



Situation Analysis Report

Shenandoah County

2013

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Introduction

In the fall of 2013, the Situation Analysis was updated with the assistance of the Shenandoah County ELC. Compiled base information from the 2008 Situation Analysis was updated using the 2010 Census, the 2007 Census of Agriculture and other relevant documents. Input was also obtained from other Extension Advisory Committees community members and stakeholders.

Unit Profile

Shenandoah County is located in the Northern Shenandoah Valley of Virginia, approximately 95 miles west of Washington, DC, and 20 miles northeast of Harrisonburg. The county is 512 square miles and the population density is 70.9 people per square mile.

The 2010 U.S. Census showed the population at 41,993 citizens. The population of Shenandoah County is becoming more diverse. From 2007 to 2011, the county's population grew by 2,066. This growth included 959 non-white (Blacks, American Indian, Eskimo, and Asian Pacific Islanders). The percentage breakdown of the population by race was 95% White, 2% Black, .5% Asian, 2% other, .2% American Indian or Alaska Native and 2% other race. The percentage of residents indicating Hispanic ethnicity grew to 5.2 percent of the population or 2,160 people. This is a 137 percent increase in the Hispanic population of Shenandoah County.

Unemployment has generally been below the state and national average for the last decade. However, the most recent statistics show the county with an unemployment rate of 5.7 percent during August 2013, while the statewide rate for the same period was 5.6 percent.

The 2011 U.S. Census reported that 82.6 percent of the county's population 25 years old or older has earned a high school diploma or GED. Almost 18 percent of the population 25 years or older has earned a Bachelor's degree or higher.

The 2007 Census of Agriculture indicated that the number of farms in Shenandoah County grew from 989 in 2002 to 1,043 farms in 2007. Most of this increase occurred on farms between 10 to 49 acres in size. Much of the increase in the number of farms appears to have occurred when large farms or timber tracts were subdivided into smaller farms. Approximately 35 percent of these additional farms had gross sales of less than \$2,500 per year. The number of farms with sales exceeding \$2,500 appeared to be stable. Thirty-five percent of the farms in Shenandoah County are between 10 to 49 acres in size and 37 percent of the farms are between 50 to 179 acres in size.

The total market value of agriculture products grown in Shenandoah County has increased from \$69,000,000 in 2002 to \$101,576,000 in 2007.

The most noteworthy changes in the type of agriculture in Shenandoah County include the following: the number of farms producing grapes (vineyards); horses; goats; llamas; and beef; appears to be increasing. The number of sheep and swine farms appears to be decreasing.

Over the past three years there has been a significant shift of hay land to crop land for growing corn, soybean and small grain.

Summary of Land Use in Shenandoah County for 2007		
	Acres	Percent
Total Land Area	324,480	
Agricultural Land	116,708	36%
National Forest	77,681	23.9%
Private Forest Land	95,000	29%
State Forest Land	394	0.1%
Roads, Houses, Buildings, Interstate, Rivers, and Other	34,697	11%

The average age of Shenandoah County citizens and farm operators is increasing. In 1960, the average age was 31.9 years old; in 1980, it was 34; in 2000, it was 40.9 years old; and in 2010, the average age was 43 years old. The average age of principal farm operators in 2007 was 58 years old.

Interstate 81 is 34.64 miles long in the county. Based on 2012 data from the Virginia Department of Transportation, 20,000 to 50,000 vehicles per day travel the interstate; in the last 20 years, traffic has more than doubled, and in urban areas, tripled. Between 19% and 40% of the vehicles traveling on I-81 each day are trucks, depending on the segment. The 30-year-old interstate was designed to accommodate only 15% truck traffic. Truck traffic is expected to continue growing as businesses increase their reliance upon trucks to transport goods.

In 2013, the Virginia Department of Environmental Quality continues to monitor six stream segments in Shenandoah County that have been classified as impaired. The impairments include either Fecal Coliform Bacteria and/or Benthic Macro invertebrates. In addition, a Virginia Cooperative Extension household water quality testing program conducted in Shenandoah County in 2013 included samples from approximately 81 homes and farms (a few properties collected more than one sample). Of these, 61.7% exceeded the EPA recommendation for total coliform and 22.2% exceeded the recommendation for E. coli. Only 1.2% of the samples exceeded the recommendation for nitrate.

Based on a survey completed in 2002, 61 percent of homeowners in Shenandoah County indicated that they needed information on steps the homeowner could take to improve the environment.

According to 2010 Census Data, 11.7% of Shenandoah County residents live in poverty, with 17.2% of the children living in poverty. Yet living above the poverty level does not provide an adequate income for maintaining financial self-sufficiency. A 2011 report by the Weldon Cooper Center for Public Service, Building Economic Security for Virginia Families, indicated

that Virginia families need an income approximately two times the federal poverty line to approach self-sufficiency. According to American Community Survey 2010 estimates, 32% of the individuals in Shenandoah live with incomes below 200% of the federal poverty level.

