

# Many Plans One Community Performance Measurement System

December 2011

many plans  
**one COMMUNITY**  
1-community.org

## **Performance Measurement System**

The Performance Measurement System is a tool to evaluate existing conditions, monitor trends and track progress towards achieving regional sustainability goals. This system is the first deliverable for the Sustainable Communities Planning Grant.

The Performance Measurement System is intended to describe the baseline conditions of livability in the City of Charlottesville and Albemarle County. Over the course of the project, the Performance Measurement System will suggest where we are heading as a region, providing a resource for local government decision makers to make informed choices about our community's future.

### *How the Performance Measurement System was Developed*

The Livable Communities Planning Project formed a Research Panel tasked with studying existing performance measurement systems, proposing a system for our region, and collecting preliminary data. The Research Panel, comprised mainly of graduate students from UVA's Urban and Environmental Planning program, worked in collaboration with TJPDC staff from January to April 2011. Continued research and refinement of the system was performed by TJPDC staff and interns, based on input received in the public review process.

#### **I. Comparative study of existing performance measurement systems**

The panel began by investigating livability measurement systems that were currently in use across the country, comparing and contrasting other communities' visions and values, indicators of performance, data used for calculations, methods of measurement, and communication strategies. The systems reviewed included city, regional and statewide assessments.

##### *Case Study: Santa Monica*

The City of Santa Monica, located in Southern California publishes an annual Sustainable City Progress Report. This report tracks the locality's progress in areas such as Environmental & Public Health, Housing, Economic Development and Transportation. Each of these categories consists of a number of data-based indicators, such as the water quality in the Santa Monica bay, income disparities, affordable housing and bus ridership. For many of these indicators, a target has been set, and annual reports include a letter grade for each category based on how well the city has progressed in meeting this target, as shown in the example below.

# SUSTAINABLE CITY REPORT CARD



## ECONOMIC DEVELOPMENT

|        | 2005 | 2006 | 2007 | 2008 | 2010 |
|--------|------|------|------|------|------|
| Grade  | B    | B    | B    | B    | B    |
| Effort | C+   | B+   | A-   | A-   | A-   |

Goals: Nurture a diverse, stable local economy that supports the basic needs of community members /  
Increase sustainable business practices

Santa Monica's economy remains resilient, and experienced growth in the finance, information and health sectors. The local economy continues to be stable and diverse with no sector representing more than 25% of total economic activity. Though total wages fell 8% in 2009, back to 2006-7 levels, no one sector was disproportionately affected. The city, Chamber of Commerce, Convention and Visitors Bureau and Sustainable Works continue to collaborate on programs that support local businesses. More than 200 businesses now participate in the recently launched Buy Local Santa Monica program. To date, 51 Santa Monica businesses have been recognized for their exceptional commitment to sustainable practices through the Green Business Certification Program and 78 businesses have been recognized with Sustainable Quality Awards. An additional 158 businesses have participated in the Sustainable Works Business Greening Program. The rising cost of living and an unbalanced ratio of jobs to housing make it difficult for people to live near their workplace, exacerbating traffic and parking problems. The consistent grade reflects the continued strength of the local economy and growth in local green business, while recognizing the challenges presented by cost of living and the global recession.

### *Case Study: Cascadia Scorecard*

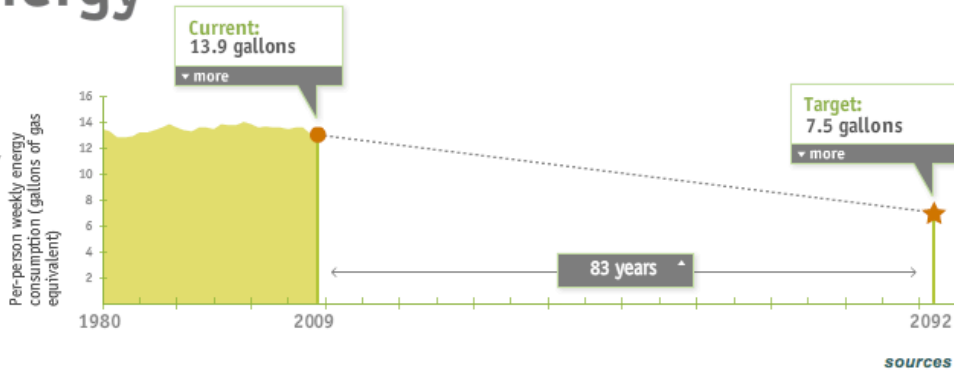
The Cascadia Scorecard is an assessment system established by the Sightline Institute, a non-profit think tank, to measure particular indicators across the Pacific Northwest, including parts of Oregon, Washington, Idaho and British Columbia. These regional-based assessment was unique among those examined for its geographic range. The system measures seven areas: Health, Population, Economy, Sprawl, Wildlife, Energy and Pollution, using only one data point as an indicator for each category. A goal has been set for each indicator and the data is examined as a trend over time, typically since 1980. Graphs demonstrate the amount of time, according to current trends, it will take to reach this goal, as shown in the graph below.



# Energy

**INDICATOR:**  
Gasoline, diesel,  
and electricity  
consumption

**TREND:**  
Stuck in high  
gear



## Case Study: Virginia Performs

While this system was not examined in the first round of research by the panel, Virginia conducts a statewide assessment known as Virginia Performs, which covers the areas of Economy, Education, Health and Family, Public Safety, Transportation, Natural Resources and Government and Citizens. Progress is measured for a number of indicators in each category such as employment growth, educational attainment, crime rates, life expectancy and voter participation. Data for each indicator is compared with that of peer states such as Maryland and North Carolina and can also be compared across Virginia's eight regions. Each indicator is assessed with a performance trend rating of improving, maintaining or worsening compared to previous years data (represented by up, down, or sideways arrows).

07.2011

# SCORECARD AT A GLANCE

**Economy**

Goal: Be a national leader in the preservation and enhancement of our economy.

- Business Climate ↑
- Business Startups →
- Employment Growth →
- Personal Income ↓
- Poverty ↓
- Unemployment ↓
- Workforce Quality ↑

**Education**

Goal: Elevate the levels of educational preparedness and attainment of our citizens.

- School Readiness ↑
- 3rd Grade Reading →
- 4th Grade Reading/Math →
- High School Graduation ↑
- High School Dropout →
- College Graduation ↑
- Educational Attainment ↑
- Lifelong Learning →

**Health and Family**

Goal: Inspire and support Virginians toward healthy lives and strong and resilient families.

- Adoption →
- Cancer ↑
- Cardiovascular Disease ↑
- Child Abuse and Neglect ↑
- Foster Care ↑
- Health Insurance ↓
- Immunization ↓
- Infant Mortality ↑

Virginia's Eight Regions

- Valley Region
- Northern Region
- Central Region
- Eastern Region
- West Central Region
- Southwest Region

**Virginia Performs** | VISION FOCUS RESULTS

*"Measuring what matters to Virginians."*

## *Key Findings*

In examining numerous performance measurement systems, the Research Panel identified several elements that defined many such systems. These issues would need to be addressed in creating a system for the Charlottesville-Albemarle region.

### **1. Categories**

Most systems divided the indicators into thematic categories such as Environment, Economy, Health, Housing, etc. What categories are appropriate for our region?

### **2. Time intervals**

Most performance measurement systems are assessed on an annual basis. Most are able to compare previous year's data to discern trends, though the period of time for which data is available often varies by indicator.

### **3. Goals**

Along with defining specific indicators, some systems have specific goals they would like to achieve, sometimes with a specific deadline in mind. For example, Minneapolis includes teen birthrate as an indicator and set a goal of reducing the pregnancy rate among 15-17 year olds to 46 pregnancies per 1,000 by 2010. Should goal-setting be part of the performance measurement system? If so, how should they be developed?

### **4. Action plans**

Some systems have developed actions plans to identify what steps a locality intends to take in order to achieve the goals they have set. For example, PlaNYC has developed detailed action plans related to brownfield cleanup, stormwater management, and energy efficient buildings in order to achieve the sustainability goals is has set for 2030.

### **5. Evaluations**

Many plans rate each indicator based on trends towards achieving a set goal. The city of Santa Monica assigns letter grades while the state of Virginia rates indicators according to three levels of progress, indicated by up, down, or straight arrows.

### **6. Presentation**

Plans were often presented in a web-based format. Different presentation styles allowed for various levels of user interaction. For example, the Virginia Performs website allows the viewer to examine data based on indicator category, or by comparing performance across Virginia regions.

## **II. Review of Charlottesville and Albemarle Comprehensive Plans**

While examining performance measurement systems currently in use across the country was helpful in providing ideas for the *structure* of such a system, the Research Panel and TJPDC staff knew that the *content* of the system – the specific areas to be measured - must be based on the unique characteristics and values of the Charlottesville Albemarle region that the system was to be designed to serve.

Therefore, the next step was to review the current comprehensive plans of Charlottesville and Albemarle as well as the Metropolitan Planning Organization's (MPO) Long-Range Transportation Plan. These documents contain vision statements, goals and objectives that have already been solicited from the local community and approved by elected officials. Thus, the panel looked to these existing plans to discover areas that should be measured by a performance measurement system unique to our region.

Each of these three plans was reviewed in depth by one or more panel members. Each goal or objective included in the plan was categorized based on its theme or chapter in the plan (i.e. Land Use, Housing, Transportation) as well as its relevance to a range of values selected from the panel. The research panel and TJPDC staff selected a number of values which had been prominent in other plans as well as in the Livability principles set forth by the Sustainable Communities program which awarded the project grant. Those were: Healthy, Accessible, Equitable/Affordable, Diverse, Cohesive, and Resilient/Adaptive. Many goals related to more than one of these values, and were classified as such. For example, a goal contained in the City of Charlottesville's Comprehensive Plan to "Offer a range of housing options diverse enough to meet the needs of Charlottesville's residents, including those presently underserved" was classified as relating to the values of "Diverse" as well as "Equitable/Affordable". A goal in Albemarle County to "Protect the County's open space for its environmental, aesthetic, cultural, agricultural/forestral and recreational value" was categorized according to the values of "Healthy", "Accessible" and "Cohesive/Character".

After goals and objectives were extracted and categorized, they panel searched for patterns and alignments between the localities. Clear differences emerged, such as a significant focus on rural preservation and strengthening the rural economy in Albemarle County, which is not as relevant in Charlottesville. As well, since comprehensive plans typically focus on land use and physical planning, there were few goals related to social/community aspects of livability such as education or health.

## **III. Synthesis and Selection of Indicators**

After extensive review of the two comprehensive plans and long-range transportation plans, the panel had a broad view of the priorities and goals of the community as documented in existing plans. The panel and staff found that most goals could fit into the following six categories: Housing and Built Environment, Economy, Infrastructure, Communities and Neighborhoods, Transportation, and Natural Resources. These were chosen as the six key systems for the Livability Performance Measurement System.

While initially a set of values were used to help divide the goals, these categories were abandoned in place of the systems. The panel found that certain values naturally fit with certain categories – i.e. “Healthy” and “Environment” or “Accessible” and “Transportation” and thus, it would be difficult to use one set of values to measure each of the systems.

The next step was to choose indicators for each system. Once again, the goals contained in the three community plans being examined were categorized, this time according to the six systems that had been selected. For each goal, an indicator, or multiple indicators, were drafted which could evaluate performance in that area. For example, for the related goals to “Generate and sustain successful small businesses” in the Charlottesville comprehensive plan and “Increase local business development opportunities” as listed in the Albemarle County Comprehensive Plan, an applicable measurement could be the number of new businesses created. Based on this extensive list of possible indicators, a final list was created, eliminating indicators that would be difficult to measure and selecting those that could pertain to multiple goals.

#### **IV. Data and Methodology**

Once indicators had been chosen, the final step was to collect data. The panel developed criteria to ensure that the baseline study would be achievable and replicable at a future date. Those are that all data should be:

- Easy to obtain
- From a reliable source
- Simple to calculate
- Available for Charlottesville and Albemarle
- Regularly updated

These requirements narrowed the scope for data collection. Typical sources included the US Census (including the American Community Survey), state agencies such as the Virginia Department of Environmental Quality and local organizations such as the Albemarle County Service Authority. Most data was readily available in online databases but certain indicators required reaching out to agency staff for internal reports.

##### *American Community Survey*

Many of the indicators presented use data from the US Census Bureau’s American Community Survey. This Survey is conducted continuously and results are released annually. Data is drawn from various time periods depending on a community’s population size. One-year survey estimates are produced on an annual basis for localities (counties, towns, etc) with a population over 65,000. Albemarle County meets this threshold while Charlottesville does not. Because of the smaller sample size in Charlottesville, the data released represents a multi-year average of either three or five years. Thus, to use comparable figures for both Charlottesville and Albemarle, 3-Year Estimates were used. The estimates used in this report represent data collected from 2008-2010.

University of Virginia students living on grounds in University housing are considered to be residents of group housing in Albemarle County. This living environment is not considered a household and thus is not a factor in data based on household characteristics. Students living off grounds in housing they have purchased or rented themselves would be counted in the locality in which they reside.

### *Data Analysis*

For each indicator, data is cited with a source and date for which this data is applicable. In cases where the data applies to a geographic range other than the city of Charlottesville, County of Albemarle, or Commonwealth of Virginia, this range is noted. A combined figure for Charlottesville and Albemarle County is given for indicators for which such a calculation is possible and relevant. In such cases, this figure represents data that has been combined and calculated according to the entire universe being measured, such as total households, population, or area.

## **V. Public Input**

An Open House was held on June 23, 2011 to share a draft of the Performance Measurement System with the community and solicit feedback. Information was displayed on posters describing each indicator, why it was chosen, and providing current data. The public provided feedback by placing post-it notes directly on to posters, and by filling out comment sheets. This input was collected and recorded by staff. Additionally, these posters were displayed at Cityspace, a public gallery on the Charlottesville downtown mall, for the month of July. The public also had the opportunity to leave comments at this display.

As well, a survey was conducted of both the general public and the Livability Partnership, a community body with representation from over 50 area community groups, asking respondents to evaluate each indicator and provide feedback. The system was also presented to both the Charlottesville and Albemarle Planning Commissions and PACC Tech for feedback.

Based on the feedback received, a number of indicators were removed, added, or modified. Additional explanation was included for a number of indicators to better describe the factors being measured and why it was chosen. The text of all the feedback received, as well as the initial set of indicators presented in June 2011, can be found on our website: [1-community.org](http://1-community.org).

## **System: Housing & Built Environment**

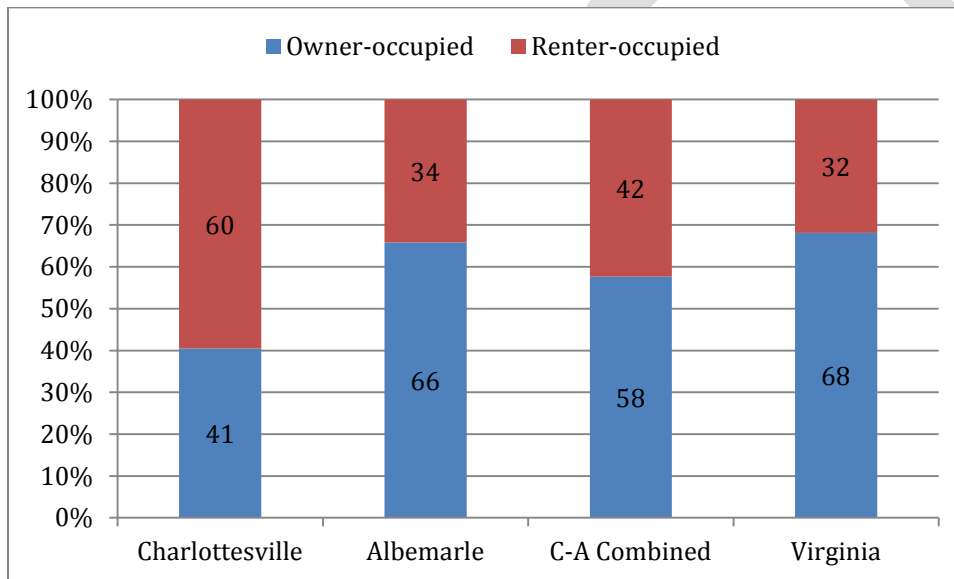
**The Housing & Built Environment System serves the community by providing an array of housing options serving the needs of all citizens. The integration of housing within a community, the efficiency of housing units, the availability of safe, varied housing choices and a range of affordable options are all measurements of the health of the Housing and Built Environment.**

# System: Housing & Built Environment

## Indicator: Renter & Owner Occupied Housing

A mix of properties available to renters and owners ensures choices for citizens of various incomes and lifestyles. Homeowners can bring stability to a neighborhood as they tend to reside in a home for longer periods of time. Renting often better meets the needs of students and other mobile populations.

The data below finds that the rate of owner occupancy in the Charlottesville-Albemarle area is 58%, as compared to the state average of 68%. This is likely due to the high student population, which tends to include more renters than homeowners.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Offer a range of housing options diverse enough to meet the needs of Charlottesville’s residents, including those presently underserved.”

### Albemarle Comprehensive Plan Goal:

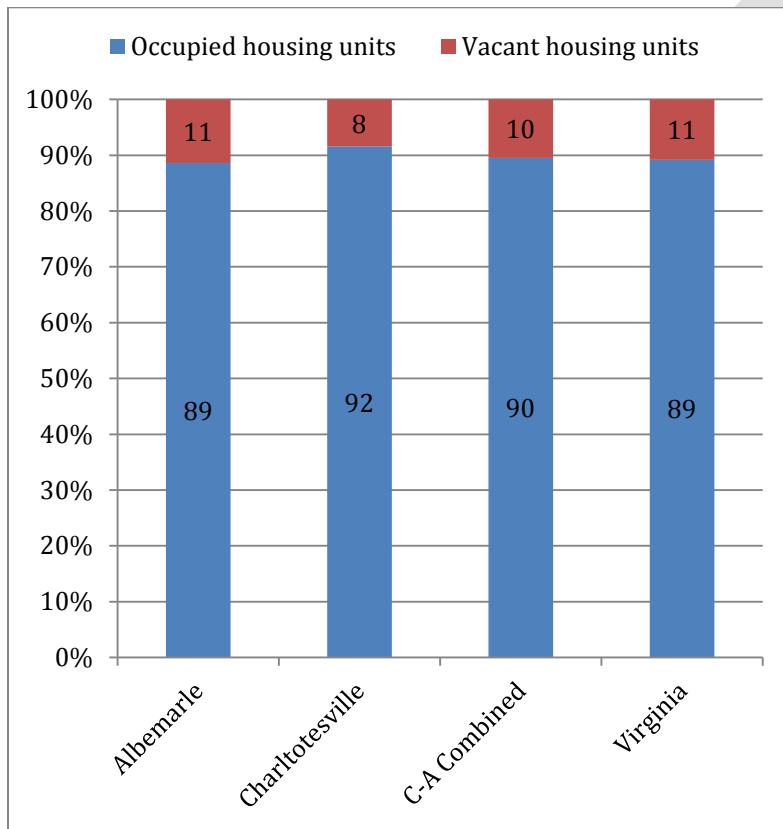
“Insuring variety/choice in housing and equal housing opportunities.”

# System: Housing & Built Environment

## Indicator: Vacancy Rate

This category includes vacant units both for sale and for rent. High vacancy rates can indicate a lack of demand for residential or commercial property, possibly representing economic decline. Low vacancy rates could signal a competitive housing market and/or a need for additional units.

The vacancy rate in our region is comparable to the state-wide rate.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Continue to maintain, improve and grow the city’s housing stock.”

