

2022 – 2023 GO Virginia Region 6 Growth and Diversification Plan

ACKNOWLEDGMENTS

This work would not be possible without the contributions of the various individuals and organizations who provided insight and experience in guiding the collection, synthesis, and presentation of the information contained herein. Thank you especially to the Region 6 Regional Council members for their insight and contributions to this plan.

GO VIRGINIA REGION 6 COUNCIL

NAME	COMPANY/AGENCY	SECTOR	PDC
William Beale, Chair	Retired - Union Bankshares Corporation	Private Large	GW
Rob Quartel, Vice Chair	NTELX	Private	MP
John Anzivino	Middlesex County EDA/Citizen Member	Local Govt	MP
Sarah Calveric	Caroline County PS	K-12	GW
Rene Daniels	Spotsylvania County PS	K-12	GW
Bruce Davis	Retired - Beltone Hearing Centers; Germanna Community College	Community College	GW
Jackie Davis	Bay Consortium Workforce Development Board	Economic/ Workforce Development	NN
Jan Erkert	Spangler Erkert and Associates	Private Small	GW
Val Foulds	Retired - Bank of America; Retired - Town of Colonial Beach	Private	NN
Steve Goodall	WestRock	Private	MP
Joel Griffin	JG Financial Group	Private Small	GW
Merthia Haynie	Abilities Abound Physical Therapy & Wellness Center	Private Small	NN
Lisa Hull	Northern Neck Tourism Commission	PDC	NN
Shannon Kennedy	Rappahannock Community College	Community College	NN
Ann Lewis	Rappahannock Electric Cooperative	Private	GW
Kim McClellan	Fredericksburg Area Association of REALTORS	Private	GW
Morgan Quicke	Richmond County	Local Govt	NN
Jeff Szyperski	Chesapeake Bank	Private Large	NN
John Wells	Virginia Institute of Marine Science	Higher Education	MP
Linda Worrell	Worrell Management Group	Private	GW
Kimberly Young	University of Mary Washington	Higher Education	GW

Special thanks to the staff of the George Washington Regional Commission, Fredericksburg Regional Alliance, Northern Neck Planning District Commission, Middle Peninsula Planning District Commission, Virginia Tech Center for Economic and Community Engagement, The Chapman Company, and Draper Aden Associates.

INTRODUCTION TO THE GROWTH AND DIVERSIFICATION PLAN

The Growth and Diversification Plan is each Region's guiding document. Every two years the GO Virginia State Board requires regions to update their regional Growth and Diversification Plan. The purpose of this plan is to outline a series of investment strategies to accelerate the creation of higher paying jobs in the region's targeted industry clusters.

The GO Virginia Region 6 Growth and Diversification Plan is a guiding document that the GO Virginia Region 6 Council will use to:

1. Identify economic opportunities, needs, and challenges;
2. Establish regional priorities from identified economic opportunities, needs, and challenges;
3. Outline activities in which GO Virginia funds can be used to support collaborative projects amongst at least two or more localities that meet the regional priorities from identified economic opportunities, needs, and challenges of the Region 6 Council and region.

The Growth and Diversification plan provides strategic framework to solicit and approve grant funding. The plan includes a review of existing regional approaches, engages regional stakeholders, examines current economic trends, summarizes workforce patterns, and provides future objectives and investment strategies. The plan identifies targeted industry clusters for the region and strategies in which the region can grow activities in these industries. All programs and projects recommended by the Region 6 Regional Council and approved by the GO Virginia State Board shall be consistent with the region's economic growth and diversification plan.

ABOUT GO VIRGINIA

HISTORY

In 2016, the board certified nine distinct GO Virginia regions across the Commonwealth. These regions consist of nine to 18 localities that share similar economic development and workforce needs. Each region is overseen by a regional council that developed organically from regional business leadership, economic development and workforce professionals, educators, and local government officials.

Regional councils are responsible for identifying economic opportunities, needs and challenges, and establishing priorities among those opportunities that can be addressed through regional collaboration. Regional opportunities and priorities are laid out in this economic growth and diversification plan and updated every two years. Regional councils are also responsible for soliciting, reviewing, and recommending regional projects to the board for funding that align with these priorities.

Each regional council is assisted by a support organization that is responsible for regional program operations, including serving as the fiduciary for all GO Virginia funding in the region. To contact the support organization, please visit www.govirginia6.org.

PURPOSE

The purpose of GO Virginia is to “create more higher-paying jobs through incentivized collaboration, primarily through out-of-state revenue, which diversifies and strengthens the economy in every region.” The initiative is based on three main points:

- Virginia urgently needs strong private-sector growth.
 - Federal cutbacks have exposed our over-dependence on public-sector jobs. Virginia needs strong private-sector growth and job creation.
- Growth in Virginia’s diverse regions requires collaboration.
 - To grow and diversify our economy, business, education, and government must collaborate effectively in each region.
- The state government must be a catalyst and partner.
 - The state government must provide incentives for strategic, job-focused collaboration in each region of the Commonwealth.

FUNDING

GO Virginia is funded by the State through the General Assembly. GO Virginia has three funding categories in which Councils may use to fund projects.

CAPACITY BUILDING FUNDS

Each fiscal year support organizations receive \$250,000 to support project pipeline development efforts, fund staff, and other activities related to running the regional council.

PER CAPITA FUNDS

These funds are used to fund projects. Each year Region 6 receives about \$1 million in project funds that is used over the course of the fiscal year to fund projects. Applicants can ask for any amount of money up to \$1 million, however, the region may not currently have those funds on hand, depending on when the project is approved. The Council has the ability to determine if the funding amount an applicant is asking for is acceptable or not and may reduce the amount approved towards a project. There are two types of projects that can be funded through this allocation:

- Enhanced Capacity Building: These grants are planning grants i.e., Feasibility Studies, Pre-Development Activities, Plans, and Capacity Building Activities. Region 6 is only allowed to fund \$250,000 of their \$1 million allocation towards these types of grants.
- Implementation: These grants implement projects that produce outcomes and a ROI. Applicants may ask up to \$1 million for these types of projects, depending on fund availability.

STATEWIDE COMPETITIVE FUNDS

These funds are for multi-region projects. These funds are separate from the regional allocation and are up to the discretion of the State Board to approve.

GO VIRGINIA ECONOMIC RESILIENCE AND RECOVERY PROGRAM

In April 2020, GO Virginia dedicated \$1 million to each region to help regions build capacity to support and serve existing businesses, priority traded sectors and essential businesses, including the health care system and its supply chain during the COVID-19 crisis. This initiative focused resources on economic

resiliency and recovery while staying true to the GO Virginia mission. This funding is available as of October 2021 until April 2022.