In addition, many individuals and families, whether low- or middle-income rely on expensive and sometimes even predatory financial services, such as check-cashing services, payday loans, rent-to-own agreements or pawn shops. These households are considered “unbanked” or “underbanked.” According to data compiled by the Bank On initiative, 7% of the households in Shenandoah County are unbanked, while an additional 18.3% are underbanked. Both of these statistics are several percentage points above the state average.

Regardless of income, families across Virginia lack some of the most basic skills to promote financial stability. A 2009 Financial Capability Study by the FINRA Foundation found that Virginians struggle in the following four key areas:

- **Making Ends Meet.** 21% of individuals reported that over the past year, their household spent more than their income.
- **Planning Ahead.** 58% of individuals lack a "rainy day" fund to cover expenses for three months, in case of emergencies such as sickness, job loss or economic downturn.
- **Managing Financial Products.** 21% of individuals reported using one or more non-bank borrowing methods in the past five years.
- **Financial Knowledge and Decision-Making.** On average, individuals answered 3.0 out of five financial literacy questions correctly. In addition, 60% of individuals said that, when obtaining their most recent credit card, they did not collect and compare information about cards from more than one company.

According to the previously mentioned Weldon Cooper Center for Public Service report, more than a quarter of Virginia's households currently lack sufficient assets to cope with a short-term financial emergency.

Before the economic down turn, for the year 2007, there were 65 consumer bankruptcies filed for Shenandoah County households. By 2011, that number had increased to 148.

Premature death in Shenandoah County dropped slightly from 2010 (15.2%) to 2013 (14.5%); however, adult obesity is 30%, well above the national average of 25%; physical inactivity is 29%, also over the national average of 21%; and excessive drinking is 14% compared to the national average of 7%. Eighteen percent of Shenandoah County residents in 2013 find themselves uninsured for health care compared to 11% of the rest of the nation. The county only has one primary care physician for every 1,912 residents; whereas the national statistic is one physician for every 1,067 persons. STD infections, as well as teen births, are far above the national averages.

In 2011, there were 10,222 children, ages 0-19, living in Shenandoah County. Of those, 20.3% were living in poverty. This is higher than the Virginia average of 15.6% of children who

live in poverty, and it is an increase from 13% who lived in poverty in Shenandoah County during 2005.

In the 2012-2013 school year, 2,677 children (42.8%) received free or reduced cost meals in Shenandoah County Public Schools. This was much higher than the 25.17% rate in 2003-2004 and also higher than the state average of 40.1% for 2012-2013

During the 2013-2014 school year, there were 1914 students enrolled in grades nine through twelve in Shenandoah County. Of these students, 2136 students (duplications included) enrolled in Career and Technical Education Classes (commonly referred to as Vocational Education Classes). There were 248 students classified as Vocational Education “Completers” (students who have completed at least two classes in the same Vocational Education subject matter area and graduated from high school during the 2012-2013 school year).

The school dropout rate has dropped from 1.5% in 2003-2004, to 1.14% in 2012-2013. During the same time, the state average also dropped from 2.05% to 1.22%. Shenandoah County remained below the state average dropout rate.

The total number of students enrolled in Shenandoah County Public Schools for 2013-2014 is 5,651. The number of minority students enrolled has increased between the 2003-2004 year and the 2013-2014 year. American Indian student numbers increased from 22 to 41 and the black student numbers increased from 115 to 147. There was a decrease in Asian students, from 42 to 40. There are also 219 students who are more than one race. The Hispanic student population increased from 429 to 692.

Some highlighted results of the 2009-2010 National PRIDE Survey, conducted in the Shenandoah County Schools are shown below:

- 30 day use of tobacco, alcohol, and marijuana (2009 CTC survey) are either static or slightly lower than the 2008 survey (Pride survey*). Considering it was only one year between surveys, large change is not expected, however the CTC is a preferred tool and a baseline has been established. Use rates for 6- 12th grades are around state and national averages.
- 30 Day Use rates are low for 4-6th grades, but appears to shift beginning in 7th grade and rises, steadily. This is consistent with the 2008 survey, although 4-5th grades were not surveyed in 2008.
- Perception of risk for using Alcohol, Tobacco, and other Drugs (ATOD) is high from 4-7th grade, but shifts lower, beginning in 8th grade and continues to get lower by 12th grade. This is consistent with the 2008 survey.
- Perception of friend’s disapproval of ATOD use is also high from 4-7th grade, but also shifts lower, beginning in 8th grade and continues to get lower by 12th grade. This is consistent with the 2008 survey.

