



Virginia Cooperative Extension

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Situation Analysis Report



Shenandoah County

2018

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Introduction

The Shenandoah County Extension Leadership Council, along with the VCE Agent staff, conducted a comprehensive situation analysis beginning in November of 2017. The ELC has discussed the Situation Analysis during the past seven meetings and smaller work groups met between ELC meetings. The first meeting, in November 2017, introduced the ELC to the upcoming situation analysis project and provided each member with a notebook that included an overview of the purpose, scope, and timetable of the report. Additional reference data was also included in the notebook. The group discussed participating in a planning district survey and decided to pursue both electronic and paper copy distribution throughout the county. Several members gave input on questions for the planning district survey, which was to be developed by the agents in PD7.

During December, all of the Agents in PD7 met to discuss and develop a Qualtrics survey that would cover all counties in PD7. Each county promoted the survey and provided links and paper copies in appropriate locations in each respective county. Completed paper copies received would be transferred to the Qualtrics survey to make data collection easier.

The January 2018 ELC meeting included an update on the Planning District Survey and a discussion of how/where/who would distribute the surveys. ELC members agreed to take hard copies of the survey to be placed in key areas around the county. Links to the electronic survey were sent to all media and all VCE clients on our respective mailing lists, in addition to members of coalitions and other groups that the agents are involved with. Data collection began immediately following this meeting.

During the March 2018 meeting, survey results were distributed and reviewed. One ELC member offered to enter the hard copies into the system and three ELC members offered to meet and sort through the data to categorize it for further analysis.

The fourth ELC meeting was held in May and members discussed the compiled results of the planning district survey. The ELC members identified the top six issues and broke the issues down into two subcommittees, with ELC members agreeing to serve on each committee for further work on the issues. They decided to conduct key informant interviews and each subcommittee came up with a list of key informants to interview. A smaller group was identified to come up with questions to ask. Interviews were to be conducted by the end of August and each agent met with the chair of a subcommittee to compile the results of the interviews to be presented to the group in September.

During the September ELC meeting, the subcommittees presented summaries of their interviews. A thank you note was sent to each key informant letting them know that we would send them a link to the final report as soon as it was available. The decision was also made to delay the ELC Showcase event to coincide with the release of the Situation Analysis reports so the ELC could present our findings to the Board of Supervisors members.

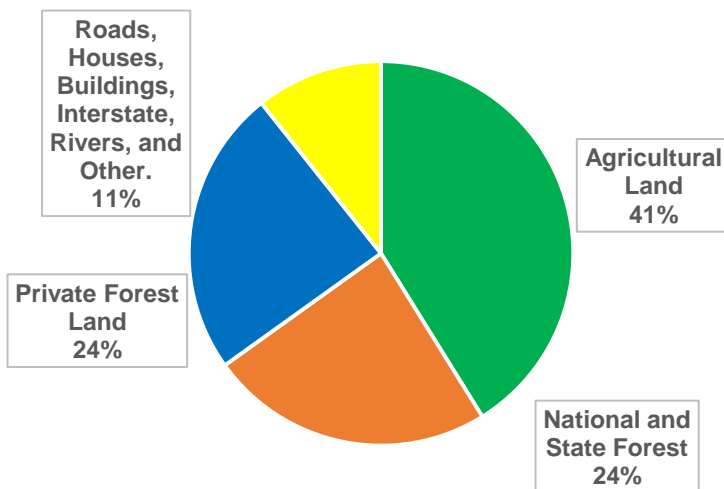
The sixth ELC meeting was held in November and members reviewed and ranked the key issues that were identified in Shenandoah County. Each subcommittee had three issues, for a total of six to be ranked.

The seventh ELC meeting was held in January 2019. A draft of the Situation Analysis report was e-mailed to the ELC members a week prior to the meeting. During the meeting ELC members recommended a few changes to the report.

Unit Profile

Shenandoah County, Virginia, is located in the Northern Shenandoah Valley Region of the State, sharing a border with West Virginia. The county has a total area of 509 square miles. Shenandoah County is a rural county with rolling hills, incorporated small towns, and picturesque farmland that is nestled between the Blue Ridge Mountains to the East and the Allegheny Mountains, part of the Appalachian, to the West. The county is known for its three distinct valleys. The central valley encompasses roughly two-thirds of Shenandoah County's acreage. This is the portion that is transected by Interstate 81 and is the mainstay of the county's industry, agriculture, citizenry, and commerce. The two other valleys, Fort Valley and the Cedar Creek Valley, are somewhat geographically isolated from the main valley. These two valleys, however, offer a touch of quiet rural landscape surrounded by tranquil national forest that many citizens and weekend visitors find highly desirable.