ABOUT REGION 6

The Mary Ball Washington Regional Council governs GO Virginia Region 6, which covers the Fredericksburg area, the Northern Neck, and the Middle Peninsula (Planning Districts 16, 17, and 18).

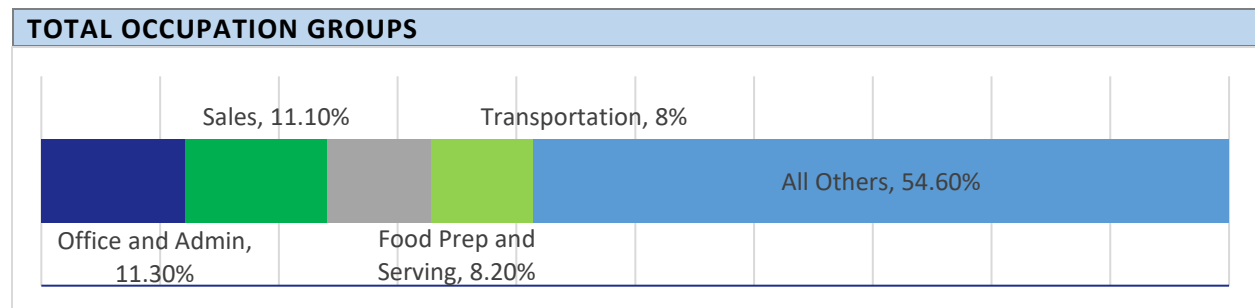
The George Washington Regional Commission is the Support Organization and Fiscal Agent for the Regional Council.



DEMOGRAPHIC PROFILE

The population in the GO Virginia Region 6 was 505,800 per American Community Survey data for 2015-2019. The region has a civilian labor force of 170,097 with a participation rate of 64.3%. Between 2010-2020, Region 6 added 12,000 jobs. Of individuals 25 to 64 in the GO Virginia Region 6, 32.4% have a bachelor's degree or higher which compares with 33.5% in the nation. The median household income in the GO Virginia Region 6 is \$83,182 and the median house value is \$280,387.¹

EMPLOYMENT	WAGES
170,097	\$49,230 Avg Wages per Worker / \$63,393 in the nation
0.6% ↑ Avg Ann % Change Last 10 Years/+0.6% in the U.S.	3.1% ↑ Avg Ann % Change Last 10 Years/+3.2% in the U.S.



¹ Source: JobsEQ®, <http://www.chmuraecon.com/jobseq>

LOCALITY	APRIL 1, 2010 CENSUS	JULY 1, 2020 ESTIMATE*
Caroline County	28,545	30,342
Essex County	11,151	10,849
Gloucester County	36,858	37,175
King and Queen County	6,945	6,940
King George County	23,584	26,296
King William County	15,935	17,277
Lancaster County	11,391	10,808
Mathews County	8,978	8,707
Middlesex County	10,959	10,754
Northumberland County	12,330	12,100
Richmond County	9,254	9,223
Spotsylvania County	122,397	137,739
Stafford County	128,961	153,392
Westmoreland County	17,454	17,980
Fredericksburg City	24,286	28,880
PLANNING DISTRICTS		
16 George Washington Regional Commission	327,773	376,649
17 Northern Neck	50,429	50,111
18 Middle Peninsula	90,826	91,702

REGION 6 COUNCIL

The Region 6 Council is comprised of 21 members representing small and large businesses, higher education institutions, K-12, local governments, and other community stakeholders.

The Region 6 Council meets quarterly to advance the initiatives outlined in this Growth and Diversification plan and recommends projects to be funded to the GO Virginia State Board.

ABOUT GO VIRGINIA PROJECTS

GO Virginia was established to create more higher-paying jobs through incentivized collaboration, primarily through out-of-state revenue, which diversifies and strengthens the economy in every region. GO Virginia achieves this mission through approving regionally significant projects in targeted traded industry clusters, that promoted above the regional median higher paying jobs in the targeted industry, established by the Regional Councils, in their Growth and Diversification plans.

Industry clusters are groups of similar and related firms in a defined geographic area that share common markets, technologies, worker skill needs, and which are often linked by buyer-seller relationships.

GO Virginia only funds projects in traded industry clusters, identified as the targeted industry clusters by Region 6 in this plan. Traded industries are those that concentrate in particular regions but sell products or services across regions and countries. Non-traded or local industries are those that their primary goods are only consumed within the region. Although, tourism can be defined as a traded sector, GO Virginia does not promote projects in this industry cluster as it primarily does not pay above the regional median in average wages.

All projects presented to the Region 6 Council must:

- Adhere to the policies and guidelines presented by the GO Virginia State Board
- Align with Region 6's targeted industry clusters
- Align with the Statewide Priority Investment Areas
- Create Higher Paying Jobs
- Have Collaboration from Two or More Localities

TARGETED INDUSTRY CLUSTERS

The following industry clusters were selected based on quantitative and qualitative information, to be the future focus for economic development in Region 6. The targeted industries were compiled from related subsectors. A full list of the subsectors can be found in the Targeted Industry Appendix.

The clusters chosen are industries that build upon statewide priority investment areas including workforce, sites, and entrepreneurship.

The six targeted industry clusters for Region 6 are:

- | | |
|---|--|
| 1. Aquaculture/Seafood/Commercial Fishing/Marine Industries | 4. Distribution/Logistics |
| 2. Forestry/Wood Products and Paper | 5. Information/Data Centers |
| 3. Manufacturing | 6. Professional, Scientific and Technical Services |

EXECUTIVE SUMMARY

This Amendment to the 2017 and 2019 Growth and Diversification Plans focuses on strategies and opportunities for Region 6 to pursue over the next two years.

This report was written in August 2021 with much of the data used taken from Q32020, during the height of the COVID-19 pandemic. Nevertheless, a review of the data and recent activities across the region, through both GO Virginia and non-GO Virginia funding, reaffirm the targeted industries for Region 6:

- | | |
|---|--|
| 1. Aquaculture/Seafood/Commercial Fishing/Marine Industries | 4. Distribution/Logistics |
| 2. Forestry/Wood Products and Paper | 5. Information/Data Centers |
| 3. Manufacturing | 6. Professional, Scientific and Technical Services |

From May 25th, 2021 through July 14th, 2021 Region 6 held seven stakeholder engagement sessions with partners throughout the region to provide input and share views about the current and future state of the Region's economy.