### Albemarle Comprehensive Plan Goal:

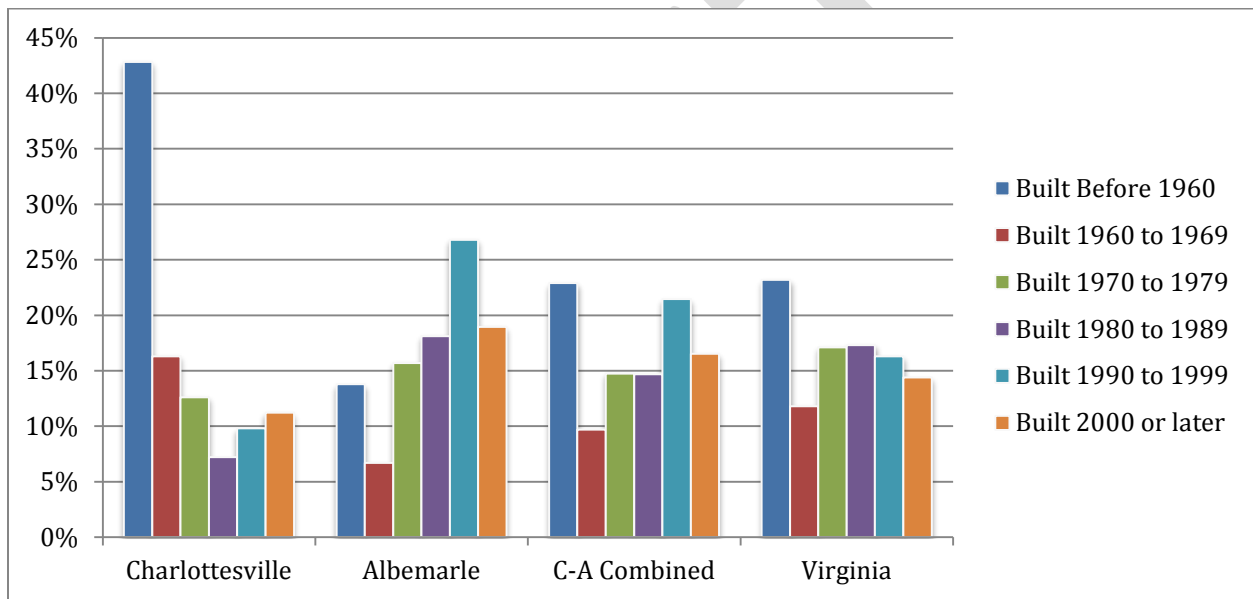
“Creating and preserving safe, high quality and sustainable neighborhoods.”

# System: Housing & Built Environment

## Indicator: Year Structure Built

A diverse housing stock necessarily includes structures of various ages. A distribution in housing units of different ages denotes an assortment of choices based on housing size, style and maintenance needs. The age of housing stock provides a rough estimate of the quality of housing stock.

Just over half of our area's housing stock has been built since 1980.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Continue to maintain, improve and grow the city’s housing stock.”

### Albemarle Comprehensive Plan Goal:

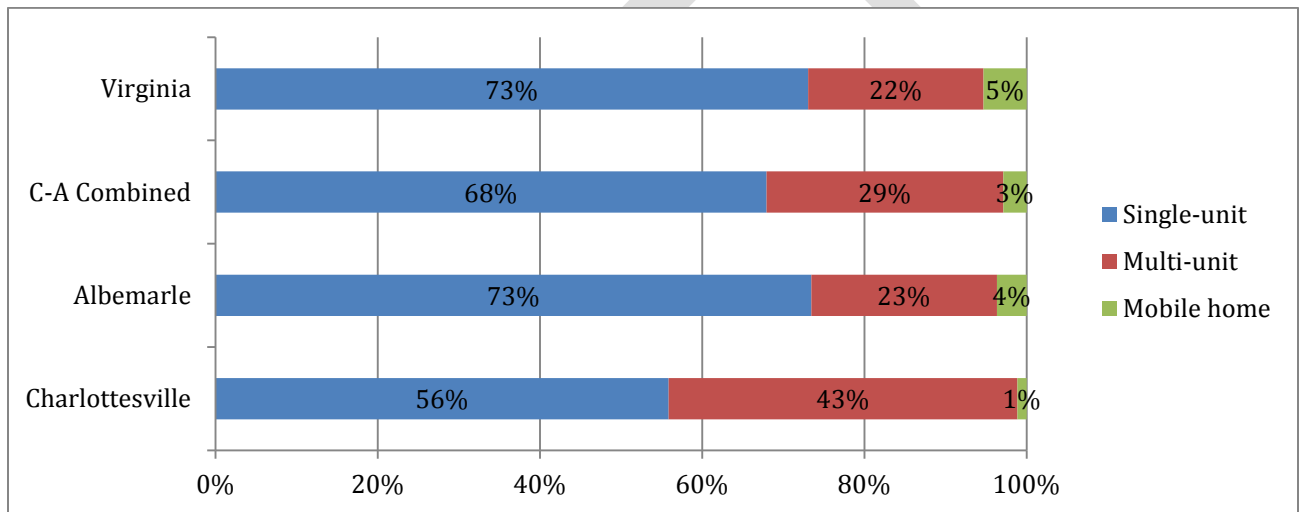
“Insuring variety/choice in housing and equal housing opportunities.”

# System: Housing & Built Environment

## Indicator: Type of Unit

A variety of single, multi-family and mobile homes provides options for a diverse range of housing needs in the community. The single-unit home category includes both detached and attached units (such as a townhome). Multi-unit housing can include duplexes as well as apartments or condominiums.

About two-thirds of the housing stock in the Charlottesville-Albemarle region is comprised of single-unit homes.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

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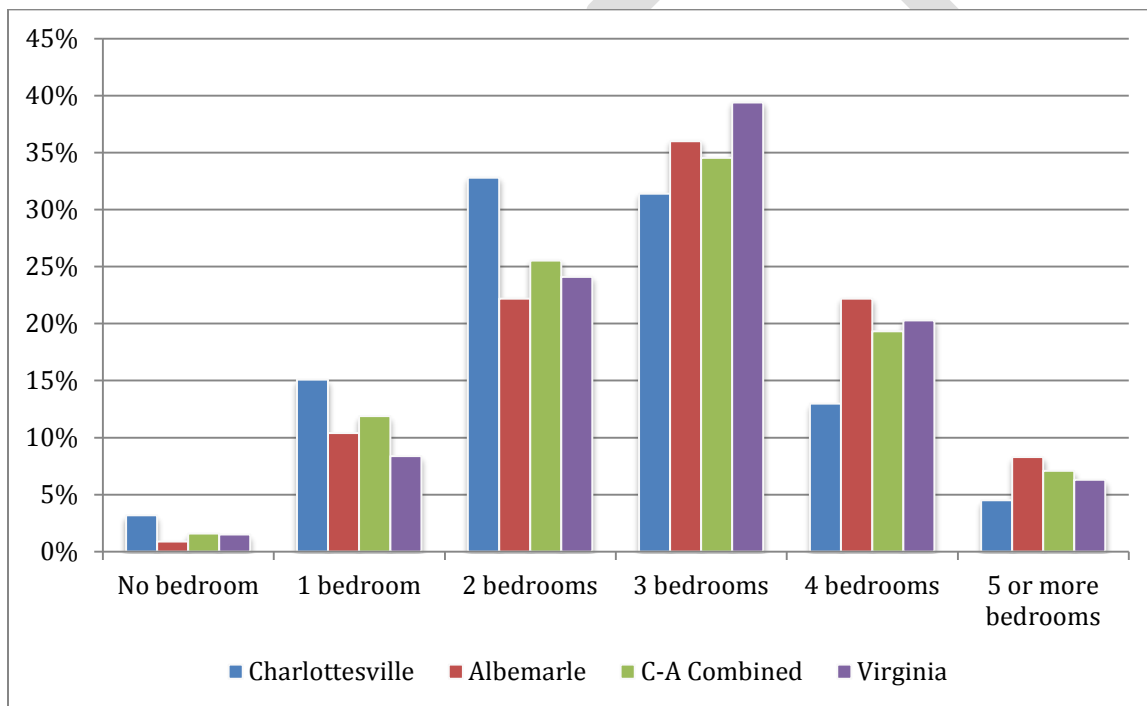
“Understanding diverse housing needs and special needs of various populations.”

# System: Housing & Built Environment

## Indicator: Number of Bedrooms

Number of bedrooms is an indicator of the size of a housing unit and the number of occupants it can accommodate. The distribution of housing units by bedroom size can be compared to the patterns of household size to determine whether the current housing stock meets the needs of the local population. An array of units by number of bedrooms denotes an assortment of housing choices for residents of varying income levels, family sizes, and lifestyles.

### Housing Units by Number of Bedrooms (as portion of total housing units)



Source: American Community Survey, 2008-2010 3- Year Estimates

### Charlottesville Comprehensive Plan Goal:

“Offer a range of housing options diverse enough to meet the needs of Charlottesville’s residents, including those presently underserved.”

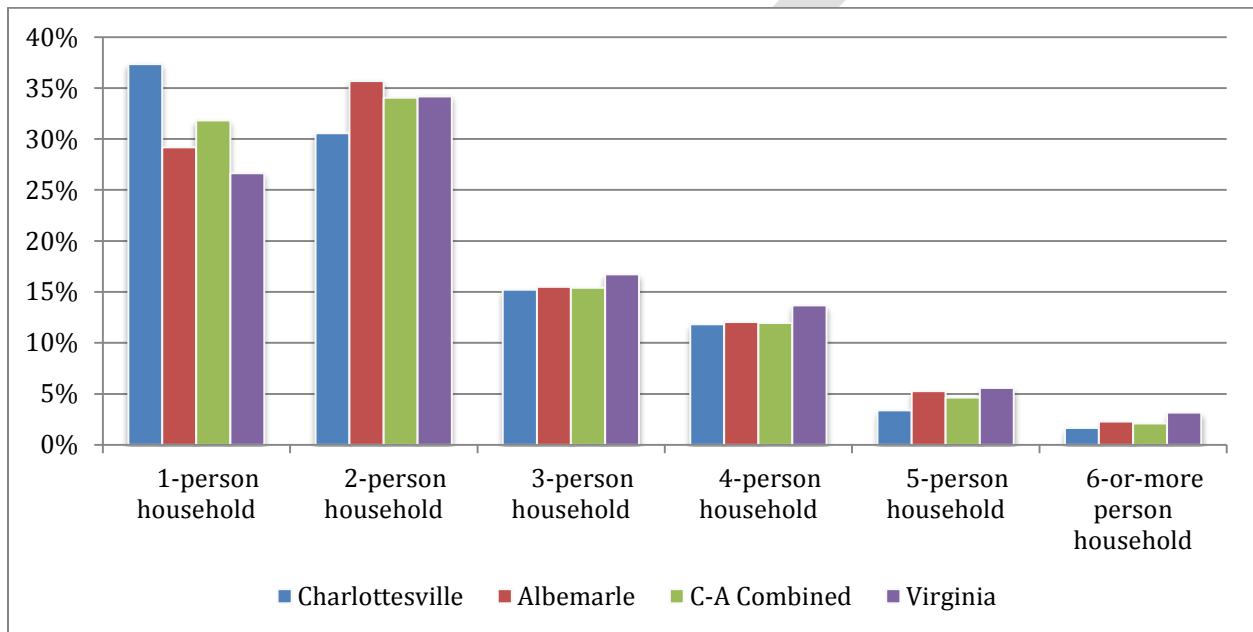
### Albemarle Comprehensive Plan Goal:

“Insuring variety/choice in housing and equal housing opportunities.”

# System: Housing & Built Environment

## Indicator: Household Size

When compared to the distribution of number of bedrooms throughout supply of housing units, household size reveals whether the existing housing stock is compatible with the needs of the variety of households in the community.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Offer a range of housing options diverse enough to meet the needs of Charlottesville’s residents, including those presently underserved.”

### Albemarle Comprehensive Plan Goal:

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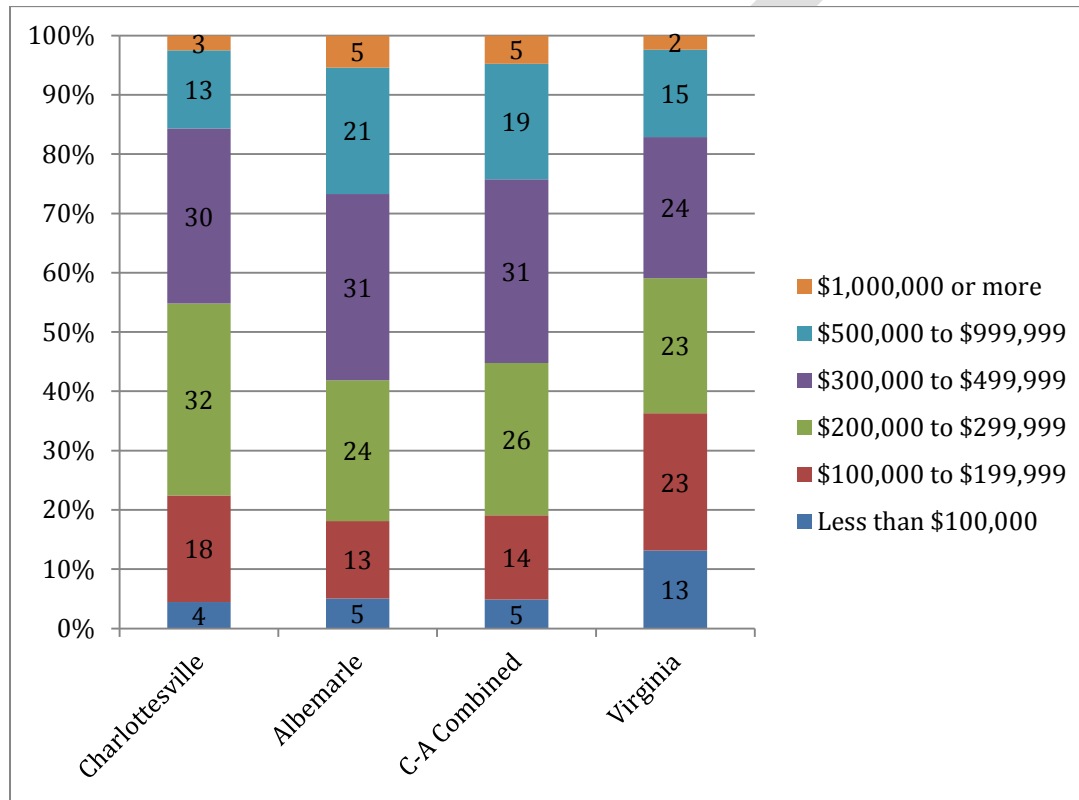
# System: Housing & Built Environment

## Indicator: Value of Housing Unit

The value of area housing units indicates how accessible homeownership is for households in a geographic area. Homeownership is a means of financial security and savings for many households and provides neighborhood stability.

This data is based on homeowner’s assessment of the amount they would expect their home to sell for.

More than half (55%) of homes in our region are valued over \$300,000.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Promote an assortment of affordable housing initiatives to meet the needs of owners and renters with varying levels of income.”

### Albemarle Comprehensive Plan Goal:

“Promoting safe, decent, and affordable housing options for low- to moderate-income residents of Albemarle County and those working in and desiring to reside in Albemarle County.”

# System: Housing & Built Environment

## Indicator: Median Housing Unit Value

Median housing unit value of all owner-occupied housing indicates how accessible homeownership is, particularly when compared to the local median income (see Economy chapter for this data).

The median housing unit values for both Charlottesville and Albemarle are higher than the Virginia median.

|                                  | Charlottesville   | Albemarle         | Virginia          |
|----------------------------------|-------------------|-------------------|-------------------|
| <b>Median Housing Unit Value</b> | <b>\$ 284,400</b> | <b>\$ 346,200</b> | <b>\$ 256,600</b> |

*Source: U.S. Census Bureau, 2008-2010 American Community Survey*

### Charlottesville Comprehensive Plan Goal:

“Promote an assortment of affordable housing initiatives to meet the needs of owners and renters with varying levels of income.”

### Albemarle Comprehensive Plan Goal:

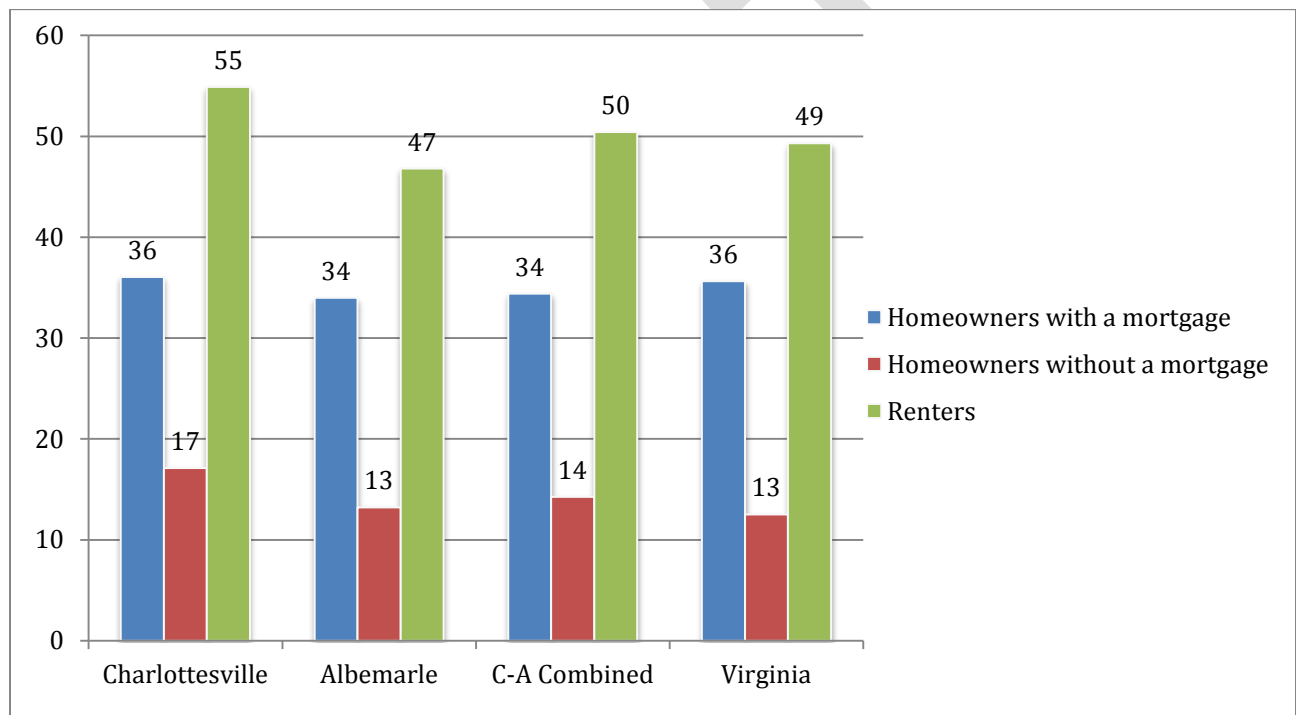
“Promoting safe, decent, and affordable housing options for low- to moderate-income residents of Albemarle County and those working in and desiring to reside in Albemarle County.”

## System: Housing & Built Environment

### Indicator: Percent of Households spending more than 30% of Income on Housing

A commonly accepted guideline is that housing cost should not exceed 30% of household income to be considered affordable<sup>1</sup>. Housing costs include mortgage or rent payments, insurance, real estate taxes, and utilities.

In the Charlottesville Albemarle region, half of renters spend more than 30% of their income on rent. This is just slightly higher than the Virginia average of 49%. In contrast, in our region 34% of homeowners with a mortgage and 14% of homeowners without a mortgage spend more than 30% of household income on housing.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Promote an assortment of affordable housing initiatives to meet the needs of owners and renters with varying levels of income.”

### Albemarle Comprehensive Plan Goal:

“Promoting safe, decent, and affordable housing options for low- to moderate-income residents of Albemarle County and those working in and desiring to reside in Albemarle County.”

<sup>1</sup>Glossary of HUD Terms. [http://www.huduser.org/portal/glossary/glossary\\_a.html](http://www.huduser.org/portal/glossary/glossary_a.html). Accessed November 22, 2011.