Summary of Land Use in Shenandoah County

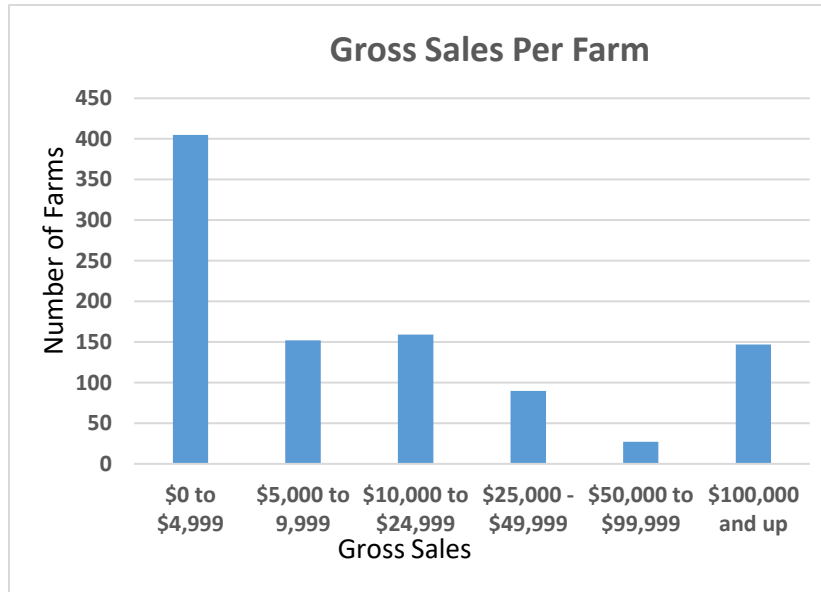


The county has a total population of 43,225 people of which 88.3% are Non-Hispanic White and 3.1% are African-American. Hispanics account for 7% of the population. Twenty-one percent of the population is below 18 years of age and 22% are 65 years and older. Since 2011 the working age group has remained steady at about 57% while those 65 and over rose from 18.3% and the school age population declined from 24.5%. Gender distribution is 51.1% females and 48.9% males.

For the past decade, unemployment in Shenandoah County has generally been slightly higher than the state average but dropped slightly below the state average for the past two years. Both Shenandoah County and the state have unemployment numbers that are well below the national average.

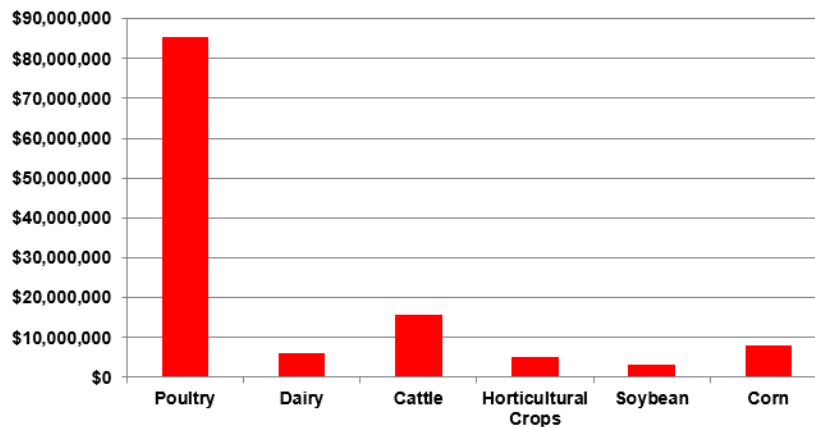
Eleven percent of Shenandoah County residents live in poverty. Thirty percent of residents earn more than the poverty level but less than the basic cost of living for the county (ALICE). In total, 41% of Shenandoah County residents are struggling daily to make ends meet. Approximately 42.5% of the students are eligible for free and reduced price lunches, down from 43.7% four years ago. The median household income level of \$53,934 per year is both below state and national numbers of \$68,766 and \$57,652, respectively. A living wage in Shenandoah County for a family with two adults and two children (with both adults working) is \$15.85 per hour (which equates to about \$634 per week). Along with housing, childcare and transportation are major factors in the cost of living.

