 to \$49,999	317	+/-100
\$50,000 to \$59,999	755	+/-200
\$60,000 to \$74,999	591	+/-178
\$75,000 to \$99,999	656	+/-161
\$100,000 to \$124,999	192	+/-112
\$125,000 to \$149,999	85	+/-55
\$150,000 to \$199,999	104	+/-62
\$200,000 or more	51	+/-44

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Also, according to the 2000 Census, Floyd County's per capita income was 68.2% of Virginia's average (\$16,345 vs. \$23,975). This ratio got even worse by the end of the decade. See Table 28 below for more detail.

Table 28
Floyd County per Capita Income, 1980-2005/09

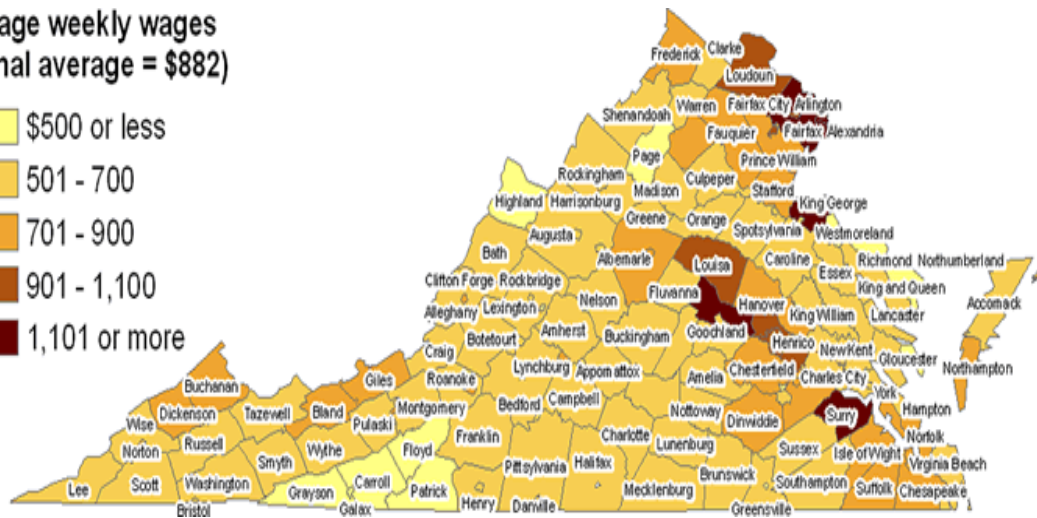
Jurisdiction	1980	1990	2000	2005-09
Floyd County	\$5,186	\$10,532	\$16,345	\$ 20,171
NRV	\$5,678	\$10,884		
Virginia	\$7,478	\$15,713	\$23,975	\$ 31,606
Floyd Co % of VA	69.4%	67.0%	68.2%	63.8%

*estimate from American Community Survey

Map 15: Average Weekly Wage by County

Average weekly wages
(National average = \$882)

- \$500 or less
- 501 - 700
- 701 - 900
- 901 - 1,100
- 1,101 or more



It should also be noted here that the poverty rate for individuals was 11.7% in Floyd County in 2000. According to 2005-09 data, the poverty rate for individuals in Floyd County is now 15.1%. This is a 29% increase in the poverty rate.

Agriculture

Agriculture is still the backbone of the Floyd County economy, and it also maintains the rural lifestyle cherished by County residents and enhances the scenic beauty. In fact, its aesthetic qualities amidst these mountains have been deemed a national treasure, worthy of preservation as part of the Blue Ridge Parkway.



Mabry Mill originally used water power to grind corn and buckwheat for local farmers. This type of local food production with renewable energy may be not just the way of the past but the way of the future for Floyd County.

There were over \$43 million in farm products sold from Floyd County, a 32% increase over 2002 (Census of Agriculture 2007). Beef and dairy cattle farms have been the mainstay of Floyd County agriculture for generations; in 2007, Floyd County ranked 6th in Virginia for cattle-calf production and 18th for dairy production. Note that many of the farmers represented below have separate full-time jobs.

Table 29
Change in Farms 2002-2007 in Floyd County

	2007	2002	% change
Number of Farms	864	829	+ 4
Land in Farms	128,872 acres	135,311 acres	- 5
Average Size of Farm	149 acres	163 acres	- 9
Market Value of Products Sold	\$43,361,000	\$32,801,000	+ 32
Crop Sales \$18,727,000 (43 percent)			
Livestock Sales \$24,634,000 (57 percent)			
Average Per Farm	\$50,186	\$39,567	+ 27

Table 30
Economic Characteristics of Farms in Floyd County, 2007

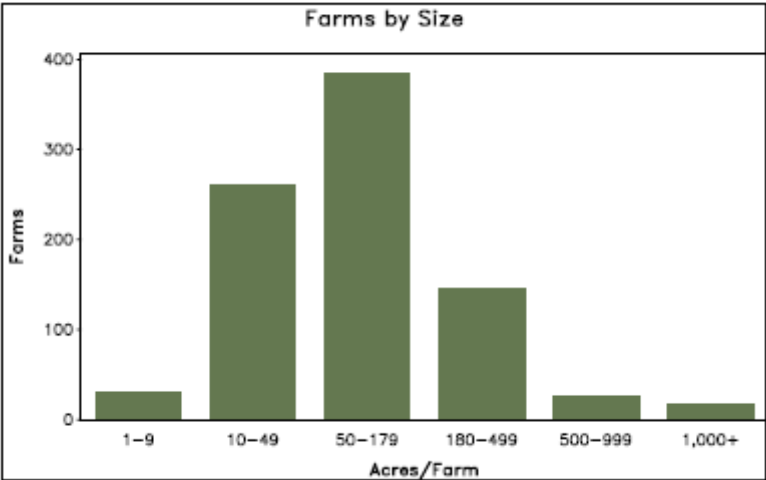
Economic Characteristics	Quantity
Farms by value of sales:	
Less than \$1,000	199
\$1,000 to \$2,499	87
\$2,500 to \$4,999	120
\$5,000 to \$9,999	135
\$10,000 to \$19,999	118
\$20,000 to \$24,999	18
\$25,000 to \$39,999	68
\$40,000 to \$49,999	26
\$50,000 to \$99,999	48
\$100,000 to \$249,999	22
\$250,000 to \$499,999	12
\$500,000 or more	11
Total farm production expenses (\$1,000)	40,539
Average per farm (\$)	46,920
Net cash farm income of operation (\$1,000)	3,897
Average per farm (\$)	4,510



Photo on right: Mark Sowers (along with brother Curtis Sowers of Huckleberry Ridge Farm in Floyd) was named Virginia Dairyman of the Year in 2009. He also serves as Floyd County Planning Commission Chairman and is shown here welcoming people to the Community Input meeting in Willis.

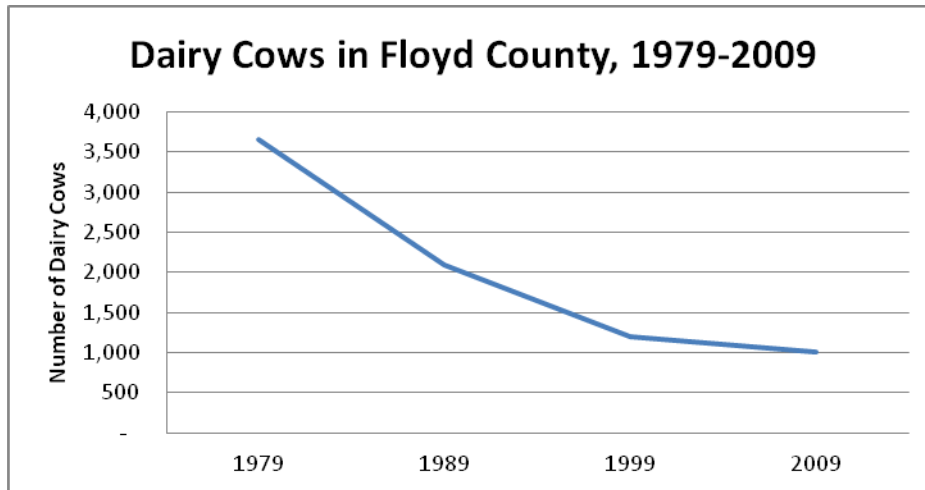
While the number of farms increased to 864 (up 4% in 5 years), the amount of land in farms and the size of farms decreased 5% and 9%, respectively. The size of Floyd County farms in 2007 is shown in Figure 17.

**Figure 17
Floyd County**



This decrease in farm size is a reflection, in part, of the dramatic decrease in the number of dairy farms and dairy cows in the County in the past 3 decades (see Figure 18.) Only about a dozen dairies remain in Floyd County, and they are at risk if trends and opportunities do not change.

Figure 18



Tables 31 and 32 reflect more details of the farms in Floyd County. Note that the average net income of farms in Floyd County (in 2007) was about \$4,500 (Table 18); this would be significantly higher if excluded those for whom it's just part-time income. This is not a primary income for most farm families.

Table 31 Agricultural Census Summary, 2007

Floyd County – Virginia

Ranked items among the 98 state counties and 3,079 U.S. counties, 2007

Item	Quantity	State Rank	Universe ¹	U.S. Rank	Universe ¹
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD (\$1,000)					
Total value of agricultural products sold	43,381	15	98	1,889	3,078
Value of crops including nursery and greenhouse	18,727	15	98	1,498	3,072
Value of livestock, poultry, and their products	24,634	18	98	1,359	3,069
VALUE OF SALES BY COMMODITY GROUP (\$1,000)					
Grains, oilseeds, dry beans, and dry peas	209	72	97	2,339	2,933
Tobacco	(D)	(D)	34	(D)	437
Cotton and cottonseed	-	-	15	-	826
Vegetables, melons, potatoes, and sweet potatoes	(D)	24	95	(D)	2,796
Fruits, tree nuts, and berries	812	17	96	523	2,659
Nursery, greenhouse, floriculture, and sod	15,815	5	94	206	2,703
Cut Christmas trees and short rotation woody crops	974	2	64	46	1,710
Other crops and hay	821	47	98	1,985	3,054
Poultry and eggs	151	35	96	1,320	3,020
Cattle and calves	20,574	6	96	656	3,054
Milk and other dairy products from cows	3,707	18	78	822	2,493
Hogs and pigs	12	51	86	2,201	2,922
Sheep, goats, and their products	88	30	95	1,419	2,998
Horses, ponies, mules, burros, and donkeys	106	38	94	1,647	3,024
Aquaculture	(D)	42	44	(D)	1,498
Other animals and other animal products	(D)	(D)	94	(D)	2,875
TOP CROP ITEMS (acres)					
Forage - land used for all hay and haylage, grass silage, and greenchop	27,590	15	98	759	3,080
Nursery stock	1,994	1	71	41	2,130
Corn for silage	1,875	16	81	679	2,263
Rye for grain	800	1	51	83	977
Cut Christmas trees	718	2	67	73	1,756
TOP LIVESTOCK INVENTORY ITEMS (number)					
Cattle and calves	38,353	12	97	820	3,080
Layers	2,442	24	97	1,032	3,024
Horses and ponies	1,189	27	97	1,188	3,066
Sheep and lambs	879	24	94	1,007	2,891
Goats, all	446	50	97	1,582	3,023

**(D)* means withheld to avoid disclosing data on individual farms.*

"Universe" means total number of localities reporting.

Table 32
Floyd County Farms, 1982-2007

	1982	1987	1992	1997	2002	2007	% change '82-'07	% change '02-'07
Farms #	920	772	761	731	829	864	-6.1%	4.2
Land in Farms (Acres)	131,727	118,115	116,509	122,613	135,311	128,872	-2.2%	-4.8
Average size of Farms (Acres)	143	153	153	168	163	149	4.2%	-8.6
Average farm in (\$)	116,329	116,078	166,058	226,640	308,517	619,915	432.9%	100.9
Average per acre (\$)	759	837	1,068	1,523	2,113	4,156	447.6%	96.7
Est Market Value of mach and equip (avg/farm in \$)	18,523	25,442	28,190	41,444	32,136	58,108	213.7%	80.8
Farm by Size								
1-9 acres	30	29	28	27	29	30	0.0%	3.4
10-49 acres	181	149	174	159	180	260	43.6%	44.4
50-179 acres	505	408	361	338	421	384	-24.0%	-8.7
180-499 acres	174	149	162	166	153	146	-16.1%	-4.6
500-999 acres	25	33	29	31	34	26	4.0%	-23.5
1,000 acres +	5	4	7	10	12	18	260.0%	50
Total cropland (farms)	873	722	709	681	744	720	-17.5%	-3.2
Total cropland (acres)	61,472	54,303	58,120	60,660	57,500	45,010	-26.8%	-21.7
Harvested cropland (farms)	795	662	649	615	657	644	-19.0%	-2
Harvested cropland (acres)	25,201	23,328	25,619	27,962	30,688	33,971	34.8%	10.7
Irrigated land (farms)	7	11	18	20	48	40	471.4%	-16.7
Irrigated land (acres)	9	58	161	415	779	108	1100.0%	-86.1

Table 32 Floyd County Farms, 1982-2007 (cont)

	1982	1987	1992	1997	2002	2007	% change '82-07	% change '02-'07
Land in Orchards (farms)	41	19	23	14			NA	
Land in Orchards (acres)	164	137	213	97			NA	
Farms by Value of sales								
Less than \$2,500	389	242	168	178	290	286	-26.5%	-1.4
\$2,500 - \$4,999	186	151	173	117	93	120	-35.5%	29
\$5,000-\$9,999	141	153	136	161	166	135	-4.3%	-18.7
\$10,000-\$24,999	111	114	158	152	136	136	22.5%	0
\$25,000-\$49,999	46	54	67	61	67	94	104.3%	40.3
\$50,000-\$99,999	25	28	20	26	43	48	92.0%	11.6
\$100,000 +	22	30	39	36	34	45	104.5%	32.4
Total Farm Production Expenses (\$1,000)	Na	44,509	17,063	22,605	27,724	40,539	NA	46.2
Average Per Farm (\$1)	Na	14,927	22,422	30,839	33,402	46,920	NA	40.5
Operators by Principal Occupations							NA	
Farming	326	312	339	317	504	405	24.2%	-19.6
Other	594	460	422	414	325	459	-22.7%	41.2
Operators by days worked off Farm								
Any			441	416	409	563	NA	37.7
200+			323	282	300	330	NA	10



of cut Christmas trees in Virginia (see Table 31 above).

Three segments of agriculture which have grown in the County in recent years are the production of Christmas trees, the operation of nurseries, and the growth of sustainable produce farming. The nurseries mainly produce ornamental trees, such as white pine. Both the nurseries and the Christmas tree farms are primarily wholesale operations, with the stock being distributed to retailers throughout the eastern United States. Floyd County is currently ranked 1st for acres of nursery stock and 2nd for acres

At left, the Freemans present the Virginia First Lady with the State Champion Christmas tree in 2010 from Mistletoe Meadows farm in Willis. Photo via family.

Vegetable production is increasing in the County (see Table 33 below). There are now 34 operations with a total of 224 acres harvested. Total sales (including seeds and transplants) were \$272,000 in 2002, but that data is not available for the other years. Produce operations are generally small with some farms operating on plots less than 5 acres. Irrigation generally results in higher productivity. Note that all of these vegetables are sold fresh (none are processed.) Often these vegetables are sold to families through community-support-agriculture (CSA's) or farmers' markets or directly to chefs in the region. Table 34 lists the main vegetables grown in Floyd County by acreage. Lastly, in 2007, there were reported to be 9 certified organic farms in the County with crop sales of \$195,000.

Table 33
Vegetables Grown in Floyd County and Sold Fresh

	1997	2002	2007
ACRES HARVESTED	73	140	224
ACRES IRRIGATED	12	23	46
OPERATIONS WITH HARVEST	18	21	34
<i>Note all are "in the open" not in hothouses.</i>			

Source: Census of Agriculture, National Agricultural Statistics Service

At right, Tenley Weaver, a grower, wholesaler and retailer of local foods, helps a customer at the Floyd Community Market.



Table 34
Main Vegetables Grown in Floyd County by Acreage, 2007

	Acres in Production in 2007
Beans, Snap	9
Broccoli	6
Cabbage, Head	14
Cucumbers	8
Melons, Cantaloupe	2
Melons, Watermelon	1
Peas, Green	1
Peppers, Bell	5
Potatoes	61
Pumpkins	11
Squash, Summer	6
Squash, Winter	2
Sweet Corn	36
Tomatoes	9
Other	53
Total	224

These increases in vegetable production are in line with a major new national tendency toward locally-grown foods. With the current national and regional interest in local foods, food security, reducing the carbon footprint of food, and favoring small farms over conglomerates, Floyd County is poised to be a leader in this market in our region. The County seems to have great opportunities to expand and diversify local agriculture and food-related jobs.

A local non-profit group, SustainFloyd, is operating a new farmers market in Floyd and leading an effort to evaluate the feasibility of value-added processing of local foods in Floyd. SustainFloyd has also worked with the school system in creating a pilot Farm to School project in an effort to get local farm products into the school lunch program.

Beyond their value as economic and cultural assets, agricultural lands further benefit the County by providing open space and wildlife habitat and by protecting watersheds. The perpetuation of viable farms and the promotion of sound farming techniques are therefore important to the entire community.

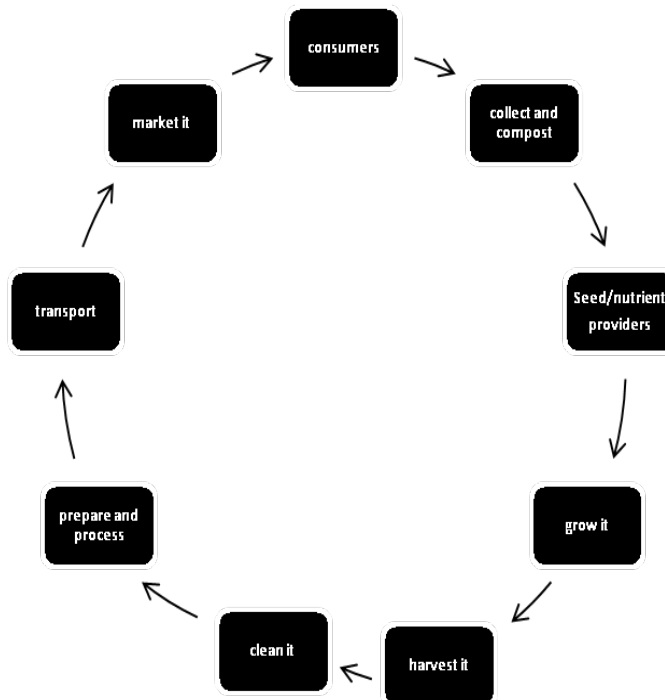
Currently working farms benefit from Land Use Valuation, a method of taxing local real estate based on use value rather than market value. Farms are also assisted by the local

forester and Cooperative Extension agent. Farms may also pursue voluntary conservation easements, as long as their land is not identified as a growth area in the Comprehensive Plan. All of these are helpful but apparently not sufficient to curb the loss of large farms.

In conclusion, while land planning and protection is essential for maintaining and growing farms into the future, land alone does not make a farm--farmers are essential. To begin or continue farming, farmers must be able to make a reasonable living. There needs to be new market opportunities, training in new crop varieties, aggregating entities to help enter new markets, value-added facilities, agri-tourism, and perhaps a “Product of Floyd” brand could be developed. Furthermore, many are not encouraging their children or grandchildren to continue the farm business because of the economic challenges.

An agricultural strategic plan is needed to assess, prioritize and promote opportunities, including further engaging youth in new farming opportunities. Part of that should be a food system plan, to determine how we can reduce the “leakage” of food dollars from our region and capture those dollars with products from Floyd County. This could ultimately result in more jobs in Floyd County and greater incomes for farmers. It should be noted that business and job opportunities go beyond just the production and processing of local foods, but a whole cycle related to food (see Figure 19).

Figure 19
Cycle of Producing and Processing Foods

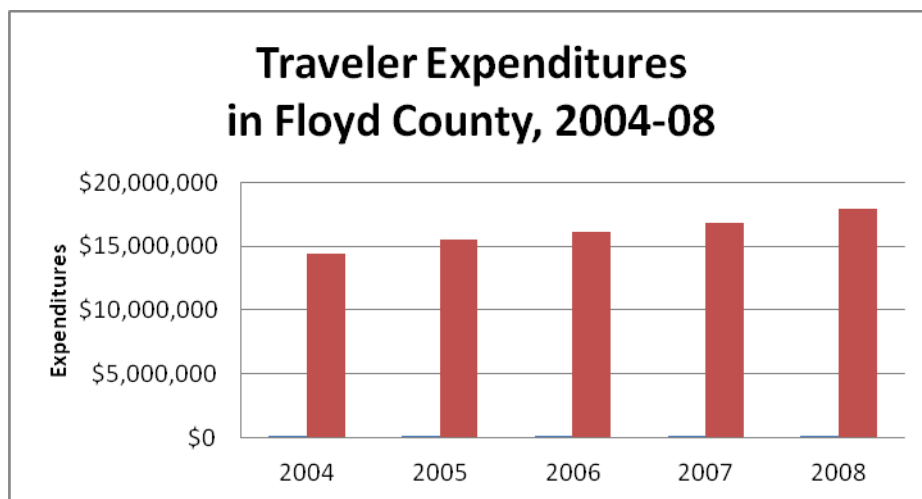


One final note, many households in Floyd County have a small garden or some farm animals that provides a portion of the family food. This is an important thing economically, culturally and nutritionally. Additionally there are non-profit efforts like Plenty! that are working to distribute food to those who do not have enough—such as needy children, seniors and shut-ins. These efforts are supported by donations, fundraisers, and volunteers. This year they also established a community garden. Likewise, SustainFloyd is working to make sure that families receiving federal food assistance dollars can use them at the farmers’ market. In addition, the Floyd County Multi-Disciplinary Team (a group of non-profits and civic organizations), was grant funded to hire a Childhood Obesity Prevention Specialist (COPS) located in and dedicated to work in Floyd County. The COPS will work with the school system, the farmers’ market, the Farm-to-School program, and community and school gardens to help combat childhood obesity and see that these programs are self-sustaining and effective. Efforts like these are important to make sure residents have access to healthy foods, preferably local.

Tourism

Tourism is a vital part of Floyd County’s economy, with visitors’ expenditures estimated by the Virginia Tourism Corporation at over \$17 million in 2008 (see Figure 20).The County has an abundance of tourism assets, including Buffalo Mountain, the Blue Ridge Parkway, downtown Floyd, the arts, music, wineries, historical sites like Mabry Mill, and local foods. Through support of the Crooked Road, Rocky Knob/Blue Ridge Heritage project, the Jacksonville Center for the Arts, Chamber of Commerce, Floyd Merchants, and ‘Round the Mountain’, as well as other marketing efforts, the County promotes the many tourism-related entrepreneurs and artisans in the Town and County.

Figure 20



Source: Virginia Tourism Corporation

Planning directly with tourism stakeholders occurred in 2010, resulting in the first ever draft Floyd County Tourism Strategic Plan. The document identifies goals and objectives of tourism stakeholders to allow Floyd County to continue efforts in tourism while maintaining its rural and unique character. Priorities include:

- Establishing a tourism committee to make recommendations to local government
- Developing a recognizable emblem to represent Floyd
- Developing a tourism marketing plan
- Creating a comprehensive “official” Floyd visitor website
- Developing public and private support for a full-time tourism director
- Providing customer service training to businesses
- Establish a centralized, official visitor center
- Develop a visitor walking accessibility and signage plan and parking analysis.
- Encourage protection of agriculture and cultural assets.



Photo Courtesy of the Floyd Country Store

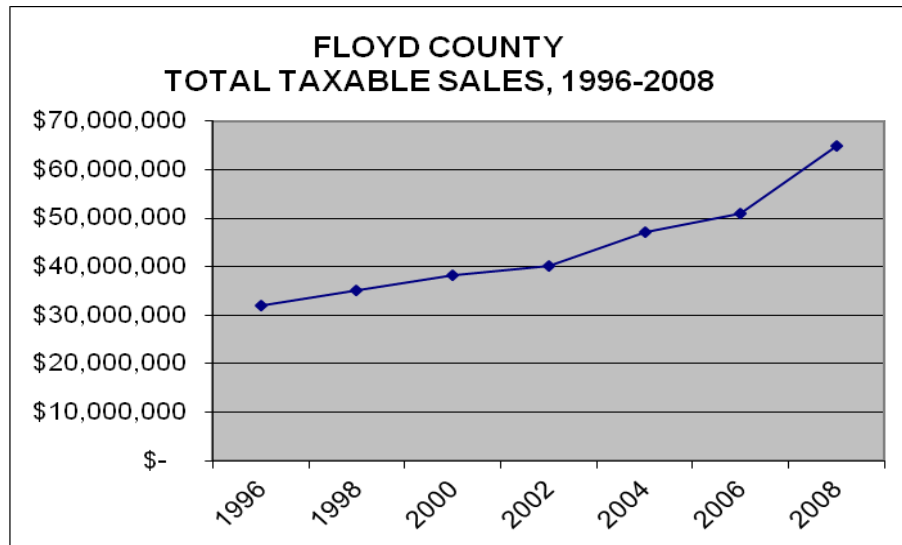
The plan is currently pending with Town Council and the Board of Supervisors.

Retail Sales

There has been a general increase in retail sales over the past decade (see Figure 21), likely caused by population and visitor growth, though this increase halted with the recession in 2009.

The Virginia Department of Taxation, which supplies this information, changed from the SIC coding system to the NAICS coding system around 2005, making specific long-term comparisons difficult. See Tables 35 and 36 for trend information before and after those changes, respectively. Despite the recession in 2009, it is apparent that some sectors—including accommodations, arts and many services continued to experience growth. Please note that many businesses fall into more than one class. For example, grocery stores sell many non-food items, while department stores, hotels, and other establishments sell food. Therefore, the classifications reflect the principal business activity as reported by dealers.

Figure 21



Source: Virginia Department of Taxation and Weldon Cooper Center

Table 35
Retail Sales by Category in Floyd County, 1996-2004

Retail Numbers	1996	1998	2000	2002	2004
Apparel Group	\$ 241,865	\$ 314,627	\$ 185,769	\$ 263,014	\$ 290,271
Automotive Group	\$ 3,786,184	\$ 3,700,221	\$ 4,296,946	\$ 4,377,920	\$ 5,491,079
Food Group	\$ 16,306,576	\$ 16,640,299	\$ 17,625,349	\$ 17,432,545	\$ 17,770,347
Furniture, Home Furnishing & Equipment Group	\$ 1,199,750	\$ 1,282,282	\$ 1,313,480	\$ 1,023,108	\$ 1,006,650
General Merchandise Group	\$ 1,233,864	\$ 632,110	\$ 1,132,516	\$ 1,092,514	\$ 852,128
Lumber, building materials and supply Group	\$ 1,799,468	\$ 2,321,130	\$ 2,860,645	\$ 3,231,859	\$ 5,161,195
Fuel Group	withheld				
Machinery, equipment and supplies Group	\$ 495,605	\$ 407,099	\$ 462,417	\$ 425,108	\$ 323,833
Miscellaneous Group					
unclassified	\$ 1,996	\$ 1,998	\$ 2,000	\$ 2,002	\$ 2,004
books, stationery, printing, office supplies	\$ 127,759	\$ 126,180	\$ 160,420	\$ 87,498	\$ 159,828
florists, nurseries, garden, fertilizer, tree dealers	\$ 444,311	\$ 704,422	\$ 595,056	\$ 498,999	\$ 430,182
gifts, novelties, ceramics, art shops,	\$ 338,788	\$ 400,131	\$ 340,586	\$ 1,316,149	\$ 1,334,039
jewelry, luggage, leather goods	\$ 325,442	\$ 369,151	\$ 348,384	\$ 398,070	\$ 391,710
salvage, surplus, flea markets	\$ 151,861	\$ 36,730	\$ 33,074	\$ 21,197	\$ 19,971
sporting goods, hobby supply, fire arms, golf, etc.	\$ 100,047	\$ 70,706	\$ 98,146	\$ 134,893	\$ 109,322
vending machine sales	\$ 49,526	\$ 31,141	\$ 30,312	\$ 38,749	\$ 36,916
retail shoe repair, beauty shops, optical, auction, manufacturers, banks, hearing aids	\$ 3,454,529	\$ 4,005,082	\$ 5,331,575	\$ 5,785,848	\$ 6,371,497
	\$ 4,992,263	\$ 5,743,543	\$ 6,937,553	\$ 8,281,403	\$ 8,853,465
Hotels, Motels, Tourist Camps, etc.	\$ 310,446	\$ 568,998	\$ 636,051	\$ 533,224	\$ 440,358
Alcoholic Beverage	\$ -	\$ -	\$ -	\$ -	\$ -
Other miscellaneous and unidentifiable	\$ 1,621,033	\$ 3,465,362	\$ 2,828,615	\$ 3,556,873	\$ 7,010,926
	\$ 1,996	\$ 1,998	\$ 2,000	\$ 2,002	\$ 2,004
TOTAL TAXABLE SALES	\$ 31,987,054	\$ 35,075,671	\$ 38,279,341	\$ 40,217,568	\$ 47,200,252

Source: Virginia Department of Taxation and Weldon Cooper Center

The number of business establishments increased 7.5% from 2008 to 2009, though total retail sales fell by about 8%. Table 23 shows the trend toward increasing local sales tax revenue in the County, though this is but a small fraction of the County's overall budget.

Table 36
Number of Establishments and Retail Sales by Category, 2008-2009

	2008		2009	
	establishments	taxable sales	establishments	taxable sales
No NAICS Information	16	\$ 143,740	16	\$ 212,667
Crop Production	6	\$ 228,671	11	\$ 278,251
Animal Production			7	\$ 260,159
Miscellaneous Manufacturing	5	\$ 254,672		
Nonmetallic Mineral Product Manufacturing			6	\$ 1,196,646
Merchant Wholesalers, Durable Goods	11	\$ 1,496,440	11	\$ 185,744
Motor Vehicle and Parts Dealers	11	\$ 858,255	12	\$ 1,004,365
Furniture and Home Furnishings Stores	8	\$ 839,735	9	\$ 441,192
Electronics and Appliance Stores			5	\$ 49,704
Building Material and Garden Equipment and	8	\$ 6,756,078	6	\$ 6,447,062
Food and Beverage Stores	16	\$ 21,806,734	16	\$ 21,617,105
Gasoline Stations	11	\$ 2,439,080	11	\$ 2,158,817
Clothing and Clothing Accessories Stores	10	\$ 480,779	8	\$ 316,462
Sporting Goods, Hobby, Book, and Music Stores	15	\$ 304,409	15	\$ 243,433
General Merchandise Stores	7	\$ 3,222,974	7	\$ 3,289,329
Miscellaneous Store Retailers	56	\$ 1,757,555	54	\$ 1,509,644
Nonstore Retailers	23	\$ 580,429	30	\$ 870,663
Publishing Industries			5	\$ 4,661
Real Estate			5	\$ 437,159
Rental and Leasing Services	30	\$ 402,970	25	\$ 337,118
Professional, Scientific, and Technical Services	5	\$ 66,818	6	\$ 70,723
Performing Arts, Spectator Sports, and Related Activities	7	\$ 90,543	12	\$ 109,360
Accommodation	16	\$ 724,471	16	\$ 875,788
Food Services and Drinking Places	21	\$ 6,229,265	25	\$ 6,277,195
Repair and Maintenance	17	\$ 2,553,379	20	\$ 2,890,531
Personal and Laundry Services	7	\$ 585,844	6	\$ 700,780
Floyd Total:	306	\$ 51,822,841	344	\$ 51,784,558
Miscellaneous and Unidentifiable Total:	76	\$ 13,082,149	67	\$ 7,561,020
Total:	382	\$ 64,904,990	411	\$ 59,345,578

Source: Virginia Department of Taxation and Weldon Cooper Center

Table 37
Sales Tax Revenue Data (collected from revenue not source) 2000-2008

Year	Floyd County	Virginia
2000	\$420,165	\$777,850,960
2001	\$445,698	\$777,241,737
2002	\$443,558	\$789,905,170
2003	\$470,220	\$838,275,059
2004	\$543,189	\$914,499,686
2005	\$537,780	\$976,923,577
2006	\$600,974	\$1,208,544,074
2007	\$662,580	\$1,056,766,678
2008	\$735,912	\$1,032,845,078

Source: Virginia Department of Taxation and Weldon Cooper Center

Business Survey

As part of the input for this plan, an online survey was conducted of local businesses to measure concerns, markets and satisfaction levels. The responses were from a variety of business, with diverse markets. The survey provided positive news: nearly 80% rated the County above average for business climate and, despite the recession, a majority of the businesses expected to grow in the near term (see details below). This underlines encouraging the great potential of supporting local businesses.

Figure 22
Floyd County Business Survey

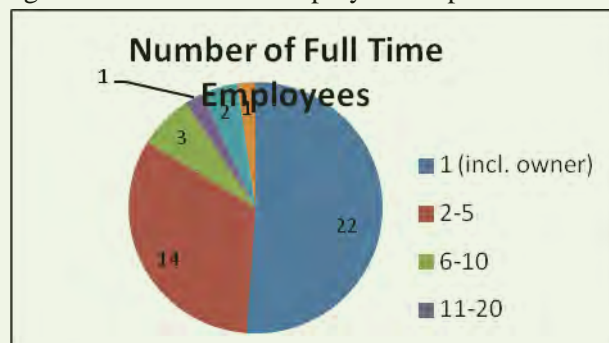
In the spring of 2010, an online, volunteer survey was conducted of Floyd County businesses (collaborative effort between David St. Jean, a Virginia Tech graduate student; the New River Valley/Mount Rogers Workforce Investment Board; and Floyd County.) There were 43 responses. The 4 business categories with the largest numbers of respondents were:

1. Arts and Crafts with 11 respondents (25%).
2. Hospitality (food and lodging) with 8 respondents (19%).
3. Health Care with 7 respondents (16%).
4. Agriculture with 4 respondents (10%).

These 4 categories represented over 70% of the responses.

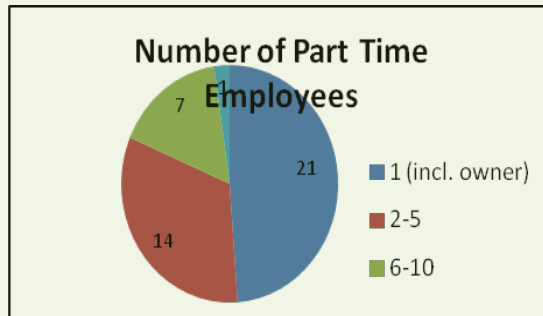
The following summarize key findings of the survey:

- **How many years have you been operating in Floyd County?**
The majority of respondents (17) to this survey have been in business for over 10 years. Nearly 56% have been in operation in the county since at least 2004.
- **On average, how many full time employees do you have? (If you are a seasonal employer, please enter the number for your busy season.)**
Over half of the respondents are one employee companies (counting the owner as an employee), although several of the one employee companies are not sole proprietorships.



On average, how many part time employees do you have?

Seasonal businesses were asked to submit a response for their busy season.



- **On average, how far away are your customers and suppliers based?**

Not surprisingly, since Floyd County is well removed from large population centers, the average distance to each is very similar. When these distances are taken into consideration, transportation infrastructure and services take on larger roles in the county’s economic viability and future growth.



- **Are you having recruiting/retention problems?**

Overall, 77% of the respondents answered “not a problem” or “occasionally” for these employee issues.

- **What strengths does Floyd County offer to small businesses (check all that apply):**

Nearly every respondent chose “creative atmosphere”, “lifestyle”, and “rural character” as their top strengths of the county.

- **Sometimes having one type of business nearby can help other businesses to grow. Keeping that in mind, which of the following industries do you think are underrepresented in Floyd?**
This question aims to get at what type of business growth would help existing businesses be more successful. Respondents were allowed to choose from multiple industries from the list. Expected answers could be for business services such as accounting and shipping. Whereas this was true for this survey, the greatest number of respondents stated a desire for growth in manufacturing businesses.
- **Using a 1 to 10 scale, can you please rate the following government services in terms of their ability to meet the needs of the business community (1 is poor, 10 is excellent):**
Respondents were given nine services provided by the county to choose from. K through 12 education is rated highly by most of the respondents. Recycling services are rated the lowest.
- **Do you plan to expand your business facilities within the next 1-5 years?**
When asked whether they expected to expand their businesses in the near future, 56% responded positively.
- **On a scale of 1 to 10 (1 poor, 10 excellent), how would you characterize the overall business climate in the county (ie: taxes, regulation, government support, community support, etc.):**
Perhaps mirroring the respondents' positive outlook for business expansion, 79% indicated the business climate in the County as being above average.

Chapter 5. **How Do People Make a Living in Floyd County?**

Summary and Conclusion

EMPLOYMENT and MAJOR EMPLOYERS

- Nearly six-times more people drive out of Floyd County to work than drive in. This has negative consequences for workers for businesses in Floyd County, as commuters tend to spend retail and service dollars outside the community.
- Major employers inside the County include the School Board, Hollingsworth and Vose, the Bank of Floyd, Chateau Morrisette, Riverbend Nursery, Citizens' Telephone Cooperative, and Wall Residences.
- The number of people employed from Floyd County (both inside and outside the County) has decreased significantly in manufacturing and agriculture, indicative of global pressures. In-County employment has increased in retail, construction, arts related and professional occupations over the past decade, likely related to population increases and Floyd's heightened status among arts and travelers. Unfortunately, the tourism-related jobs are among the lowest paying of all jobs in the County.
- Floyd County's unemployment rate topped 9% in February 2010, the highest point in at least 10 years; the state number was 7.8% and the national number was 10.4%.
- Because of robust telecommunications infrastructure throughout the County, residents have growing tele-commuting opportunities in various service sectors.

INCOME

- Average weekly wages in Floyd County (\$535) are among the lowest in Virginia. Coupled with increased demand for land from population increases, this has resulted in people employed locally struggling to afford land and housing. It is important to support development of higher wage jobs, such as in light industry, technology and innovations fields, which are consistent with community and regional assets (e.g. Virginia Tech).
- While median family income and per capita income have increased in Floyd County, they have not kept pace with the growth of income in the rest of Virginia.
- The poverty rate for individuals has increased from 11.7% in 2000 to 15.1% in 2005-09, likely because of the major economic recession.

SMALL BUSINESSES

- Floyd County has a very high rate of self-employed people and small business establishments. This likely reflects the independent and/or creative nature of many, the lack of other opportunities and the great opportunities available for home-based businesses because of the robust telecommunications infrastructure in the County.
- There are over 400 small businesses with employees ("establishments") in the County (2009). There are also over 1,200 self-employed people/firms in the County, the largest numbers of which are construction (246), retail trade (145), professional, scientific and technical services (101), and other services (166.)

Chapter 5. **How Do People Make a Living in Floyd County? (cont'd)**

Summary and Conclusion

AGRICULTURE

- Agriculture is still a major part of the economy in Floyd County. The County ranks 1st in the state for acres in nursery stock and 2nd for acres in Christmas trees. Furthermore, the County ranks 6th for beef cattle sales and 18th in dairy sales.
- The County has also seen growth in vegetable production and is poised to be a leader in the region. Value-added processing of local foods could help farmers as well as provide additional manufacturing and distribution jobs.
- While keeping interest alive in being a farmer is an essential thing, it does not guarantee the continuation of farming in the County. Good agricultural lands must be available, affordable and desirable to future generations. Land Use Valuation is helpful but not sufficient to sustain farms.

TOURISM

- Tourism continues to grow in Floyd County because of major natural and cultural assets and the work of organizations like The Crooked Road and Round the Mountain. A separate tourism strategic plan has been drafted to encourage greater collaboration, coordination and focus. The draft plan captures the wishes of tourism stakeholders and includes their desire for an official tourism committee to make recommendations to local governments, a comprehensive marketing plan, a full-time tourism director, and an official visitor website.

RETAIL SALES

- Taxable sales have generally increased in Floyd County, until 2009 when the recession affected sales (as it did in Virginia and the nation.)
- In general, Floyd County can benefit from reducing the “leakage” of retail dollars to other communities. Encouraging buying local is important, as is developing more local choices and brands, including potentially locally-processed foods.

BUSINESS SURVEY

- In a survey, nearly 80% of businesses found the business climate in Floyd County to be above average.
- Continuing to support the growth of these local businesses is an important opportunity.

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CHAPTER 6.

WHAT ARE OUR HISTORIC AND CULTURAL RESOURCES?

Floyd County is culturally rich, as evidenced in increased tourism and population. These cultural resources are both historic and contemporary.

Brief History of Floyd County (adapted from *Our Beautiful Mountain*, 2006)

According to tradition, present day Floyd County was among the first areas explored when Virginia Colonists began to push into the mountains of Virginia. In the mid-to-late 1600's, expeditions began to map the area that was then principally a hunting-grounds by Indians, including the Canawhay tribe. The first white settlements in the area occurred in the mid-18th century. By the 1790's, English, German, French, Scottish and Irish immigrants settled in what is now Floyd County. One of



the first industries, Spangler's Mill, was also established in this time period. Watermills such as this one continue to symbolize the resourcefulness of residents and the importance of natural resources and living in touch with the land.