Session 1 laid the groundwork for stakeholders to understand the importance of all three priority areas as fundamental tools for successful economic development; understand the current status of assets of these priority areas in GO Virginia Region 6; and understand the linkage of all three priority areas as it relates to the economic health of the entire Region.

Sessions 2 and 3 divided stakeholders into the priority investment areas of Entrepreneurship Ecosystem Development, Site Development, and Workforce Development. Each investment area held individual meetings in which stakeholders discussed the gaps in the region and actionable strategies to recommend to the Council to help close these gaps.

Below outlines the priorities for the region identified through these stakeholder engagement sessions.

ENTREPRENEURSHIP ECOSYSTEM

Problem: What activities can we undertake to foster the development of entrepreneurial companies? How can we foster an environment where existing small and medium businesses can grow?

GOAL	OBJECTIVE	STRATEGIES
Develop a strong entrepreneurial ecosystem	Establish an entrepreneurship ecosystem hub in the region.	<ul style="list-style-type: none"> Develop an entrepreneurial ecosystem development plan for the region. Develop a robust network of entrepreneurs from both 'main street businesses' and 'high growth businesses' Develop programming to help businesses at all stages develop and grow. Capitalize on the large concentration of veteran population in the region to foster prospective entrepreneurs.
Identify, empower, and support entrepreneurs	Promote the development of 'main street businesses' and 'high growth businesses'	<ul style="list-style-type: none"> Connect to existing and develop new activities aimed to support entrepreneurs. Build awareness around existing business support programs and resources in the region.
Enhance technology commercialization from research centers and institutions	Develop and construct a technology commercialization system	<ul style="list-style-type: none"> Provide counseling, mentoring and other instructional programs for technology and venture-backed startups, to facilitate innovators bringing new technologies to the marketplace. Create industry review council to provide insight and expertise on technology commercialization opportunities. Foster the development of maker's spaces for idea exploration.

SITE DEVELOPMENT

Problem: How can the region collaborate regionally to increase the inventory of shovel ready sites in the region to attract prospects? Keep in mind that the VEDP's VBRS and GO Virginia are not mutually exclusive and can be combined to solve this problem.

GOAL	OBJECTIVE	STRATEGIES
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Increase the number of business ready sites within the region to either Tier 3, Tier 4, or Tier 5 sites.	Fund regionally significant sites grouped around targeted industry clusters to move up the Virginia Business Ready Sites Program (VBRSP) tier scale to either Tier 3, Tier 4, or Tier 5 sites within 24 months.	<ul style="list-style-type: none"> • Ensure the understanding of the importance of site development and available sites with local elected officials and county administrators; public and private utility companies; utility cooperatives; regional planning organizations; and local and regional economic development organizations. • Support localities efforts in determining best grouping of sites from prioritization list. • Develop list of uncharacterized sites and determine regional significance. • Within 24 months, fund 10 regionally significant sites based on prioritized list to either Tier 3, Tier 4, or Tier 5 sites.
Increase the number of site characterizations across the region.	Fund regionally significant sites grouped around priority industry clusters to become characterized as defined by the Virginia Business Ready Sites Program (VBRSP) tier scale.	<ul style="list-style-type: none"> • Develop list of uncharacterized sites and determine regional significance. • Support localities in characterizing previously uncharacterized sites and define a prioritization list.

WORKFORCE DEVELOPMENT

Problem: How can we solve the three major workforce challenges that the region faces: 1. Aligning Virginia talent with current and prospective job opportunities, 2. Adapting education and training programs to meet current and prospective Virginia business needs, and 3. Attracting and retaining talent from outside Virginia.

GOAL	OBJECTIVE	STRATEGIES
Adapt education and training programs to meet current and prospective business needs	Strengthen and expand non-degree programs (e.g., certifications and credentials) that meet the needs of regional employers.	<ul style="list-style-type: none"> • Complete Rappahannock Workforce Study • Implement Action Items Determined in Rappahannock Workforce Study • Examine current course offerings and gaps amongst Community Colleges and Universities with the needs of employers. • Determine training gaps based on needs from employers. • Organize regional cluster networks to promote collaborative workforce development and training solutions.
Align Region 6 Talent with Current and	Establish internship programs that connect students with employers	<ul style="list-style-type: none"> • Engage employers in targeted industries and determine current programs. • Develop internship programs for employers in small to mid-sized companies.

Prospective Job Opportunities.	in the region in targeted industry sectors.	
	Establish programs for high school students to learn about jobs in the region and a pathway to entry.	<ul style="list-style-type: none"> • Engage K-12 schools to strengthen and expand non-college degree programs (e.g., certifications and credentials) • Enhance job shadowing programs with employers. • Establish regional career exhibitions to connect students with summer job opportunities.
Attract and Retain Talent in the Region	Establish pathway programs for workers within the region for career advancement.	<ul style="list-style-type: none"> • Develop work-based learning opportunities that incorporate soft skills training to keep employees. • Strengthen and expand programs that prepare mid-career personnel with the skills and certifications necessary to enter targeted industry fields.

EVALUATION OF THE REGION 6 ECONOMY

The 2017 original and 2019 update of the GO Virginia Region 6 Growth and Diversification Plan examined the region as a whole but specifically broke out the similarities and differences between the three main sub-regions within Region 6: George Washington (PDC 16), Northern Neck (PDC 17), and Middle Peninsula (PDC 18). Each of these sub-regions are unique in how each of the different industries interact within the sub-region. The following sections discuss the region's economy as a whole and the individual sub-regions.

EMPLOYMENT GROWTH ACROSS ALL SECTORS

GO Virginia and Region 6 define employment growth within the selected industry by how many jobs in the occupation are expected to be added. This is also known as growth demand.

Region 6 has a total employment population of 170,097 as of 2020Q3. The unemployment rate for the GO Virginia Region 6 was 5.3% as of February 2021. The regional unemployment rate was lower than the national rate of 6.6%. One year earlier, in February 2020, the unemployment rate in the GO Virginia Region 6 was 3.0%.² These unemployment rates are influenced by the COVID-19 pandemic beginning in March/April 2020. Prior to the COVID-19 pandemic unemployment in the region had been trending downward. As the regional, state, and national economies recover from COVID-19, the regional unemployment rate continues to trend downward.