# System: Housing & Built Environment

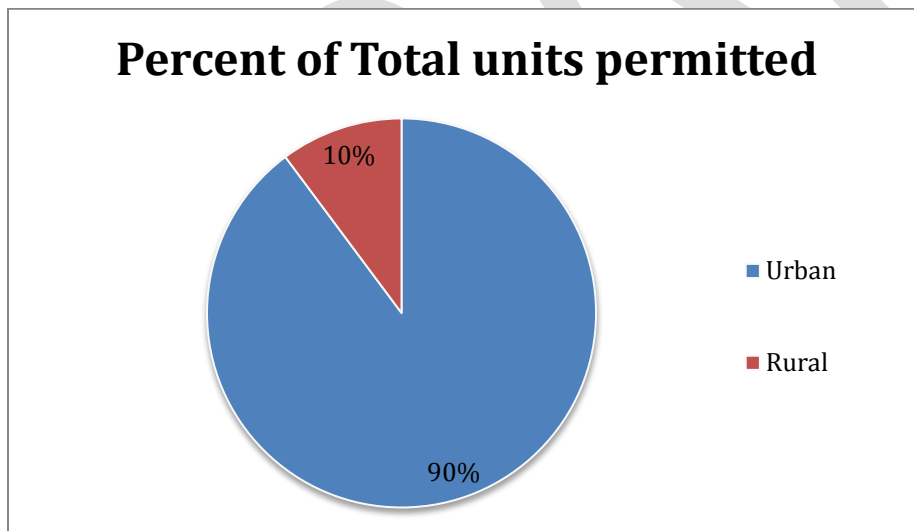
## Indicator: New Permitted Residential Units in Urban and Rural Areas

A larger percentage of growth in the urban area indicates efficient land use in a community and conserves open space. Urban areas include the City of Charlottesville and designated development areas of Albemarle County. Rural areas have been designated as such by the county.

Approximately 90% of new development during the year examined took place in urban areas.

### New permitted residential units in urban and rural areas, July 2010 – June 2011

|       | Number of units permitted | Percent of total units permitted |
|-------|---------------------------|----------------------------------|
| Urban | 954                       | 90%                              |
| Rural | 108                       | 10%                              |



Sources: [Albemarle County](#); [City of Charlottesville](#)

### Charlottesville Comprehensive Plan Goal:

“Continue to pursue and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities.”

### Albemarle Comprehensive Plan Goal:

“Accommodate new growth in the County within Development Areas.”

# System: Housing & Built Environment

## Indicator: Residential Density in Urban and Rural Areas

Comparing residential density in urban versus rural areas indicates where populations are concentrated.

Residential density is measured as the number of dwelling units per acre. This measurement includes all land in the area, no matter its use or zoning designation. (In other words, it does not measure only land zoned for residential use.) The urban area includes the city of Charlottesville and designated development areas of Albemarle County; rural areas comprise the remainder of the county.

Residential density in urban areas is more than ten times higher than in rural areas. Even in urban area, the average residential density is less than one dwelling unit per acre.

## Average Residential Density in Urban and Rural Areas

|             | Number of Dwelling Units | Acreage | Average Residential Density (dwelling units/ acre) |
|-------------|--------------------------|---------|--|
| Rural Areas | 33,780                   | 441,092 | 0.08   |
| Urban Areas | 27,531                   | 29,933  | 0.92   |

Source: City of Charlottesville, Albemarle County, US Census Bureau 2010

### Charlottesville Comprehensive Plan Goal:

“Continue to pursue and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities.”

### Albemarle Comprehensive Plan Goal:

“Encourage greater utilization of land in designated Development Areas by achieving higher gross densities for residential and non-residential development than in the past.”

# System: Housing & Built Environment

## Indicator: Number of Certified Green Buildings

Various certification programs rate buildings on a range of sustainable characteristics, including: site selection, water usage, and energy efficiency. A prevalence of certified green buildings in a community denotes residents' investment in reducing energy and water consumption, as well as preserving air quality, land, and materials.

This indicator includes buildings certified by three different programs, to allow for a range of building types. LEED (Leadership in Energy and Environmental Design) is a certification program developed by the US Green Building Council. This system rates buildings based on energy and water usage, site selection, and construction materials, among other factors. EarthCraft was developed specifically for use in the Southeast and is tailored to our unique climate and environmental conditions. The Energy Star rating system was created jointly by the US Environmental Protection Agency and US Department of Energy to certify energy-efficient buildings and products.

As shown below, most green buildings in our region are residential. Of the commercial buildings certified, many are public schools and buildings at the University of Virginia, demonstrating a commitment on the part of educational institutions to energy savings and sustainable construction.

### Certified Green Buildings in Charlottesville and Albemarle

|              | Commercial | Residential |
|--------------|------------|-------------|
| LEED         | 21         | 4           |
| Energy Star  | 39         | 495         |
| EarthCraft   |            | 377         |
| <b>Total</b> | <b>60</b>  | <b>609</b>  |

Sources: USGBC (<http://www.usgbc.org/LEED/Project/CertifiedProjectList.aspx>), EarthCraft, and EnergyStar ([http://www.energystar.gov/index.cfm?fuseaction=labeled\\_buildings.locator](http://www.energystar.gov/index.cfm?fuseaction=labeled_buildings.locator))

### Charlottesville Comprehensive Plan Goal:

“Practice and promote sustainable building practices using the U.S. Green Building Council’s LEED program or a similar system.”

### Albemarle Comprehensive Plan Goal:

“Creating and preserving safe, high quality and sustainable neighborhoods.”

# System: Housing & Built Environment

## Indicator: Overcrowding

The number of occupants per room is an indicator of overcrowding. A dwelling unit with an average of more than one occupant per room is considered to be overcrowded<sup>2</sup>. For this calculation the total number of rooms in a dwelling unit includes all rooms except kitchens and bathrooms. Overcrowding has been correlated with unfavorable physical and mental health outcomes, as well as greater risk for household accidents<sup>3</sup>.

The percent of housing units experiencing overcrowding in our area is 1.7%, slightly below the state average of 1.9%.

|   | Charlottesville | Albemarle | C-A Combined | Virginia |
|---|-----------------|-----------|--------------|----------|
| Number of housing units with more than one occupant per room  | 431             | 516       | 947          | 55,319   |
| Percent of housing units with more than one occupant per room | 2.5%            | 1.4%      | 1.7%         | 1.9%     |

Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Continue to maintain, improve and grow the city’s housing stock.”

### Albemarle Comprehensive Plan Goal:

“Promoting safe, decent, and affordable housing options for low- to moderate-income residents of Albemarle County and those working in and desiring to reside in Albemarle County.”

<sup>2</sup> *Measuring Overcrowding in Housing*. US Department of Housing and Urban Development. September 2007. [http://www.huduser.org/publications/pdf/Measuring\\_Overcrowding\\_in\\_Hsg.pdf](http://www.huduser.org/publications/pdf/Measuring_Overcrowding_in_Hsg.pdf)

<sup>3</sup> Ibid.

## System: Housing & Built Environment

### Indicator: Housing Units Lacking Complete Kitchen or Plumbing Facilities

The prevalence of complete kitchen and plumbing facilities is an indicator of safe housing conditions. Complete kitchen and plumbing facilities are necessary for adequate health and sanitation.

Complete plumbing facilities are defined as (1) hot and cold running water, (2) a flush toilet, and (3) a bathtub or shower, all located inside the housing unit, though not necessarily in the same room<sup>4</sup>. Complete kitchen facilities are defined as (1) a sink, (2) a stove, and (3) a refrigerator, all located inside the housing unit, though not necessarily in the same room<sup>5</sup>.

The portion of homes in our area lacking complete plumbing facilities, at .3%, is lower than the state average of .5%. On the other hand the portion of homes lacking complete kitchen facilities in our region, at .9% is slightly higher than the state-wide rate of .7%. This could be due to a concentration housing oriented towards students which might not include a full kitchen.

|   | Charlottesville | Albemarle | C-A Combined | Virginia |
|---|-----------------|-----------|--------------|----------|
| Number of housing units lacking complete plumbing facilities  | 50              | 115       | 165          | 15,482   |
| Percent of housing units lacking complete plumbing facilities | 0.3%            | 0.3%      | 0.3%         | 0.5%     |
| Number of housing units lacking complete kitchen facilities   | 178             | 340       | 518          | 20,880   |
| Percent of housing units lacking complete kitchen facilities  | 1.0%            | 0.9%      | 0.9%         | 0.7%     |

Source: U.S. Census Bureau, 2008-2010 American Community Survey

#### Charlottesville Comprehensive Plan Goal:

“Continue to maintain, improve and grow the city’s housing stock.”

#### Albemarle Comprehensive Plan Goal:

“Promoting safe, decent, and affordable housing options for low- to moderate-income residents of Albemarle County and those working in and desiring to reside in Albemarle County.”

<sup>4</sup> American Community Survey 2010 Subject Definitions.

[http://www.census.gov/acs/www/Downloads/data\\_documentation/SubjectDefinitions/2010\\_ACSSubjectDefinitions.pdf](http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2010_ACSSubjectDefinitions.pdf).

<sup>5</sup> Ibid.



## **System: Transportation**

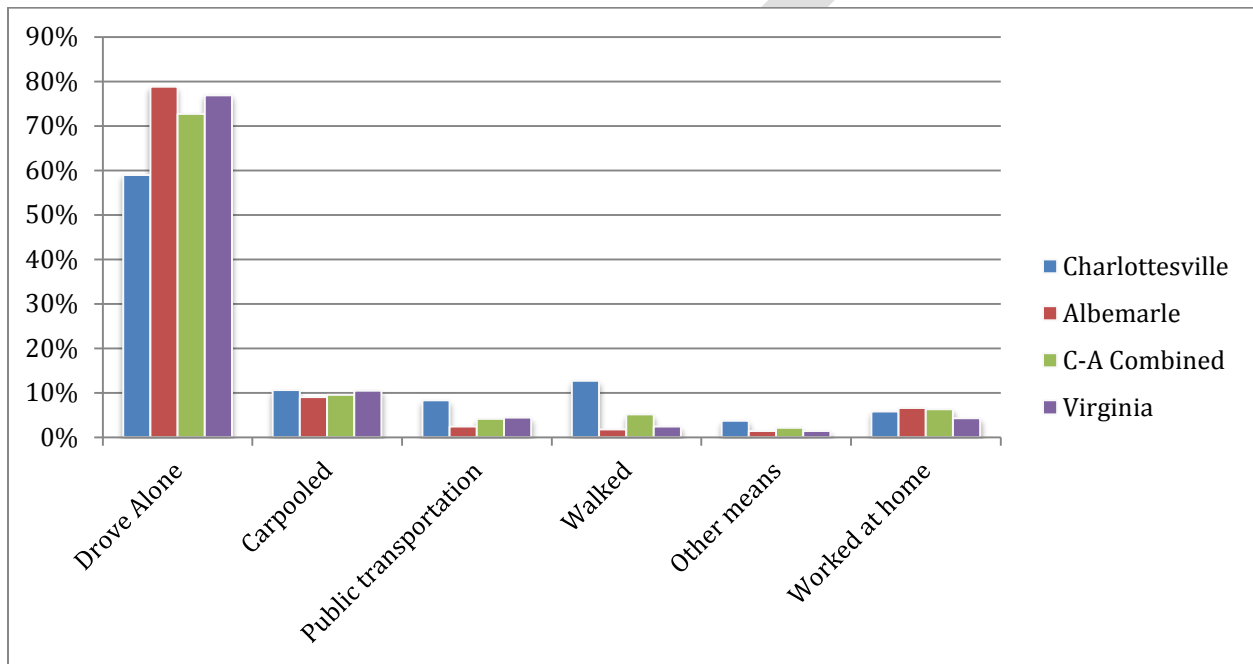
**The Transportation System serves the community by enabling all citizens to access jobs, resources, and amenities in an efficient manner at a reasonable cost, and supports the area's quality of life. Access to various types of multimodal options provides citizens with transportation choices.**

# System: Transportation

## Indicator: Means of Transportation to Work

The percent of residents using the main transportation options to travel to works shows the balance of the area's transportation system.

73% of Charlottesville and Albemarle residents drove alone to work, lower than the statewide rate of 77%. A higher portion of Charlottesville and Albemarle residents walk to work or work at home than the state average.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Reduce the number of trips per person in motor vehicles, especially trips in vehicles occupied only by a driver, with a goal of reducing the percentage of people who drive alone as a means of transportation to work, to 50 percent by 2015.”

### Albemarle Comprehensive Plan Goal:

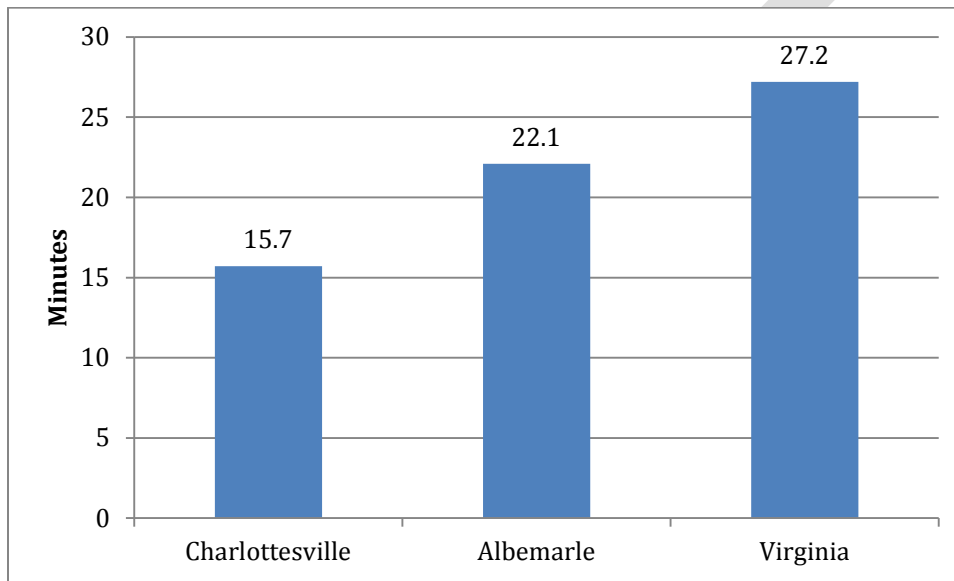
“To protect air quality, promote alternatives to single-occupancy vehicles, such as pedestrian sidewalks, bicycle use, ride-sharing, and public transit services.”

# System: Transportation

## Indicator: Average Commute Time

Average commute time measures the average amount of time workers spend travelling to work by all modes of transportation.

The average commute time in both Charlottesville and Albemarle is lower than the state-wide average.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Efficiently manage the capacity of the arterial roadway network, relieving congestion and increased traffic on local streets.”

### Albemarle Comprehensive Plan Goal:

“Encourage (1) the reduction of traffic congestion, pollution and energy consumption, vehicular miles traveled and (2) increased mobility of the general public, especially, handicapped and the disadvantaged, through the increased use of public transportation, car/vanpooling and park and ride lots.”

# System: Transportation

## Indicator: Average Traffic Delay per Capita

Delay per capita measures the time lost per person, per day due to congestion. An increase can alert to the need for additional capacity on the roadways or alternative modes of transportation.

This figure applies to the entire Metropolitan Planning Organization jurisdiction (Charlottesville, Albemarle, Greene, Nelson, Louisa, and Fluvanna). This figure is on a per capita basis which includes all local residents, whether or not they drive.

|                                |
|--------------------------------|
| <b>Travel Delay per Capita</b> |
| 3.65 Minutes                   |

*Source: MPO 2007 Travel Demand Model*

### **Charlottesville Comprehensive Plan Goal:**

“Efficiently manage the capacity of the arterial roadway network, relieving congestion and increased traffic on local streets.”

### **Albemarle Comprehensive Plan Goal:**

“Encourage (1) the reduction of traffic congestion, pollution and energy consumption, vehicular miles traveled and (2) increased mobility of the general public, especially, handicapped and the disadvantaged, through the increased use of public transportation, car/vanpooling and park and ride lots.”

# System: Transportation

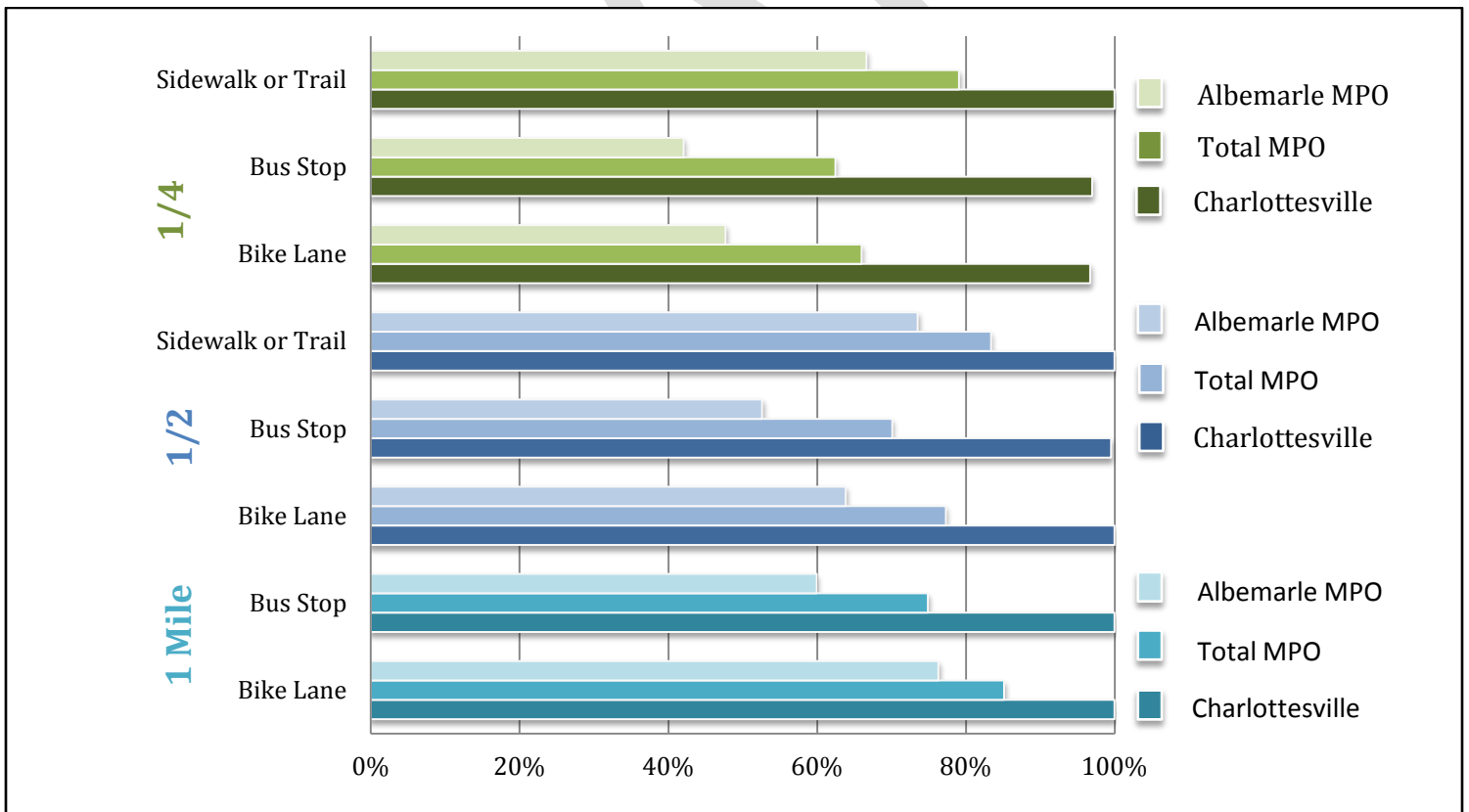
## Indicator: Proximity Sidewalk, Bike Lane, and Public Transit

The portion of the population within various distances to a sidewalk or trail, bus stop, and bike lane indicates the diversity of the transportation system and how well it is integrated into the community.

A widespread bike system can encourage higher public use, and enhance recreational and alternative commuting opportunities for residents. The portion of the population within various distances to sidewalks indicates a neighborhood's walkability. Sidewalks encourage walking and promote safety by separating vehicle travel lanes from pedestrians. The portion of the population within various distances of a bus stop evaluates proximity to public transportation, indicating how many residents have reasonable access to the system.

The areas examined by the chart below include Charlottesville, the Albemarle portion of the regional Metropolitan Planning Organization (MPO), and the total MPO region, which includes both Charlottesville and a portion of Albemarle County.

98 percent of Charlottesville residents live within a half mile of a bike, pedestrian, or transit facility. More than half of Albemarle residents live within a quarter mile of a sidewalk or trail.