Coming onto the crest in what is now Floyd County, settlers were often astounded by the natural beauty, particularly in the Spring when the Chestnut blooms made a sea of white. Writing of their new plateau homeland, they often referred to it as "our beautiful mountain."

Land in the southwest portion of the County that was ceded by the Cherokee Nation to the British in 1768 was, in turn, part of the large land grant made to Lighthorse Harry Lee, father of Robert E. Lee and Charles Carter Lee. The latter moved to the County and penned what is believed to be the first book written here, *The Maid of the Doe*. It was a book of poetry about the Revolutionary War. Part of that Lee property, Buffalo Mountain, is now a natural recreation area.

In 1831, Floyd County was established and was named for Governor John Floyd. Governor Floyd was a native of Montgomery County, the parent County of Floyd. Reflecting early and strong commitment to education in the community, the Jacksonville Academy was established in 1846. It served students from Floyd and surrounding counties. The

Jacksonville Academy was located in one of the two buildings that is now Schoolhouse Fabrics.



Schoolhouse Fabrics

Throughout the 19th and 20th centuries, the local economy was dominated by agriculture. Textile manufacturing rose and fell during this time. The construction of the Blue Ridge Parkway during the

Great Depression brought some needed work to the County, and more importantly created a linear park and access way to introduce travelers to the arts, crafts and music of Floyd County. Mabry Mill, located in Floyd County, is one of the most visited and photographed sites along the 469-mile length of the Blue Ridge Parkway. The Rocky Knob recreation area along the Parkway also features hiking, camping and panoramic views.

By the 1970's, Floyd County was "discovered" by the back-to-the-landers seeking rural refuge. Many of the new residents were artists or artisans. In Floyd County, they found a land of natural beauty, a unique geography with all waters flowing out, rich hand-craft and music traditions, and open opportunities for creative living. These same assets and the culture of creativity now attract many travelers to Floyd.

Thanks in part to the natural, cultural and technological amenities (see Citizens, local telecommunications cooperative), the population of Floyd County has increased considerably in the past two decades.

Historic Resources

Three organizations have done a great amount to preserve and share history: the Floyd County Historical Society, the Floyd County Preservation Trust and the Old Church Gallery. Current projects include the preservation of historic properties such as the Oxford Academy. Just last year, the Ridgemont Hospital-Marie Williams House at 217 North Locust Street opened as the Floyd County Historical Society Museum.



Ridgemont Hospital-Marie Williams House now serves at the new Floyd County Historical Society Museum. Photo courtesy of the Floyd County Historical Society.

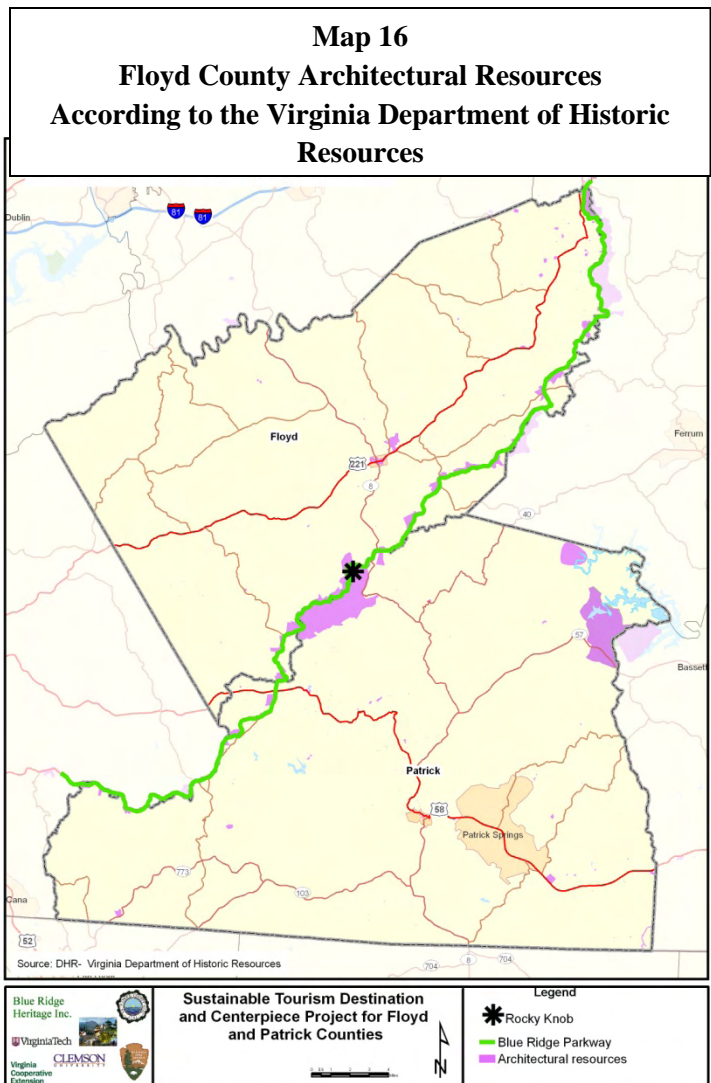
Several places in the County are now listed on the National Register of Historic Places, the Virginia Landmarks Register or both (see Table 38). Additionally, the Town of Floyd has adopted an historic district.

Table 38
Floyd County Places on Historic Registers

Place	USGS Quad	Date Listed on Virginia Landmarks Register	Date Listed on the National Register of Historic Places
Floyd Presbyterian Church	Floyd	12-16-75	05/17/76
Zion Lutheran Church and Cemetery	Floyd	06-16-81	-----
Glenanna	Floyd	06-13-01	05/16/02
Phlegar House	Floyd	03-19-03	06/22/03
Floyd Historic District	Floyd	09-14-05	11/16/05
Rev. Robert Childress Rock Churches, MPD	3 counties	12/06/06	03/30/07
Slate Mountain Pres. Church and Cemetery (see also Rock Churches)	Willis	12-06-06	03/30/07
Willis Presbyterian Church and Cemetery (see also Rock Churches)	Willis	12-06-06	03/30/07
West Fork Furnace (44FD0048)	Willis	03/19/09	06-05-09
Oakdale	Endicott	12/17/09	03-17-10

Source: <http://www.dhr.virginia.gov/register/RegisterMasterList.pdf>

Preliminary research suggests there are many other historic properties in the County (see Maps 16 and 17). For example, there are reported to have been well over a hundred watermills in Floyd County, several of which are still standing. An inventory of historic resources would help identify important properties before they are lost.



Map 17
Floyd County Archaeological Resources
According to the Virginia Department of Historic Resources



<p>Blue Ridge Heritage Inc.</p> <p>Virginia Tech</p> <p>Virginia Cooperative Extension</p> <p>CLEMSON UNIVERSITY</p>	<p>Sustainable Tourism Destination and Centerpiece Project for Floyd and Patrick Counties</p> <p>0 0.5 1 2 3 4 Miles</p> <p style="text-align: right;">N</p>	<p>Legend</p> <p>★ Rocky Knob</p> <p>— Blue Ridge Parkway</p> <p>● Archaeological resources</p>
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Culture

Though increasingly diverse in population, Floyd County is still imbued with a strong sense of common values, very much like these identified by Loyal Jones in his article *Appalachian Values* in 1975:

- *Religion*
- *Individualism, Self-Reliance, and Pride (including freedom and “space and solitude”)*
- *Neighborliness and Hospitality*
- *Familism (“family-centered”)*
- *Personalism (“one of the main aims in life . . . is to relate well with others. We will go to great lengths to keep from offending others, even sometimes appearing to agree when we do not. . . . Appalachians respect others and are quite tolerant of differences.”)*
- *Love of Place*
- *Modesty*
- *Sense of Beauty*
- *Sense of Humor*
- *Patriotism*

At times, these values can be at odds, such as the desire for “space and solitude” and unlimited choices, or Love of Place and Personalism. That is, when neighbors can sell land for virtually any use or any density of development, the sense of place, freedom, space and solitude can be lost forever. Historically, the individualism, personalism and reticence to set “speed limits” on development have dominated County culture. With the pace of change in the past decade, though, most people who have weighed all sides thoughtfully, as evidenced in the community input rankings, are now ready for more reasonable limits to protect the farms, forests and waters of Floyd County.

Cultural Resources

Now, Floyd County is known for music, the arts, farms, the Blue Ridge Parkway, and the Childress Rock Churches, among other things. Yet, cultural resources are sometimes difficult to quantify.

It has been said that there may be more musicians per capita in Floyd County than in Nashville. There certainly are many music venues in the County, providing live music 5 days per week generally, not to mention special events and festivals. Much of the music is traditional mountain music, but there is also a variety of American roots and world music.

The Crooked Road: Virginia's Heritage Music Trail has brought greater recognition to Floyd County's musical assets.



At left, Arthur Conner describes how he made the fiddle he is holding.

There are also many talented artists in the County, from woodworkers, metalsmiths, ceramists, painters, photographers, jewelry-makers to writers. The Jacksonville Center for the Arts, a local non-profit, promotes the arts as well as other rural, creative enterprises. Likewise, the Old Church Gallery is an important repository for local and regional arts, as are many individual studios and shops around the County. Round the Mountain: Southwest Virginia's Artisan Network also links visitors to artisans, farms, galleries and craft venues in Floyd County.



The Parkway itself records the history and culture of the Blue Ridge. One of the most frequently photographed cultural/historic assets in the United States is Mabry Mill, which is located on the Blue Ridge Parkway in the southwestern tip of Floyd County. During the early 20th century, the mill ground corn and buckwheat for surrounding farms as well as powered a lumber mill and woodworking shop. Over the past 200 years, there have been over 140 watermills in Floyd County (Cox 2010).

Several of the Childress

Churches, as written about in *The Man Who Moved a Mountain*, are in Floyd County. They are now listed on the National Register of Historic Places.



Photo by Lee Chichester

Chapter 6.
What are our Historic and Cultural Resources?

Summary and Conclusion

- Traditional “Appalachian Values” such as Individualism and Love of Place are still present in the County, and sometimes conflicting.
- Historically, the Floyd Countians have favored individualism and personalism, but with the quickening pace of land development, most citizens who participated in this planning process now favor actions to protect this place they love, especially farms, forests and water resources.
- Floyd County has a wealth of cultural and historic resources.
- Several non-profits are working to preserve and share historic resources including through a new museum.
- The Town of Floyd has adopted a historic district.
- A historical places inventory of the County is needed to help identify and prioritize key historical places.
- Several non-profits are working to promote cultural resources, which are also important to the people and economy of Floyd County.

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CHAPTER 7.

WHAT ARE OUR TRANSPORTATION MODES?



Photo by Jack Whitmore

In a rural area with a widely dispersed population such as Floyd County, transportation is not taken for granted. There is no rail, water or public air transport in the County. Roads provide the only access to employment, services, and social activities as well as the transport of consumer items and agricultural and industrial materials.

A review of the road infrastructure and travel information is, thus, the core of transportation planning here. Road classifications, traffic count, intersections and traffic control, safety and crash data, and travel and commuting information are all elements that should be considered.

Existing Road Infrastructure and Travel

Road Classifications

(background narrative adapted from the Route 8 Corridor Study and the draft 2035 NRV Rural Long Range Transportation Plan, not adopted)

There are over 600 miles of state-maintained roads in Floyd County. There are no four-lane roads in the County. Only four VDOT functional road classifications exist throughout Floyd County: Rural Minor Arterial, Rural Major Collector, Rural Minor Collector, and Not Classified/Rural Local. Rural Minor Arterial Roads, which includes Route 8 and U.S. Highway 221, are generally characterized by the following according to the FWHA:

- Link cities and larger towns and provide interstate and inter-County service
- Spaced so all developed areas in State within reasonable distance
- Provide service to corridors with trip lengths and travel density greater than rural collector or local systems
- Contain high overall traffic speeds.

Rural major collector roads provide service to the County seat not on an arterial route, to larger towns not directly served by the higher systems, and to other traffic generators of

equivalent importance. Minor collector roads collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road. Finally, local roads or unclassified roads generally provide access to adjacent land and serve short distance travel needs.

Nearly half (48.6%) of all roads in Floyd County are untreated roads. This is the highest percentage in the Salem VDOT district (see table below). Untreated roads require more maintenance. At least once per year the road needs machining and ditching. VDOT is putting more money into road improvements and fewer into maintenance. Further, it is focusing funds on interstates and key primary roads. This combination of factors has resulted in Floyd County losing a large amount of essential transportation funds.

Table 39
Salem District
Secondary System by Road Types, 2006

COUNTY	HARD SURFACED	UNTREATED ALL WEATHER SURFACE	UNTREATED LIGHT SURFACE	UNSURFACED	TOTAL	PERCENT WITHOUT HARD SURFACE
BEDFORD	732.69	216.78	26.29	0.00	975.76	24.9%
BOTETOURT	394.10	145.20	7.06	6.31	552.67	28.7%
CARROLL	514.35	262.72	56.06	6.62	839.75	38.7%
CRAIG	144.60	35.29	0.92	0.00	180.81	20.0%
FLOYD	320.38	209.71	84.36	9.29	623.74	48.6%
FRANKLIN	919.05	76.62	69.82	1.40	1,066.89	13.9%
GILES	208.79	101.74	22.48	0.00	333.01	37.3%
HENRY	684.09	0.77	1.07	0.00	685.93	0.3%
MONTGOMERY	328.03	92.81	28.45	6.10	455.39	28.0%
PATRICK	478.80	84.54	62.23	0.73	626.30	23.6%
PULASKI	301.75	64.83	12.62	0.27	379.47	20.5%
ROANOKE	548.27	21.74	0.16	0.24	570.41	3.9%
DISTRICT TOTAL	5,574.90	1,312.75	371.52	30.96	7,290.13	23.5%

Source: VDOT, 2011

Road Intersections and Traffic Control

The existing road network in Floyd County consists mainly of collector and local routes. Two roads considered minor arterial by State standards serve as major access routes: U.S. Route 221 (Floyd Highway North and South) and Virginia Route 8 (Webbs Mill Road North and Parkway Lane South). The intersection of U.S. 221 and VA Route 8 occurs in the Town of Floyd and is the only intersection in the County with a traffic light. Interstate 81, the closest limited-access highway designed for high volume traffic, lies about 20 miles North-

Northwest of the Town of Floyd via Route 8. Interstate 77 lies about 28 miles west of Floyd via U.S Route 221.

In the past 15 to 20 years, significant improvements have been made in the County to Route 8 and Route 221. Yet, several improvements are still needed to offset increases in traffic volume from population increase and roadway straightening improvements. Currently VA Routes 8 and 221 suffer from difficult intersections located within areas that do not provide appropriate sight distances to prevent accidents when traveling at the posted speed limit or greater. Horizontal and vertical sight distance improvements could be made to improve safety along those primary corridors. Additional improvements must be examined around the County's heavy truck traffics areas, such as the Floyd Regional Commerce Center.

There is not a significant amount of intersection and traffic control within the study area, but three general characteristics should be noted. First, the intersection of Route 8 (Locust Street) and Highway 221 (Main Street) in downtown Floyd is the location for the one traffic light in all of Floyd County. This intersection sees extensive use. Due to the use by semi-trucks, the lines are set back from the intersection to allow vehicles with larger turning radii to safely execute turns.

In addition, traffic is controlled upon entering the Town of Floyd through a gradual reduction of the speed limit along Route 8. On the approach to town coming from the north or the south, the speed limit drops to 45 mph from the standard 55 mph. After a short interval, the speed limit drops again to 35 mph. After another short interval before the town limits, the speed limit drops to 25 mph.

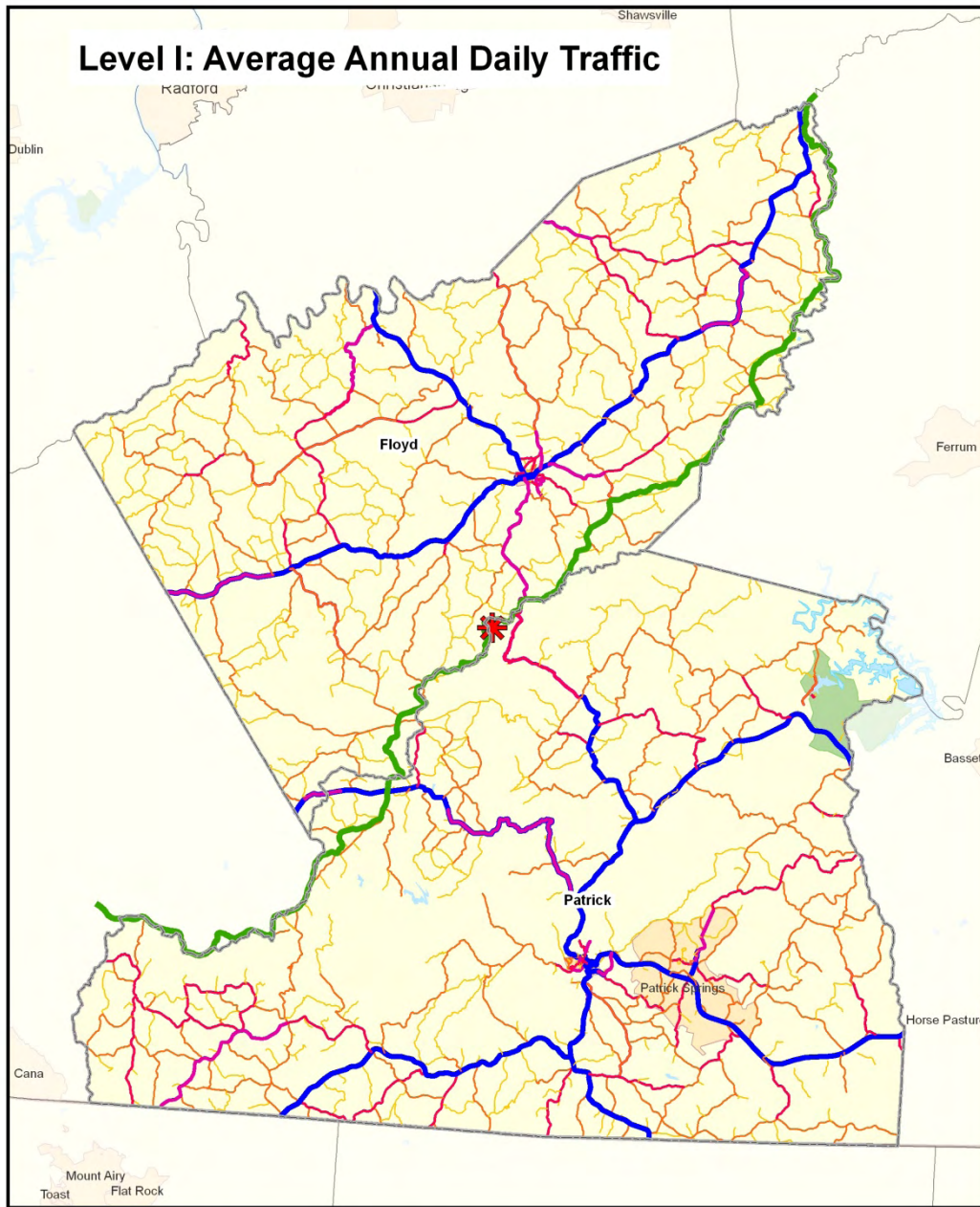
The final form of traffic control to be mentioned occurs at several intersection points where there are right-turn deceleration lanes for traffic to safely maneuver from Route 8 or Highway 221 onto an adjoining road.

Travel Information

Trucks and private automobiles are the conveyers of almost all cargo and people in Floyd County. Much of the car traffic is commuters, about 16% of which carpool. Informal car poolers' parking exist at various locations along Highway 221, such as near intersections with Routes 799 (Conner's Grove Road Southwest) and 610 (Daniels Run Road Northeast) and Route 8, such as near intersections of Blue Ridge Parkway and Route 750 (Alum Ridge Road Northwest.)

The highest volume of traffic along Route 8 within Floyd County occurs at the intersection of Route 8 (Locust Street) and Route 221 (Main Street), according to the latest VDOT traffic counts (2009). The highest volume (Average Annual Daily Traffic) for any stretch of road in Floyd County is 8,100, which occurs along Route 221 between the town of Floyd and Route 860 (Shooting Creek Road Southeast). Locust Street (Route 8) has 6,800 vehicles. Traffic count numbers outside of this interchange are considerably smaller and generally include: 4,600 along Route 8 at the intersection of northern Floyd County and Montgomery County, 2,900 along Route 221 at the intersection of Floyd County and Roanoke County, 1,900 along Route 221 at the intersection of Floyd County and Carroll County, and 1,800 along Route 8 from the Blue Ridge Parkway north towards the town of Floyd. (See Map 18 below for traffic volumes).

Map 18



	<p align="center">Sustainable Tourism Destination and Centerpiece Project for Floyd and Patrick Counties</p> <p align="center">0 1 2 4 6 8 Miles</p> <p align="center">N</p>	<p>Legend</p> <p> Rocky Knob</p> <p> Blue Ridge Parkway</p> <p>Average Annual Daily Traffic</p> <ul style="list-style-type: none"> 0 - 100 101 - 500 501 - 1000 1001 - 2000 2001 - 9300
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Safety/Crash Data

Crash density data on major rural collectors reveals areas of concern (see table and figure below). Portions of Alum Ridge Road (750) and Christiansburg Pike (615) had the highest number of crashes per mile.

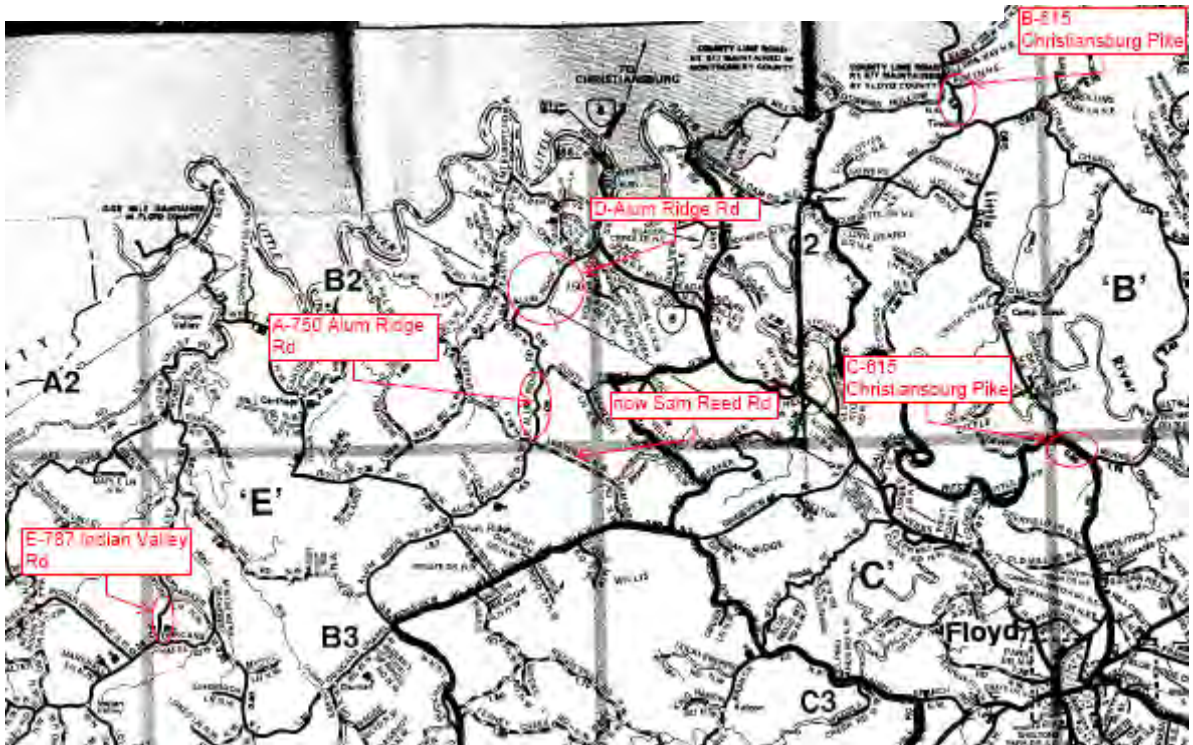
Table 40
Prioritized Crash Density on Segments Classified as Major Rural Collectors

ROUTE ID	LENGTH (MILE)	Approx. Start	Approx. End	AADT	2006 - 2008 CRASH	DENSITY (CRASH/MILE)
3100750	0.90	#739, Sam Reed	#735, Dusty Rock	1021	8	8.89
3100615	0.80	#705, Sowers	Mont. County Line	695	5	6.25
3100615	0.50	#686, Moore	#699, Bluebird	590	3	6.00
3100750	1.31	#738, S. Easter	#738, Mt. Elbert	1223	7	5.34
3100787	0.63	#751, Duncan Chapel	#730, Parker's Lane	372	3	4.76

AADT is Average Annual Daily Traffic

Source: VDOT (Dan Huff)

Map 19
Prioritized Crash Density on Segments Classified as Major Rural Collectors



Also, according to the Virginia Department of Motor Vehicles (DMV), there were a total of 47 automobile accidents in the Town of Floyd, with 1 fatality and 24 injuries from 1999 to 2008. The VA State Police respond to all traffic accidents in the town limits but they do not keep records on the exact locations of crashes. Over the same time period, there were 9 accidents involving pedestrians in Floyd.

Additional Safety/Crash Data for the remainder of the County should be made available in the upcoming NRV Rural Transportation plan.

Future Road Infrastructure

Due to Floyd County's roadway network type, regulations found in the Virginia Administrative Code for Minor Arterials, Collectors, and Local Streets (see Figure 23) will be of importance for future land development. These regulations call for decreasing the number of access points on roadways to prevent avoidable accidents. These standards are to be taken into account by Floyd County when reviewing land development applications.

The VTrans2035 Final Report to the General Assembly designates the New River Valley as an "Emerging Growth Area," which means it may demonstrate a 12-25% increase in jobs and population between 2010 and 2035. Next, key elements of the draft 2035 New River Valley Long Range Transportation Plan will be shared.

Appendix E contains a map of all the public roads in the County.

Figure 23
Changes to the Code of Virginia Related to Transportation Issues

Since 2000 the Virginia General Assembly enacted significant changes to the Code of Virginia pertaining to Transportation. The General Assembly made these changes in large part to increase the coordination between Land Use and Transportation, and provide guidance for land development.

Secondary Street Acceptance Requirements:

The Secondary Street Acceptance Requirements (SSAR) became effective on March 9, 2009. The SSAR includes the requirements that the new secondary streets must meet in order to be accepted by VDOT for ongoing maintenance.

Primary Requirements within the SSAR new to VDOT:

Area Types –

- The division of the state into three categories based on long-term local, regional and federal planning boundaries.
- These area types are Compact, Suburban, and Rural. Floyd County is considered Rural under these requirements. As a result the following requirements are to be utilized:
 - a. The streets are designed and constructed in compliance with the rural design standards pursuant to the Secondary Street Acceptance Requirements, the Road Design Manual, and the Subdivision Street Design Guide (24VAC30-92- 150); and
 - b. The network addition provides multiple connections to adjacent properties or streets in varying directions.
- The importance of area types within the SSAR is that a parcel’s area type will determine the connectivity and may impact pedestrian accommodation requirements which need to be met.

Connectivity Requirements –

- Standards to ensure multiple connections with existing streets and adjacent properties.
- The “connectivity index” requirement is based upon a development’s area type. (It should be noted that these requirements do allow for “connectivity exceptions.” These include: railroad tracks, limited access highway, navigable river or standing body of water that is greater in depth than 4 ft., terrain grades in excess of 20%, and government owned property.)
- The connectivity index can be found by dividing the development’s street segments by its intersections (street segments/intersections). The SSAR Guidance Document has an extensive section on these calculations and definitions.

- Compact and Suburban area types must meet a 1.6 and a 1.4 index, respectively, while developments in the Rural area type are not required to meet an index amount.
- All newly built developments, regardless of area type, must have multiple transportation connections in different directions. This can be accomplished with connections to existing roads in the state system or “stub outs” constructed to the property line for a future connection.

Pedestrian and Bicycle Accommodations –

- Sidewalk, trail, and path requirements are based upon density, proximity to public schools, and the functional classification of streets.
- Pedestrian accommodations are required on both sides of streets for developments with a median lot size of one half acre or less, a floor area ratio of 0.4 or greater, and along collector and arterial roads with three or more lanes.
- Accommodations must be provided on one side of the street for developments with median lot sizes between one half acre and two acres, developments within one half centerline mile of a public school in Compact and Suburban area types, and along collector and arterial roads with less than three lanes.
- If a development can be categorized into both groups requiring sidewalks on both and one side of a street, the higher requirement (pedestrian accommodations on both sides of the street) shall apply.

Network Additions –

- In most but not all cases, streets accepted under the SSAR will be accepted as part of a “network addition.” Each network addition must meet the public benefit requirements on its own.
- A network addition is a group of interconnected street segments and intersections shown in a plan of development that are connected to the state highway system and are intended to be accepted into the system at the same time.

Access Management Regulations and Standards:

Access management focuses on the location, spacing, and design of entrances, street intersections, median openings, and location of traffic signals. Each of these creates conflict points where vehicles have to stop or slow down, disrupting the flow of traffic.

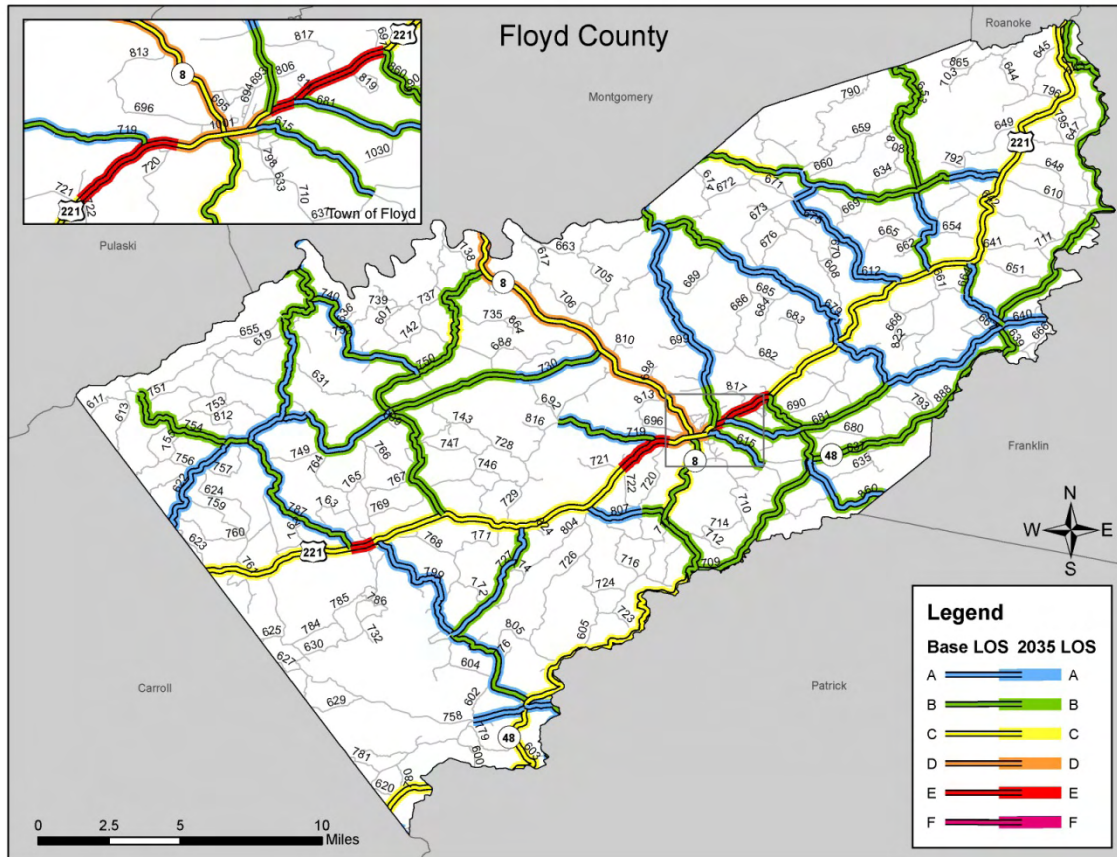
Draft 2035 Rural Long Range Transportation Plan (not adopted)

The New River Valley Planning District Commission 2035 Rural Long Range Transportation Plan is currently being developed (New River Valley Planning District Commission, 2010). This plan will provide an overview for the development and maintenance of rural transportation systems to support existing and projected travel demands to the year 2035. This plan specifically identifies needed roadway improvements throughout the New River Valley, including Floyd County.

In developing the 2035 Rural Long Range Transportation Plan jurisdictions, the NRVPC and consultants for the Virginia Department of Transportation, reviewed the rural transportation system (including hot spots identified by the locality, accident data, traffic counts, etc.) and recommended improvements to satisfy existing and future travel needs. The study specifically consolidated local and statewide deficiencies and recommendations into one plan. Recommended improvements by VDOT consultants identified in the 2035 Rural Long Range Transportation Plan can be found in the Transportation Policies section on the following page, and additional information from the VDOT plan can be found in Appendix C. Please note that the County has not adopted or endorsed the draft VDOT 2035 Rural Long Range Transportation Plan.

Many of the improvements identified in the 2035 Rural Long Range Plan include tiered recommendations for improvements. Many of the Short Term improvements can be achieved by Floyd County with small investment. When moving to Mid-Term to Long Term recommendations, many of the improvements identified will require incorporation into the Six Year Improvement Plan for appropriate funding. Also, the Plan identified the Level of Service (traffic compared to capacity) of important roads in the County both now and in the future (in 2035), based on general growth (see Map 20). Like a school grading scale, an A is excellent and F is failing. Anything below a C will need improvement.

Map 20 Level of Service, 2009 and 2035



Source: draft New River Valley 2035 Rural Long Range Transportation Plan

Transportation Policies

Short Term:

- Greater maintenance resources and attention are critical to improve safety and functionality of the many unpaved roads in Floyd County (for example, Sowers Mill Road)
- Address high crash density areas as much as possible with limited “6-Year Plan” funds from VDOT
- Continue increased communication with VDOT regarding Floyd County’s unique need for road maintenance assistance
- Maintain existing bridge infrastructure within existing transportation network
- Route 8 (Webbs Mill Road N) and Route 730 (Ridgeview Road NW) intersection improvements as outlined in the RLRP (\$50,000)
- Route 8 (Webbs Mill Road N) and Route 750 (Alum Ridge Road NW) intersection

improvements as outlined in the RLRP
(\$750,000)

- Adding advance warning signage along Route 221 and Route 8 for intersections identified as having poor horizontal or vertical sight distances
- Remove obscure abandoned structures and clear debris and vegetation to improve sight distances for traffic entering Route 221 and Route 8
- Apply access management standards to high traffic areas to improve safety (in conjunction with VDOT)

Mid Term:

- Improve stormwater management along existing roadway networks
- Higher traffic roads without hard-surface may need surface treatment to help reduce maintenance requirements.
- Add right and left run lanes along Route 221 and Route 8 at high volume intersections with the local roadway network
- Increase turning radii for truck traffic in high volume areas
- Improve pedestrian transportation network through the development of ADA accessible sidewalks or multipurpose paths
- Route 221 and Route 681 (Franklin Pike SE) intersection improvements as outlined in the RLRP (\$1.0M)
- Route 221 and Route 642 (Locust Grove Road NE) intersection improvements as outlined in the RLRP (\$1.9M)

Long Term:

- Reconstruct substandard transportation elements that improve: sight distance, reaction time, capacity, widths, safety, and roadway horizontal/vertical alignment.
- Examine alternative routing for Route 221 (including truck safety corridor to keep trucks from the narrow streets and sharp turns in downtown Floyd.)

The maps on the following pages represent transportation infrastructure projects identified within these policies.

Map 21



Floyd County, VA

Proposed Route 730 & 8 Improvements

Description of Safety Deficiencies:
 Stop bar is missing on northbound approach. Edge of pavement along US 8 is eroded. Horizontal curve alignment on west-leg of US 8 limits sight distance on both roadways.

Congestion Deficiencies:
 None

Recommendations:
Short Term:
 Install stop bar on northbound approach. Repair eroded pavement along US 8. Install advance warning signage along eastbound approach to alert drivers of intersection ahead.



This map was prepared by the New River Valley Planning District Commission in 2010 utilizing VGIN Imagery. All Images, Logos, and information contained herein is for planning purposes only.

Map 22



Floyd County, VA

Proposed Route 750 & 8 Improvements

Description of Safety Deficiencies:
 Stop bar is missing on northbound approach. Single lane configuration westbound creates potential for rear-end crashes given posted speed limit of 55 mph. VA 750 slopes downward and away from intersection and is not highly visible.

Congestion Deficiencies:
 None

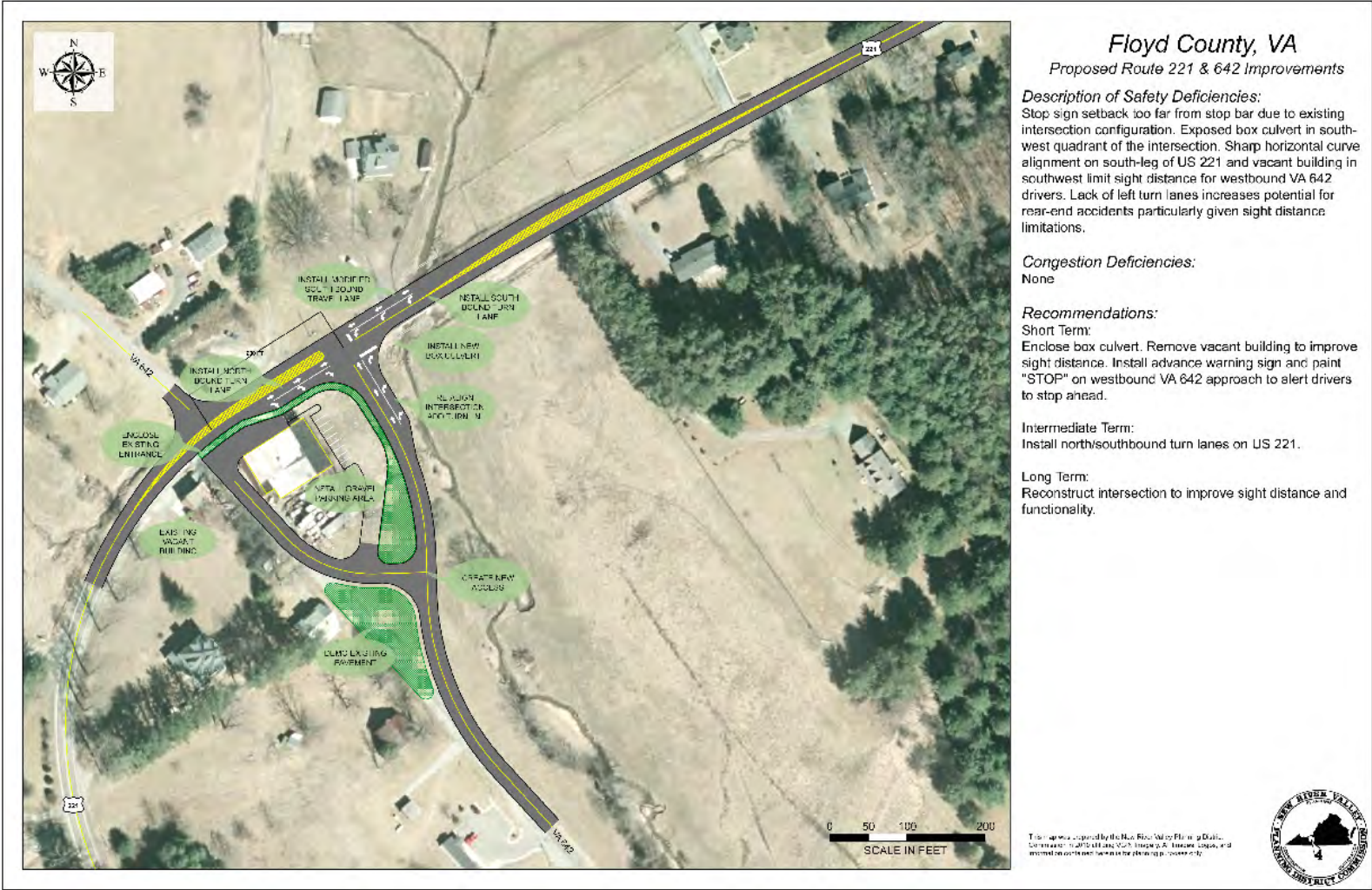
Recommendations:
Short Term:
 Install stop bar on northbound approach. Install advance warning signage along east/westbound approaches of US 8 to alert drivers of intersection ahead.

Intermediate Term:
 Install westbound left turn lane on Route 8 (100 foot storage length with 200 feet taper).



This map was prepared by the New River Valley Planning District Commission in 2010 utilizing VGIN Imagery. All Images, Logos, and information contained herein is for planning purposes only.

Map 23



Floyd County, VA

Proposed Route 221 & 642 Improvements

Description of Safety Deficiencies:
 Stop sign setback too far from stop bar due to existing intersection configuration. Exposed box culvert in southwest quadrant of the intersection. Sharp horizontal curve alignment on south-leg of US 221 and vacant building in southwest limit sight distance for westbound VA 642 drivers. Lack of left turn lanes increases potential for rear-end accidents particularly given sight distance limitations.