Across the region over the past five years the region has seen the highest growth in the following industry clusters: Transportation and Warehousing (6.3%), Management of Companies and Enterprises (3.2%), Professional, Scientific, and Technical Services (2.7%), and Administrative and Support and Waste Management and Remediation Services (2.6%). The region has seen the highest retraction in the following industry clusters: Information (-3.8%), Arts, Entertainment, and Recreation (-3.2%), Agriculture, Forestry, Fishing and Hunting (-1.8%), Wholesale Trade (-1.8%), Manufacturing (-1.7%), and Accommodation and Food Services (-1.7%).³

REGION 6 EMPLOYMENT CHANGES ACROSS ALL SECTORS					
Industry	Current			5-Year History	
	Empl	Avg Ann Wages	LQ	Empl Change	Ann %
Retail Trade	22,917	\$29,721	1.31	-445	-0.4%
Health Care and Social Assistance	21,972	\$47,681	0.88	931	0.9%
Educational Services	16,992	\$42,580	1.21	-118	-0.1%
Public Administration	16,899	\$92,470	2.03	1,639	2.1%
Accommodation and Food Services	14,751	\$18,485	1.08	-1,300	-1.7%
Professional, Scientific, and Technical Services	12,327	\$82,334	1.04	1,551	2.7%
Construction	11,469	\$47,791	1.15	509	0.9%
Other Services (except Public Administration)	9,160	\$28,669	1.23	11	0.0%
Finance and Insurance	8,244	\$64,779	1.17	446	1.1%
Administrative and Support and Waste Management and Remediation Services	7,076	\$37,184	0.66	844	2.6%
Transportation and Warehousing	6,353	\$50,526	0.79	1,669	6.3%

² Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 2020Q3

³ Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 2020Q3

Manufacturing	5,399	\$54,328	0.39	-493	-1.7%
Wholesale Trade	4,151	\$53,239	0.64	-385	-1.8%
Arts, Entertainment, and Recreation	2,811	\$27,340	0.96	-494	-3.2%
Real Estate and Rental and Leasing	2,327	\$46,575	0.78	141	1.3%
Agriculture, Forestry, Fishing and Hunting	1,970	\$34,806	0.85	-188	-1.8%
Management of Companies and Enterprises	1,827	\$92,293	0.70	268	3.2%
Information	1,688	\$48,026	0.50	-363	-3.8%
Utilities	992	\$77,771	1.10	43	0.9%
Unclassified	503	\$42,198	2.88	431	47.3%
Mining, Quarrying, and Oil and Gas Extraction	267	\$48,354	0.40	15	1.1%
Total - All Industries	170,097	\$49,230	1.00	4,712	0.6%

As of 2020Q3, Region 6 is projected in the next two years to see an annual percentage of growth in the following industry clusters: Health Care and Social Assistance (+1.6%), Professional, Scientific, and Technical Services (+1.6%), Arts, Entertainment, and Recreation (+1.2%), and Administrative and Support and Waste Management and Remediation Services (+0.9%). The region is expected over the next two years to have a decrease in annual growth in the following industry clusters: Manufacturing (-0.8%), Agriculture, Forestry, Fishing and Hunting (-0.6%), Retail Trade (-0.2%), and Wholesale Trade (-0.1%).⁴

REGION 6 EMPLOYMENT PROJECTIONS ACROSS ALL SECTORS						
Industry	Current			2-Year Forecast		
	Empl	Avg Ann Wages	LQ	Total Demand	Exits	Ann % Growth
Retail Trade	22,917	\$29,721	1.31	6,022	2,699	-0.2%
Health Care and Social Assistance	21,972	\$47,681	0.88	4,917	2,061	1.6%
Educational Services	16,992	\$42,580	1.21	3,349	1,518	0.6%
Public Administration	16,899	\$92,470	2.03	3,225	1,316	0.4%
Accommodation and Food Services	14,751	\$18,485	1.08	5,042	2,123	0.8%
Professional, Scientific, and Technical Services	12,327	\$82,334	1.04	2,523	794	1.6%
Construction	11,469	\$47,791	1.15	2,357	809	0.4%
Other Services (except Public Administration)	9,160	\$28,669	1.23	2,209	956	0.6%
Finance and Insurance	8,244	\$64,779	1.17	1,604	585	0.4%
Administrative and Support and Waste Management and Remediation Services	7,076	\$37,184	0.66	1,765	695	0.9%
Transportation and Warehousing	6,353	\$50,526	0.79	1,450	578	0.7%
Manufacturing	5,399	\$54,328	0.39	1,036	412	-0.8%
Wholesale Trade	4,151	\$53,239	0.64	866	328	-0.1%
Arts, Entertainment, and Recreation	2,811	\$27,340	0.96	868	357	1.2%
Real Estate and Rental and Leasing	2,327	\$46,575	0.78	479	214	0.2%
Agriculture, Forestry, Fishing and Hunting	1,970	\$34,806	0.85	401	181	-0.6%
Management of Companies and Enterprises	1,827	\$92,293	0.70	351	122	0.5%
Information	1,688	\$48,026	0.50	327	118	0.0%
Utilities	992	\$77,771	1.10	181	65	0.1%
Unclassified	503	\$42,198	2.88	120	48	0.6%

⁴ Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 2020Q3

Mining, Quarrying, and Oil and Gas Extraction	267	\$48,354	0.40	59	18	0.8%
Total - All Industries	170,097	\$49,230	1.00	39,369	15,922	0.6%

WAGE GROWTH ACROSS ALL SECTORS

Workers within GO Virginia Region 6 earned annual wages of \$49,230 as of 2020Q3. Average annual wages per worker increased 6.9% in the region over the preceding four quarters. National annual average wages were \$60,042 as of 2020Q3.⁵

Annual wages have steadily increased across Region 6 as a whole. In 2018 average annual wages were \$44,058⁶, in 2019 \$45,208⁷, and in 2020 \$47,188.⁸ The table below shows how average annual wages have increased across each of the sub regions within Region 6, yet are strikingly different compared to each sub region.

ANNUAL WAGE BY PLANNING DISTRICT COMMISSION									
PDC	PDC Name	2018 Average Annual Wages	2019 Average Annual Wages	2020 Average Annual Wages					
Total		\$44,058	\$45,208	\$47,188					
16	George Washington	\$46,959	\$48,166	\$50,346					
17	Northern Neck	\$35,013	\$36,060	\$37,629					
18	Middle Peninsula	\$34,725	\$35,487	\$36,523					

The table below shows average annual wages across each industry sector and projected annual employment growth. The top five wages in Region 6 are in Public Administration (\$92,470), Management of Companies and Enterprises (\$92,293), Professional, Scientific, and Technical Services (\$82,334), Utilities (\$77,771), and Finance and Insurance (\$64,779). The bottom five industries by average annual wage are Agriculture, Forestry, Fishing and Hunting (\$34,806), Retail Trade (\$29,721), Other Services (except Public Administration) (\$28,669), Arts, Entertainment, and Recreation (\$27,340), and Accommodation and Food Services (\$18,485).

