



Central Shenandoah Planning District Commission Comprehensive Economic Development Strategy

August 2018



Prepared for:

Central Shenandoah Planning
District Commission
112 MacTanly Place
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WHAT IS A COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY ?

A CEDS is a key component in establishing and maintaining a robust, diverse economic ecosystem. The CEDS provides a platform for individuals, organizations, local governments, institutes of learning, and private industry to engage in a meaningful conversation about how local strengths can be leveraged to improve overall quality of life and how barriers can be overcome to achieve goals. Establishing regional economic development goals through an intensive planning process is not only important in terms of setting roles and responsibilities among stakeholders, completing an EDA-approved CEDS unlocks federal and state funding sources that are invaluable to localities who may not otherwise have access to capital.¹

ABOUT THE CENTRAL SHENANDOAH PLANNING DISTRICT COMMISSION

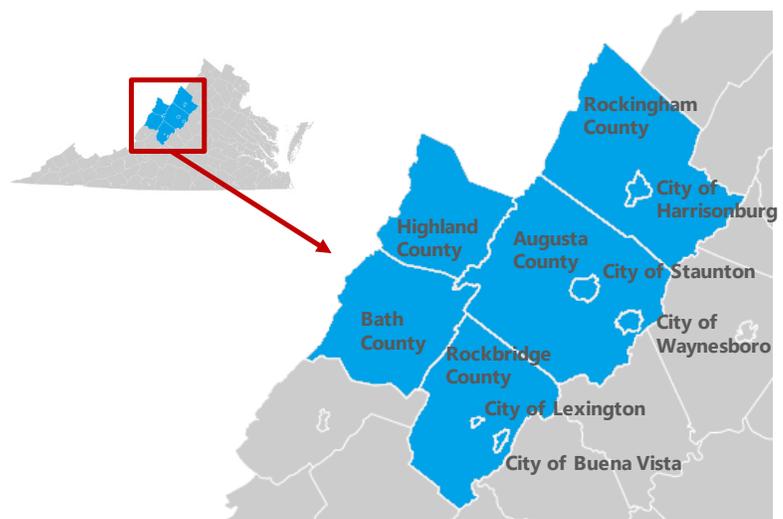
Who we are

The Central Shenandoah Planning District Commission (CSPDC) is comprised of Rockingham County, City of Harrisonburg, Highland County, Augusta County, City of Staunton, City of Waynesboro, Bath County, Rockbridge County, City of Lexington, and City of Buena Vista and 11 incorporated towns.

The CSPDC is a designated Economic Development District (EDD) under a program administered by the U.S. Department of Commerce's Economic Development Administration (EDA). Economic planning services are provided to all towns, cities, and counties within the CSPDC region.

What we do

The CSPDC's vision is to be recognized and respected as a leader in regional and local planning issues by providing support to the local governments of the Central Shenandoah Valley Region. They aim to help communities and agencies within the Central Shenandoah Valley work together by providing high-quality planning, technical assistance, and facilitation services that address local, regional, and state needs in an innovative, timely, and cooperative manner.



¹ Adapted from the Economic Development Administration website



Executive Summary

The Central Shenandoah Region is an area rich in employment opportunities, natural resources, and economic assets that can support sustainable growth into the future. Every corner of the Central Shenandoah Region is diverse in its geography and industry mix, which is part of what makes the region enticing to residents and business alike.

Focused on sustaining and enhancing these characteristics, the CSPDC engaged in a CEDS to pursue strategy-driven regional economic development. The CEDS serves as a roadmap to guide the region in achieving their vision. The vision is a result of collaboration and extensive engagement through key stakeholder interviews, focus groups, and CEDS Project Team meetings. The CEDS is an important economic development tool for the CSPDC that builds on other impressive regional planning efforts, like the GO Virginia Economic Growth and Diversification Plan.

The CEDS is informed by a rigorous analysis of the region's current state, which includes a Background Conditions Report; Infrastructure and Environmental Conditions Overview; and a Strengths, Weakness, Opportunities, Threats (SWOT) Analysis. The CEDS focuses heavily on implementation with an Action Plan Matrix guiding the CSPDC through priority projects and performance metrics to gauge the success of their efforts.

The CEDS effort was a collaborative process that sought insight from existing plans and key stakeholders to achieve regional goals. The goals were devised by examining the main areas for development and progress, and include workforce, infrastructure and community needs, business attraction and retention, agriculture and agribusiness, and economic and business resiliency. Objectives under each goal area are ranked in order of regional priority, which was determined during an interactive activity in a strategy development workshop.

CEDS PROCESS

1. ANALYZE DATA
2. DERIVE THEMES
3. BUILD CONSENSUS
4. CREATE ACTION STEPS



EXPECTED OUTCOMES

1. INCREASED WAGES
2. GREATER QUALITY OF LIFE
3. WORKFORCE PREPARED FOR FUTURE ECONOMY
4. ENHANCED VISITOR EXPERIENCE
5. ASSET-BASED ECONOMIC DEVELOPMENT
6. INNOVATION

REGIONAL STRENGTHS

- Diverse industry mix.
- Abundant cultural, historical, natural and recreational assets.
- Substantial transportation assets in rail, road, and airports.
- Prevalence of higher education institutions.
- Strong relationships among economic development and planning organizations.
- Rural settings with high quality of life in close proximity to regional urban centers.



Vision Statement

The Central Shenandoah Region is committed to collaborating across sectors to create a prosperous environment that encourages sustainable development, supports a diversity of employment opportunities, provides a high quality of life for residents, and preserves the many natural resources that make the Shenandoah Valley a unique place to visit, live, and work.

MOVING FORWARD TOGETHER

The CSPDC's Strategic Direction/Action Plan contains five ambitious visions, which are outlined on the following pages. Each vision promotes the individual qualities of each locality, while striving to make a positive regional impact.

Beneath each vision are goals, which help define how that vision will be achieved. Nearly every goal requires collaboration from not only localities, but regional economic development and planning partners.

Regionalizing economic development efforts allows parties to concentrate resources, draw on the expertise of partners and empower organizations to work across jurisdictional boundaries.

The complete Strategic Direction/Action Plan can be found in the Appendices of this report.





VISION I:

Prepare the Central Shenandoah Region's workforce for in-demand occupations with opportunities to advance up the career ladder and build human capital.

GOAL 1:

Expand the workforce talent pool in the Central Shenandoah Region by attracting new residents and retaining workers.

GOAL 2:

Partner with local industry to engage students and recent graduates to change the culture around careers available to students locally.

GOAL 3:

Enable the growth of programs that recognize the potential of the local workforce to upskill and climb the career ladder.



VISION II:

Address critical infrastructure updates and anticipate future community needs to improve the Central Shenandoah Region's competitiveness to attract and retain business.

GOAL 1:

Expand and improve the Region's technology and telecommunications systems.

GOAL 2:

Maintain and improve transportation networks that carry goods and people throughout the Central Shenandoah Region.

GOAL 3:

Invest in site improvements by focusing on essential infrastructure upgrades or installation.

GOAL 4:

Diversify housing options within the Central Shenandoah Region.



VISION III:

Expand and diversify economic activity in the Central Shenandoah Region by focusing on developing physical assets and cultivating natural resources.

GOAL 1:

Encourage the diversification of new and existing industries to ensure economic resiliency.

GOAL 2:

Support business attraction and retention efforts in the Central Shenandoah Region.

GOAL 3:

Enhance natural resources, heritage sites and other outdoor recreation elements throughout the Region to promote quality of life, increase visitation and spur the outdoor recreation economy.

GOAL 4:

Create, improve, and renovate downtown corridors or other significant centers of activity to be economically productive.

VISION IV:

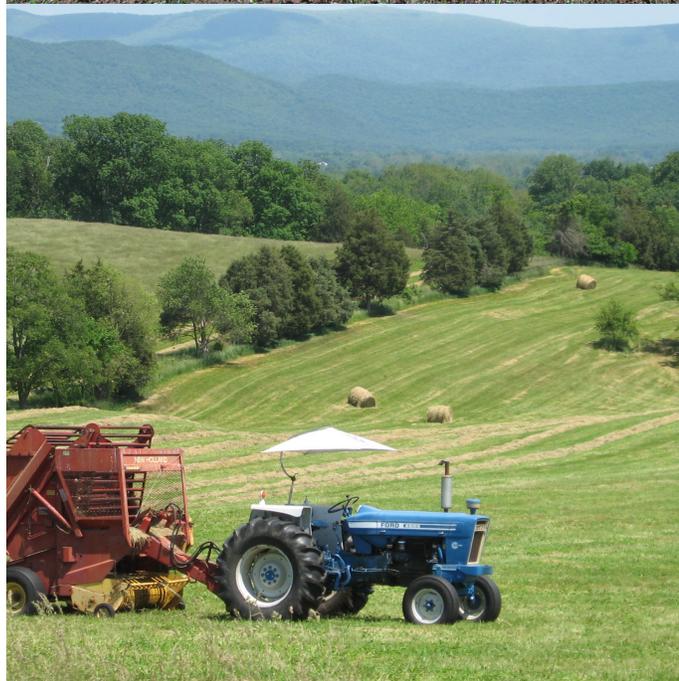
Grow agribusiness by expanding the markets for farmers, producers, food manufacturers, and other related sectors, like forestry, in the Central Shenandoah Region and beyond.

GOAL 1:

Collaborate with agribusiness to understand challenges facing their production and strategies to improve their business.

GOAL 2:

Support resources and programs to grow the agritourism sector.





VISION V:

Increase resilience to natural and man-made hazards, economic downturns, and social vulnerabilities that impact communities and businesses in the Central Shenandoah Region.

GOAL 1:

Make the Region more resilient through planning, education, and mitigation activities.

GOAL 2:

Facilitate strategic land use to mitigate negative effects of natural disasters on residents and businesses.

GOAL 3:

Diversify regional funding assistance and federal funds to strengthen organizational capacity in times of stability and disaster efforts.

Implementation

The planning process was initiated with the understanding that developing relationships among stakeholders in the public and private sector would be essential for successful implementation. The factors, partners and other resources expected for implementation are detailed in the Action Plan Matrix, contained in the report's Appendices. Potential funding sources are identified so that the organization can launch into implementation from planning. CSPDC anticipates taking on the role of facilitator, while enabling local experts to take on goal areas that match their expertise. Additionally, each objective has a performance measure, which will be updated along with other necessary elements during each annual review of the CEDS required by the Economic Development Administration.

Acknowledgements

The CEDS was a collaborative effort that came together successfully because of the valuable contributions of community members around the Central Shenandoah Region.

CEDS PROJECT TEAM

The CEDS Project Team was integral in reviewing draft CEDS materials, refining strategies and advising on regional priorities from diverse perspectives. Representatives are listed below.

Amanda Glover, Director of Economic Development & Tourism at Augusta County

Betty Mitchell, Executive Director at The Highland Center

Bonnie Riedesel, Executive Director of CSPDC

Carolyn Dull, CSPDC Board member and Mayor of Staunton

Chris Slaydon, Assistant Director of Community Development at Rockbridge County

Courtland Robinson, Director of Business Development at Shenandoah Valley Partnership

Dr. Kevin Ratliff, Dean of Workforce and Continuing Education at Blue Ridge Community College

Elizabeth McCarty, Director of Planning at CSPDC

Joan Hollen, Shenandoah Valley Workforce Development Board

Peirce Macgill, Assistant Director at City of Harrisonburg Economic Development

CEDS COMMITTEE

The CSPDC Board of Commissioners also acts as the CEDS Committee. Members of the Board are listed below.

Augusta County

- Marshall Pattie, Board of Supervisors
- Terry Kelley, Board of Supervisors
- Vickie Moran, Craigsville Town Council
- Leslie Tate, Non-Elected Representative

Bath County

- Edward Hicklin, Board of Supervisors

Buena Vista

- Lisa Clark, City Council

Harrisonburg

- Ted Byrd, City Council
- George Hirschmann, City Council
- Adam Fletcher, Non-Elected Representative

Highland County

- Kevin Wagner, Board of Supervisors

Lexington

- Frank Friedman, City Council

Rockbridge County

- Jay Lewis, Board of Supervisors
- Chris Slaydon, Non-Elected Representative

Rockingham County

- Ned Overton, Timberville Town Council
- Rick Chandler, Board of Supervisors
- Rhonda Cooper, Non-Elected Representative
- Kim Sandum, Non-Elected Representative

Staunton

- Carolyn Dull, City Council
- Sharon Angle, Non-Elected Representative

Waynesboro

- Terry Short, City Council
- Warren Johnson, Non-Elected Representative

Thank you also to the team at Camoin Associates who facilitated the planning process and coordinated the CEDS development.



THE PROJECT STAFF

Project Principals

Michael N'dolo, *Vice President*

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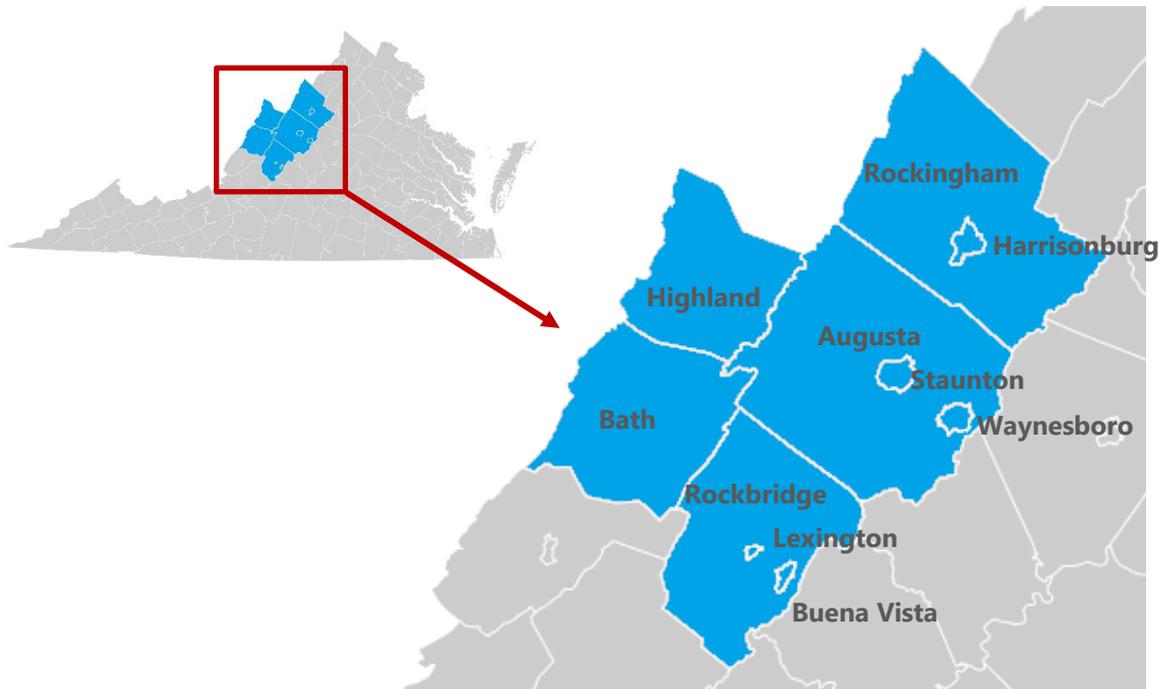
Bethany Meys, *Analyst*

Appendix A: Background Conditions

Introduction

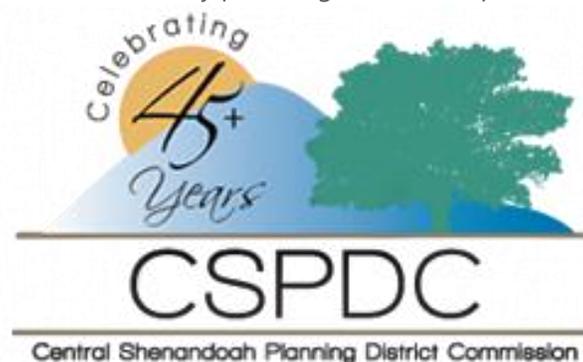
The Central Shenandoah Planning District Commission (CSPDC) is comprised of Rockingham County, City of Harrisonburg, Highland County, Augusta County, City of Staunton, City of Waynesboro, Bath County, Rockbridge County, City of Lexington, and City of Buena Vista and 11 incorporated towns.

Figure 1: Map of Central Shenandoah Planning District Commission within the Commonwealth of Virginia



The Central Shenandoah Planning District Commission’s vision is to be recognized and respected as a leader in regional and local planning issues by providing support to the local governments of the Central Shenandoah Valley Region. They aim to help communities and agencies within the Central Shenandoah Valley work together by providing high-quality planning, technical assistance, and facilitation services that address local, regional, and state needs in an innovative, timely, and cooperative manner.

Aligning with its vision and mission, the CSPDC has engaged in a Comprehensive Economic Development Strategy (CEDS) process to pursue strategy-driven regional economic development. The following Background Conditions Report will serve as the foundation of the CEDS by providing data trends pertaining to the state of the regional economy.



The Background Conditions for the Central Shenandoah Planning District Commission presents detailed information about historic, current, and projected economic conditions that inform where the CSPDC region has been, where the CSPDC region is currently, and anticipated trends that will impact future progress and development. Information presented in this section has been gathered from previous efforts, namely the GO Virginia Region 8 Economic Growth and Diversification Plan completed in 2017. Supplemental data was pulled as appropriate, in order to fill in gaps in previous plans.

Background Conditions Key Findings

Demographics

- As of 2017, there are approximately 299,000 residents and 116,000 total households within the CSPDC. Total number of households has increased by 5% since 2010 and is projected to continue expanding into 2022.
- The CSPDC population is predominately White, with variations in race and ethnicity among its localities. Currently, Highland County is the least diverse with 99.5% of its residents identifying as White and the City of Harrisonburg is the most diverse with a mix of White, Black, Hispanic, and Asian residents.
- The median age within the CSPDC is 39.2 years old.
- The CSPDC has a variety of educational assets within its boundaries to prepare the regional workforce for various employment opportunities, including ten universities and colleges. Approximately 85.4% of the CSPDC population aged 25 or older is a high school graduate. Additionally, 5.8% of the population aged 25 or older has an Associate degree while 25.0% of the population aged 25 or older has a Bachelor's degree or higher.
- Median household income within the CSPDC is \$49,190, which falls about \$17,000 below median household income across the state, which totals \$66,285. Both geographies are projected to experience an increase in median household income in the coming years. Virginia's median household income growth is projected to increase by 12.1% while the CSPDC is projected to grow by 5.0%.

Industries and Employment

- As of 2016, there were approximately 138,610 jobs in the Central Shenandoah Planning District Commission. Jobs have declined by 1% since 2006, with major losses in the Construction and Manufacturing industries.
- The top three 2-digit NAICS industries by employment are Government¹; Manufacturing; and Health Care and Social Assistance with 22,342, 19,324, and 15,758 jobs respectively.
- The CSPDC region is projected to experience job growth of 9%, adding approximately 12,363 jobs between 2016 and 2026. Industries projected to experience high levels of growth include Health Care and Social Assistance; Accommodation and Food Service; and Transportation and Warehousing.
- The largest occupation groups at the 2-digit SOC level are: Office and Administrative Support Occupations (19,010 jobs); Sales and Related Occupations (13,186), and Production Occupations (12,880). These occupations have median hourly earnings of \$14.84, \$11.87, and \$14.91, respectively.
- As of 2016, there were approximately 145,000 people in the CSPDC labor force for a labor force participation rate of 60.0%. The CSPDC unemployment rate as of 2016 was 5.2%.
- Industry clusters are groups of industries that are linked to common products, labor pools, technologies, supply chains and/or training needs. Identifying clusters is crucial in long-term economic development

¹ Note that the Government NAICS 90 also contains jobs at publicly operated educational and medical institutions. Therefore, jobs like teachers and nurses at federally, state or locally owned institutions are counted in this industry.

planning, as benefits to one industry will generally impact other industries within the same cluster. Clusters identified with the greatest opportunities for economic growth include: Health Care and Biopharmaceuticals, Food Processing and Manufacturing, and Distribution and Electronic Commerce.

Population

As of 2017, there were approximately 299,000 residents within the CSPDC. Rockingham County is the largest locality in the planning district, accounting for 26.8% of the region’s population. Conversely, Highland County is the smallest locality, with 0.7% of CSPDC’s total residents.