- Perception of parental disapproval of ATOD use remains high (above 85%) until 12th grade, where it drops by 10-15%. This is consistent with the 2008 survey.
- Average age of “first use” for tobacco (13-14), alcohol (13-14), and marijuana (about 14) has remained static from 2008, but again, large change is not expected in just one year. These figures reflect 10th – 12th grades.*
- Carried a hand gun to school: No change from 2008 (2%), grades 6-12.
- Use of prescription drugs (e.g., amphetamines, barbiturates, etc.), without a prescription, in past 30 days*: Approximately 7%, with the prevalence rates concentrated among 12th graders. (This data was not available in the 2008 survey.) There has been a rise in prescription use among youth, so this is an important indicator to track.
- Ever belonged to a gang: Approximately 4% stated that have belonged to a gang and the rate was concentrated in among 12th graders. This data was not available for in the 2008 survey
- Prevention strategies and programs aimed at 4th – 7th grades appear to be needed, along with strong reinforcement beginning in 8th grade. Comprehensive prevention strategies (i.e., environmental, etc.) should be utilized and parents should be targeted, especially parents of 10th – 12th graders.
- Although Shenandoah County has use rates that are around the state and national average (some lower), it appears that most youth do not use and thus, the use of social norm campaigns are suggested.
- Increased and continued promotion for community involvement.

Community and Resident Perspectives

Due to the short turn-around time for this Situation Analysis, the only community and resident perspectives we were able to gather were from our Extension Leadership Council members. Those perspectives are incorporated into the Unit Profile and Priority Issues sections of this report. In the future, if we have more notice and are allowed a longer data collection period, we would like to do a more thorough data collection, including conducting surveys, holding focus groups, performing key stakeholder interviews, etc. to get a more broad array of input on issues and needs.

Priority Issues

The Extension Leadership Council identified the following top priority issues for Shenandoah County.

Issue 1: Economic Security and Rural Economic Development

Economic security of individual families and rural economic development was the most important issue to county citizens. Specific aspects of this issue include: jobs, employment, better job opportunities, need for higher wages, need for lower cost of living (including affordable housing, health care, and child care), need for improved transportation, trade jobs for vocational school graduates, economic development through tourism, improving viable small business opportunities, encouraging environmentally-friendly businesses, and more vocational education. A critical component of economic security is the lack of availability of affordable housing, which is influenced by commuting patterns that allow employees in Northern Virginia to earn higher salaries and thereby rent or purchase more expensive homes in Shenandoah County. Thus, housing costs are inflated and often unaffordable for people who work in the county earning “rural” salaries.

VCE-Shenandoah County has initiated educational programming related to this need including a variety of workshops on financial management, housing, and consumer education topics; telephone consultation on financial management and consumer issues; and a volunteer based financial mentoring program. Continuation of these efforts is warranted. This issue is being addressed to some extent by VCE resources.

Issue 2: Competitiveness and Profitability of Agriculture

This issue was second in the list of priorities identified in the processes above. Concerns include agricultural education, training, creating and expanding into new agricultural markets, alternative agriculture, pesticide education, poultry litter management, hay storage and quality, and nutrient management. Related to these were supporting and protecting agriculture and farming as an occupation, farm profitability, government programs, and the inadequate supply of farm labor.

VCE-Shenandoah County and Planning District 7 have many programs related to this area including: area fruit production schools, commercial greenhouse production meetings, beef production meetings, private and commercial pesticide applicator recertification training, marketing educational efforts for many agriculture products, crop production schools, education about animal waste management, education on agribusiness management, and many related areas. Continuation of the always present assessment of programs versus needs and adjustments as needed is warranted. This issue is currently being addressed with VCE resources. No further action is needed.

Issue 3: Education

Education was identified as the third most important issue in Shenandoah County. In general, citizens were highly interested in assuring that the county provides high quality education for children. Specific interests beyond the interest in high quality basic education include:

- Ensuring that vocational technical programs provide job readiness skills
- Offering retooling training for adult workers
- Offering family information (parenting, nutrition, consumer debt, teen pregnancy prevention, and substance abuse).

Presently, the 4-H Youth Development Program in Shenandoah County offers many different informal, experiential educational opportunities. This includes the 4-H/FFA Livestock Program, Day and Resident Camping Programs, International and Interstate Exchanges, After-School 4-H Clubs, Leadership Development, and Life Skill Development. Review of these programs in view of the above topics is warranted. This issue is being addressed to some extent by VCE resources. Additional efforts need to be explored to better address this issue.