Congestion Deficiencies:
 None

Recommendations:
Short Term:
 Enclose box culvert. Remove vacant building to improve sight distance. Install advance warning sign and paint "STOP" on westbound VA 642 approach to alert drivers to stop ahead.

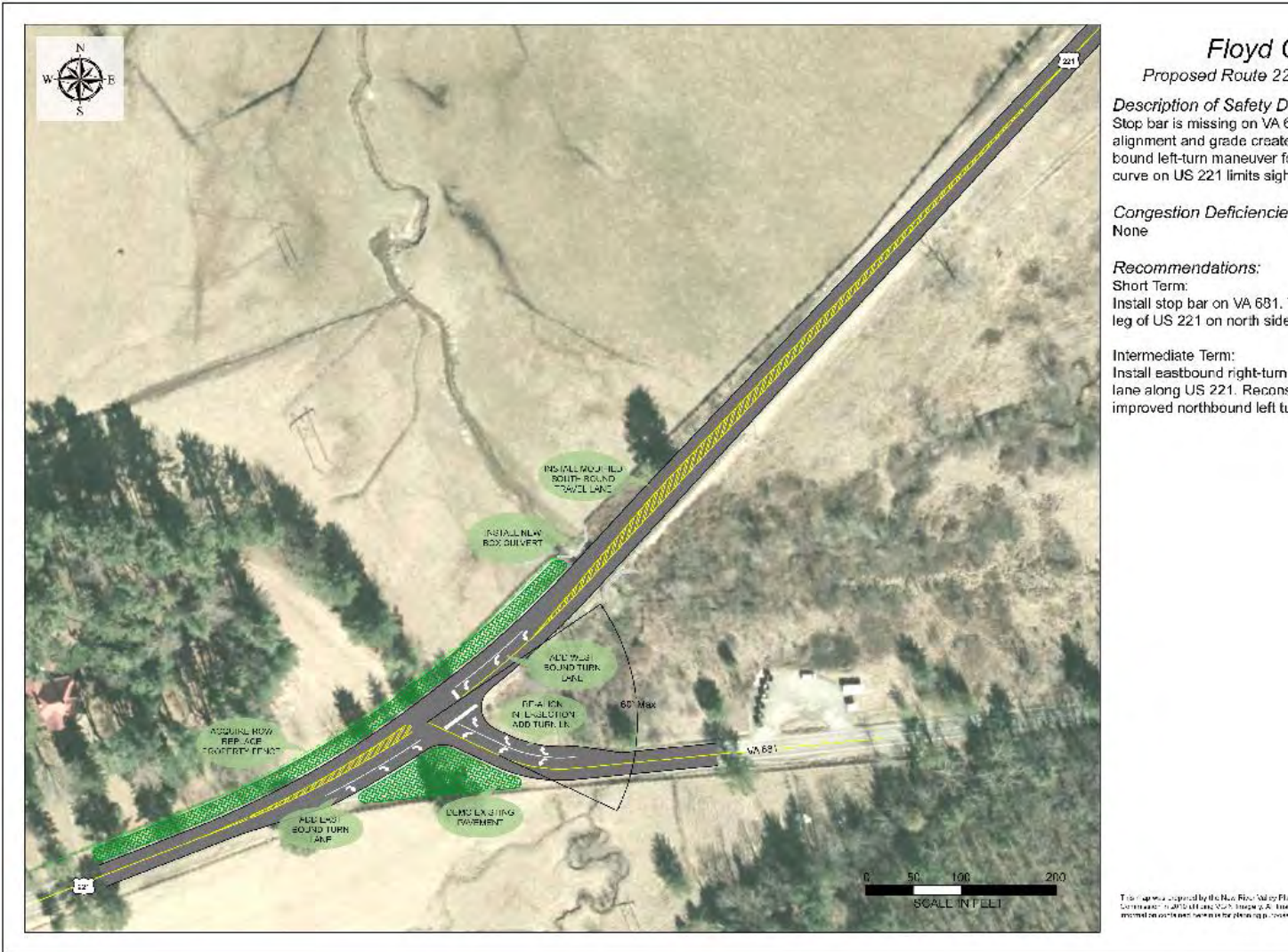
Intermediate Term:
 Install north/southbound turn lanes on US 221.

Long Term:
 Reconstruct intersection to improve sight distance and functionality.



This map was prepared by the New River Valley Planning District Commission for the Floyd County Board of Supervisors. It is intended for informational purposes only and should not be used for any other purpose without the express written consent of the New River Valley Planning District Commission.

Map 24



Floyd C

Proposed Route 221

Description of Safety Deficiency:
 Stop bar is missing on VA 681 alignment and grade creates a bound left-turn maneuver for curve on US 221 limits sight

Congestion Deficiency:
 None

Recommendations:
Short Term:
 Install stop bar on VA 681 leg of US 221 on north side

Intermediate Term:
 Install eastbound right-turn lane along US 221. Reconstruct improved northbound left turn

Map 25



Floyd County, VA

Proposed Sowers Mill Road Improvements

Description of Safety Deficiencies:
Drainage ditches on west side of roadway are eroding and impact travel lanes. Sub-standard roadway conditions that include poor geometric, surface and edge of road conditions.

Congestion Deficiencies:
None

Recommendations:
Improved maintenance.

This map was prepared by the New River Valley Planning District Commission in 2010 utilizing VGN Imagery. All Images, Logos, and information contained herein is for planning purposes only.



Road Maintenance

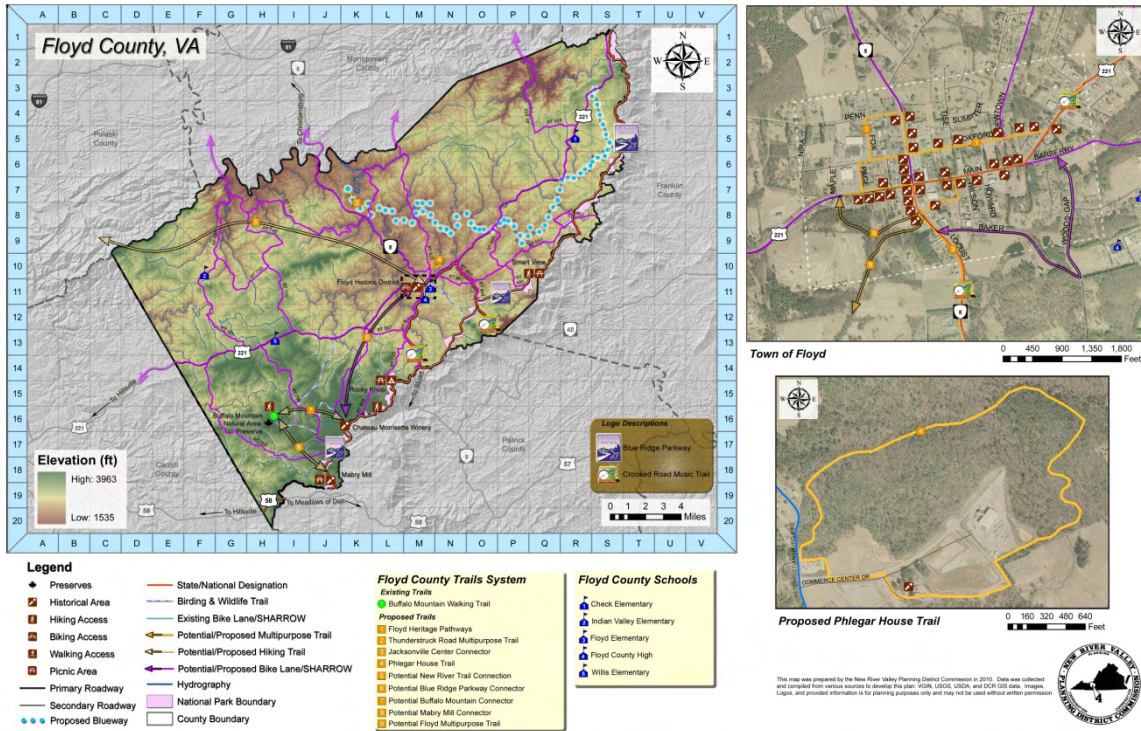
It must be noted that while needed long-term structural improvements have been identified by the VDOT-sponsored study, there is great local concern over the immediate need for road maintenance. As noted earlier, Floyd County has a disproportionate share of roads without a hard surface. These roads require regular maintenance to be safely passable. While the state has the responsibility to provide road maintenance resources, fewer of those resources are being shared with rural counties like Floyd. Because roads provide the only means of transportation in the County, it is critical that VDOT provide safe roads here, which requires improved maintenance.

Alternative Transportation

In addition to the roadway network in Floyd County a number of trails have been created or proposed. These trails can be seen as both necessary routes for pedestrians and bicycles and a recreational asset. Construction of trails identified in the New River Valley Bikeway Walkway Plan (New River Valley Planning District Commission, 2010) should be considered (see Map 26). Lands identified as potential trail areas are recommended to be preserved for future use. Pedestrian connection opportunities include linking County focal points, like the Jacksonville Center, the Floyd Regional Commerce Center and the Floyd schools to the Town sidewalk network. See map below for bikeway/walkway possibilities.

In addition to trails, alternative transportation systems that decrease automobile traffic should be examined. These solutions may include transit service integrated into the region with local and regional routes to Radford, Christiansburg, and Roanoke. Recent studies from the Virginia Department of Rail and Public Transportation show that Floyd County has characteristics of a community in which bus services may be viable. An additional component to Floyd County's transportation system includes development of informal park and ride lots into a standardized system that could be utilized to provide commuters access to carpooling services.

Map 26 Potential Bikeways/Walkways in Floyd County



Chapter 7.

What are Our Transportation Modes?

Summary and Conclusion

- Absent rail, air and water transport, Floyd County transportation relies entirely on roads.
- There are over 600 miles of state-maintained roads in the County, many of which lack hard surface (often they are gravel.) Unpaved roads require regular maintenance to be safely passable. More state resources and attention are needed.
- There are no four-lane roads in the County. Route 8 and Highway 221 are the main thoroughfares and their intersection in the Town of Floyd is the only signaled intersection.
- Several high-crash density and other “hotspots” of road safety concerns are identified here.
- Further, VDOT has indicated that traffic will exceed safe road capacity (level of service) along main corridors in the next 25 years. VDOT indicates portions of Route 8 will need to be four-lanes and that turning lanes will need to be added in and around Floyd and Willis on Highway 221.
- There is interest in alternative transportation, such as bikeways and walkways, as well as service by public transit.
- There are already significant unmet needs for road maintenance, due to the high proportion of roads without a hard surface and dwindling VDOT resources for maintenance. This is the responsibility of the Commonwealth of Virginia and VDOT. It appears that Floyd County is getting a smaller portion of dollars as they flow to more urban areas with a high percentage of improved and primary roads and interstates. Safe travel in the County demands more action by VDOT.

CHAPTER 8.

WHAT COMMUNITY FACILITIES ARE AVAILABLE IN FLOYD COUNTY?

Existing Community Facilities are detailed below, as well as assessment of future needs.

Community Facilities Generally

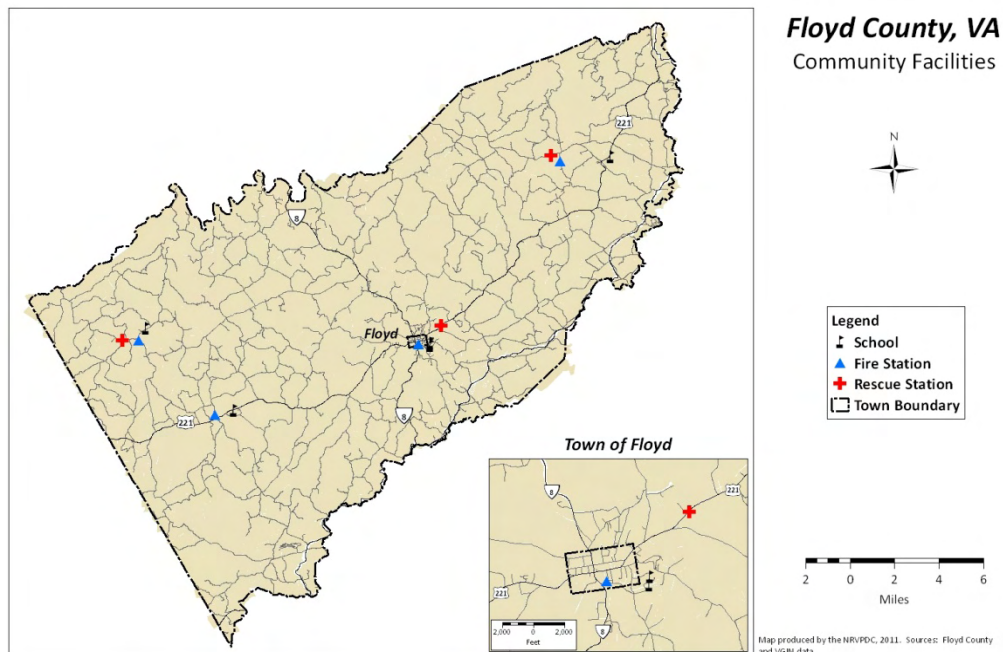
Community facilities throughout the County are generally located in or around Check, Floyd, Indian Valley, and Willis. All of these areas have schools and some form of emergency services.



Check Post Office

The Community Facilities Map (Map 27) shows the locations of these general services. The broadly dispersed nature of housing in the County makes the provision of convenient and efficient community facilities and services challenging. Many services are provided in or near the Town of Floyd, but some regional community service agencies do not have a site in Floyd County, making them difficult for County citizens to access. The health and human service agencies serving the County would like to see a one-stop shop in or near the Town of Floyd to help address this need.

Map 27
Floyd County Community Facilities



Courthouse and Constitutional Offices

The Floyd County Courthouse is located in downtown Floyd. It serves District and Circuit court as well as all of the elected Constitutional Officers:

- Clerk of the Court , where wills, deeds, plats and other legal documents are officially recorded;
- Commonwealth’s Attorney, where all local criminal prosecutions are handled;
- Treasurer, where local and state taxes are paid;
- Commissioner of Revenue, where questions related to property classifications are answered;
- and the Sheriff’s office, which will be discussed more later.

Citizens may also register to vote at the Registrar’s Office in the Courthouse.

Administration

County administrative offices are located on Oxford Street. Staff includes the County Administrator and Assistant, Building Inspections, Emergency Medical Services billing and Community and Economic Development. The site, known as the Floyd County Administration Building, also houses Social Services, Cooperative Extension and County Recreation



Floyd County Administration Building

offices. The Town of Floyd's administrative offices are located on Wilson Street (see the Town’s Comprehensive Plan for additional information).

Public Safety



Police protection in Floyd County is provided by the Sheriff's Department. The Sheriff's department is located in the rear of the Courthouse, where it may conveniently interact with other law enforcement offices. In 2009, the Sheriff’s office had 10,016 calls for service. It has 17 full-time sworn officers, 3 part time (2 part-time for Town patrol and 1 part-time for court security), and one administrative person. There are 13 patrol vehicles, 4 investigative vehicles, plus a red Explorer (donated to sheriff's office from fire department), army truck, and a spare jeep.

New River Valley Regional Jail houses and transports all local inmates; on average there are about 30 to 35 inmates from Floyd County each month.

The County has an Emergency 911 system, with all roads named and all houses numbered. The system is administered by an Emergency Services Coordinator.

In 2008, a new dispatch/communications center was added at the Sheriff's Department. The County's emergency services communication system is now compatible with federal systems and several adjacent localities.



Communications Center



Check Fire Station



Indian Valley Rescue Station

Fire protection is provided by four volunteer units located in Floyd, Willis, Check, and Indian Valley. Rescue Stations are located in Floyd, Check and Indian Valley. See Tables 41 and 42 and Map 28 below for station locations as well as response areas. Currently there are about 110 volunteer fire department personnel and 45 volunteer rescue personnel; there is also a career emergency response crew that does emergency transport.

**Table 41
Fire Stations in Floyd County**

	Year Built	Approximate Dimensions	Basement	Vehicles	Notes
Station 1, Acres Ave, Floyd	1986	100'X120'	na	6	meeting room, two offices
Station 2, Firehouse Rd, Willis	1986	50'X120'	50'X20'	6	meeting room, kitchen
Station 3, Kings Store Rd, Check	1986	45'X100'	45'X40'	5	meeting room in basement
Station 4, Indian Valley Rd, Indian Valley	1986	40'X110'	none	5	meeting room; bldg expanded 2005

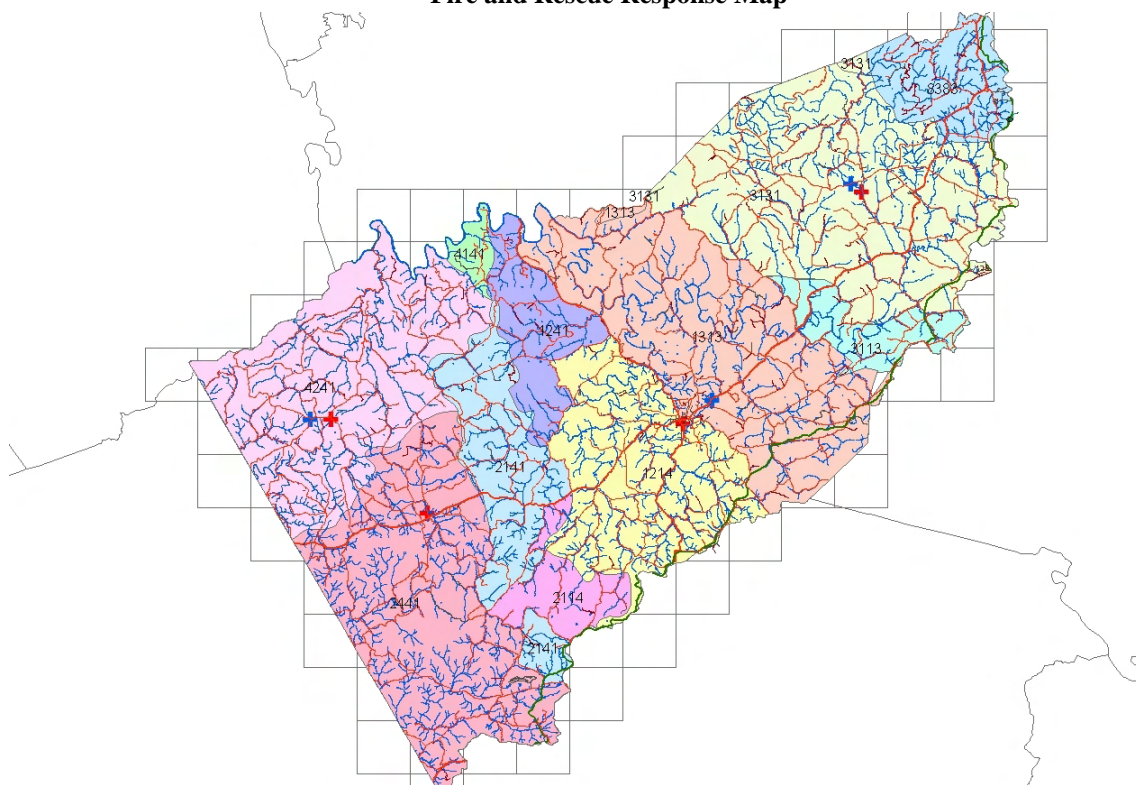
Source: Emergency Services Coordinator, 2010

**Table 42
Rescue Stations in Floyd County**

	Year Built	Approximate Dimensions	Basement	Vehicles	Notes
Station 1, Floyd Hwy N, Floyd		150'X55'	55'X55'	8	meeting room, lounge, kitchen
Station 3, Daniels Run Rd, Check		60'X60'	45'X40'	2	meeting room, 2 bunk rooms, kitchen
Station 4, Macks Mountain Rd, Indian Valley		65'X65'	65'X45'	2	meeting rooms, 2 bunk rooms

Source: Emergency Services Coordinator, 2010

Map 28
Fire and Rescue Response Map

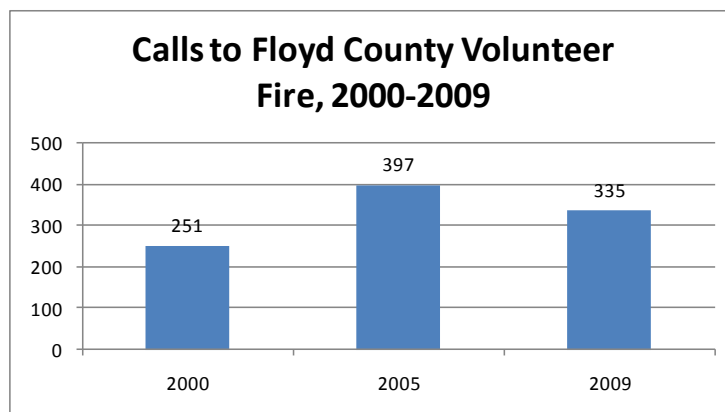


<p>+ Fire Station</p> <p>+ Rescue Station</p>	<p><i>Note that the 4 digit numbers indicate stations that should respond: first and second digits represent which fire stations should respond, respectively and latter two digits which rescue stations should respond, respectively.</i></p>
---	---

Source: Emergency Services Coordinator, 2010

The Volunteer Fire crews responded to 335 calls in 2009. This was down from 2005, but still up 33% from 2000. (See Figure 24 below)

Figure 24



In 2010, there have been nearly 1,500 calls for emergency medical transport in the County. The volunteer crew (Floyd County Rescue Squad) has responded to about 42% of those calls. About 56% of all calls result in medical transport. See Table 43 for more details.

Table 43
Calls for Emergency Medical Transport, 2010 (Estimates)

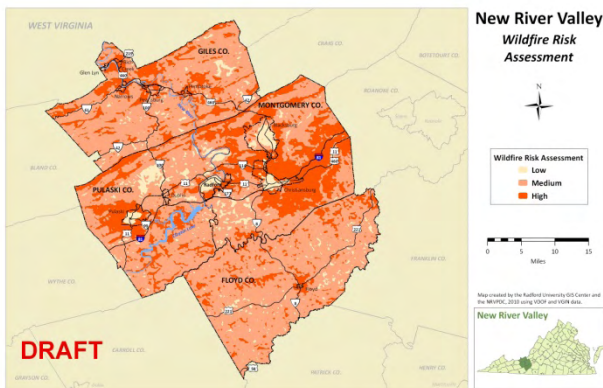
	Floyd County Emergency Medical Services	Floyd County Rescue Squad
Transports	482	357
Refusals	126	87
Other	260	180
TOTAL	868	624

Source: Floyd County EMS and FCRS

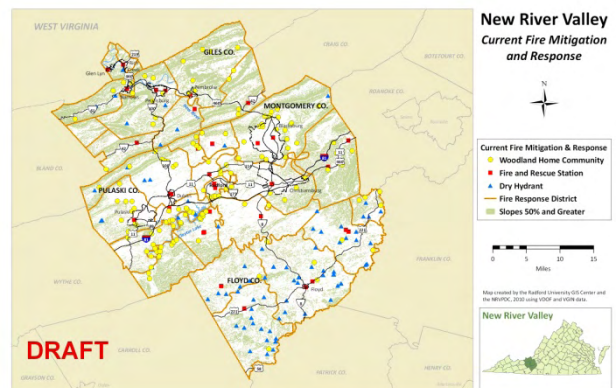
Note: Other can be fire stand-bys, cancelled calls, or assisting

One special fire concern in portions of Floyd County, according to the draft New River Valley Hazard Mitigation Plan (see maps below), is high risk of wildfire, based largely on slope and landcover (New River Valley Planning District Commission, 2010). Further, there are some woodland home subdivisions where residents need to be mindful of risks and tap available programs like Firewise from the Virginia Department of Forestry.

Map 29



Map 30



Medical Facilities



Tri Area Clinic of Floyd

Floyd County has been a medically-underserved region historically, but the addition of the Tri Area Community Health Center in Floyd is an important step forward. Community health centers give extra focus to preventative care and managing chronic illness; they can serve any one, and through federal subsidy they are able to offer a sliding fee scale to lower income citizens. Several other private practice primary care facilities continue to operate in the County, including the Barter Clinic, Carilion, LV Marshall Office, Mountain Springs Family Practice, and Primary Care Associates. Floyd County also has several alternative and supplemental medical facilities including the Blue Ridge Center for Chinese Medicine. There are also two dental offices in Floyd County.

Recently the Floyd County Health Department opened at a new location downtown at The Station. The facility has an onsite clinic and provides additional assistance to qualified recipients. This facility has moved around to different locations recently. Housing this facility in a permanent location with other health and human service agencies via “one stop shop” would provide greater convenience for clients and potentially efficiencies for staffs.



Blue Ridge Center for Chinese Medicine *photo courtesy of BRCCM*

There are no hospitals in the County. The nearest hospitals are at least 30-45 minutes away for most residents. For the eastern half (Check/Copper Hill) of the County, the nearest hospital is Lewis-Gale in Salem. For the northwestern portion (Alum Ridge and Indian Valley), the nearest hospital is the New River Valley Medical Center in Radford or Montgomery Regional Hospital in Blacksburg. For the southwestern portion (Willis and Meadows of Dan), the nearest hospitals are Twin County (in Galax) and Patrick County (in Stuart).

Skyline Manor, a nursing home and rehabilitation center, is located just northeast of the Town of Floyd. The facility offers skilled services as well as counseling services for residents who have behavioral or emotional issues. The total number of beds at the facility is 90 with 30 nursing beds.



Skyline Manor

Floyd County School System

Floyd County Public School system operates five school buildings: four elementary (K-7) and one comprehensive high school (8-12).

Enrollment is now over 2,000 and projected to continue increasing. The Floyd County High School consists of an academic high school, a band building and a vocational/technology school.



Check Elementary School

Program offerings include: a special needs preschool program; full-day kindergarten program; alternative program for at-risk youth; adult education programs in cooperation with New River Community College; extensive vocational programs; special education programs addressing individual and unique abilities; differentiated instruction within the regular classroom for the gifted; dual enrollment; and advanced placement classes. Floyd County High School is on a four-by-four block schedule.

Tables 44 and 45 and Figure 23 below show the graduation and continuing education statistics. The “Total Graduates and Completers” number is based on those who DID NOT MOVE away after starting high school. The drop-out rate for this time period was 1.64%. Note from Table 44 that over 71% of the high school graduates continued their educations; of those 52% attend a two-year college and 43% attend a four-year college.

Table 44
Floyd County Public School Graduation Statistics for 2008-2009

	Totals	Percentage of original Class
Standard Diploma	58	30.2%
Advanced Studies Diploma	74	38.5%
Special Diploma	2	1.0%
GED Certificate	2	1.0%
ISAEP	15	7.8%
Modified Standard Diploma	0	N/A
Total Graduates and Completers	139	72.4%

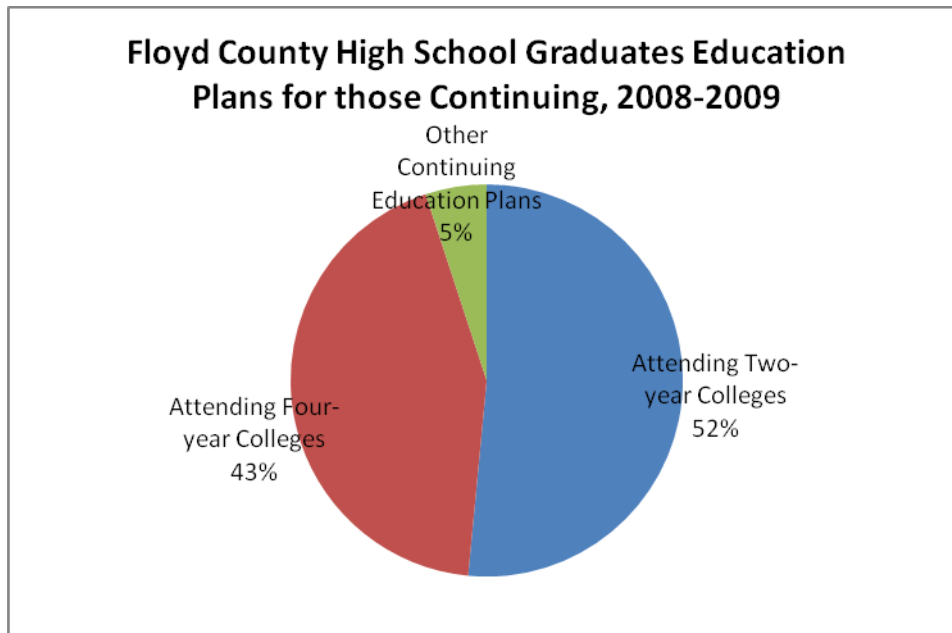
Source: Virginia Department of Education

Table 45

Virginia Department of Education							
2008-2009 Report of High School Graduates and Completers by Plans							
Regular Term Plus Summer Term							
<i>(Compiled 1/20/2010)</i>							
Graduates and Completers by Continuing Education Plans							
Division No./Name	Attending Two-year Colleges	Attending Four-year Colleges	Other Continuing Education Plans	Employment	Military	No Plans	Total
31 Floyd County	51	43	5	34	6	0	139
	36.7%	30.9%	3.6%	24.5%	4.3%	0.0%	100.0%
State Totals	26590	40072	3912	9511	3037	4595	87717
	30.3%	45.7%	4.5%	10.8%	3.5%	5.2%	

Source: Virginia Department of Education

Figure 25



As the population has grown in the County since 1990, so has the need to expand and upgrade the schools. School construction bonds including issuance date, amount and final maturity date are listed below.

At right, a portion of the addition to Floyd County High School in 2003-04



Part of Addition at FCCHS

Table 46
School Construction Bonds in Floyd County

Date Issued	Final Maturity Date	Amount of Original Issue
10-1992	07-2012	\$ 91,371
01-1994	12-2011	\$ 360,000
12-1995	07-2015	\$ 2,835,979
11-2000	07-2020	\$ 3,142,650
11-2005	07-2025	\$ 10,259,045

Source: Floyd County Financial Report, June 30, 2010

Current projections from the Weldon Cooper Center for Public Service do not show a necessary increase in facilities (which reportedly have capacity for up to 300 more students, though this could increase student-teacher ratios). However, if the school age population grows at the same rate as the overall population in Floyd County, this could change. The low decennial growth rate estimate of 8.2% would result in another 170 students by 2020. The high growth rate estimate of 15.57 would result in another 323 students by 2020, and an additional 373 by 2030. (Note, during the fall of 2010, the number of students in public school has slipped downward slightly; it is not clear why or if this is temporary.)

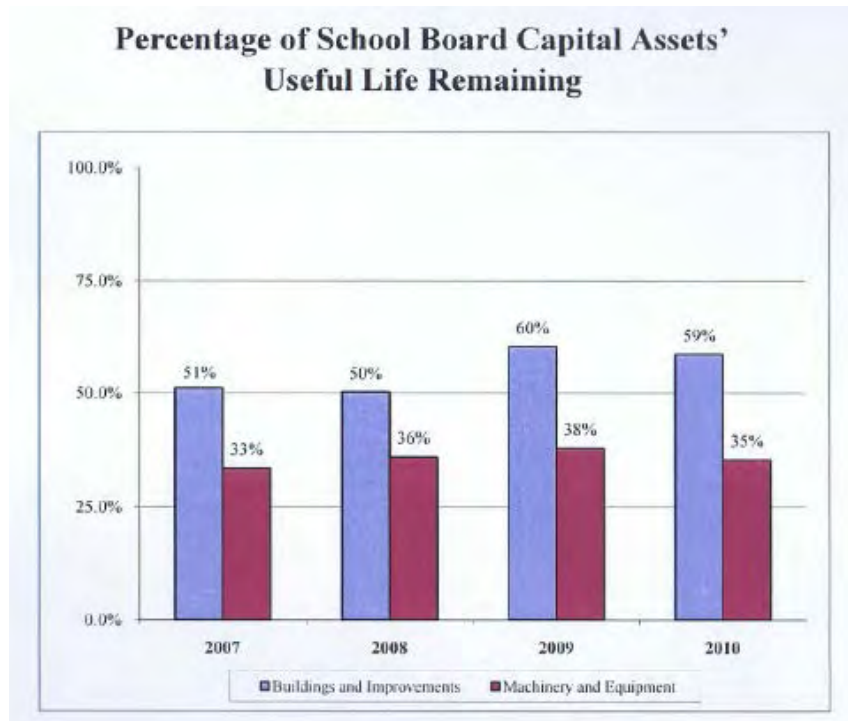
Table 47
Historic and Projected Public School Fall Membership 2008-09 to 2014-15

School Year	Public School Fall Membership	Percent Change
2008-09	2,063	
2009-10	2,078	0.73%
2010-11 (Projected)	2,096	0.90%
2011-12 (Projected)	2,118	1.00%
2012-13 (Projected)	2,125	0.30%
2013-14 (Projected)	2,137	0.60%
2014-15 (Projected)	2,151	0.70%
5-Year Total Change		4.30%

Source: Weldon Cooper Center for Public Service

Apart from any need for additional facilities current facilities will eventually need upgrading. The remaining useful life of current buildings and equipment, as shown in Figure 26 below, is an indicator for future capital expenditure needs.

Figure 26



Source: County of Floyd, Virginia Financial Analysis, June 30, 2010

The School Board develops its own public school system comprehensive plan (see insert next). Yet, it is necessary to continue communication between the School Board and the County Board of Supervisors to ensure performance is being met and school infrastructure/maintenance is provided as necessary.

Floyd County Public Schools 2007-2013 Comprehensive Plan

Floyd County Public Schools completed a five year master plan in 2007. This plan was completed by the Floyd County School Board with the intention to continue to provide or exceed high academic standards. This includes meeting Adequate Yearly Progress at all schools, continued staff development, and the continued development of curriculum necessary for Virginia's Standards of Learning.

The Plan is comprised of the following six priorities:

Priority 1: Floyd County Public Schools will meet or exceed the high academic standards as outlined in the Standards of Accreditation and the No Child Left Behind Act.

Priority 2: Floyd County Public Schools will provide staff, resources, and direction to allow all students to reach their learning potential.

Priority 3: Floyd County Public Schools will recruit, hire, train, and retain effective teachers, administrators, and support staff to meet the needs of students.

Priority 4: Floyd County Public Schools will differentiate staff development activities based on staff needs as determined by surveys, NCLB/SOL data, state mandates, and/or instructional specialization.

Priority 5: Floyd County Public Schools will ensure the health and safety of each child while in the care of the school system.

Priority 6: Floyd County Public Schools will provide safe facilities and infrastructure for operational needs.

Private Schools

There are at least two private schools in Floyd County, the Blue Mountain School (K-7) and the Mennonite Church School. Also, a significant number of parents home school their children in Floyd County, particularly during elementary grades. Based on the estimate of children of school age in the County (nearly 2,600) and the public school enrollment (approximately 2,070), more than 500 children may be educated outside the public system.

Colleges

Also, while there are no college campuses in Floyd County, there are many colleges and universities within easy commute (e.g. Virginia Tech, Radford University, Ferrum College, Roanoke College, Hollins University, community colleges.) American Community Survey 2005-09 data suggests that there were 493 residents of the County enrolled in undergraduate college and another 141 enrolled in graduate or professional schools.

Montgomery-Floyd Regional Library

The Jessie Peterman branch library maintains over 50,000 volumes of fiction and non-fiction for adults, young adults, juveniles and easy readers in a 10,500 SF facility. The building was built in 1986 with an addition completed in 2008, and is



equipped with a community meeting room which seats 50 people, and an additional Conference Center. The library also has computers providing public Internet access, including a 14-computer lab. The library is located in the Town of Floyd on Route 221 South.

In FY 2010, the library had a staff of 8 (4.8 FTE) and logged the following usage numbers:

- Check outs: 176,141 (11.8 per capita)
- Door count: 89,190
- Computer use: 24,377
- Programs offered: 249
- Program attendance: 3,824

Clearly the library is a well-used resource in the County.

Social Services

Social services are provided by the Department of Social Services as well as regional agencies like New River Community Action, New River Community Services, and the Agency on Aging. Historically, requests for public assistance in Floyd County were relatively low in comparison to those eligible. With the most recent recession, however, the Department of Social Services notes dramatic increases in public assistance in the County.

Table 48
Department of Social Services
Public Assistance Expenditures, FY 2007 and FY 2010, Floyd County

	FY 2007	FY 2010	% Change
Medicaid Expenditures	\$ 10,372,167	\$ 14,098,502	36%
FAMIS Expenditures	\$ 429,265	\$ 737,329	72%
SNAP/Food Stamps	\$ 1,175,597	\$ 2,603,544	121%
Energy Assistance	\$ 152,710	\$ 350,908	130%
Comprehensive Services Act	\$ 544,464	\$ 433,613	-20%

Source: Department of Social Services Report to Board of Supervisors

Water Supply

A strong determinant in land use and a clear index of changes is the nature and distribution of water supplies. A system based on individual wells demands low density land use. Conversely, high density development requires a public system of water distribution, especially where there are industrial land uses. Much of Floyd County's population relies on groundwater supplies and individual wells (see Groundwater and Housing sections for additional details) rather than the small public system. Consequently, most of the County's population is very susceptible to springs and wells going dry due to droughts and the ever-increasing number of dwellings with private wells. Citizens are encouraged to conserve water, especially during drought periods. Moreover, when new replacement wells are required, citizens are encouraged to properly "abandon" any previous wells to protect the groundwater.

For more about the Floyd-Floyd County Public Service Authority (PSA) System, see the tables below and the information that follows.

**Table 49
Floyd-Floyd County PSA Well Data**

Name and ID	Christie	Shortt	Howard	Rec. Park	Comm. Cntr
Well Number:	1	2	3	5	6
Well Depth:	345'	205'	350'	300'	400'
Casing Depth:	52'	59'	50'	77'	105'
Screen Depth:	NI	NI	NI	NI	NI
Well Diameter:	8"	8"	8"	7"	8"
Average Daily Withdrawal:	0.03 MGD (29,000 gpd)	0.03 MGD (27,800 gpd)	0.03 MGD (25,500 gpd)	0.03 MGD (25,700 gpd)	0.04 MGD (40,000 gpd)
Design Capacity-Max Daily:	0.07 MGD (68,400 gpd)	0.04 MGD (43,200 gpd)	0.04 MGD (36,000 gpd)	0.04 MGD (36,000 gpd)	0.12 MGD (115,200 gpd)
System Permitted Capacity:	0.07 MGD (68,400 gpd)	0.04 MGD (43,200 gpd)	0.04 MGD (36,000 gpd)	0.04 MGD (36,000 gpd)	0.12 MGD (115,200 gpd)

Source: Draft New River Valley Water Supply Plan

**Table 50
Floyd-Floyd County PSA Water Use by Sector, 2006**

Community Water System	Residential Use MG (gallons)	CIL Use MG (gallons)	Heavy Industrial Use MG (gallons)	Unaccounted Water Loss	Water Sales		Total MG (gallons)
					Sold To	Amount (MG/mo)	
Floyd-Floyd County PSA	0.051 (51,100)	0.045 (45,422)	0.017 (17,033)	0.004 (3,600)	None		0.117

Source: Draft New River Valley Water Supply Plan

The existing public water distribution system consists primarily of 6-inch and 8-inch mains in a grid system within the Town of Floyd and adjacent areas in the County and is highlighted in Map 32, The Floyd-Floyd County PSA Service Area Map. The system also contains some smaller distribution lines and a larger (10- and 12-inch) main from Route 221 to a 400,000 gallon tank located approximately 1,200 feet southeast of the town corporate limits (near the high school). In 2004 a new water storage tank was incorporated into the system allowing for 200,000 gallons of storage. This new tank is located on Storkers Knob south of the Town of Floyd. A couple of years ago a line was extended from the high-level system into the downtown Floyd area to boost commercial fire protection pressure and provide water to support sprinkler systems. Maps 32 and 33 show the possible expansion areas for public water and sewer around the Town of Floyd.