Table 1: CSPDC Population

CSPDC Population, 2017		
Locality	Population Total	% of Population
Augusta County	75,144	25.1%
Bath County	4,297	1.4%
City of Buena Vista	6,327	2.1%
City of Harrisonburg	54,215	18.1%
City of Lexington	7,106	2.4%
City of Staunton	24,528	8.2%
City of Waynesboro	22,327	7.5%
Highland County	2,212	0.7%
Rockbridge County	22,659	7.6%
Rockingham County	80,227	26.8%
Total	299,042	100%

Source: U.S. Census Bureau, Population Division 2017

Demographic Profile

As of 2017, there were approximately 116,000 total households within the Central Shenandoah Planning District Commission jurisdiction. The total number of households has increased since 2010 and is projected to continue expanding into 2022. The average household size has remained relatively consistent since 2010, increasing slightly from 2.44 in 2010, to 2.45 in 2017. The median age in both the CSPDC and the state overall will continue to rise, a function of the aging population across the country. The CSPDC population is slightly older when compared to the Commonwealth of Virginia, demonstrating a median age of 39.2 in 2017, while the same indicator reaches 38.2 for the state overall.

Table 2: CSPDC Demographic Profile, 2010 – 2022

CSPDC Demographic Profile, 2010 - 2022			
	2010	2017	2022
Total Households	110,702	116,232	120,368
Average Household Size	2.44	2.45	2.45
Median Age	38.1	39.2	40.2

Source: Esri

Table 3: Virginia Demographic Profile, 2010 – 2022

Virginia Demographic Profile, 2010 - 2022			
	2010	2017	2022
Total Households	3,056,058	3,234,614	3,376,509
Average Household Size	2.54	2.56	2.57
Median Age	37.4	38.5	39.3

Source: Esri

Race and Ethnicity

Table 4 breaks down racial and ethnic demographics for each of the CSPDC localities. Overall, the CSPDC population reports as 86.6% White, 4.4% Black, 6.3% Hispanic, 1.0% Asian and 1.7% Other.² Among all localities, Highland County is the least diverse, as 99.5% of the population identifies as White. The City of Harrisonburg is the most diverse locality, with 71.8% of the population identifying as White, 6.8% as Black, 18.4% as Hispanic, 0.2% as Asian and 2.7% as Other.

Table 4: CSPDC Population by Race and Ethnicity

CSPDC Population by Race and Ethnicity, 2015					
Locality	White	Black	Hispanic	Asian	Other
Augusta County	92.0%	4.0%	2.0%	1.0%	1.0%
Bath County	91.2%	3.4%	3.4%	0.0%	1.9%
City of Buena Vista	89.0%	1.0%	1.0%	7.0%	2.0%
City of Harrisonburg	71.8%	6.8%	18.4%	0.2%	2.7%
City of Lexington	75.0%	11.0%	4.0%	7.0%	3.0%
City of Staunton	91.9%	3.5%	1.3%	2.3%	1.0%
City of Waynesboro	78.0%	12.0%	7.0%	1.0%	2.0%
Highland County	99.5%	0.0%	0.0%	0.0%	0.5%
Rockbridge County	93.0%	3.0%	2.0%	1.0%	2.0%
Rockingham County	90.0%	2.0%	6.0%	1.0%	1.0%
CSPDC	86.6%	4.4%	6.3%	1.0%	1.7%

Source: U.S. Census Bureau, American Community Survey, 2015

² Note that for this analysis, the Hispanic ethnicity has been classified as a separate category.

Age

The age cohort composition in the Central Shenandoah Planning District Commission is displayed in Table 5. About a quarter of the population falls within the youngest age cohort, 0 to 19 years old. Another third of the population falls within the next age bracket, 20 to 44 years hold. Just over a quarter comprise the cohort 45 to 64 years old. The remaining population, about 17%, are 65 and older. The City of Harrisonburg and the City of Lexington have a higher prevalence of younger residents than other localities, which reflects the colleges and universities in these cities. Meanwhile, Highland County presents a relatively older community, with over a third of the population over the age of 65. Note, numbers may not total 100% due to rounding.

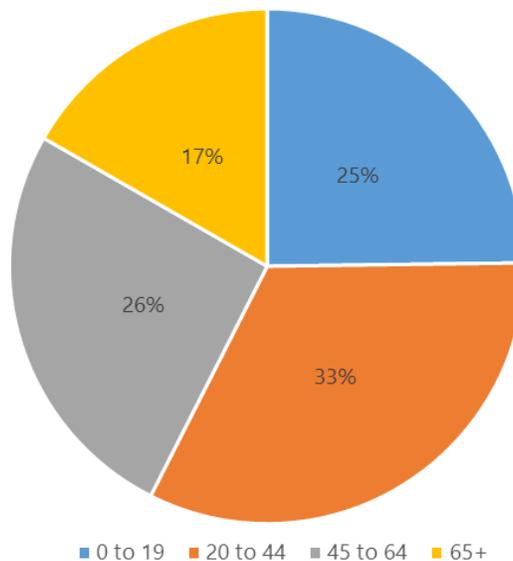
Table 5: CSPDC Population by Age

CSPDC Population by Age, 2015				
Locality	0 to 19	20 to 44	45 to 64	65+
Augusta County	22%	28%	30%	18%
Bath County	21%	23%	33%	23%
City of Buena Vista	27%	34%	22%	16%
City of Harrisonburg	30%	47%	15%	8%
City of Lexington	31%	47%	11%	12%
City of Staunton	22%	32%	26%	20%
City of Waynesboro	25%	32%	25%	18%
Highland County	16%	16%	35%	34%
Rockbridge County	20%	26%	31%	23%
Rockingham County	26%	29%	28%	17%
CSPDC	25%	33%	26%	17%

Source: U.S. Census Bureau, American Community Survey, 2015

Figure 2: CSPDC Population by Age

CSPDC Population by Age, 2015



Source: U.S. Census Bureau, American Community Survey, 2015

Educational Attainment

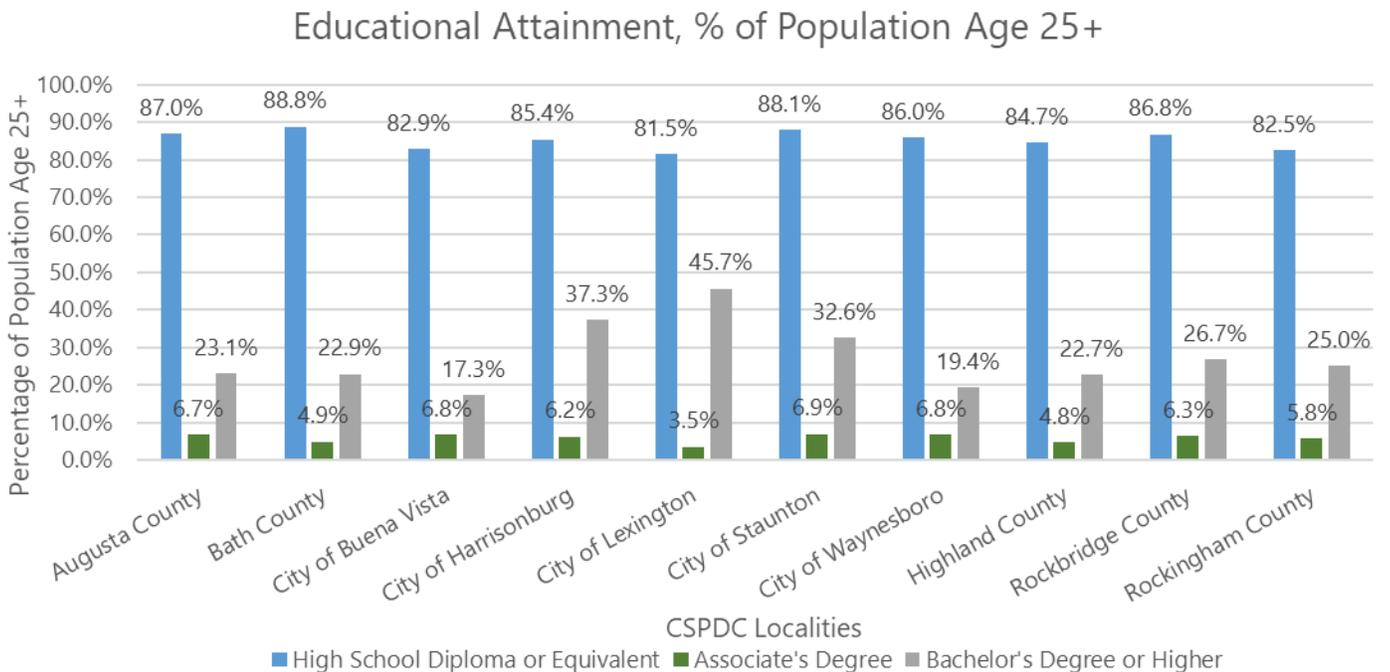
The Central Shenandoah Planning District Commission is home to a wealth of educational resources that produce a variety of degrees, training certificates and workforce training skills. Colleges and universities within the CSPDC include: American National University; Blue Ridge Community College; Bridge Water College; Eastern Mennonite University; Dabney S. Lancaster Community College Rockbridge Regional Center; James Madison University; Mary Baldwin University; Southern Virginia University; Virginia Military Institute; and Washington and Lee University.

Educational attainment varies across all localities within the Central Shenandoah Planning District Commission. The percentage of adults above the age of 25 who have earned a high school diploma or equivalent ranges between 81.5% in the City of Lexington to 88.8% in Bath County. Across the CSPDC, the percentage of adults above the age of 25 who have an Associate's Degree ranges from its lowest of 3.5% in the City of Lexington to its highest of 6.9% in the City of Staunton. Nearly half of the population 25 and over in the City of Lexington have achieved a Bachelor's Degree or Higher.

Figure 3: Mary Baldwin University



Figure 4: Educational Attainment, % of Population Age 25+



Source: U.S. Census Bureau, American Community Survey, 2015

Income

Per capita income, the average income earned per person in a given region, is currently slightly over \$25,000 within the CSPDC and nearly \$36,000 in Virginia. Another useful measure of economic health, median household income, is

a measure of distribution in which half of the households are earning above the median and the other half is earning below. In the CSPDC region, median household income is over \$49,000, which falls below the median household income for the Commonwealth, which reaches \$66,000.

Income levels, both in terms of per capita income and median household income, are projected to increase in both the CSPDC and Virginia by 2022. In the CSPDC region, per capita income is projected to grow by 13.0% to over \$28,000 per capita. The Commonwealth is projected to experience a similar growth rate, 12.5%. Meanwhile, median household income in the CSPDC is projected to grow by 5% to approximately \$52,000 by 2022. Median household income is projected to grow at more than double that rate across the Commonwealth.

Table 6: CSPDC Income, 2017 - 2022

CSPDC Income, 2017 - 2022				
	2017	2022	Change 2017-2022	% Change 2017-2022
Per Capita Income	\$ 25,051	\$ 28,309	\$ 3,258	13.0%
Median Household Income	\$ 49,190	\$ 51,642	\$ 2,452	5.0%

Source: Esri

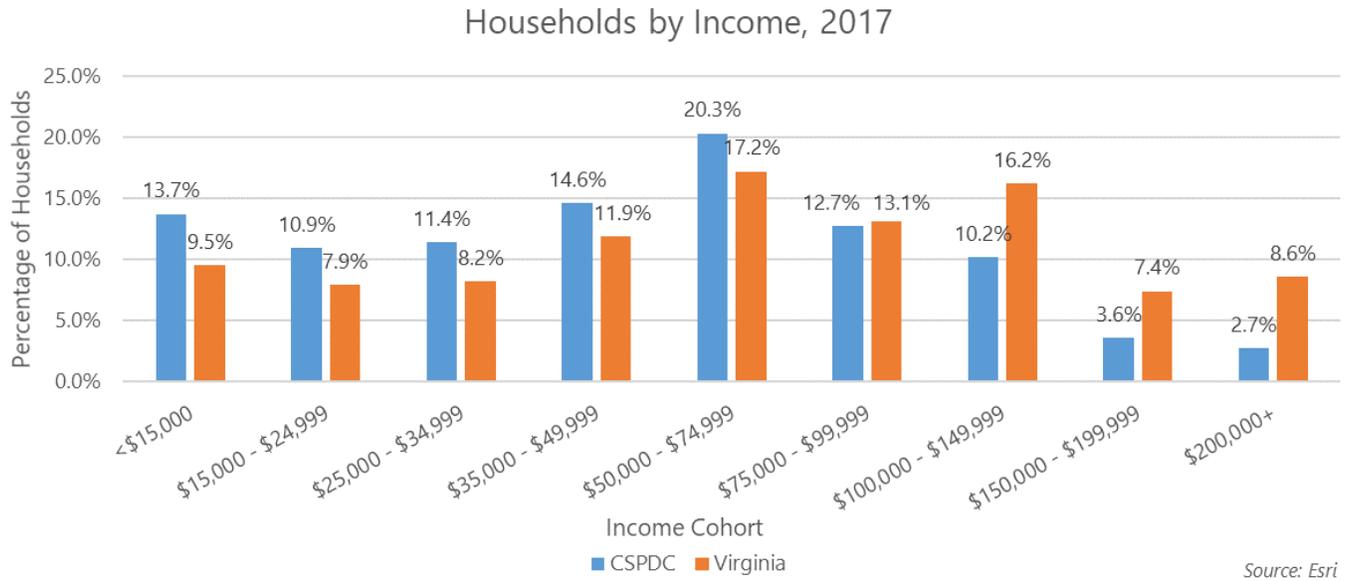
Table 7: Virginia Income, 2017 - 2022

Virginia Income, 2017 - 2022				
	2017	2022	Change 2017-2022	% Change 2017-2022
Per Capita Income	\$ 35,637	\$ 40,086	\$ 4,449	12.5%
Median Household Income	\$ 66,285	\$ 74,321	\$ 8,036	12.1%

Source: Esri

Figure 5 displays the percentage of CSPDC and Virginia households by income cohort in 2017. In the CSPDC, households earning \$50,000 to \$74,999 annually comprise the greatest proportion of the population, totaling approximately 20.3% of total households. This is also the largest income bracket in the Commonwealth of Virginia, totaling 17.2% of all households in the state. The smallest income cohort in the CSPDC is households earning \$200,000+, with 2.7% of total households. Overall, Virginia has a much smaller proportion of households earning less than \$74,999 per year and a higher proportion of households earning \$75,000+ compared to the CSPDC.

Figure 5: Households by Income, 2017



Employment

Industry employment is displayed using North American Industry Classification System (NAICS) codes. NAICS codes are the standard used by Federal statistical agencies to classify business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. economy. NAICS is based on a 6-digit coding system with 2-digit NAICS being the broadest industry classification and 6-digit codes being the most specific subsectors.

As of 2016, there were approximately 138,610 jobs in the Central Shenandoah Planning District Commission. Between 2006 and 2016, the CSPDC decreased by 1,100 jobs, a decline of 1%. Note that this decline captures the effects of the Great Recession in 2008 that resulted in major job loss across the nation. The region has experienced major job losses in the Construction and Manufacturing industries, which have decreased by 3,324 and 3,667 jobs respectively. As of 2016, the top three industries by employment are Government (NAICS 90)³; Manufacturing (NAICS 31); and Health Care and Social Assistance (NAICS 62), accounting for 22,342, 19,324, and 15,758 jobs respectively. These three industries comprised 41% of total 2016 jobs. Average earnings per job are approximately \$45,939, across all industries.

Table 8: CSPDC Historic Industry Employment Trends, 2-Digit NAICS

CSPDC Historic Industry Employment Trends, 2-Digit NAICS						
NAICS	Description	2006 Jobs	2016 Jobs	2006 - 2016 Change	2006 - 2016 % Change	Avg. Earnings Per Job
11	Crop and Animal Production	2,021	2,997	976	48%	\$29,787
21	Mining, Quarrying, and Oil and Gas Extraction	253	170	(83)	(33%)	\$53,148
22	Utilities	359	310	(49)	(14%)	\$109,539
23	Construction	11,382	8,058	(3,324)	(29%)	\$46,605
31	Manufacturing	22,991	19,324	(3,667)	(16%)	\$63,971
42	Wholesale Trade	4,114	3,875	(239)	(6%)	\$56,145
44	Retail Trade	16,543	15,163	(1,380)	(8%)	\$29,310
48	Transportation and Warehousing	5,754	7,351	1,597	28%	\$54,912
51	Information	2,110	1,792	(318)	(15%)	\$57,373
52	Finance and Insurance	2,443	2,356	(87)	(4%)	\$63,962
53	Real Estate and Rental and Leasing	2,040	1,895	(145)	(7%)	\$40,692
54	Professional, Scientific, and Technical Services	3,505	4,101	596	17%	\$55,355
55	Management of Companies and Enterprises	1,308	1,365	57	4%	\$78,810
56	Administrative and Support and Waste Management and Remediation Services	4,740	4,575	(165)	(3%)	\$30,217
61	Educational Services	3,375	4,493	1,118	33%	\$39,841
62	Health Care and Social Assistance	12,934	15,758	2,824	22%	\$53,476
71	Arts, Entertainment, and Recreation	1,677	1,588	(89)	(5%)	\$17,202
72	Accommodation and Food Services	12,602	14,539	1,937	15%	\$19,621
81	Other Services (except Public Administration)	6,630	6,351	(279)	(4%)	\$25,329
90	Government	22,924	22,342	(582)	(3%)	\$56,021
99	Unclassified Industry	<10	206	Insf. Data	Insf. Data	\$37,458
	Total	139,710	138,610	(1,100)	(1%)	\$45,939

Source: EMSI

³ Note that the Government NAICS 90 also contains jobs at publicly owned educational and medical institutions. Therefore, jobs like teachers and nurses at federally, state or locally owned institutions are counted in this industry.

Table 9 below displays historic job change by locality. The City of Staunton experienced the most dramatic job decline, shedding 1,422 jobs, followed by Rockbridge County which declined by 1,267. However, Rockingham County experienced significant growth during that time, growing by approximately 2,335 jobs. Health Care and Social Assistance and Transportation and Warehousing were major drivers of growth in Rockingham County, expanding by 2,759 and 1,511 jobs, respectively.

Table 9: Historic Change in Jobs by CSPDC Localities, 2006 – 2016

Historical Change in Jobs by CSPDC Localities, 2006 - 2016											
NAICS	Industry Description	Augusta County	Bath County	Buena Vista City	Harrisonburg City	Highland County	Lexington City	Rockbridge County	Rockingham County	Staunton City	Waynesboro City
11	Crop and Animal Production	31	(39)	Insf. Data	738	(46)	Insf. Data	(72)	365	Insf. Data	0
21	Mining, Quarrying, and Oil and Gas Extraction	(20)	0	0	(45)	Insf. Data	(21)	22	(52)	Insf. Data	0
22	Utilities	(57)	(14)	(17)	0	0	0	16	(3)	24	0
23	Construction	(662)	(73)	(23)	(280)	(32)	(98)	(177)	(1,265)	(225)	(490)
31	Manufacturing	(735)	(19)	98	(1,002)	3	(34)	(921)	(282)	83	(857)
42	Wholesale Trade	(8)	Insf. Data	22	(161)	Insf. Data	(57)	(8)	88	(39)	(90)
44	Retail Trade	123	(57)	(21)	(562)	(11)	(82)	30	(782)	(261)	243
48	Transportation and Warehousing	571	(17)	Insf. Data	(163)	4	38	(86)	1,511	(223)	(26)
51	Information	210	Insf. Data	Insf. Data	(429)	Insf. Data	(66)	6	72	(216)	140
52	Finance and Insurance	(24)	(3)	(11)	49	(1)	18	4	(48)	(44)	(28)
53	Real Estate and Rental and Leasing	20	(22)	(13)	73	Insf. Data	(1)	(26)	(47)	(35)	(92)
54	Professional, Scientific, and Technical Services	72	100	3	41	6	93	69	246	(62)	28
55	Management of Companies and Enterprises	(33)	Insf. Data	0	(4)	0	0	(29)	80	101	(94)
56	Administrative and Support and Waste Management and Remediation Services	35	(15)	(25)	46	17	(12)	19	(360)	(29)	160
61	Educational Services	54	(27)	(166)	1,043	Insf. Data	486	43	(302)	(33)	13
62	Health Care and Social Assistance	750	62	8	(1,320)	15	(201)	321	2,759	458	(28)
71	Arts, Entertainment, and Recreation	3	3	Insf. Data	127	Insf. Data	(58)	(124)	(37)	0	(7)
72	Accommodation and Food Services	532	(135)	61	1,373	(45)	89	(205)	368	(422)	321
81	Other Services (except Public Administration)	169	(17)	(6)	(15)	(17)	32	87	113	(674)	50
90	Government	(434)	(14)	(87)	168	7	68	(246)	(120)	116	(39)
99	Unclassified Industry	33	30	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data	Insf. Data	23	23
	Total	635	(187)	(202)	(290)	(124)	200	(1,267)	2,335	(1,422)	(775)

Source: EMSI

Job decline is expected to reverse between 2016 and 2026 as the CSPDC is projected to experience job growth of 9%, adding approximately 12,363 jobs over the course of 2016 to 2026. Health Care and Social Assistance (NAICS 62); Accommodation and Food Service (NAICS 72); and Educational Services (NAICS 61) are anticipated to gain an additional 5,069, 1,544, and 1,314 jobs respectively. Transportation and Warehousing (NAICS 48) also showed significant growth over the ten-year period, adding an additional 1,150 jobs.