Source: City of Charlottesville; Albemarle County

**Charlottesville Comprehensive Plan Goal:**

“Increase regional access to transit for County-City travel.”

“Establish connectivity between residences and commercial destinations that are located in close proximity to one another to promote the option of walking and biking rather than driving.”

**Albemarle Comprehensive Plan Goal:**

“Make all residential and commercial development as transit -ready and transit-worthy as possible.”

“Provide a comprehensive and coordinated regional bicycling and walking system.”

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# System: Transportation

## Indicator: Public Transit Ridership

The Charlottesville-Albemarle area is served by three major public transportation providers. Charlottesville Area Transit (CAT) provides public bus service in the greater Charlottesville region. University Transit Service provides service for UVA students as well as the general public. JAUNT is a regional transportation provider serving Charlottesville and five surrounding counties. In Charlottesville and the urban portion of Albemarle County, JAUNT serves mainly as a demand-responsive service for people with disabilities, as a complement to the CAT system.

Ridership describes the total number of point to point rides taken. Many users take multiple rides per day.

Over 5.2 million trips in the Charlottesville Albemarle area are taken using public transportation annually.

| <b>System</b>                                      | <b>Ridership</b><br><i>(FY2011 except where noted)</i> |
|--|--|
| University Transit Service (CY2010)                | 2,711,328  |
| Charlottesville Area Transit                       | 2,312,126  |
| JAUNT (Charlottesville and Albemarle Origin Trips) | 232,024  |
| <b>Total</b>                                       | <b>5,255,478</b>                                       |

*Source: CAT Transit Development Plan FY 2012-2011; JAUNT Annual Report FY10-11; University Transit Service*

### **Charlottesville Comprehensive Plan Goal:**

“Increase regional access to transit for County-City travel.”

### **Albemarle Comprehensive Plan Goal:**

“Make all residential and commercial development as transit –ready and transit-worthy as possible.”

## System: Transportation

### Indicator: Number of Traffic Accidents

Number of accidents is a gauge of the safety of a transportation system. A healthy transportation network considers safety for all of its users, including automobile drivers, bicyclists, and pedestrians.

With 2,579 crashes in our region during 2010, or 2.8 per licensed driver, our rate of crashes exceeds the statewide average per driver.

### Traffic Accident Figures for 2010

| Number of Traffic Crashes | Charlottesville | Albemarle | C-A Combined | Virginia  |
|---------------------------|-----------------|-----------|--------------|-----------|
| Number of crashes         | 799             | 1,780     | 2,579        | 116,386   |
| Number of injuries        | 380             | 849       | 1,229        | 61,418    |
| Number of fatalities      | 2               | 13        | 15           | 740       |
| Licensed Drivers          | 26,468          | 65,928    | 92,396       | 5,569,524 |
| Crashes per 100 drivers   | 3.0             | 2.7       | 2.8          | 2.1       |

Source: Virginia DMV Highway Safety Office

### Charlottesville Comprehensive Plan Goal:

“Reduce speeding and cut-through traffic on local streets (where justified by data and not a detriment to emergency services) using a comprehensive, safety-focused approach that prioritizes efforts to address the greatest safety concerns first. Increase safer accommodations for pedestrians, bicyclists and citizens with disabilities while within existing roadway network.”

### Albemarle Comprehensive Plan Goal:

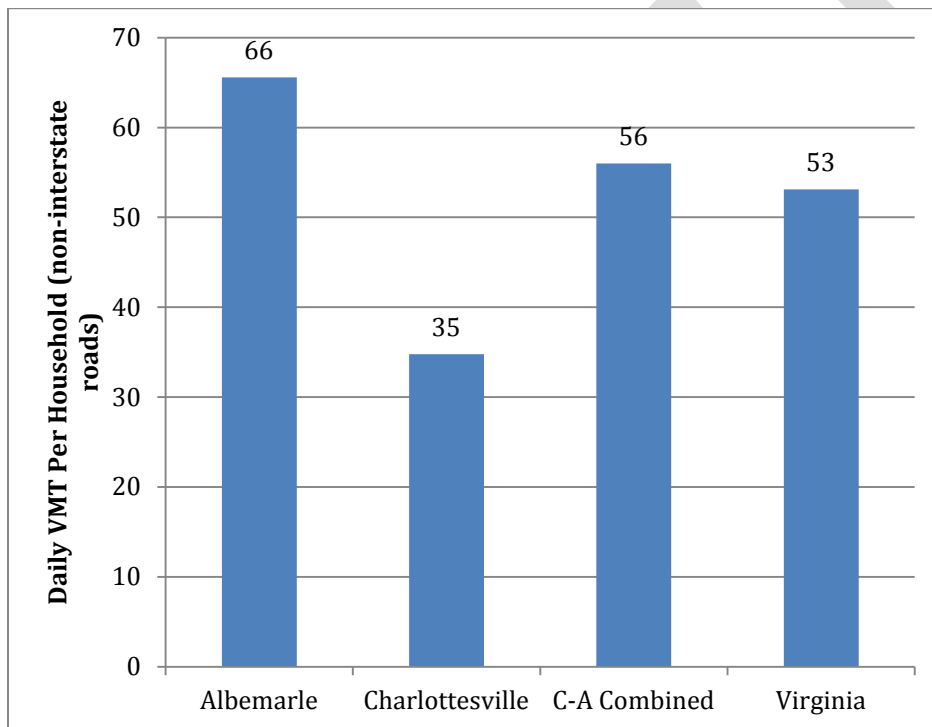
“Plan, establish, and maintain a comprehensive County transportation system which supports the growth management policy and provides for necessary public safety.”

## System: Transportation

### Indicator: Average Vehicle Miles Traveled per Household

Daily vehicle miles traveled (VMT) measures how many miles are traveled through an area each day. We analyzed this figure on a per household basis to understand the average vehicle miles traveled per household. In order to account for through traffic, this measurement removes interstate VMT to include only VMT on primary and secondary roads. This indicator is a measure of daily traffic volume, which has a direct impact on quality of life.

Albemarle County has a high average VMT compared to state rates. The combined figure for Charlottesville and Albemarle is only slightly higher than the state average.



Source: VMT: Virginia Department of Transportation, 2010; household figures from U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Reduce the number of trips per person in motor vehicles, especially trips in vehicles occupied only by a driver, with a goal of reducing the percentage of people who drive alone as a means of transportation to work, to 50 percent by 2015. To achieve this, an increase in the percentage of trips by walking, biking, transit, and car pooling by enhancing incentives and opportunities to use other modes of transportation, exploring disincentives to drive alone, and altering land use patterns to facilitate use of nondriving modes of transportation will have to occur.”

**Albemarle Comprehensive Plan Goal:**

“Encourage (1) the reduction of traffic congestion, pollution and energy consumption, vehicular miles traveled and (2) increased mobility of the general public, especially, handicapped and the disadvantaged, through the increased use of public transportation, car/vanpooling and park and ride lots.”

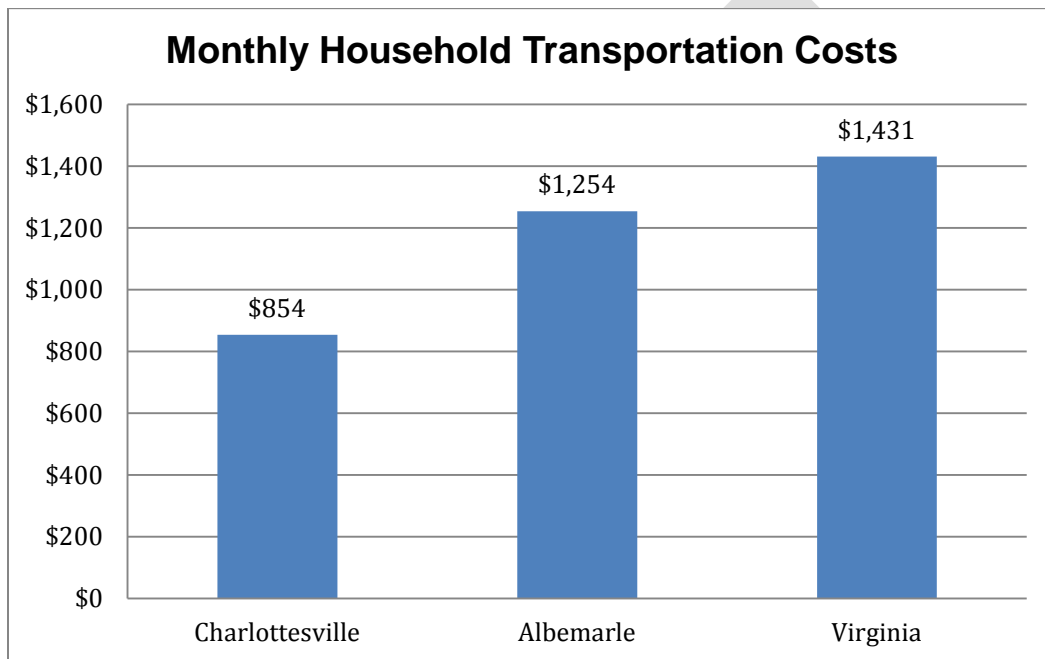
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## System: Transportation

### Indicator: Monthly Household Transportation Costs

Monthly household transportation costs include the costs of vehicle ownership, maintenance, and operating costs (fuel), as well as the cost of taking public transit. Transportation is typically the largest category of household expenditures after housing.

On average, households in Charlottesville and Albemarle spend less per month on transportation than the average Virginia household.



Source: Center for Neighborhood Technology (reflecting gas price of \$3.65)

## **System: Economy**

**The Economy System serves the community by providing a diverse and resilient economic base to meet the needs of a growing and dynamic community.**

## System: Economy

### Indicator: Employment by Industry

A diverse economic base, characterized by the presence of a range of industries, can help an area withstand changes in the global and national economy and provide economic stability.

The figures below represent the civilian employed population over 16.

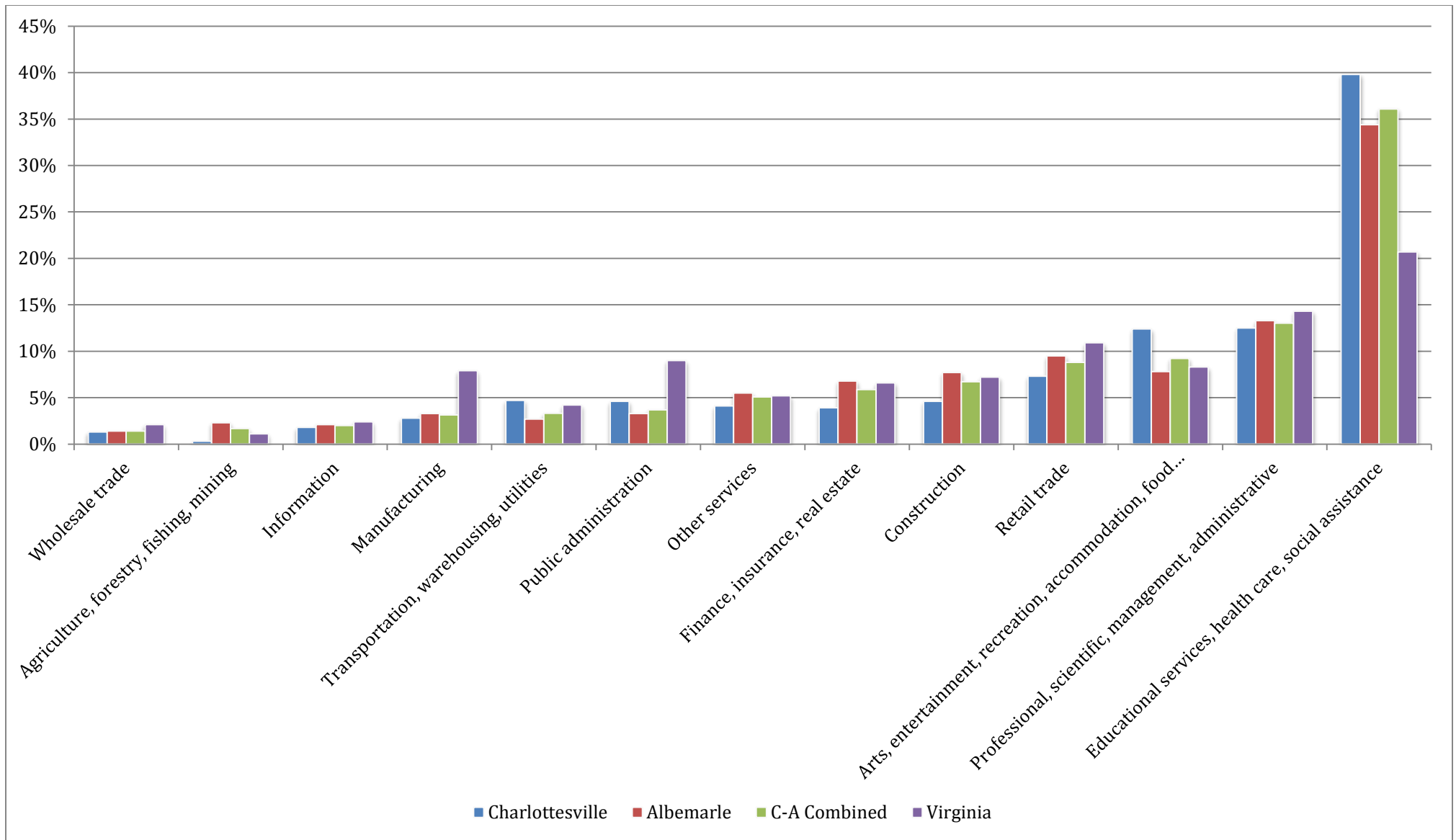
Education, health care and social service industries employ the greatest number of people in the Charlottesville-Albemarle region. These industries combined provide 35% of jobs in our area, considerably higher than the state-wide average of around 20%. Our region has fewer jobs in manufacturing and public administration than the state average.

### Charlottesville Comprehensive Plan Goal:

“Build partnerships with private sector groups in order to facilitate the completion of significant development opportunities.”

### Albemarle Comprehensive Plan Goal:

“Increase diversity in business and industry which will accommodate a variety of skill/educational levels, and provide for a diversified tax base, in particular to reduce the tax burden borne by residential property owners.”



Source: U.S. Census Bureau, 2008-2010 American Community Survey

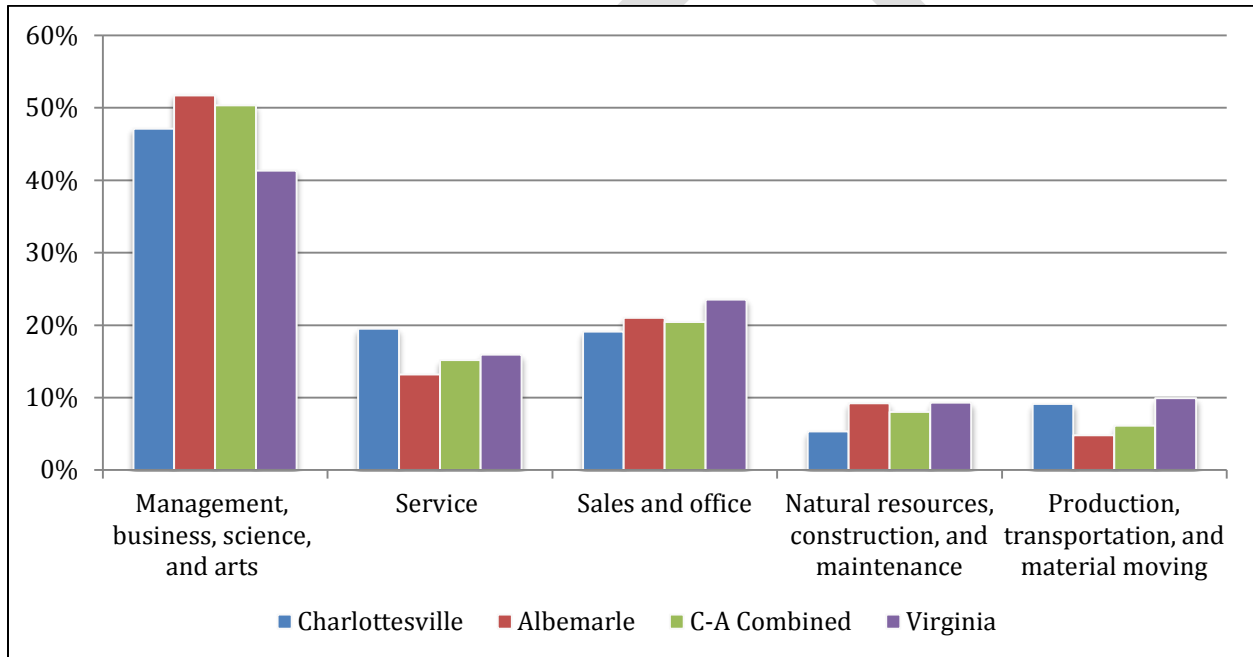
# System: Economy

## Indicator: Employment by Occupation

Economic diversification by occupation ensures that opportunities exist for residents with varying skills and education levels. As well, providing diverse opportunities by occupation allows workers to advance in their career while remaining in the area.

The figures below represent the civilian employed population over 16.

Management, business, science and the arts are the most common occupations in our area. Half of workers in our region are engaged in these types of occupations, higher than the state-wide rate of 41%.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Build and strengthen partnerships with local organizations to create meaningful workforce development programs.”

### Albemarle Comprehensive Plan Goal:

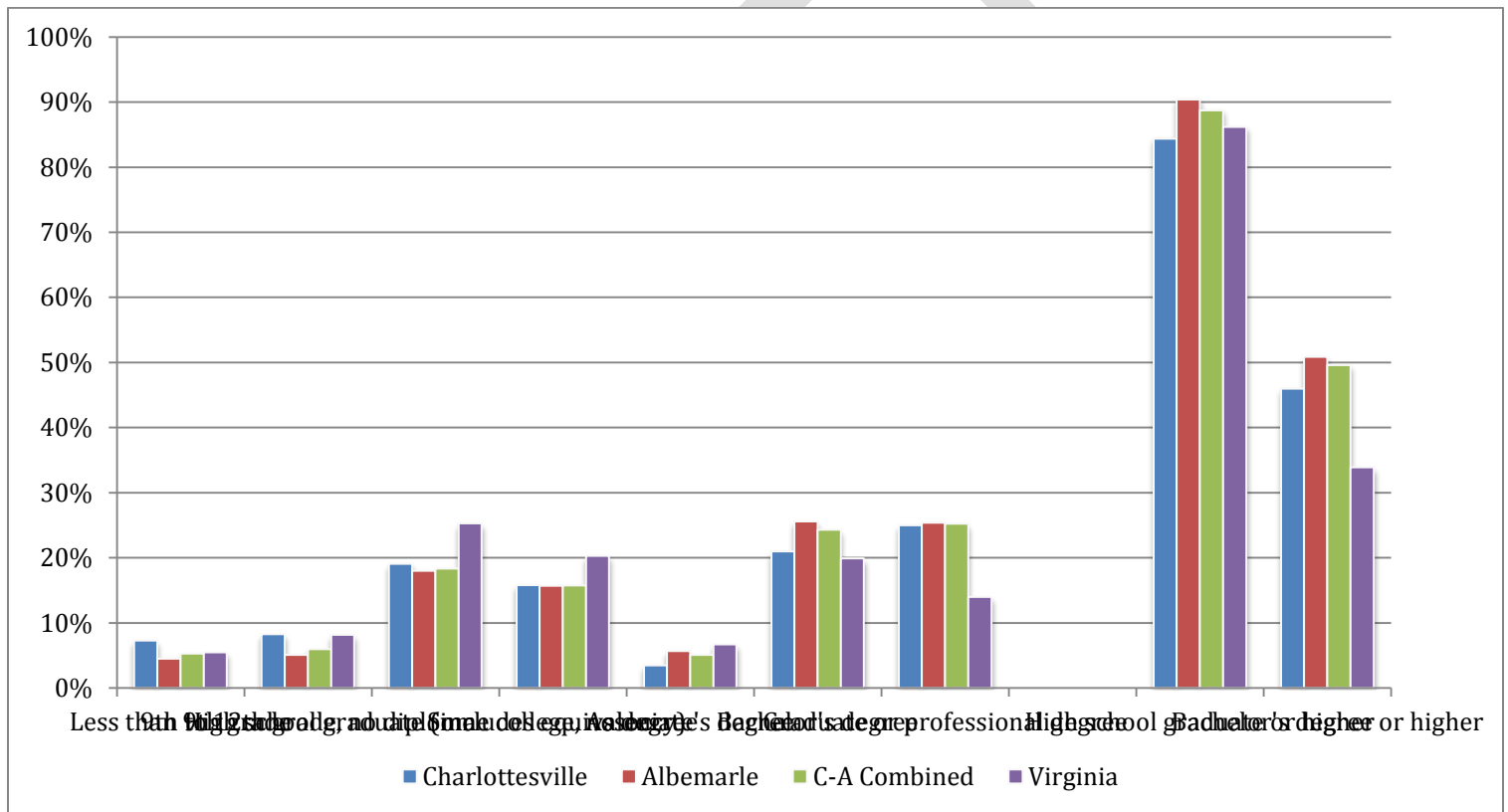
“Maintain a strong and sustainable economy benefiting County citizens and existing businesses and providing diversified economic opportunities.”