Map 31



Floyd County, VA Floyd-Floyd County PSA Water and Wastewater

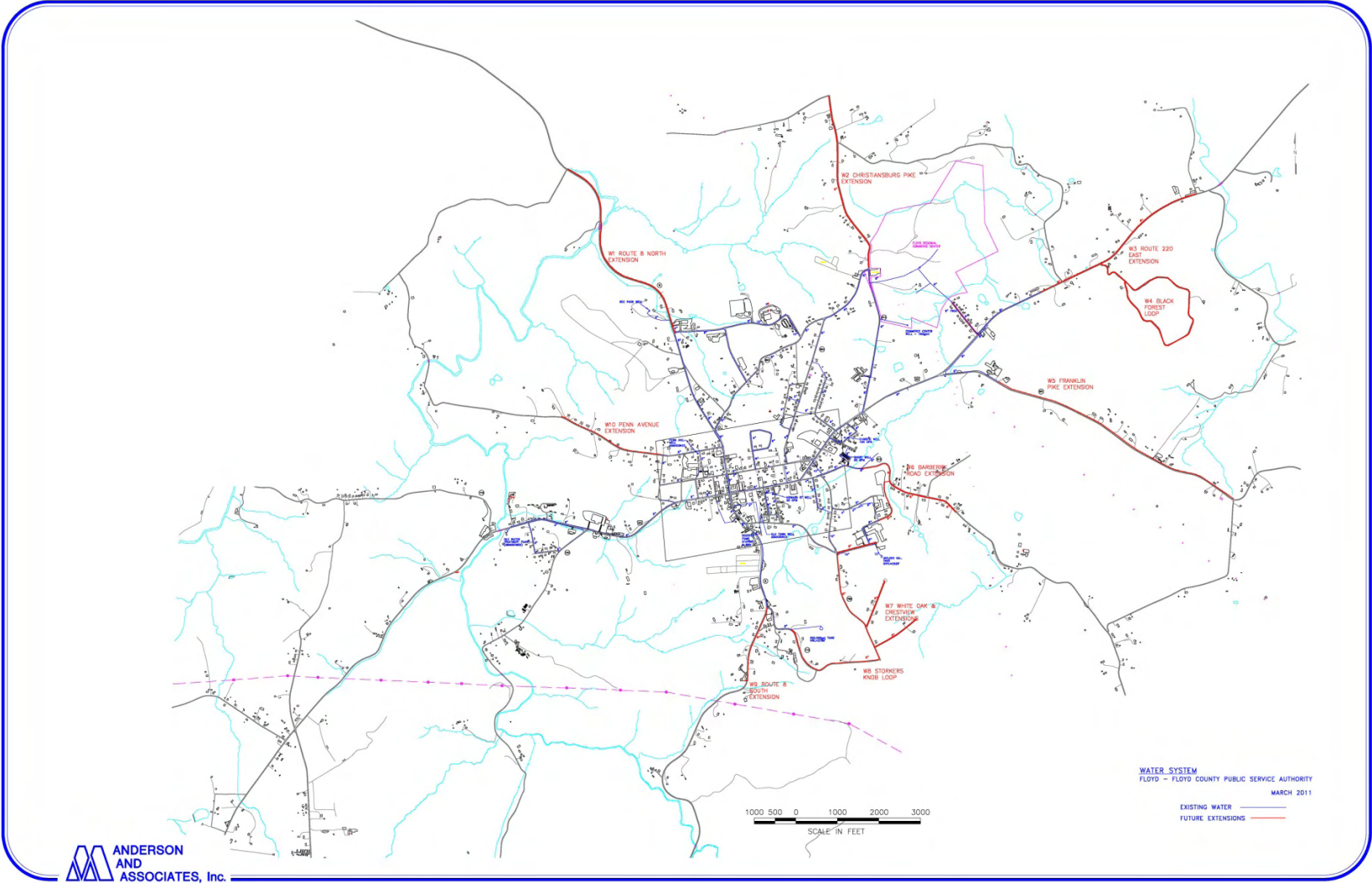


- Legend**
- Waterline
 - Wastewater Pump Station
 - Town Boundary



Map produced by the NRVPCD, 2011. Source: Floyd County and VGIN data.

Map 32 Public Water Potential Expansion Areas



Map 33 Public Wastewater Potential Expansion Areas



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Public Water System

Adapted from the Floyd Source Water Protection Plan (Gannon, 2010)

As of 2009, the Floyd-Floyd County Public Service Authority, which primarily serves residents in the Town and vicinity is made up of five wells and two storage tanks. The public water system was first installed in 1974 and serves approximately 1,500 people, including 43 businesses. The five wells are called Well 1, 2, 3, 5, and 6 (Figures 1 and 2). Well 4 was abandoned in 1991 due to insufficient production. Timers currently control wells 1, 2, and 3. These wells pump either



during the day or night and rest for the remainder of the period. Well 6 pumps only when the water level in the storage tanks is below a certain threshold. As of December of 2009, Well 5 is off line and does not pump. Well 5 is off line because total coliform was higher than is acceptable in its water and the fact that the other 4 wells supply the town. Each well is housed in a locked well house along with its control system, water treatment system,

meter, pressure gage (to measure water level in the well), and in some cases a remote gage recording the storage tank water level. Well 3 is the only well without a pressure gage to measure water level in the well. Well construction and production information can be found in Figure 2.

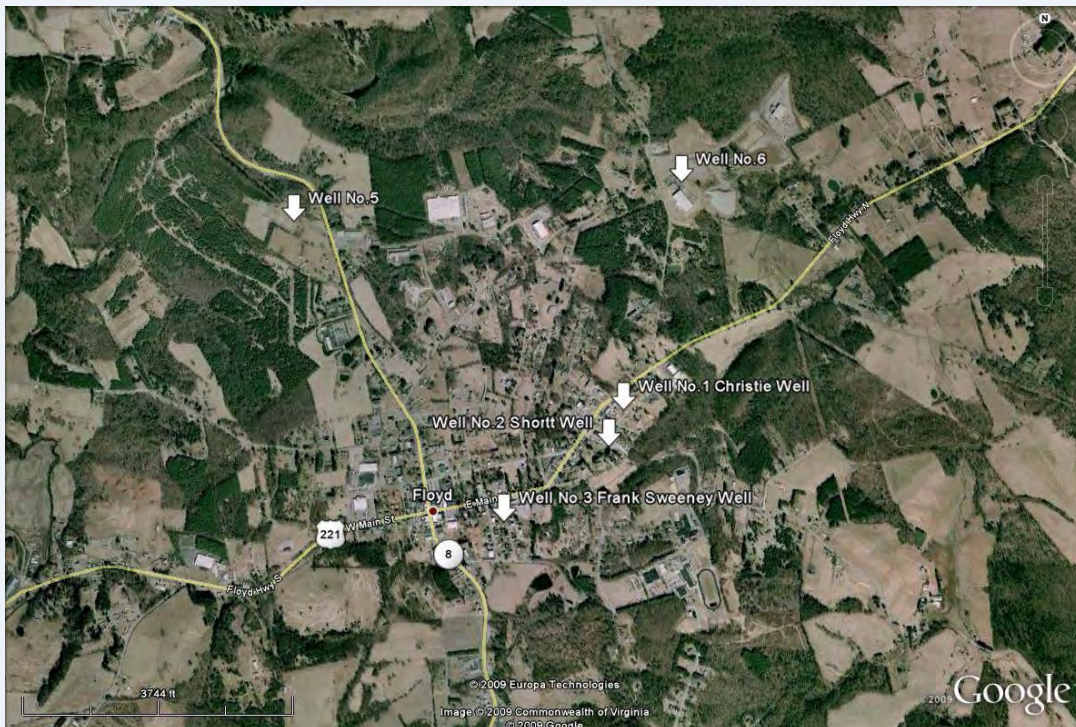


Figure 1: Locations of public supply wells.

Well Name	Depth (ft)	Cased To (ft)	Productive Zones (ft)	Approx Yield (GPM)	Date of Completion
Well 1	345	52	54-55	95	4/12/1979
Well 2	205	59	65-66, 85-87, 145-146	60	6/27/1979
Well 3	350	50	55-56, 245-246, 315-316	50	6/7/1980
Well 5	300	77	80-81, 260-261	50	5/30/1989
Well 6	400	105	272-275	160	9/2/2005

Figure 2 Well Information

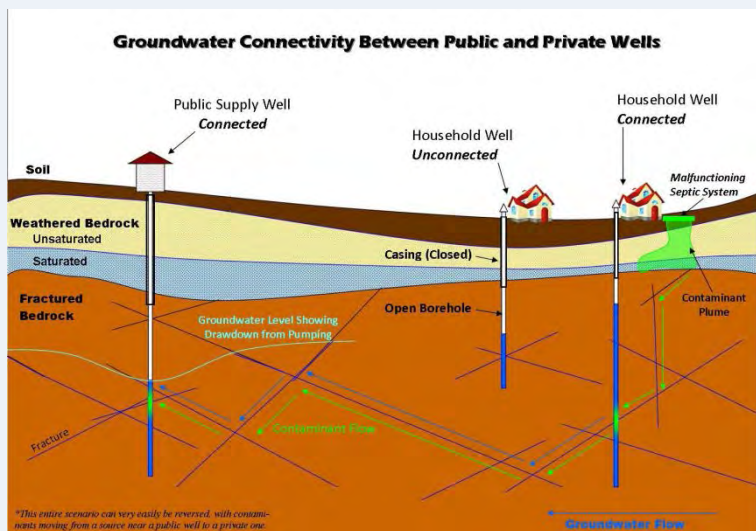
Before being pumped to the two storage tanks for distribution, soda ash is added to the water from the wells to adjust the pH. The soda ash is mixed daily in a barrel in each well house and introduced automatically into the water being pumped to the storage tanks. This is the only water treatment administered.

The wells in the system pump water into the two storage tanks where water is stored to be used. The older of the two storage tanks, constructed in 1974, has a capacity of 400,000 gallons; it is referred to as the low tank and is the primary source of water for the town. The high tank, constructed in 2004, is 200,000 gallons and is a reserve tank. Only after the low tank is emptied does the high tank supply the town with water. A booster pump is located at the old (pre 1974) water tower and helps pump water to the high tank. It is important to note that while the old water tower still stands at this booster pump station it is not connected to the system and does not hold water. The PSA is supplied with power by Appalachian Power.

Staff of the Public Service Authority checks the water use meters, level gages, and the soda ash delivery systems every morning. The water is sampled monthly for Total Coliform and E-Coli, yearly for Nitrate, Nitrite, and VOCs, and every three years for radiological contaminants, metals, Lead, and Copper.

Protecting Our Groundwater

This diagram shows the interconnectivity of public and private groundwater as well as how it may inadvertently be affected by a malfunctioning septic system or other contaminants nearby. It is important for everyone who has a private septic system or has chemicals on their property know how to protect our groundwater.



In addition to the PSA water distribution system, a second system is in operation at the Big Rock Trailer Park. Also, the elementary schools in Check, Indian Valley and Willis have public water systems. Studies on expanding the reach of centralized systems may provide answers for weathering future droughts if residential growth continues. One possibility is to expand upon the school water systems. Another possibility is public-private partnerships, such as private developers putting in central water systems with new development and the PSA providing maintenance in exchange for user fees.

New River Valley Water Supply Plan

The State Code of Virginia (9 VAC 25-780) requires local governments to prepare and submit a water supply plan to the Department of Environmental Quality (DEQ) by the year 2011 (deadline determined by population/regional plan). This plan is currently being completed for the jurisdictions within the New River Valley (New River Valley Planning District Commission, 2010). It notes the following for Floyd County:

Floyd County Alternatives

Currently Floyd County has a new groundwater system (well #6) ready to operate, but is waiting for the demand to necessitate bringing the system online. This represents a 62% increase in the Floyd-Floyd County PSA capacity. While Floyd-Floyd County PSA is well suited to serve water to residents in town and close proximity, portions of the County are receiving residential development and methods to provide water to areas beyond the PSA reaches around town should be considered. Floyd-Floyd County PSA is currently looking for locations to site a new well (well #7) should it become necessary for future use.

Sewerage System

Most of the County is served by private septic systems. A public sewer system is maintained by the Floyd-Floyd County Public Service Authority (PSA), serving principally the Town of Floyd and the immediate vicinity.

Currently the PSA Wastewater treatment plant is operating at approximately 150,000 gallons per day with a maximum limit of 250,000 gallons per day, resulting in at least 100,000 gpd additional capacity available. New equipment in the plant includes a new digester, with other improvements being directed towards inflow and infiltration in the system.

The Floyd-Floyd County PSA wastewater collection system, constructed around 1950, has undergone several extensions in its 60 years of existence. While the original collection system consisted of mortared-joint concrete pipe, newer construction has been mainly PVC pipe. The older pipes are experiencing some deterioration due to age and will be replaced in small sections as needed, except the main interceptor which would need to be done comprehensively. The Main Pump station and the Nursing Home Pump Station are nearing the end of their normal useful life and probably need replacing in the next five years. The other two major pump stations-- Industrial Park Pump Station and Floyd Regional Commerce Center Pump Station were upgraded in recent years. There are two minor pump stations, Dodd Creek and Town Estates.

The existing wastewater collection system consists of approximately 58,000 feet of sewer pipe and force main ranging primarily from 4- to 8-inch diameter with a small amount of 10 or 12-inch. The Floyd-Floyd County Public Service Authority (PSA) operates a secondary treatment plant of 150,000 gallons per day (gpd) capacity. The treatment process includes a manual bar screen, grit removal, flow equalization, primary clarifiers, rotating biological contactors, secondary clarifiers, disinfection using chlorine, dechlorination using sulfur dioxide, and cascade post aeration, as upgraded in 2004.

Additional development in any area served might necessitate upgrading not only that pump station but downstream pump stations and sewer lines. The Floyd-Floyd County Public Service Authority is considering expanding its service area around the Town of Floyd. The areas under consideration for service extension are shown in Map 33.

New River Valley Regional Wastewater Study
EXECUTIVE SUMMARY
(excerpt)

SCOPE

The improvement of water quality in the streams and groundwaters of the New River Valley via the development of public wastewater collection, treatment and disposal infrastructure is one of the most challenging issues facing local governments within the New River Valley Planning District (NRVPD). Issues common to all of the localities in the New River Valley include limited service area boundaries due to existing system capacities, aging systems that are becoming inadequate to serve the current customer base and an inability to serve adjacent areas of potential growth and development. Many areas have clusters of housing that currently have no acceptable means of wastewater treatment. In fact, many households are currently discharging into inadequate septic systems or discharging directly into streams, affecting environmental quality as well as public health.

The presence of approved wastewater collection and treatment systems is essential for the enhancement of public health, protection of the environment, successful economic development initiatives, and an increase in new housing production. Some of the most common problems resulting from the lack of this vital infrastructure include, but are not limited to, the following:

- Numerous environmental and public health problems stemming from the illegal discharge of raw sewage into surface waters and/or groundwater resources;
- Numerous environmental and public health problems arising from the use of failed, overstressed, and/or poorly maintained on-site septic tank/drain field systems;
- An inability to accommodate new housing production due to shallow depths of soil to bedrock and/or high groundwater conditions on potential building lots thereby preventing the approval of septic tank/drainfield systems;
- The lack of public wastewater collection and treatment systems limits the ability of planners and local officials to market portions of the NRVPD to potential industrial prospects. Economic development activities are underway throughout the New River Valley in an effort to attract new industries, create jobs, and diversify the local economy. In many cases, the ability to market the region to a particular industrial prospect is directly linked to the availability of public wastewater collection and treatment services. Potential industries expect public wastewater collection and treatment to be available. Moreover, the prospect of developing mass septic tank/drainfield systems to accommodate industrial users is problematic due to costs and the resulting land area requirements.

PURPOSE

With generous funding provided by the Southern Rivers Watershed Enhancement Program, the New River Valley Regional Wastewater Study is intended to address water quality improvement through the development of sewage collection and treatment alternatives. The Study's goals include identifying the need for sewer service in the region, identifying and prioritizing projects, finding and identifying funding sources for these projects, and eliminating the health hazards and environmental problems associated with inadequate septic systems and straight pipe discharges to streams. The study also identifies projects that due to their remote location, topographic situations, small size or soil conditions, will benefit from non-traditional de-centralized wastewater systems (DWS). It is envisioned that the Study will serve as a road map for future implementation of sanitary sewer collection, treatment and disposal projects in the New River Valley.

METHODS

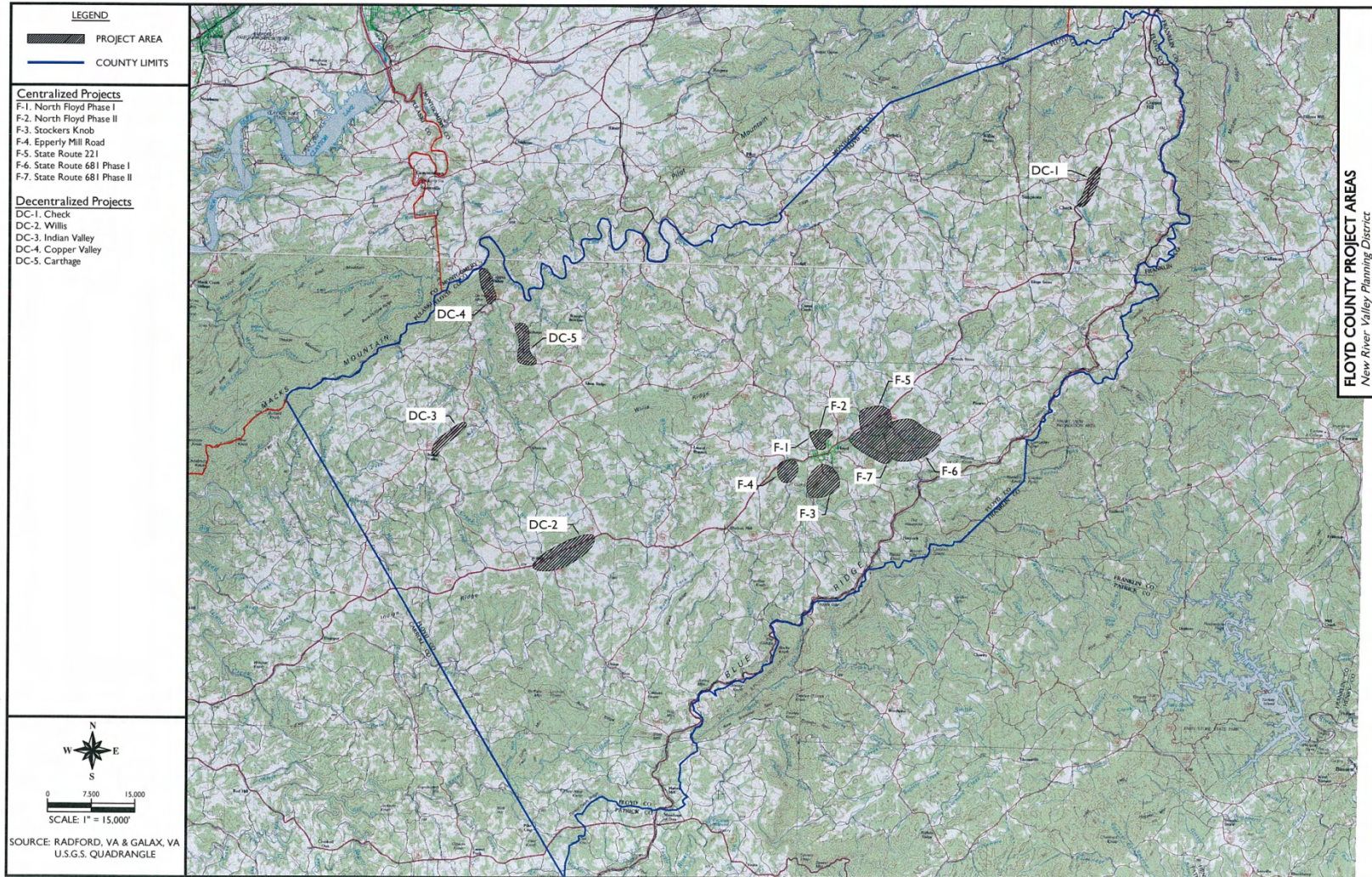
During the course of this Study, the Design Team examined over 134 projects. These projects were analyzed and prioritized based on the degree of health hazard, elimination of water quality problems, the number of customers served, construction cost per connection, facility availability, as well as residential and industrial growth potential.

CONCLUSIONS

The project rankings led to a recommendation to pursue 20 centralized projects and 6 de-centralized projects. The recommended projects for Floyd County are shown on the following map.

For a list of potential grant and other funding sources, see the complete New River Valley Regional Wastewater Study (NRVRWS) at <http://www.nrvpdc.org/wastewaterstudy.html>.

Map 34 Recommended Wastewater Projects in Floyd County (from NRVRWS)



Storm Sewers

The County of Floyd has no major facilities for the collection and disposal of storm water. Runoff is diverted by ditches, culverts, and channels to natural water courses. Minor ponding may occur on streets and in gutters after heavy precipitation. With new state requirements addressing Sediment and Erosion Control and Stormwater runoff, additional work may be required with new projects.

While historically “best practices” in stormwater management required routing water off the property as soon as possible, now, the goal is to keep as much of the rainfall as possible and allow it to recharge the groundwater. Tools such as permeable pavement and rain gardens are increasingly used.

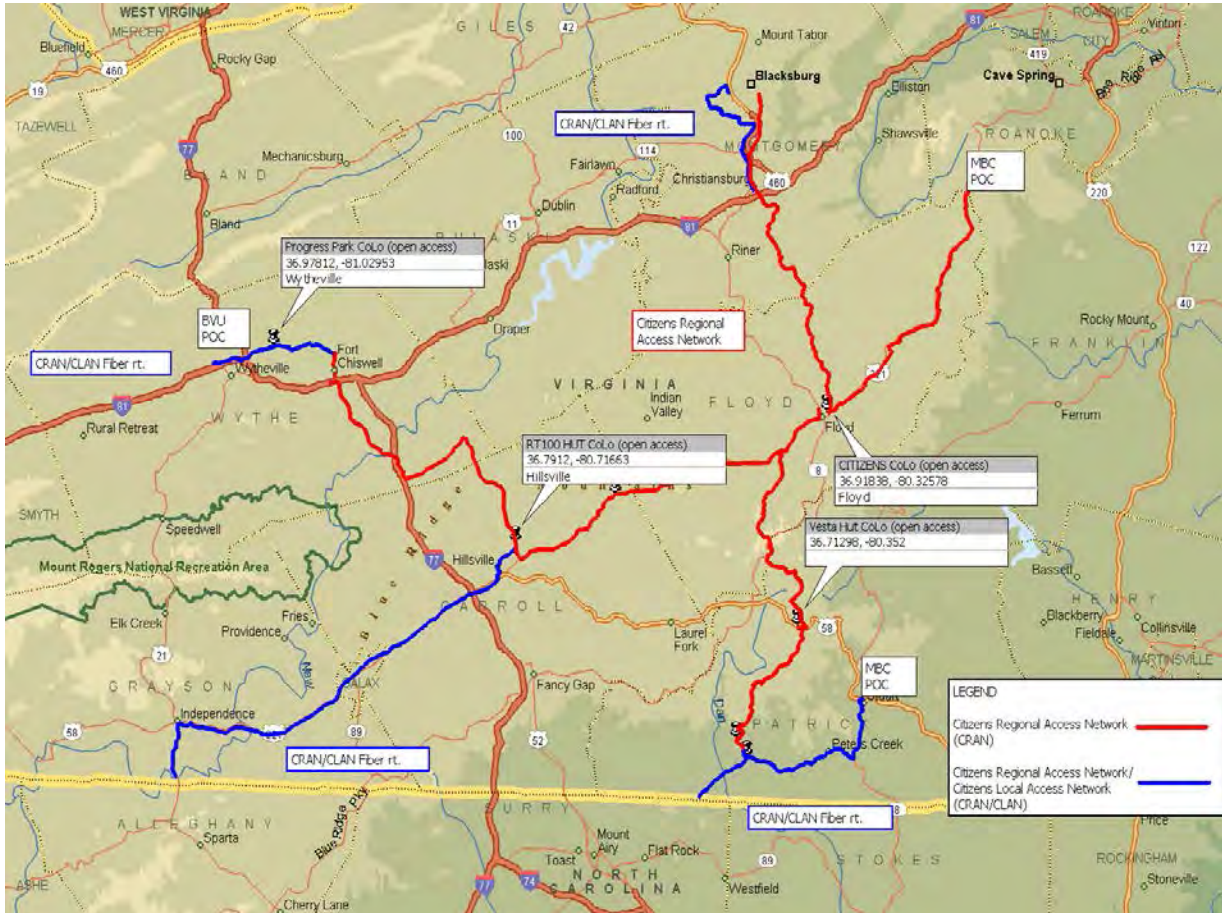
Telecommunication Infrastructure

Floyd County has exceptional telecommunications infrastructure. Citizens Telephone Cooperative is the ILEC and provides voice, video and data services. The system currently has a 200Gbps backbone (upgradable to 800Gbps) on an open access network with redundant and diverse routing with other network providers like Mid-Atlantic Broadband Cooperative and Bristol Virginia Utilities (see map below). Currently, 95% of Floyd County residents can get DSL service (ADSL 2+). Over 95% of all network facilities are buried. FTTP (Fiber to the Premise) is currently available in parts of the county. This will continue to grow as Citizens moves forward with its Long Term Plan.



In support of economic development, there is a co-location building at the Floyd Regional Commerce Center with 200 amps DC power system, battery backups, and 25kW on-site emergency generator.

Map 35 Major Fiber Routes in Floyd County



Source: Citizens Telephone Cooperative, 2010

Recreation

The Floyd-Floyd County Parks & Recreational Authority (from website) was created by the Town and County of Floyd in 1984 to operate independently of local governments, though with some board appointments by the County and Town. The Authority owns and operates a 42-acre park near the Town of Floyd which was built to serve the citizens of Floyd County.



The Authority receives some public funding, but also must solicit private donations, charge participation fees, fund raise and depend on volunteerism from our citizens. Typically more than 3,000 children and adults have participated in the Authority's programs which include:

- For the Youth, offerings include T-Ball, Softball, Baseball, Basketball, Co-ed Flag Football, Tackle Football, Wrestling, Co-ed Volleyball, and Aerobics.
- For the Adults, offerings include Aerobics, Softball, Basketball, Volleyball, and Senior Olympics.
- Other programs that are offered to the public are Hunter Safety Course, Health Clinics, Basketball Clinics, Softball and Baseball Clinics, Coaches Clinics, Soccer Clinics and Self Defense Classes. Other classes may be scheduled.

During focus group meetings, there was concern about the need for additional fields and athletic facilities, with the increase in soccer and other programs. In the future, perhaps, such facilities could be developed in conjunction with a community center.

In addition to the Recreation Authority program, there is a private fitness center in the County. There are also outdoor recreation opportunities like biking and hiking available along the Blue Ridge Parkway, plus hiking at Buffalo Mountain Natural Area Preserve. There are also nine trout streams stocked by the Virginia Department of Game and Inland Fisheries.

Historically there have been no other publicly maintained parks within the Town of Floyd or County. The new Warren G. Lineberry Memorial Park is located near the center of the Town with operations and maintenance provided by Partnership for Floyd with both public and private investment. Public input into the Comprehensive Plan has shown a desire for additional facilities, including trails and an indoor community pool.

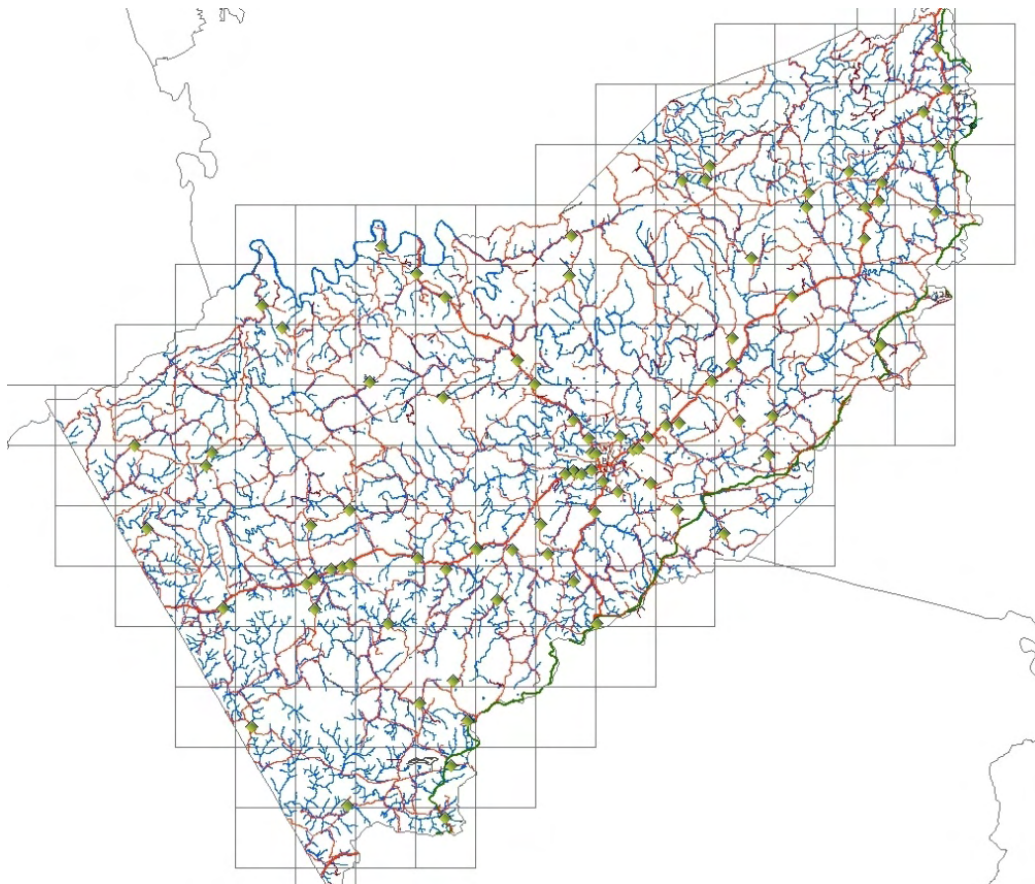
Solid Waste Collection and Disposal

The County currently operates a solid waste collection system consisting of a 55-acre landfill (closed) and a greenbox collection system. As of October 8, 1993, landfill operations were closed and refuse is being transported out of the County to the Cloyd's Mountain facility in Pulaski County. Approximately 11,300 tons have been sent to the landfill each



of the last 3 years (see Table 34 below). The number increases during wet periods or growth periods. In addition to the main transfer station drop off sites, there are 52 public greenbox sites (207 boxes), plus 32 private greenbox sites (40 boxes) paid for by individual businesses. This system is very dispersed and expensive to maintain (see Map 36 below). Other disposal/recycling alternatives should be evaluated based on Public Input.

Map 36
Floyd County Greenbox Sites



Since 1993, the County has owned and operated the Floyd County Recycling system. The most recent Solid Waste Management Plan, including a recycling action plan, was approved by DEQ in 2009 (County, 2005). The plan notes the great expense of serving so many green box sites around the County, and the need for more recycling opportunities. Additional facilities within or near the town should be examined to provide additional access to recycling. It also highlights the County's continuing efforts to improve recycling rates, beyond the minimum requirements of the state already being met. Note in Table 37 below that recycling rates have improved annually. This is very difficult in a rural community. County staff picks up recycling from 17 locations; there are also 4 cardboard roll-offs at private businesses. The Town of Floyd hauls about 12 pick-up loads of recycling to the County Recycling Center each week.

Note there is a licensed private composting facility in the County that composts food items from nearby state universities (though this and most manufacturing recycling are not counted by DEQ.)

Also of great importance is a non-profit organization called Angels in the Attic that accepts donated items, is staffed by volunteers and sells the items in a downtown store. With the money earned, Angels in the Attic has donated hundreds of thousands of dollars to local human services programs and agencies such as fire and rescue, New River Community Action, and Angel's Bounty (meal and fellowship for older residents.)

Table 51
Recycling Rates in Floyd County, 2006 to 2009 (in Tons)

	2006	2007	2008	2009*
Paper	379.7	529.5	312.6	348.9
Metal*	1,076.6	284.0	927.4	976.3
Plastic	19.6	38.5	48.2	52.0
Glass	10.0	22.5	31.9	25.0
Commingled	80.0	11.5		
Yard waste (composted or mulched)	-	-		
Waste wood (chipped or mulched)	-	57.0	60.7	1,055.9
Textiles	-	-		
Tires	67.4	145.0	138.9	133.8
Used Oil	10.6	66.0	84.1	104.3
Used Oil Filters	-	-		
Used Antifreeze	4.5	14.0	12.8	3.3
Batteries	30.0	16.0	48.7	56.1
Sludge (composted)	-	-		
Electronics	-	-		4.0
Tree Stumps (>6" diameter)	-	-		
Inoperable Vehicles (per DMV)	-	-		
Other (cardboard)	-	-		
Other: sawdust, manure, hay composted (PME)		-		
total Principal Recycling Material	1,678.4	1,184.0	1,665.2	2,759.5
Total MSW landfilled	13,581.4	11,332.8	11,309.0	11,269.2
Total Municipal Solid Waste	15,259.8	12,516.8	12,974.2	14,028.6
Base Recycling Rate	11.0%	9.5%	12.8%	19.7%
Calculated Recycling Credits (cannot exceed 5%)				
Total Non-MSW Recycled				
H&V Meltblown to scrap dealers		777.0	685.4	755.4
Sawdust (reused for doors)		-		144.0
Dex (metal)		160.0	693.9	439.3
Griffith Lumber (dust and chips for fiber board)				5,020.9
Credits total	-	937.0	1,379.3	6,359.6
max 5%				
Adjusted Recycling Rate, per DEQ	11.0%	15.8%	17.8%	24.7%
*Not yet approved by DEQ				
Note DEQ does not accept most manufacturing recycling as such, and also does not accept composted material.				

Ideally, recycled goods could be turned into new products locally through new businesses. One idea for this is to recycle glass and other materials into countertops or other home furnishings (*Sustainable Business Opportunities for Floyd County*, 2010).

Facilities for New or Expanding Industries

Since public water and sewer is so limited in the County, establishing land fully served by public water and sewer for growth of industry has been important. While the original Floyd County Industrial Park has only one vacant tract remaining (about 5 acres), the newer Floyd Regional Commerce Center has several tracts available, including 3 small graded pads and 2 larger undeveloped tracts. The Commerce Center is owned by the Economic Development Authority of Floyd County and is one of the tools used to encourage job creation and private investment. It is served by robust fiber optics including dark fiber, as well as an adjacent Appalachian Power substation providing two 69KV leads and one 138-KV lead. It is also recognized as a Small Business Administration Hub-zone and is served by the New River Valley Port and Free Trade Zone.



Energy

The dramatic rise in energy prices in the past 5 years has underlined the vulnerability of most current fuel supplies. As the chart of gasoline prices in Charlotte, North Carolina demonstrates, the prices of gasoline, heating oil, natural gas, propane and electricity have gotten higher and less predictable.

Figure 27 Regular Gasoline





Wall Residences Office Building with solar panels, geothermal wells and grey water system

As national leaders debate energy policy, private citizens and businesses are struggling to afford energy to heat and cool their homes (see Table below) and to get to and from work and school. There is practical interest now from many in finding alternative fuel supplies, such as solar, wind, geothermal and biofuels for homes and businesses. There are also increased opportunities for energy savings through energy efficient programs and investments.

**Table 52
Home Heating Fuel Used in Floyd County, 2005-09**

	Estimate	Margin of Error	Percent
Occupied housing units	6,009	+/-218	6,009
Utility gas	47	+/-39	0.80%
Bottled, tank, or LP gas	503	+/-129	8.40%
Electricity	2,978	+/-318	49.60%
Fuel oil, kerosene, etc.	1,235	+/-203	20.60%
Coal or coke	11	+/-18	0.20%
Wood	1,235	+/-251	20.60%
Solar energy	0	+/-127	0.00%
Other fuel	0	+/-127	0.00%
No fuel used	0	+/-127	0.00%

Source: American Community Survey 2005-2009

The County seeks to enable and encourage all safe and reasonable small-scale power generation in the community. Furthermore, the County will continue to encourage federal- and state-funded programs for weatherization and energy-efficiency to serve more eligible households and facilities in Floyd County.

Wind potential is very location specific and general maps suggest there are sites with significant wind potential in Floyd County (see Map 37.) Two major electrical transmission lines traverse Floyd County (see Map 38.) Because of the wind along ridge tops in



Windmill at Residence on Franklin Pike

Floyd County and the proximity to transmission lines, a private company is currently testing potential for large windmills in the County. Also, a few private homes have put up small windmills.

Map 37
Wind Speed at 30m in Virginia

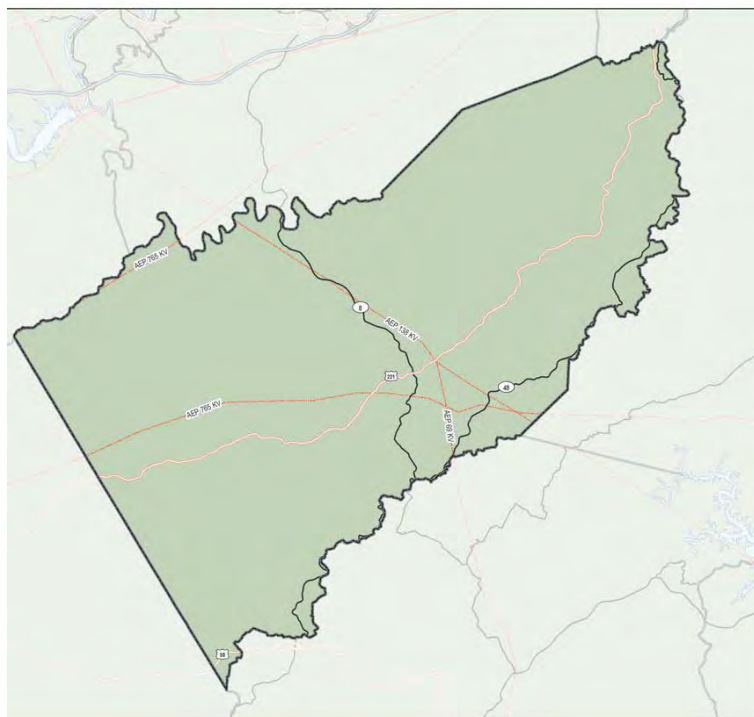


Projection: Universal Transverse Mercator (Zone 17)
 Spatial Resolution of Wind Resource Data: 200 m

This map was created by TrueWind Solutions using the Mesomap system and historical weather data. It has been validated using available surface wind data by the National Renewable Energy Laboratory. Although it is believed to represent an accurate overall picture of the wind energy resource, estimates at any location should be confirmed by measurement.

Source: James Madison University

Map 38 Electric Transmission Lines in Floyd County



Source: Appalachian Power Company

A local energy plan is needed to assess and prioritize all opportunities for energy savings, assistance and investment. SustainFloyd, a local non-profit, is working on an energy inventory which will establish a baseline of energy use by source.

Community Activities, Volunteerism and Community Center

There are many religious, civic and other non-profit groups in Floyd County that provide important activities for individuals as well as services to the community. There is a large number of volunteers in the County, and yet non-profit entities recently reported the need for more volunteers and financial contributions.



Zion Lutheran Church is one of the oldest churches in the County.

Though many people use local schools, churches, the Jacksonville Center and the Jessie Peterman Library for community meetings, Floyd County does not have a stand-alone community center. Plans for incorporating events and activities at Town of Floyd Council's chambers are being examined by the Town. Otherwise, consideration should be given to combining efforts and financial resources for development of a multi-use facility, which might include the one-stop-shop and community pool.

Future Community Facilities

With regards to public water and sewer, which is currently very limited in reach, the Town, County and Public Service Authority must continue to jointly monitor growth trends and the ability of public utility systems to adequately address future demands. This should entail a formal assessment of potential water sources to be developed for public use and collaborative efforts between the PSA and Planning Commission to identify one or more growth corridors, which would be easily serviced by schools, EMS, solid waste collection, etc.

The community is interested in additional facilities, such as a community center and indoor pool, one-stop shop for health and human services, as well as pedestrian pathways and trails. It is difficult for the County to afford these things as it struggles to provide the basic services of education, public safety, and health and welfare (see Figure 28 regarding State and Local Fiscal relationships.) These services have not only operating costs but capital costs as well. Costs have increased about 59% in the past decade (see Tables 52 and 53 and Figures 29 and 30.)



Figure 28

Adapted from *A Review of the State-Local Fiscal Relationship in Virginia*
(Menkes, 2010)

Virginia's state and local governments need each other's close cooperation to function effectively, but in today's political and economic climate, the relationship has become badly frayed according to Neal Menkes, a longtime state finance expert. The state relies on local governments to deliver core programs such as education, public safety and social services. In return, the state provides localities legal authority, financial and technical assistance and a helpful buffer between them and the federal government, writes the author.

The constitution of Virginia puts the General Assembly in charge of the state-local fiscal relationship and Virginia follows a legal precedent, called Dillon's Rule, which limits powers of local governments only to those expressly granted by the state.

Localities, especially Counties, are very limited in their revenue tools. See Table 1 for a Composition of local taxes in Virginia. Yet, they are responsible to deliver an ever-increasing range of services. See Table 2 for Amount and Financing of Locally-delivered Services in Virginia. Moreover, the state has reduced its contribution for basic services, while continuing to increase unfunded mandates.

Table 1: Composition of Virginia Local Taxes, FY 2009

Tax	Amount (\$)	Share of Total (%)
Property		
Locally assessed real property	8,858,451,612	61.4
Other locally assessed property ^a	1,858,306,745	12.9
Public service corporations property	260,678,902	1.8
Local sales and use	996,750,154	6.9
BPOL	660,068,168	4.6
Restaurant food	403,819,957	2.8
Communications, sales and use	403,392,362	2.8
Consumer utilities	310,586,470	2.2
Hotel and motel rooms	171,787,363	1.2
Motor vehicle license	126,627,741	0.9
All other local ^b	379,536,846	2.6
Total	14,430,006,320	100.0

Source: Auditor of Public Accounts, *Comparative Report of Local Government Revenues and Expenditures, Year Ended June 30, 2009, Amended Version* (Richmond, 2010), Exhibits B and B-2. <http://www.apa.virginia.gov/ComparativeReport.cfm>
^a Personal property, machinery and tools, merchants' capital, penalties and interest.
^b Includes taxes on recordation and wills, tobacco, bank stock, natural resources (coal, oil, and gas), franchise licenses, admissions, and miscellaneous categories.