AVERAGE ANNUAL WAGES ACROSS ALL SECTORS					
Industry	Current		2-Year Forecast		
	Empl	Avg Ann Wages	Total Demand	Empl Growth	Ann % Growth
Public Administration	16,899	\$92,470	3,225	120	0.4%
Management of Companies and Enterprises	1,827	\$92,293	351	20	0.5%
Professional, Scientific, and Technical Services	12,327	\$82,334	2,523	389	1.6%
Utilities	992	\$77,771	181	2	0.1%
Finance and Insurance	8,244	\$64,779	1,604	61	0.4%

⁵ Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 2020Q3

⁶ Employment and wages data (1st quarter 2018) are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed by Chmura where necessary.

⁷ Employment and wages data (1st quarter 2019) are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed by Chmura where necessary.

⁸ Employment and wages data (1st quarter 2020) are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed by Chmura where necessary.

Manufacturing	5,399	\$54,328	1,036	-81	-0.8%
Wholesale Trade	4,151	\$53,239	866	-5	-0.1%
Transportation and Warehousing	6,353	\$50,526	1,450	90	0.7%
Mining, Quarrying, and Oil and Gas Extraction	267	\$48,354	59	4	0.8%
Information	1,688	\$48,026	327	1	0.0%
Construction	11,469	\$47,791	2,357	101	0.4%
Health Care and Social Assistance	21,972	\$47,681	4,917	725	1.6%
Real Estate and Rental and Leasing	2,327	\$46,575	479	8	0.2%
Educational Services	16,992	\$42,580	3,349	193	0.6%
Unclassified	503	\$42,198	120	6	0.6%
Administrative and Support and Waste Management and Remediation Services	7,076	\$37,184	1,765	122	0.9%
Agriculture, Forestry, Fishing and Hunting	1,970	\$34,806	401	-24	-0.6%
Retail Trade	22,917	\$29,721	6,022	-87	-0.2%
Other Services (except Public Administration)	9,160	\$28,669	2,209	112	0.6%
Arts, Entertainment, and Recreation	2,811	\$27,340	868	70	1.2%
Accommodation and Food Services	14,751	\$18,485	5,042	243	0.8%
Total - All Industries	170,097	\$49,230	39,369	2,127	0.6%

EMPLOYMENT GROWTH IN TARGET TRADED INDUSTRY SECTORS

GO Virginia focuses on industry sectors that are traded sectors. Traded industries are those that concentrate in particular regions but sell products or services across regions and countries. In the 2017 and reaffirmed in the 2019, GO Virginia Region 6 Growth and Diversification plans, Region 6 identified the following industry sectors as the targeted traded industry sectors for the region:

- Aquaculture/Seafood/Commercial Fishing/Marine Industries
- Forestry/Wood Products and Paper
- Manufacturing
- Distribution/Logistics
- Information/Data Centers
- Professional, Scientific and Technical Services

These industry sectors were chosen for their high location quotient (LQ) in reference to the region. A location quotient is a measure of the relative size of the selected region's industry employment compared to the national average. A breakdown of each sector's LQ can be found in Targeted Industry Appendix.

The table below demonstrates across the region, employment growth in targeted traded industry sectors. The table shows that across the region there was a decline in growth in the Aquaculture/Seafood/Commercial Fishing/Marine Industries, Forestry/Wood Products and Paper, and Information/Data Centers industry sectors and a positive growth in Manufacturing, Distribution/Logistics, and Professional, Scientific and Technical Services across the region as a whole.

REGION 6 EMPLOYMENT CHANGES ACROSS TARGETED INDUSTRY SECTORS		
	Current	5-Year History

Industry	Empl	Avg Ann Wages	LQ	Empl Change	Ann %
Aquaculture/Seafood/Commercial Fishing/Marine Industries	860	\$39,393	9.90	-178	-3.7%
Forestry/Wood Products and Paper	1,909	\$46,167	2.61	-230	-2.2%
Manufacturing	1,544	\$52,497	0.59	41	0.5%
Distribution/Logistics	8,431	\$49,419	0.76	908	2.3%
Information/Data Centers	1,002	\$41,306	0.77	-205	-3.7%
Professional, Scientific and Technical Services	11,182	\$91,108	0.98	1,793	3.6%

As of 2020Q3, Region 6 is projected in the next two years to see employment growth in the Distribution/Logistics (0.5%), Information/Data Centers (0.5%), and Professional, Scientific and Technical Services (1.5%) industry sectors. While it is projected to see a decline in the Aquaculture/Seafood/Commercial Fishing/Marine Industries (-2.0%), Forestry/Wood Products and Paper (-0.7%), and Manufacturing (-0.9%) industry sectors, Region 6 maintains these industry sectors as priorities due to their high LQ, particularly for the Northern Neck and Middle Peninsula localities due to their rural locations.⁹

REGION 6 EMPLOYMENT GROWTH ACROSS TARGETED INDUSTRY SECTORS								
Industry	Current				2-Year Forecast			
	Empl	Avg Ann Wages	LQ	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Aquaculture/Seafood/Commercial Fishing/Marine Industries	860	\$39,393	9.90	144	67	112	-34	-2.0%
Forestry/Wood Products and Paper	1,909	\$46,167	2.61	402	151	278	-27	-0.7%
Manufacturing	1,544	\$52,497	0.59	285	115	196	-26	-0.9%
Distribution/Logistics	8,431	\$49,419	0.76	1,914	703	1,135	76	0.5%
Information/Data Centers	1,002	\$41,306	0.77	195	65	119	11	0.5%
Professional, Scientific and Technical Services	11,182	\$91,108	0.98	2,239	663	1,229	346	1.5%

EMPLOYMENT GROWTH ACROSS TARGETED INDUSTRY SECTORS – GEORGE WASHINGTON REGIONAL COMMISSION, VA PDC 16								
Industry	Current				2-Year Forecast			
	Empl	Avg Ann Wages	LQ	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Aquaculture/Seafood/Commercial Fishing/Marine Industries	40	\$30,890	0.61	17	11.5%	7	3	4
Forestry/Wood Products and Paper	498	\$54,793	0.88	-70	-2.6%	109	40	73
Manufacturing	762	\$54,033	0.38	-77	-1.9%	148	58	99
Distribution/Logistics	6,499	\$53,911	0.75	431	1.4%	1,522	542	875
Information/Data Centers	701	\$50,429	0.70	-246	-5.8%	143	45	83

⁹ A location quotient is a measure of the relative size of the selected region's industry employment compared to the national average. A location quotient greater than 1.0 indicates that the region has a higher concentration of employment in a particular industry or occupation than the nation; a location quotient less than 1 indicates the region has a lower concentration of employment in the cluster than the nation.