# System: Economy

## Indicator: Educational Attainment

Educational attainment suggests the type of employment the local workforce is equipped to carry out. Higher education attainment levels would indicate a workforce is prepared for high-skill, high-wage jobs.

Data suggests that our region is highly educated. Of Charlottesville and Albemarle residents over age 25, 89% have a high school degree, compared with 86% statewide. Of the same group, 50% have a bachelor's degree or higher compared with 34% at the state level.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

### Charlottesville Comprehensive Plan Goal:

“Create scholarship program to encourage workforce development in key areas.”

### Albemarle Comprehensive Plan Goal:

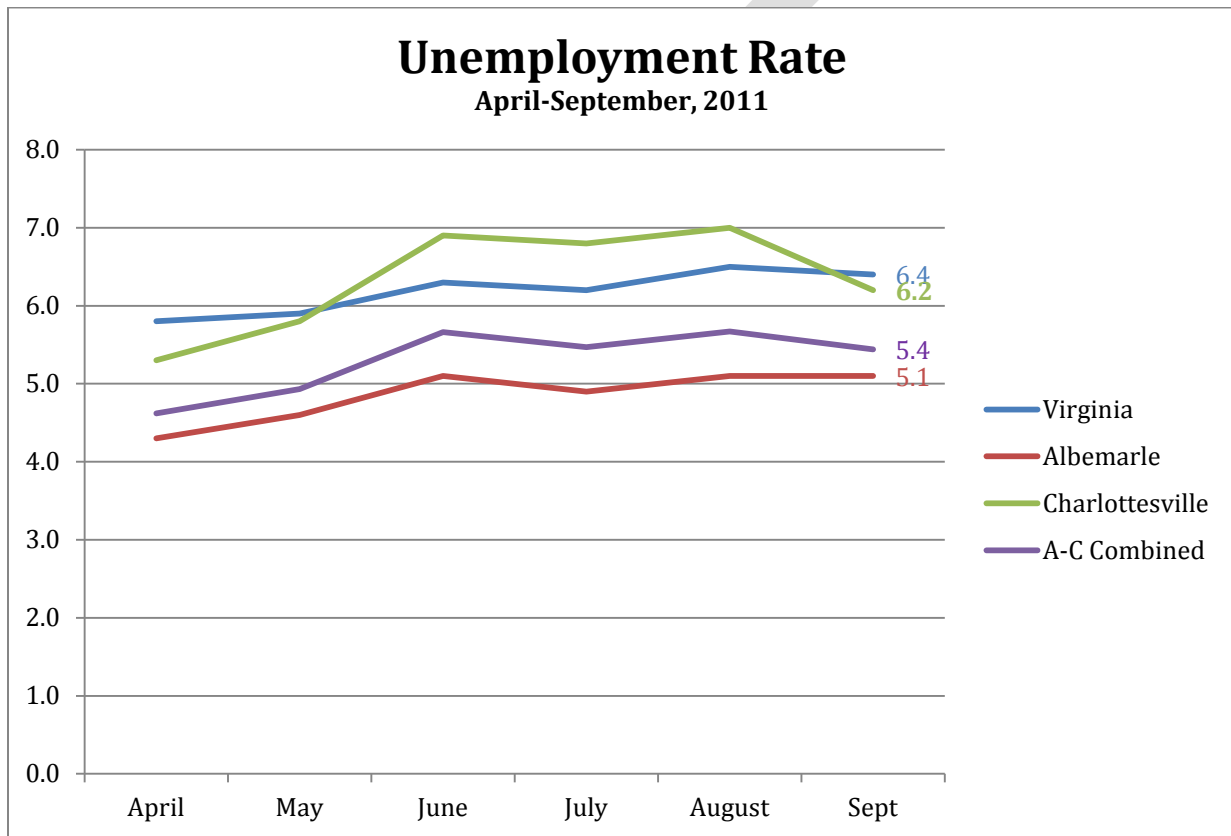
“Recognize that the most fundamentally sound work force is one that has basic education and good work habits.”

## System: Economy

### Indicator: Unemployment Rate

The unemployment rate demonstrates whether there is a match between employees seeking work and available job opportunities. Low unemployment contributes to stability of the local economy.

At 5.4% the unemployment rate in the Albemarle Charlottesville region is lower than the statewide rate of 6.4%.



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics (via Virginia Employment Commission)

#### Charlottesville Comprehensive Plan Goal:

“Build and strengthen partnerships with local organizations to create meaningful workforce development programs.”

#### Albemarle Comprehensive Plan Goal:

“Increase support to initiatives that support employment of the local labor force, rather than heavy reliance on relocated workers.”

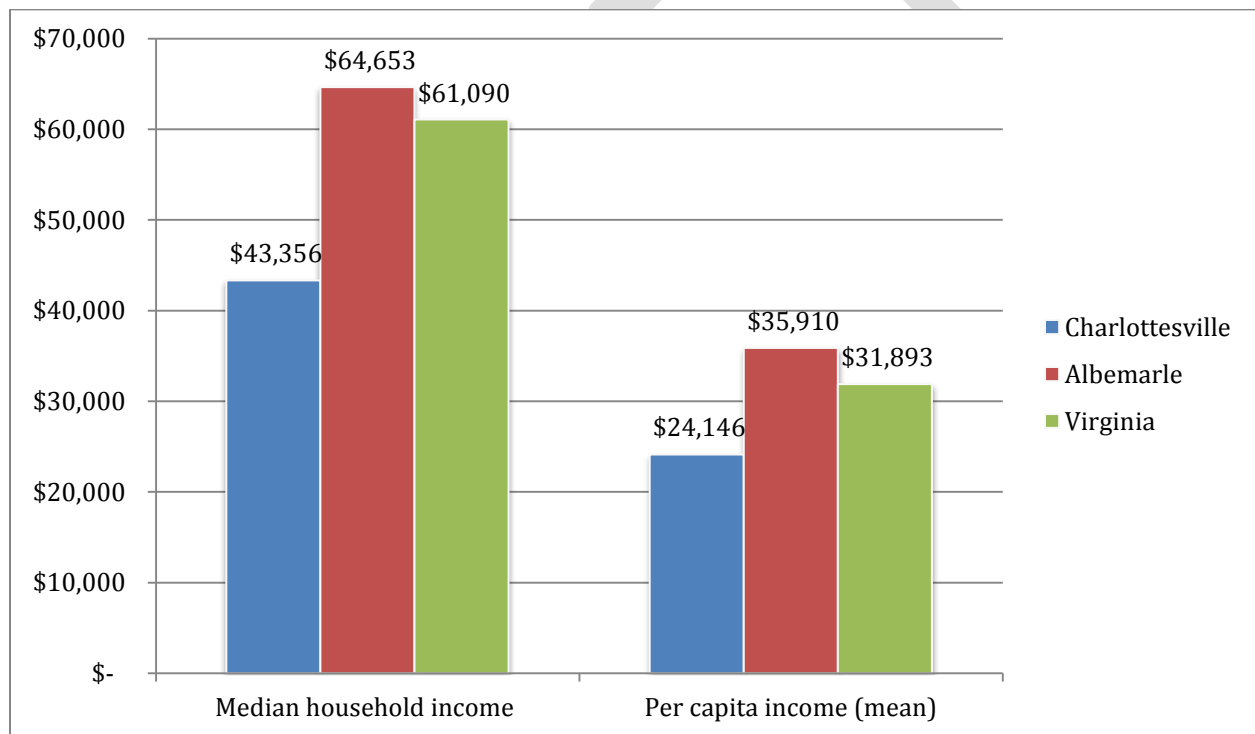
## System: Economy

### Indicator: Median Household and Per Capita Income

Median household income and per capital income are indicators of the average wage levels for the area. A higher median income can suggest greater financial stability of households in the area.

Median household income represents the point on the range of household incomes at which half of incomes are lower and half are higher. Per capita income represents a mean (average) of all income in the jurisdiction divided among the total population of that jurisdiction (whether or not they are employed and including children).

Median household income in Albemarle is slightly higher than the state average, while the equivalent figure for Charlottesville is about 30% lower.



Source: U.S. Census Bureau, 2008-2010 American Community Survey

#### Charlottesville Comprehensive Plan Goal:

“Build and strengthen partnerships with local organizations to create meaningful workforce development programs.”

#### Albemarle Comprehensive Plan Goal:

“Increase work force development opportunities, to further career-ladder opportunity and higher wages.”

## System: Economy

### Indicator: Annual New Business Creation

The rate of new business creation indicates the level of local entrepreneurial activity. Local businesses are often created in response to community needs and thus have the ability to respond to local conditions and enhance quality of life. This figure also speaks to the availability of financial resources and lending sources.

### New Startup Firms Established in 2010

| Albemarle | Charlottesville | C-A Combined | Virginia |
|-----------|-----------------|--------------|----------|
| 130       | 67              | 197          | 10,502   |

Source: Virginia Employment Commission, Quarterly Census of Employment and Wages (QCEW)

### Charlottesville Comprehensive Plan Goal:

“Work to better capture entrepreneurial startup activity within the City. Generate and sustain successful small businesses.”

### Albemarle Comprehensive Plan Goal:

“Increase local business development opportunities. Support and coordinate with existing entities that assist new small, locally-owned, local agricultural ventures, minority businesses and micro-enterprises in their start-up and early operation efforts.”

# System: Economy

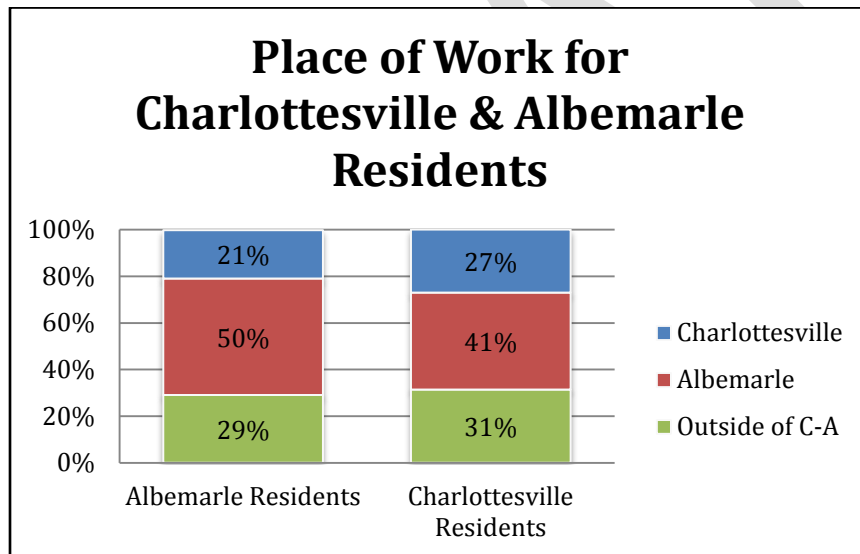
## Indicator: Commuting Patterns

The number of Charlottesville and Albemarle County workers who live outside of the area can indicate a mismatch between the cost of living and average wages in job centers, personal choice related to housing, family or schools, lack of adequate jobs in the community in which they live, or a preferred job in this location.

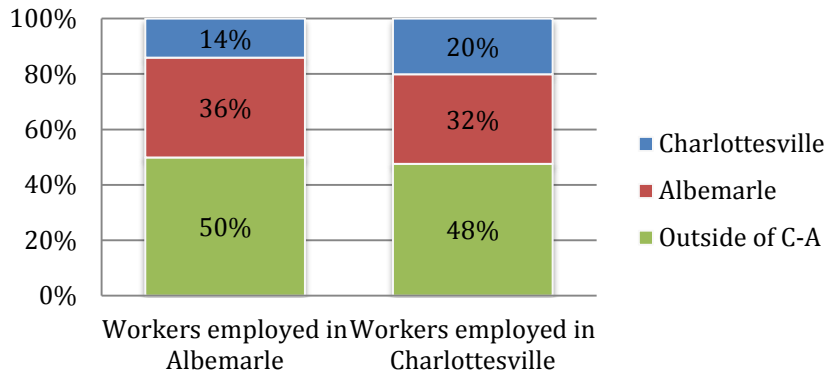
The number of residents with a job outside of Charlottesville and Albemarle County can indicate a mismatch between available jobs and the skills of the resident workforce, telecommuting, or a preferred job in a different location.

The charts below note the number of residents commuting outside of their locality of residence for work. The University of Virginia is considered to be located in Albemarle County.

About 30% of those living in Charlottesville and Albemarle commute outside the region for employment. About 50% of those employed in Charlottesville and Albemarle live outside of these two localities. These two trends suggest Charlottesville-Albemarle's role as a regional employment center, as more workers commute into the region than out of it for work.



## Place of Residence for Charlottesville & Albemarle Workers



Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2009)

### **Charlottesville Comprehensive Plan Goal:**

“Promote land use that maintains & enhances the City's role as a regional market place, without sacrificing the quality of life & environment.”

### **Albemarle Comprehensive Plan Goal:**

“Recognize the County's place in the regional economy.”

## System: Economy

### Indicator: Economic Impact of Tourism

Tourists visit our community to appreciate the creative, historic, scenic, and natural amenities of the area. This indicator measures how tourism contributes to the strength and diversification of the local economy.

Tourism is responsible for over 4,800, or 6.5% of all jobs in our region. Travel-related expenditures account for nearly \$500M spent in the region.

|                     | Albemarle      | Charlottesville | A-C Combined   | Virginia          |
|---------------------|----------------|-----------------|----------------|-------------------|
| Tourist spending    | \$ 274,411,041 | \$ 174,898,397  | \$ 449,309,438 | \$ 18,893,241,576 |
| Travel-related jobs | 2,832          | 2,031           | 4,863          | 203,734           |

Source: Virginia Tourism Corporation, 2010 Locality Economic Impact Estimate

### Charlottesville Comprehensive Plan Goal:

“Increase tourism to help expand the positive economic impact visitors have on the City.”

### Albemarle Comprehensive Plan Goal:

“Increase the promotion of tourism focused on the rural, agrarian, and historical resources of the County.”

# System: Economy

## Indicator: Real Estate Tax Base

The real estate tax base indicates the percentage of real estate tax revenue generated by residential versus commercial or other forms of property. A diverse tax base will include a mix of revenue from residential and other types of real estate, so that homeowners are not overburdened and a municipality collects adequate funds to provide for public services.

### Tax Real Property - Assessed Values by Sector, FY2010

|                 | Residential | Commercial/Industrial<br>/Agricultural/Other |
|-----------------|-------------|--|
| Charlottesville | 66%         | 34%  |
| Albemarle       | 73%         | 27%  |

Source: City of Charlottesville; Albemarle County

### Charlottesville Comprehensive Plan Goal:

“Increase diversity in business and industry which will accommodate a variety of skill/educational levels, and provide for a diversified tax base, in particular to reduce the tax burden borne by residential property owners.”

### Albemarle Comprehensive Plan Goal:

“Promote land use that maintains & enhances the City's role as a regional market place, without sacrificing the quality of life & environment.”

## **System: Community & Neighborhoods**

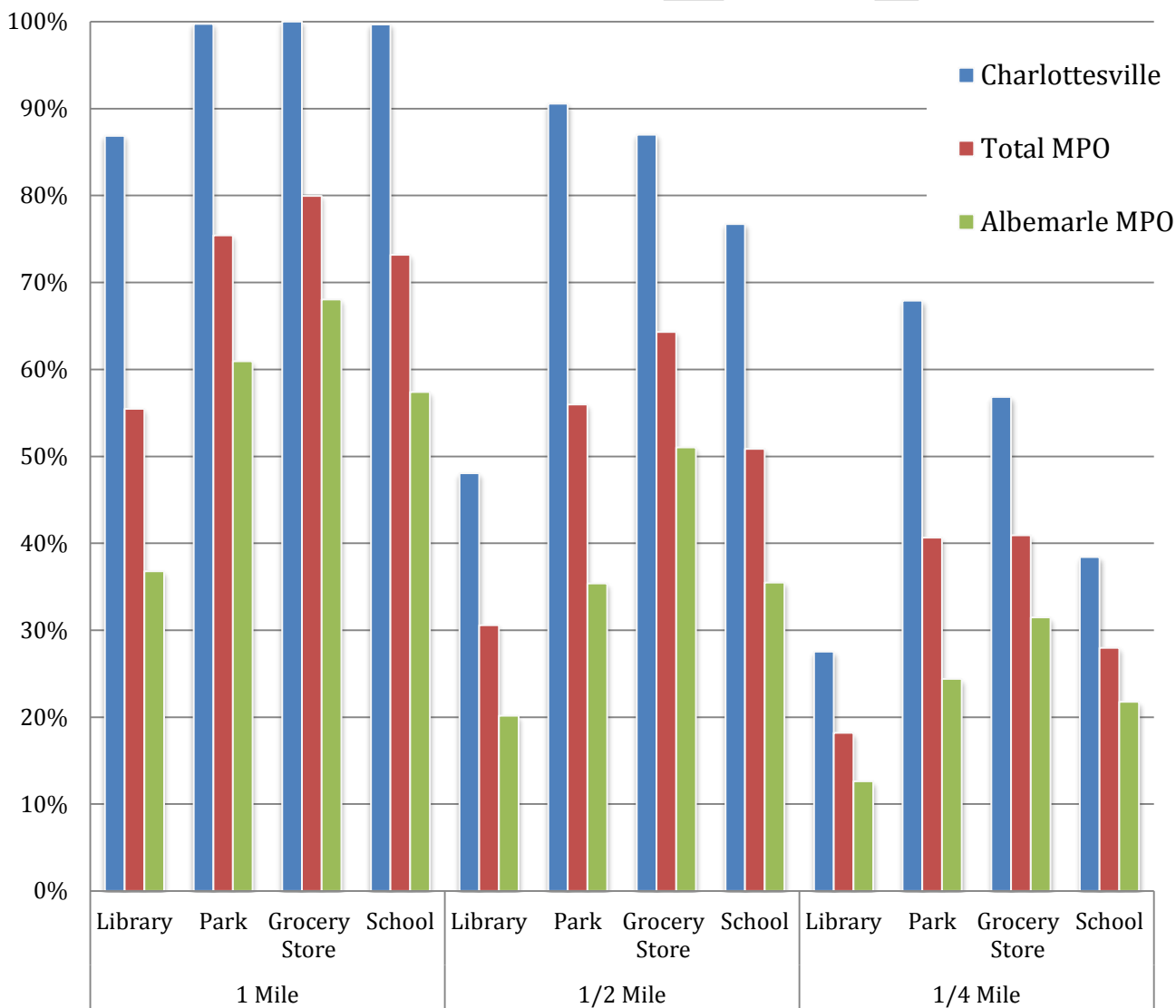
**The Community and Neighborhood System captures various factors that make people choose to live in a specific location. This System includes quality of life elements of a community, access to community resources, the health of the community, the involvement level of members of the community and the integration between a varied array of community features.**

# System: Community & Neighborhoods

## Indicator: Proximity to Neighborhood Resources

This indicator measures the population’s proximity to several key neighborhood resources: schools, parks, libraries, and grocery stores. Proximity is measured at three levels: a quarter-mile, half-mile and one mile. These distances represent walkable or bikeable distances for populations with varying levels of activity or, at one mile, a short 5-minute drive. The areas measured include the City of Charlottesville, the portion of Albemarle County in the Metropolitan Planning Organization (MPO) area (generally urban Albemarle) and the entire MPO region (Charlottesville and urban Albemarle).