The 2012 Census of Agriculture shows there are 980 farms in Shenandoah County. The average farm size is 136 acres, a little smaller than the Virginia average of 180 acres. The total market value of agriculture products grown in Shenandoah County exceeded \$128 million dollars in 2012. This farm revenue supports 481 full time farmers (some of which are likely retired people who farm full time) and 971 farm workers. The majority of Shenandoah County farms are relatively small with 29% generating sales below \$2,500 per year and another 28% generating sales between \$5,000 and \$10,000.



Since 2012 the amount of agri-tourism activities in the county has increased (wineries, on-farm breweries, weddings, etc.). There was not a category that directly quantified the value of agri-tourism in 2012. Since 2012 the number of dairy farms has decreased.

Farm Gate Value of All Agricultural Products Sold in 2012 = **\$128,766,000**



Epidemiological data from the Virginia Department of Health indicates the most urgent health issues in the Shenandoah County are the increasing prevalence of chronic diseases, such as Obesity and Diabetes. The prevalence of Diabetes is 11% and Obesity, a known risk factor for Diabetes, affects 30% of the adult population. These statistics, along with 25% of adults that admit to physical inactivity, portray a worrisome situation. Seventeen percent of adults were uninsured in 2012. This drastically reduces their access to adequate health care.

In regard to food insecurity, the Northern Shenandoah Valley has a smaller problem compared to the state as a whole. However, Shenandoah exceeds the state average for the percentage of food insecure children.

Shenandoah County has a plethora of outdoor recreational facilities. This includes parks in New Market, Strasburg, Woodstock, Edinburg, and Mt. Jackson. Each of these parks has a community pool. In addition, the county park is located outside of Woodstock. All six of these parks have picnic shelters, gentle walking trails, athletic fields, playgrounds, and open space. There are well over 178 miles of walking trails in the national forest. In the spring of 2019 the Seven Bends State Park (located near Woodstock) will open with primitive trails and primitive river access. Shenandoah County also owns the 151 acre Keister Farm near Strasburg and a 195 acre Zula Wagner Farm west of New Market. Both of these properties have not been developed for recreation. There are also six public access points to the North Fork of the Shenandoah River. Bryce Mountain Resort located in the south western portions of the county is a year round resort with (for a fee) snow and grass skiing, an 18 hole golf course, tennis, and a lake. Another 18 hole golf course is located near New Market. Indoor recreation in Shenandoah County is more limited. There are 13 privately owned gyms in the county. There is a privately owned recreation facility in Strasburg that includes indoor winter sports (basketball, dancing, etc.) and a pool.

Shenandoah County operates three school campuses geographically distributed in the southern, central, and northern third of the county. School officials indicate the county achieves a 95% attendance rate and that rate has held steady for the past several years. The graduation rate is 86%. This is very comparable to both Virginia and the United States. The school system offers college credit for 45 different classes through Lord Fairfax Community College. Shenandoah County also hosts the Massanutten Regional Governor's School.

In regard to youth discipline, the county public school system has witnessed nearly a 2% increase in school incidents that require disciplinary action. Specifically, the numbers increased from 5.1% in years 2013-14 to 6.9% in year 2017-18.

The county also offers a vocational center for its students. This vocational center offers 13 different credentialed training curriculums that include: Auto Body Technology, Automotive Technology, Carpentry, Cisco Networking, Cosmetology, Criminal Justice, Culinary Arts, Cyber Security, Early Childhood Education, Electricity, Health Care Science, Masonry, and Nurse Aide. The three high schools also offer multiple classes in Family and Consumer Science and Vocational Agriculture. In terms of post-secondary education, Lord Fairfax Community College and Blue Ridge Community College are both within a 35 minute drive from Shenandoah County. These two institutions offer a multitude of training opportunities for both skilled trades and college credit.

Eighty-five percent of the county's population 18 years old or older has earned a high school diploma or GED. Twenty-four percent of this population has earned an Associate's degree or higher.

Data about heroin and other opioid drug use for the six localities that make up the Northern Shenandoah Valley (Clarke, Frederick, Page, Shenandoah, Warren, and Winchester City) is shown below. The Northern Shenandoah Valley Substance Abuse Coalition believes the type of drug use is shifting, but drug use is still very problematic.

Year	Fatalities	Non-Fatal Overdoses
2012	1	18
2013	21	100
2014	33	73
2015	30	55
2016	30	125
2017	40	190
2018	22	151

Over 8,000 people have died in Virginia over the last decade from opioid overdoses. Nationally, drug overdose deaths now exceed motor vehicle related deaths in 29 states and Washington, DC. They are the leading cause of death for Americans under the age of 50. Vaping is also becoming more popular. Nationally, nearly one in three students in 12th grade report past year use of a vaping device. A Northwest Virginia Regional Drug and Gang Task Force works with the Northern Shenandoah Valley Substance Abuse Coalition in addressing this crisis.