Professional, Scientific and Technical Services	10,465	\$98,393	1.19	2,393	5.3%	2,138	617	1,154
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EMPLOYMENT GROWTH ACROSS TARGETED INDUSTRY SECTORS – NORTHERN NECK, VA PDC 17								
	Current				2-Year Forecast			
Industry	Empl	Avg Ann Wages	LQ	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Aquaculture/Seafood/Commercial Fishing/Marine Industries	604	\$50,032	80.04	-123	-3.6%	100	48	79
Forestry/Wood Products and Paper	392	\$34,786	6.08	-140	-5.9%	88	32	60
Manufacturing	382	\$69,358	1.69	154	10.9%	64	27	46
Distribution/Logistics	547	\$39,079	0.55	47	1.8%	110	46	74
Information/Data Centers	89	\$28,096	0.78	-2	-0.5%	13	6	11
Professional, Scientific and Technical Services	505	\$71,903	0.50	16	0.7%	86	30	54

EMPLOYMENT GROWTH ACROSS TARGETED INDUSTRY SECTORS – MIDDLE PENINSULA, VA PDC 18								
	Current				2-Year Forecast			
Industry	Empl	Avg Ann Wages	LQ	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
Aquaculture/Seafood/Commercial Fishing/Marine Industries	199	\$32,320	15.54	-75	-6.2%	33	15	25
Forestry/Wood Products and Paper	1,023	\$68,051	9.35	-25	-0.5%	210	79	145
Manufacturing	309	\$42,895	0.80	-196	-9.3%	55	24	40
Distribution/Logistics	1,393	\$44,978	0.83	366	6.3%	293	116	187
Information/Data Centers	78	\$23,495	0.40	-27	-5.8%	9	6	9
Professional, Scientific and Technical Services	742	\$59,852	0.43	-153	-3.7%	122	45	80

WAGE GROWTH IN TARGETED TRADED INDUSTRY SECTORS

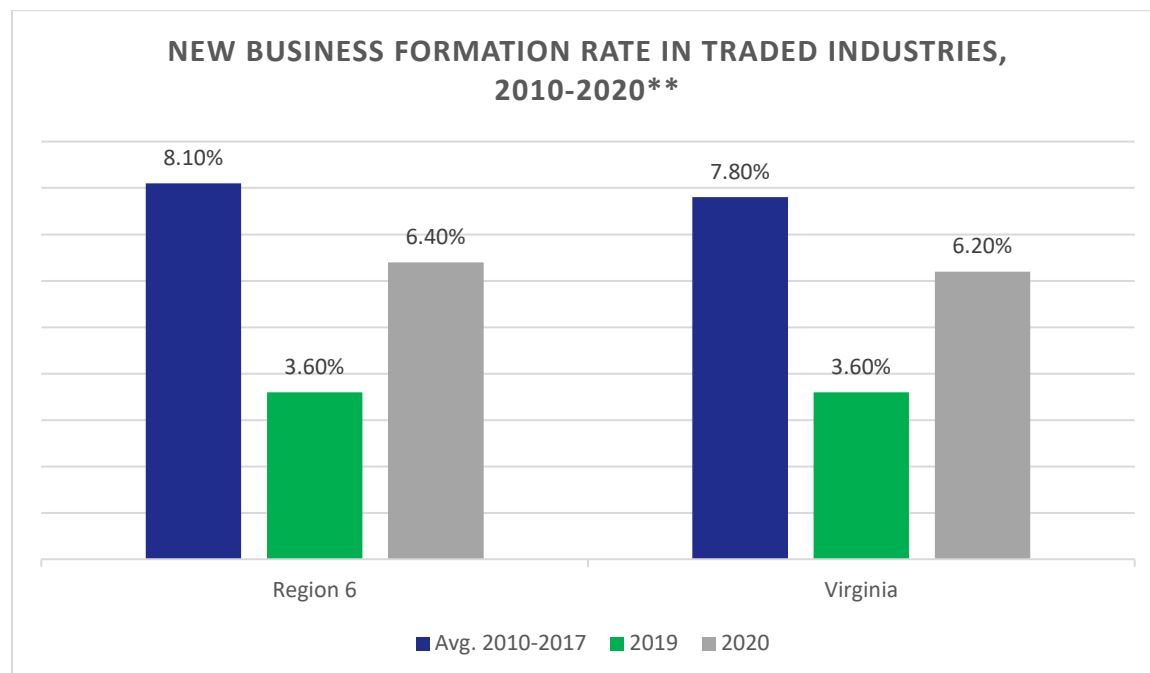
The average annual wage for GO Virginia Region 6 in 2020Q3 was \$49,230. The table below examines the average annual wage by the Region 6 targeted traded industry sectors.

REGION 6 WAGE GROWTH IN TARGETED INDUSTRY SECTORS					
	Current			5-Year History	
Industry	Empl	Avg Ann Wages	LQ	Empl Change	Ann %
Aquaculture/Seafood/Commercial Fishing/Marine Industries	860	\$39,393	9.90	-178	-3.7%
Forestry/Wood Products and Paper	1,909	\$46,167	2.61	-230	-2.2%
Manufacturing	1,544	\$52,497	0.59	41	0.5%
Distribution/Logistics	8,431	\$49,419	0.76	908	2.3%
Information/Data Centers	1,002	\$41,306	0.77	-205	-3.7%
Professional, Scientific and Technical Services	11,182	\$91,108	0.98	1,793	3.6%

Wages in the Manufacturing, Distribution/Logistics, and Professional, Scientific and Technical Services industry clusters on average pay above the average annual wage for the region. There has been a decline in employees in the Aquaculture/Seafood/Commercial Fishing/Marine Industries, Forestry/Wood Products and Paper, and Information/Data Centers sectors in the past five years. The Aquaculture/Seafood/Commercial Fishing/Marine Industries and Forestry/Wood Products and Paper industries however, have seen less of a decline in employment in the Northern Neck (-0.9% annual growth) and Middle Peninsula (-1.0% annual growth) versus the George Washington region (0% annual growth). The Information/Data Centers have seen a positive growth (0.4% annual growth) whereas the Northern Neck (-1.8% annual growth) and Middle Peninsula (-2% annual growth) have seen declines, potentially skewing the five-year average.