Access to the natural environment allows residents a safe way to exercise, engage with nature, and participate in leisure and recreational activities. Proximity to a grocery store is especially important in ensuring access to fresh food for populations who may not have use of a car. Libraries and schools provide access to education and can serve as centers of community engagement.



Source: City of Charlottesville; Albemarle County

### **Charlottesville Comprehensive Plan Goals:**

“Establish connectivity between residences and commercial destinations that are located in close proximity to one another to promote the option of walking & biking rather than driving.”

“Create balance and accessibility for all types of parks and facilities across the City.”

“Examine changes to the ordinance to include areas for uses such as grocery and drug stores, in areas proximate to the Downtown.”

### **Albemarle Comprehensive Plan Goals:**

“Provides for neighborhoods to have a designated center to bring diverse and continuous activity to a neighborhood.”

“Locate library facilities in a manner that provides the most convenient access possible to residents within the designated service area.”

“Establish service areas for existing schools and identify those geographic areas not effectively served as the basis for identifying overall school facility needs.”

“Recognize the value of urban open spaces (including among others: greenways, greens, squares, courts, plazas, urban parks and playgrounds, street medians, and tree lawns between street and sidewalk) as a structuring element in emerging urban areas, and as a part of a larger network of urban open space which may be linked to the rural open space system.”

# System: Community & Neighborhoods

## Indicator: Designated Historic Structures and Districts

This indicator demonstrates the number of historic buildings and historic districts within the area, as designated by the Virginia Department of Historic Resources. It represents the local level of investment in community history and preservation.

There are a total of 137 designated historic structures and 16 historic districts in Charlottesville and Albemarle.

### Number of State Designated Historic Structures and Districts

|                 | Structures | Historic Districts |
|-----------------|------------|--------------------|
| Charlottesville | 56         | 9                  |
| Albemarle       | 81         | 7                  |

Source: Virginia Department of Historic Resources

### Charlottesville Comprehensive Plan Goal:

“Seek to increase the number of rehabilitated and re-used historic structures. Provide the fullest protection to the City of Charlottesville’s historic resources.”

### Albemarle Comprehensive Plan Goal:

“Pursue additional protection measures and incentives to preserve Albemarle’s historic and archaeological resources in order to foster pride in the County and maintain the County’s character.”

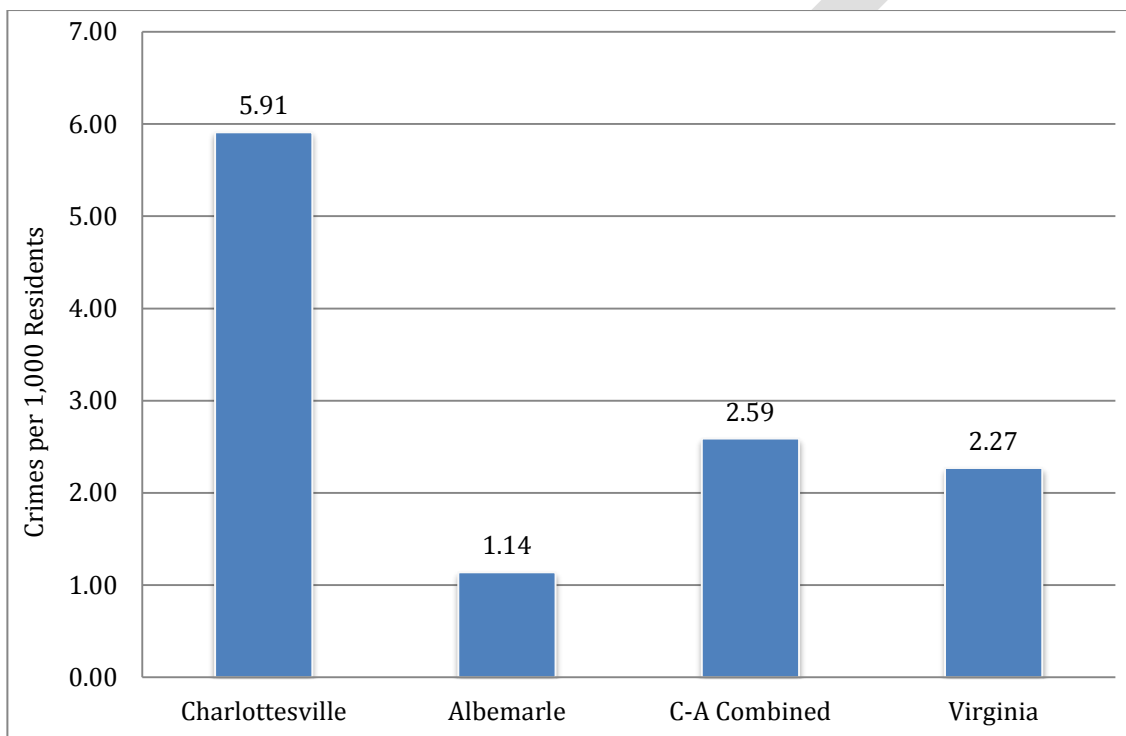
# System: Community & Neighborhoods

## Indicator: Violent Crime Rate

The violent crime rate is a measure of community safety. A safe neighborhood enhances individual well-being, fosters community pride and is attractive to new businesses and residents.

Figures are expressed here as the number of crimes per 1,000 residents, using data reported in 2009.

The area's violent crime rate of 2.59 crimes per 1,000 residents is higher than the state average of 2.29 crimes per 1,000 residents.



Source: FBI Uniform Crime Reports, 2009

### Charlottesville Comprehensive Plan Goal:

“Provide efficient and effective police protection. Secure adequate facility space, equipment, and staff for the Police Department and its operations to continue providing safety and protection to Charlottesville residents.”

### Albemarle Comprehensive Plan Goal:

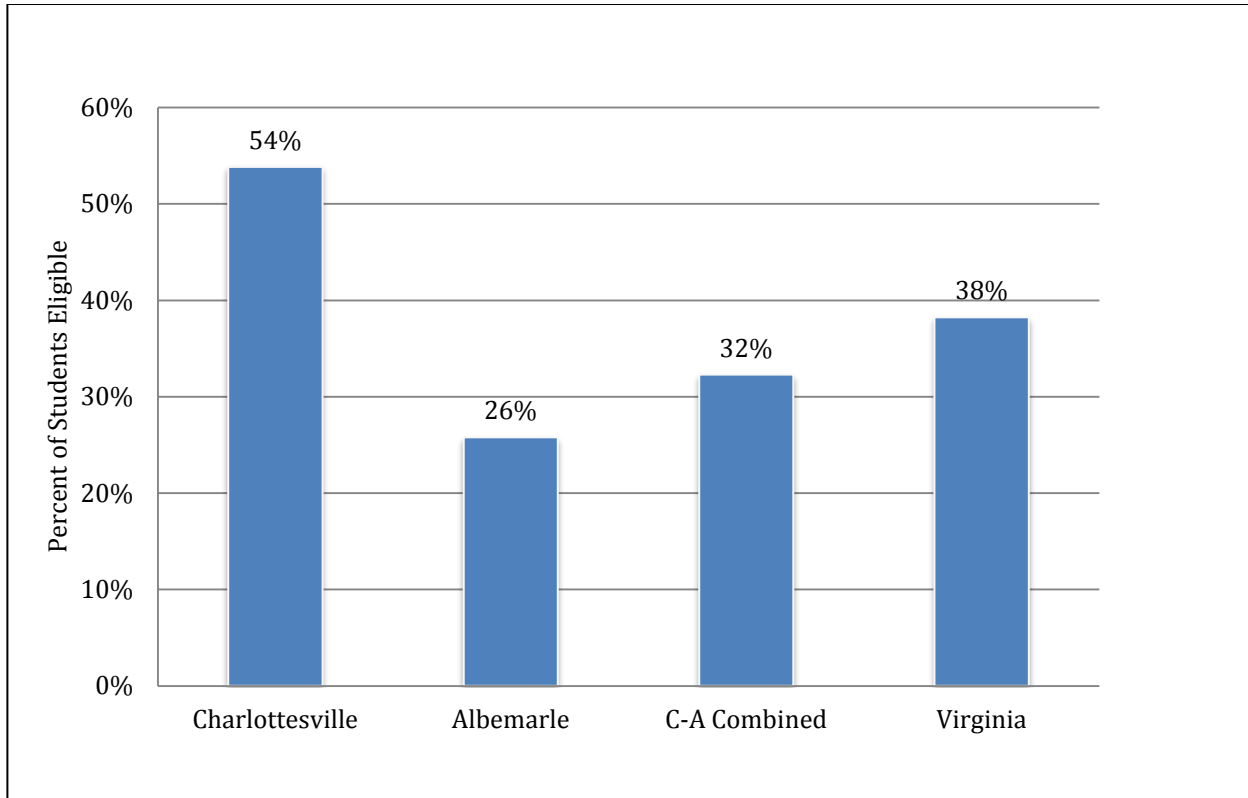
“Achieve an average response time of five minutes or less to all emergency calls 85 percent of the time in the designated Development Areas. Achieve an average response time of ten minutes or less to all emergency calls in the Rural Area of the County.”

## System: Community & Neighborhoods

### Indicator: Free and Reduced Lunch Program Eligibility

Counting the number of children within the public school system that are eligible for the Free or Reduced Lunch Program is one method of gauging an area's poverty rate.

About a third of school-aged children in Charlottesville and Albemarle combined are eligible for free or reduced lunch, slightly below the state rate of 38%.



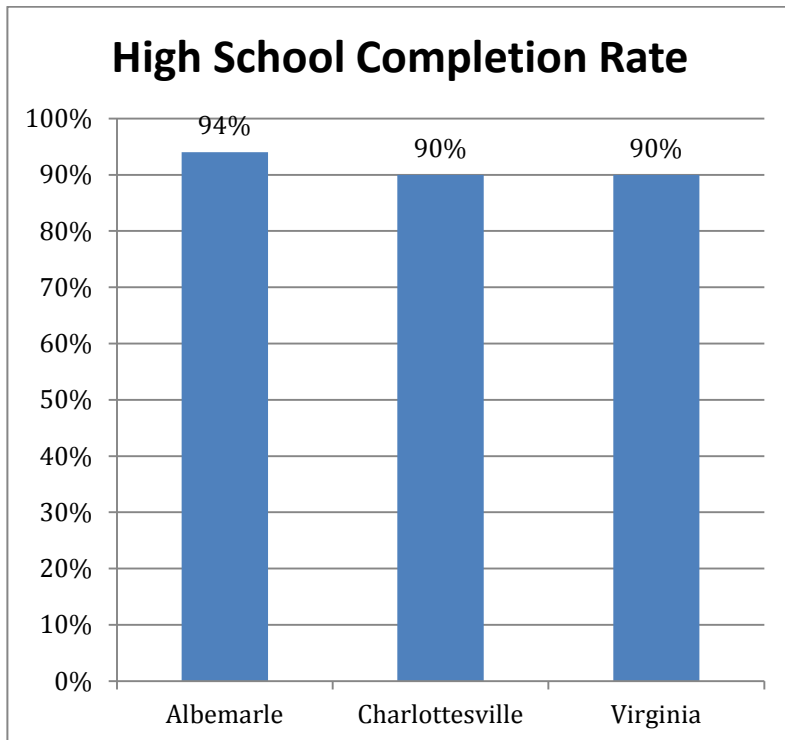
Source: Virginia Department of Education, 2010-2011 School Year

# System: Community & Neighborhoods

## Indicator: High School Completion Rate

This indicator measures the effectiveness of our public education systems by comparing local completion rates with the state's average. High quality education is important for communities' future success.

The high school completion rate describes the portion of students graduating from high school or passing the General Educational Development (GED) test within four years of entering 9<sup>th</sup> grade.



Source: Virginia Department of Education

### Charlottesville Comprehensive Plan Goal:

“Improve and maintain Charlottesville’s public school facilities to continue providing an excellent education to Charlottesville students.”

### Albemarle Comprehensive Plan Goal:

“Maintain the relationship of high quality schools and public services and an outstanding level of natural and cultural amenities to positive economic development, and maintain these attributes.”

# System: Community & Neighborhoods

## Indicator: Voting Rate

The voting rate is an indicator of civic engagement. Voting is a primary way citizens participate in, and influence, our political system.

Because turnout rates can vary year to year based on public interest in elections at the local and national level, figures are provided for the most recent general election as well as the most recent presidential election (2008). The voter turnout rate describes the portion of registered voters submitting a ballot in a given election.

The voting rate in the Charlottesville-Albemarle area is above or on par with state voting rates in the elections reported below.

### Total Voter Turnout for November General Elections

|                        | 2011 | 2008 |
|------------------------|------|------|
| <b>Albemarle</b>       | 35%  | 76%  |
| <b>Charlottesville</b> | 26%  | 70%  |
| <b>C-A Combined</b>    | 33%  | 74%  |
| <b>Virginia</b>        | 28%  | 75%  |

Source: Virginia Board of Elections

## System: Community & Neighborhoods

### Indicator: Health Outcomes

Health outcomes indicate overall well-being in a community and can reflect access to health care, preventative health measures, level of physical activity and other risk factors such as smoking and obesity.

|                 | Total Deaths<br>per 1,000<br>Population | Infant Mortality<br>(infant deaths per<br>1,000 births) |
|-----------------|---|---|
| Charlottesville | 6.4                                     | 8.8   |
| Albemarle       | 7.5                                     | 4.6   |
| Virginia        | 7.4                                     | 7   |

Source: Virginia Department of Health

## **System: Natural Resources**

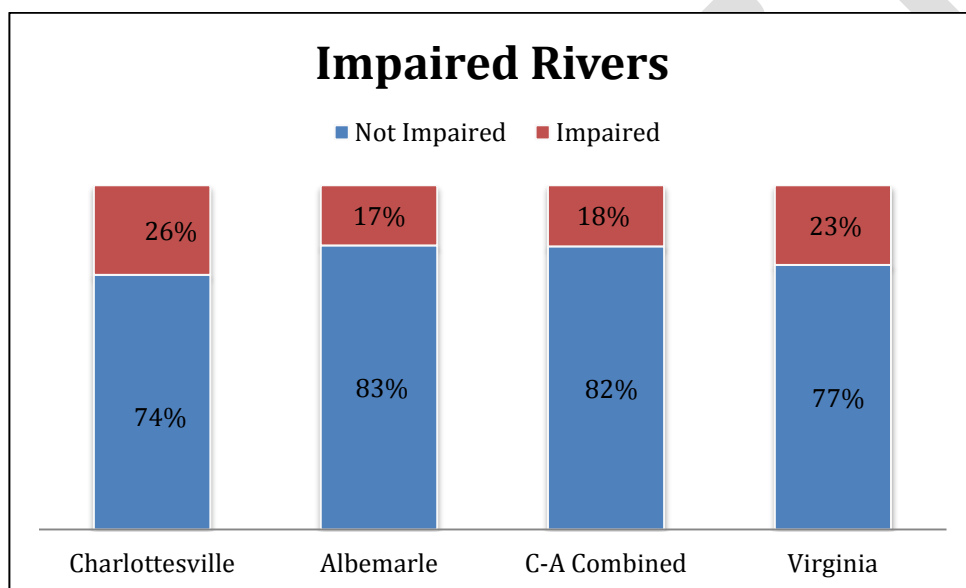
**The Natural Resources System serves the community by providing access to natural resources to meet our needs for clean air and water, land, and recreation. Maintaining the health of and conserving these vital resources ensures that the natural environment will continue to enhance the quality of life for the area.**

# System: Natural Resources

## Indicator: Water Quality

Water is an important natural resource as it provides for vital physical, sanitation, and recreational needs. Waters are considered impaired when monitored levels of bacteria, chemicals, and other indicators exceed federal and state clean water standards. In compiling this data, the Virginia Department of Environmental Quality draws on reports from numerous community organizations, including the local Streamwatch program which carries out monitoring in the Rivanna Watershed.

The data below shows that 18% of regional streams and rivers that have been assessed are considered impaired. This is lower than the state level of 23%.



Source: Virginia Department of Environmental Quality, 2010

### Charlottesville Comprehensive Plan Goal:

“Promote, protect and restore riparian (streamside) and stream ecosystems to protect habitat and water quality for people and animals.”

### Albemarle Comprehensive Plan Goal:

“Maintain the integrity of existing stream channels and networks for their biological functions and drainage. Protect the condition of state waters for all reasonable public uses and ecological functions. Restore degraded stream and wetland ecosystems where possible.”

# System: Natural Resources

## Indicator: Air Quality

Ozone is the primary pollutant that constitutes "smog". High levels of ozone cause damage to plants and affect human health by triggering asthma and other respiratory illnesses.

A monitor located in Albemarle County measures air quality for the Albemarle and Charlottesville area. The chart below lists the number of days for which the ozone level has exceeded national standard (75 parts per billion) for an eight-hour period or more. Before 2008 no monitor was present in the Albemarle-Charlottesville area.

| Monitored Ozone Level       | 2010 | 2009 | 2008 | 3 Year Average |
|-----------------------------|------|------|------|----------------|
| Days with 8-hour exceedence | 3    | 0    | 3    | 2              |

Source: Virginia Department of Environmental Quality (VDEQ)

### Charlottesville Comprehensive Plan Goal:

"Strategically continue, expand, and implement environmentally sustainable initiatives and measures that contribute to climate protection and support key actions outlined in the US Mayors Climate Protection Agreement."

### Albemarle Comprehensive Plan Goal:

"Achieve a sustainable community that meets the needs of the present without compromising the ability of future generations to meet their own needs."

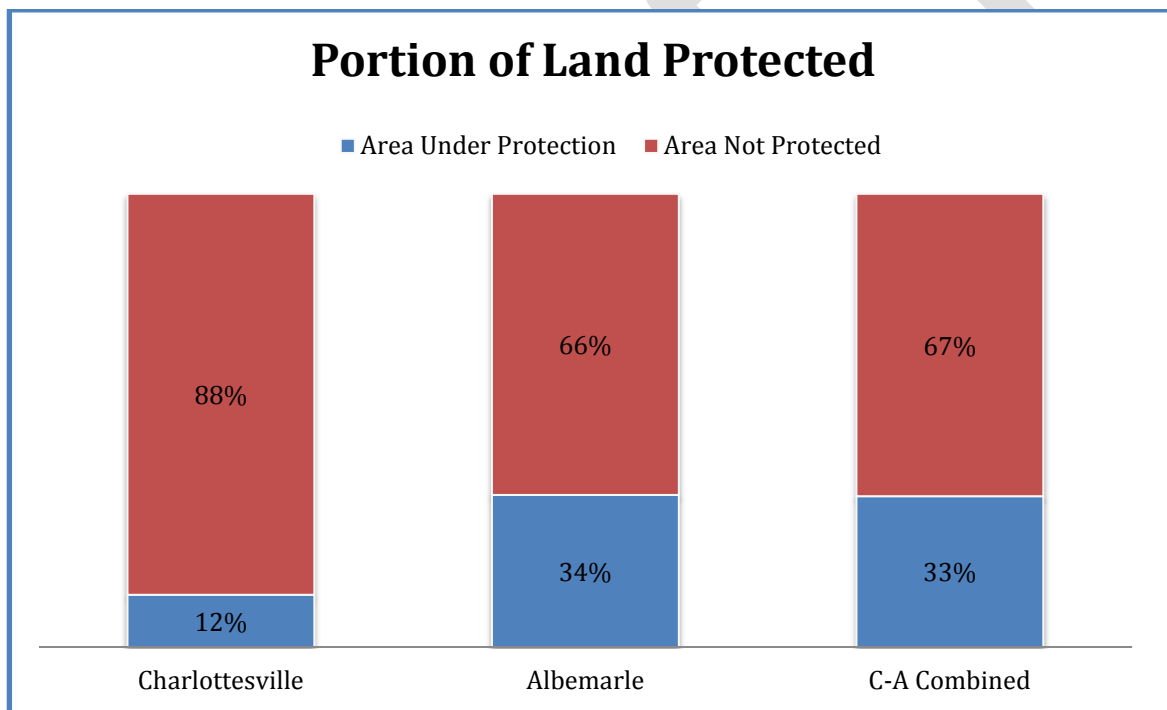
# System: Natural Resources

## Indicator: Protected Land

The total amount of protected land is a measure of how well our natural resources are conserved. Protected areas include both public and private holdings of land that have restrictions on development, such as conservation easements, stream buffers or parks.