In 2018, the Virginia Department of Environmental Quality continues to monitor five stream segments in Shenandoah County that have been classified as impaired. The impairments include either E-coli Bacteria and/or Benthic Macro Invertebrates. In terms of funding to protect/improve the county’s natural resources, on average the USDA Natural Resources Conservation Service has invested over \$400,000 per year on Shenandoah County farms through its Cost-Share Program. Additionally, an average of \$600,000 per year in state funds have been invested on Shenandoah County farms through the Lord Fairfax Soil and Water Conservation District for the past 10 years.

From Year 2010 through 2018 Virginia Cooperative Extension has offered a home water quality testing program. One hundred ninety-four water samples have been run. Data from these tests is not a statistically valid representation of the county. However, it shows that 46% of the samples were positive for Total Coliform Bacteria and 14% were positive for E-coli Bacteria. Also, only 1% of the samples exceeded 10 ppm nitrate.

Community and Resident Perspectives

Agents and ELCs in Planning District 7 (Counties of Clarke, Frederick, Page, Shenandoah, Warren, and the City of Winchester) conducted a 2018 ELC Community Survey in which 647 residents responded. Two hundred sixty were from Shenandoah County. Table #1 shows the responses to specific questions from county residents. Table #2 shows these same results summarized and ranked. Additionally, the survey asked residents to describe the top three issues facing Shenandoah County. That data is summarized in Table #3.

Data from these responses was used to identify a preliminary set of priority issues (six issues were identified). The ELC subdivided the six issues into two groups. Two sets of key informants were selected (one group for each set of issues). The key informants were selected based on their knowledge of those issues. Twenty-three key informants were interviewed. A final set of priority issues was selected based on data from the community wide survey, responses from the key informants, and ELC member's knowledge of the community.

Table #1: Summary of Community Wide Survey Data for Shenandoah County						
Q1 - Please select where you reside:						
1	Shenandoah	260	Number of Respondents			
Q2 - Positive Youth Development:						
		Not Important	Slightly Important	Important	Extremely Important	No Opinion
1	Increased availability of before and after school programming	6%	12%	40%	35%	8%
2	Teen community involvement	3%	5%	40%	48%	3%
3	Teen leadership opportunities/ life skills/decision making for youth	3%	3%	31%	61%	3%
4	Positive youth activities	3%	4%	29%	62%	2%
5	Youth health and wellness (mental health, substance abuse, obesity, nutrition and violence)	2%	6%	29%	61%	1%
6	Workforce prep and job skills	1%	4%	25%	69%	2%
7	More programs teaching science, technology, engineering, arts, math (STEAM) knowledge	3%	10%	41%	44%	3%
8	Character education and bullying prevention	2%	9%	29%	57%	3%

Table # 1 Continued

Q3 - Agriculture and Natural Resources:						
		Not Important	Slightly Important	Important	Extremely Important	No Opinion
1	Understanding advanced technology (GMO, antibiotics, bioengineering) to make educated food purchasing decisions	3%	15%	43%	36%	2%
2	Availability of a safe food supply	1%	5%	32%	61%	1%
3	Availability of an affordable food supply	1%	4%	32%	62%	1%
4	Maintaining and conserving farmland, forestry, and open space	0%	5%	24%	69%	2%
5	Creating niche markets for locally grown products (either those currently grown or those with potential to be grown here)	0%	7%	44%	47%	1%
6	Efforts to improve and protect water quality (surface water, ground water, and the Chesapeake Bay)	0%	7%	27%	64%	2%
7	Safe use of pesticides	0%	6%	27%	64%	3%
8	Early detection, identification, and management of invasive species (weeds, insects, plant pathogens)	3%	9%	35%	50%	3%
Q4 - Nutrition, Health and Wellness:						
		Not Important	Slightly Important	Important	Extremely Important	No Opinion
1	Affordable health and dental services	0%	3%	26%	69%	1%
2	Obesity prevention	1%	14%	52%	29%	4%
3	Access to recreational/exercise facilities	2%	11%	47%	38%	2%
4	Chronic disease (heart, diabetes, cancer) prevention	1%	9%	46%	41%	3%
5	Substance abuse prevention	0%	6%	29%	63%	2%
6	Access to fresh healthy food	0%	4%	30%	64%	2%
7	Access to safe drinking from well water	0%	3%	24%	72%	2%