Table 2: Amount and Financing of Locally Delivered Services, FY 2009

Activity	Total Expenditures (\$)	Share of Funding by Level of Government (%)		
		Local	State	Federal ^a
Education ^b	13,799,138,512	48.4	44.9	6.7
Public safety	4,002,197,359	84.2	12.0	3.7
Health and welfare ^b	2,814,549,454	56.2	25.9	18.0
Public works ^b	1,505,925,371	75.6	22.6	1.8
General government administration	1,022,321,475	94.2	5.5	0.3
Community development	939,727,689	77.7	3.7	18.6
Parks, recreation and cultural	905,757,952	97.7	1.9	0.4
Judicial administration	435,509,274	56.7	41.2	2.1
Total^c	25,425,127,086	61.3	31.6	7.1

Source: Auditor of Public Accounts, 2009 *Comparative report of Local Government Revenues and Expenditures*, Exhibits C, C-1, C-2, C-3, C-4, C-5, C-6, C-7, and C-8. <http://www.apa.virginia.gov/ComparativeReport.cfm>

^a Includes federal pass-through money from the state.

^b Excludes state expenditures made on behalf of local government.

^c Excludes \$2,41,168 of nondepartmental spending.

Table 3: Major Categories of State General Fund Aid to Localities, A Comparison of General Fund Appropriations in Millions of Dollars, FY 2008 to FY 2010

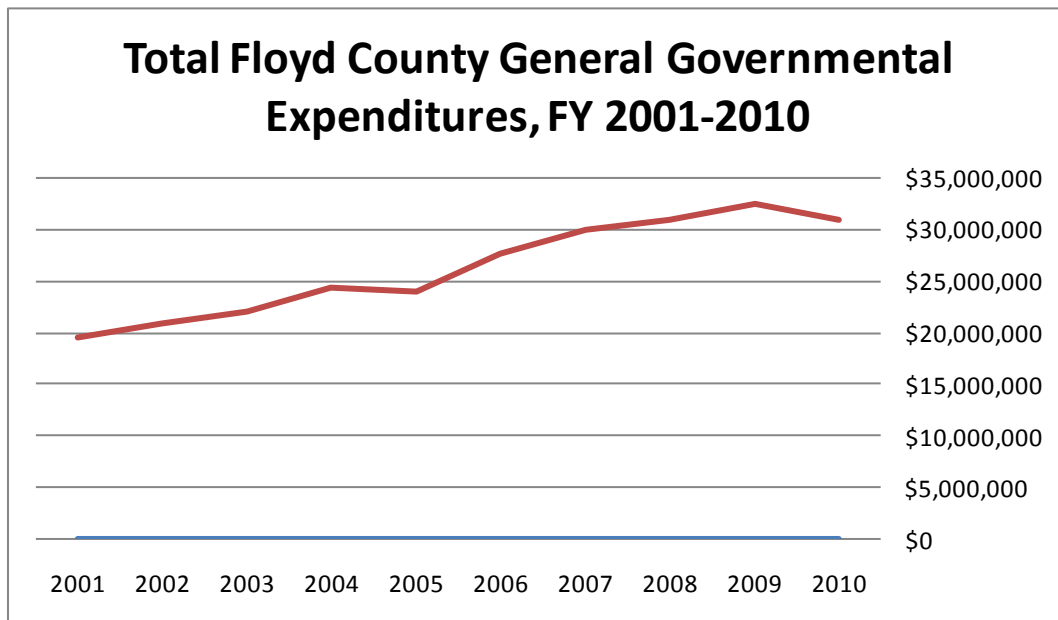
Category	FY 2008 ^a	FY 2009 ^a	FY 2010 ^a	FY 2011	FY 2012
K-12 direct education aid	5,768	5,608	4,770	4,739	4,903
Car tax relief	950	950	950	950	950
Compensation Board aid for local constitutional officers	618	649	473	592	581
Comprehensive Services Act	294	300	279	272	274
Aid to police departments	216	197	181	179	160
Subtotal	7,846	7,704	6,653	6,732	6,868
Total general fund appropriations	17,263	15,943	14,787	15,377	16,021

Sources: Chapter 847, 2007 Session of the General Assembly, p.508; Chapter 847, 2008 Session of the General Assembly, pp 46, 118, 166, 246; Chapter 879, 2008 Session of the General Assembly, p. 436; Chapter 781, 2009 Session of the General Assembly, pp. 61, 138, 241, 347, 401; Chapter 872, 2010 Session of the General Assembly, pp 34, 93, 149, 226; and Chapter 874, 2010 Session of the General Assembly, pp. 53, 125, 190, 210, 297.

^a Final appropriation.

Menkes urges three approaches to ease the fiscal situation. First, the governor and legislature, as "senior partners," should agree not to further restrict local revenue authority, impose new spending requirements on services delivered by local governments, or shift state funding responsibilities onto local governments. Second, the governor and the General Assembly, in concert with local governments, should establish a task force to develop legislative proposals for compelling state agencies to justify standards and regulations, including those in public education, in terms of costs and benefits. Third, as part of its own budget deliberation processes, the state needs to develop fiscal priorities. For example, "Should education funding be afforded less priority than certain tax preferences?"

Figure 29



Source: County of Floyd Virginia, Financial Report, June 30, 2010

Table 53

COUNTY OF FLOYD, VIRGINIA										
FINANCIAL TRENDS INFORMATION										
GENERAL GOVERNMENTAL EXPENDITURES BY FUNCTION										
Last Ten Fiscal Years										
UNAUDITED										
Fiscal Year	General Government Administration	Judicial Administration	Public Safety	Public Works	Health and Welfare	Education	Parks, Recreation and Culture	Community Development	Interest on Long-term Debt	Total Expenses
2010	1,628,664	572,753	2,898,201	1,177,625	1,751,651	\$20,204,293	269,105	338,392	2,068,342	\$30,909,026
2009	1,266,567	579,640	3,677,344	1,163,279	1,841,316	21,141,687	326,136	327,908	2,078,232	32,402,109
2008	1,183,135	605,257	2,992,836	1,146,413	1,715,900	19,417,079	1,316,756	377,031	2,126,635	30,881,042
2007	1,128,863	563,480	2,877,355	1,207,529	1,919,653	19,049,744	287,108	706,916	2,166,978	29,907,626
2006	920,395	559,783	2,968,520	1,841,280	1,861,215	17,964,584	344,679	186,217	921,892	27,568,565
2005	1,141,681	365,295	2,823,688	242,501	1,850,806	15,924,702	249,907	218,699	1,146,650	23,963,929
2004	969,791	302,046	2,674,664	226,060	1,808,472	16,180,338	252,671	744,030	1,069,286	24,227,358
2003	753,460	317,434	2,093,701	441,714	1,763,589	15,482,351	277,856	283,642	639,402	22,053,149
2002	701,739	296,484	1,939,784	185,756	1,732,232	14,425,480	241,935	411,734	786,570	20,721,714
2001	923,214	304,302	1,872,418	250,413	1,134,441	13,613,933	215,813	593,829	555,050	19,463,413

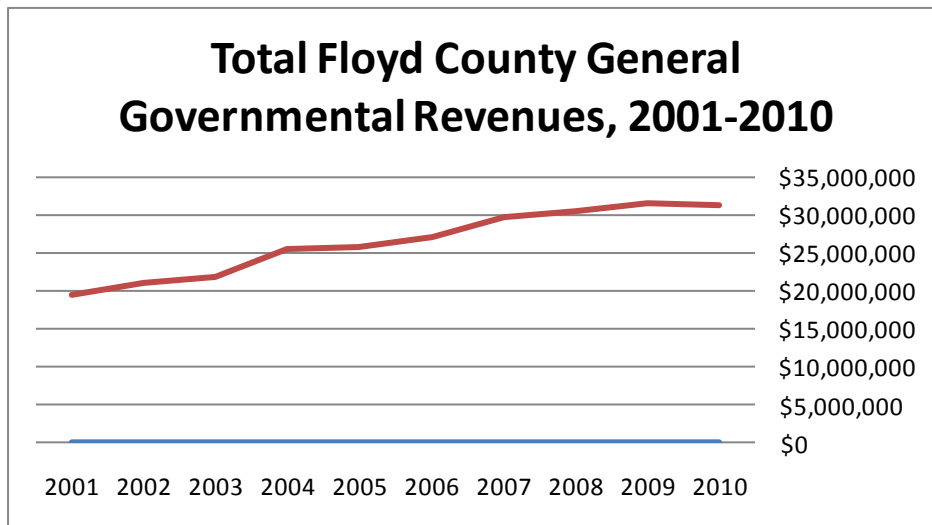
Note: Includes General and Special Revenue funds of the Primary Government and its Discretely Presented Component Unit - School Fund and excludes Capital Project funds.

(1) The Environmental fund. was merged with the General fund in 2006. Prior year expenditures related to this fund are excluded.

(2) Excludes contribution from Primary Government to Discretely Presented Component Unit - School Board.

Source: County of Floyd Virginia, Financial Report, June 30, 2010

Figure 30



Source: County of Floyd Virginia, Financial Report, June 30, 2010

Table 54

COUNTY OF FLOYD, VIRGINIA
 FINANCIAL TRENDS INFORMATION
 GENERAL GOVERNMENTAL REVENUES BY SOURCE
 Last Ten Fiscal Years
 UNAUDITED

Fiscal Year	General Property Taxes	Other Local Taxes	Permits, Privilege Fees, and Regulatory Licenses	Fines and Foreitures	Revenue from Use of Money and Property	Charges for Services	Misc.	Recovered Costs	Inter-governmental (1)	Total Revenues
2010	\$ 9,622,323	\$ 2,156,204	\$ 105,299	\$ 21,515	\$ 155,864	\$ 1,134,792	\$ 48,767	\$ 267,145	\$ 17,755,770	\$ 31,267,679
2009	\$ 9,282,097	\$ 2,142,339	\$ 129,507	\$ 10,598	\$ 204,580	\$ 1,147,435	\$ 15,140	\$ 230,221	\$ 18,441,780	\$ 31,603,697
2008	\$ 9,250,277	\$ 2,327,988	\$ 160,041	\$ 18,329	\$ 201,309	\$ 960,068	\$ 1,135	\$ 314,590	\$ 17,337,978	\$ 30,571,715
2007	\$ 8,445,898	\$ 2,235,986	\$ 175,963	\$ 14,983	\$ 114,846	\$ 1,045,632	\$ 19,309	\$ 224,419	\$ 17,486,068	\$ 29,763,104
2006	\$ 7,939,696	\$ 2,029,472	\$ 164,375	\$ 18,935	\$ 79,359	\$ 586,462	\$ 309,675	\$ 30,148	\$ 16,115,388	\$ 27,273,510
2005	\$ 7,279,817	\$ 1,907,484	\$ 165,965	\$ 15,966	\$ 75,617	\$ 425,054	\$ 227,078	\$ 48,578	\$ 15,750,468	\$ 25,896,027
2004	\$ 8,621,865	\$ 1,872,247	\$ 85,462	\$ 12,006	\$ 99,305	\$ 380,180	\$ 324,366	\$ 26,754	\$ 14,070,406	\$ 25,492,591
2003	\$ 6,034,706	\$ 1,894,913	\$ 71,798	\$ 12,693	\$ 104,145	\$ 371,563	\$ 293,551	\$ 7,488	\$ 13,198,031	\$ 21,988,888
2002	\$ 5,473,840	\$ 1,663,570	\$ 78,445	\$ 12,057	\$ 162,068	\$ 374,762	\$ 230,832	\$ 51,559	\$ 13,086,742	\$ 21,133,875
2001	\$ 5,188,871	\$ 1,607,298	\$ 76,893	\$ 13,646	\$ 406,183	\$ 362,204	\$ 116,251	\$ 19,963	\$ 11,793,121	\$ 19,584,430

Note: Includes General and Special Revenue funds of the Primary Government and its Discretely Presented Component Unit - School Fund and excludes Capital Project funds.

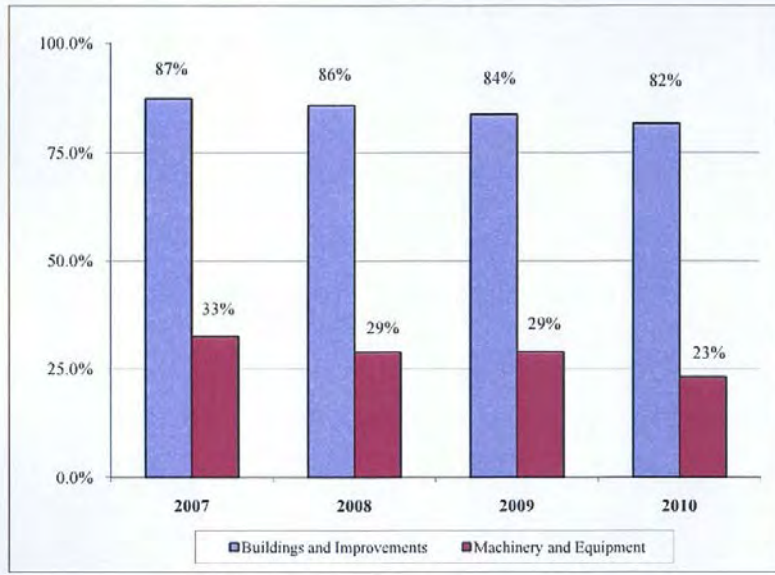
(1) Excludes contribution from Primary Government to Discretely Presented Component Unit - School Board.

Source: County of Floyd Virginia, Financial Report, June 30, 2010

See Figure 29 below from the recent County audit (June 30, 2010) which gives indication of likelihood of upcoming capital asset replacement needs. A complete listing of the life expectancy of capital assets and an expected replacement schedule would be extremely useful in future planning and helping the County enumerate its priority needs in a capital improvement plan (CIP).

Figure 31

Percentage of Primary Government Capital Assets' Useful Life Remaining



Source: County of Floyd, Virginia Financial Analysis, June 30, 2010 (Edwards, 2010)

Chapter 8.

What Community Facilities are Available in Floyd County?

Summary and Conclusion

- There are a variety of public and private community facilities in Floyd County.
- The public facilities and services, including education, public safety, public utility, and health and human services are costly and those costs have increased substantially due to growth and federal and state mandates.
- Thoughtful expansion of the service area for public water and sewer will be required to safely accommodate growth in the future, given the County's vulnerability to drought.
- Portions of the community report needs for more community facilities such as a community center with indoor pool and more trails, but those are difficult to afford with local tax dollars at this time.

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CHAPTER 9.

WHAT HOUSING IS AVAILABLE?

The impacts of the quality, quantity, and distribution of housing are felt in the social, physical, environmental, and economic health of the County and its inhabitants. Although the actual production and exchange of housing is largely a matter of private enterprise, local government can have a strong influence on the housing delivery system through public policy and its infrastructure of roads, utilities, police and fire protection.

Other than new building permits, which will be discussed shortly, the most recent housing statistics are from the American Community Survey, which supplies data collected over a period of years (2005-2009).

Housing Summary from the American Community Survey, 2005-2009

The American Community Survey (ACS) results were released to the general public in December 2010. This information contains estimates from 2005 until 2009 on demographic information related to the Population, Housing, and Social Characteristics of those residing in Floyd County. Since this information is only estimated its use is limited to comparison purposes where data already exists. Below are tables for Floyd County utilizing the 2010 ACS data release.

Table 54 below illustrates Housing Occupancy for 2005-2009 in Floyd County. The County is estimated to have just over 80% of the housing stock occupied with just below 20% vacant. This is corroborated by a query of outside ownership of improved tax parcels; there are

Table 55

Floyd County Housing Occupancy, 2005-2009

*American Community Survey data is estimated for 2005-2009

Housing Type	Number of Units	Percentage of All Units
Occupied	6,009	80.8%
Vacant	1,432	19.2%

Housing Tenure compares owner-occupied status with rental. Table 55 below indicates that 77% of all housing units in the County are owner-occupied while 22% are rental. The owner-occupied units have less vacancy than the rental units which is a typical housing scenario, particularly in rural communities.

Table 56
Floyd County Housing Tenure, 2005-2009

Housing Type	Number of Units	Percentage of All Units	Vacancy Percentage of All Units
Owner Occupied	4,651	77.4%	2.4%
Rental	1,358	22.6%	7.7%

**American Community Survey data is estimated for 2005-2009*

Housing Costs is an important data set in determining cost of living in the County. The amount paid for housing is utilized as an indicator for numerous government grants and loans. Based on Table 55 below it appears that just over 30% of the County households pay more than 30% of their income toward housing. Households paying more than 30% of their household income toward housing costs can be considered financially constrained with limited amounts of income for other needs such as food, clothing, transportation and medical care.

Table 58 below shows that over 61% of the housing in the County costs less than \$150,000. When considering there are 715 households paying more than 30% of their household income for housing costs combined with the amount of housing under \$150,000, there may be housing affordability issues due to lower wages earned by County residents. The employment section of this Plan illustrates low wage figures for the County and reviewed in conjunction with housing indicators, there are underlying affordability issues the County should address in the next ten years. Programs such as the New River Valley HOME Consortium, of which the County is a member, can offer funding to a variety of programs that may relieve some of the tension felt by families paying 30% or more of their income toward housing costs. In order for the County to retain the growing retail opportunities, housing cost needs to be addressed to allow more expendable income.

Table 57
Housing Costs as Percentage of Household Income in Floyd County

Percentage of Income toward Housing	Number of Owners	Percentage of all Owners
Less than 20%	749	33.1%
20%-24.9%	520	22.9%
25%-29.9%	282	12.4%
30%-34.9%	127	5.6%
35%+	588	25.9%

**American Community Survey data is estimated for 2005-2009*

Table 58
Housing Value, 2005-2009

Housing Value	Number of Owners	Percentage of all Owners
<\$50,000	649	14.0%
\$50,000-\$99,999	957	20.6%
\$100,000-\$149,999	1,282	27.6%
\$150,000-\$199,999	732	15.7%
\$200,000-\$299,999	573	12.3%
\$300,000-\$499,000	190	4.1%
\$500,000-\$999,999	233	5.0%
\$1,000,000 +	35	0.8%

**American Community Survey data is estimated for 2005-2009*

Age of Housing Structures

More than 30% of housing structures in Floyd County were built 50 years ago or longer. The majority of structures (54.4%) were built from 1970 to 1999.

Table 59
Year Floyd County Housing Structures Built

	Margin of Estimate Error Percent		
Total housing units	7,441	+/-19	7,441
Built 2005 or later	37	+/-41	0.50%
Built 2000 to 2004	423	+/-135	5.70%
Built 1990 to 1999	1,555	+/-285	20.90%
Built 1980 to 1989	1,009	+/-172	13.60%
Built 1970 to 1979	1,481	+/-285	19.90%
Built 1960 to 1969	592	+/-159	8.00%
Built 1950 to 1959	617	+/-169	8.30%
Built 1940 to 1949	425	+/-131	5.70%
Built 1939 or earlier	1,302	+/-233	17.50%

Source: American Community Survey 2005-09

New Housing: 2000 to 2010

New housing in Floyd County (since the 2000 Census) has sharply increased the supply of housing. Housing trends often follow national markets. This is no longer the case in Floyd County; Table 60 shows housing, as defined by building permits, has increased each year since 2006, despite the recent recession and decline in new building nationwide.

As Table 60 shows, there were 1,669 new housing permits from 2000 to 2009 in Floyd County including all types of housing. By far, most were single family units. The increase in demand for Floyd County property, particularly from outside the County, has driven up land prices dramatically in the past decade. Note that 46% of these building permits were for manufactured housing, underlining the need for affordable housing in Floyd County.

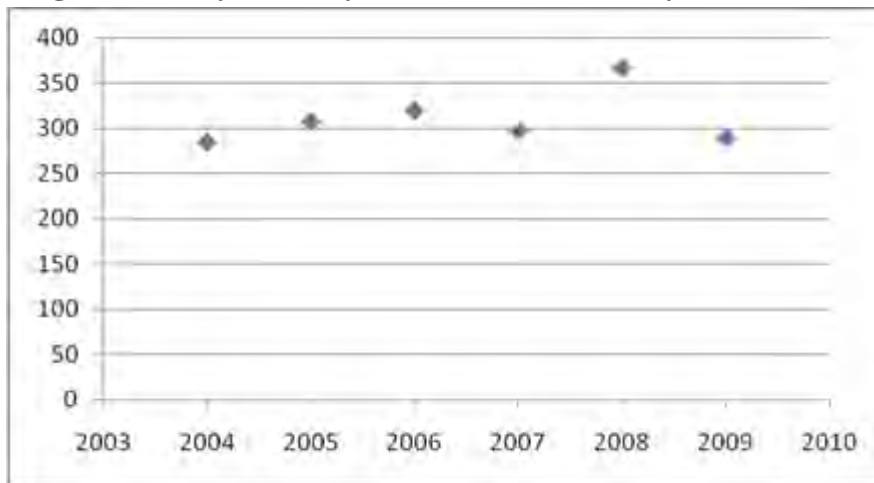
**Table 60
Building Permits in Floyd County 2000-2009**

Year	Single Family Units	Duplex Units	Multi-Fam. (5+) Units	Manufactured Housing Units	TOTAL Units
2009	54			39	93
2008	88			56	144
2007	86			50	136
2006	75			64	139
2005	94	4	4	54	156
2004	94			79	173
2003	90			86	176
2002	108			88	196
2001	105			109	214
2000	95	2		145	242
Total	889	6	4	770	1669

Locally, Floyd County experienced growth unmatched in the New River Valley. Subdivision activity increased in the County with larger farm tracts being split into smaller residential tracts; however few developed subdivisions exist, most are two to ten acre lots with private access onto a public road (with no new road and no additional infrastructure like central water and sewer.)

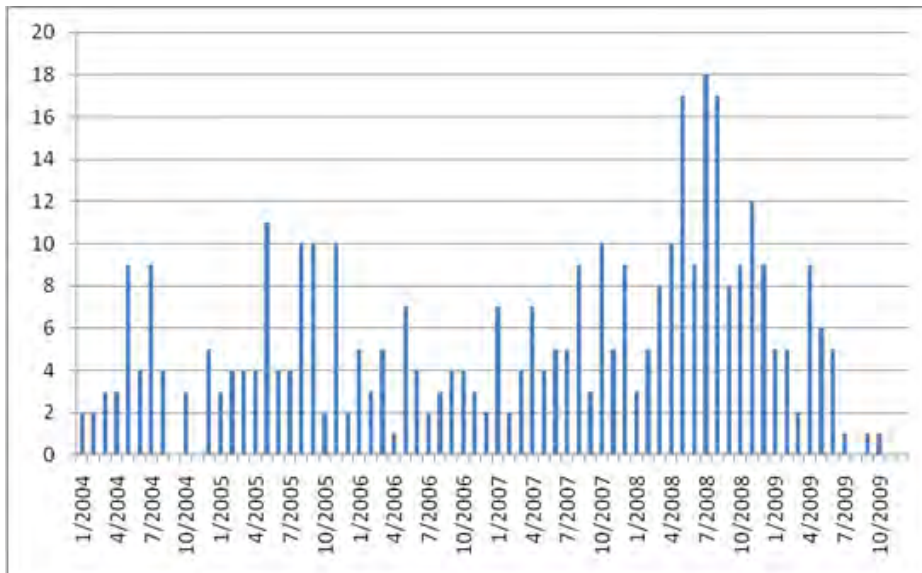
Due to the location of these lots, public water and sewer utilities are largely unavailable. Water access can be a problem in the County. It is not uncommon for well depths to exceed 600 feet (see Map 37). Also, as shown in Figures 32 and 33, the number of well permits spiked considerably in 2008, though the number of building permits did not (New River Valley Planning District Commission, 2010). These summer 2008 spikes suggests that some portion of these well permits were actually replacement permits for wells or springs that went dry (this was not tracked closely by the Health Department as it was during the major drought of 1998 to 2002, when 500 replacement well permits were issued.) *Unfortunately the well yields were not captured from the records when the depth and general locations were.*

Figure 32: Floyd County Well Permits Annually, 2004 to 2009



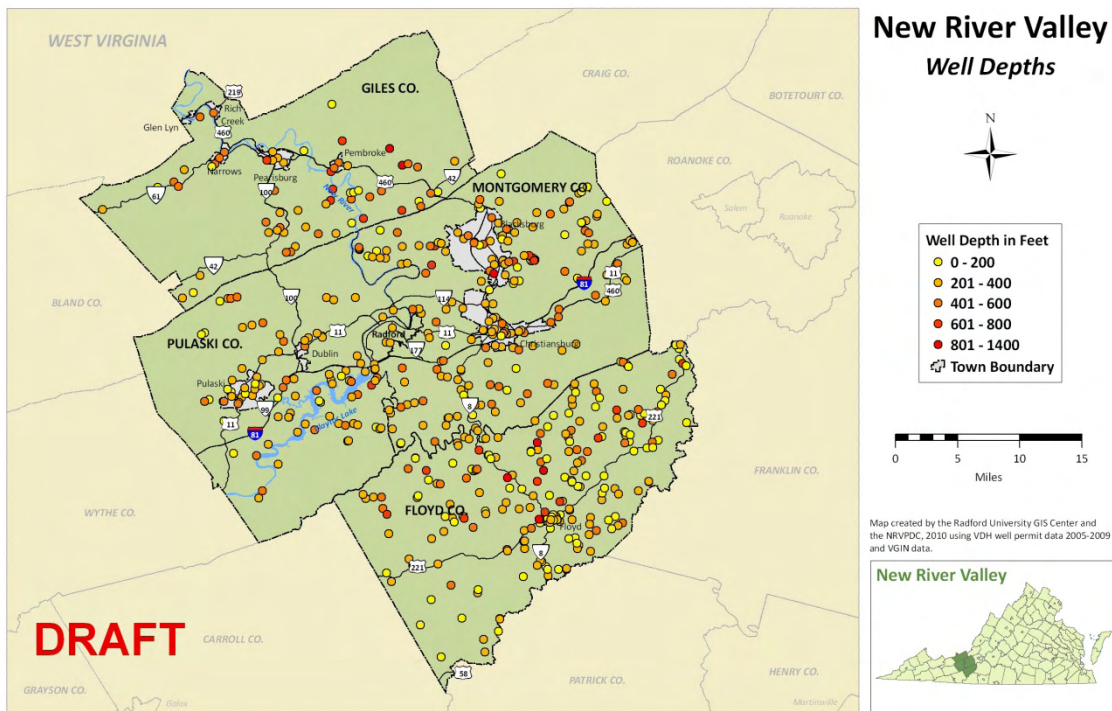
Source: draft NRV Hazard Mitigation Plan, 2010

Figure 33: Floyd County Well Permits by Quarter, 2004 to 2009



Source: draft NRV Hazard Mitigation Plan, 2010

Map 39



Source: draft NRV Hazard Mitigation Plan, 2010

Housing Needs

Due to the age of many existing homes and the recent advancements in energy efficiency, many homes could likely benefit from better insulation, replacement windows, newer appliances and heating and cooling. There are federal and state programs that help with such “weatherization needs,” but it is not clear that Floyd County residents have received their fair portion of this. These programs should be better promoted to serve the County. Even at market costs, many energy efficiency projects have relatively short pay-backs. This work can also provide much needed jobs in the County.

Furthermore, there are 89 houses which lack plumbing, according to the ACS 2005-09 data. Connecting these homeowners with the state’s indoor plumbing program could be helpful, though it is not easy because the list is not accessible.

Estimations of future housing needs are based on projected population growth and the number of existing structures which, due to their condition, need to be replaced. The actual demand for new housing, of course, is not the same thing as need, but depends upon the willingness and ability of consumers to pay the costs. According to previous population projections, Floyd County can expect a population of 17,796 to 21,416 in 2030. Based on 2.4

people per household (Census, 2000), that will be an additional 1,081 to 2,242 houses. Among those is a need for “workforce housing;” that is, housing that people who work in Floyd County can afford.

Moreover, the housing needs of many elderly residents (particularly the 85+ segment) may change in the relatively near future as they look for alternative long-term care arrangements from assisted-living to full-time nursing care. Additional options along the “continuum-of-care” are needed for seniors, including day care, retirement home, and assisted living.

It is important to define locations that are best suited for future residential development. These locations should have adequate levels of service to support future housing. Additionally, they should not be the areas that are prime for agricultural and forests.

New River Valley HOME Consortium

The New River Valley HOME Consortium is composed of local government representatives from Giles, Montgomery, Floyd, and Pulaski Counties and the Towns therein, as well as the City of Radford. These local governments came together in 2007 to form the NRV HOME Consortium to attract Federal HOME funds to the area. HOME funding is provided by the Federal Department of Housing and Urban Development (HUD). HOME funding can be used to assist low income homeowners with building or purchasing a new home, or with renovating an existing dilapidated home. The funding can also be utilized to build or renovate rental housing in the New River Valley.

Monies from this program can support a variety of affordable housing needs; localities are free to determine different types of projects. Other communities in the New River Valley have used this program to renovate existing structures, create housing for aging populations, and other projects to assist low income residents. Funding for the County and Town will become available in the near future. It is recommended that regardless of the type of housing, areas of consideration should be in close proximity to services and infrastructure in and around the Town of Floyd. Planning for these housing funds needs to get underway in 2011 to assure that the HOME Consortium Funds are leveraged with other available programs, such as block grant funds. The ideal location for new affordable housing is where public water and sewer are available; this is currently in or near the Town of Floyd.

Chapter 9.
What Housing is Available in Floyd County?

Summary and Conclusion

- Housing stock in the County is widely varied in age and condition.
- In recent years, manufactured housing has accounted for 35 to 45% of new building permits. This housing is likely all that many people who work in the County can afford.
- Based on current growth projections, 1,100 to 2,200 more homes will be built in the County in the next 20 years.
- Private wells are highly vulnerable to drought in Floyd County and most growth should be directed to areas that can be served by a central and/or public system.
- A state weatherization program exists, but it is not clear that Floyd County residents are receiving their fair portion. Attention should be given to promoting this program.
- Floyd County will be eligible for New River Valley HOME Consortium funds in 2012 and should begin planning immediately to maximize leveraging of those funds for affordable housing construction and/or rehab.

CHAPTER 10.

HOW IS PROPERTY USED IN FLOYD COUNTY?

Historical Background

Traditional accounts suggest that the first English explorers came down the Little River into what would become Floyd County around 1654. While traders passed through to meet with the Cherokees of eastern Tennessee for several decades, settlement did not begin in the area until the mid-18th century. Early settlers came to the community almost exclusively for the purpose of establishing farms. When compared to many areas of Appalachian America, the County offered an abundance of land suited to agriculture. The soil was well adapted to grains and grasses, encouraging livestock-raising. Tobacco and fruits were favored crops (Houston, 1996).

The lack of coal or large timber resources in Floyd County meant that rail service was never developed here like it was in other parts of southwest Virginia. In turn, the absence of rail precluded the large-scale industrial and commercial development experienced in localities surrounding Floyd County in the first half of the twentieth century. Consequently, the County began to lose population to other areas offering better employment opportunities. Floyd County eventually gained some local industry, primarily textile and lumber-related. However, this segment of the economy, in the wake of global competition, dramatically declined by the dawning of the 21st Century.

Existing Property Use

Property use in the County is largely agricultural and residential, with some commercial/industrial in and around the Town of Floyd and in the communities of Check and Willis. Yet residential properties are scattered down virtually every one of the 620 miles of state roads in the County. This is visible on the property use maps below, where “suburban residential” (residential parcels less than 20 acres and shown in light yellow) are widely dispersed, and parcels designated “Agriculture over 99 acres” (shown in dark green) and “Agriculture 20-99 acres” (shown in light green) appear to dominate the County’s landscape. A close comparison of changes from the 2002 map and 2009 map, though, reveals that many large parcels have been converted to residential parcels.

As of 2009 there were 13,496 parcels in the County, of which 9,082 were smaller than 20 acres. Agriculture properties combined (20 or more acres) constituted 3,736 properties, this difference is increasing as evidenced in Table 61 and 62 and Maps 38, 39 and 40. From 2002 to 2009, there was a loss of 27.1% of large Agricultural (99+ acre lots) tracts, while the number of smaller parcels (typically residential) increased by 29.4%. Table 62 below reflects the changes in just a two year period. This loss of farmland if it continues at this pace, threatens the viability and future of agriculture in the County. See inset on Right to Farm Laws and Nuisance Laws in Virginia.

Table 61
Floyd County Property Use Parcel Changes from 2002 to 2009

Acreage	2002 Parcels	2009 Parcels	Amount Change	Percent Change
Residential	7,016	9,082	2,066	29.4%
Commercial\Industrial	101	198	97	96.0%
AG 20 to 99 Acres	3,410	3,200	(210)	-6.2%
AG Over 99 Acres	735	536	(199)	-27.1%
Tax Exempt	416	480	64	15.4%
Subtotal	11,678	13,496	1,818	15.6%
No Data	479	48	(431)	-90.0%
Total	12,157	13,544	1,387	NA

Source: County Landbook ("Class1 field") and NRVPCD Analysis, 2010

Table 62
Floyd County Property Use Acreage Changes from 2007 to 2009

Classification	2007 # Acres	2009 # Acres	Amount Change	Percent Change
Residential Housing	39,385.5	41,565.9	2,180.4	5.5%
Commercial/Industrial	423.7	453.5	29.8	7.0%
Ag. 20-99 Acres	119,882.5	119,111.6	-770.9	-0.6%
Ag. 99+ Acres	61,499.7	58,645.6	-2,854.1	-4.6%

Source: County Landbook _____ and NRVPCD Analysis, 2010

When residential development occurs near working farms, neighbors may complain about the smells and noises that are a natural part of farming. Virginia has Right to Farm laws that can help provide farmers a defense if neighbors claim "nuisance" and sue. Unfortunately, the Right to Farm laws do not prevent the lawsuits, which can be very expensive for farmers, and they also do not guarantee victory in court for farmers. See inset on Right to Farm Laws and Nuisance Laws in Virginia.

Agricultural Uses and the Virginia Right-to-Farm Statute

As non-agricultural uses move ever closer to and surround farms, complaints of sounds and smells are inevitable. Virginia has a Right-to-Farm statute, **but it is only a *defense to nuisance suits which might be brought against farms, it does not prevent nuisance suits.*** As stated in Virginia Code §3.2-302(B), there is no provision to limit “the right of any person to recover damages” claimed against a farm for nuisance (see below). If neighboring landowners bring a lawsuit against an agricultural operation and it is found to be a nuisance, courts have the option of closing the operation, altering the way it conducts its business, or assessing penalties to compensate the neighboring landowner for the nuisance. Even if a lawsuit fails, the cost of defending against the suit could threaten or even close the farming operation.

§ 3.2-301. Right to farm; restrictive ordinances

In order to limit the circumstances under which agricultural operations may be deemed to be a nuisance, especially when nonagricultural land uses are initiated near existing agricultural operations, no county shall adopt any ordinance that requires that a special exception or special use permit be obtained for any production agriculture or silviculture activity in an area that is zoned as an agricultural district or classification. Counties may adopt setback requirements, minimum area requirements, and other requirements that apply to land on which agriculture and silviculture activity is occurring within the locality that is zoned as an agricultural district or classification. No locality shall enact zoning ordinances that would unreasonably restrict or regulate farm structures or farming and forestry practices in an agricultural district or classification unless such restrictions bear a relationship to the health, safety, and general welfare of its citizens. This section shall become effective on April 1, 1995, and from and after that date all land zoned to an agricultural district or classification shall be in conformity with this section.

§ 3.2-302. When agricultural operations do not constitute nuisance

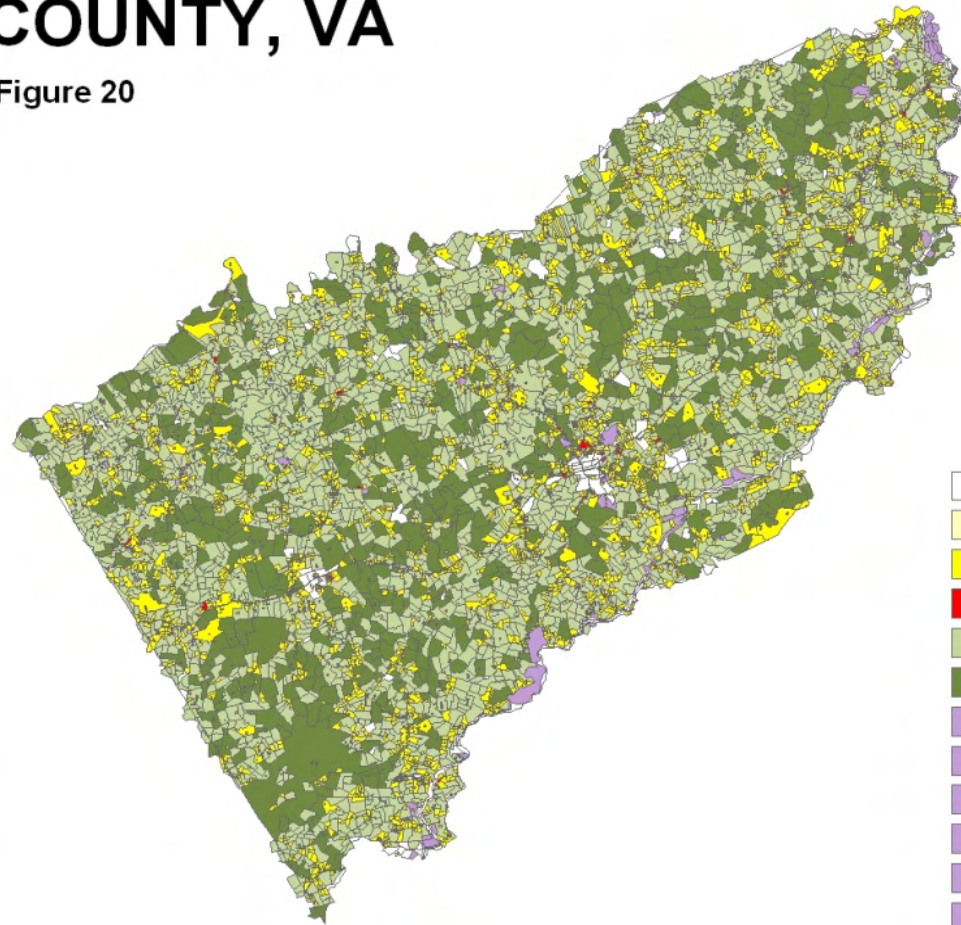
A. No agricultural operation or any of its appurtenances shall be or become a nuisance, private or public, if such operations are conducted in accordance with existing best management practices and comply with existing laws and regulations of the Commonwealth. The provisions of this section shall not apply whenever a nuisance results from the negligent or improper operation of any such agricultural operation or its appurtenances.