Figure 6: CSPDC Projected Industry Employment Trends, 2-Digit NAICS

CSPDC Projected Industry Employment Trends, 2-Digit NAICS						
NAICS	Description	2016 Jobs	2026 Jobs	2016 - 2026 Change	2016 - 2026 % Change	Avg. Earnings Per Job
11	Crop and Animal Production	2,997	3,599	602	20%	\$29,787
21	Mining, Quarrying, and Oil and Gas Extraction	170	191	21	12%	\$53,148
22	Utilities	310	286	(24)	(8%)	\$109,539
23	Construction	8,058	8,305	247	3%	\$46,605
31	Manufacturing	19,324	18,613	(711)	(4%)	\$63,971
42	Wholesale Trade	3,875	4,309	434	11%	\$56,145
44	Retail Trade	15,163	15,673	510	3%	\$29,310
48	Transportation and Warehousing	7,351	8,501	1,150	16%	\$54,912
51	Information	1,792	1,955	163	9%	\$57,373
52	Finance and Insurance	2,356	2,500	144	6%	\$63,962
53	Real Estate and Rental and Leasing	1,895	2,105	210	11%	\$40,692
54	Professional, Scientific, and Technical Services	4,101	5,107	1,006	25%	\$55,355
55	Management of Companies and Enterprises	1,365	1,313	(52)	(4%)	\$78,810
56	Administrative and Support and Waste Management and Remediation Services	4,575	4,839	264	6%	\$30,217
61	Educational Services	4,493	5,807	1,314	29%	\$39,841
62	Health Care and Social Assistance	15,758	20,827	5,069	32%	\$53,476
71	Arts, Entertainment, and Recreation	1,588	1,682	94	6%	\$17,202
72	Accommodation and Food Services	14,539	16,083	1,544	11%	\$19,621
81	Other Services (except Public Administration)	6,351	6,741	390	6%	\$25,329
90	Government	22,342	22,162	(180)	(1%)	\$56,021
99	Unclassified Industry	205.638634	374	168	82%	\$37,458
	Total	138,610	150,973	12,363	9%	\$45,939

Source: EMSI

Location Quotient

Location Quotient (LQ) analysis compares a specific geographic region to a larger reference area by quantifying the concentration of an industry, demographic group, or other variable compared to its concentration in the larger geography. The concentration of employment by industry in the planning district is compared to the nation to identify which industries are highly concentrated and, therefore, may have a competitive advantage within the Central Shenandoah Planning District Commission.

LQ is calculated by dividing the percent of jobs within each industry locally by the percent of jobs in the same industry at the national level. For example, if the finance and insurance industry accounts for 2% of jobs in a community and at the national level this industry has 1% of the total jobs, the community has a LQ of 2.0 ($0.02 \div 0.01 = 2$). In this example, the local community employs twice as many individuals in the industry as expected based on national employment patterns. Typically, only values above 1.20 or below 0.80 are considered “significant” findings in LQ analysis. Industries with a high LQ and high employment numbers are assumed to produce more than what is needed locally (i.e. a surplus) and export their products and services.

Table 10 below shows the top 30 4-digit NAICS industries in the Central Shenandoah Planning District Commission by 2016 job count. Industries with location quotients greater than 2.00, indicating highly concentrated industries, have been highlighted in orange.

As of 2016, Education and Hospitals (State Government) (NAICS 9026); Animal Slaughtering and Processing (NAICS 3116); and Traveler Accommodation (NAICS 7211) industries are the top 3 industries by employment numbers and have LQs above 2.00. Within the Transportation and Warehousing industry there are two major subsectors, Warehousing and Storage (NAICS 4931) and General Freight Trucking (NAICS 4841), that show strong growth and LQs greater than 2.00. The Central Shenandoah Planning District Commission is deeply rooted in agricultural as indicated with Animal Slaughtering and Processing (NAICS 3116) with approximately 4,200 employees and a LQ of 9.64. Additionally, Animal Production and Aquaculture (NAICS 1120) supports the region’s agricultural roots with approximately 1,300 employees and an LQ of 3.28.

Table 10: CSPDC Top 30 Industries by Job Count, 4-Digit NAICS

CSPDC Top 30 Industries by Job Count, 4-Digit NAICS						
NAICS	Description	2006 Jobs	2016 Jobs	2006 - 2016 Change	2006 - 2016 % Change	2016 Location Quotient
7225	Restaurants and Other Eating Places	8,265	9,573	1,308	16%	1.06
9036	Education and Hospitals (Local Government)	7,892	7,365	(527)	(7%)	0.98
9026	Education and Hospitals (State Government)	6,727	6,656	(71)	(1%)	2.53
9039	Local Government, Excluding Education and Hospitals	4,516	4,840	324	7%	0.98
6221	General Medical and Surgical Hospitals	4,140	4,719	579	14%	1.17
3116	Animal Slaughtering and Processing	4,714	4,178	(536)	(11%)	9.63
7211	Traveler Accommodation	3,468	3,470	2	0%	2.11
6113	Colleges, Universities, and Professional Schools	2,458	3,404	946	38%	2.01
4931	Warehousing and Storage	2,375	3,081	706	30%	3.90
4451	Grocery Stores	2,089	2,576	487	23%	1.07
4529	Other General Merchandise Stores	3,291	2,520	(771)	(23%)	1.52
5617	Services to Buildings and Dwellings	2,527	2,496	(31)	(1%)	1.02
4841	General Freight Trucking	2,044	2,347	303	15%	2.24
2382	Building Equipment Contractors	2,598	2,233	(365)	(14%)	1.13
6233	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	1,833	2,178	345	19%	2.78
8131	Religious Organizations	2,506	1,912	(594)	(24%)	1.26
6211	Offices of Physicians	1,680	1,823	143	9%	0.80
9029	State Government, Excluding Education and Hospitals	2,094	1,788	(306)	(15%)	0.89
6241	Individual and Family Services	593	1,654	1,061	179%	0.79
3231	Printing and Related Support Activities	1,806	1,583	(223)	(12%)	3.84
4471	Gasoline Stations	1,554	1,467	(87)	(6%)	1.80
2389	Other Specialty Trade Contractors	1,857	1,368	(489)	(26%)	1.57
5511	Management of Companies and Enterprises	1,308	1,365	57	4%	0.70
7223	Special Food Services	729	1,299	570	78%	1.89
4441	Building Material and Supplies Dealers	1,436	1,289	(147)	(10%)	1.29
1120	Animal Production and Aquaculture	1,090	1,255	165	15%	3.28
4411	Automobile Dealers	1,324	1,241	(83)	(6%)	1.08
2361	Residential Building Construction	2,198	1,193	(1,005)	(46%)	1.18
6231	Nursing Care Facilities (Skilled Nursing Facilities)	1,117	1,169	52	5%	0.81
5221	Depository Credit Intermediation	1,096	1,100	4	0%	0.74

Source: EMSI

Self Employed

Self-employed workers work for themselves as a freelancer or owner of a business rather than for an employer. Self-employment is often overlooked, despite its national growth and impact on the economy. This analysis examines the number of people working as self-employed within industries to have a comprehensive understanding of independent workers and workforce resources that are available within the CSPDC region.

Table 11 demonstrates that overall self-employment is projected to grow by 5% from 8,278 workers in 2016 to 8,681 workers in 2026. Over that time, many of the top 20 industries with a high number of self-employed workers are projected to decline across the CSPDC. Only two of the top 20 self-employed industries have location quotients greater than 2.00; Animal Production and Aquaculture (NAICS 1120) and Used Merchandise Stores (NAICS 4533). Of the two, Used Merchandise Stores (NAICS 4533) is the only significantly growing and concentrated self-employed industry.

Table 11: CSPDC Top Self-Employed Industries by Job Count, 2016- 2026

CSPDC Top Self Employed Industries by Job Count, 2016 - 2026						
NAICS	Description	2016 Jobs	2026 Jobs	2016 - 2026 Change	2016 - 2026 % Change	2026 Location Quotient
1120	Animal Production and Aquaculture	636	638	2	0%	5.20
5617	Services to Buildings and Dwellings	569	551	(18)	(3%)	0.85
1110	Crop Production	365	426	61	17%	1.80
2361	Residential Building Construction	405	372	(33)	(8%)	1.13
8141	Private Households	335	368	33	10%	0.65
2383	Building Finishing Contractors	410	331	(79)	(19%)	1.05
8121	Personal Care Services	334	312	(22)	(7%)	0.63
5311	Lessors of Real Estate	252	276	24	10%	1.60
8111	Automotive Repair and Maintenance	261	267	6	2%	1.39
5416	Management, Scientific, and Technical Consulting Services	188	239	51	27%	0.81
2389	Other Specialty Trade Contractors	302	212	(90)	(30%)	0.83
4533	Used Merchandise Stores	151	203	52	34%	5.84
6116	Other Schools and Instruction	162	188	26	16%	1.16
4841	General Freight Trucking	198	178	(20)	(10%)	1.12
7115	Independent Artists, Writers, and Performers	178	162	(16)	(9%)	0.79
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	132	159	27	20%	1.11
6244	Child Day Care Services	246	155	(91)	(37%)	0.61
5419	Other Professional, Scientific, and Technical Services	102	142	40	39%	0.96
2381	Foundation, Structure, and Building Exterior Contractors	162	136	(26)	(16%)	1.04
2382	Building Equipment Contractors	149	135	(14)	(9%)	0.83
	Other Industries	2,742	3,232	490	18%	
	Total	8,278	8,681	403	5%	

Source: EMSI

Occupations

Occupations are classified by the Standard Occupational Classification (SOC) system. Similar to NAICS codes, SOC codes are broad at the 2-digit level and specific at the 5-digit level.

The largest occupation groups at the 2-digit SOC level are: Office and Administrative Support Occupations (19,010 jobs); Sales and Related Occupations (13,186), and Production Occupations (12,880). Conversely, Legal Occupations (551 jobs); Life, Physical, and Social Science Occupations (866); Military Occupations (950); and Architecture and Engineering Occupations (950) hold less than one percent of the occupational mix within the CSPDC.

Figure 7: CSPDC Occupational Mix, 2017



Table 12 below displays the top occupations by 2017 job count within the CSPDC by 2-SOC code along with their projected change, number of annual openings, location quotient, and median hourly earnings. Annual openings reflect the annual occupational demand based on new jobs from employer job growth and replacement jobs to fill an existing position that was vacated by an employee. In total, there are approximately 18,000 annual openings within the CSPDC. At the 2-digit SOC level, median hourly earnings range from \$9.53 in Food Preparation and Serving Related Occupations to \$32.22 in Management Occupations.

Table 12: CSPDC Top Occupations 2-Digit SOC Codes, 2017 - 2022

CSPDC Occupations 2-Digit SOC Codes, 2017 - 2022						
SOC	Description	2017 Jobs	2017 - 2022 Change	Annual Openings	2017 Location Quotient	Median Hourly Earnings
43-0000	Office and Administrative Support Occupations	19,010	801	2,387	0.91	\$ 14.84
41-0000	Sales and Related Occupations	13,186	529	2,031	0.94	\$ 11.87
51-0000	Production Occupations	12,880	(110)	1,598	1.56	\$ 14.91
35-0000	Food Preparation and Serving Related Occupations	12,694	979	2,466	1.08	\$ 9.53
53-0000	Transportation and Material Moving Occupations	12,682	743	1,713	1.37	\$ 16.55
25-0000	Education, Training, and Library Occupations	9,332	292	884	1.17	\$ 22.77
29-0000	Healthcare Practitioners and Technical Occupations	6,926	807	573	0.90	\$ 24.84
47-0000	Construction and Extraction Occupations	6,633	103	751	1.06	\$ 15.83
37-0000	Building and Grounds Cleaning and Maintenance Occupations	6,465	391	924	1.23	\$ 10.51
49-0000	Installation, Maintenance, and Repair Occupations	6,374	369	701	1.20	\$ 18.89
39-0000	Personal Care and Service Occupations	5,781	491	1,003	1.00	\$ 9.58
11-0000	Management Occupations	5,594	374	526	0.73	\$ 32.22
13-0000	Business and Financial Operations Occupations	4,409	346	482	0.62	\$ 25.45
31-0000	Healthcare Support Occupations	3,735	467	545	0.97	\$ 12.37
33-0000	Protective Service Occupations	2,607	84	293	0.83	\$ 18.31
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	2,277	143	271	0.89	\$ 16.90
15-0000	Computer and Mathematical Occupations	2,270	209	200	0.57	\$ 28.67
21-0000	Community and Social Service Occupations	2,080	113	260	0.91	\$ 20.18
45-0000	Farming, Fishing, and Forestry Occupations	1,793	234	332	1.71	\$ 12.66
17-0000	Architecture and Engineering Occupations	1,324	96	124	0.57	\$ 30.39
55-0000	Military occupations	950	41	114	0.54	\$ 17.67
19-0000	Life, Physical, and Social Science Occupations	866	34	89	0.77	\$ 29.59
23-0000	Legal Occupations	551	12	40	0.48	\$ 28.73
	Total	140,420	7,546	18,307		

Source: EMSI

Table 13 shows the same indicators as above at a more granular level, at the 5-digit SOC level. The top occupations are Retail Salespersons (4,122); Cashiers (3,961); and Combined Food Preparation and Serving Workers, Including Fast Food (3,847). This group of occupations reflect those positions that are highly correlated to supporting the region’s tourism and agri-tourism industry. The lowest earnings within the top twenty 5-digit occupations are exhibited among Personal Care Aides with median hourly earnings of \$8.61 and Combined Food Preparation and Serving Workers, Including Fast Food with \$8.75. Highest median hourly earnings are among Postsecondary Teachers with median hourly earnings of \$30.14. Although projected to decline in jobs by 2022, Meat, Poultry, and Fish Cutters and Trimmers are highly specialized within the region, demonstrating a location quotient of 9.71.

Table 13: CSPDC Top Occupations 5-Digit SOC Codes, 2017 - 2022

CSPDC Top Occupations 5-Digit SOC Codes, 2017 - 2022						
SOC	Description	2017 Jobs	2017 - 2022 Change	Annual Openings	2017 Location Quotient	Median Hourly Earnings
41-2031	Retail Salespersons	4,122	146	633	1.01	\$ 10.50
41-2011	Cashiers	3,961	97	771	1.26	\$ 9.29
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	3,847	366	807	1.25	\$ 8.75
53-3032	Heavy and Tractor-Trailer Truck Drivers	3,655	194	443	2.14	\$ 20.43
43-9061	Office Clerks, General	3,335	136	423	1.13	\$ 13.89
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,839	166	408	1.25	\$ 11.03
25-1099	Postsecondary Teachers	2,793	27	229	2.11	\$ 30.14
35-3031	Waiters and Waitresses	2,724	116	548	1.19	\$ 9.62
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,687	161	409	1.15	\$ 13.93
43-5081	Stock Clerks and Order Fillers	2,512	79	338	1.40	\$ 11.55
29-1141	Registered Nurses	2,219	331	189	0.86	\$ 25.69
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	2,029	150	253	0.84	\$ 15.35
37-2012	Maids and Housekeeping Cleaners	1,872	123	279	1.41	\$ 9.35
31-1014	Nursing Assistants	1,738	191	245	1.32	\$ 12.28
39-9021	Personal Care Aides	1,672	246	302	0.94	\$ 8.61
49-9071	Maintenance and Repair Workers, General	1,524	109	173	1.17	\$ 16.84
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,489	(1)	170	0.97	\$ 16.74
41-1011	First-Line Supervisors of Retail Sales Workers	1,353	41	153	1.08	\$ 17.76
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	1,331	(127)	160	9.71	\$ 12.32
37-3011	Landscaping and Groundskeeping Workers	1,283	76	175	1.12	\$ 11.03

Source: EMSI

Labor Force and Unemployment

As of 2016, the CSPDC had approximately 242,000 individuals 16 years or older. Of these individuals 60.0% were actively participating in the labor force for a total of 145,362 individuals in the CSPDC labor force. The total labor force figure includes both employed and unemployed individuals. Approximately 5.2% of the CSPDC population 16 years old and older were unemployed for a total of 7,601 individuals.

Table 14: Labor Force Breakdown, 2016

CSPDC Labor Force Breakdown, 2016	
Population 16 Years and Over	242,341
Labor Force Participation Rate	60.0%
Total Labor Force	145,362
Unemployment Rate	5.2%
Total Unemployed	7,601

Note: Based on population 16 years and over

Source: U.S. Census Bureau, American Community Survey, 2016

Analysis of unemployment by occupations in Table 15 shows that unemployment varies by occupation within the Central Shenandoah Planning District Commission. Production Occupations (SOC 51) experience the highest unemployment at 16%, nearly twice as high as the national unemployment level for that occupation. Office and Administrative Support Occupations (SOC 43) also exhibit high unemployment with approximately 652 positions unemployed for a rate of 14%. In occupations with high unemployment there is an opportunity to implement workforce development initiatives to prepare existing workers for those positions. Conversely, Life, Physical, and Social Science (SOC 19); Legal Occupations (SOC 23); and Military (SOC 55) have nearly 0% unemployment which is comparable or lower than national levels.

Table 15: CSPDC Unemployment by Occupation, 2017

CSPDC Unemployment by Occupation, 2017				
SOC	Occupation	# of Unemployed*	% of Regional Unemployment	% of National Unemployment
51-0000	Production Occupations	761	15.9%	8.2%
43-0000	Office and Administrative Support Occupations	652	13.6%	11.8%
53-0000	Transportation and Material Moving Occupations	415	8.7%	5.9%
99-0000	No Previous Work Experience/Unspecified	406	8.5%	12.5%
11-0000	Management Occupations	374	7.8%	8.8%
47-0000	Construction and Extraction Occupations	331	6.9%	9.9%
41-0000	Sales and Related Occupations	310	6.5%	7.4%
35-0000	Food Preparation and Serving Related Occupations	211	4.4%	5.3%
49-0000	Installation, Maintenance, and Repair Occupations	203	4.2%	3.6%
31-0000	Healthcare Support Occupations	158	3.3%	2.9%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	155	3.2%	3.6%
13-0000	Business and Financial Operations Occupations	124	2.6%	4.1%
25-0000	Education, Training, and Library Occupations	100	2.1%	2.1%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	99	2.1%	1.5%
29-0000	Healthcare Practitioners and Technical Occupations	89	1.9%	1.8%
39-0000	Personal Care and Service Occupations	87	1.8%	2.1%
15-0000	Computer and Mathematical Occupations	75	1.6%	2.0%
45-0000	Farming, Fishing, and Forestry Occupations	51	1.1%	1.6%
33-0000	Protective Service Occupations	44	0.9%	1.3%
17-0000	Architecture and Engineering Occupations	43	0.9%	1.3%
21-0000	Community and Social Service Occupations	42	0.9%	1.1%
19-0000	Life, Physical, and Social Science Occupations	25	0.5%	0.6%
23-0000	Legal Occupations	16	0.3%	0.5%
55-0000	Military occupations	7	0.1%	0.2%

* As of November 2017 estimates

Source: EMSI

Industry Cluster Identification

An analysis was performed to identify which industry clusters demonstrate the greatest potential for generating economic activity in the CSPDC jurisdiction. Industry clusters are groups of industries that are linked to common products, labor pools, technologies, supply chains and/or training needs. Identifying clusters is crucial in long-term economic development planning, as benefits to one industry will generally impact other industries within the same cluster. These industries are identified by the following characteristics: earnings potential, growth, regional competitiveness, regional specialization, and gross regional product.