Table # 1 Continued**Q6 - Family and Community Economics:**

		Not Important	Slightly Important	Important	Extremely Important	No Opinion
1	Buying a home or affording a home mortgage	3%	14%	48%	30%	4%
2	Handling personal and family finances	2%	8%	44%	45%	1%
3	Managing credit and debt	3%	9%	40%	46%	2%
4	Paying for college	10%	7%	51%	26%	6%
5	Planning for retirement	2%	10%	39%	46%	3%
6	Protecting your finances with insurance	6%	18%	51%	22%	3%
7	Reducing frauds, scams, and identity theft	0%	7%	45%	44%	3%
8	Renter's rights and responsibilities	9%	21%	47%	15%	7%
9	Wills and estate planning	3%	19%	51%	25%	2%

Q15 - How familiar are you with Virginia Cooperative Extension?

1	Not familiar at all	9%				
2	Somewhat familiar	31%				
3	Familiar	27%				
4	Very familiar	33%				

Q16 - Have you ever participated in educational programs offered by Virginia Cooperative Extension?

1	No	48%				
2	Yes	52%				

Table #2: Summary of Community Wide Survey Responses	
Question	Sum of Important and Extremely Important
Access to safe drinking from well water	95%
Affordable health and dental services	95%
Availability of an affordable food supply	94%
Access to fresh healthy food	94%
Workforce prep and job skills	93%
Maintaining and conserving farmland, forestry, and open space	93%
Availability of a safe food supply	92%
Teen leadership opportunities/life skills/decision making for youth	92%
Substance abuse prevention	92%
Creating niche markets for locally grown products (either those currently grown or those with potential to be grown here)	91%
Efforts to improve and protect water quality (surface water, ground water, and the Chesapeake Bay)	91%
Safe use of pesticides	91%
Positive youth activities	91%
Youth health and wellness (mental health, substance abuse, obesity, nutrition and violence)	90%
Reducing frauds, scams, and identity theft	90%
Handling personal and family finances	89%
Teen community involvement	88%
Chronic disease (heart, diabetes, cancer) prevention	87%
Character education and bullying prevention	86%
Early detection, identification, and management of invasive species (weeds, insects, plant pathogens)	86%
Managing credit and debt	85%
Planning for retirement	85%
More programs teaching science, technology, engineering, arts, math (STEAM) knowledge	85%
Access to recreational/exercise facilities	85%
Obesity prevention	81%
Understanding advanced technology (GMO, antibiotics, bioengineering) to make educated food purchasing decisions	80%
Buying a home or affording a home mortgage	79%
Paying for college	77%
Wills and estate planning	76%
Increased availability of before and after school programming	75%
Protecting your finances with insurance	73%
Renter's rights and responsibilities	63%

Table 3: Summary of Top Three Issues

%	# Responses		Issues in Alphabetical Order
0.2%	1	A	Aging population
2.0%	9	C	Childcare (also senior care)
0.9%	4	CL	Climate Change/ Energy (renewable energy)
5.1%	23	CM	County Management (taxes, budget decisions on resource use, teacher salaries, school maintenance, emergency & fire services)
14.3%	64	D	Drugs (alcohol, human trafficking, related crime)
0.2%	1	DV	Domestic Violence
10.9%	49	F	Farms (and forests, preservation/conservation, production issues, maintaining rural lifestyle)
5.3%	24	FD	Food (availability, quality, cost)
3.8%	17	FM	Financial Management
0.2%	1	G	Guns (firearms training)
8.2%	37	H	Health (insurance, exercise, recreation, obeisity, chronic pain, elderly, isolation)
4.2%	19	MH	Mental Health
2.2%	10	Hs	Housing (affordability, availability, rental rights & responsibilities)
8.0%	36	J	Jobs (employment, growth, economic development, encouraging small businesses, tourism)
1.6%	7	P	Parenting (skills, child abuse)
4.7%	21	S	Schools (curriculum, structure, student behavior, overcrowding, bullying, teacher turnover; but not funding which is under CM)
2.2%	10	TS	Trade Schools (need for more vocational training)
3.3%	15	T	Transportation (I-81, lack of public transit, farm traffic on back roads)
0.7%	3	TCH	Technology (affordable computer training for all ages, phone scams, need for choice in internet/cable providers)
1.6%	7	P	Poverty
3.1%	14	V	Values (community spirit, toxic political climate)
0.7%	3	VCE	Comments directed to Virginia Cooperative Extension Services
8.7%	39	WEP	Water/ Environment/ Pesticides (including air quality)
7.8%	35	Y	Youth (healthy after school activities, work habits, life skills, job skills, programs for teens, social skills, responsibility)
100.0%	449		

Priority Issues

1. Employment, Pay Scale, Workforce Preparation, and Job Skills

Sustaining a local economy that provides citizens adequate employment opportunities at a living wage is an important issue for Shenandoah County. There was a desire for industries that can thrive among the resources available in Shenandoah County and are in harmony with the county's goal of continuing its rural character. Key Informants recommended securing industries and businesses that are the "right fit" or "right size" for Shenandoah County.