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










Map 40: Floyd County Property Use, 2002

FLOYD COUNTY, VA

Figure 20



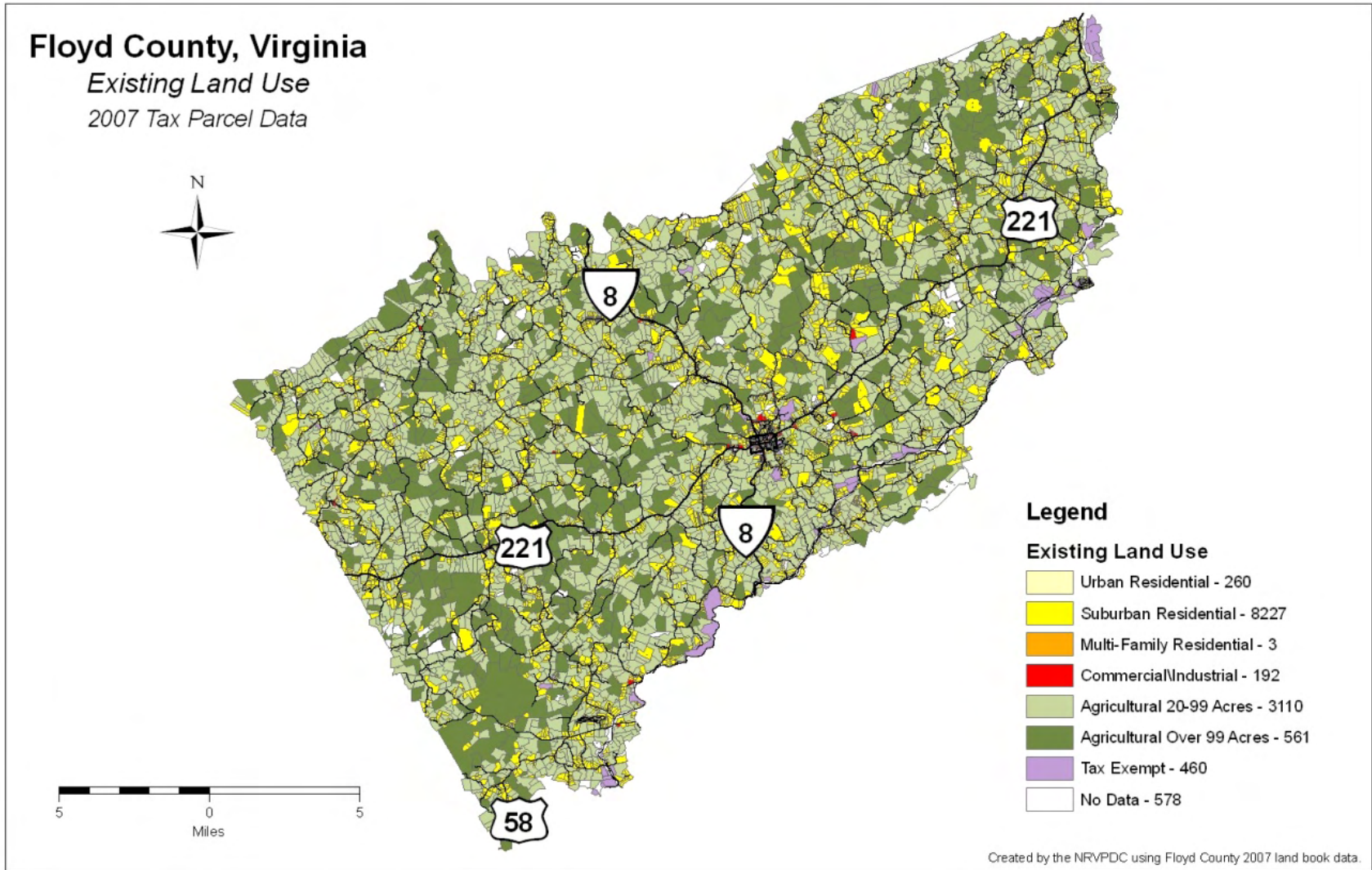
EXISTING LAND USE

	No Data - 479
	Urban Residential - 6
	Rural Residential - 7010
	Commercial/Industrial - 101
	Agricultural 20-99 acres - 3410
	Agricultural over 99 acres - 735
	Tax Exempt - 62
	Tax Exempt - 35
	Tax Exempt - 31
	Tax Exempt - 262
	Tax Exempt - 5
	Tax Exempt - 21

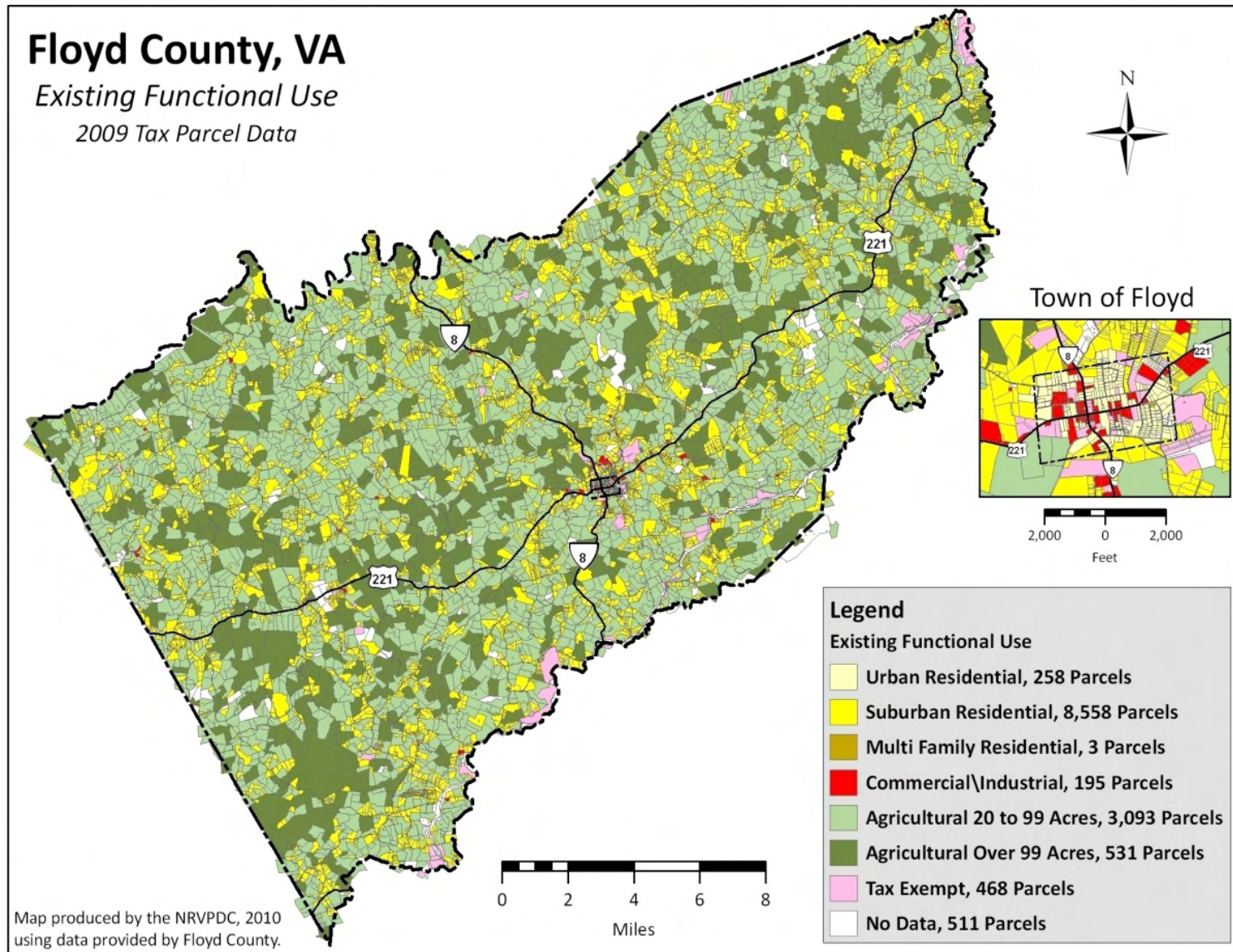
Note: map not to scale.

Map produced by the NRVPCD, 2002, using tax parcel mapping and County land book information.

Map 41: Floyd County Property Use, 2007



Map 42: Floyd County Property Use, 2009



Subdivision Ordinance

Currently the County’s primary regulatory mechanism for property development is the Subdivision Ordinance. In general, the Subdivision Ordinance is a limited tool and does not determine use. For example, any type of use can occur on any parcel of land in Floyd County as determined by the buyer of that land (the only exception being on parcels with conservation or scenic easements.) Additionally, any number of residences can be built on a single parcel; this has occurred in the County and poses challenges for the provision of services.

A subdivision ordinance legally controls only the size, shape and orientation of new parcels, not how it can be used. It cannot prevent divisions of land based on location, quality of roads, highest and best use (like farming), distance from schools or emergency services. Also, it cannot limit the number of parcels that can be created from a parent tract, as long as each new parcel meets a specific standard. Zoning is used in most Virginia localities to guide use and density. (See table below for a comparison of Subdivision Ordinances and Zoning Ordinances.)

Table 63
Legal Capacities of Subdivision and Zoning Ordinances

	Subdivision Ordinance	Zoning Ordinance
Can control size, shape and orientation of NEW parcels to	YES	YES
Can control Use of Parcels	NO	YES
Development standards can vary by land traits and location	NO	YES
Can deny proposed development if roads aren't sufficient	NO	YES
Can require developer pay for needed infrastructure if from AG to residential	NO	YES
Can limit number of stick built dwellings on one parcel	NO	YES

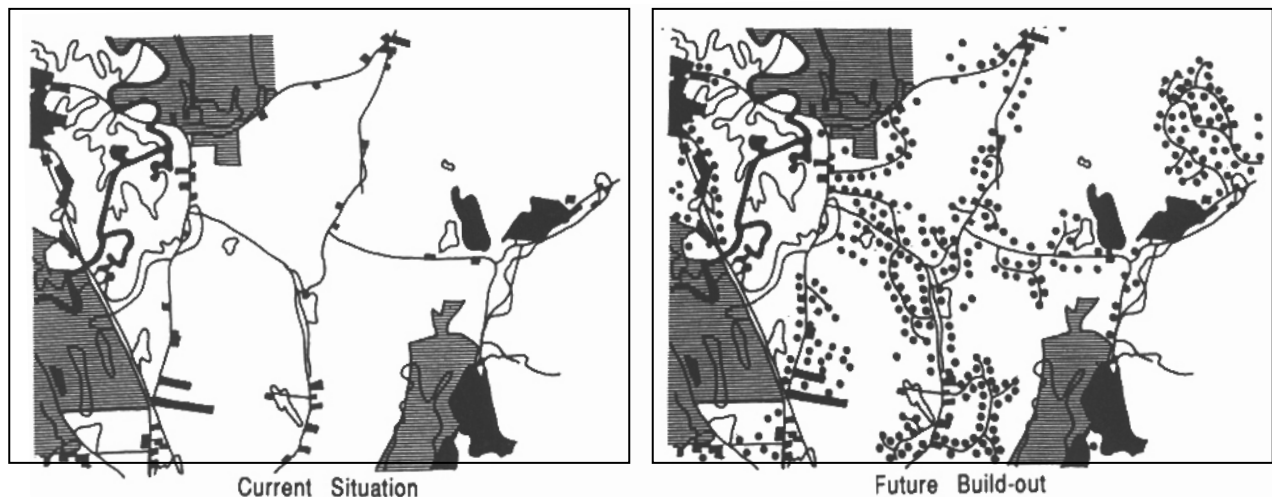
Last updated in 2002, the Subdivision Ordinance tries to encourage new residential street development rather than having multiple new residents’ driveways open onto one stretch of road, which may or may not be well-suited to any driveways. Unfortunately, since the adoption of the updated Ordinance, only one or two new subdivisions has included a new

residential street. Otherwise, all development continues to be down existing roads, often maximizing the number of parcels allowable and resulting in multiple residential points of entry in close proximity and sometimes with limited site distance (the Virginia Department of Transportation must provide a residential access for individual lots). Moreover, many of the large farms recently divided have been down small gravel roads, where land is cheaper for the developer but more expensive for local government to serve.

Other concerns expressed with the Subdivision Ordinance are as follows:

- That the family subdivision provision, which is intended to make it easy to keep land in families, is actually used to circumvent the ordinance for people intent on selling outside the family. Other counties address this concern by setting minimum ownership time periods before and/or after a family conveyance (with some stated exceptions) and requiring an affidavit be signed by the grantor and grantee.
- That doing a small division of land is too difficult. Particularly the requirement to pre-perk any non-family lots under 25 acres; 5 acres or less may be more reasonable.
- That many small parcels will not have adequate sites for well/s, especially during droughts; wells should be developed before the property is divided on small parcels.
- That not allowing development on private roads is resulting in road-side stripping (that is, many adjacent driveway entrances onto state roads which decreases safety.)
- That cluster or open-space subdivisions should be encouraged if water, wastewater and access concerns are met.
- That the Ordinance is cumbersome and difficult to interpret.
- That if the County were built-out exactly as allowed by the current Subdivision Ordinance (not including family subdivisions), it would have over 18,000 two-acre lots down every mile of state road in the County (620 miles, including gravel roads.)

Figure 34
Sample Build-Out Analysis



Trends Affecting Property Use

The first comprehensive survey of land use in Floyd County was made by the New River Valley Planning District Commission in 1970. The Commission predicted that a number of trends in land use were developing:

1. A move away from farming to manufacturing as the major employer;
2. The emergence of vacation home construction in the County;
3. A national trend of former urban dwellers seeking new lifestyles in rural communities;
4. An increasing acceptance of mobile homes as an alternative to the traditional single family house; and,
5. An overspill of development from surrounding areas, particularly Roanoke and Montgomery Counties.

These trends did “reshape the look” of the County and Town, and most of them are continuing today. Additional trends that also have or will affect the County are:

- Free trade and global competition, virtually eliminating all basic textile jobs, traditional lumber-related jobs, and increasing domestic competition for remaining industry, such as food and technology.
- Population growth across age categories, and “aging” of population.
- The power and prevalence of current information technology, requiring that virtually all employees be technologically savvy and allowing new home-based businesses and telecommuting.
- The importance of local entrepreneurs and enterprises in diversifying the economy.
- The increase in tourism in the region, and particularly in local craft shops and bed-and-breakfasts.
- Volatile energy prices and ever-growing demand.
- Tightening land use restrictions in neighboring jurisdictions and the natural movement of residential development and potentially dangerous industries to unregulated localities.
- Nationally poor economic conditions limiting employment and credit.

Parcel Ownership

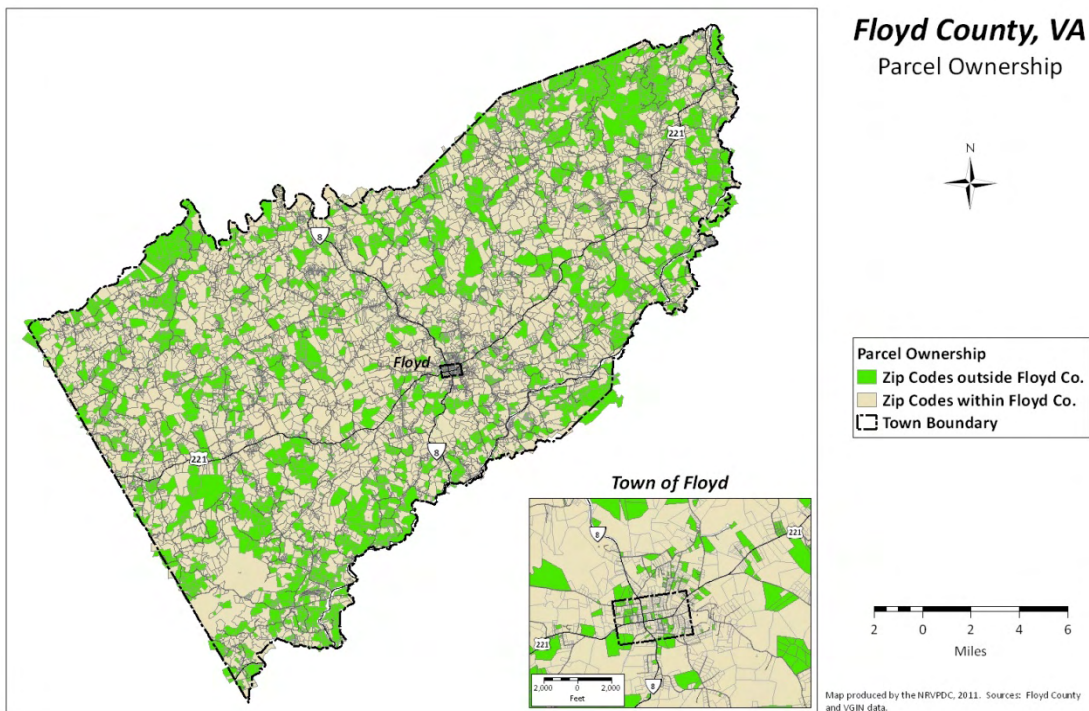
Utilizing land records for Floyd County, an analysis was completed to identify the number of properties owned by persons residing in Floyd County. This was completed with the assumption that property whose tax ticket will be mailed to a Floyd County zip codes in 2011

is also occupied by that person; this is not always the case. (Zip codes do not follow County lines, but zip codes used for Floyd County here were 24072, 24079, 24091, 24105, 24120, 24138, 24149, and 24380.)

Map 41, Floyd County Parcel Ownership, illustrates in green the parcels with owner's zip codes outside of Floyd County, with tan illustrating parcels with owner's zip codes inside of Floyd County. There are 13,811 total parcels in Floyd County of which 27% (3,690 parcels) have owners whose zip codes are outside of Floyd County. Additionally, there is a total acreage of 240,948 in Floyd County, of which 33% (79,605 acres) are owned by non-residents. While this number of parcels is up substantially from 2002, the rate of outside parcel and acreage ownership is not much different than 2002 (was 29% and 34%, respectively then).

This analysis is beneficial when determining Floyd County policies related to solid waste collection and disposal, future transportation demands, and the need for community facilities in outlying areas.

Map 43 Floyd County Parcel Ownership

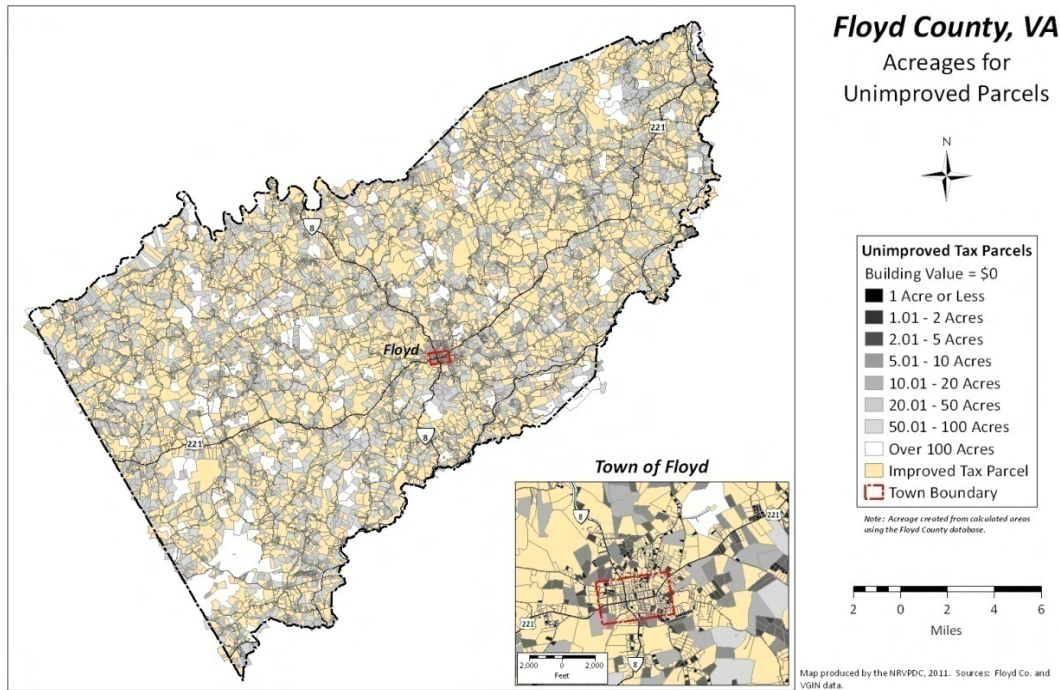


Available Building Lots

An analysis was completed identifying parcels in Floyd County that currently do not have any improvements. These are all properties that are theoretically available for future home sites (note further, that the County does not limit how many stick-built dwellings can be constructed on a single parcel) without any further subdividing of land in the County. Due to limited density development in some areas and higher density in others this analysis also provides information allowing for future planning of infrastructure and other community facilities. Assumptions made in the analysis do not include the potential for uses on lands that may hinder development (e.g. farming activities on adjacent properties without improvements, conservation easements limiting development, etc.)

Map 42, Floyd County Unimproved Parcels, illustrates the parcels with no recorded improvements. As of January 2011, there were 13,811 total parcels in Floyd County of which 42.6% (5,887) parcels do not have an associated improvement value. Additionally, there is a total acreage of 240,948 in Floyd County, of which 43.4% (104,548 acres) do not have an associated building value.

Map 44 Floyd County Unimproved Parcels



**Table 64
Floyd County Unimproved Parcels by Acreage Size, 2011**

Acreage	Unimproved Parcels	Improved Parcels
Up to 1 acre	1,497	1,467
1.01 to 2 acres	580	1,291
2.01 to 5 acres	859	1,527
5.01 to 10 acres	669	967
10.01 to 20 acres	725	804
20.01 to 50 acres	1008	1,068
50.01 to 100 acres	405	555
100.01 acres and greater	144	245
Total	5,887	7,924

Source: Floyd County data and NRVPCD Analysis, 2011

This analysis shows parcel fragmentation, already identified previously, from subdivision activity. Many of these parcels may not be prime for development, yet in recent years, most larger new subdivisions (partitioning of lands rarely with provision of new road or infrastructure.) and houses have gone in places like these, farthest removed from services. Given the current number of parcels already available and the inefficiencies of serving sprawling sites, new land policies should be considered.

Figure 35 provides a snapshot of the cost of serving residences in the County versus the cost of serving farm/forest and commercial properties.

Figure 35
Floyd County Cost of Community Services Study
By Joe Powers, 2010
Executive Summary

The Floyd County Planning Commission is working on a new Comprehensive Plan to guide future growth and development in the County. As part of this planning effort, a Cost of Community Services (COCS) study was conducted to look at the fiscal contribution of existing land uses in the County. This study analyzes revenues and expenditures on a land use basis for fiscal year 2009 (July 1, 2008 – June 30, 2009). It examines revenues by land use and the financial demands of public services (e.g. public safety, government administration, schools, courts, etc.) and shows the cost of providing these services to residential, commercial, and farm/forest land uses. This COCS methodology has been used by the American Farmland Trust and the Piedmont Environmental Council in the preparation of similar studies for several Virginia counties.

The COCS study found that in Floyd County:

- ✓ 88% of county revenue in FY 2009 was generated by residential land uses; 6% was generated by commercial land uses; and 6% by farm/forest land uses.
- ✓ 95% of county expenditures went to provide services for residential land use compared with 3% for commercial land uses and 2% for farm/forest land uses.

In other words, on average for each \$1 in revenue from residential properties in Floyd County in FY 2009, the county spent \$1.09 providing services to those lands. For each \$1 received from commercial land uses, the county spent 45 cents; and for each \$1 received from farm/forest land uses, the county spent 35 cents providing services.

The COCS study findings demonstrate that a balance of land uses is necessary to ensure fiscal stability. While residential development contributes the largest amount of county revenue, its net fiscal impact is negative because the total expenditures for residential land use exceed its revenues. On the other hand, farm/forest lands make a positive contribution, even though agriculture and horticulture lands in the county are under Virginia's land use assessment and taxation program and are thus taxed at a reduced rate.

Study Findings

	FY 2009	Residential Development	Commercial Development	Farm/Forest Lands
Total Revenues	\$ 30,657,726	\$ 27,082,617	\$ 1,768,373	\$ 1,806,736
Total Expenditures	\$ 31,033,006	\$ 29,595,801	\$ 804,528	\$ 632,677
Net Contribution (Rev – Exp)	\$ (375,280)	\$ (2,513,184)	\$ 963,845	\$ 1,174,059
Land Use Ratio*		1: 1.09	1: 0.45	1: 0.35

* Cost for each \$1 of revenue generated

Future Property Use

As of now, the vast majority of land in Floyd County is available for any future use chosen by the highest bidder, regardless of the impact to neighbors' investment or the County's expenses. (The main exceptions to that are lands owned by federal and state government, those under easement, those covered by deed restrictions or those in floodplains.) This leaves the County vulnerable to uses chosen by developers or owners who may never live in the community.

Planning Tools Available

While some development guidance is provided by the subdivision ordinance, floodplain management ordinance, Erosion and Sediment Control ordinance, manufactured home park ordinance, and land use valuation in the County, it is important to know that these do not control use generally. There are other planning tools available, however (see below as adapted from *Managing Growth and Development in Virginia*, VAPA, October 2010.). Some of the tools allowed by the Code of Virginia include:

- Use Value Assessment and Taxation: uses discounts in property tax assessments to promote and preserve agricultural, forestal and/or open space lands. It is a voluntary program requiring a minimum of 5 acres for agricultural or open space and a minimum of 20 acres for forests. The County currently allows agricultural "land use" on the honor system. Rollback taxes must be paid when the property is removed from the program. "State aid to localities for K-12 education is calculated on a formula, called the Local Composite Index; since the taxes are technically deferred, it uses the full value of real estate in determining a locality's ability to pay (it does not recognize land use valuation.) Note: Virginia Code Section 58.1-3231 states, regarding a Land-Use Plan, "such ordinance may provide that the special assessment and taxation be established on a sliding scale which establishes a lower assessment for property held for longer periods of time . . . "
- Agricultural and Forestal Districts: are areas enabled by a locality in which owners voluntarily protect agricultural and forestal land for a period from 4 to 10 years. In return, owners get "Land Use" valuation and certain protections from development encroachment. Landowners must assemble at least 200 acres of contiguous land and be approved for a district by the local governing body.
- Conservation Easement: "is a legal agreement between a landowner and a land trust or government agency that limits the use of the land by recording deed restrictions that severely restrict further development. Each easement is unique in terms of acreage, description, use restrictions, and duration; these terms are negotiated by the owner and the easement holder." Easements are generally forever. They bring state

and federal tax incentives to the owner. Also, land under easement should be assessed and taxed using land use valuation; the Local Composite Index does recognize this loss as diminishing a locality's ability to pay. Easements must be consistent with the Comprehensive Plan. *See more info below.*

- Capital Improvement Plan: “outlines the multi-year scheduling of public physical improvements and related costs to help guide the locality’s decisions on how to allocate available funds over a 5-year period.”
- Regulation of Mountain Ridge Construction: localities, according to § 15.2-2295.1 of the Code of Virginia, may by ordinance, provide for the regulation of the height and location of tall buildings or structures on protected mountain ridges. The ordinance may be designed and adopted by the locality as an overlay zone superimposed on any preexisting base zone. “Protected mountain ridge,” as defined in the Virginia Code, means a ridge with (i) an elevation of 2,000 feet or more and (ii) an elevation of 500 feet or more above the elevation of an adjacent valley floor “outlines the multi-year scheduling of public physical improvements and related costs to help guide the locality’s decisions on how to allocate available funds over a 5-year period.”
- Zoning: divides a locality into specific districts and establishes regulations concerning use as well as placement, spacing and size of land and buildings within respective districts. It is “the quintessential tool of comprehensive plan implementation.” The following are also available through zoning:
 - ~Conditional Use Permits: while some uses are defined as “by right” or automatically allowed in a given zoning district, others are “conditional uses,” meaning that they are allowed only when certain conditions are met, such as provision for parking and traffic.
 - ~Cash Proffers: are a tool for managing the fiscal impacts of growth. Used with conditional zoning, proffers are voluntary offers by the developer to mitigate the impacts of a re-zoning. Proffers may include land, infrastructure, cash or other conditions or constraints on the use of the property.
 - ~Level of Service Standards: “specify the public facilities needed for new residential developments in an effort to determine if those facilities are adequate to support a proposed rezoning.” In other words, if adequate schools, roads, libraries, parks, public transit or water and sewer systems are not available, the rezoning is denied.
 - ~Impact Fees: are an effort to make growth pay its own way. Unlike proffers which are voluntary offers for conditional changes, impact fees are mandatory costs to be paid by the developer for utilities, roads or other public facilities. Fees can be collected for both “by-right” development and rezoning.
 - ~Sliding Scale: a tool wherein the number of parcels that can be created is determined by the size of the original parcel. Some localities set minimum size (e.g. 25 acres) or maximize size (e.g. 3 acres) or both.
 - ~Urban Development Areas: are locations where greater density is encouraged; most

often these are areas where public water and sewer are available or planned.

~Density Bonuses: reward well-planned developments with additional parcels.

~Transfer of Development Rights: “is a concept in which some or all of the rights to develop a parcel of land in one district (the sending district) can be transferred to a parcel of land in a different district (the receiving district.) It is a tool used to preserve farmland, water resources and open spaces where a locality wishes to limit development.

- Cluster development: is the clustering of dwelling units in a residential subdivision leaving the remainder available as agricultural or forestal working lands or open space. The remainder may be held in common with deed restrictions or easement preventing growth. Can be voluntary or mandatory. Can help protect working lands, but do not completely protect rural land from the effects of sprawl.
- The “2232” Review: according to Section 15.2-2232 of the Virginia Code, the comprehensive plan ‘shall control the general and approximate location, character, and extent of each feature shown” and “unless a feature is already shown on the adopted plan, no street or connection to a street, park or other public area, public building or public structure, public utility facility or public service corporation, whether publicly or privately owned, shall be constructed, established or authorized until its location has been approved by the local planning commission as being substantially in accord with the adopted Comprehensive Plan.
- Service Districts: are legally defined geographic portions of a jurisdiction established by the governing body. In these special service districts, more services may be provided such as water and sewer facilities, sidewalks, garbage removal and disposal, fire-fighting equipment, but also higher taxes may be charged. These can be done individually or jointly by localities.
- Fiscal Impact Analysis: is used to forecast the net operating expenditures and capital outlays for public services required to serve a proposed development. Best used in preparing other planning documents, such as level of service standards.
- Revenue Sharing (Tax sharing): is the sharing of revenues between jurisdictions. Can be used to settle boundary or governmental transition issues related to growth.
- Enterprise Zones: are economically distressed areas as defined by Virginia Code that have entered into a partnership with state government to provide incentives for improved economic conditions. They must be approved by the Governor.

See Appendix D for a ten-page summary called *Tools to Implement the Comprehensive Plan in Virginia*.

It should also be noted that public infrastructure investments, such as water and sewer, can be a tool to help encourage development in certain areas.

Conservation Easements

As already mentioned, Virginia Code (10.1-1009, 1010, et al), has given landowners an option and tax incentives to keep their land from development in perpetuity; the tool is conservation easements. Easements are seen as a public value of protecting “rare” and/or “unique” conservation values associated with a particular parcel of land.

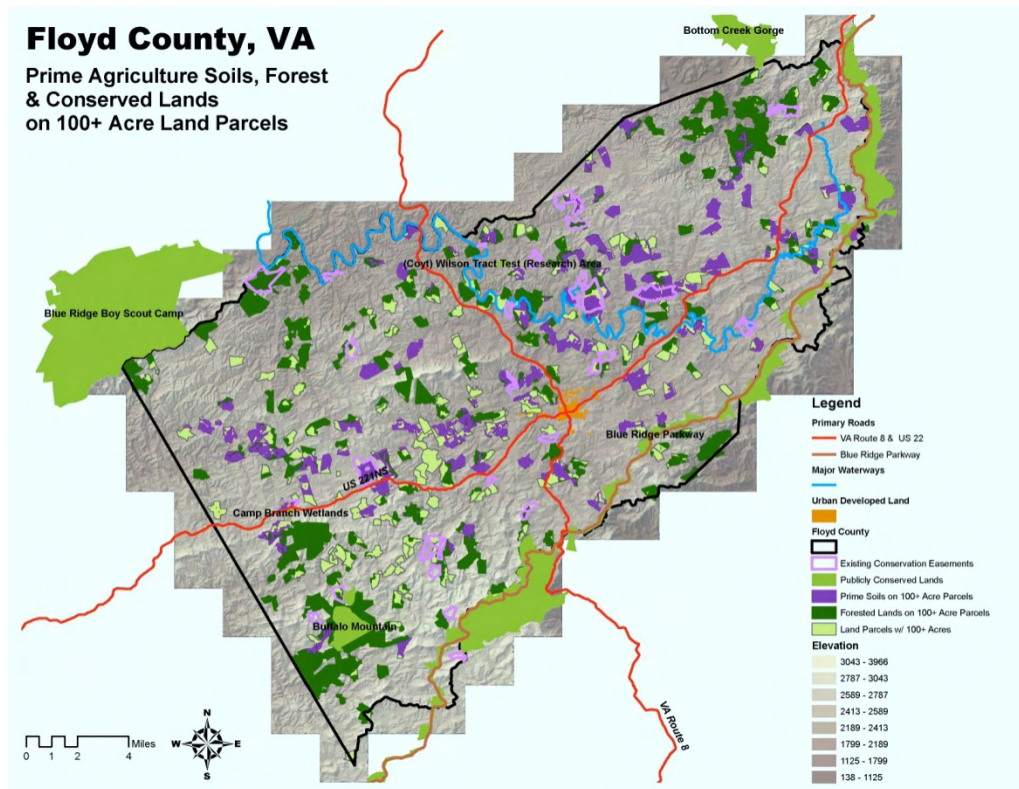
The Code of Virginia does require that the easements be in conformity with the Comprehensive Plan. It is, therefore, critical that the County differentiate between areas that are appropriate for conservation easements (important farmlands, large forest tracts or other important natural resources areas) and those that are not (areas that are well-suited and located for development.) Further, though it does not recognize revenue lost to Land Use Valuation, Virginia recognizes the fore-gone revenue due to Conservation Easements in its Composite Index that determines local school funding percentages.

Recommendations

Guiding development and limiting service cost escalations will require some difficult decisions. While preserving flexibility for land owners is important, those freedoms must be balanced by the responsibilities to adjacent landowners and the community at-large. Continuing with virtually unlimited development options has its risks and its costs, both now and later. Most citizens who participated in the community input sessions strongly favored the use of more planning tools over loss of farmland, haphazard development, depletion of water supplies and increasing costs of community services.

With available GIS tools, it is possible to identify areas based on a series of factors. For example, when prime agricultural soil data is combined with 100+ acre land parcels, high priority agricultural lands emerge. Note the following map, prepared by the New River Land Trust (2010) shows prime agricultural soil, 100+ acre parcels, and private or publicly protected lands in Floyd County.

Map 45

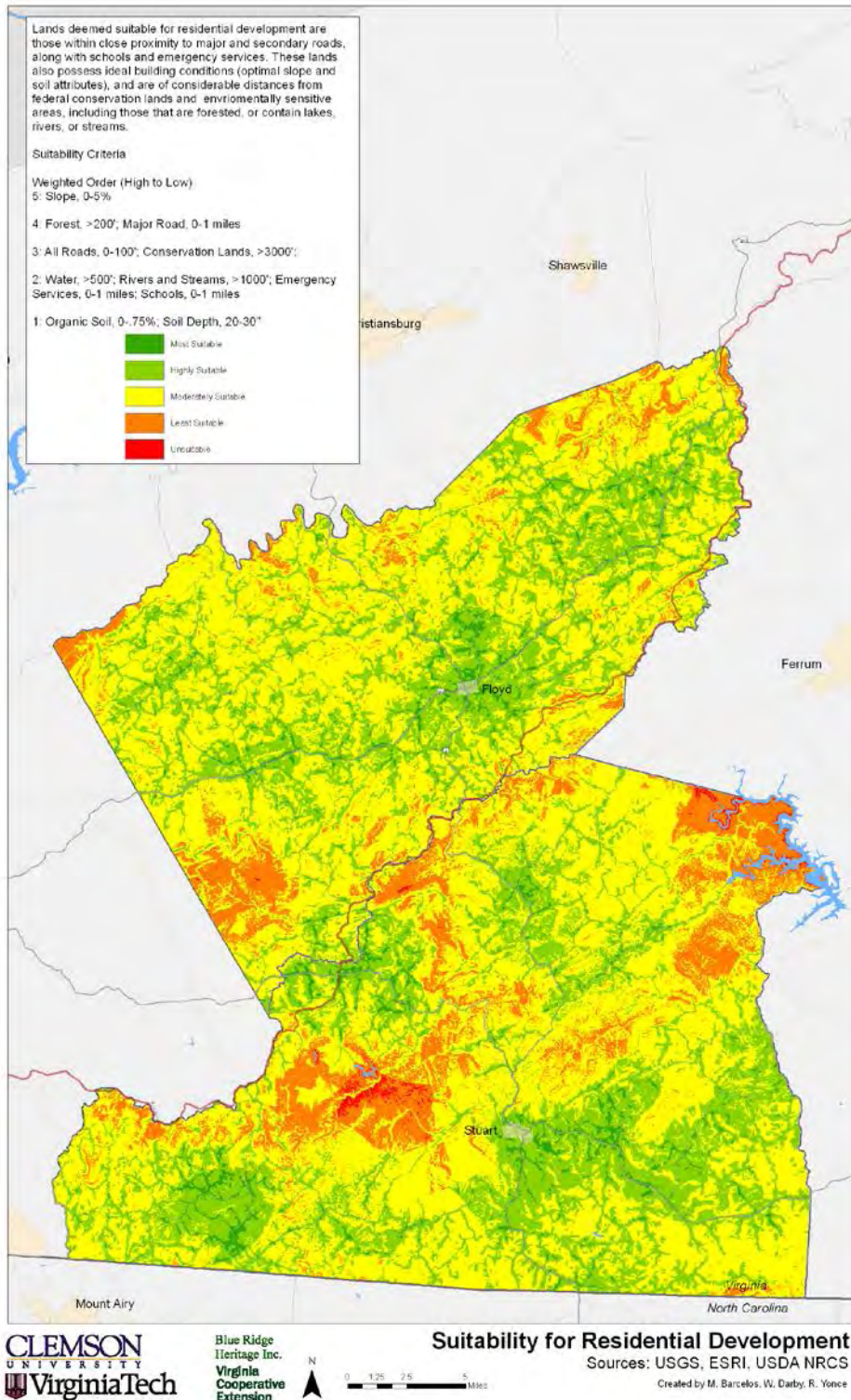


Source: New River Land Trust, 2010

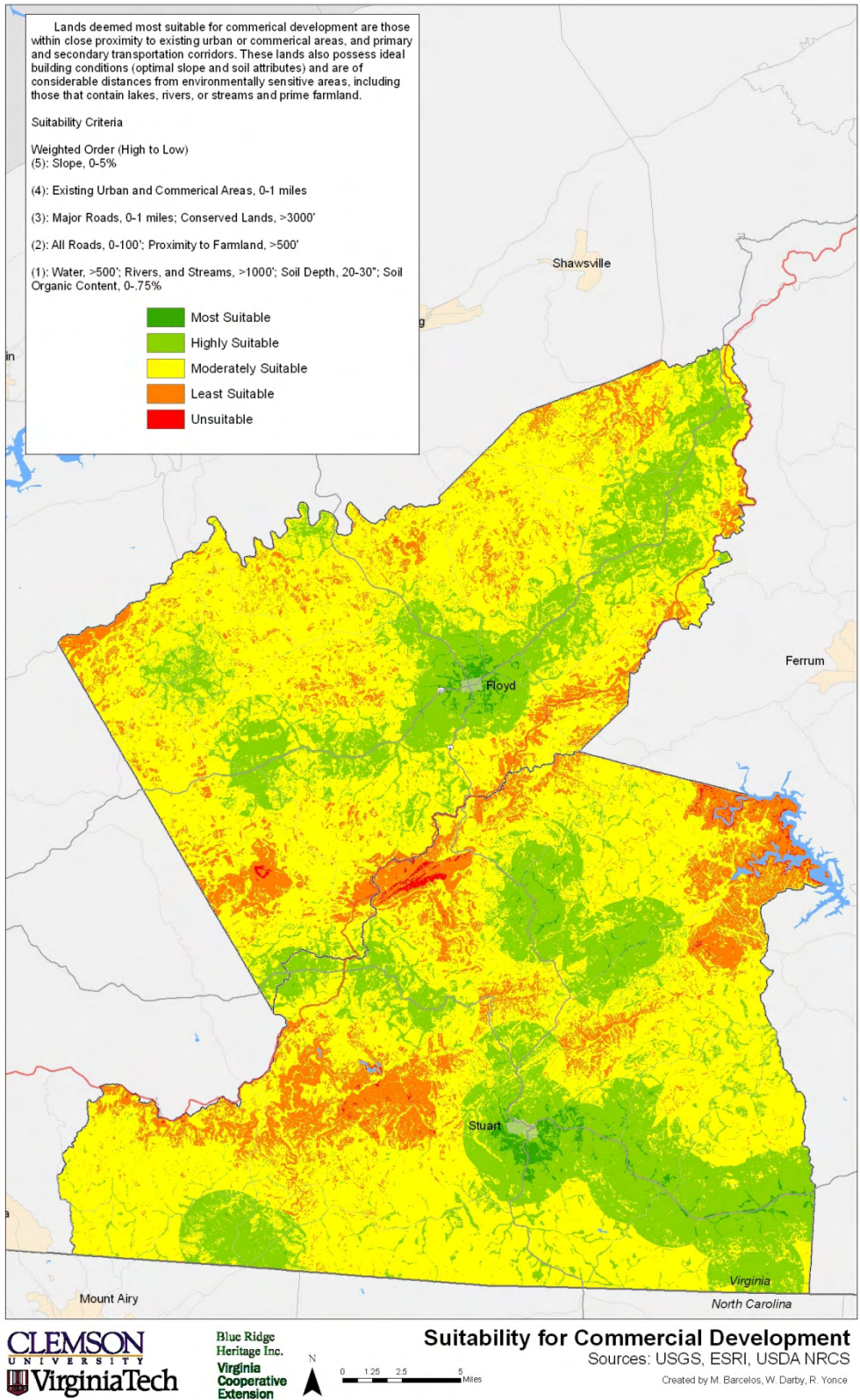
Likewise, areas best suited for development can be identified by looking at the availability of adequate groundwater (including centralized systems), proximity to schools, firehouses and other public safety services, existing road capacity, etc. Standards of measuring the capacity and/or proximity for public services in a specific location are known as Level of Service Standard, and they can be used to identify areas where growth is suitable and encouraged. For example, Maps 44 and 45 show areas best suited to residential and commercial/light industry, respectively, according to certain levels of service.

It has become increasingly important that the County use such tools to show where growth is preferred or supportable and what areas should be protected for agriculture and natural resources, as is shown in the Future Property Use Map, Map 46. This map is not a traditional future land use map, as there are currently no tools in place to direct growth. Instead this map shows general locations for all growth. Areas highlighted in white borders should be considered areas prime for growth, with other areas requiring additional infrastructure improvement or additional resources.