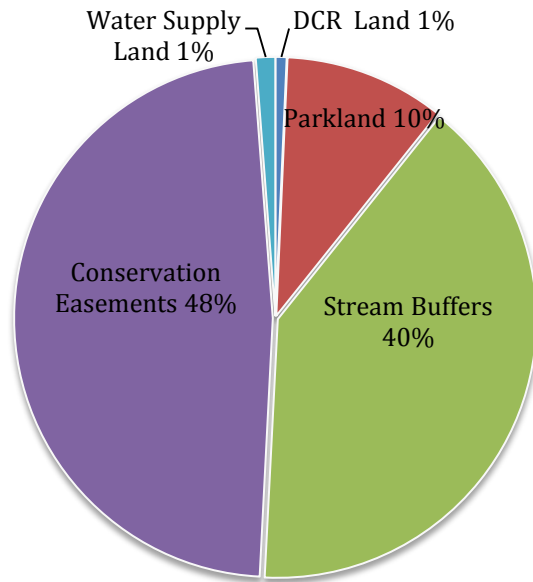
The charts below list the amount of city and county land that is protected by one of these measures, as well as the entire region combined. The second chart details what portion of land is protected by different conservation measures.

One third of City and County land is included in a conservation easement, park, or water protection ordinance.



Source: City of Charlottesville, Albemarle County, VA Department of Conservation and Recreation, April 2011

## Protection Measures by Area (C-A Combined)



*Source: City of Charlottesville, Albemarle County, VA Department of Conservation and Recreation, April 2011*

### **Charlottesville Comprehensive Plan Goal:**

“Regulate the use of land to assure the protection, preservation, and wise use of the City’s natural, historic, and architecturally significant environment.”

### **Albemarle Comprehensive Plan Goal:**

“Preserve and manage the County’s natural resources in order to protect the environment and conserve resources for future use. Protect the County’s open space for its environmental, aesthetic, cultural, agricultural/forestral and recreational value.”

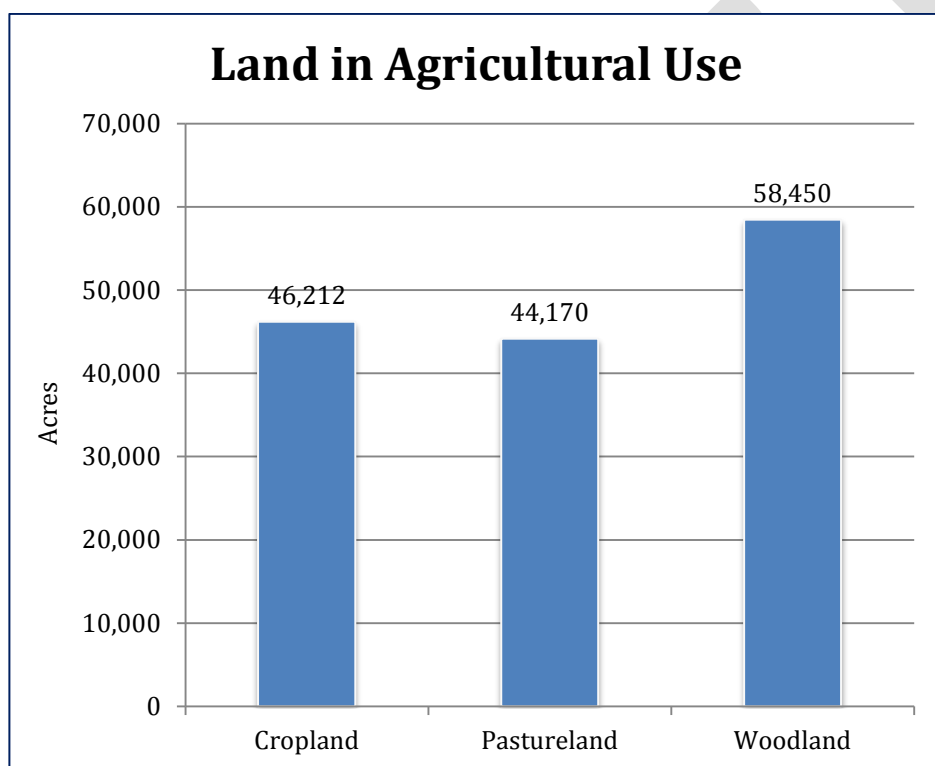
## System: Natural Resources

### Indicator: Acres of Land in Agricultural Use

The amount of land in agricultural use is one indicator of the health of the agricultural industry, which is an important component of the rural economy.

Agricultural land includes cropland, pasture for livestock, and woodlands used for timber harvest. These figures pertain only to Albemarle County, as Charlottesville does not contain agricultural land as classified by the USDA Census of Agriculture.

As a whole, the amount of land in agricultural use in the county represents a third of county land.



Source: USDA Census of Agriculture, 2007

### Albemarle Comprehensive Plan Goal:

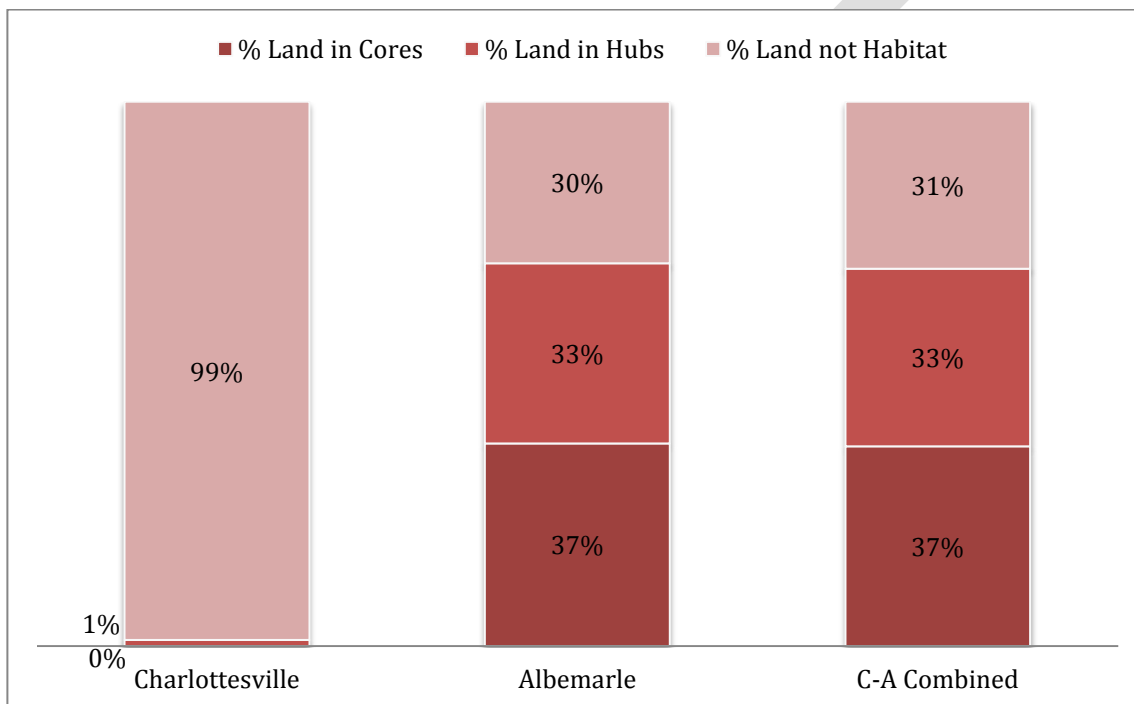
“Protect agricultural lands as a resource base for its agricultural industries and for related benefits they contribute towards rural character, scenic quality, natural environment, and fiscal health.”

# System: Natural Resources

## Indicator: Habitat Fragmentation

Unfragmented natural land provides habitat for a greater variety of species. Core land refers to an unfragmented natural land area of at least 100 contiguous acres, while hubs refer to smaller, fragmented land areas.

70% the land in the Charlottesville Albemarle region can be considered habitat, and over half of this is “core” land that has been not been fragmented by development.



Source: Virginia Conservation Lands Needs Assessment (VaNLA) GIS Data provided by VA Department of Conservation and Recreation

### Charlottesville Comprehensive Plan Goal:

“Provide an interconnected system of green space, including pocket parks and buffers along streams for wildlife and birds. Identify gaps in the system to provide additional habitat corridors and opportunities to implement natural habitat improvements.”

### Albemarle Comprehensive Plan Goal:

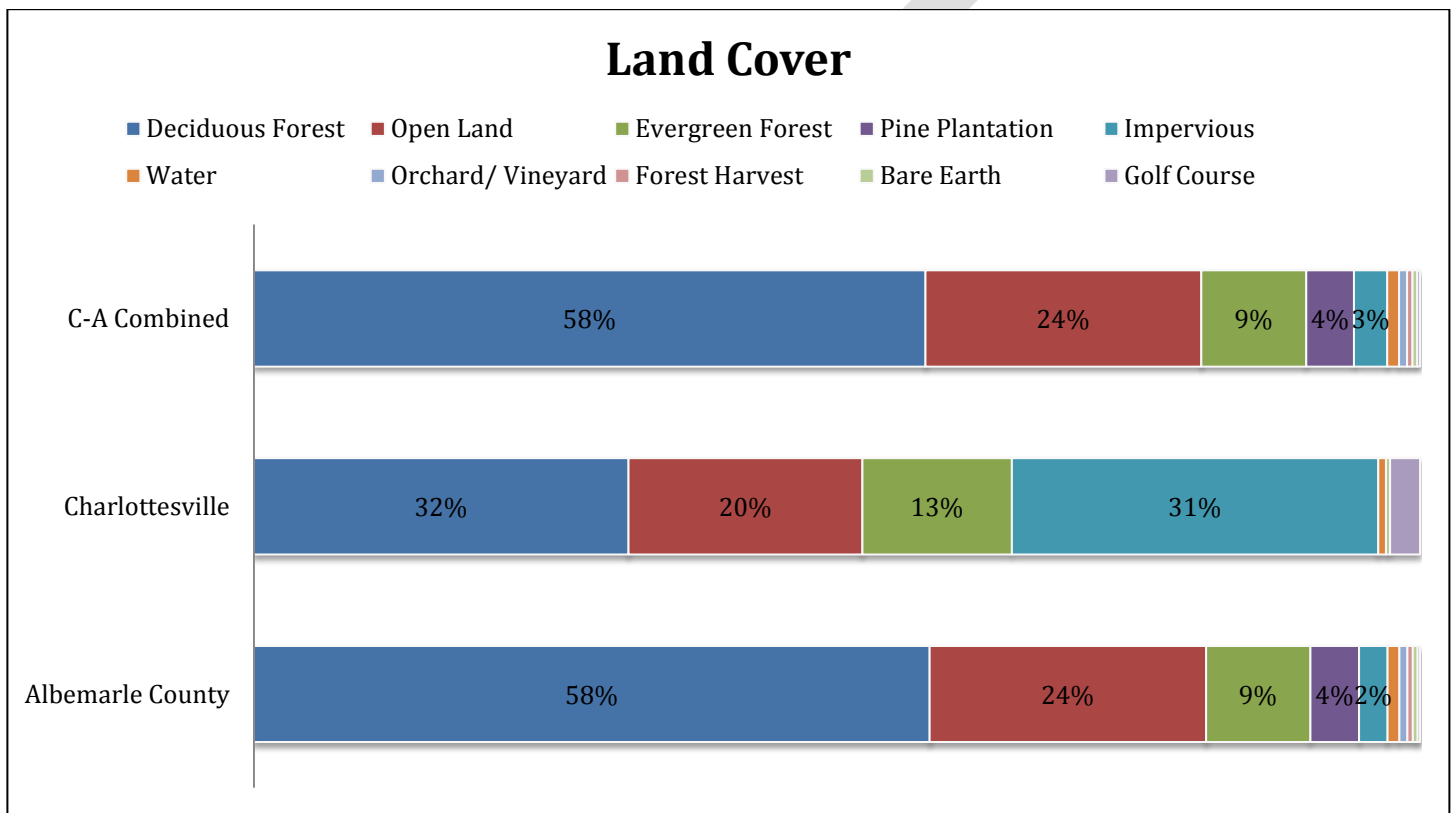
“Recognize the importance of protecting biological diversity in both the Rural Area and the Development Areas for the ecological, aesthetic, ethical, and economic benefits to the community.”

# System: Natural Resources

## Indicator: Land Cover

Land cover represents the type of natural vegetation or development that covers a given land area. Types of land cover include forests, open land such as lawns, pastures, and cropland, and impervious surfaces such as buildings, roads and parking lots.

About two-thirds of the land cover in the region is made up of deciduous or evergreen forest.



Source: Rivanna Watershed and Vicinity Land Use/Land Cover Map, 2009

### Charlottesville Comprehensive Plan Goal:

“Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2.”

### Albemarle Comprehensive Plan Goal:

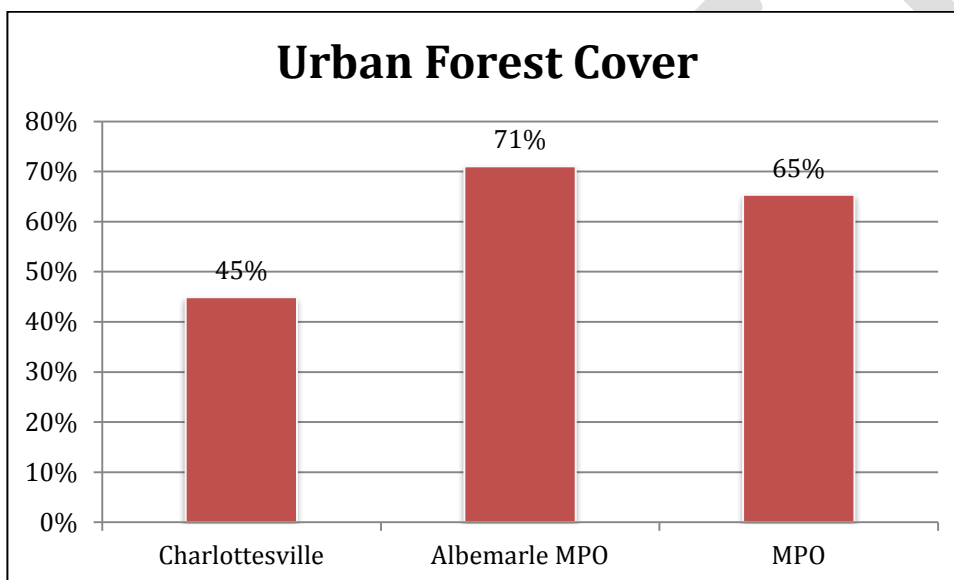
“Encourage the preservation of existing wooded areas as development occurs in Development Areas.”

## System: Natural Resources

### Indicator: Urban Tree Canopy

The presence of trees in an urban area can provide benefits such as CO<sub>2</sub> absorption, improved air quality, shading which reduces energy costs for indoor cooling, as well as aesthetic benefits which can increase property values and contribute to overall quality of life.

Charlottesville has exceeded its target of 40% urban tree canopy and Albemarle has maintained a high portion of tree cover in its urban area. Overall, in the area covered by the Metropolitan Planning Organization (MPO), which includes Charlottesville and the urbanized portion of Albemarle, trees cover 65% of the land area.



### Charlottesville Comprehensive Plan Goal:

“Establish and maintain a 40 percent minimum urban tree canopy level in Charlottesville.”

### Albemarle Comprehensive Plan Goal:

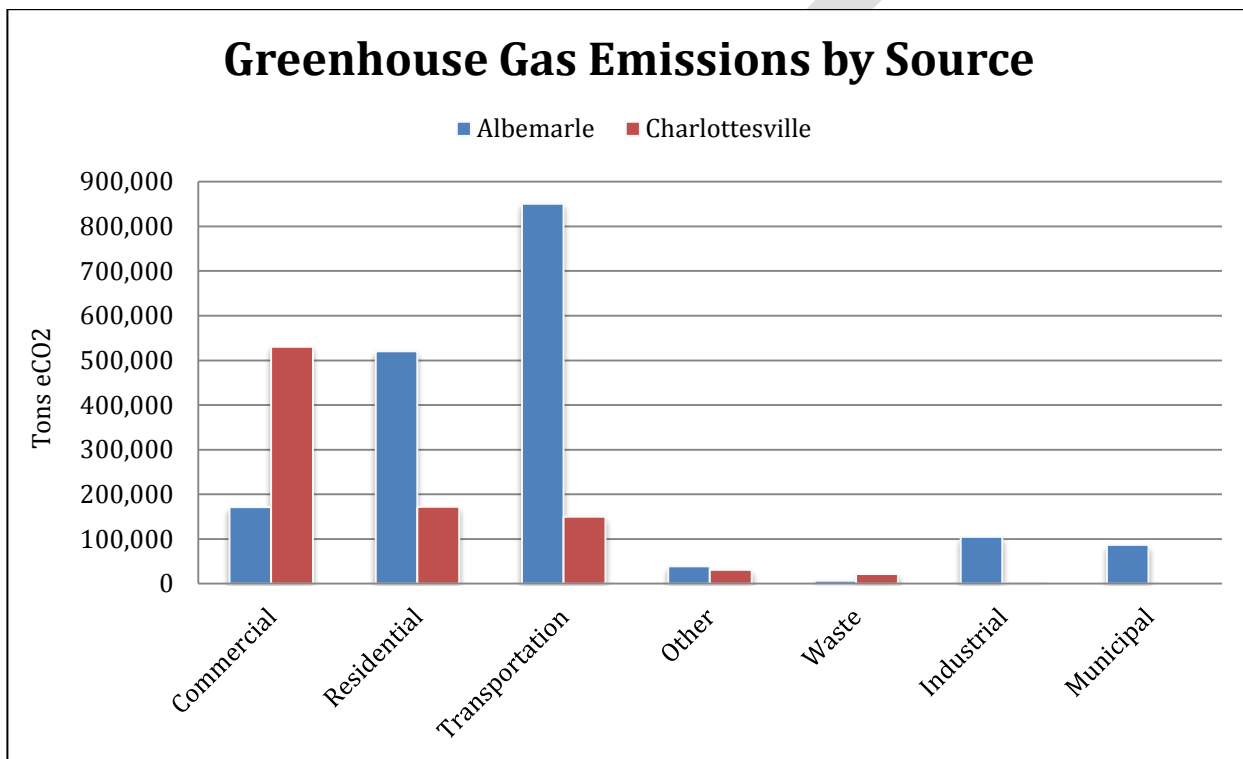
“Encourage the preservation of existing wooded areas as development occurs in Development Areas.”

# System: Natural Resources

## Indicator: Greenhouse Gas Emissions

The presence of greenhouse gases in the atmosphere has been linked to climate change, which causes instability and disruption in weather patterns.

Transportation is the leading source of CO2 emissions in Albemarle while the leading source in Charlottesville is commercial.



Source: Albemarle County Baseline Emissions Report, 2006; Charlottesville Emissions Baseline Report, 2006

### Charlottesville Comprehensive Plan Goal:

“Strategically continue, expand, and implement environmentally sustainable initiatives and measures that contribute to climate protection and support key actions outlined in the US Mayor’s Climate Protection Agreement.”

### Albemarle Comprehensive Plan Goal:

“Achieve a sustainable community that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

## **System: Infrastructure**

**The Infrastructure System serves the community by providing utility including water, sewer, power, and trash collection. The adequacy, efficiency and affordability of the Infrastructure System contribute to a community's health and wellbeing.**

# System: Infrastructure

## Indicator: Waste Generation and Recycling

The recycling rate is an indicator of the consumption level and reuse of materials. Recycling prevents items from entering the waste stream, thus reducing the total amount of landfill space needed, and the toxic effect of waste disposal.