Many citizens believe too many of our young people are still being encouraged to go to college instead of pursuing careers in skilled trades. The recent upswing in the economy created significant opportunities for skilled labor. The community college system has underutilized capacity to train young people in skilled trades. There were suggestions to expand Triplett Tech to offer both more diverse training and more capacity in its current offerings.

Extension offers a multitude of educational programs that indirectly benefit this issue. The 4-H program includes public speaking contests, livestock judging contests, camp counselor training, and more. All of these venues train youth in communication skills which are essential in any job. There are 11 community clubs in the county that provide youth with direct experience at leading groups. 4-H'ers complete project books which teach youth how to plan and do critical thinking. Extension also offers youth financial education programs (Kids Marketplace, Real Money Real World, and Reality Store). Other aspects of Extension provide direct workforce skill training. Extension provides certification and recertification training for both private and commercial pesticide applicators. Training in food processing technology helps both farmers and new farm employees learn needed skills to better market farm products. Extension offers ServSafe training for food service workers. Most of Extension's educational meetings serve to provide continuing education to agribusiness employees and professionals.

2. Long Term Sustainability and Profitability of Agriculture and Climate Change

Maintaining and conserving farmland, forest land, and open space is a priority issue for Shenandoah County. The county will continue to face development pressure from Northern Virginia that could easily re-purpose a substantial amount of farmland in the coming years. Maintaining vibrant agriculture throughout the United States ensures an adequate food supply that is both safe and economical. Preserving/protecting some farmland from development will be important so that future generations have the opportunity to farm. Also, the rural character of Shenandoah County is a key component of the tourism industry.

Sustaining vibrant farming is always a challenge that is no different for Shenandoah County than anywhere else in the world. There will be more challenges in the future due to climate change. Agricultural entrepreneurs will consistently need access to the latest production technologies, access to food processors and/or the ability to create value added products, marketing information, and market access.

Extension educational efforts to protect/preserve farmland are three fold. First, all efforts are designed to enhance farm profitability to enable farmers to continue to farm (as opposed to selling the farmland for development). Additionally, in years past Extension provided direct education on how to place conservation easements on farmland through the “Preserving Shenandoah” newsletter series and related educational meetings. This particular effort has graduated into Extension supporting the Shenandoah County Easement Authority. Third, the Shenandoah County Sustainable Farm Demonstration is primarily focused on teaching people who own farmland (but who do not farm) how to achieve their goals through lease arrangements with area farmers.

In regard to farm profitability, Extension offers a plethora of educational programs focused on competitiveness and profitability of agriculture. These efforts span the entire realm of agriculture from traditional agriculture to alternative farm enterprises to direct marketing, agri-tourism, and value-added processing.

Extension does not have a direct educational initiative focused on climate change. However, several efforts address this issue. For example, Extension’s crop variety testing and plant breeding programs enable farmers to shift to varieties that are adapted to climate change. Not all crops are tested in every state; but, for the most part, they are tested nearby. Extension’s research and education in both plant and animal diseases, entomology, and weed science enable the commonwealth to continue addressing issues with new pests. Extension also has educational efforts designed to improve energy efficiency (energy audits, use of solar, and wind) and carbon sequestering (no-till farming, improved pasture management, and timber management).

3. Youth and Education

Local youth are the future leaders of our county. Adults who work with teens, both inside and outside of the school system, report that they are seeing an increasing number of teens who don’t feel a connection to their community and who don’t always receive consequences for bad behavior. In addition, many students also have difficulty in planning or lack a concept on how to plan for themselves. Face-to-face communication skills among students are suffering from the increased use of texting and social media in place of face-to-face communication. Local youth need more opportunities to learn and practice good communication and leadership skills in order to develop a good work ethic, be employable after school, and become active and contributing members of society.

Afterschool activities, outside of school sports, are lacking for older youth between the time of school dismissal and when parents return home from work. In some cases, teens lack either transportation or funds to participate in the activities that are available to them. Bullying and cyberbullying continue to be issues among youth, even though these issues are being addressed in the school system. Key informants would like to see more career coaching at an earlier age for schoolchildren.