NEW BUSINESS FORMATION ACTIVITY

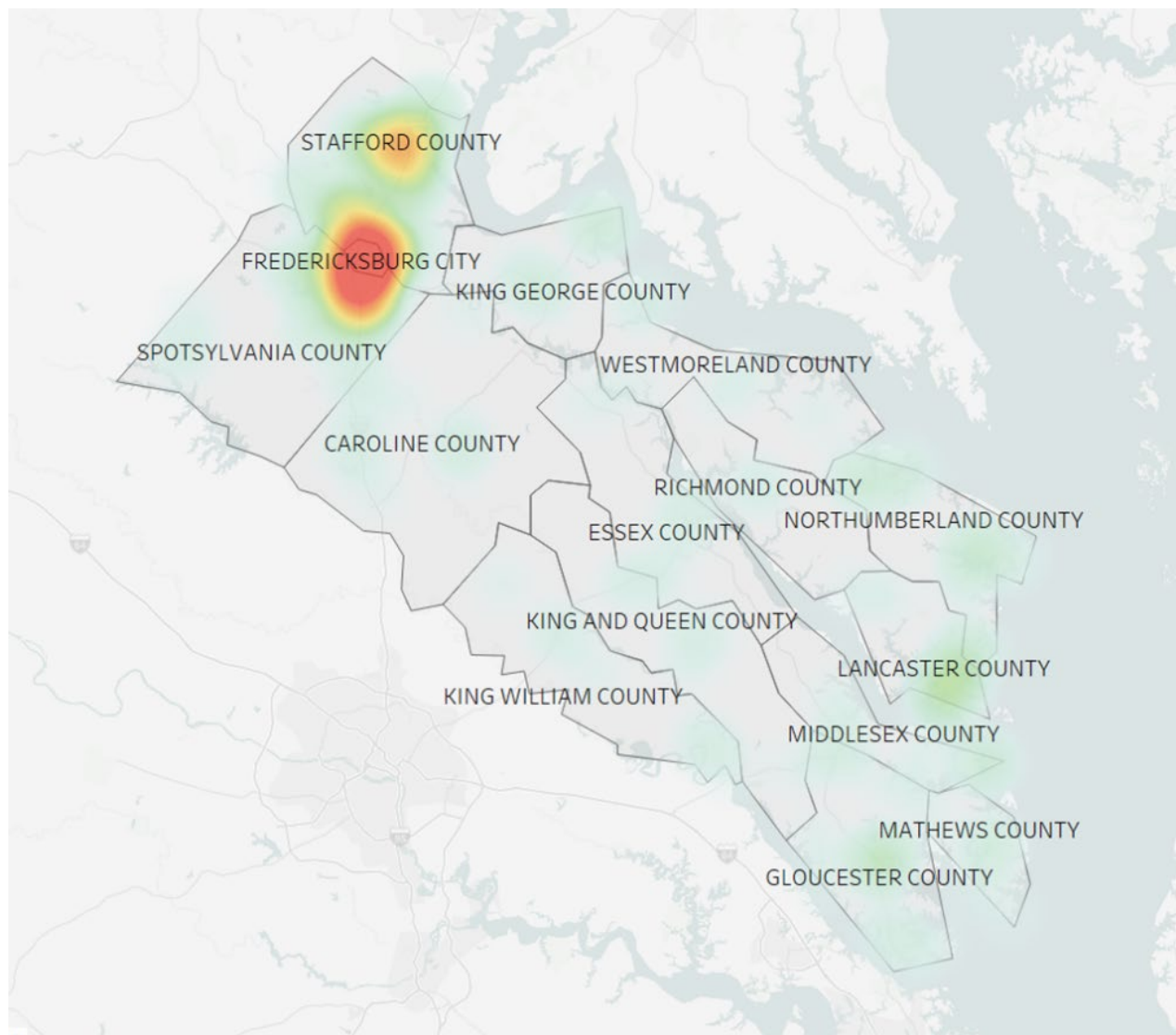
In 2021, the Department of Housing and Community Development contracted with TEconomy to examine new business formation activity in each of the GO Virginia regions. Below examines the new business formation for Region 6 as compared to the state of Virginia. The chart below shows that Region 6 performed better than the state on average for the past ten years. The business formation rate compares the level of startups to the total number of all firms in traded industries. This number helps a region to determine the health of the entrepreneurship ecosystem in the region.



**Note: 2018 excluded due to addition of a major source of firm data to underlying BDRC database that makes comparisons using 2018 not possible

Source: Business Dynamics Research Consortium, Your-economy Time Series (YTS); TEconomy analysis.

Much of Region 6's startup density is located in Fredericksburg and Stafford County. The map below provided by TEconomy shows where traded industry startups are located within the region over the 2018-2020 period based on the specific geo-coordinates of the firm's address.



NEW BUSINESS FORMATION IN TARGETED INDUSTRY SECTORS

As part of the 2021 update provided by TEconomy, the chart below examines new business startups and business formation rates across a standardized set of Traded Industry Clusters for the region and statewide average in 2019 and 2020. The standardized clusters were informed by targeted clusters set out across all GO VA regions.

MAJOR CLUSTER	TRADED INDUSTRY	STARTUPS 2019	NEW BUSINESS FORMATION RATE, 2019		STARTUPS 2020	NEW BUSINESS FORMATION RATE, 2020	
			REGION 6	VA		REGION 6	VA

Agriculture and Food Processing	8	3.8%	4.1%	14	7.4%	5.5%
Business Services	61	5.7%	4.4%	62	7.1%	7.6%
Energy, Natural Resources, & Finished Products	2	1.2%	2.5%	4	2.8%	3.9%
Engineering, R&D, Testing & Technical Services	3	2.1%	4.2%	6	5.4%	7.4%
Financial & Insurance Services	5	2.3%	3.5%	10	3.7%	4.0%
Health Care Services	3	4.3%	4.2%	21	27.3%	15.8%
Information Technology & Communications Services	6	4.0%	3.6%	7	5.4%	8.0%
Life Sciences			2.7%	3	4.0%	6.1%
Manufacturing	6	2.7%	2.1%	8	4.0%	3.7%
Ship Building, Aerospace, & Defense			1.1%			0.9%
Transportation, Distribution and Logistics	13	3.3%	2.9%	21	6.1%	4.6%
All Other Traded Industries	16	2.3%	3.3%	40	6.4%	5.9%
Traded Industry Total	123	3.6%	3.6%	196	6.4%	6.2%