Health Care and Biopharmaceuticals

The health care ecosystem and its related research play a vital role in supporting the quality of life for residents in the CSPDC and around the country. Major industries, by employment numbers, within this cluster include General Medical and Surgical Hospitals (NAICS 622110); Office of Physicians (except Mental Health Specialists) (NAICS 621111); and Continuing Care Retirement Communities (NAICS 623311) with 4,718, 1,725, and 1,604 jobs respectively. These subsectors are projected to increase by number of jobs into 2022. Large health care facilities

within the CSPDC include, but are not limited to, James Madison University Rockingham Memorial Hospital, Augusta Medical Center, and Bridgewater Healthcare Foundation.

The region also supports subsectors related to medical research within the wider Health Care field. Biopharmaceuticals, Medical and Botanical Manufacturing (NAICS 325411) and Pharmaceutical Preparation Manufacturing (NAICS 325412) are included in this cluster with 296 and 272 jobs respectively. Employers include, but are not limited to, Merck and Co. Inc., Cadence Inc., SRI International, and Sunlit Plastics Inc.

Growth in the Biopharmaceuticals and Health Care industry is attributed to an aging population combined with favorable health care reform and increases in private health insurance. Specifically, Biopharmaceuticals industries are growing, as new products and new product lines are being introduced to the market at an increasingly faster rate. The number of establishments in these industries is anticipated to increase.

Food Processing and Manufacturing

The Food Processing and Manufacturing cluster builds off the Central Shenandoah Planning District Commission's strong agricultural ecosystem and rural roots by using technological processes to provide food. The Food Processing and Manufacturing cluster includes three major subsectors: Confectionery Manufacturing from Purchased Chocolate (NAICS 31152) with 942 jobs; Other Snack and Food Manufacturing (NAICS 311919) with 771 jobs; and Breweries (NAICS 312120) with 537 jobs. Hershey Chocolate of Virginia and Dean Foods are the largest employers in the Confectionery Manufacturing from Purchased Chocolate industry. Utz Quality Foods, Inc. is the largest Other Snack and Food Manufacturing employer. There are several Breweries in the Central Shenandoah Planning District Commission including Devils Backbone, Molson Coors, Bothers Craft, Seven Arrows Brewing, Stable Craft Brewing, Blue Lab, Bold Rock, Brew Ridge Taps, Queen City, Redbeard and Shenandoah Valley. In addition to these aforementioned establishments, the CSPDC is home to several other Food Processing and Manufacturing companies including George's Chicken, Pilgrim's Pride, Virginia Growers Poultry, and Shenandoah Valley Organic. The Food Processing and Manufacturing cluster is dependent on steady consumer spending and effective marketing, proximity to large population centers and ease of transportation/distribution help businesses in this cluster remain successful. Further investments in transportation and capacity infrastructure will enable growth and increase potential for additional industries within the cluster.

Figure 9: Devils Backbone Brewing Company in Lexington



Figure 8: Little Debbie Truck



Distribution and Electronic Commerce

The Distribution and Electronic Commerce cluster includes a mix of 22 industries that are involved in the buying and selling of goods and services, either in-store or online. Significant industries in terms of job numbers include General Warehousing and Storage (NAICS 493110) with 3,145 jobs; Farm Supplies Merchant Wholesalers (NAICS 424910) with 425 jobs; and Farm Supplies Merchant Wholesales (NAICS 424820) with 251 jobs. Central Shenandoah Planning District Commission facilities within the Distribution and Electronic Commerce cluster include, but are not limited to, R & S Storage, Heritage Mini Storage, Interchange Group, Cargill Inc, Tractor Supply Co, and Farmchoice. These facilities are reliant on infrastructure assets such as Interstate 81 and Interstate 64 that allow for distribution of goods throughout and beyond the CSPDC region and beyond. Maintenance and improvements to these interstates will be necessary to allow for the growth of CSPDC distribution network.

Nationally, e-commerce sales are projected to grow at an annualized rate of 7.8% into 2022. This growth will place additional space and labor requirements on Distribution and Electronic Commerce industries. For operators in Central Shenandoah Planning District Commission to remain successful, they need to focus on attracting and retaining a workforce that is appropriately skilled for the right position.

Other Considerations

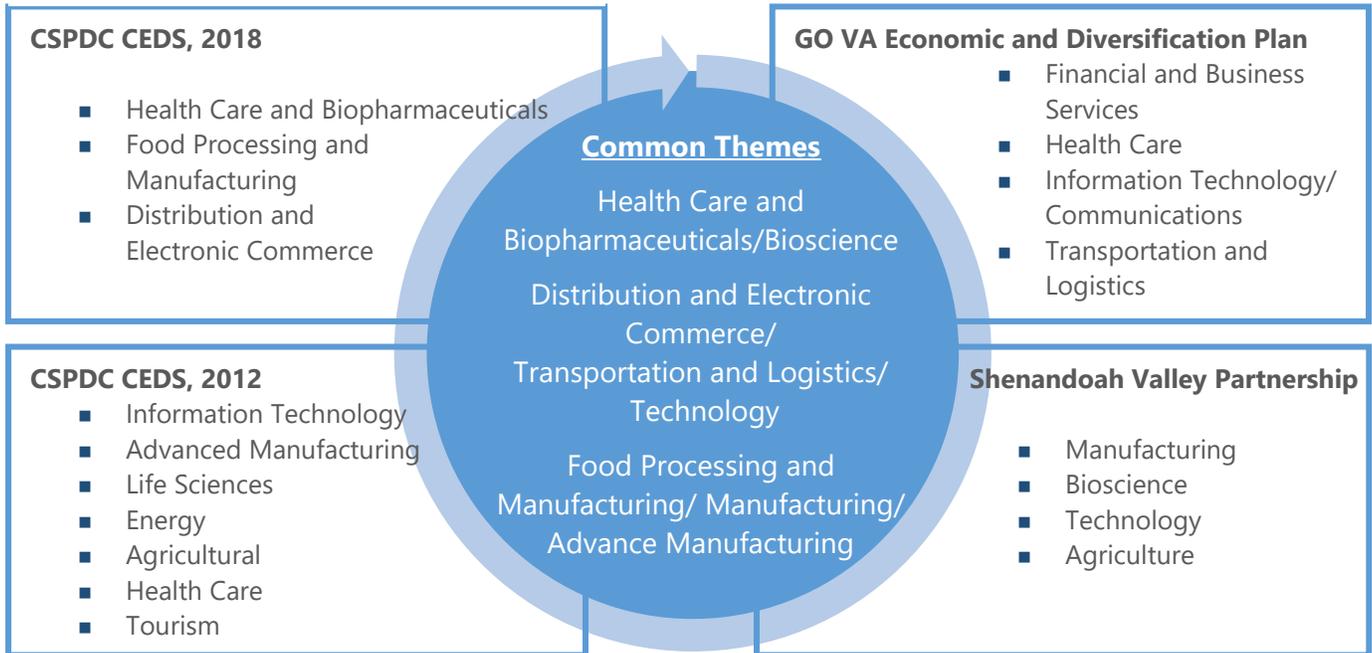
One additional cluster, Local Education and Training, was deemed significant through the cluster analysis. While additional jobs in the public sector can help facilitate economic activity, growth in the private sector has the most potential to increase economic growth. Therefore, we recommend investing in those clusters that show the most potential for private sector growth. However, the strong educational institutions in the region are a significant resource for facilitating training in numerous workforce specialties and coordination among educators and employers in the clusters noted above will be critical to supporting economic growth.

Coordinating Regional Priorities

While the goal of this data analysis is to take stock of existing economic conditions and identify industries that are primed for economic growth in the CSPDC region, it is also important to take into consideration other ongoing planning efforts across the region to ensure coordination. The priorities laid out in CSPDC's 2018 Comprehensive Economic Development Strategy should consider all existing initiatives to provide a full understanding of strategy needs. Figure 10 displays strong industry clusters presented in this report, the 2012 CSPDC CEDS, the GO Virginia Economic and Diversification Plan (2017) and the Shenandoah Valley Partnership. Common themes shared between the four include: Health Care and Biopharmaceuticals/Bioscience, Distribution and Electronic Commerce/Transportation and Logistics/Technology, Manufacturing and Agriculture.

To facilitate growth in these industry clusters and ensure business resiliency and diversification within the Central Shenandoah Planning District Commission, infrastructure capacity and workforce development efforts should be dependent on building resources within these clusters. This will assist CSPDC in delivering sought-after products and services and help the region remain competitive.

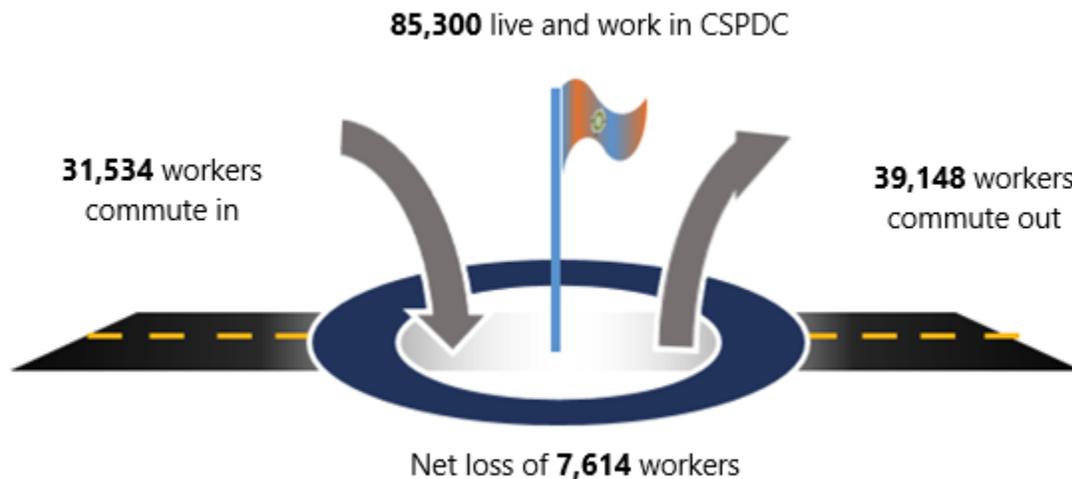
Figure 10: Targeted Industries of Existing Reports



Commuter Patterns

The Central Shenandoah Planning District Commission has 31,534 workers who commute into the region and 39,148 workers who commute outside of the region for work. This results in a net loss of 7,614 workers, making the Central Shenandoah Planning District Commission an exporter of employees. Approximately 85,300 (73%) workers both live and work within the CSPDC.

Figure 11: Commuting Patterns for CSPDC



Source: US Census on the Map, 2015

The biggest destinations for the region's workers are the City of Harrisonburg (23,111); Rockingham County (19,339); Augusta County (18,065); Staunton (8,095); and City of Waynesboro (6,643). Out of the top 10 destinations for CSPDC workers, three locations are outside of the CSPDC region: Albemarle County, City of Charlottesville and Fairfax County. Workers leaving the region are likely headed to University of Virginia or University of Virginia Health System University Hospital for work, among other locations.

Table 16: Where CSPDC Workers are Employed

Where CSPDC Workers are Employed, 2015		
City of Harrisonburg	23,111	18.6%
Rockingham County	19,339	15.5%
Augusta County	18,065	14.5%
City of Staunton	8,095	6.5%
City of Waynesboro	6,643	5.3%
Albemarle County	3,930	3.2%
Rockbridge County	3,565	2.9%
City of Lexington	3,171	2.5%
City of Charlottesville	2,757	2.2%
Fairfax County	2,240	1.8%
All Other Locations	33,532	26.9%

Source: US Census on the Map, 2015

Those individuals who work in the CSPDC region primarily live in Rockingham County (26,404); Augusta County (22,586); City of Harrisonburg (12,859); and City of Staunton (7,268).

Table 17: Where CSPDC Workers Live

Where CSPDC Workers Live, 2015		
Rockingham County	26,404	22.6%
Augusta County	22,586	19.3%
City of Harrisonburg	12,859	11.0%
City of Staunton	7,268	6.2%
Rockbridge County	5,903	5.1%
City of Waynesboro	5,551	4.8%
Albemarle County	2,286	2.0%
Page County	2,190	1.9%
City of Buena Vista	1,808	1.5%
City of Lexington	1,265	1.1%
All Other Locations	28,714	24.6%

Source: US Census on the Map, 2015

Appendix B: Infrastructure Overview

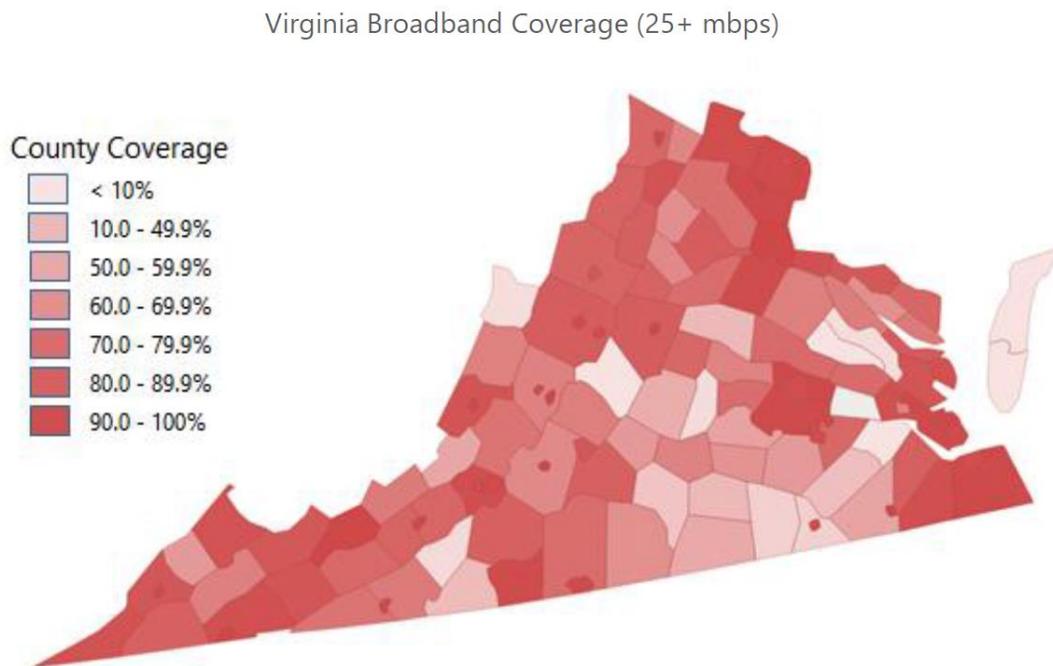
Communities depend on efficient and reliable infrastructure to connect supply chains, transport goods, and connect residents to employers and services. A solid infrastructure network allows a region to be competitive in today's global markets. Thus, infrastructure directly impacts a region's economic growth potential. Lack of adequate infrastructure can inhibit private and public-sector participation and therefore hinder economic growth. This report explores the state of the Central Shenandoah Region's infrastructure, specifically related to broadband, transportation, and water/sewer systems. Furthermore, this report can be used to understand the highest priorities for the Central Shenandoah Region in terms of the necessary repair and replacement of the region's aging infrastructure, as well as development of new infrastructure that is crucial to establishing an environment conducive to a prosperous economy.

Broadband

The Commonwealth of Virginia has broadband coverage of 89%. However, the speed and quality of coverage is varied across the state and within Planning Districts. Broadband is a critical piece of physical economic development infrastructure because it plays a role in connecting residents, businesses, and the government to their constituents.

Approximately 15% of the state's population is classified as underserved, meaning individuals have access to less than two wired providers. Out of all the cities in Virginia, Harrisonburg ranks among the highest for broadband coverage with 90.5% of residents covered. Compared to other Virginia counties, Highland County ranks as one of the lowest in terms of Broadband coverage, with 17.7% of residents having access to a minimum of 25 megabits per second (mbps).

Figure 12: Virginia Broadband Coverage (25+ mbps)



Source: BroadbandNow

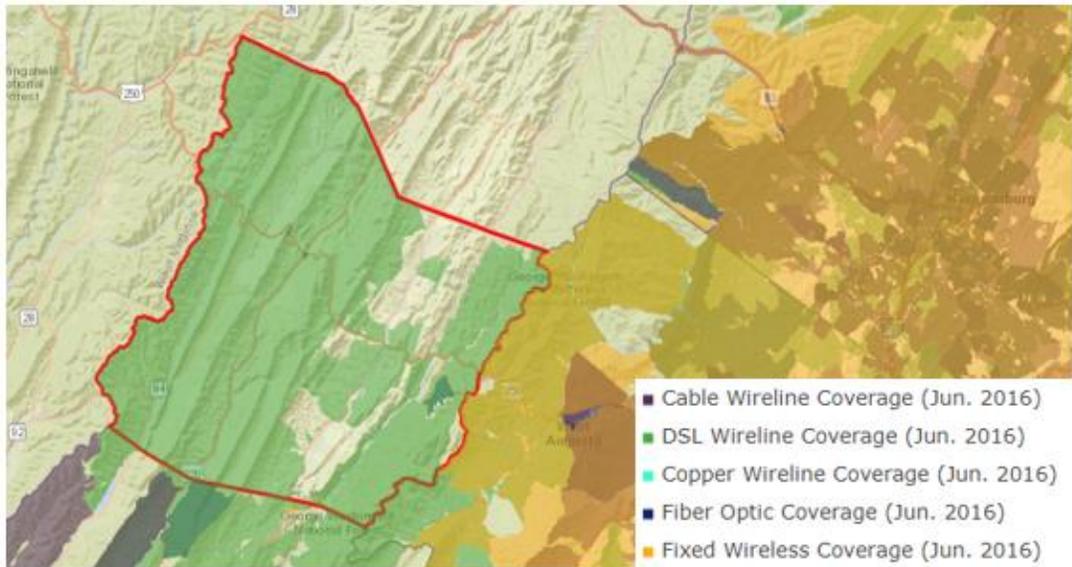
Currently, Highland County has access to only one broadband constituent, DSL. There is currently no access to cable wireline, copper wireline, fiber optic, or fixed wireless. In addition to having limited broadband options, there are areas of the county that lack coverage entirely. In contrast, the City of Harrisonburg has full broadband coverage,

with speeds up to 25 mbps. The entire city has fixed wireless coverage, followed by a nearly complete DSL coverage and substantial cable wireline and fiber optic coverage.

The following figures show broadband coverage in Highland County and the City of Harrisonburg based on cable, DSL, copper, fiber optic, and fixed wireless coverage.

Figure 13: Highland County Broadband Availability

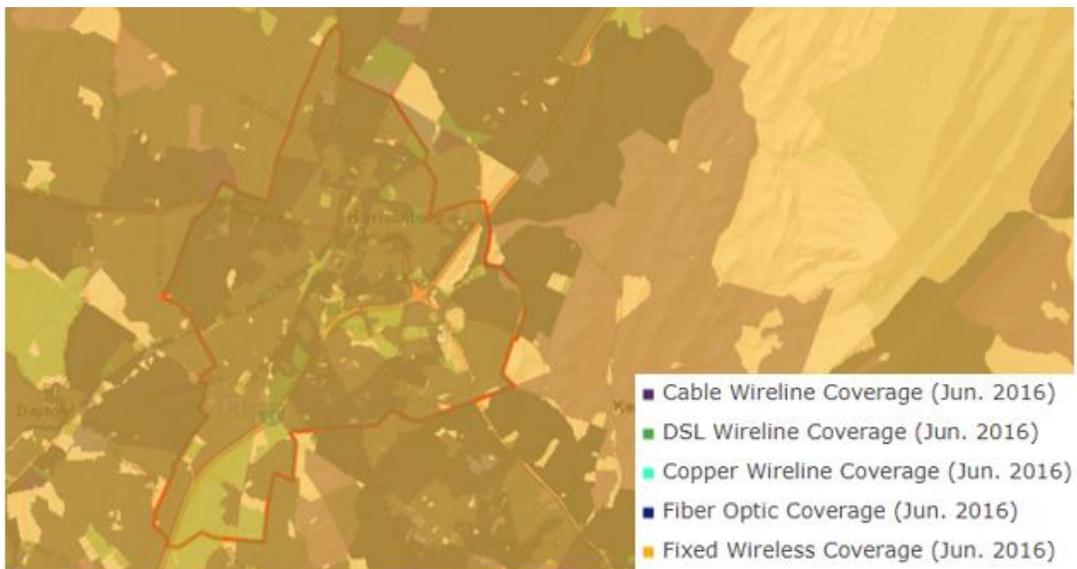
Highland County Broadband Availability



Source: Center for Geospatial Information Technology

Figure 14: City of Harrisonburg Broadband Availability

City of Harrisonburg Broadband Availability



Source: Center for Geospatial Information Technology

Ongoing Broadband Improvements Across the Central Shenandoah Region

There are existing efforts in place within the Central Shenandoah region that focus on improving and developing broadband within the region. Efforts include a telecommunication plan, tower/wireless project, Middle Mile Fiber network, creation of broadband authorities, and several broadband plans for specific counties. Details of these plans and the involved localities are provided below.