This issue is currently being addressed by VCE resources, in addition to other resources in the county. The School System offers myriad programs, including FFA, FCCLA, sports, vocational training, concurrent college classes, and science academies. KidzRec, through Parks and Recreation, offers an afterschool program in the elementary schools. The Shenandoah County Chamber of Commerce and the Salem YMCA are also planning to offer leadership and mentoring programs in the schools.

VCE's 4-H Youth Development Program networks with other youth agencies and programs to provide needed programs for all youth. 4-H involves 4-H adult volunteers who work with youth teaching leadership, citizenship, and life skills through out of school 4-H clubs, workshops, and camps. There are enough volunteers to enable the 4-H program to expand. More networking and more recruiting can to be done to reach more local youth.

4. Substance Abuse

Substance abuse (opioids, heroin, meth, cocaine, marijuana, painkillers, alcohol, and prescription drugs) continues to be identified as a major problem in Shenandoah and neighboring counties. Opioid use appears to be decreasing while overall drug use is very prevalent. The availability of Narcan to the general public gives people the impression that they have a safety net and reduces the number of official overdose reports so it may appear that the problem is decreasing, when it is not. Abuse of substances is more of a problem in the home than in school and can be tied to a lack of support at home along with alcohol and drug use by the adults in the home. The I-81 corridor is often used to transport drugs through Shenandoah County and also aids human trafficking, which is an emerging issue that is often tied to substance abuse. Citizens need more education about how to recognize and report human trafficking.

A shortage of drug rehabilitation facilities, long waiting lists for rehabilitation counselors, along with a need for more training for law enforcement officers, make substance abuse an issue that will not go away.

Virginia Cooperative Extension received grant funding to start a new initiative focused on substance abuse. Four new Extension Agents are being hired to focus on the substance abuse problem. Presently, none of these people are focusing on any Shenandoah Valley Counties. The 4-H Agent serves on the Family Youth Initiative Coalition that brings together youth serving agencies, the School System, mental health agencies, the hospital, and law enforcement to address substance abuse issues in youth. The 4-H HealthRocks! Curriculum has been offered to all three middle schools as a prevention program and was successfully taught to 6th graders at one middle school. Keeping youth involved in positive youth development programs, such as 4-H clubs and programs, helps prevent substance abuse among young people.

5. Water Quality

Shenandoah County citizens place great value on ensuring that we protect/sustain good water quality for both the citizenry of the county and for those beyond county boundaries. County citizens also placed a high priority on being able to access safe drinking water, with 95% of respondents ranking this as “important” or “extremely important.” Most county residents rely on private water sources for their water supply. Thus, all efforts to ensure protection of our groundwater are important. Some survey respondents requested water testing that goes beyond coliform/e-coli and nitrates. There was interest in having water tested for pesticides (specifically, the herbicides glyphosate and dicamba were mentioned) and heavy metals.

There were a multitude of responses from citizens and key informants that efforts to improve/protect water quality are on the right path. Respondents believe current state and federal cost-share programs have done good things for protecting/improving water quality. Most respondents encouraged us to “stay the course” with the current level of effort for these programs. There was some who felt a little effort on the urban non-point sector (home lawns, small towns, etc.) might result in great improvements in water quality.

Some citizens are concerned that Shenandoah County might not have an adequate quantity of water for future growth. Several mentioned that major industrial or population growth might appear advantageous for the county but they are concerned that we might not have enough water to support that growth.

A multitude of Extension programs address water quality issues. For example, the “Graze 300 VA” initiative has a goal of extending the grazing season through better pasture management and Extension’s educational efforts focused on no-till farming will increase the portion of crop land farmed using no-till practices. As both no-till increases and more farmers extend their grazing season, there will be significant water quality improvements. Extension continues to provide municipalities and farmers with improved waste and nutrient management technologies that will improve water quality. Extension Agents in many areas of Virginia offer urban nutrient management education. This could potentially be expanded into the Northern Shenandoah Valley. Extension has been offering a household water quality testing program for the past two decades and will continue to do so in the future.

6. Health

Mental health issues appear to be as prevalent as substance abuse in Shenandoah County. Dysfunctional family dynamics, pressure for higher grades in school, and peer pressure have all added to high anxiety and panic attacks in youth that were not seen in years past. Adults are not immune to this issue either. The increase in mental health issues has created challenges for local law enforcement. While not necessarily a public safety issue, lack of resources is apparent. Unfortunately, those with mental health issues many times turn to substance abuse when healthier resources are not available.