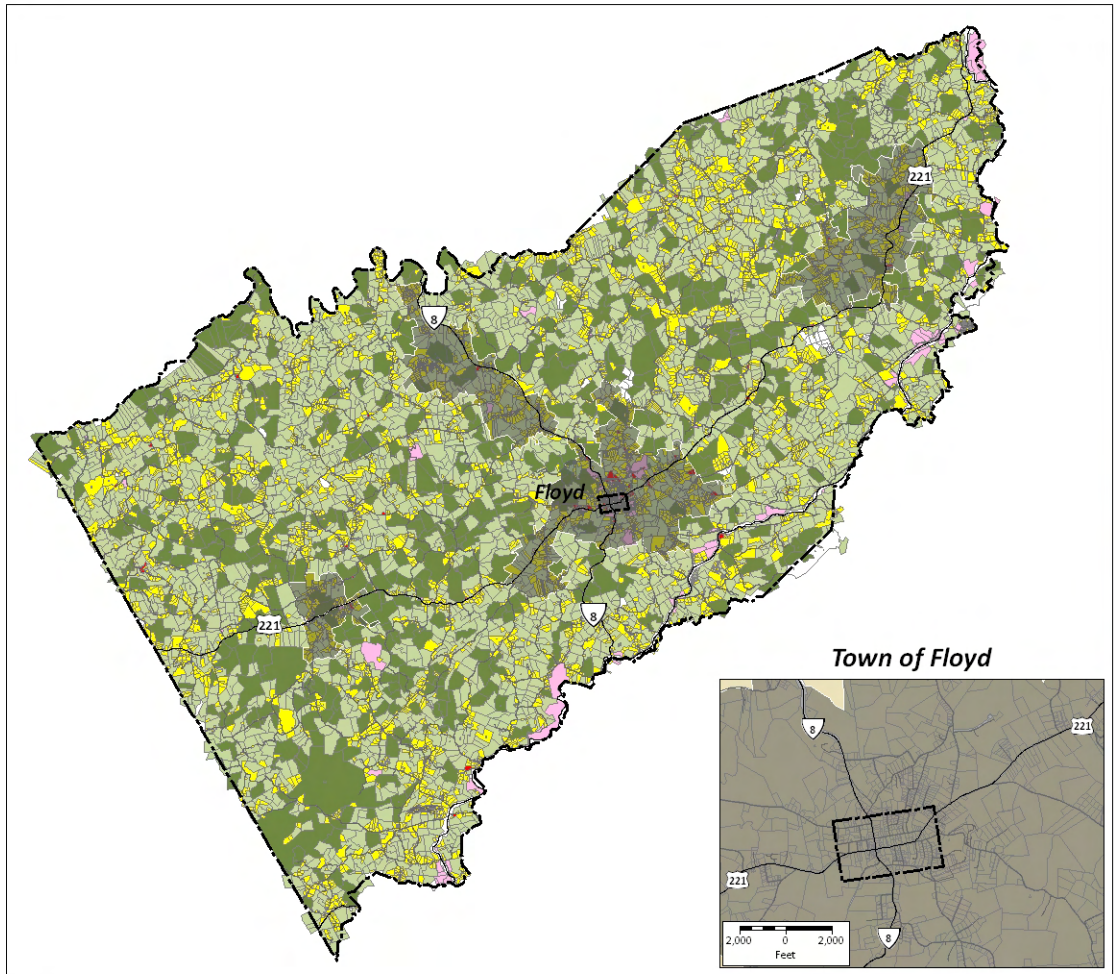
Map 46 Example of Residential Development Suitability Map



Map 47 Example of Commercial/Light Industry Suitability Map



Map 48: Future Property Use Map



Floyd County, VA Future Property Use



Legend

Future Property Use

- Urban Residential
- Suburban Residential
- Multi-family Residential
- Commercial\Industrial
- Agricultural 20-99 Acres
- Agricultural over 99 Acres
- Tax Exempt
- No Data
- Potential Growth Area
- Town Boundary



Map produced by the NRVPCD, 2011. Sources: Floyd County and VGIN data.

Conclusions

Based on the findings of this plan and the public input received, a Land Policy task force should be established to work with the Planning Commission to make specific recommendations to the Board of Supervisors in the next 18 months with regard to other planning tools, including GIS, agricultural and forestal districts, zoning, cash proffers, level of service summaries, a future land use map and preferred future utility service areas. The task force would delineate areas based largely on the following tables (Tables 63 and 64), and then make specific recommendations for implementation. The need for this planning is due to a host of issues primarily related to the protection of the County's farms (see Figure 36), water supply, and quality of life, plus fiscal responsibilities.

Furthermore, based on the limited availability of public water and sewer in the County, the County should consider future purchase of lands for special opportunities, such as waste collection and recycling center/s, community center with recreation fields, and a one-stop health and human service facility.

Lastly, it would be helpful if the County's logo better reflected its goals, values and vision. The current emblem contains a plant with nurturing hands indicating "To Grow is to Prosper." While the plant is consistent with this new plan, the text could be more nuanced to indicate what or how it is important to grow, or the interplay of humans and nature (e.g. "Nurtured by Nature"). Other phrases or images could also reflect the County, such as Farms and Fiber (double-meaning) , "Harmony Found," or "Find Harmony in Floyd" (reflecting music, nature and community character); the latter may be better suited to tourism promotion rather than a County logo.) The Farm and Forest Task Force, the Land Policy Task and a tourism group should be asked to make recommendations regarding a new logo and/or tagline.

Table 65
Future Property Use Areas
Matrix

Land Use	Average Density / Lot Size	Uses	Agriculture & Forest Stewardship	Planned Growth Areas	Developed Areas
Agriculture/Forest lands	25 acres	Farm and forest lands to be protected from non-farm encroachment and development. Rural homes on large lots, or family subdivisions.	P		
Rural Residential	2-5 acres	Agriculture uses are permitted. Access to paved or chip-sealed roads are required for subdivisions. Clustering subdivisions are encouraged. Conservation and nuisance easements are encouraged and may be required as condition of subdivision.	P		
Community Residential	4 dwelling units per acre	Residential development in areas with public water and sewer and paved roads. Allowed only in developed or planned growth areas.		C	P
Rural Business		Limiting commercial serving needs of rural residents and/or farms. Uses include small retail, agricultural support operations, rural services and natural resource-based uses.	P		
Business/Commercial and Mixed Use		Small businesses, including technology and innovation businesses, and/or shopping centers which may be integrated with residential development. Generally served by central water and sewer and appropriate roads.		C	P
Unique Opportunity		Unique, site- or purpose-specific uses, not likely to be replicated in other locations, and benefiting from local attributes such as natural resources, viewsheds, access or recreational/environmental amenities. Non-residential uses range from light industry to energy to eco-tourism.	C	C	C

P = Permitted; C = Conditionally Permitted

adapted from draft Carroll County Comprehensive Plan 2010

**Table 66
Infrastructure and Improvement Requirements by Future Property Use**

	Agriculture and Forestland	Rural Residential	Community Residential	Rural Business	Business, Commerical, Mixed Use	Unique Opportunity
WATER						
Centralized		Yes	Yes		Yes	
Individual Well	Yes	Yes				
Site and Use Dependent				Yes	Yes	Yes
WASTEWATER						
Centralized		Yes	Yes		Yes	
Individual Septic	Yes	Yes				
Site and Use Dependent				Yes	Yes	Yes
TRANSPORTATION						
Legal Access	Yes	Yes	Yes	Yes	Yes	Yes
Grants of Right-of-Way and Easements	Yes	Yes	Yes	Yes	Yes	Yes
Arterial			Yes		Yes	
Paved Road			Yes		Yes	
Within 1/4-mile of a Paved Road				Yes		
Within 1/2-mile of a Paved Road		Yes				
Dust Control Required		Yes				
Site and Use Dependent					Yes	Yes
PUBLIC SAFETY						
Sheriff-Avg Response time of less than 8 minutes			Yes		Yes	
Sheriff-Avg Response time of 8 minutes or more	Yes	Yes		Yes		Yes
Fire- Average Response time of less than 8 minutes			Yes		Yes	
Fire- Average Response time of 8 minutes or more	Yes	Yes		Yes		Yes
Emergency Medical-Avg Response time of less than 8 minutes			Yes		Yes	
Emergency Medical-Avg Response time of 8 minutes or more	Yes	Yes		Yes		Yes
Adequate Fire Flow			Yes	Yes	Yes	Yes
DEVELOPMENT AND DESIGN						
Curbs, Gutters, & Sidewalks			Yes		Yes	
Paved Parking					Yes	
Shared Parking					Yes	Yes
Drainage Detention/Retention Facility			Yes		Yes	Yes
Landscaping, Buffering			Yes		Yes	Yes
Open Space		Yes	Yes		Yes	Yes
Cluster, Conservation Subdivision		Yes			Yes	Yes
Planned Development			Yes		Yes	
Density Bonus for Additional Open Space		Yes	Yes		Yes	
Density Bonus for Sustainability		Yes	Yes		Yes	
<i>adapted from draft Carroll County Comprehensive Plan</i>						

Chapter 10.

How Is Property Used in the County?

Summary and Conclusion

- Land is primarily used for agriculture, forests, residences and small businesses in the County.
- A large amount of agricultural land has been converted to residential lots in recent years.
- For farming to continue in the County, there must be good farmland that is available and affordable. Lands identified as well-suited for agriculture should be designated and protected as such by County land regulations.
- GIS layers overlaying agricultural and forest tracts as well as areas most efficiently reached with public services create guide maps for future land use policy.
- There are many additional planning tools available to the County, including agricultural and forestal districts, zoning (along with proffers, impact fees, etc.), and capital improvement plan.
- It is important to the fiscal health of the County to guide future land use by policy, as farm/forest lands and commercial properties bring in substantially more in revenue than the costs in services, whereas residences receive more in services than they pay in taxes.
- Based on the findings of this plan and the public input received, a Land Policy task force should be established to work with the Planning Commission to make specific recommendations in the next 18 months with regard to other planning tools. New policies should then be put in place to protect farms, forests and water and guide future development.
- To assure adequate space for future community facilities, such as solid waste and recycling, the County should consider acquiring more land in the future.
- A new or revised County logo should be developed to be more consistent with the County's goals.

CHAPTER 11.

WHAT ARE OUR GOALS?

Goals, policies and strategies articulate how Floyd County will meet its challenges and opportunities and be the “*creative, prosperous, and resilient community that respects its people and protects its farms, forests and water for future generations.*”

A goal is a brief statement of desired results. A policy is a statement of direction to accomplish the goal/s. A strategy is a specific action or regulation that implements policy and helps achieve a goal. Note that the County may only utilize policies and strategies that are expressly allowed by the Code of Virginia. A summary of tools available to implement the Comprehensive Plan can be found in Appendix D.

GOAL 1 FARMS AND FORESTS ARE VALUED AND PROTECTED.

Policy 1:1 Farms and forests must be given priority attention in the short-term to protect them as resources in the long-term.

Policy 1:2 Recognize that the dividing of important agricultural tracts into residential parcels forever diminishes the likelihood that substantive farming will occur there in the future. Further, the encroachment on surrounding farmlands increases the likelihood of legal challenges from residences related to farm noises, smells and other practices. Also, after a certain point, the critical mass of beef/dairy farms may be lost so that the farming infrastructure (haulers, stores, cooperatives, etc.) is not viable. It is important to protect farmland through County policy.

Policy 1:3 Identify and recognize areas that are ideal for different uses, especially agriculture and forests, residential development and commercial and light industry.

Policy 1:4 Areas designated as ideal for agriculture and forests should generally be protected through County policy. More specific volunteer protections are also allowed for those areas, such as conservation easements and agricultural and forestal districts, if they are not in designated growth areas. Some exceptions

may be allowed in designated growth areas if the property or area is exceptional, but these conservation easements and agricultural or forestall districts shall not prevent construction of public utilities to growth areas.

- Policy 1:5** Within those areas considered well-suited for residential and commercial/light industry development, the County will work with the Public Service Authority to identify areas where central water and sewer may be established most readily, to direct growth to those areas and away from agricultural and forest lands (and avoid incompatible uses and encroachment.)
- Policy 1:6** Recognize that areas most removed from public services (schools, public safety, solid waste) are the most expensive to serve and further development there should be discouraged.
- Policy 1:7** Collaborate with public and private agencies to support agricultural and forestal viability through programs, such as local value-added processing and expanding local and regional markets for local foods.
- Policy 1:8** Encourage and support farms in obtaining BQA (Beef Quality Assurance) and GAP (Good Agricultural Practice) certifications.
- Policy 1:9** Recognize and support agriculture as a way of life by keeping agriculture in the school curriculum and coordinating with Virginia Cooperative Extension and by encouraging farm mentoring work.
- Policy 1:10** Protect and promote private and community gardens, including greenhouses to extend seasons.
- Policy 1:11** Recognize the natural and economic value of maintaining unfragmented forests (greater than 40 acres.) Forests help recharge groundwater and provide forestry jobs.
- Policy 1:12** Best management practices and plans are encouraged for farms and forests.
- Policy 1:13** Encourage volunteer efforts to expand access to healthy foods for needy families and seniors.
- Policy 1:14** Tap diverse local expertise and interests by establishing tasks forces, such as one to make specific recommendations on land policies (work in conjunction with the Planning Commission) and one to develop an agricultural

strategic plan, including a local food assessment, to help economic viability of farming.

Policy 1:15 It is important that families be able to pass land down to immediate family members, but the giving and receiving family members must attest that they are not circumventing the Subdivision Ordinance. Furthermore, a minimum time of ownership should be established.

GOAL 2 WATER IS BETTER UNDERSTOOD, VALUED, AND PROTECTED.

Policy 2:1 Recognize that the County’s residents are dependent on groundwater supplies and that these supplies are limited and vulnerable to drought and contamination.

Policy 2:2 Establish a mechanism that will prevent development from over-burdening groundwater supplies while respecting property rights.

Policy 2:3 Within those areas considered well-suited for residential and commercial/light industry development (but not agriculture), work with the Public Service Authority to identify where central water and sewer may be established most readily. Establish areas designated for non-agricultural growth and development when central water and sewer may be provided and direct growth to those areas and away from agricultural and forest lands, to avoid incompatible uses and encroachment. It is important to protect farmland and forests through County policy.

Policy 2:4 Recognize the natural and economic value of maintaining unfragmented forests (greater than 40 acres.) Forests help recharge groundwater and provide forestry jobs.

Policy 2:5 Recognize the value of wetlands and erosion control in replenishing groundwater.

Policy 2:6 Encourage best practices in development that will help retain more water.

Policy 2:6 Encourage proper use and care of private septic systems and any storage tanks.

Policy 2:7 Collaborate with public and private agencies to study groundwater or improve surface water quality through voluntary programs.

Policy 2:8 Encourage the Health Department and other regional stakeholders to add “yield” to the fields tracked in the well database as a means to better understand water resources and aid future planning.

Policy 2:9 **Natural areas, such as wetlands, that are** critical to groundwater recharge, and should be identified and generally protected through County policy. More specific volunteer protections are also allowed, such as conservation easements, if they are not in designated growth areas. Some exceptions may be allowed in designated growth areas if the property is exceptional, but these conservations easements and agricultural or forestall districts shall not prevent construction of public utilities to growth areas.

GOAL 3 THE LOCAL ECONOMY IS DIVERSIFIED AND EXPANDED, WITH MORE GOOD-PAYING JOBS AND GROWING SMALL BUSINESSES.

Policy 3:1 The number of jobs within the County needs to increase, especially the number of jobs providing living wages and benefits.

Policy 3:2 A larger, more diverse tax base is needed to support basic service needs; appropriate commercial and light industry are an important source of tax revenue.

Policy 3:3 The County encourages good technology and innovation firms to grow or develop in the County.

Policy 3:4 Staff will share available information about grants and programs with local businesses seeking to expand or preserve jobs, and staff may assist with viable public grant and loan opportunities.

Policy 3:5 Citizens and governmental departments are encouraged to buy goods and services locally whenever practical to support the local economy.

Policy 3:6 Affordable building space is needed for small businesses and should be encouraged.

- Policy 3:7** Staff will collaborate with public and private agencies to provide training to small businesses and for workforce development to enable business and wage growth.
- Policy 3:8** To better understand and support local businesses, an inventory is needed of businesses in the County.
- Policy 3:9** Agriculture is an essential part of the local economy, and expanding agriculture and value-added processing is important and will be encouraged.
- Policy 3:10** Tourism is an important part of the local economy. Assets and products of Floyd County will be promoted to visitors and targeted potential visitors.
- Policy 3:11** Utilize and support economic development programs for the arts and crafts community, including the Jacksonville Center, The Crooked Road, and Round the Mountain.
- Policy 3:12** Creativity and the arts are a special strength in Floyd County, and they will be promoted and recognized, such as through public art.
- Policy 3:13** The robust telecommunications infrastructure affords many telecommuting opportunities for citizens in various service fields; these opportunities should be promoted as a way to increase job and training opportunities.
- Policy 3:14** The County will support the Economic Development Authority of Floyd County as it seeks to expand private investment and increase the quantity and quality of jobs in the County.

GOAL 4 GOOD EDUCATIONAL AND TRAINING OPPORTUNITIES ARE AVAILABLE FOR ALL.

- Policy 4:1** Children in Floyd County will have access to high quality k-12 education.
- Policy 4:2** School buildings and equipment will be well-maintained for health and safety.
- Policy 4:3** The County will encourage abundant access to education and training for local residents and businesses.
- Policy 4:4** Support the local library as a focal point for lifelong learning.

Policy 4:5 Seek to develop an expanded physical presence of New River Community College in the County.

GOAL 5 ESSENTIAL PUBLIC SERVICES OF FIRE PROTECTION, EMERGENCY MEDICAL TRANSPORT, AND LAW ENFORCEMENT ARE AVAILABLE TO ALL COUNTY RESIDENTS.

Policy 5:1 Provide operations and capital funding necessary for the essential functions of fire protection, emergency medical transport, and law enforcement.

Policy 5:2 Encourage collaboration and coordination among agencies.

Policy 5:3 Seek to expand substance abuse prevention programs in the County.

GOAL 6 HEALTH AND HUMAN SERVICES ARE AVAILABLE IN THE COUNTY.

Policy 6:1 Floyd County residents should have fair access to all federally and state-funded programs.

Policy 6:2 Health and human service agencies serving the County are encouraged to coordinate and collaborate to create a real or virtual one-stop-shop.

Policy 6:3 When services are not available inside the community, the County will advocate for transportation to be made available to residents to access those services.

Policy 6:4 The (private) development of a community center with indoor pool and other multi-purpose community space is encouraged.

Policy 6:5 Recreation opportunities are important for all ages.

GOAL 7 SAFE, AFFORDABLE AND ENERGY-EFFICIENT HOUSING FOR ALL INCOME LEVELS IS AVAILABLE IN FLOYD COUNTY.

Policy 7:1 It is important that families that work in Floyd County be able to live in Floyd County.

- Policy 7:2** Floyd County residents should receive their fair-share of regional weatherization funds, which provide for energy-efficiency improvements.
- Policy 7:3** Encourage rehabilitation of older unsafe or unsanitary residential units.
- Policy 7:4** Encourage safe and attractive manufactured home parks.
- Policy 7:5** Encourage the study of a Moderately Priced Dwelling Unit Program to provide new housing for moderate to low-income citizens.
- Policy 7:6** Encourage expansion of public water (including additional public wells) and sewer to enable more housing to be near essential services.
- Policy 7:7** Encourage homeowners to educate themselves regarding maintenance of private sewer systems.
- Policy 7:8** Encourage private and public development of ample housing that meets the “continuum of care” for seniors, including patio homes, assisted living, and retirement homes.
- Policy 7:9** New housing developments should not result in increased burdens on current tax payers.
- Policy 7:10** Guide growth to existing parcels.
- Policy 7:11** Homeowners are encouraged to pursue safe, efficient alternative energy sources, such as wind and solar.
- GOAL 8 PROVIDE AN EFFICIENT SOLID WASTE COLLECTION SYSTEM, INCLUDING RECYCLING.**
- Policy 8:1** Continuously improve the efficiency of solid waste collection.
- Policy 8:2** Analyze the creation of solid waste convenience centers to replace the large number of greenbox locations.
- Policy 8:3** Encourage re-use and recycling for individuals, non-profits, businesses, and government.

- Policy 8:4** Regularly seek better markets for recyclables.
- Policy 8:5** Encourage participation in litter clean-up, like the annual clean-up days.
- Policy 8:6** Encourage participation in collection days for hazardous household materials.

GOAL 9 RESIDENTS AND BUSINESSES ENJOY EFFICIENT, CAPABLE AND RESPONSIVE GOVERNANCE.

- Policy 9:1** Support regulatory requirements that are fair, predictable and effective at protecting the interests of private property owners and the community as a whole.
- Policy 9:2** Through planning and local policies, manage growth and its fiscal impacts.
- Policy 9:3** Improve public relations and transparency with citizens.
- Policy 9:4** Participate with regional efforts when they support County goals.
- Policy 9:5** Support coordination amongst public and private entities to achieve common goals.
- Policy 9:6** Support the role of County Administration and its staffing requirement: to assist departments and the Board in meeting goals; serve as a key link between the Board, the staff and the public; coordinate the work of county departments and officers; implement strategic financial planning in the areas of budget and capital improvements; and provide timely financial data and recommendations.
- Policy 9:7** Maintain information technology equipment capable of supporting the efficient and effective delivery of services.
- Policy 9:8** Consideration will be given to a new County seal or logo that reflects strategic direction.

GOAL 10 RESIDENTS ENJOY EFFICIENTLY-PROVIDED FACILITIES AND FAIRLY-FUNDED SERVICES.

Policy 10:1 Assure that the costs of facilities to serve new residents is not shifted to current residents.

Policy 10:2 Central water and sewer is available in areas designated for growth.

Policy 10:3 Adequate roads and other services are available in areas designated for growth.

Policy 10:4 Maintain adequate levels of service for county facilities and services, operations and maintenance; law enforcement; fire protection; emergency medical transport; solid waste management; and others through operating and capital expenditures.

GOAL 11 SAFE AND CONVENIENT TRANSPORTATION ROUTES AND MODES ARE AVAILABLE TO RESIDENTS, BUSINESSES AND VISITORS.

Policy 11:1 The Commonwealth of Virginia must be held accountable in providing adequate road maintenance for the safety of all.

Policy 11:2 Non-family subdivisions are not well-suited to un-paved roads.

Policy 11:3 Pedestrian pathways are difficult to achieve in the County due to lack of maintenance resources, lack of existing easements, and limited public lands under local control, but where resources are available to develop and implement pathways, they will be allowed and encouraged.

Also see specific policies and projects in the Transportation portion of the Plan.

GOAL 12 RESIDENTS ENJOY THE RURAL CHARACTER AND A SENSE OF COMMUNITY THAT HONORS THE PAST AND FORGES THE FUTURE.

Policy 12:1 Preservation of history and culture is important and encouraged.

Policy 12:2 Volunteerism is important to this community's well-being and is encouraged.

Policy 12:3 Encourage potential and new residents to understand what it is really like to live in a rural place and be part of the fabric; that as citizens we are givers and stewards.

Policy 12:4 The County should have a logo consistent with its goals.

Chapter 11.

What are Our Goals?

Summary and Conclusion

Goals, policies and strategies articulate how Floyd County will meet its challenges and opportunities. The goals--brief statements of desired results--are:

1. Farms and Forests are valued and protected.
2. Water is valued and protected.
3. The local economy is diversified and expanded, including more good-paying jobs and small business opportunities.
4. Good educational and training opportunities are available for all.
5. Essential public services of fire protection, emergency medical transport, and law enforcement are available to all County residents.
6. Health and human services are available in the County.
7. Safe, affordable and energy-efficient housing for all income levels is available in Floyd County.
8. The County has efficient solid waste collections, including recycling.
9. Residents and businesses enjoy efficient, capable and responsive governance.
10. Residents enjoy efficiently-provided facilities and fairly-funded services.
11. Safe and convenient transportation routes and modes are available to residents, businesses and visitors.
12. Residents enjoy the rural character and a sense of community that honors the past and forges the future.

For these goals to be realized, implementation measures are essential.

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CHAPTER 12.

HOW WILL WE ACCOMPLISH OUR GOALS?

The plan will be implemented and accomplished through deliberate actions as presented in Strategies Matrix. The matrix includes the following headings:

- Strategy: Project/Activity: identifies and describes the strategy.
- Goal/s Supported: identifies which goals from Chapter 10 are supported by this action
- Priority: indicates priority in terms of time schedule.
 - 1 = A critical task and should be begun as soon as possible. It is necessary to begin implementation of the Plan and should occur in the first three years after plan adoption.
 - 2 = A very important task that is essential to the Plan implementation. Should occur in years 4-9 of the planning period.
 - 3 = An important task but with no special sense of urgency. It will help implement this Plan and should occur in years 10-20 after Plan adoption.

Priorities 1 and 2 are listed in order of importance. Priority 3 items are in no particular order, though they will become more important and will be ranked in future plans.

- Responsible Party: the person, department or entity that is primarily responsible for initiating, pursuing and/or carrying out the strategy. When multiple parties are listed, it is in the order of responsibility.
- Budgetary Impact: the relative fiscal impact of that strategy on the County's budget:
 - Low = Little to no fiscal impact.
 - Mod = Moderate; some fiscal impact, but likely to be funded in one or two fiscal years.
 - High = May have significant fiscal impact, though some of this could be defrayed by alternate revenue sources.

Review and Evaluation

The Goals Chapter and the Strategies Matrix should be reviewed annually by the Planning Commission and County staff with progress updates provided to the Board of Supervisors.

Strategy Number	Goals Supported	Strategy: Project/Activity	Priority	Responsible Party (Support Party)	Budgetary Impact	Capital Item
1	1, 3, 12	Establish a Farm and Forest Task Force to develop a draft Agricultural and Forestal Strategic Plan to improve the economic viability of farms and forests. This should include an assessment of local/regional food opportunities.	1	Dean Gall, & Community Development (Community Organizations)	Low	
2	1, 2, 3	Establish a Land Policy Task Force to make specific recommendations regarding the protection of farms, forests and water to the Planning Commission and Board of Supervisors within 18 months with help from the PDC, including new logo ideas.	1	Dean Gall & Community Development (Planning Commission & Community Organizations)	Low/Mod	
3	3, 4	Support local and/or recruit clean companies with good wages, especially light industry, technology and innovation jobs.	1	Economic Development and EDA	Low/Mod	
4	1,3	Support planning and development of opportunities to process local foods.	1	Economic Development	Low	
5	3	Collaborate with public and private entities to grow economic development infrastructure, including available buildings to assist small companies that cannot afford to build.	1	Economic Development and EDA	Low	
6	3	Make resources readily available to small businesses about the availability of assistance to help them grow their business (local EDA loan program and land, business planning resources, state and federal grant programs.)	1	Economic Development and EDA	Low	
7	3	Develop a Strategic Economic Development Plan to prioritize needs and opportunities (beyond the Agricultural and Forest Plan.)	1	Economic Development and EDA	Low	
8	3, 7	Explore alternative energy opportunities, such as through regional initiatives.	1	Community Organizations	Low	
9	1, 3, 12	Support more vegetable and specialty crop (e.g. fruits, biomass, fiber, herbs, flowers, greenhouse/plant stock) production.	1	Cooperative Extension	Low	
10	7	Encourage development of assisted living in the County.	1	Economic Development	Low	
11	8	Study waste collection options to provide more recycling and cost efficient service overall.	1	County Administrator	Mod/High	

Strategy Number	Goals Supported	Strategy: Project/Activity	Priority	Responsible Party (Support Party)	Budgetary Impact	Capital Item
12	11	Explore pedestrian walkways, trails and bikelanes through federal, state, regional and non-profit initiatives.	1	Community Organizations	Low/Mod	
13	4, 6	Encourage development of more senior programs and wellness programs, including a multiple purpose community center with pool.	1	Community Organizations	Low	
14	4	Increase workforce training opportunities through collaboration with higher education institutions and other agencies.	1	Economic Development	Low	
15	3	Promote tourism development through strategic marketing investments and collaborations.	1	Economic Development	Moderate	
16	9, 10	Establish a Capital Improvement Program.	1	County Administration		
17	5, 9, 10	Maintain adequate emergency vehicles and replace when necessary.	1	Volunteer Organizations / County Government	High	
18	4, 9, 10	Conduct work sessions with school board representatives regarding school needs.	1	Board of Supervisors	Low	
19	7, 9, 10	Extend public water and sewer to areas targeted for development.	1	PSA	High	YES
20	1, 2, 5, 6, 7, 8, 9, 10, 11, 12	Adopt revisions to land development regulations (based on recommendations from Task Force) to protect farms, forests and water and avoid future residential development where services are difficult and more costly to provide. This would include a revision	1	Board of Supervisors and Planning Commission	Low-Mod	
21	3	Participate in regional initiatives related to economic development including tourism when it is efficient and effective to do so.	1	Economic Development	Low-Mod	
22	11	Request that the Virginia Department of Transportation make all efforts to maintain safe roads in the County.	1	Board of Supervisors	Low	
23	3	Create local business mentoring program, likely through SCORE	1	Economic Development and EDA	Low	

Strategy Number	Goals Supported	Strategy: Project/Activity	Priority	Responsible Party (Support Party)	Budgetary Impact	Capital Item
24	5, 8, 9, 10	Buy essential capital items as needed for public safety, solid waste, etc.	1	County Government, Volunteer Organizations	High	YES
25	1, 2, 9, 10	Create a new seal or logo that better reflects core values and/or strategic direction.	1	Board of Supervisors	Low	
24	3, 4	Present free/low-cost training opportunities for businesses in Floyd County.	1	Economic Development and EDA	Low	
25	7	Establish a housing committee to prepare for the Floyd County HOME Consortium Funds and leverage other funds.	1	Economic Development	Low	
26	9, 10	Assure that all due taxes are billed and collected for real and personal property in the County.	1	Constitutional Positions		
27	3	Adopt a business license requirement with a nominal fee, to provide an active inventory for economic development purposes.	1	Board of Supervisors	Low	
28	5	Continue participation in Regional Jail and regional drug task force.	1	Board of Supervisors, Sheriff		
29	1, 2, 3, 5, 6, 7, 8, 9, 10	Participate in the New River Valley Sustainable Communities grant.	1	Community Development	Low	
30	6	Encourage virtual or physical one-stop shop for health and human services.	2	Community Organizations	Low	
31	1, 3, 12	Support programs to educate the public on the importance of buying locally, including locally produced foods.	2	Community and Economic Development	Low	
32	3	Develop Labor Market Analysis to better understand and promote County workforce, if/when grant funding available.	2	Community and Economic Development	Moderate	
33	8,9,10	Implement solid waste management changes.	2	Solid Waste/Recycling	Moderate	YES
34	1, 2, 5, 6, 7, 8, 9, 10	Establish level of service standards to direct future areas of growth and future standards.	2	Planning Commission and Community Development	Low	
35	9, 10	Align growth patterns with fiscal capacities of the County.	2	Planning Commission, Board of Supervisors	Low	

Strategy Number	Goals Supported	Strategy: Project/Activity	Priority	Responsible Party (Support Party)	Budgetary Impact	Capital Item
36	3	Evaluate opportunity to establish a "product of Floyd" labeling program.	2	Economic Development	Low	
37	1, 7	Request that the Virginia Department of Forestry provide Firewise training in Floyd County, particularly to high-risk woodland home-owners.	2	Emergency Services	Low	
38	5, 7	Conduct a table-top exercise regarding potential accident at gas/oil storage facilities with help from the Virginia Department of Emergency Management.	2	Emergency Services	Low	
39	5	Keep the Emergency Operations Plan current, and prepare for new emergency possibilities as they develop.	2	Emergency Services	Low	
40	2	Seek opportunities to better understand groundwater, including encouraging Health Department and other regional stakeholders to add well yield to Well Database.	2	Planning Commission, Community Development	Low	
41	10	Residential developments should locate in designated growth areas, or else pay to upgrade levels of service (such as roads,) to meet their needs.	2	Planning Commission, Board of Supervisors	Low	
42	11	Identify areas where bikelanes along existing roads may be possible.	3	Community Organizations		
43	12	Encourage establishment of an inventory of significant historic and archaeological structures and places.	3	Planning Commission, Community Development	Low-Mod	
44	3, 4, 5, 6, 8, 9, 10	Acquire additional land for future public facility needs.	3	Board of Supervisors and EDA	High	Yes
45	5, 6, 12	Participate in some formal recognition of appreciation of volunteers in the County.	3	Community Development	Low	
46	8	Make information on recycling more readily available (via website.)	3	Community Development	Low	

Chapter 12.
How will We Accomplish Our Goals?

Summary and Conclusion

- Strategies classified as Priority 1 or 2 are critical to the implementation of this plan.
- Priority 1 strategies should be done within three years of Plan adoption.
- Priority 2 strategies should be done in planning years 4 to 9.
- Yearly review of the Goals plus Strategies Matrix is essential to chart progress and establish work programs.

GLOSSARY OF TERMS

(adapted from Virginia Code § 15.2-2201; 15.2-4302, § 56-265.1, etc., Virginia Department of Transportation, as well as the US Census Bureau)

As used in this Comprehensive Plan, unless the context requires a different meaning:

"Affordable housing" means, as a guideline, housing that is affordable to households with incomes at or below the area median income, provided that the occupant pays no more than thirty percent of his gross income for gross housing costs, including utilities. For the purpose of administering affordable dwelling unit ordinances authorized by this chapter, local governments may establish individual definitions of affordable housing and affordable dwelling units including determination of the appropriate percent of area median income and percent of gross income.

"Agricultural products" means crops, livestock and livestock products, including but not limited to: field crops, fruits, vegetables, horticultural specialties, cattle, sheep, hogs, goats, horses, poultry, furbearing animals, milk, eggs and furs.

"Agricultural production" means the production for commercial purposes of crops, livestock and livestock products, and includes the processing or retail sales by the producer of crops, livestock or livestock products which are produced on the parcel or in the district.

"Agriculturally and forestally significant land" means land that has recently or historically produced agricultural and forestal products, is suitable for agricultural or forestal production or is considered appropriate to be retained for agricultural and forestal production as determined by such factors as soil quality, topography, climate, markets, farm structures, and other relevant factors.

"Company" means a corporation, a limited liability company, an individual, a partnership, an association, a joint-stock company, a business trust, a cooperative, or an organized group of persons, whether incorporated or not; or any receiver, trustee or other liquidating agent of any of the foregoing in his capacity as such; but not a municipal corporation or a county, unless such municipal corporation or county has obtained a certificate pursuant to § [56-265.4:4](#).

"Conditional zoning" means, as part of classifying land within a locality into areas and districts by legislative action, the allowing of reasonable conditions governing the use of such property, such conditions being in addition to, or modification of the regulations provided for a particular zoning district or zone by the overall zoning ordinance.

"Development" means a tract of land developed or to be developed as a unit under single ownership or unified control which is to be used for any business or industrial purpose or is to contain three or more residential dwelling units. The term "development" shall not be construed to include any property which will be principally devoted to agricultural production.

"Forestal production" means the production for commercial purposes of forestal products and includes the processing or retail sales, by the producer, of forestal products which are produced on the parcel or in the district. "Forestal products" includes, but is not limited to, saw timber, pulpwood, posts, firewood, Christmas trees and other tree and wood products for sale or for farm use.

"Historic area" means an area containing one or more buildings or places in which historic events occurred or having special public value because of notable architectural, archaeological or other features relating to the cultural or artistic heritage of the community, of such significance as to warrant conservation and preservation.

"Incentive zoning" means the use of bonuses in the form of increased project density or other benefits to a developer in return for the developer providing certain features, design elements, uses, services, or amenities desired by the locality, including but not limited to, site design incorporating principles of new urbanism and traditional neighborhood development, environmentally sustainable and energy-efficient building design, affordable housing creation and preservation, and historical preservation, as part of the development.

"Landowner" or "owner of land" means any person holding a fee simple interest in property but does not mean the holder of an easement.

"Local planning commission" means a municipal planning commission or a county planning commission.

"Median Family Income" according to the US Census Bureau, is the mid-point for family incomes with half of families earning more and half earning less. Whereas a "family" is defined as two or more related persons living in the same residence, a household includes all residents, even those for single people or unrelated groups of two or more

"Median Household Income" according to the US Census Bureau, is the mid-point for household incomes with half of households earning more and half earning less. A "household" includes all persons occupying that housing unit. Also see previous definition.

"Mixed use development" means property that incorporates two or more different uses, and may include a variety of housing types, within a single development.

"Official map" means a map of legally established and proposed public streets, waterways, and public areas adopted by a locality in accordance with the provisions of Article 4 (§ [15.2-2233](#) et seq.) hereof.

"Per Capita Income," according to the US Census Bureau, is the average income as computed for every man, woman and child in a geographic area.

"Planned unit development" means a form of development characterized by unified site design for a variety of housing types and densities, clustering of buildings, common open space, and a mix of building types and land uses in which project planning and density calculation are performed for the entire development rather than on an individual lot basis.

"Planning district commission" means a regional planning agency chartered under the provisions of Chapter 42 (§ [15.2-4200](#) et seq.) of this title.

"Plat" or "plat of subdivision" means the schematic representation of land divided or to be divided and information in accordance with the provisions of §§ [15.2-2241](#), [15.2-2242](#), [15.2-2258](#), [15.2-2262](#), and [15.2-2264](#), and other applicable statutes.

"Poverty rate" is determined by the Census Bureau using a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps).

"Preliminary subdivision plat" means the proposed schematic representation of development or subdivision that establishes how the provisions of §§ [15.2-2241](#) and [15.2-2242](#), and other applicable statutes will be achieved.

"Public utility" means any company which owns or operates facilities within the Commonwealth of Virginia for the generation, transmission or distribution of electric energy for sale, for the production, storage, transmission, or distribution, otherwise than in enclosed portable containers, of natural or manufactured gas or geothermal resources for sale for heat, light or power, or for the furnishing of telephone service, sewerage facilities or water; however, the term "public utility" shall not include any of the exceptions provided for in State Code § 56-265.1.

Road classifications such as arterial and collector, according to the Virginia Department of Transportation, are as follows: since cities and larger towns generate and attract a large

proportion of the relatively longer trips, the arterial highways generally provide direct service for such travel. In Rural areas the intermediate functional category, the collectors, serves small towns directly, connects them to the arterial network, and collects traffic from the bottom-level system of local roads, which serves individual farms and other rural land uses.

"Site plan" means the proposal for a development or a subdivision including all covenants, grants or easements and other conditions relating to use, location and bulk of buildings, density of development, common open space, public facilities and such other information as required by the subdivision ordinance to which the proposed development or subdivision is subject.

"Special exception" means a special use, that is a use not permitted in a particular district except by a special use permit granted under the provisions of this chapter and any zoning ordinances adopted herewith.

"Street" means highway, street, avenue, boulevard, road, lane, alley, or any public way.

"Subdivision," means any division of land. The term includes resubdivision and, when appropriate to the context, shall relate to the process of subdividing or to the land subdivided and solely for the purpose of recordation of any single division of land into two lots or parcels, a plat of such division shall be submitted for approval in accordance with § [15.2-2258](#).

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

"Zoning" or "to zone" means the process of classifying land within a locality into areas and districts, such areas and districts being generally referred to as "zones," by legislative action and the prescribing and application in each area and district of regulations which could include building and structure designs, building and structure placement and uses to which land, buildings and structures within such designated areas and districts may be put. Each district could have automatic "by-right" uses in which no approval is needed. Each district could also have "special uses" which would require specific review by the Planning Commission to determine with the scale and impact of the proposed use was appropriate for that district and location.

(adapted from Virginia Code § 15.2-2201; 15.2-4302, § 56-265.1, etc., Virginia Department of Transportation, as well as the US Census Bureau)

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Appendix A

Acreage and Proportionate Extent of Soils in Floyd County

Acreage and Proportionate Extent of Soils in Floyd County

Map symbol	Map unit name	Acres	Percent
1E	Ashe-Edneytown complex, 25 to 35 percent slopes	5,046	2.1
2E	Ashe-Edneyville complex, 35 to 55 percent slopes	11,191	4.6
3E	Ashe-Edneyville complex, 35 to 55 percent slopes, very stony	2,137	0.9
4B	Braddock cobbly loam, 3 to 8 percent slopes	698	0.3
4C	Braddock cobbly loam, 8 to 15 percent slopes	1,605	0.7
4D	Braddock cobbly loam, 15 to 25 percent slopes	127	*
5D	Brownwood fine sandy loam, 8 to 35 percent slopes	198	*
5E	Brownwood fine sandy loam, 35 to 55 percent slopes	622	0.3
6A	Codorus loam, 0 to 3 percent slopes, frequently flooded	2,587	1.1
7A	Comus fine sandy loam, 0 to 5 percent slopes, frequently flooded	419	0.2
8C	Cowee loam, 8 to 15 percent slopes	4,779	2.0
8D	Cowee loam, 15 to 35 percent slopes	6,087	2.5
8E	Cowee loam, 35 to 55 percent slopes	1,743	0.7
9D	Cowee gravelly loam, 8 to 35 percent slopes, stony	12,054	4.9
9E	Cowee gravelly loam, 35 to 55 percent slopes, stony	7,032	2.9
10D	Cowee-Rock outcrop complex, 8 to 35 percent slopes	1,192	0.5
10E	Cowee-Rock outcrop complex, 35 to 55 percent slopes	546	0.2
11C	Cowee-Urban land complex, 0 to 15 percent slopes	71	*
12A	Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded	11	*
13B	Delanco fine sandy loam, 3 to 8 percent slopes, rarely flooded	2,848	1.2
14C	Delanco fine sandy loam, 8 to 15 percent slopes	1,816	0.7
15B	Delanco-Kinkora complex, 0 to 8 percent slopes, rarely flooded	4,106	1.7
16C	Edneytown-Ashe complex, 8 to 15 percent slopes	5,120	2.1
16D	Edneytown-Ashe complex, 15 to 25 percent slopes	7,679	3.1
17C	Edneytown-Urban land complex, 0 to 15 percent slopes	13	*
18C	Edneyville-Ashe complex, 8 to 15 percent slopes	401	0.2
18D	Edneyville-Ashe complex, 15 to 35 percent slopes	602	0.2
19D	Edneyville-Ashe complex, 8 to 35 percent slopes, very stony	1,553	0.6
20B	Elsinboro fine sandy loam, 3 to 8 percent slopes, rarely flooded	475	0.2
21B	Glenelg and Hayesville loams, 3 to 8 percent slopes	1,629	0.7
22C	Glenelg loam, 8 to 15 percent slopes	25,941	10.6
22D	Glenelg loam, 15 to 25 percent slopes	25,175	10.3
22E	Glenelg loam, 25 to 35 percent slopes	6,557	2.7
22F	Glenelg loam, 35 to 55 percent slopes	72	*
23C	Glenelg loam, 8 to 15 percent slopes, very stony	2,498	1.0
23D	Glenelg loam, 15 to 35 percent slopes, very stony	5,517	2.3
23E	Glenelg loam, 35 to 55 percent slopes, very stony	4,411	1.8
24C	Glenelg-Urban land complex, 0 to 15 percent slopes	304	0.1
25C	Greenlee very cobbly loam, 0 to 15 percent slopes, very stony	493	0.2
25D	Greenlee very cobbly loam, 15 to 35 percent slopes, very stony	866	0.4
26A	Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded	6,581	2.7
27B	Hayesville loam, 3 to 8 percent slopes	589	0.2
27C	Hayesville loam, 8 to 15 percent slopes	626	0.3

* Less than 0.1 percent.