Bath and Highland Counties: Bath and Highland Counties completed a regional telecommunications plan in June 2015 through the support of a Community Development Block Grant (CDBG) Regional Planning Grant from the Virginia Department of Housing and Community Development (DHCD). The plan was designed to create competitive communities and ensure community sustainability by building and utilizing telecommunications infrastructure. The planning process included the following: needs assessment and asset inventory; broadband education development strategies and end user application; last mile connectivity options; preliminary engineering, design, and cost estimates; organization and network operation options; and funding strategies.

Bath and Highland Counties received funding through the Virginia Telecommunications Planning Initiative (VATPI). Through this joint planning effort, the counties of Bath and Highland and the Town of Monterey created a broadband authority, the Bath-Highland Network Authority, to facilitate access to affordable high-speed data, internet, and telecommunications services needed to foster economic development, improve educational opportunities, ensure public safety, and enhance the overall quality of life. The Articles of Incorporation were sent to the state in October 2017.

Augusta County: In 2015, Augusta County was awarded a Virginia Telecommunication Planning Initiative (VATPI) grant through the Virginia Department of Housing and Community Development to develop its first comprehensive broadband plan. The planning process included the following: demand aggregation demonstrating a market; needs assessment; infrastructure/services inventory; gap analysis; broadband education; and identification of connectivity solutions. In 2017, Augusta County was awarded a grant through the Virginia Telecommunications Initiative (VATI) program to construct a new tower for improved wireless coverage and broadband connectivity. Lingo Networks was the service provider partner for the program.

Rockbridge Area (Rockbridge County, City of Buena Vista, City of Lexington): A broadband plan team, Rockbridge Telecommunications Management Team, was formed in late 2007. This group had representation from Rockbridge County, City of Lexington, City of Buena Vista, local schools and universities, emergency services personnel, and experts from the telecommunications sector. With support from a CDBG Planning Grant through the Virginia Department of Housing and Community Development, the team hired a consultant to conduct a comprehensive broadband feasibility plan. The report, completed in 2008, included the following: vision for the region; economic impact analysis; case studies from other areas; needs assessment; residential and business survey analysis; broadband education strategies; last mile solutions; network architecture options; and recommendations.

Broadband Authority: The Rockbridge Area Network Authority (RANA) was created by Rockbridge County, Lexington and Buena Vista cities, and Washington and Lee University in 2009 to promote and provide high-speed, "big broadband," fiber infrastructure for the area's localities. More information is available at:

<http://www.ranabroadband.net/>

Middle Mile Fiber Network: In 2009, the County submitted a Broadband Infrastructure funding application to the National Telecommunications and Information Administration (NTIA) to build the proposed network. Nearly \$7 million was awarded for Connecting the Dots: Rockbridge Broadband Initiative. The project constructed both a middle mile fiber network linking all anchor institutions in the Rockbridge area and a shared data center on the campus of Washington and Lee University. The linear fiber backbone extended throughout the following

jurisdictions: Rockbridge County, cities of Lexington and Buena Vista, and the towns of Glasgow and Goshen. This effort and future network projects are managed by the Rockbridge Area Network Authority.

Transportation

Interstate and Other Roadways

Interstate 64 and Interstate 81 are major roadways within the Central Shenandoah region. Several improvement planning efforts and projects are in place to increase the function of transit within the Central Shenandoah region.

The CSPDC's two Metropolitan Planning Organizations (MPOs), Staunton-Augusta-Waynesboro and Harrisonburg-Rockingham, along with the neighboring Charlottesville-Albemarle MPO, conducted a study to evaluate the feasibility of implementing transit service in the Interstate 81 and 64 corridors to better connect the cities of Harrisonburg, Staunton, Waynesboro, and Charlottesville. The study was supported by the Virginia Department of Rail and Public Transportation. The Steering Committee members included representatives from Staunton-Augusta-Waynesboro MPO, Charlottesville-Albemarle MPO, Harrisonburg-Rockingham MPO, the University of Virginia, James Madison University, and area transit providers such as Harrisonburg Transit, Charlottesville Area Transit, JAUNT, and BRITE. The study included results from a public survey, which confirms the need for such a transit service, potential routing and stops, park-and-ride lot needs to support the service, costs for service provision, and potential funding sources, as well as organizational alternatives for service management and oversight.

Figure 15: Interstate 81



In 2017, the Strategic Highway Research Program 2 (SHRP 2) conducted an Interstate 64 Corridor Study. The study was a collaborative effort between the Charlottesville-Albemarle MPO and the Staunton-Augusta-Waynesboro MPO, and focused on the 40-mile Interstate 64 corridor between Charlottesville and Staunton. The project was funded by the Federal Highway Administration SHRP2 Implementation Assistance Program PlanWorks: Better Planning. Better Projects. Using FHWA's PlanWorks, a working group was formed with the goals of identifying corridor deficiencies, developing solutions, and building cross-boundary and cross-disciplinary partnerships. The Thomas Jefferson Planning District Commission contracted with the CSPDC to perform a portion of the project activities.

Interstate 81 requires significant improvements to ensure safe and continued use of the interstate. Requested improvements include extending acceleration and deceleration lanes at Exits 213, 220, 221, and 222. Additionally, improvements are needed for the ramp at exit 205 and intersection improvements at State Route 606. Both the GO Virginia Region 8 Council and Improve I-81 Chamber Coalition have submitted letters supporting improvements.

Air Transportation

The Shenandoah Valley Airport (SHD) is located in Weyers Cave, Virginia, conveniently positioned near Harrisonburg, Staunton, Waynesboro, and surrounding counties. In April 2018, the nation's largest regional airline, SkyWest, started offering daily flights to and from Washington Dulles International Airport. This development will prove critical to economic development and will enhance travel opportunities for residents and individuals looking to travel to the Central Shenandoah region. The Shenandoah Valley Airport's master plan can be found on its website:

<https://flyshd.com/2016/08/17/master-planning-process-overview> ~~trashed/masterplanning/~~.

In addition to SHD, the region also has a number of general aviation airports, including Ingalls Field Airport, Eagle's Nest Airport, and Bridgewater Air Park.



Passenger Rail

Amtrak's Cardinal line runs between New York and Chicago three days per week with afternoon stops in downtown Staunton. The Cardinal route also stops in Charlottesville as a transfer point to Washington D.C. and the Northeast Corridor. From Staunton to Chicago, Amtrak stops in the neighboring county of Alleghany at the Clifton Forge station. Previously, the Staunton Amtrak station served as a full passenger and freight railroad depot.

Public Transit

In August 2015, the CSPDC completed and adopted a Transit Development Plan for the region's administered transit services. The Transit Development Plan focused on the development of a combined urban-rural system to better link the services operating in Staunton, Augusta, and Waynesboro. As a result, the CSPDC formed a Transit Advisory Committee, gained ownership of the Fishersville transit facility, and made necessary improvements to the Route 250 Connector, Staunton Green and Silver Trolley routes, Stuarts Draft Link, and the Waynesboro Circulator route. Additionally, the CSPDC has launched BRITE transit system.

In 2017, the CSPDC was awarded a Virginia Regional Transit five-year contract for a turnkey BRITE bus service. BRITE is a public bus transit system that connects Staunton, Augusta, and Waynesboro. Services include fixed routes, as well as on-demand services. By the end of June in 2017, the CSPDC had gained ownership of the transit facility. To increase public awareness, the CSPDC completed a comprehensive Geographic Information Systems (GIS) inventory of all bus stops and installed signage where appropriate. Additionally, social media pages on Facebook and Twitter further promote the BRITE bus presence. Development of a BRITE bus website is underway. The BRITE bus is funded through a

Figure 16: BRITE



mix of federal and state money, as well as local match provided by the City of Staunton, Augusta County, City of Waynesboro, Augusta Health, Blue Ridge Community College, Shenandoah Valley Social Services, Staunton Downtown Development Association, and Wilson Workforce & Rehabilitation Center.

Inter-Regional Transit Study: The CSPDC's two Metropolitan Planning Organizations (MPOs), Staunton-Augusta-Waynesboro and Harrisonburg-Rockingham, along with the neighboring Charlottesville-Albemarle MPO have completed a study to evaluate the feasibility of implementing transit service in the Interstate 81 and 64 corridors to better connect the cities of Harrisonburg, Staunton, Waynesboro, and Charlottesville. The study is supported by the Virginia Department of Rail and Public Transportation. The Steering Committee members include representatives from Staunton-Augusta-Waynesboro MPO, Charlottesville-Albemarle MPO, Harrisonburg-Rockingham MPO, the University of Virginia, James Madison University, and area transit providers such as Harrisonburg Transit, Charlottesville Area Transit, JAUNT, and BRITE. The study includes results from a public survey, which confirms the need for such a transit service, potential routing and stops, park-and-ride lot needs to support the service, costs for service provision, and potential funding sources, as well as organizational alternatives for service management and oversight. The next steps include refining the preferred service alternative and building consensus to move forward with future implementation.

Rideshare Commuter Program: The CSPDC continues to implement a Rideshare Program with funding through the Virginia Department of Rail and Public Transportation (DRPT). In 2018, the Rideshare program completed a Long-Range Transportation Demand Management (TDM) Plan that covers Fiscal Years 2019-2024. Twenty-three strategic initiatives were developed and stratified into five categories - marketing and community outreach; carpool/vanpool/ride matching; employer services; alternative travel mode promotion; and TDM and regional planning and coordination. In the coming year, the Rideshare will begin the process of implementing these strategies. CSPDC staff has been doing extensive outreach through events with local chambers of commerce, having booths at organizational wellness and benefits fairs, and one-on-one meetings with the human resource representatives of individual employers. A radio campaign focused on commuters aired this year.

Harrisonburg Transit: Harrisonburg Transit is the municipally-owned public transportation system for the City of Harrisonburg. The system is operated by the Harrisonburg Department of Public Transportation (HDPT). Funding for the bus service is provided by the Virginia Department of Transportation, U.S. Department of Transportation, James Madison University (JMU), and the City of Harrisonburg. Much of the scheduled bus service is focused around local connections to/from JMU. College Transit provides bus service from JMU to destinations throughout the Northeast, including the Baltimore-Washington International Airport and Amtrak station, while Home Ride of Virginia offers weekend and holiday service between JMU and Virginia destinations, such as Northern Virginia, Richmond, and Hampton.

Rockbridge Area Transportation System: The Rockbridge Area Transportation System (RATS) operates demand-responsive transit service and contracts with Roanoke-Area-Dial-A-Ride (RADAR) to connect between Lexington and Buena Vista, Monday through Saturday. RATS provides on-demand, low-cost transportation, both locally and to nearby airports from Roanoke to Richmond, and train stations in Charlottesville and Lynchburg. While the initial mission was to provide door-to-door, nonemergency, demand-response rides to health-care providers, RATS service is available to the general public. Able, full-fare passengers can schedule rides between one and five miles for just \$9.00. Beyond that distance, RATS charges \$2.00 per mile for rides of up to 30 miles, \$1.75 per mile for rides between 31 and 59 miles, \$1.50 per mile for rides between 60 and 100 miles, and \$1.00 per mile for rides over 100 miles. RATS operates 15 vans, most wheelchair accessible, and in 2015, served over 650 residents in the Lexington area community.

Intercity Buses: The nearest intercity bus stops are in Charlottesville, which is served by Greyhound routes between Lynchburg and Washington, D.C. and between Richmond and Nashville, Tennessee. Greyhound operates two daily

round trips between Charlottesville and Baltimore, Maryland and three daily round trips between Richmond and Nashville via Charlottesville. Greyhound no longer serves Harrisonburg, Staunton, or Waynesboro.

Launched in 2017, the Virginia Breeze is the latest bus service in our region. The Virginia Breeze features a modern 56-passenger coach with free Wi-Fi, in-seat power outlets, and other amenities, and provides a critical transportation connection between rural Virginia communities and the national bus network. The Virginia Breeze runs along I-81 and I-66 connecting travelers from Blacksburg to Washington, D.C. with multiple destinations in-between, including Lexington, Staunton, and Harrisonburg. Tickets for the bus line can be purchased through Megabus. The program is funded through the Federal Transit Administration's 5311 Intercity Bus Program and administered by the Virginia Department of Rail and Public Transportation.

Unfortunately, traditional fixed-route transit service does not serve everyone in the Central Shenandoah region. In order to ensure that mobility needs are met for the region's disadvantaged populations who do not have transit access, the Central Shenandoah Planning District Commission and Virginia Department of Rail and Public Transportation developed a Coordinated Human Service Mobility (CHSM) Plan. Strategies include:

- Continue to support and maintain capital needs of coordinated human service and public transportation providers;
- Build coordination among existing public transportation and human service transportation providers;
- Expand outreach and information on available transportation options in the region, including establishment of a centralized point of access;
- Provide flexible transportation options and more specialized one-to-one services through expanded use of volunteers;
- Expand availability of demand-response and specialized transportation services to provide additional trips for older adults, people with disabilities, and people with lower incomes;
- Implement new public transportation services or operate existing public transit services on a more frequent basis;
- Establish or expand programs that train customers, human service agency staff, medical facility personnel, and others in the use and availability of transportation services;
- Bring new funding partners to public transit/human service transportation; and
- Provide targeted shuttle services to access employment opportunities.

Water/Sewer

The CSPDC worked with the localities in the Shenandoah Water Basin and Upper James River Water Basin to develop regional water supply plans that meet the State's water supply plan mandate. These plans, the Upper Shenandoah River Basin Water Supply Plan, and the Upper James River Basin Water Supply Plan aim to ensure that adequate and safe drinking water is available to citizens and encourages, promotes, and protects all other beneficial uses of water resources in the region. Plans explicitly laid out project water demands, water demand management, as well as drought response planning efforts. Plans were submitted to the Virginia Department of Environmental Quality (DEQ) in November 2011 and adopted by all localities by February 2012.

For more information regarding watershed planning please visit: <http://www.cspdc.org/programs-services/environment-and-natural-resources/>

Appendix C: Environmental Conditions Overview

Major Risks Facing the Central Shenandoah Region

Major environmental threats to the Central Shenandoah region include floods, tropical storms, tornados, wildfires, hurricanes, and winter storms. While these natural events are a concern that should be taken into consideration during planning and economic development activities, it is also true that this area experiences generally moderate weather conditions. Unlike other parts of the country, where rising sea waters, floods, and dangerous hurricanes are an expected occurrence, the region is relatively insulated from extreme weather. Yet, the CSPDC continues to actively work with partners across the region to mitigate risk wherever possible.

Existing Plans and Measures

The CSPDC is involved in emergency management services throughout the Central Shenandoah region, including providing training programs, educational programs, technical assistance, and emergency response and mitigation planning. Since 2000, a program of the CSPDC, Shenandoah Valley Project Impact (SVPI), has assisted with mitigation planning efforts and implemented several programs and activities. SVPI has helped to promote community education and outreach to prepare for severe weather, disasters, and other emergencies. SVPI holds several workshops and training programs on topics including the disaster preparedness and mitigation awareness and education. Additionally, publications created by the SVPI aid in increasing public awareness of major risks and mitigation best practices. Publications include the Shenandoah Valley Hurricane Preparedness Guide, Disaster Preparedness and Mitigation Guide for Businesses, Too Much Weather – A Disaster Preparedness Guide for Kids, and numerous brochures. In the Fall of 2003, SVPI began offering Community Emergency Response Team (CERT) training to inform citizens on basic skills for emergency response. SVPI strives to inform all members of the community and has developed specific awareness campaigns to target children and special needs individuals.

The CSPDC is a member of the Natural Hazards Association's Resilient Neighbors Network (RNN) Program. This program is a grassroots effort to help ensure a safer, disaster-resilient, and sustainable community. Additionally, the CSPDC has worked collaboratively with the Natural Hazards Mitigation Association to create their Disaster Risk Reduction Curriculum. The curriculum is part of the Ambassador program that allows individuals with intensive knowledge of best practices and analytic tools to make informed decisions to reduce disaster risk.

Every five years, the CSPDC completes a Regional All Hazards Mitigation Plan, which addresses current hazards and identifies vulnerable areas. The Plan includes best practices and strategies to reduce hazards. The CSPDC is proactive in mitigating the occurrence and damage of wildfires by becoming the first in Virginia to take on a Community Wildfire Protection Plan. Several flood mitigation projects have been completed throughout the region, including projects in the Town of Glasgow, City of Staunton, Rockbridge County, City of Buena Vista, and Village of Port Republic.

At the state level, the CSPDC has been involved with the Resilient Virginia program. Involvement includes assisting with creation of the program for annual Resilient Virginia conferences, as well as delivering presentations.

Future Considerations

Currently, the CSPDC is working to further develop and promote its Emergency Management Services Program. The program promotes community resilience by covering three major areas: (1) emergency management planning, (2) preparedness/mitigation education and outreach, and (3) hazard mitigation project administration. Existing efforts are focused on creating and updating local Emergency Operations Plans, Hazardous Materials Emergency Response Plans, Continuity of Operations Plans, as well as the regional All Hazard Mitigation Plan and a Community Wildfire Protection Plan.

Environmental gaps exist that may progress into issues pertinent to economic development in the Central Shenandoah region. The majority of the emergency preparedness and planning efforts are focused on weather and

natural disaster incidences and neglecting to capture public health concerns that impact communities. Nationally, there has been a surge in concern over infectious disease and environmental contagions in communities, and the CSPDC should adapt its planning efforts to reflect that. While the Central Shenandoah Planning District Commission is not responsible for public health matters, it does have some public health measures in place. The CSPDC can continue to work with their regional and state partnerships to actively address issues and plan responses. For example, the Community Emergency Response Team training currently incorporates aspects of the pandemic flu into its curriculum. This curriculum could expand to cover other public health concerns that are currently impacting the Central Shenandoah region community, such as Lyme disease and other tick-borne diseases. Public awareness campaigns can educate the public on the importance of sustainability and reducing environmental contagions to ensure clean air and drinking water within the Central Shenandoah region. Additionally, the CSPDC can collaborate with health organizations to best understand the recent outbreaks and incidents of public health issues. The CEDS Action Plan will denote priority actions for future hazard mitigation and emergency management.

Appendix D: SWOT Analysis

The Strengths, Weakness, Opportunities, Threats (SWOT) analysis serves as a foundation for the economic potential of the Central Shenandoah Region (“the Region”). The strengths, weaknesses, opportunities and threats identified in this document are based on extensive primary and secondary data collection and analysis performed for the GO Virginia Region 8 Economic Development and Diversification Plan, existing reports, supplemental research, and discussion with Central Shenandoah Planning District Commission (CSPDC) representatives and the CEDS Strategy Committee. The analysis examines both internal and external factors that display where the Central Shenandoah Region is now, as well as potential future outcomes based on its current status. Specifically, the SWOT analysis examines:

- State of the regional economy
- Regional clusters
- External trends and forces
- Workforce considerations
- Spatial efficiencies/sustainability
- Infrastructure including broadband, road, rail, airport, public transit, water/sewer
- Energy
- Natural hazards
- Equitable development
- Economic development partners
- Economic development resources

Looking forward, the opportunities and threats identified in the SWOT will be leveraged to shape the Strategic Action Plan. The Strategic Action Plan will incorporate additional planning measures, such as regional plans, ongoing projects from the current 2012 CEDS, as well as identify responsible stakeholders, funds, and implementation schedule to fully develop the opportunities within the Central Shenandoah Region.