The data listed below compares waste generation and recycling rates in the Rivanna Solid Waste Authority (RSWA) area, which covers Charlottesville and Albemarle, and the state wide rates.

While less waste is generated per capita in the RWSA region, the recycling rate is lower than the state average.

|  | RSWA | Virginia |
|--|------|----------|
| Waste Generated annually per capita (tons) | 0.83 | 1.15     |
| Recycling Rate                             | 35%  | 39%      |

Source: Rivanna Solid Waste Authority

### Charlottesville Comprehensive Plan Goal:

“Increase recycling rates in City operations and in the community. Maintain a sanitary City while preserving its aesthetic qualities.”

### Albemarle Comprehensive Plan Goal:

“Ensure solid waste generated in the County is collected, processed and disposed of in a manner beneficial to the health, safety and welfare of the citizens of the County.”

# System: Infrastructure

## Indicator: Average Natural Gas Consumption

Natural gas consumption rates indicate how efficiently homes are using this natural resource.

This data describes the average usage of Charlottesville Gas residential customers and is averaged over an entire year. This utility serves households in Charlottesville and portions of Albemarle County.

|  |
|--|
| <b>Average Monthly Natural Gas Consumption per Household</b> |
| 5.65 million cubic feet                                      |

*Source: Charlottesville Gas, June 2010-May 2011*

### Charlottesville Comprehensive Plan Goal:

“Develop policies within the city-owned natural gas utility that provides financial incentives and support for energy conservation by gas customers. Utilize incentives such as graduated water and natural gas rates so that rates increase above a certain level of usage in order to encourage energy and water conservation (known as a fee-bate program).”

### Albemarle Comprehensive Plan Goal:

“Insure the adequate provision of electricity, telephone, and natural gas services to support existing and anticipated development in the County .“

# System: Infrastructure

## Indicator: Average Cost of Household Natural Gas Consumption

The cost of natural gas demonstrates how accessible this resource is, particularly to lower-income households.

This data describes the average monthly cost for Charlottesville Gas residential customers and is averaged over an entire year. This utility serves households in Charlottesville and portions of Albemarle County.

| Average Monthly Rates for Natural Gas per Household |       |
|---|-------|
| \$  | 82.44 |

Source: Charlottesville Gas, June 2010-May 2011

## Charlottesville Comprehensive Plan Goal:

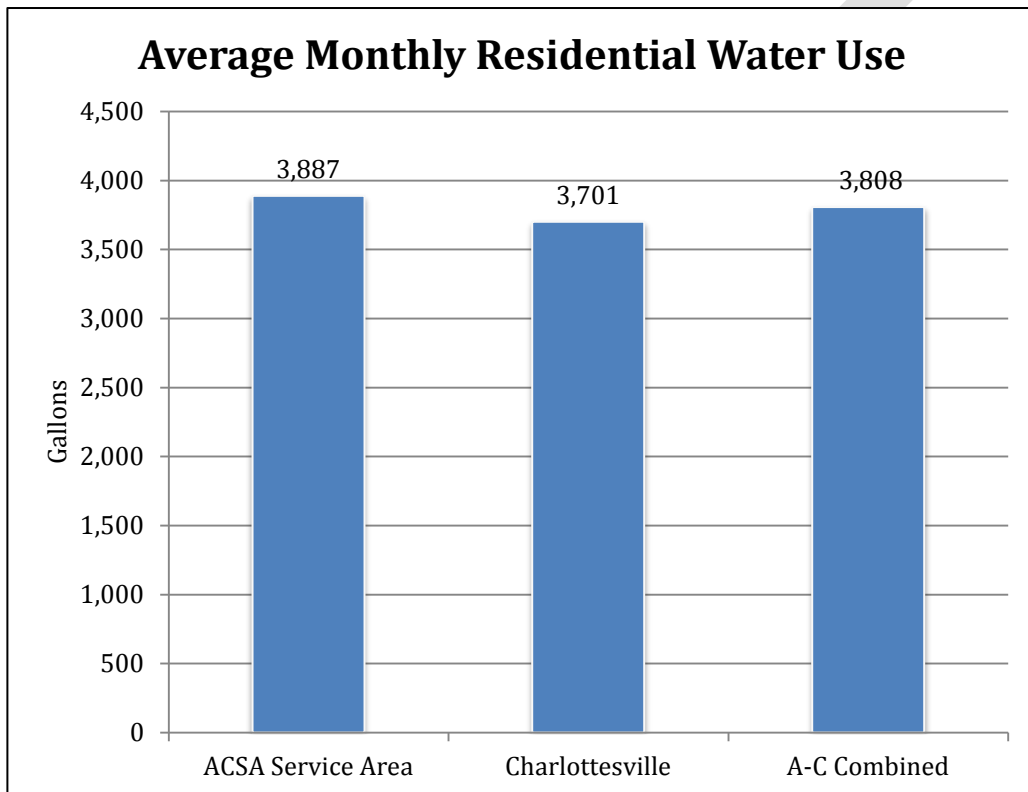
“Utilize incentives such as graduated water and natural gas rates so that rates increase above a certain level of usage in order to encourage energy and water conservation (known as a fee-bate program).”

# System: Infrastructure

## Indicator: Average Household Water Consumption

Average household water consumption rates indicate how efficiently water is used.

This data describes the average monthly usage for residential customers and is averaged over an entire year. Average residential usage in the area is about 3,800 gallons per month.



Source: Albemarle County Service Authority, FY2010; Charlottesville Water, FY2010

### Charlottesville Comprehensive Plan Goal:

“Improve the water system infrastructure to provide efficient water service to Charlottesville residents. Consideration for increasing density within the City should be addressed as part of any improvements.”

### Albemarle Comprehensive Plan Goal:

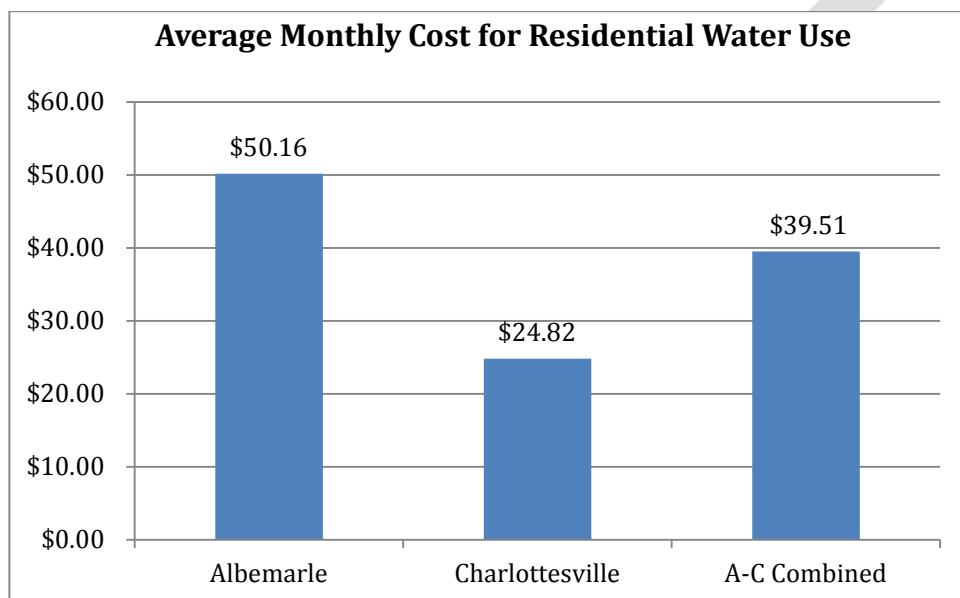
“Support water conservation and use-efficiency measures to minimize impacts to water resource systems and the environment and to prolong the life of existing and future water supplies.”

# System: Infrastructure

## Indicator: Average Cost of Household Water Use

The cost of water indicates the amount most households are spending on water resources.

This data describes the average monthly cost for residential water customers and is averaged over an entire year. Average monthly cost for residential customers in the area is just under \$40 per month.



Source: Albemarle County Service Authority, FY2010; Charlottesville Water, FY2010

### Charlottesville Comprehensive Plan Goal:

“Utilize incentives such as graduated water and natural gas rates so that rates increase above a certain level of usage in order to encourage energy and water conservation (known as a fee-bate program).”

### Albemarle Comprehensive Plan Goal:

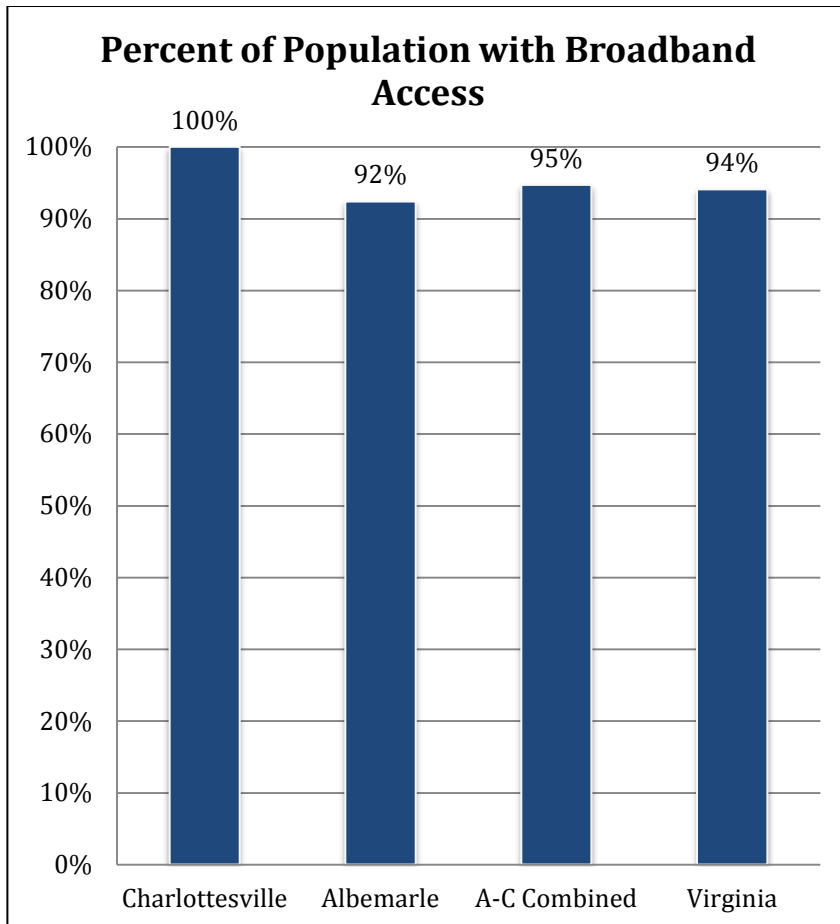
“Plan and live in accord with our water and sewer resources by providing an economical and safe public system of water and sewer to serve the existing and future Development Area population and ensure high quality ground water for the existing and future Rural Area population.”

# System: Infrastructure

## Indicator: Population served by Broadband Internet

The availability of broadband internet indicates how accessible information technology is to local residents.

95% of residents in this region have access to broadband, just slightly higher than the statewide rate of 94%.



Source: National Broadband Map, 2010

### Albemarle Comprehensive Plan Goal:

“Insure the adequate provision of electricity, telephone, and natural gas services to support existing and anticipated development in the County.”

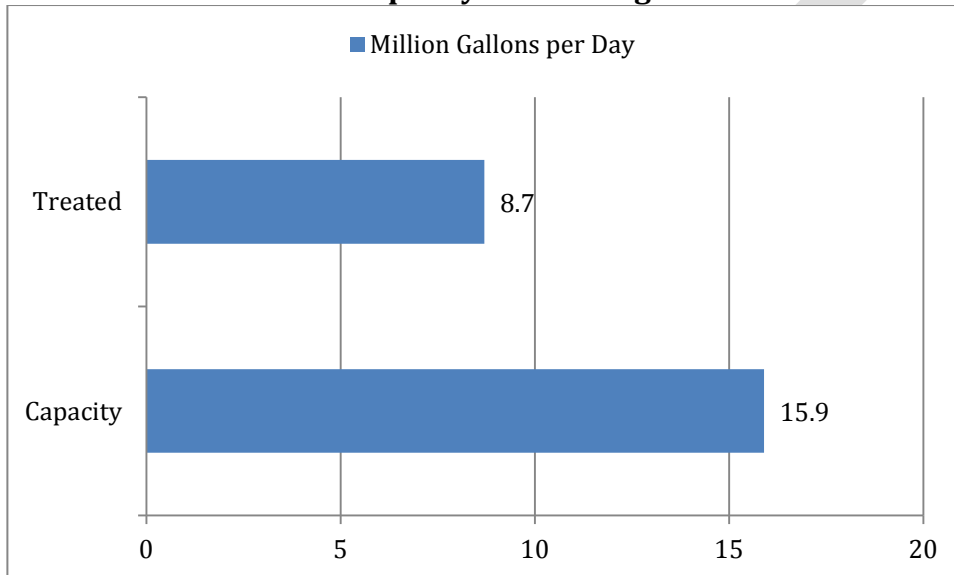
# System: Infrastructure

## Indicator: Wastewater Treatment Capacity

This indicator describes the capacity of local facilities to treat wastewater before it is discharged into local rivers. These figures refer to the capacity of treatment facilities managed by the Rivanna Water and Sewer Authority, which treats wastewater for Charlottesville and Albemarle County customers.

Wastewater generation is within the current capacity of local treatment facilities.

### Wastewater Treatment Capacity and Average Volume Treated



Source: Rivanna Water & Sewer Authority, FY2010

### Charlottesville Comprehensive Plan Goal:

“Improve wastewater infrastructure to provide effective and efficient sanitary sewer services to residents, to accommodate the zoned densities in the City, and to protect public health and environmental quality.”

### Albemarle Comprehensive Plan Goal

“Plan and live in accord with our water and sewer resources by providing an economical and safe public system of water and sewer to serve the existing and future Development Area population and ensure high quality ground water for the existing and future Rural Area population.”

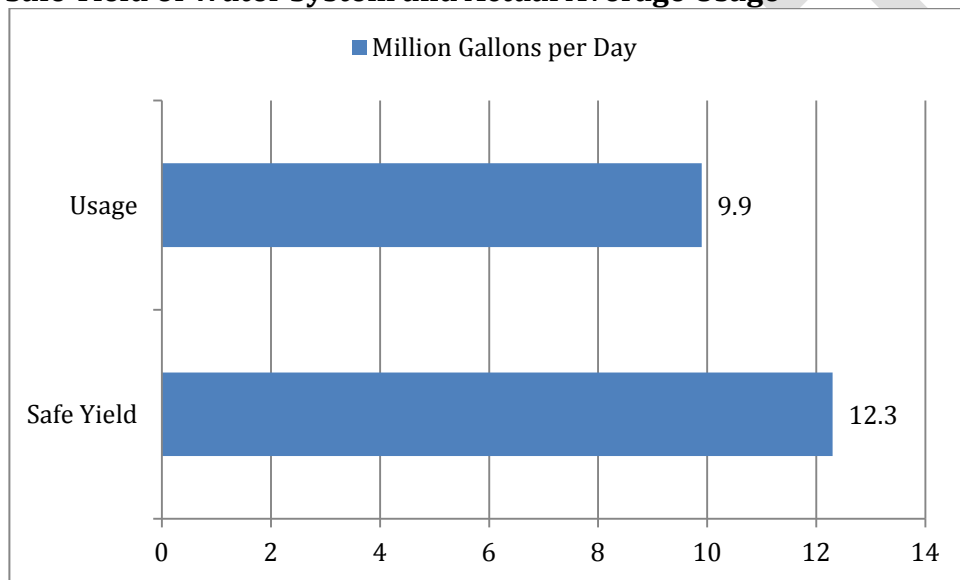
# System: Infrastructure

## Indicator: Safe Yield of Water System

The safe yield of our water system indicates the amount of water available for use by customers while maintaining stable reservoir levels. These figures refer to the safe yield of reservoirs managed by the Rivanna Water and Sewer Authority, which provides water for Charlottesville and Albemarle County customers.

Current water use is within the safe yield of the local water supply.

### Safe Yield of Water System and Actual Average Usage



Source: Rivanna Water & Sewer Authority, FY2010

### Charlottesville Comprehensive Plan Goal:

“Maintain an infrastructure system adequate to serve existing and future development. Improve the water system infrastructure to provide efficient water service to Charlottesville residents.”

### Albemarle Comprehensive Plan Goal

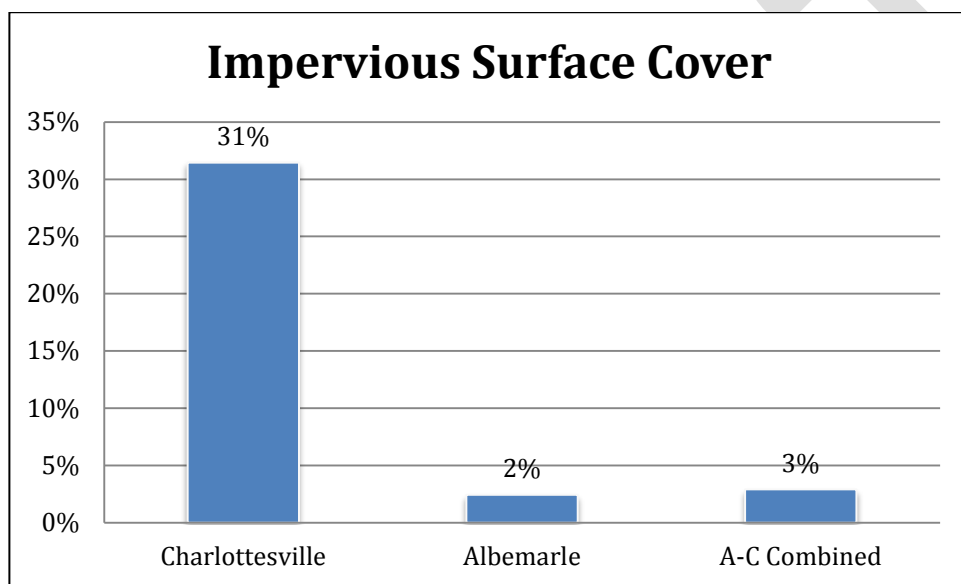
“Protect the availability and quality of surface drinking water supplies.”

## System: Infrastructure

### Indicator: Land Covered by Impervious Surfaces

The amount of impervious surface increases stormwater runoff and reduces the ability for stormwater to filter naturally into soils. This can lead to increased flooding, as well as greater volume of pollutants entering local waterways. Impervious surfaces include roads, parking lots and buildings.

Just under one-third of the land in Charlottesville is covered by impervious surfaces. 3% of the total Charlottesville Albemarle region is covered by impervious surfaces.



Source: Rivanna Watershed and Vicinity Land Use/Land Cover Map, 2009

### Charlottesville Comprehensive Plan Goal:

“Reduce and/or eliminate stormwater runoff problems from sites that lack stormwater treatment by requiring a reduction in overall imperviousness and by seeking new opportunities for stormwater infiltration when sites are rezoned (e.g. 10-20% reduction).”

### Albemarle Comprehensive Plan Goal:

“Protect the safety and welfare of citizens, property owners, and businesses by minimizing the negative impacts of increased stormwater discharges from new land development.”

# System: Infrastructure

## Indicator: Number of Stormwater Treatment Facilities

Stormwater management facilities detain and treat stormwater on-site, reducing the amount of stormwater running off to neighboring properties, eventually entering local streams or being treated at a municipal facility. This form of green infrastructure reduces the load on standard wastewater treatment facilities, using natural processes to clean our waters.

### Total Number of On Site Stormwater Treatment Facilities

| Albemarle | Charlottesville |
|-----------|-----------------|
| 500       | 77              |

Source: City of Charlottesville/Albemarle County, May 2011

### Charlottesville Comprehensive Plan Goal:

“Improve public and private stormwater infrastructure to protect natural systems from flooding due to extreme stormwater volumes and velocities and protect public health by reducing contaminants in stormwater runoff.”

### Albemarle Comprehensive Plan Goal:

“Protect the safety and welfare of citizens, property owners, and businesses by minimizing the negative impacts of increased stormwater discharges from new land development. Encourage BMPs to reduce nonpoint source pollution from agricultural and forestry uses.”