Issue 4: Water Quality/Conservation/Environmental Issues

Ensuring that the quality of Shenandoah County's natural resources (land, air, water, and wildlife) is protected is very important to county citizens and came in as the fourth most important issue. Specific aspects of this issue include:

- Finding a solution to animal waste problems
- Ensuring there are adequate public utilities for waste treatment
- Ensuring there is an adequate water supply and utilities for population growth
- Ensuring protection and/or improvement of surface and ground water quality
- Achieving the goals of the Chesapeake Bay TMDL
- Responsible development.

While citizens want to ensure adequate protection of county resources, there is an overall concern that environmental regulations not impede livelihoods and operations.

VCE-Shenandoah County and Planning District 7 play a major role in education, dissemination of information, and hands-on help related to this issue, but a review of the programming in light of its alignment with these concerns is warranted. This issue is being addressed to some extent by VCE resources. Additional efforts need to be explored to better address this issue.

Issue 5: Food, Nutrition, and Health

A lack of physical activity and poor nutrition are contributing factors to high weights and obesity and to a wide range of health problems and chronic diseases among all age groups, including high cholesterol, hypertension, diabetes, heart disease, stroke, some cancers, and more. Nationally, the increase in both the prevalence of overweight and obese persons and

associated chronic diseases is well documented and has negative consequences for individuals and society. In addition, the renewed interest in local foods, food preservation, and food safety indicates a need for education related to selecting and preparing foods safely.

VCE-Shenandoah County and Planning District 7 offer evidence-based programs to help encourage youth and adults to adopt healthy eating and physical activity practices that follow recommendations from the 2010 U.S. Dietary Guidelines and the 2008 Physical Activity Guidelines for Americans. This is accomplished by direct teaching, partnering with agencies to reach diverse audiences, training teachers and day-care providers, in-school nutrition education, and parent education. This issue is being addressed to some extent by VCE resources.

Issue 6: Control Growth and Land Preservation

Managing Population Growth and Land Preservation (for farming, open space, and green space) was identified as the sixth most important issue facing Shenandoah County. Major concerns expressed by citizens include:

- A lot of new housing
- The growth creates the need for more infrastructure (roads, utilities, schools, services, etc.)
- Citizens do not want to see the rural character of Shenandoah County lost
- Growth reduces overall land base available for viable farming operations
- Growth drives up the cost of land and houses such that low to medium income families cannot afford housing.

Presently, VCE-Shenandoah County has no active programming related to this issue. Based on this analysis, VCE is developing an educational program to educate landowners about how to preserve farmland and/or open space in an economically viable manner. The Extension Leadership Council feels that Virginia Cooperative Extension is well situated to lead this educational process. VCE plans to dialogue with the Shenandoah County Board of Supervisors and other relevant entities about this process. This issue is being addressed to some extent by VCE resources. Additional efforts need to be explored to better address this issue.

Issue 7: Public Safety

The safety and well-being of county residents was seventh among the top priority concerns for Shenandoah County residents. Primary sub-issues include:

- Drug and gang related crimes;
- The increase in the juvenile crime rate and the fact that the rate is consistently higher than neighboring counties;
- Concern that there is too much exploitation of the elderly.

VCE-Shenandoah County programs have direct and indirect benefits in preventing youth from participating in these undesirable activities. Youth programs in particular can be seen as a low-cost way to reduce youth participation in activities that are of concern here. County support and understanding on this is high. In addition, VCE-Shenandoah County has workshops related to topics such as identity theft, consumer fraud, and indoor air quality - issues which often disproportionately impact the elderly and other at-risk populations. VCE-Shenandoah County will continue to monitor the effectiveness of these approaches and the potential for new programs. This issue is being addressed to some extent by VCE resources. Additional efforts need to be explored to better address this issue.

Issue 8: Interstate 81

Issues surrounding the large amount of traffic and proposed solutions for it constituted the eighth most pressing issue in Shenandoah County. These concerns include the widening of I-81, transportation, road safety, traffic, and improved rail services to reduce truck congestion. What VCE-Shenandoah County can do regarding this issue is not readily apparent. However, since there are educational, economic, and agriculture related issues, VCE-Shenandoah County should be available to provide information as needed. This issue is outside the scope of VCE to address.

Other Issues

Some of the other priorities expressed include:

- The needs of the elderly population. This issue is being addressed by a few organizations separately, but not in a joint comprehensive manner. However, the following statement is the best choice out of the selections given: This issue is not currently being addressed by VCE or other organizations. It could be addressed by VCE if additional resources were available.
- The needs of the growing Latino population. This issue is being addressed by a few organizations separately, but not in a joint comprehensive manner. However, the following statement is the best choice out of the selections given: This issue is not currently being addressed by VCE or other organizations. It could be addressed by VCE if additional resources were available.
- Responsible county government. This issue is outside the scope of VCE to address.