Note that the bullet points are not listed in any particular order within each category.

Strengths, Weaknesses, Opportunities, and Threats Analysis

Strengths

- The Region's population is expected to grow over the next ten years.
- The Region is projected to have a job growth of 9%, or 12,363 jobs, by 2026.
- The Region has strong post-secondary institutions that offer a variety of degrees and technical/career programs.
- Health Care, Accommodation and Food Services and Education Services are projected to grow within the Region.
- There is relatively low unemployment in the Region.
- Infrastructure assets are disbursed throughout the Region, including I-81 and I-64, Shenandoah Valley Airport (SHD), the Amtrak station in Staunton, and general aviation airports Ingalls Field Airport, Eagle's Nest Airport, and Bridgewater Air Park.
- The Region is in close proximity to the Virginia Inland Port located in Front Royal, VA.
- The Region has access to freight transportation via CSX, Norfolk Southern, the Shenandoah Valley Railroad and Buckingham Branch Railroad.
- The rural setting offers a high-quality of life with relatively easy access to regional urban centers.
- There is a relatively diverse industry composition across the Region.
- Entrepreneurism is present throughout a range of industries.
- The Region has a variety of outdoor recreational resources, agri-tourism and historic assets that attract visitors and support quality of life for residents.
- The Region is home to the top two agricultural producing counties in Virginia, Rockingham and Augusta Counties.
- The Region has strong partnerships with regional economic development agencies.
- Nearly each locality has at least one Census tract nominated as an Opportunity Zone, allowing those areas to take advantage of development incentives.

Weaknesses

- The Region's population growth is not uniform amongst localities.
- There is a lack of available sites that are "shovel" ready for development prospects.
- The Region's 2017 median household income (\$49,190) is low relative to the state (\$66,285).
- There is uneven broadband coverage across the Region.
- Historic job decline was observed in the top three highest earning industries (Utilities, Management of Enterprises, and Manufacturing).
- A portion of Manufacturing subsectors are projected to continue to decline.
- The Region has difficulty attracting high wage jobs.
- The Region's population is aging, posing challenges to future workforce demand.
- The Region has difficulty attracting/retaining younger workers.
- Innovation and entrepreneurship systems in technology related fields could be strengthened/need strengthening.
- There is a limited range of housing options within the Region. This can pose a challenge to recruiting workers.
- Public transit options are contained to urban areas with limited transportation options in rural areas.

Opportunities

- The Region can secure state assistance through the ongoing implementation of GO Virginia Region 8 Economic Growth and Diversification Plan.
- Available sites can be improved through the Virginia Business Ready Sites Program.
- The Region can capitalize on strong projected growth in Health Care and Accommodation and Food Services.
- The Region can retain a portion of the approximately 40,000 workers who live in the Region and commute outside of the area for work.
- Telecommuting can be marketed within the Region as an alternative to life in metropolitan areas such as Washington D.C. or Richmond.
- Broadband coverage can be expanded through innovative partnerships, especially in rural areas.
- The Region can better market existing workforce training programs.
- The Region can engage high school students in workforce opportunities and career pathways in target industries through events, activities and programs.
- The Region can continue enhancing the tourism industry, especially within the agri-tourism and outdoor recreation subsector.
- The Region can use smart growth development principles to strategically develop available land for industry and commercial use and protect agricultural land.
- The Region can retain more graduates and young professionals after they have completed schooling.
- The Region can assess energy, water, and wastewater needs to ensure the Region's capacity is in line with its industry and population demands.
- The Region can work to ensure future cooperation among regional economic development and planning agencies.
- The Region can capitalize on the local food movement through a robust, regional food distribution system.
- Opportunities for value-added manufacturing in the Region can be enhanced.
- The Region can expand and improve cell service availability throughout the Region.

Threats

- The Region is threatened by a shortage of skilled workers for employers within the Region.
- The Region may face environmental risks including floods, tropical storms, tornados, wildfires, and hurricanes.
- The Region faces challenges in efforts to expand broadband, like topography, and attaining a critical mass to support traditional broadband infrastructure in rural areas. This could deter business development.
- Putting off critical infrastructure repairs, especially on I-81, could hinder quality of travel and transit for both people and goods.
- Lack of funding resources to improve broadband could prevent the Region from quickly advancing technology in the workforce.
- Deficiency of high wage jobs could impede growth within the Region.
- The loss of, or reduction in organizational funding, (federal, state, and private sector) could stifle economic growth if funding streams are not diversified.
- Increased competition from other regions in Virginia, especially Northern Virginia, threatens the Region's ability to attract businesses and workforce.
- College and University graduates leaving the Region after they have completed their degree threatens economic growth.
- A lack of understanding of career pathways amongst residents impedes career advancement in some sectors.
- The aging population and increased retirements results in further pressure on workforce needs.
- The Region faces the threat of aging infrastructure limiting business development.
- Lack of infrastructure capacity including sewer, waste water, utilities or broadband could threaten the Region's ability to attract major employers and retain existing employers.
- Failure to maintain a steady supply of high quality water for industrial uses could threaten economic growth in the manufacturing and/or agri-business sectors.

Appendix E: Strategic Direction/Action Plan

The Strategic Direction/Action Plan is designed to provide the Central Shenandoah Planning District Commission (CSPDC) with the guidance to achieve their economic development goals. Based on opportunities and threats identified in the Strengths, Weakness, Opportunities, Threats (SWOT) analysis, the Strategic Direction/Action Plan focuses on implementing the identified and prioritized goals through measurable objectives. Each objective has corresponding performance measure(s) to gauge success over the next five years. However, since this is a living document it is expected that these measures may change over time as different elements of the plan are implemented and economic conditions evolve.

The implementation details for the objectives contained in the Strategic Direction/Action Plan will be further elaborated on in Action Plan Matrix, which will be developed with the aid of the CEDS Project Team during a facilitated workshop. The Action Plan Matrix will identify details such as partner organizations, priority level of each objective, and funding sources that are necessary to achieve successful implementation. The CSPDC Board of Commissioners, the official CEDS committee, was consulted on an initial draft of the Strategic Direction/Action Plan through a prioritization activity.

While this is intended to be a regional plan, it should be noted that not all objectives apply to every locality in the Central Shenandoah region. Instead, the Strategic Direction/Action Plan contains objectives that will have a *regional impact*. Regionalizing economic development efforts allows parties to concentrate resources, draw on the expertise of partners and empower organizations to work across jurisdictional boundaries. Nearly every objective requires collaboration from not only localities, but regional economic development and planning partners. Every corner of the CSPDC jurisdiction is diverse in its geography and industry mix, which is part of what makes the region enticing to residents and business alike. The following vision statement aims to capture the diversity of the region and demonstrate how the region will achieve its economic development goals over the next five years.

Vision Statement

The Central Shenandoah Region is committed to collaborating across sectors to create a prosperous environment that encourages sustainable development, supports a diversity of employment opportunities, provides a high quality of life for residents, and preserves the many natural resources that make the Shenandoah Valley a unique place to visit, live, and work.

Vision I: Prepare the Central Shenandoah Region's workforce for in-demand occupations with opportunities to advance up the career ladder and build human capital.

Goal 1: Expand the workforce talent pool in the Central Shenandoah Region by attracting new residents and retaining workers.

- Objective 1.1** Attract home-based business/workers to the Central Shenandoah Region as an alternative to working in major metropolitan areas such as Washington D.C. and Richmond.
- Objective 1.2** Collaborate with higher education institutions to proactively engage students in community activities and market the Region's workforce opportunities and quality of life to increase the number of graduating students (high school and university/college) that remain in the Central Shenandoah Region.
- Objective 1.3** Support educational institutions, workforce training organizations, and other employers to solidify a strategy to tackle the challenge of "trailing spouses."

Objective 1.4 Continue to work with GO Virginia Region 8 Council and Economic Development subcommittee to advance projects that create high wage, skilled jobs and build human capital within the Central Shenandoah Region.

Performance Measures: Number of telecommuting workers (U.S. Census Data); List of marketing efforts to attract graduating students (internal/educational institutions); Percent of graduates who remain in the region after graduation (educational institutions); Strategy for “trailing spouses” identified and roles of partner organizations solidified (internal); Average annual income (U.S. Census data); Number of GO Virginia funded projects that target high wage, skilled jobs (internal); List of earn and learn training programs in target industries in the region (internal); Number of GO Virginia funded workforce talent projects (internal).

Goal 2: Partner with local industry to engage students and recent graduates to change the culture around careers available to students locally.

Objective 2.1 Increase the number of high schoolers engaged in workforce training opportunities, specifically those that relate to key industries, over the next five years.

Objective 2.2 Seek funding at the regional, state, and federal levels for workforce training programs such as apprenticeships and other hands on training for students and recent graduates.

Objective 2.3 Encourage “earn and learn” training programs in target industries to provide students with opportunities to learn skilled trades.

Objective 2.4 Educate students on post-high school options, including 2-year degrees or trades programs, that are traditionally not as common as pursuing a 4-year degree.

Performance Measures: Number of high schoolers enrolled in workforce training programs throughout the region (workforce organizations/educational institutions); Dollar amount of funding obtained that is dedicated for apprenticeships and on-the-job training (internal and workforce organizations); Number of individuals graduating from “earn and learn” training programs (workforce organizations/educational institutions); Change in number of students graduating from 2-year degree or trades program over five years (workforce organizations/educational institutions).

Goal 3: Enable the growth of programs that recognize the potential of the local workforce to upskill and climb the career ladder.

Objective 3.1 Expand worker training programs and services that upskill current employees into difficult to fill middle-skill positions.

Objective 3.2 Collaborate with workforce development partners to identify where marketing efforts are needed to ensure that the general population and employers are aware of incumbent workforce programs.

Objective 3.3 Partner with regional workforce and economic development organizations to identify emerging clusters or industries that will require additional skill sets for employees to remain competitive in the workforce market.

Objective 3.4 Increase fast track job training opportunities to address new and emerging industry needs.

Objective 3.5 Encourage the corresponding development of childcare resources to allow parents to grow in the workforce.

Performance Measures: Number of workforce training programs that target middle skills (internal and workforce organizations); Number of incumbent worker programs that exist throughout the Central Shenandoah Region (workforce organizations); Emerging occupations identified in annual CEDS update (internal); Number of fast track job training opportunities (workforce organizations); List of daycare resources throughout the Central Shenandoah Region (internal).

Vision II: Address critical infrastructure updates and anticipate future community needs to improve the Central Shenandoah Region's competitiveness to attract and retain business.

Goal 1: Expand and improve the Region's technology and telecommunications systems.

- Objective 1.1** Develop stronger, reliable broadband coverage through innovative partnerships between localities and telecommunications companies, specifically focusing on rural areas.
- Objective 1.2** Expand and advance cell service availability throughout the region to attract businesses and residents.
- Objective 1.3** Utilize state and federal broadband funds to implement telecommunication projects.

Performance Measures: Community survey ranking satisfaction with broadband quality (survey); Percent coverage of broadband and cell service (utility organizations); Virginia broadband availability mapping (internal/ Virginia Broadband Availability Map and Integrated Broadband Planning and Analysis Toolbox); Funding amount obtained through state and federal broadband funds (internal).

Goal 2: Maintain and improve transportation networks that carry goods and people throughout the Central Shenandoah Region.

- Objective 2.1** Improve road and rail access to new and existing commercial and industrial sites to assure their competitiveness for business location in our region.
- Objective 2.2** Support VDOT and local transportation projects and initiatives that improve travel time reliability and freight trucking reliability on the region's interstates and primary roads.
- Objective 2.3** Fund transportation services and infrastructure projects that provide the region's residents with access to jobs and schooling.

Performance Measures: Number of transportation network improvement projects (VDOT); Traffic counts on I-81 (VDOT); Number of transportation network improvements in areas with deferred maintenance (VDOT); Percent of population with access to public transit (survey).

Goal 3: Invest in site improvements by focusing on essential infrastructure upgrades or installation.

- Objective 3.1** Identify priority sites throughout Central Shenandoah Region that could attract significant development opportunity. Assess these sites for their water, sewer, and energy capacity and rank most important upgrades needed.
- Objective 3.2** Leverage the Virginia Business Ready Sites Program to improve site characteristics.
- Objective 3.3** Properly characterize sites and promote through appropriate state and regional channels to align with target audience.
- Objective 3.4** Partner with Virginia Economic Development Partnership (VEDP) to maintain an inventory of available sites within the region and track infrastructure needs/improvements.
- Objective 3.5** Continue to collaborate on GO Virginia efforts to fund site improvements.

Performance Measures: Priority sites established and progress on their infrastructure updated in each annual CEDS update (internal); Contributions and/or funding sources identified for infrastructure upgrades to sites (internal); Number of sites seeking assistance through the Virginia Business Ready Sites Program (internal); Number of sites in inventory with VEDP (internal); List of collaboration efforts with GO Virginia site improvements (internal).

Goal 4: Diversify housing options within the Central Shenandoah Region.

- Objective 4.1** Coordinate the development of a regional housing needs assessment with localities.

- Objective 4.2** Identify the number of units and housing mix that will meet the goal of attracting young families to the region.
- Objective 4.3** Provide safe and affordable housing options for the elderly population to age-in-place.
- Objective 4.4** Keep open communication with large employers to understand what housing stock and community characteristics could improve their ability to attract and retain workers.
- Objective 4.5** Continue to promote and offer the Down Payment Assistance (DPA) program that provides financing for first-time homebuyers with qualifying income levels.
- Objective 4.6** Support localities with necessary housing resources.

Performance Measures: Meetings with localities regarding regional housing needs (internal); Number of new or redeveloped units and housing mix identified (U.S. Census data); Housing purchase price (Zillow data report); Cost of living index (U.S. Census data); Meetings with large employers (internal); Number of first-time home buyers utilizing DPA program (Virginia Department of Housing and Community Development); Number of marketing analyses conducted within the Central Shenandoah Region (internal); Number of localities supported with data and planning expertise (internal).

Vision III: Expand and diversify economic activity in the Central Shenandoah Region by focusing on developing physical assets and cultivating natural resources.

Goal 1: Encourage the diversification of new and existing industries to ensure economic resiliency.

- Objective 1.1** Support a range of industries to increase breadth and depth of the business ecosystem.
- Objective 1.2** Support development and operations of entrepreneurial assistance programs to increase success of startups and businesses.

Performance Measures: List of marketing efforts to encourage business ecosystem (internal); Funding amount within entrepreneurial assistance programs (internal).

Goal 2: Support business attraction and retention efforts in the Region.

- Objective 2.1** Work with the localities' economic development offices to provide data and/or maps that will assist the localities in growing an existing business or attracting a new business.
- Objective 2.2** Continue to partner with the Shenandoah Valley Partnership on providing necessary data and/or expertise for marketing efforts in business retention and expansion.

Performance Measures: Number of localities utilizing data/maps from CSPDC (internal); List of collaborative discussions or transfer of data between CSPDC and SVP regarding business retention and expansion (internal).

Goal 3: Enhance natural resources, heritage sites and other outdoor recreation elements throughout the Region to promote quality of life, increase visitation and spur the outdoor recreation economy.

- Objective 3.1** Promote outdoor recreation opportunities within the Central Shenandoah Region through supporting marketing and organizational efforts.
- Objective 3.2** Provide GIS/mapping services to localities to highlight local resources, expand individual tourism experiences, map bike or walking trails, improve wayfinding signage, or other related projects.
- Objective 3.3** Assist communities in seeking funding opportunities that support natural resources, heritage sites, and other outdoor recreation opportunities.

Performance Measures: Number of marketing campaigns geared toward outdoor recreation (Virginia Tourism Corporation); Number of events held at heritage sites (Visit the Shenandoah Valley, Virginia Tourism Corporation, and internal); List of collaboration efforts (internal); Number of provided GIS/mapping resources provided to localities (internal); Amount of funding allocated towards natural resources, heritage sites, and other outdoor recreation opportunities within the Central Shenandoah Region (internal).

Goal 4: Create, improve, and renovate downtown corridors or other significant centers of activity to be economically productive.

- Objective 4.1** Improve infrastructure necessary to accommodate development in downtown districts.
- Objective 4.2** Utilize funding streams like façade improvement programs and revolving loan funds as leverage to attract private sector investment to downtowns throughout the Region.
- Objective 4.3** Identify target markets for downtowns/centers using data and maps.

Performance Measures: Number of downtown revitalization projects (localities); Number of storefronts improved (localities); Number of businesses using revolving loan fund (internal); Reports detailing target markets for each locality (localities).

Vision IV: Grow agribusiness by expanding the market of farmers, producers, food manufacturers, and other related sectors, like forestry, in the region and beyond.

Goal 1: Collaborate with agribusiness to understand challenges facing their production and strategies to improve their business.

- Objective 1.1** Explore the opportunity to attract a regional food distribution facility that would advance local food processing efficiency and meet or exceed U.S. Department of Agriculture regulations.
- Objective 1.2** Grow existing food manufacturing and craft beverage production through attracting investment to available sites.
- Objective 1.3** Collaborate with agribusiness owners to understand the latest technologies or other advancements that increase efficiency in their production.
- Objective 1.4** Engage regional, state and federal officials in discussions about supporting policies that will grow agricultural ecosystems.
- Objective 1.5** Support the forestry industry and related sectors by working directly with industry leaders to assess their needs to remain competitive.

Performance Measures: Growth in agricultural industry (U.S. Census data); Funding support for sites (internal); Contributions and/or funding sources identified for infrastructure upgrades to sites (internal); Number agribusiness companies seeking available sites within the region (internal); Meetings with agribusiness owners discussing efficient practices (internal); List of pro-agribusiness policies at the state and federal level (internal), Number of meetings with forestry industry and related sector businesses (internal).

Goal 2: Support resources and programs to grow the agritourism sector.

- Objective 2.1** Continue to expand Fields of Gold program to broaden opportunities for regional farmers to market their offerings throughout Central Shenandoah and beyond.
- Objective 2.2** Capitalize on the local food and craft beverage movement by supporting businesses who are developing products to meet market demand.
- Objective 2.3** Integrate local food into school cafeterias.
- Objective 2.4** Sponsor Farm-to-Fork tradeshow/expos to increase visibility and sales of local farmers in the Region and beyond.
- Objective 2.5** Support organizations to provide training in initiatives related to agritourism.

Performance Measures: Funding within the Fields of Gold program (internal); Number of farmers utilizing Fields of Gold program (internal); Amount of funding dedicated to local food and craft beverage companies (internal); Number of producers integrated into school cafeterias (internal/educational institutions); Number of tradeshow/expos sponsored (internal); Number of agritourism training programs in conjunction with business support organizations (internal).

Vision V: Increase resilience to natural and man-made hazards, economic downturns, and social vulnerabilities that impact communities and businesses in the Region.

Goal 1: Make the Region more resilient through planning, education, and mitigation activities.

- Objective 1.1** Engage localities' participation in the regional disaster preparedness and mitigation education program, Shenandoah Valley Project Impact.
- Objective 1.2** Assist localities with their emergency management and resilience planning efforts as requested.
- Objective 1.3** Assist interested localities and businesses with hazard mitigation activities to protect property, structures, and infrastructure at risk from natural and man-made hazards.
- Objective 1.4** Provide educational workshops and training to the business community in the region on topics regarding economic resilience, natural hazard mitigation, emergency preparedness, and continuity of operations planning (COOP), as resources are available.
- Objective 1.5** Serve as coordinator between national and state level resilience efforts and local communities to expand potential resources and assistance available in the Region.

Performance Measures: Number of localities engaged in the Shenandoah Valley Project Impact (internal); Number of plans created or updated (internal); Number of outreach efforts made specifically to the business community (internal); Number of educational and outreach opportunities (internal); Number of mitigation projects and activities implemented (internal).

Goal 2: Facilitate strategic land use to mitigate negative effects of natural disasters on residents and businesses.

- Objective 2.1** Use smart growth development principles to strategically develop available land for industry and commercial use and to protect agricultural land and protect.
- Objective 2.2** Use existing emergency management programs to coordinate an inventory of land throughout the region that is poorly situated to be developed for commercial, industrial or residential use.
- Objective 2.3** Strategically place utilities to reduce disruption during emergencies and natural disasters.
- Objective 2.4** Monitor and protect water sources to ensure water quality is not degraded or impaired.