Adding to the problem is the lack of mental health care providers due to highly regulated federal and state guidelines, lack of funding, and large caseloads, all resulting in turnover and burnout. Transportation to and from local health services is also an issue for those in need along with the inability to secure health insurance at a reasonable cost. A bright spot in the county is a counseling service now offered to youth on our southern school campus and recently expanded to our two other campuses. In addition, Valley Health is extending healthcare coverage via the creation of Rural Health Clinics (RHC) that offer primary care services for both Medicaid and Medicare patients outside the hospitals in a more rural setting.

County citizens also expressed a concern about the incidence of obesity and concerns that there are inadequate facilities available for citizens to get proper exercise. Thirty percent of the adult population in Shenandoah County is overweight or obese, which is a staggering number. Youth in school appear to be health conscious and aware of a proper diet, but again, lack of activity takes a toll. There were also a multitude of concerns expressed that rising health care costs are hurting citizen's ability to pay for good health care (i.e. Affordable Health Care).

VCE is currently addressing health related issues through programs targeted to diabetes prevention, living with diabetes, and nutrition education for youth. VCE is not adequately equipped to handle mental health issues, but we can facilitate trainings to teach Youth Mental Health First Aid programs to help our 4-H volunteers, and other youth-serving groups, identify problems, and refer youth to the appropriate resources for help.

Sources of Information

Population Data and Statistics

- www.census.gov
- www.census.gov/quickfacts/

Economic

- <http://livingwage.mit.edu/>
- Feeding America, 2014 <https://www.feedingamerica.org/research/hunger-in-america>
- People inc. Building Futures Realizing Dreams. 2017 Community Assessment: <http://www.peopleinc.net/media/About/Publications/Publications-PINC-%20Community%20Assessment%202017.pdf>
- Community Profile for Shenandoah Co., Virginia; Virginia Economic Development Partners: www.VEDP.org (formerly www.YesVirginia.org)

Agriculture and Natural Resources

- www.agcensus.usda.gov
- Dialogue with officials from the Virginia Department of Environmental Quality
- Communication with the Lord Fairfax Soil and Water Conservation District
- Communication with the USDA Natural Resources Conservation Service
- [Communication with the Virginia Department of Forestry](#)

Public Schools and Trade/Technical Education

- Dialogue with Shenandoah County Public School officials.
- Incidence of guns, alcohol, tobacco, and other drugs in public schools: Virginia Dept. of Education Safe Schools Information Resource (SSIR): <https://p1pe.doe.virginia.gov/pti/>
- Graduation rates, dual enrollment, dropout rate in public schools: Shenandoah County Public Schools – Division Profile, January 2018 (hard copy)
- For other information on Lord Fairfax Community College: www.lfcc.edu

Health

- Virginia Department of Public Health: www.vdh.virginia.gov/data/
- Shenandoah County Parks and Recreation
- People inc. Building Futures Realizing Dreams. 2017 Community Assessment: <http://www.peopleinc.net/media/About/Publications/Publications-PINC-%20Community%20Assessment%202017.pdf>
- Health insurance (uninsured population) 2013-2017 and US census data: www.census.gov/quickfacts/fact/table/shenandoahcountyvirginia/
- Health insurance 2012 data, data on mental health providers in Shenandoah County: www.countyhealthrankings.org
- Obesity, risk factors for obesity: www.cdc.gov Centers for Disease Control and Prevention, and www.aafp.org American Academy of Family Physicians

Substance Abuse

- Data on fatal drug and non-fatal overdoses, trends in drug use, new initiatives on Drug Treatment Court, etc.: Northern Shenandoah Valley Substance Abuse Coalition www.roadtorecovery.info
- People inc. Building Futures Realizing Dreams. 2017 Community Assessment: <http://www.peopleinc.net/media/About/Publications/Publications-PINC-%20Community%20Assessment%202017.pdf>
- Virginia State Police: www.vsp.virginia.gov
- NW Virginia Regional Drug and Gang Task Force: www.warrencountysheriff.org/divisions/drug-task-force
- Northern Virginia Daily Newspaper: www.nvdaily.com
- Virginia Department of Public Health (VDH): www.vdh.virginia.gov
- National Institute on Drug Abuse (NIH): www.drugabuse.gov
- Shenandoah County Sheriff's Department: www.shencosheriff.com
- Virginia Department of Health Opioid Resource Guide: <http://www.vdh.virginia.gov/content/uploads/sites/127/2017/12/Opioid-Resources-VSP-Div-II.pdf>