Map symbol	Map unit name	Acres	Percent
27D	Hayesville loam, 15 to 25 percent slopes	43	*
28C	Hayesville-Urban land complex, 0 to 15 percent slopes	39	*
29C	Junaluska channery loam, 8 to 15 percent slopes	3,971	1.6
29D	Junaluska channery loam, 15 to 35 percent slopes	2,170	0.9
29E	Junaluska channery loam, 35 to 55 percent slopes	104	*
30A	Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded	242	*
31D	Marbleyard-Unicoi complex, 8 to 35 percent slopes, extremely stony	601	0.2
32B	Myersville loam, 3 to 8 percent slopes	452	0.2
32C	Myersville loam, 8 to 15 percent slopes	3,557	1.5
32D	Myersville loam, 15 to 25 percent slopes	1,043	0.4
32E	Myersville loam, 25 to 35 percent slopes	215	*
33C	Myersville loam, 8 to 15 percent slopes, very stony	636	0.3
33D	Myersville loam, 15 to 35 percent slopes, very stony	1,788	0.7
33E	Myersville loam, 35 to 55 percent slopes, very stony	683	0.3
34C	Myersville-Urban land complex, 0 to 15 percent slopes	220	*
35D	Peaks very gravelly loam, 8 to 35 percent slopes	1,269	0.5
35E	Peaks very gravelly loam, 35 to 55 percent slopes	4,299	1.8
36D	Peaks very gravelly loam, 8 to 35 percent slopes, very stony	2,215	0.9
36E	Peaks very gravelly loam, 35 to 55 percent slopes, very stony	5,964	2.4
36F	Peaks very gravelly loam, 55 to 90 percent slopes, very stony	3,182	1.3
37F	Peaks-Rock outcrop complex, 25 to 90 percent slopes, extremely stony	6,226	2.6
38D	Rock outcrop-Clingman complex, 8 to 35 percent slopes	27	*
38F	Rock outcrop-Clingman complex, 35 to 95 percent slopes	75	*
39C	Sylco-Sylvatus complex, 8 to 15 percent slopes	1,912	0.8
39D	Sylco-Sylvatus complex, 15 to 35 percent slopes	3,450	1.4
39E	Sylco-Sylvatus complex, 35 to 55 percent slopes	13,334	5.5
40D	Sylco-Sylvatus complex, 8 to 35 percent slopes, very stony	243	*
40E	Sylco-Sylvatus complex, 35 to 55 percent slopes, very stony	3,786	1.6
41B	Tate loam, 3 to 8 percent slopes	927	0.4
41C	Tate loam, 8 to 15 percent slopes	4,735	1.9
41D	Tate loam, 15 to 25 percent slopes	356	0.1
42C	Tate loam, 8 to 15 percent slopes, stony	6,089	2.5
42D	Tate loam, 15 to 25 percent slopes, stony	1,147	0.5
43C	Tate-Urban land complex, 0 to 15 percent slopes	96	*
44D	Udorthents, 0 to 25 percent slopes	50	*
45D	Udorthents-Urban land complex, 0 to 25 percent slopes	98	*
46D	Unaka loam, 8 to 35 percent slopes, very stony	367	0.2
47C	Unaka-Porters complex, 8 to 15 percent slopes	187	*
47D	Unaka-Porters complex, 15 to 35 percent slopes	213	*
48D	Unaka-Rock outcrop complex, 8 to 35 percent slopes	80	*
48E	Unaka-Rock outcrop complex, 35 to 55 percent slopes	472	0.2
48F	Unaka-Rock outcrop complex, 55 to 80 percent slopes	25	*
49E	Unicoi-Marbleyard complex, 35 to 55 percent slopes, extremely stony	2,809	1.2
Total		244,000	100.0

* Less than 0.1 percent.

Map symbol	Map unit name	Farmland classification
20B	Elsinboro fine sandy loam, 3 to 8 percent slopes, rarely flooded	All areas are prime farmland
21B	Glenelg and Hayesville loams, 3 to 8 percent slopes	All areas are prime farmland
27B	Hayesville loam, 3 to 8 percent slopes	All areas are prime farmland
32B	Myersville loam, 3 to 8 percent slopes	All areas are prime farmland
41B	Tate loam, 3 to 8 percent slopes	All areas are prime farmland
4B	Braddock cobbly loam, 3 to 8 percent slopes	Farmland of statewide importance
4C	Braddock cobbly loam, 8 to 15 percent slopes	Farmland of statewide importance
4D	Braddock cobbly loam, 15 to 25 percent slopes	Farmland of statewide importance
14C	Delanco fine sandy loam, 8 to 15 percent slopes	Farmland of statewide importance
16C	Edneytown-Ashe complex, 8 to 15 percent slopes	Farmland of statewide importance
16D	Edneytown-Ashe complex, 15 to 25 percent slopes	Farmland of statewide importance
18C	Edneyville-Ashe complex, 8 to 15 percent slopes	Farmland of statewide importance
22C	Glenelg loam, 8 to 15 percent slopes	Farmland of statewide importance
22D	Glenelg loam, 15 to 25 percent slopes	Farmland of statewide importance
23C	Glenelg loam, 8 to 15 percent slopes, very stony	Farmland of statewide importance
27C	Hayesville loam, 8 to 15 percent slopes	Farmland of statewide importance
27D	Hayesville loam, 15 to 25 percent slopes	Farmland of statewide importance
32C	Myersville loam, 8 to 15 percent slopes	Farmland of statewide importance
32D	Myersville loam, 15 to 25 percent slopes	Farmland of statewide importance
33C	Myersville loam, 8 to 15 percent slopes, very stony	Farmland of statewide importance
41C	Tate loam, 8 to 15 percent slopes	Farmland of statewide importance
41D	Tate loam, 15 to 25 percent slopes	Farmland of statewide importance
42C	Tate loam, 8 to 15 percent slopes, stony	Farmland of statewide importance
42D	Tate loam, 15 to 25 percent slopes, stony	Farmland of statewide importance
13B	Delanco fine sandy loam, 3 to 8 percent slopes, rarely flooded	Prime farmland if drained

Appendix B

**Endangered, Threatened or Species of Concern
Within 10 miles of Floyd, Virginia
2011**

<u>BOVA Code</u>	<u>Status*</u>	<u>Tier**</u>	<u>Common Name</u>	<u>Scientific Name</u>
010214	FESE	I	Loggerch, Roanoke	Percina rex
050023	FESE	I	Bat, Indiana	Myotis sodalis
100780	FESE	I	Butterfly, Mitchell's satyr	Neonympha mitchellii
050035	FESE	II	Bat, Virginia big-eared	Corynorhinus townsendii virginianus
030061	FTSE	I	Turtle, bog (= Muhlenberg)	Clemmys muhlenbergii
040267	SE	I	Wren, Bewick's	Thryomanes bewickii
050068	SE	I	Squirrel, Virginia northern flying	Glaucomys sabrinus fuscus
100673	FSSE	I	Mealybug, Buffalo Mountain	Puto kozstarabi
110066	FSSE	I	Coil, shaggy	Helicodiscus diadema
070118	FSSE	II	Crayfish, Big Sandy	Cambarus veteranus
040096	ST	I	Falcon, peregrine	Falco peregrinus
040129	ST	I	Sandpiper, upland	Bartramia longicauda
040293	ST	I	Shrike, loggerhead	Lanius ludovicianus
100155	FSST	I	Skipper, Appalachian grizzled	Pyrgus wyandot
110242	FSST	I	Xystodesmid, Laurel Creek	Sigmoria whiteheadi
010127	FSST	II	Madtom, orangefin	Noturus gilberti
040093	FSST	II	Eagle, bald	Haliaeetus leucocephalus
060081	ST	II	Floater, green	Lasmigona subviridis
060173	FSST	II	Pigtoe, Atlantic	Fusconaia masoni
110227	FSST	II	Pseudotremia, Ellett Valley	Pseudotremia cavernarum
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans
100248	FS	I	Fritillary, regal	Speyeria idalia idalia
100176	FS	I	Skipper, Arogos	Atrytone arogos arogos
100154	FS	II	Butterfly, Persius duskywing	Erynnis persius persius
010110	FS	III	Jumrock, bigeye	Moxostoma ariommum
100001	FS	IV	fritillary, Diana	Speyeria diana
040372	SS	I	Crossbill, red	Loxia curvirostra
040306	SS	I	Warbler, golden-winged	Vermivora chrysoptera
010174	SS	II	Bass, Roanoke	Ambloplites cavifrons

010199	SS	II	Darter, candy	Etheostoma osburni
020020	SS	II	Hellbender, eastern	Cryptobranchus alleganiensis alleganiensis
040213	SS	II	Owl, northern saw-whet	Aegolius acadicus
040304	SS	II	Warbler, Swainson's	Limnothlypis swainsonii
040266	SS	II	Wren, winter	Troglodytes troglodytes
010115	SS	III	Sucker, rustyside	Thoburnia hamiltoni
020046	SS	III	Salamander, shovel-nosed	Desmognathus marmoratus
040094	SS	III	Harrier, northern	Circus cyaneus
040036	SS	III	Night-heron, yellow-crowned	Nyctanassa violacea violacea
040204	SS	III	Owl, barn	Tyto alba pratincola
060004	SS	III	Elktoe	Alasmidonta marginata
030012	CC	IV	Rattlesnake, timber	Crotalus horridus
040264	SS	IV	Creepers, brown	Certhia americana
040364	SS		Dickcissel	Spiza americana
040032	SS		Egret, great	Ardea alba egretta
040366	SS		Finch, purple	Carpodacus purpureus
040241	SS		Flycatcher, alder	Empidonax alnorum
040285	SS		Kinglet, golden-crowned	Regulus satrapa
040112	SS		Moorhen, common	Gallinula chloropus cachinnans
040262	SS		Nuthatch, red-breasted	Sitta canadensis
040189	SS		Tern, Caspian	Sterna caspia
040278	SS		Thrush, hermit	Catharus guttatus
040314	SS		Warbler, magnolia	Dendroica magnolia
050110	SS		Mole, star-nosed	Condylura cristata parva
050045	SS		Otter, northern river	Lontra canadensis lataxina
040225		I	Sapsucker, yellow-bellied	Sphyrapicus varius
040319		I	Warbler, black-throated green	Dendroica virens

To view **All 643 species** [View 643](#)

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; SC=State Candidate; CC=Collection Concern; SS=State Special Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Appendix C

**Transportation Need Matrix of Floyd County
Adapted from
Draft 2035 New River Valley Rural Transportation Plan**

MAP KEY	LOCATION INFORMATION	DEFICIENCIES	RECOMMENDATIONS -- RLRP DRAFT
1	VA 681 at US 221	Stop bar is missing on VA 681. Poor intersection alignment and grade creates a less than desirable northbound left-turn maneuver for VA 681 drivers. Horizontal curve on US 221 limits sight distance to all approaches.	Short Term: Install stop bar on VA 681. Trim vegetation along east-leg of US 221 on north side to improve sight distance. Mid-Term: Install eastbound right-turn lane and westbound left-turn lane along US 221. Reconstruct intersection to provide improved northbound left turning operation.
2	US 8 at VA 750	Safety: Stop bar is missing on northbound approach. Single lane configuration westbound creates potential for rear-end crashes given posted speed limit of 55 mph. VA 750 slopes downward and away from intersection and is not highly visible. (Source: 1)	Short-Term: Safety: Install stop bar on northbound approach. Install advance warning signage along east/westbound approaches of US 8 to alert drivers of intersection ahead. Mid-Term: Safety: Install westbound left turn lane (~100 feet with 200 foot taper). (Source: 1)
3	US 221 at VA 642	Safety: Stop sign set back too far from stop bar. Westbound sight distance limited by sharp horizontal curve on south-leg and vacant building in southeast corner. Limited sight distance and lack of left turn lanes increases potential for rear-end accidents. Exposed box culvert in southwest quadrant of the intersection. (Source: 1, 9)	Short-Term: Safety: Enclose box culvert. Remove vacant building to improve sight distance. Install advance warning sign and paint "STOP" on westbound VA 642 approach to alert drivers to stop ahead. Mid-Term: Safety: Install north/southbound left turn lanes on US 221. Long-Term: Safety: Reconstruct intersection to improve sight distance and functionality. (Source: 1)
4	US 8 at VA 730	Safety: Stop bar is missing on northbound approach. Edge of pavement along US 8 is eroded. Horizontal curve alignment on west-leg of US 8 limits sight distance on both roadways. (Source: 1)	Short-Term: Safety: Install stop bar on northbound approach. Repair eroded pavement along US 8. Install advance warning signage along eastbound approach to alert drivers of intersection ahead. (Source: 1)
5	Sowers Mill Road from 0.1 Mi east of VA 617 (White Oak Grove Road) to 1.0 Mi east of VA 617 (White Oak Grove Road)	Safety: Drainage ditches on west side of roadway are eroding and impact travel lanes. Sub-standard roadway conditions that include poor geometric, surface and edge of road conditions. (Source: 1)	Long-Term: Safety: Reconstruct VA 663 to the VDOT rural roadway design standards that are applicable at time of implementation. (Source: 1)
6	US 221 (Floyd Highway South) from VA 787 to VA 799	Congestion: Segment will operate with unacceptable LOS E in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd Highway South) from VA 799 to VA 727	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd Highway South) from VA 727 to VA 726	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd Highway South) from VA 726 to VA 722	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd Highway South) from VA 722 to T-1004	Congestion: Segment will operate with unacceptable LOS E in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
7	US 8 (Locust Street) from Floyd Northern Town Limit to VA 748	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Urban - Improve (Source: 2, 3)
8	US 221 (Floyd highway North) from VA 615 North to VA 860	Congestion: Segment will operate with unacceptable LOS E in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd highway North) from VA 860 to VA 679 West	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd highway North) from VA 679 West to VA 661	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd highway North) from VA 661 to VA 610	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd highway North) from VA 610 to VA 649 West	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
	US 221 (Floyd highway North) from VA 649 West to Roanoke County Line	Congestion: Segment will operate with unacceptable LOS C in 2035. (Source: 2, 3)	Long-Term: Safety/Congestion: Rural - 2 Lane 24 Feet (Source: 2, 3)
9	US 8 (Locust Street/Webbs Mill Road) from VA 748 to VA 730	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 3)	Long-Term: Safety/Congestion: Rural - Improve (Source: 1)
	US 8 (Locust Street/Webbs Mill Road) from VA 730 to VA 750	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 3)	Long-Term: Safety/Congestion: Rural - improve (Source: 1)
	US 8 (Locust Street/Webbs Mill Road) from VA 750 to Montgomery County Line	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 3)	Long-Term: Safety/Congestion: Rural - Improve (Source: 1)

MAP KEY	LOCATION INFORMATION	DEFICIENCIES	RECOMMENDATIONS -- RLRP DRAFT
10	VA 612 (Stonewall Road) from VA 660 to Montgomery County Line	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
11	VA 660 (Daniel's Run) from VA 612 to VA 610	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
12	VA 610 (Daniel's Run) from VA 660 North to VA 669	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
13	VA 610 (Daniel's Run) from VA 653 to VA 649	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
14	VA 653 (Shawsville Pike) from VA 610 to VA 808 South	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
15	VA 654 (Kings Store Road) from VA 665 South to VA 610	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
15	VA 654 (Kings Store Road) from VA 661 South to VA 654	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
16	VA 661 (King Store Road) from US 221 to Route 665 East	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
17	VA 639 (River Ridge Road) from VA 640 East to Blue Ridge Parkway	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
	VA 639 (River Ridge Road) from Blue Ridge Parkway to I 664	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
18	VA 664 (River Ridge Road) from VA 639 to US 221	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 3)
19	VA 681 (Franklin Pike) from Blue Ridge Parkway to Franklin County Line/VA 666	Safety: Narrow roadway and bridges. (Source: 9, 3)	Short-Term: Safety: Evaluate to identify potential improvements. Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 3)
20	VA 681 (Franklin Pike) from VA 679 to Blue Ridge Parkway	Safety: Narrow roadway and bridges. (Source: 9, 3)	Short-Term: Safety: Evaluate to identify potential improvements. Long-Term: Safety: Rural - 2 Lane 24 Feet (Source: 3)
21	VA 679 (Poor Farm Road) from VA 681 to US 221 South	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
22	VA 681 (Franklin Pike) from US 221 to VA 860	Safety: Narrow roadway and bridges. (Source: 9, 3)	Short-Term: Safety: Evaluate to identify potential improvements. Long-Term: Safety: Rural - 2 Lane 24 Feet
23	VA 615 (Christiansburg Pike) from US 221 East to VA 693	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 24 Feet (Source: 3)
24	VA 615 (Barberry Road) from VA 637 to T-798	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 24 Feet (Source: 3)
25	VA 860 (Shooting Creek Road) from Franklin County Line to VA 635 South	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
	VA 860 (Shooting Creek Road) from VA 635 South to Blue Ridge Parkway	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
26	VA 679 (Bethlehem Church Road) from VA 608 to VA 689	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 3)
27	VA 615 (Christiansburg Pike) from VA 817 North to VA 705	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 24 Feet (Source: 3)
28	VA 719 (Laurel Branch Road) from 1.83 miles VA 729 to Route 221	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 1)
29	VA 719 (Laurel Branch Road) from 0.89 miles VA 729 to 1.59 miles VA 729	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 1)
30	VA 719 (Laurel Branch Road) from VA 729 to 0.89 miles VA 729	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
31	VA 799 (Conner Grove Road) from VA 727 to US 221	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
32	VA 727 (Union School Road) from VA 799 to VA 772	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
33	VA 787 (Indian Valley Road) from VA 740 to Montgomery County Line	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 24 Feet (Source: 3)
	VA 787 (Indian Valley Road) from VA 622 to VA 751 North	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 1)

MAP KEY	LOCATION INFORMATION	DEFICIENCIES	RECOMMENDATIONS -- RLRP DRAFT
34	VA 787 (Indian Valley Road) from VA 751 North to VA 619 North	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 1)
	VA 787 (Indian Valley Road) from VA 619 North to VA 655	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 1)
35	VA 622 (Indian Valley Post Office Road) from Carroll County Line to VA 754	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 3)
	VA 622 (Indian Valley Post Office Road) from VA 754 to VA 787	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 22 Feet (Source: 1)
36	VA 740 (White Rock Road) from VA 750 to VA 814	Safety: Geometric Need (Source: 3)	Long-Term: Safety: Rural - 2 Lane 20 Feet (Source: 1)
37	VA 8 (Parkway Lane) from VA 709 (Morning Dew Lane) to end of S-curve	Safety: Tight S-curve in roadway needs straightening. (Source: 9)	Short-Term: Safety: Straighten roadway (Source: 8)
38	VA 681 (Franklin Pike) from VA 860 to VA 679	Safety: Narrow roadway and bridges. (Source: 9)	Short-Term: Safety: Evaluate to identify potential improvements. Long-Term: Safety: Rural - 2 Lane 24 Feet (Source: 8)
39	US 221 (Main Street) at US 8 (Locust Street)	Safety: Route signs obscured. Operational and safety concerns with turns into entrance on the southbound approach. Inadequate ADA provisions. Vehicles exiting diagonal parking conflict with traffic. Crashes at this location exceed the planning threshold (nine crashes over three-year period). Congestion: Single lane configuration on all approaches increases delay for vehicles	Await recommendation from the Town of Floyd
40	US 8 (Locust Street) from US 221 to Northern City Limit - Town of Floyd	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 3)	Await recommendation from the Town of Floyd
41	US 221 (Main Street) from VA T-1004 to VA 615 North	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 3)	Await recommendation from the Town of Floyd
42	VA T-615 (Barberry Road) from VA T-798 to US 221 West	Congestion: Segment will operate with unacceptable LOS D in 2035. (Source: 3, 3)	Await recommendation from the Town of Floyd

<p>Source of Defic</p> <p>Source of Deficiencies</p> <ol style="list-style-type: none"> 1: Safety/Cong Priority List; 2: SMS: State Mobility System; 3: Crash Database; 4: Small Urban Area Plans; 5: High Risk Rural Roads; 6: STARS 7: Local Recommendations; 7: Private Developoer 8: SPS (excluding SMS) 9: Other 9: Unavailable <p>Source of Recc</p> <p>Source of Recommendations</p> <ol style="list-style-type: none"> 1: DSL Studies; 2: SMS (State Mobility System); 3: Six year transportation improvement program; 4: Small Urban Area Plans 5: High Risk Rural Roads 6: STARS project; 7: Local recommendations; 7: Proffer/TIA; 8: SPS (excluding SMS) 9: Other Studies; 9: Others; 	<ol style="list-style-type: none"> 1: Operation Deficiency (Intersection) 2: Safety Deficiency (Intersection) 3: Both Deficiency (Intersection) 4: Operation Deficiency (Segment) 5: Safety Deficiency (Segment) 6: Both Deficiency (Segment) 7: Geometric Deficiency 8: Other
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Appendix D

Tools for Comprehensive Plan Implementation in Virginia

*Adapted from the **Managing Growth and Development in Virginia***

Tools for Comprehensive Plan Implementation in Virginia

Adapted from the Managing Growth and Development in Virginia

by the American Planning Association, Virginia Chapter, 2010

Planning is a multi-faceted process localities use to prepare for change. In many respects, it is like the sequencing of steps and activities people and organizations have used for centuries to prepare for the future. In Virginia, community planning is primarily the responsibility of local governments. Thus, this report focuses on the tools that are legally available to localities to plan for change of all kinds.

The practice of land use planning in Virginia can be traced to the English settlement at Jamestown, 400 years ago. The fort that sprang up along the James River in 1607 was, in many respects, a planned community. The schematic that became Jamestown featured principles long associated with the 20th century planning technique known as PUDs, or Planned Unit Developments. Planning concerns influencing the Jamestown of 1607 included security issues, access and internal movement considerations, the use and preservation of indigenous natural resources, the procurement and storage of drinking water, the collection and disposal of waste, as well as discernment regarding the location of residential areas within the fort in relationship to needed processing and manufacturing enterprises. On this point, standards governing the minimum distance separating residential areas from processing and manufacturing operations, as well as outdoor privies, were established and strictly enforced. In short, the settlement at Jamestown was designed, constructed and managed with full consideration given to the well-being and general welfare needs of its inhabitants.

Addressing the public safety, convenience and welfare needs of all Virginians is a fundamental reason the state of Virginia has mandated that all local governments plan for the future.

The Reasons for Planning. Localities in Virginia plan for two major reasons. One is that state law mandates that every local government in Virginia prepare and adopt a comprehensive plan (§ 15.2-2223). In turn, the state code (§ 15.2-2224) identifies four primary tools communities can use to implement local plans (The Official Map, Subdivision Regulations, Zoning, and Capital Improvements Program). Those four primary tools will be described in the following section of this report, along with the many other major tools that derive from, or are meant to supplement those primary tools. (The other major reason Virginia localities undertake planning is to prepare for and cope with change. Change is inevitable, and whether it is a positive or negative force may depend on the effectiveness of the locality's planning efforts in managing change.)

A. The Official Map

The official map is one of four primary tools localities can use to implement the local comprehensive plan. According to § 15.2-2233 of the Virginia Code, a local planning commission may make a map showing the location of any:

1. *Legally established public street, alley, walkway, waterway and public area of the locality; and*
2. *Future or proposed public street, alley, walkway, waterway and public area.”*

If developed, the official map must establish the centerline, width and right-of-way of streets and the metes and bounds of public areas in relation to known, fixed and permanent monuments either by physical or aerial survey. This admonition applies to mapping existing streets, alleys, walkways and public areas, as well as mapping future or proposed streets, alleys, walkways and/or public areas. The official map is a discretionary tool of plan implementation. This means localities are not mandated to adopt an official map.

B. Subdivision and Site Plan Regulations

Each local government in Virginia is required to adopt a subdivision ordinance to assure that land development occurs in an orderly and safe manner. The subdivision ordinance establishes the procedures, platting and design requirements, as well as surety guarantees for public infrastructure improvements, associated with the subdivision of land into parcels or lots of development.

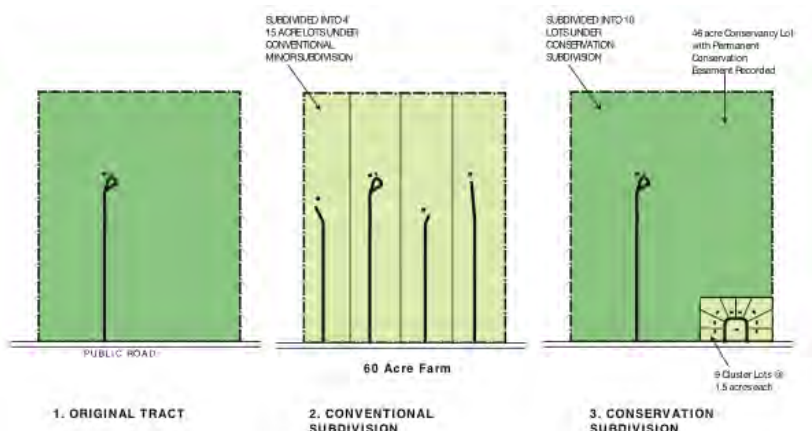
C. The Capital Improvement Program

The Capital Improvement Program (CIP) is an integral component of a locality's overall growth management program. It outlines the multi-year scheduling of public physical improvements and related costs to help guide the locality's decisions on how to allocate available funds over a 5-year period. The CIP is sometimes called a Capital Improvement Budget or Capital Improvement Plan. Localities must have a CIP if they exercise the authority to accept proffers of cash or physical improvements that benefit the community outside of the development associated with the proffers.

D. Zoning Tools

Zoning is considered the quintessential tool of comprehensive plan implementation. Zoning divides a locality into specific districts and establishes regulations concerning the use, placement, spacing and size of land and buildings within the respective districts. A few of the major variants on zoning that are used in the commonwealth, including Agricultural or Large Lot Zoning, Cluster Zoning (example shown below), Traditional Neighborhood Development, and Historic District Zoning. (Also, Conditional Zoning/Cash Proffers are discussed under financing tools rather than zoning tools).

Example of Rural Cluster



Graphic courtesy of Paradigm Design

According to the Virginia Code (§ 15.2-2280) any locality may, by ordinance, classify the territory under its jurisdiction or any substantial portion thereof, into districts of such number, size and shape as deemed important to needs of the community and the purposes of zoning as defined by the code. Accordingly, zoning is a discretionary tool of plan implementation. It is not a mandated tool like the subdivision ordinance.

Zoning is intended to avoid disruptive land use patterns by preventing activities on one property from generating external effects that are detrimental to other properties. Zoning ordinances, if drafted by the planning commission and adopted by the governing body, must feature a text describing each district and the district regulations, as well as a map detailing the location and extent of each district throughout the community.

Conventional zoning is called —Euclidean, named after the Town of Euclid, Ohio, whose zoning ordinance was upheld by the U. S. Supreme Court in a landmark case in 1926. This conventional approach divides the land within the jurisdiction into discreet geographic districts based on the general use and intensity that is permitted for land and buildings. Typical zoning districts under this approach are residential, commercial and industrial. Many variations on this approach have been devised during the past 80 years to correct the overly rigid districts, and many of these are used in various localities in Virginia. One prominent variation —Planned Unit Development (PUD), in which some amount of flexibility is permitted for lot sizes and uses within the district, based upon a detailed conceptual development plan submitted by the applicant.

On its own initiative or at the direction of the governing body, the planning commission may prepare a zoning ordinance, including text and maps dividing the community into districts; detailing the regulations applicable in each district; and providing for enforcement, variances, conditional zoning, special exceptions, appeals and penalties. To date, every city in Virginia, most towns and 87 of the 95 counties have chosen to adopt zoning to regulate land use and to help manage local growth.

E. Tools for Managing the Form and Location of Growth

- **The “2232” Review**

As noted in Section II of this report, the comprehensive plan is considered advisory and it serves as a guide for the physical development of the territory within the locality’s jurisdiction. However, according to § 15.2-2232 of the Virginia Code, the comprehensive plan —shall control the general and approximate location, character, and extent of each feature shown. Thus, while the comprehensive plan itself does not directly regulate land use, the plan does have status as a fundamental instrument of land use control once it is adopted by the local governing body.

Section 15.2-2232 provides that unless a feature is already shown on the adopted plan, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation, whether publicly or privately owned, shall be constructed, established or authorized until its location has been approved by the local planning commission as being substantially in accord with the adopted comprehensive plan. As of 2009 localities are required to show on the transportation plan map of the Comprehensive Plan transportation corridors of statewide significance upon notification by the Commonwealth Transportation Board that such a corridor has been designated in the Statewide Transportation Plan.

- **Urban Growth Boundaries (*Land Use and Infrastructure Coordination*)**

Extensions of infrastructure, particularly water and sewer lines and major streets, significantly affect the timing and density of development. The comprehensive plan can designate areas which are planned for immediate or long-term utility service, thereby coordinating development approvals (rezonings) and utility extensions to achieve an orderly and compact development pattern adjacent to existing settlements. Urban Growth Boundaries in Virginia are not zoning designations per se, but rather policy designations established in the comprehensive plan so as to guide decisions about rezoning applications and public infrastructure investments.

- **Special Exception Permitting (*Conditional/Special Use Permitting*)**

Zoning ordinances usually delineate a number of uses that are allowed as a matter of right, and a number of uses that are allowed by special exception. (Special exceptions are also called —special use permits|| or —conditional use permits||, which mean the same thing). Uses allowed by special exception are those considered to have a potentially greater impact upon neighboring properties or the public than those uses permitted by right in the district. By classifying them as special exceptions, separate and specialized regulations or conditions can be imposed by the locality to mitigate the adverse impacts. These conditions may be imposed and need not be negotiated or agreed to by the applicant. Such conditions must be specific, reasonable and enforceable.

- **Density Incentives**

A zoning ordinance is a principal planning tool used by localities to achieve their development objectives. Historically, zoning ordinances were purely regulatory tools that established minimum standards for new development. However, because —minimum standards|| many times become —maximum performance, zoning ordinances have evolved to include incentive-based approaches to community development objectives.

Although different types of incentives can be incorporated into a zoning ordinance (fast track plan reviews, reduced application fees, etc.), the most positive incentive to developers is often increased density.

- **Community Design Concepts: Traditional Neighborhood Development and New Urbanism**

Traditional Neighborhood Development (TND) and New Urbanism are forms of development that reflect the principles of New Urbanism, which is aimed at achieving a —human-scale built environment of mixed uses and interconnected streets that is conducive to pedestrian movements, as well as to motor vehicle movements.

- **Transferable Development Rights (TDR)**

TDR, or transfer of development rights, is a concept in which some or all of the rights to develop a parcel of land in one district (the sending district) can be transferred to a parcel of land in a different district (the receiving district). TDR is a tool used to preserve open space, farmland, water resources and other resources in areas where a locality wishes to limit or curtail development.

F. Tools for Managing the Financial Impacts of Growth

In addition to the Capital Improvements Program (CIP) which was discussed as one of the four primary tools of plan implementation in Part C above, other tools are available for managing the fiscal impacts of growth.

1. Conditional Zoning / Cash Proffers

Conditional zoning was enabled by the Virginia General Assembly 30 years ago to address the shortcomings of traditional zoning methods when competing and incompatible land uses conflict. While it is actually a zoning tool, it is discussed here as a tool for managing the financial impacts of growth, since that is the way this tool is used by many localities.

As designed, conditional zoning allows reasonable conditions, known as proffers, to be offered by the applicant during a rezoning process as a way of mitigating the impacts of the proposed rezoning. Proffers may include land, infrastructure, cash or other conditions/constraints on the use of the property. These proffers, if accepted by the governing body as part of the rezoning approval, become part of the zoning ordinance as it applies to that property. In theory, conditional zoning allows land to be rezoned that might not otherwise be rezoned because the proffers will protect the community or area affected by the rezoning.

2. Level of Service Standards

Level of service (LOS) standards specify the public facilities needed for new residential developments in an effort to determine if those facilities are adequate to support a proposed rezoning. Level of service standards are typically set out in a guidance document or comprehensive plan for public facilities such as schools, roads, libraries, parks, public transit, water and sewer systems. For example, Prince William County has linked the demand for public services created by new development with the County's fiscal ability to provide those services at the level of service standards set forth in the plan. If the development does not meet the LOS established in the plan, either a proffer for improvements or cash proffer can be used to offset the impact.

3. Impact Fees

Making growth —pay its own way|| is a major reason local governments across America have adopted impact fee programs through which developers are required to pay for, in whole or in part, the infrastructure improvements required by the new growth associated with each development project. The costs to be paid are often for utilities and streets, as well as schools, parks and other public facilities. Where impact fees are permitted, they must be specific, based on a reasonable formula, and uniformly applied. Classic impact fee programs provide for the fees to be collected at the time of building permit approval, thereby applying to —by-right ministerial development approvals, as well as to rezonings. (Floyd County may not be eligible to use this at this time, as excluded from the Urban Development Area requirement.)

4. Service Districts

Service Districts (sometimes called Special Service Districts) are legally defined geographic portions of a jurisdiction established by the local governing body. They are created to provide additional, more complete, or more timely services of government than are desired in the locality as a whole. Property owners within the special service district may pay a higher tax rate in exchange for these enhanced services. Any locality may by ordinance, or any two or more localities may by concurrent ordinances, create service districts within the locality or localities. Once created, the additional revenue derived from service districts is used for a wide variety of public enhancements including, but not limited to, water supply and sewerage facilities; garbage removal and disposal; fire-fighting equipment; sidewalks; economic development services; promotion of business and retail development services; beautification and landscaping; beach and shoreline management and restoration; public parking; extra security, street cleaning; snow removal; sponsorship and promotion of recreational and cultural activities and other services, events, or any other activities that will enhance the public use and enjoyment of, and the public safety, public convenience, and well-being within, a service district.

5. Community Development Authorities

A community development authority (CDA) is a political subdivision of the Commonwealth. A CDA can be authorized and created by a local governing body upon petition by at least 51% of the land owners within the proposed CDA boundaries. CDAs are authorized and created for the purpose of providing public infrastructure associated with the development or redevelopment of an area.

6. Fiscal Impact Analysis

A fiscal impact analysis is used to forecast the net operating expenditures and capital outlays for public services required to serve a proposed development. Net expenditures equal total expenditures less the revenues a government expects to receive as a result of the development.

G. Tools for Revitalization

- **Targeted Development Areas**

A targeted development area (TDA) designates a specific area within a locality for development and growth. It is an area of a jurisdiction where a local government would like to see most new growth occur, and a local government can utilize its own criteria to define a TDA. Targeted development areas are depicted on comprehensive plan maps, and can be defined by comprehensive plan policies. Implementation of targeted development areas can occur through many means including the adoption of zoning standards applicable only to the TDA, and through public capital facility investment within the targeted development areas.

- **Revenue Sharing (*Tax Sharing*)**

The sharing of revenues between jurisdictions involves the transfer of some portion of a locality's revenue receipts, with the individual political subdivisions retaining full autonomy over tax rates applied within their jurisdiction. Revenue-sharing programs have been employed to offset inequitable consequences (service costs v. revenue attained) in an area from the nature and pattern of development and to address problems caused by local reliance on the property tax.

- **Enterprise Zones**

An enterprise zone is defined by the state code as an economically distressed, distinct geographical area of a county, city or town. The Enterprise Zone Program is based upon a state and local partnership in which both parties seek to improve economic conditions within a targeted area of distress. Enterprise zones are designated by the Governor.

- **Empowerment Zones**

An Empowerment Zone is a community characterized by poverty, unemployment and general distress. A local government and the Commonwealth must nominate a local area meeting the required size, population and poverty criteria. Originally selected Empowerment Zones were awarded block grants from the Department of Health and Human Services under Title 20 of the Social Security Act.

- **Tax Increment Financing**

Tax increment financing is a redevelopment funding tool that earmarks anticipated increases in tax revenues from a defined redevelopment area to pay the debt service issued to finance the public improvements in the redevelopment area. Based on the earmarking of increased revenues, public debt can be issued for public improvement in a redevelopment area. These public improvements serve as a catalyst for private investment.

H. Tools for Rural and Natural Areas Preservation

This section describes the major tools available to local governments to preserve the State's agricultural and natural, open space resources. These tools, like those that help ensure adequate public facilities, are enhanced by a strong comprehensive plan that clearly articulates the value of open space and farmland preservation to the community, and indicates clear priorities for areas to be preserved. A common limitation of these tools is the funding they require to administer the program, to publicize it, and often, to operate it.

- **Use Value Assessment and Taxation (“Land Use”)**

The Use Value Assessment and Taxation Program uses discounts in property tax assessments to promote and preserve agricultural, forestal, and/or open space lands.

- **Agricultural and Forestal Districts (AFD)**

The Virginia Code provides for the voluntary creation of Agricultural and Forestal Districts (AFDs) in order to —provide a means for a mutual undertaking by landowners and localities to protect and enhance agricultural and forestal land as a viable segment of the Commonwealth's economy and as an economic and environmental resource of major importance.

Agricultural and/or Forestal Districts are established by local ordinance to run for a set number of years (from 4 to 10), during which the property owner continues to hold fee simple title to the land, and enjoy various benefits provided by the code for such districts. The local ordinances usually include provisions that permit the landowner to withdraw from the program under certain defined circumstances.

AFDs are established at the request of landowners, who must assemble at least 200 acres of contiguous land and be approved for a district by the local governing body. Districts last from 4 to 10 years and can be renewed. Being in a district ensures a landowner that his land will continue to be eligible for Use Value Assessment, even if the program is otherwise rescinded by the locality. The AFD also provides some extra protection against certain public infrastructure improvements. In and of itself, an AFD does not change the zoning within its borders. However, an AFD can be a factor in the locality's zoning decisions and planning policies. Further, in adopting an AFD, the governing body may require, as a condition to creation of the district, that any parcel in the district shall not, without the prior approval of the governing body, be developed to any more intensive use or to certain more intensive uses (other than uses resulting in more intensive agricultural or forestal production), during the period which the parcel remains within the district.

Other protections for landowners in AFDs include:

- The local governing body may adopt programs offering incentives to landowners to impose land use and conservation restrictions on their land within the district.
- Local ordinances, comprehensive plans, land use planning decisions, administrative decisions and procedures affecting parcels of land adjacent to any district must take into account the existence and purposes of the district.

- No special district for sewer, water or electricity or for non-farm or non-forest drainage may impose benefit assessments or special tax levies on the basis of frontage, acreage or value on land used for primarily agricultural or forestal production within a district, except a lot not exceeding one-half acre surrounding any dwelling or nonfarm structure located on such land.

Any agency of the Commonwealth or any political subdivision which intends to acquire land in an AFD must provide individual notice to landowners in the AFD. The local governing body then holds a public hearing on the proposal. If the local governing body determines that the proposed action is not necessary to provide service to the public in the most economic and practical manner and will have an unreasonably adverse effect upon state or local policy, it is to issue an order prohibiting the proposed action.

- **Conservation Easements (including Purchase of Development Rights)**

A conservation easement (also known as an Open Space or Scenic Easement) is a legal agreement between a landowner and a land trust or government agency that limits the use of the land by recording deed restrictions that prohibit or severely restrict further development in order to protect the conservation value of the property, such as farmland, watersheds, wildlife habitat, forests, and/or historical lands. Each easement is unique in terms of acreage, description, use restrictions, and duration. These details are negotiated between the property owner granting the easement, and the organization that will be holding the easement.

Conservation easements are typically established in perpetuity, but may be established for shorter periods. The easement allows a property owner to continue to own any underlying interest in the land that is not specifically limited by the easement, to use the land within the terms and restrictions of the easement, and to sell the land or pass it on to heirs (with the easement restrictions conveying with the land). Conservation easements do not permit public access unless specifically provided.

Conservation easements may be established through *purchase*, *lease* (short term), or through *donation*. In all of these easement programs, the easement is established through the voluntary cooperation or initiative of the landowner.