Performance Measures: Updates to hazard mitigation plan with inventory of land (internal); Inventory of commercial, industrial, and residential sites (internal); Number of annual outages/disruptions (Virginia, Maryland & Delaware Association of Electric Cooperatives); Water quality results of localities water sources (localities and Virginia Department of Health Office of Drinking Water).

Goal 3: Diversify regional funding assistance to strengthen organizational capacity in times of stability *and* disaster efforts.

- Objective 3.1** Leverage state and federal funds for programs for environmental resiliency and hazard mitigation efforts.
- Objective 3.2** Maintain and contribute to a fund dedicated to hazard mitigation efforts to aid communities in rebuilding after natural disasters.

Performance Measures: State and federal funding acquired (internal); Dollar amount of hazard mitigation fund (internal).

Vision I: Prepare the Central Shenandoah Region’s workforce for in-demand occupations with opportunities to advance up the career ladder and build human capital.

Goal 1: Expand the workforce talent pool in the Central Shenandoah Region by attracting new residents and retaining workers.

Objective	Partner	Target Start Date	Resources	Performance Measures
1.1: Attract home-based business/workers to the Central Shenandoah Region as an alternative to working in major metropolitan areas such as Washington D.C. and Richmond.	SVP, LJ	Q1 2019	USDA, RD, GO VA, VATI	Number of telecommuting workers.
1.2: Collaborate with higher education institutions to proactively engage students in community activities and market the Region’s workforce opportunities and quality of life to increase the number of graduating students (high school and university/college) that remain in the Central Shenandoah Region.	Higher Ed, LJ, SVP	Q1 2019	Higher Ed, SVP, CoC, GO VA, PI, CSPDC	List of marketing efforts to attract graduating students; Percent of graduates who remain in the region after graduation.
1.3: Support educational institutions, workforce training organizations, and other employers to solidify a strategy to tackle the challenge of “trailing spouses.”	CoC, Higher ED	Q2 2019	Higher Ed, SVP, PI, CSPDC	Strategy for “trailing spouses” identified and roles of partner organizations solidified
1.4: Continue to work with GO Virginia Region 8 Council and Economic Development subcommittee to advance projects that create high wage, skilled jobs and build human capital within the Central Shenandoah Region.	CSPDC, GO VA, SVP, LJ	Q1 2019	GO VA	Average annual income; Number of GO Virginia funded projects that target high wage, skilled jobs; List of earn and learn training programs in target industries in the region; Number of GO Virginia funded workforce talent projects.

Goal 2: Partner with local industry to engage students and recent graduates to change the culture around careers available to students locally.

Objective	Partner	Target Start Date	Resources	Performance Measures
2.1: Increase the number of high schoolers engaged in workforce training opportunities, specifically those that relate to key industries, over the next five years.	SVWDB, K-12	Q1 2019	DOL, DOE, GO VA, PI	Number of high schoolers enrolled in workforce training programs throughout the region.
2.2: Seek funding at the regional, state, and federal levels for workforce training programs such as apprenticeships and other hands on training for students and recent graduates.	SVWDB, K-12	Q1 2019	DOL, GO VA, PI	Dollar amount of funding obtained that is dedicated for apprenticeships and on-the-job training
2.3: Encourage “earn and learn” training programs in target industries to provide students with opportunities to learn skilled trades.	SVWDB, K-12	Q4 2019	DOL, GO VA, PI	Number of individuals graduating from "earn and learn" training programs.
2.4: Educate students on post-high school options, including 2-year degrees or trades programs, that are traditionally not as common as pursuing a 4-year degree.	SVWDB, K-12, PI, Higher Ed	Q4 2019	DOL, GO VA, PI	Change in number of students graduating from 2-year degree or trades program over five years.

Goal 3: Enable the growth of programs that recognize the potential of the local workforce to upskill and climb the career ladder.

Objective	Partner	Target Start Date	Resources	Performance Measures
3.1: Expand worker training programs and services that upskill current employees into difficult to fill middle-skill positions.	SVWDB, CC	Q1 2019	DOL, DOE, GO VA, EDA	Number of workforce training programs that target middle skills.
3.2: Collaborate with workforce development partners to identify where marketing efforts are needed to ensure that the general population and employers are aware of incumbent workforce programs.	ACQSV, ACP, CC	Q1 2019	DOL, DOE, GO VA, EDA	Number of incumbent worker programs that exist throughout the Central Shenandoah Region.
3.3: Partner with regional workforce and economic development organizations to identify emerging clusters or industries that will require additional skill sets for employees to remain competitive in the workforce market.	SVP, GO VA	Q1 2019	GO VA, EDA	Emerging occupations identified in annual CEDS update.
3.4: Increase fast track job training opportunities to address new and emerging industry needs.	PI, SVWDB, CC	Q3 2019	VEDP, GO VA	Number of fast track job training opportunities.
3.5: Encourage the corresponding development of childcare resources to allow parents to grow in the workforce.	DSS, United Way, PI	Q1 2019	RD, ARC	List of daycare resources throughout the Central Shenandoah Region.

Vision II: Address critical infrastructure updates and anticipate future community needs to improve the Central Shenandoah Region’s competitiveness to attract and retain business.

Goal 1: Expand and improve the Region’s technology and telecommunications systems.

Objective	Partner	Target Start Date	Resources	Performance Measures
1.1: Develop stronger, reliable broadband coverage through innovative partnerships between localities and telecommunications companies, specifically focusing on rural areas.	LJ, PI, BA, CSPDC	Q1 2019	VATI, ARC, USDA, RD, PI, BA	Community survey ranking satisfaction with broadband quality.

1.2: Expand and advance cell service availability throughout the region to attract businesses and residents.	LJ, PI, BA, CSPDC	Q1 2019	VATI, ARC, USDA, RD, PI	Virginia broadband availability mapping.
1.3: Utilize state and federal broadband funds to implement telecommunication projects.	LJ, PI, BA, CSPDC	Q1 2019	VATI, ARC, USDA, RD, PI, BA	Funding amount obtained through state and federal broadband funds.
Goal 2: Maintain and improve transportation networks that carry goods and people throughout the Central Shenandoah Region.				
Objective	Partner	Target Start Date	Resources	Performance Measures
2.1: Improve road and rail access to new and existing commercial and industrial sites to assure their competitiveness for business location in our region.	VDOT, DRPT, PI, LJ, MPO	Q1 2019	EDA, ARC, LJ, VDOT, DRPT, PI	Number of transportation network improvement projects.
2.2: Support VDOT and local transportation projects and initiatives that improve travel time reliability and freight trucking reliability on the region's interstates and primary roads.	VDOT, DRPT, PI, LJ, MPO	Q2 2019	EDA, ARC, LJ, VDOT, DRPT, PI	Traffic counts on I-81; Number of transportation network improvements in areas with deferred maintenance.
2.3: Fund transportation services and infrastructure projects that provide the region's residents with access to jobs and schooling.	VDOT, DRPT, PI, LJ, MPO	Q2 2019	EDA, ARC, LJ, VDOT, DRPT, PI	Percent of population with access to public transit.
Goal 3: Invest in site improvements by focusing on essential infrastructure upgrades or installation.				
Objective	Partner	Target Start Date	Resources	Performance Measures
3.1: Identify priority sites throughout Central Shenandoah Region that could attract significant development opportunity. Assess these sites for their water, sewer, and energy capacity and rank most important upgrades needed.	LJ, SVP, ED, CSPDC	Q1 2019	EDA, ARC, GO VA	Priority sites established and progress on their infrastructure updated in each annual CEDS update.
3.2: Leverage the Virginia Business Ready Sites Program to improve site characteristics.	LJ, SVP, ED, VEDP	Q2 2019	EDA, ARC, GO VA	Contributions and/or funding sources identified for infrastructure upgrades to sites.
3.3: Properly characterize sites and promote through appropriate state and regional channels to align with target audience.	LJ, SVP, ED, VEDP	Q3 2019	EDA, ARC, GO VA	Number of sites seeking assistance through the Virginia Business Ready Sites Program.
3.4: Partner with Virginia Economic Development Partnership (VEDP) to maintain an inventory of available sites within the region and track infrastructure needs/improvements.	LJ, SVP, ED, VEDP	Q1 2019	ED	Number of sites in inventory with VEDP.
3.5: Continue to collaborate on GO Virginia efforts to fund site improvements.	LJ, SVP, ED, CSPDC, GO VA	Q4 2019	ED, GO VA, LJ, EDA, ARC	List of collaboration efforts with GO Virginia site improvements.
Goal 4: Diversify housing options within the Central Shenandoah Region.				
Objective	Partner	Target Start Date	Resources	Performance Measures
4.1: Coordinate the development of a regional housing needs assessment with localities.	CSPDC, LJ	Q3 2019	ED, GO VA, LJ, EDA, ARC	Meetings with localities regarding regional housing needs.
4.2: Identify the number of units and housing mix that will meet the goal of attracting young families to the region.	CSPDC, LJ	Q3 2020	ED, GO VA, LJ, EDA, ARC	Number of new or redeveloped units and housing mix identified.
4.3: Provide safe and affordable housing options for the elderly population to age-in-place.	LJ, PI	Q3 2021	ED, GO VA, LJ, EDA, ARC, PI	Housing purchase price; Cost of living index.
4.4: Keep open communication with large employers to understand what housing stock and community characteristics could improve their ability to attract and retain workers.	LJ, PI	Q3 2022	ED, GO VA, LJ, EDA, ARC	Meetings with large employers.
4.5: Continue to promote and offer the Down Payment Assistance (DPA) program that provides financing for first-time homebuyers with qualifying income levels.	CSPDC	Q4 2019	ED, GO VA, LJ, EDA, ARC	Number of first-time home buyers utilizing DPA program.
4.6: Support localities with necessary housing resources.	CSPDC, LJ	Q1 2019	DHCD, VHDA, USDA, RD, PI	Number of marketing analyses conducted within the Central Shenandoah Region; Number of localities supported with data and planning expertise.
Vision III: Expand and diversify economic activity in the Central Shenandoah Region by focusing on developing physical assets and cultivating natural resources.				
Goal 1: Encourage the diversification of new and existing industries to ensure economic resiliency.				
Objective	Partner	Target Start Date	Resources	Performance Measures

1.1: Support a range of industries to increase breadth and depth of the business ecosystem.	SVP, GO VA, ED, SVWDB, CC	Q1 2019	GO VA, DHCD, ARC	Number of localities utilizing Esri data/maps from CSPDC.
1.2: Support development and operations of entrepreneurial assistance programs to increase success of startups and businesses.	SVP, GO VA, ED, SVWDB, SBDC, SCCF, THC, Higher Ed	Q1 2019	GO VA, DHCD, ARC	Funding amount within entrepreneurial assistance programs.
Goal 2: Support business attraction and retention efforts in the Region.				
Objective	Partner	Target Start Date	Resources	Performance Measures
2.1: Work with the localities' economic development offices to provide data and/or maps that will assist the localities in growing an existing business or attracting a new business.	CSPDC	Q2 2019	EDA, ARC, GO VA	Industry mix by NAICS Code; Number of localities utilizing data/maps from CSPDC.
2.2: Continue to partner with the Shenandoah Valley Partnership on providing necessary data and/or expertise for marketing efforts in business retention and expansion.	CSPDC	Q2 2019	EDA, ARC, GO VA	List of collaborative discussions or transfer of data between CSPDC and SVP regarding business retention and expansion.
Goal 3: Enhance natural resources, heritage sites and other outdoor recreation elements throughout the Region to promote quality of life, increase visitation and spur the outdoor recreation economy.				
Objective	Partner	Target Start Date	Resources	Performance Measures
3.1: Promote outdoor recreation opportunities within the Central Shenandoah Region through supporting marketing and organizational efforts.	CSPDC, VTC, LJ, DGIF, ED, SVTP, SVP, PI	Q2 2019	ARC, VTC, DHCD, DCR, VDOT, DGIF	Number of marketing campaigns geared toward outdoor recreation; Number of events held at heritage sites; List of collaboration efforts.
3.2 Provide GIS/mapping services to localities to highlight local resources, expand individual tourism experiences, map bike or walking trails, improve wayfinding signage, or other related projects.	CSPDC, LJ	Q4 2020	ARC, VTC, DHCD, DCR, VDOT, DGIF	Number of GIS/mapping resources provided to localities.
3.3: Assist communities in seeking funding opportunities that support natural resources, heritage sites, and other outdoor recreation opportunities.	CSPDC, LJ, ED, SVTP	Q2 2021	ARC, VTC, DHCD, DCR, VDOT, DGIF	Amount of funding allocated towards natural resources, heritage sites, and other outdoor recreation opportunities within the Central Shenandoah Region.
Goal 4: Create, improve, and renovate downtown corridors or other significant centers of activity to be economically productive.				
Objective	Partner	Target Start Date	Resources	Performance Measures
4.1: Improve infrastructure necessary to accommodate development in downtown districts.	CSPDC, LJ, ED, DHCD, PI	Q2 2019	DHCD, ARC, VHDA	Number of downtown revitalization projects.
4.2: Utilize funding streams like façade improvement programs and revolving loan funds as leverage to attract private sector investment to downtowns/centers throughout the Region.	LJ, ED, PI	Q2 2019	DHCD, ARC, VHDA, RD, HTC	Number of storefronts improved; Number of businesses using revolving loan fund.
4.3: Identify target markets for downtowns/centers using data and maps.	ED, CSPDC	Q4 2019	DHCD, ARC, VHDA	Reports detailing target markets for each locality.
Vision IV: Grow agribusiness by expanding the markets for farmers, producers, food manufacturers, and other related sectors, like forestry, in the region and beyond.				
Goal 1: Collaborate with agribusiness to understand challenges facing their production and strategies to improve their business.				
Objective	Partner	Target Start Date	Resources	Performance Measures
1.1: Explore the opportunity to attract a regional food distribution facility that would advance local food processing efficiency and meet or exceed U.S. Department of Agriculture regulations.	PI, CSPDC, ED, VDACS, VCE	Q1 2019	VDACS, USDA, VEDP, GOF, GO VA, RD	Growth in agricultural industry.
1.2: Grow existing food manufacturing and craft beverage production through attracting investment to available sites.	PI, ED, VEDP, GO VA, SVP, VDACS, LJ	Q1 2019	VDACS, USDA, VEDP, GOF, GO VA	Funding support for sites; Contributions and/or funding sources identified for infrastructure upgrades to sites; Number agribusiness companies seeking available sites within the region.
1.3: Collaborate with agribusiness owners to understand the latest technologies or other advancements that increase efficiency in their production.	PI, CO-ops	Q2 2019	VDACS, USDA, VEDP, GOF, GO VA	Meetings with agribusiness owners discussing efficient practices.
1.4 Engage regional, state and federal officials in discussions about supporting policies that will grow agricultural ecosystems.	PI, CO-ops, LJ, VDACS	Q2 2019	VDACS, USDA, VEDP, GOF, GO VA	List of pro-agribusiness policies at the state and federal level.

1.5: Support the forestry industry and related sectors by working directly with industry leaders to assess their needs to remain competitive.	VDACS, DOF, PI	Q1 2019	VDACS, USDA, VEDP, GOF, GO VA	Number of meetings with forestry industry and related sector businesses.
Goal 2: Support resources and programs to grow the agritourism sector.				
Objective	Partner	Target Start Date	Resources	Performance Measures
2.1: Continue to expand Fields of Gold program to broaden opportunities for regional farmers to market their offerings throughout Central Shenandoah and beyond.	CSPDC, LJ, SVTP, VTC, PI	Q2 2019	USDA, VTC, VDACS, DHCD	Funding within the Fields of Gold program; Number of farmers utilizing Fields of Gold program.
2.2: Capitalize on the local food and craft beverage movement by supporting businesses who are developing products to meet market demand.	CSPDC, LJ, SVTP, VTC, PI	Q2 2019	USDA, VTC, VDACS, DHCD	Amount of funding dedicated to local food and craft beverage companies.
2.3: Integrate local food into school cafeterias.	PI, K-12, DOE, Higher Ed	Q4 2019	DOE, USDA, VTC, VDACS, DHCD	Number of producers integrated into school cafeterias.
2.4: Sponsor Farm-to-Fork tradeshow/expos to increase visibility and sales of local farmers in the Region and beyond.	LJ, SVTP, CSPDC, PI	Q4 2019	SVTP, LJ, PI	Number of tradeshow/expos sponsored.
2.5: Support organizations to provide training in initiatives related to agritourism.	CSPDC, SCCF, SVSBD, VTC, VCE, VDACS	Q2 2019	USDA, VTC, VDACS, DHCD	Number of agritourism training programs in conjunction with business support organizations.
Vision V: Increase resilience to natural and man-made hazards, economic downturns, and social vulnerabilities that impact communities and businesses in the Region.				
Goal 1: Make the Region more resilient through planning, education, and mitigation activities.				
Objective	Partner	Target Start Date	Resources	Performance Measures
1.1: Engage localities' participation in the regional disaster preparedness and mitigation education program, Shenandoah Valley Project Impact.	CSPDC, LJ, VDEM	Q1 2019	DCR, DEQ, DHCD, VDEM, FEMA	Number of localities engaged in the Shenandoah Valley Project Impact.
1.2: Assist localities with their emergency management and resilience planning efforts as requested.	CSPDC, LJ, VDEM	Q1 2020	DCR, DEQ, DHCD, VDEM, FEMA	Number of plans created or updated.
1.3: Assist interested localities and businesses with hazard mitigation activities to protect property, structures, and infrastructure at risk from natural and man-made hazards.	CSPDC, LJ, VDEM	Q1 2021	DCR, DEQ, DHCD, VDEM, FEMA	Number of outreach efforts made specifically to the business community.
1.4: Provide educational workshops and training to the business community in the region on topics regarding economic resilience, natural hazard mitigation, emergency preparedness, and continuity of operations planning (COOP), as resources are available.	CSPDC, Project Impact	Q2 2022	DCR, DEQ, DHCD, VDEM, FEMA	Number of educational and outreach opportunities.
1.5: Serve as coordinator between national and state level resilience efforts and local communities to expand potential resources and assistance available in the Region.	CSPDC	Q1 2023	DCR, DEQ, DHCD, VDEM, FEMA	Number of mitigation projects and activities implemented.
Goal 2: Facilitate strategic land use to mitigate negative effects of natural disasters on residents and businesses.				
Objective	Partner	Target Start Date	Resources	Performance Measures
2.1: Use smart growth development principles to strategically develop available land for industry and commercial use and to protect agricultural land and protect.	LJ, CSPDC, VCC, ED	Q1 2019	VDEM, LJ	Updates to hazard mitigation plan with inventory of land.
2.2: Use existing emergency management programs to coordinate an inventory of land throughout the region that is poorly situated to be developed for commercial, industrial or residential use.	LJ	Q4 2020	LJ	Inventory of commercial, industrial, and residential sites.
2.3: Strategically place utilities to reduce disruption during emergencies and natural disasters.	LJ, PI	Q2 2021	PI, LJ, EDA	Number of annual outages/disruptions.
2.4: Monitor and protect water sources to ensure water quality is not degraded or impaired.	LJ, DEQ	Q1 2022	DEQ	Water quality results of localities water sources.
Goal 3: Diversify regional funding assistance to strengthen organizational capacity in times of stability and disaster efforts.				
Objective	Partner	Target Start Date	Resources	Performance Measures
3.1: Leverage state and federal funds for programs for environmental resiliency and hazard mitigation efforts.	CSPDC, LJ, VDEM, DEQ	Q1 2019	LJ	State funding; Funding obtained through the U.S. EDA for environmental resiliency and hazard mitigation efforts.
3.2: Maintain and contribute to a fund dedicated to hazard mitigation efforts to aid communities in rebuilding after natural disasters.	LJ	Q2 2019	VOAD, Red Cross, FEMA	Dollar amount of hazard mitigation fund.

Appendix G: Data Sources

Proprietary Data Sources

Economic Modeling Specialists International (EMSI)

To analyze the industrial makeup of a study area, industry data organized by the North American Industrial Classification System (NAICS) is assessed. Camoin Associates subscribes to Economic Modeling Specialists Intl. (EMSI), a proprietary data provider that aggregates economic data from approximately 90 sources. EMSI industry data, in our experience, is more complete than most or perhaps all local data sources (for more information on EMSI, please see www.economicmodeling.com). This is because local data sources typically miss significant employment counts by industry because data on sole proprietorships and contractual employment (i.e. 1099 contractor positions) is not included and because certain employment counts are suppressed from BLS/BEA figures for confidentiality reasons when too few establishments exist within a single NAICS code.

Esri Business Analyst Online (BAO)

ESRI is the leading provider of location-driven market insights. It combines demographic, lifestyle, and spending data with map-based analytics to provide market intelligence for strategic decision-making. ESRI uses proprietary statistical models and data from the U.S. Census Bureau, the U.S. Postal Service, and various other sources to present current conditions and project future trends. Esri data are used by developers to maximize their portfolio, retailers to understand growth opportunities, and by economic developers to attract business that fit their community. For more information, visit www.esri.com.

Public Data Sources

American Community Survey (ACS), U.S. Census

The American Community Survey (ACS) is an ongoing statistical survey by the U.S. Census Bureau that gathers demographic and socioeconomic information on age, sex, race, family and relationships, income and benefits, health insurance, education, veteran status, disabilities, commute patterns, and other topics. The survey is mandatory to fill out, but the survey is only sent to a small sample of the population on a rotating basis. The survey is crucial to major planning decisions, like vital services and infrastructure investments, made by municipalities and cities. The questions on the ACS are different than those asked on the decennial census and provide ongoing demographic updates of the nation down to the block group level. For more information on the ACS, visit <http://www.census.gov/programs-surveys/acs/>

OnTheMap, U.S. Census

OnTheMap is a tool developed through the U.S. Census Longitudinal Employer-Household Dynamics (LEHD) program that helps to visualize Local Employment Dynamics (LED) data about where workers are employed and where they live. There are also visual mapping capabilities for data on age, earnings, industry distributions, race, ethnicity, educational attainment, and sex. The OnTheMap tool can be found here, along with links to documentation: <http://onthemap.ces.census.gov/>.

Appendix H: Partner and Funding Key

ARC	Appalachian Regional Commission
BA	Broadband Authorities
BRCC	Blue Ridge Community College
CC	Community College
CDBG	Community Development Block Grant
CoC	Chambers of Commerce
CSPDC	Central Shenandoah Planning District Commission
DBA	Department of Business Assistance
DCR	Department of Conservation and Recreation
DEQ	Virginia Department of Environmental Quality
DHCD	Department of Housing and Community Development
DHS	Department of Homeland Security
DOE	Department of Education
DOF	Department of Forestry
DOL	Department of Labor
DSS	Department of Social Services
EDA	Economic Development Administration
ED	Economic Development Director
EZ	Enterprise Zone
FEMA	Federal Emergency Management Agency
GOF	Governor's Opportunity Fund
GO VA	Go Virginia
HF	Historic Foundation
Higher Ed	College and University Level
HTC	Historic Tax Credits
HUD	Department of Housing and Urban Development
IDA	Industrial Development Authority
JMU	James Madison University
K-12	Kindergarten through 12 Grade
LJ	Local Jurisdictions
MPO	Metropolitan Planning Organizations

NMTC	New Market Tax Credit
PI	Private Industry
RD	Rural Development
SCCF	Staunton Creative Community Fund
SVP	Shenandoah Valley Partnership
SVSBD	Shenandoah Valley Small Business Development Council
SVTC	Shenandoah Valley Technology Council
SVTP	Shenandoah Valley Tourism Partnership
SVWDB	Shenandoah Valley Workforce Development Board
THC	The Highland Center
United Way	United Way
USDA	United States Department of Agriculture
VATI	Virginia Telecommunications Initiative
VCE	Virginia Cooperative Extension
VDACS	Virginia Department of Agriculture Services
VDEM	Virginia Department of Emergency Management
VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
VEDP	Virginia Economic Development Partnership
VHDA	Virginia Housing Development Authority
VIP	Virginia Investment Program
VJIP	Virginia Job Investment Program
VTC	Virginia Tourism Corporation
VCC	Valley Conservation Council

Appendix I: Community Engagement

This work would not be possible without the contributions of the CEDS Committee (who also acts as the CSPDC Board of Commissioners) and CEDS Project Team, who provided insight and experience in guiding the collection, synthesis, and presentation of the information contained in the Central Shenandoah Planning District Commission CEDS. Additionally, previous engagement efforts throughout the Region 8 GO Virginia Initiative process, which resulted in the Economic Growth and Diversification Plan for Region 8, were used as a foundation to further engage the community and key stakeholders during the CEDS process. These efforts included engagement with the Region 8 Council and interviews with various work groups and leaders in industry, business, education, development, and the governmental and non-profit sectors.

Through this intensive engagement process we were able to involve the community and key stakeholders in the creation of the Central Shenandoah Planning District Commission CEDS in accordance with the U.S. Economic Development Administration CEDS requirements. These efforts help to ensure stakeholder participation and buy-in for long term planning initiatives spurred through the CEDS.

CEDS Committee

Augusta County

- Marshall Pattie, Board of Supervisors
- Terry Kelley, Board of Supervisors
- Vickie Moran, Craigsville Town Council
- Leslie Tate, Non-Elected Representative

Bath County

- Edward Hicklin, Board of Supervisors

Buena Vista

- Lisa Clark, City Council

Harrisonburg

- Ted Byrd, City Council
- George Hirschmann, City Council
- Adam Fletcher, Non-Elected Representative

Highland County

- Kevin Wagner, Board of Supervisors

Lexington

- Frank Friedman, City Council

Rockbridge County

- Jay Lewis, Board of Supervisors
- Chris Slaydon, Non-Elected Representative

Rockingham County

- Ned Overton, Timberville Town Council
- Rick Chandler, Board of Supervisors
- Rhonda Cooper, Non-Elected Representative
- Kim Sandum, Non-Elected Representative

Staunton

- Carolyn Dull, City Council
- Sharon Angle, Non-Elected Representative

Waynesboro

- Terry Short, City Council
- Warren Johnson, Non-Elected Representative

CEDS Project Team

- Amanda Glover, Director of Economic Development & Tourism at Augusta County
- Betty Mitchell, Executive Director at The Highland Center
- Bonnie Riedesel, Executive Director of CSPDC
- Carolyn Dull, CSPDC Board member and Mayor of Staunton

- Chris Slaydon, Assistant Director of Community Development at Rockbridge County
- Courtland Robinson, Director of Business Development at Shenandoah Valley Partnership
- Dr. Kevin Ratliff, Dean of workforce and Continuing Education at Blue Ridge Community College
- Elizabeth McCarty, Director of Planning at CSPDC
- Joan Hollen, Shenandoah Valley Workforce Development Board
- Peirce Macgill, Assistant Director at City of Harrisonburg Economic Development

GO Virginia Region 8 Council

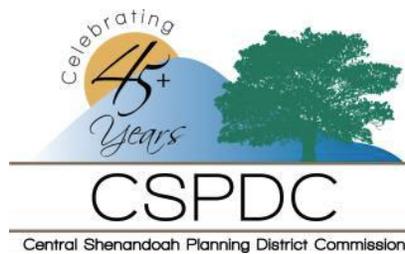
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|--------------------------|----------------------|
| ■ George Pace, Chair | ■ Judith Trumbo |
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| ■ Mark Merrill | ■ Robin Sullenberger |
| ■ Kathlynn Brown | ■ Tracy Fitzsimmons |
| ■ J.J. Smith | ■ Frank Friedman |
| ■ Jeff Stapel | ■ Stacy Barrett |
| ■ Jon Alger | ■ Rick Till |
| ■ Joanie Eiland | ■ Dilton Gibbs |

Go Virginia Region 8 Stakeholders

- | | |
|--|--|
| ■ Alan Dahl, Real estate investor | ■ Bobby Berkstresser, White's Travel Center |
| ■ Alison Denbigh, Independent business owner | ■ Bonnie Riedesel, Central Shenandoah PDC |
| ■ Amanda Glover, Augusta County, ED Director | ■ Bradley Polk, Shenandoah County, Dir. of Community Development |
| ■ Ashton Harrison, Bath County, County Administrator | ■ Brandon Davis, Northern Shenandoah Valley Regional Commission |
| ■ Becky Nucilli, Shentel | ■ Brian Brown, Shenandoah Valley Workforce Development Board |
| ■ Betsy Lee, StartHere Lexington | ■ Carrie Chenery, Shenandoah Valley Partnership |
| ■ Betty Mitchell, The Highland Center | ■ Chiedo, Chiedo Labs |
| ■ Bill Frazier, Frazier Associates | ■ Chris Kyle, Shentel |
| ■ Bobbi Strother, Thermo Fisher | |

- Chris Thompson, InterChange Co.
- Christina Cain, Staunton Creative Community Fund
- Christina Phillips, Whitewave Foods
- Courtland Robinson, Business Development Director SVP
- Debbie Melvin, Virginia Economic Development Partnership
- Debby Hopkins, Shenandoah Valley Workforce Development Board
- Diane Yearian, JMU Human Resources
- Dilton Gibbs, Kraft Heinz
- Doug Stanley, Warren Co Administrator
- EG&D Subcommittee
- Elizabeth McCarty, Central Shenandoah PDC
- Frank Tamberrino, Harrisonburg Chamber of Commerce
- George Anas, Rockingham County, ED Director
- George Pace, GOVA Chair
- Gerard Eldering, Blue Vigil
- Greg Campbell, Shenandoah Valley Regional Airport
- Greg Hitchin, City of Waynesboro, ED Director
- Heather Kovaly, Thermo Fisher
- Jeanian Clark, Lord Fairfax Community College
- Jeff Stapel, Shickel Corp/SVWDB Chair
- Jen Weaver, Shenandoah Valley Partnership
- Jennifer McDonald, Front Royal/Warren Co EDA
- JJ Smith, Valley Proteins
- Jo Lee Loveland Link, Volvox, Inc. (SB)
- Joan Hollen, Shenandoah Valley Workforce Development Board
- Joanie Eiland, Elk Trucking, Inc.
- John Downey, BRCC/GoVA, SVWDBR
- John Link, Volvox, Inc. (SB)
- Judith Trumbo, Virginia Mennonite Retirement Community
- Julie Suijk, Valley Health
- Karen Bowman, SV Tech Council
- Kathlynn Brown, SRI International
- Keith Robinson, InterChange Co.
- Larry Kroggle, Daikin Applied Technologies
- Len Capelli, Clarke County ED Director
- Lisa Seekford, Riddleberger Brothers
- Martin Lightsey, Cadence
- Mary Ann Gilmer, Goodwill Industries of the Valley
- Nick Swayne, James Madison University
- Nicky Swayne, SV Tech Council, Center for Entrepreneurship
- Patrick Barker, Frederick County, ED Director
- Patrick McGouwm, Center for Entrepreneurship
- Paul Vitagliano, ThermoFisher Scientific
- Peirce Macgill, City of Harrisonburg, Asst. ED Director
- Robin Sullenberger, Highland County
- Sally Michaels, Frederick County, Existing Business Coordinator
- Sandy Rinker, Massanutten Technical Center
- Sharon Johnson, Shenandoah Valley Workforce Development Board
- Skylar Mouris, Shenandoah Valley Partnership Intern
- Spencer Suter, Rockbridge County Administrator
- Steve Gerome, Ball Corp.
- Susan Brooks, Navy Federal
- Tom Sheets, Blue Ridge Lumber

Appendix J: Priority Projects



Comprehensive Economic Development Strategy (CEDs)
Local Economic Developers
PRIORITY PROJECT SURVEY – RESULTS

WORKFORCE (e.g., education and training, worker attraction, college graduate retention)

Bath-Highland

Bath County

1. Hospitality Industry apprenticeship program (1-2 years)
2. Workforce Housing (1-2 years)

Highland County

1. Resident Attraction (3-5 year) – to address continual population decline and attract younger families with people to add to the labor market to the community. Include a “reverse scholarship” component to help with cost of those returning back to the community.
2. Youth employment program with component to expose students to wide variety of job opportunities and recognition of skills/education required for those jobs.

Harrisonburg-Rockingham

City of Harrisonburg

1. Continue growing cybersecurity workforce training. The GO Virginia grant provides a great start to this effort. Additionally, Harrisonburg is exploring a Strategic Operations Center (SOC) training effort. We should continue to grow cybersecurity certificate training programs. This is a short and long-term project.
2. Retain college graduates in the area – fight the brain drain after graduation. Create a program that encourages/incentivizes soon-to-be graduates to stay and live and work in Harrisonburg. This is a short and long-term project.

Rockingham County

1. Operation Systems management training SCADA or PLC’s. These devices control industrial operations for major business (ex: MillerCoors or Whitewave). (1-2 years)
2. Welding/Aluminum Welding and metal fabrication (1-2 years)

Rockbridge-Buena Vista-Lexington

Rockbridge County

1. Continue support funding to help Byers Technical Institute grow
2. Programs to connect Middle and High School students with local businesses

City of Buena Vista

1. Attraction and retention of workers of all skill levels to the Rockbridge region (ongoing)
2. Creating a workforce pipeline to fill job needs in area, and retention of trained workers in area (longer-term)

City of Lexington

1. Worker attraction
2. Develop entrepreneurial economy

Staunton-Augusta-Waynesboro

City of Staunton

1. 10-Year Career and Technical Education Strategic Plan for Staunton-Augusta-Waynesboro (3-5 years)

Augusta County

1. Machinery and facility upgrade at Valley Career and Technical Center
2. Awareness/marketing campaign for high-demand jobs

City of Waynesboro

1. Partnership with SAW CTE partners to begin to initiate strategic plan (ST and LT)
2. Partnership with BRCC to provide specialized training and access to higher education in downtown (ST)

PHYSICAL ASSETS FOR BUSINESS DEVELOPMENT

(e.g., sites, access/transportation, water/wastewater systems, broadband, energy)

Bath-Highland

Bath County

1. Countywide access to broadband (3-5 years)
2. Millboro Industrial Park Site Characterization Level 5 (3-5 years)

Highland County

1. Broadband and cell coverage throughout county
2. Community Revitalization plan

Harrisonburg-Rockingham

City of Harrisonburg

1. Incentivize speculative site development. We have limited ready-to-go sites, yet developers are hesitant to undertake the risk of speculative development. Companies today do not wait for a building to be constructed, they are seeking at least a warm shell when looking at prospective locations. Short term project.
2. Expand fiber optics to increase internet speeds while at the same time providing more choice in high speed internet options. Long term project.

Rockingham County

1. Gas availability – There is a need to expand natural gas infrastructure to serve a larger portion of industrial and commercial tenants. (3-5 years)
2. Broadband – There is a need to expand coverage areas throughout rural areas of the county. (3-5 years)

Rockbridge-Buena Vista-Lexington

Rockbridge County

1. Funding for Water and Sewer extension to the I-81 188 interchange
2. Support rural broadband deployment

City of Buena Vista

1. Buena Vista has infrastructure improvement needs to attract business development (longer term)
2. Few turn-key buildings ready for occupancy or pad-ready sites for construction within city limits (ongoing)

City of Lexington

1. Reuse of buildings/update state codes to allow the reuse of old buildings
2. Redevelopment of buildings in downtown/update state codes to allow the reuse of old buildings

Staunton-Augusta-Waynesboro

City of Staunton

1. Staunton Crossing Development – Phase 3 Site Preparation (3-5 years)
2. Frontier Center Development – Phase 2 (3-5 years)

Augusta County

1. Last mile broadband, towers, fiber
2. Pad-ready sites
3. Weyers Cave Wastewater Treatment Plant upgrade
4. Wastewater installation in Lyndhurst
5. I-81, Exit 235 interchange upgrade

City of Waynesboro

1. Continued development of industrial parks to a Tier 4 level status (LT)
2. Redevelopment or reuse of older buildings and or sites (ST and LT)

BUSINESS RETENTION AND EXPANSION

(e.g., incentives, sector partnerships, marketing, business/entrepreneurial support)

Bath-Highland

Bath County

1. 5% Historic Lodging Tax for economic development incentive grants (1-2 years)
2. Small Business Revolving Loan Fund (1-2 years)

Highland County

1. Entrepreneurial support through The Highland Center and incentives to local businesses (ongoing)
2. Value-added for Forestry products

Harrisonburg-Rockingham

City of Harrisonburg

1. Create a regional 'assistance on call' program for entrepreneurs. Entrepreneurs need specific services in the areas of law, accounting, etc., but often can't afford such services. Create an on-call pool of service providers that would assist entrepreneurs. The service providers would be paid from local funding with each entrepreneur in the program being allotted a set amount of hours of the service providers' time to use. Short term project.
2. Develop state financial incentives that are tied only to capital investment instead of focusing primarily on new job creation. With technology advancements and tight labor markets, projects today tend to be capital intensive but low on new job creation. Investment still spurs fiscal growth through machine taxes. Short term project.

Rockingham County

1. Rockingham is working to update its Technology Zone opportunities to include smaller businesses and industries. We need to support more small businesses. (1-2 years)
2. We feel there is a need for increased public/private partnerships to aid in improving aging infrastructure. Roads and utilities need to be shared upgrades. (3-5 years)

Rockbridge-Buena Vista-Lexington

Rockbridge County

1. Supply chain analysis for local manufactures
2. Study impact of tariffs on local businesses and manufacturers

City of Buena Vista

1. Small business/entrepreneurial support for revitalization efforts (ongoing)
2. Incentives/support for business expansion & retention (longer term)

City of Lexington

1. Incentives – similar to Launch Lex
2. Entrepreneurial support

Staunton-Augusta-Waynesboro

City of Staunton

1. Enterprise Zone Incentives (1-5 years)
2. Staunton Creative Community Fund (1-5 years)
 - a. Public/Private Partnerships (Long Term) (1-5 years) a. Village at Staunton Development
 - b. Frontier Center Development
 - c. Green Hills Industry and Technology Center

Augusta County

1. Small business loan fund
2. Increased business marketing

City of Waynesboro

1. Development of incentive zones to encourage target industries (ST)
2. Entrepreneurial programs and funding programs (ST)

QUALITY OF LIFE ASSETS (e.g., recreation, tourism, natural resources, arts and entertainment)

Bath-Highland

Bath County

1. Bath County Welcome Center and Event Grounds (1-2 years)
2. Improved hiking and biking trails (3-5 years)

Highland County

1. State Park creation in Highland (long-term project)
2. Community Park – development of a 6 acre site into 3 segments: Civil War gravesites (92), wetland trail and education, community garden (1-2 years)

Harrisonburg-Rockingham

City of Harrisonburg

1. Develop a marketing program targeted to attracting millennials to the city. Short term project.
2. Develop a network of multi-use paths throughout the City. This means connecting the existing trails while developing new pieces to create a loop. One day even connect Harrisonburg to Staunton or Broadway. Explore rails to trails options. Long term project.

Rockingham County

1. There is a need to put a greater emphasis on celebrating our natural assets such as fishing, hiking, biking, boating, etc. The area is a prime destination for all sorts of recreational activities.
2. There is a need to increase support for the arts through music and art festivals at a higher level. We should capitalize on the strong culture of the community through or artisans and musicians.

Rockbridge-Buena Vista-Lexington

Rockbridge County

1. Funding to implement goals of Rockbridge Area Outdoor Partnership i.e., trail extensions, river access points
2. Support Lime Kiln Theater

City of Buena Vista

1. Improving quality of life through downtown revitalization, arts & cultural opportunities, and attracting additional businesses that serve both locals and tourists (ongoing)
2. Rockbridge Area Outdoor Partnership- supporting outdoor tourism & business efforts (ongoing)

City of Lexington – none listed

Staunton-Augusta-Waynesboro

City of Staunton

1. Staunton Greenways Plan - bike and pedestrian pathways implementation (3-5 years)
2. Central Avenue Streetscape Project (1-2 years)

Augusta County

1. Afton Mountain redevelopment
2. Master Plan for Natural Chimneys Campground and Park
3. County-wide walking and biking trails

City of Waynesboro

1. Continued development of the recreational trail and park system (ST and LT)
2. Locate a campus of the VMHN and other visitor destination opportunities to the City (LT)

List any additional projects that should be referenced in the updated CEDS

Bath-Highland

Highland County

1. Daycare has increasingly been identified as a problem for families in the community. Currently no certified daycare exists in the community. This becomes quite a barrier for a couple wanting/expecting quality child care.

Staunton-Augusta-Waynesboro

City of Staunton

1. Additional projects from the City's CIP FY18-22 which was adopted by City Council as part of the FY19 annual budget.

City of Waynesboro

1. Explore the feasibility of a regional information center on Afton Mountain.