The traded industry clusters TEconomy examined do not align one to one to the Region 6 targeted industry sectors. Between 2019 and 2020, Region 6 saw an increase in startups in the region. Furthermore, Region 6 is outpacing the state in new business formation. The region remains competitive in creating new businesses.¹⁰

ECONOMIC DEVELOPMENT ANNOUNCEMENTS

From July 2018 through April 2021, GO Virginia Region 6 announced 21 new businesses opening or expanding in the region and no businesses that closed.¹¹ The table below shows primarily businesses are attracted to or expand primarily in the Greater Fredericksburg region. Out of 21 businesses, four businesses opened or expanded in the Northern Neck PDC and one in the Middle Peninsula PDC.

Across the region, there has been positive signs of growth for new businesses. In 2018, two businesses expanded. In 2019, four businesses opened and five businesses expanded. During 2020 and amidst the COVID-19 pandemic eight businesses expanded and one new business opened.

LOCALITY	INDUSTRY CLUSTER	MONTH ANNOUNCED	NEW (N) / EXPANSION (E)	NEW JOBS	INVESTMENT (\$M)
Northumberland	Aquaculture/Seafood /Commercial Fishing/Marine Industries	March 2020	E	0	1.3
Spotsylvania	Distribution/Logistics	November 2019	N	25	1.285
Stafford	Distribution/Logistics	June 2020	E	12	16
Caroline	Distribution/Logistics	February 2019	N	50	2.6
Stafford	Distribution/Logistics	June 2020	E	13	20
Stafford	Distribution/Logistics	December 2020	N	577	72

¹⁰ Data is provided by TEconomy in their 2021 update provided to the Department of Housing and Community Development

¹¹ Announcements and closings data from Virginia Economic Development Partnership (VEDP)

<https://announcements.vedp.org/>

Westmoreland	Forestry/Wood Products and Paper	September 2019	N	59	10.75
Caroline	Forestry/Wood Products and Paper	June 2020	E	18	11
Spotsylvania	Manufacturing	November 2020	E	0	3
King and Queen	Manufacturing	November 2018	E	20	1.89
Westmoreland	Manufacturing	November 2018	E	42	1.625
Richmond	Not A Region 6 Targeted Industry	February 2019	E	6	1.205
Stafford	Not A Region 6 Targeted Industry	January 2019	N	150	22
Stafford	Not A Region 6 Targeted Industry	October 2019	E	18	3.5
Stafford	Not A Region 6 Targeted Industry	October 2019	E	2	0.4
Stafford	Not A Region 6 Targeted Industry	October 2019	E	0	30
Caroline	Professional, Scientific and Technical Services	March 2019	E	100	25.1
Stafford	Professional, Scientific and Technical Services	February 2020	E	23	0.435
Stafford	Professional, Scientific and Technical Services	June 2020	E	30	0
Stafford	Professional, Scientific and Technical Services	September 2020	E	60	1.2
Stafford	Professional, Scientific and Technical Services	February 2021	N	2	0.75
TOTAL				1207	\$226.04

SITUATIONAL ANALYSIS OF TARGETED INDUSTRY CLUSTERS

GO Virginia Region 6 defines targeted industry cluster as the combination of multiple NAICS codes and industry sector as the individual NAICS code. The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. The NAICS Code comprises six levels, from the “all industry” level to the 6-digit level. The first two digits define the top level category, known as the “sector”.

GO Virginia Region 6 identified the following targeted industry clusters as their priorities in 2017 and reaffirmed these in 2019. These clusters define the industry priorities for the region as a whole.


- Aquaculture/Seafood/Commercial Fishing/Marine Industries
- Forestry/Wood Products and Paper
- Manufacturing
- Distribution/Logistics
- Information/Data Centers
- Professional, Scientific and Technical Services

The following is a situational analysis that identifies strengths, weaknesses, opportunities, and threats to the future economic performance of each sector. This is approached with a consideration for GO Virginia’s four priority investment areas (Talent Development, Start Up Ecosystem, Cluster Scale Up, Sites/Infrastructure Development). Region 6 combines Start Up Ecosystem and Cluster Scale Up into Entrepreneurial Ecosystem. The following also analyzes the current inventory of sites relative to their targeted traded industry sectors to inform and prioritize future sites investments.

AQUACULTURE/SEAFOOD/COMMERCIAL FISHING/MARINE INDUSTRIES REGION 6 INDUSTRY PROFILE

OVERVIEW

The Aquaculture/Seafood/Commercial Fishing/Marine Industries sector represents industries in the fishing, oyster, coastal sectors. The core subsectors for Region 6 are Seafood Product Preparation and Packaging (NAICS 311710), Shellfish Fishing (NAICS 114112), and Shellfish Farming (NAICS 112512). A detailed listing of the industries included in the sector can be found in Targeted Industry Appendix.

EMPLOYMENT	WAGES
860 Regional Employment	\$39,393 Avg Wages Worker / \$49,230 Avg Wages in R6
-3.7%  Avg Ann % Change Last 5 Years	9.90 Location Quotient

SECTOR SIGNIFICANCE IN REGION 6

The Aquaculture/Seafood/Commercial Fishing/Marine Industries sector is not significant for all of Region 6, however is significant for the Middle Peninsula sub-region and the Northern Neck sub-region. These sub-regions are historical coastal communities. These industries are comprised of small independent watermen as well as the state's largest fishing operation, Omega Protein. This cluster has seen decline in the fish and shellfish supply, including the oyster population. Commercial limits on harvesting and shifts in climate have seen changes in the supply. Aquaculture practices have allowed for the expansion of the oyster industry in the region and new techniques for growing and harvesting other types of seafood present opportunities for the region.

A major threat to this industry cluster is rising sea levels. As sea levels rise, access to land once used for working waterfronts is at risk. The changes in the salinity of the water change the ability for watermen to grow oysters in the region's rivers and creeks. Access to water channels to gather catch nets and cages is at risk as sediment in the water rises. Sea level rise poses threats to quantity and quality of seafood, access to products, and overall use of land throughout the region.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Fishing and Oysters Hatcheries • Wild seafood management and marketing • Sea product processing – Omega Protein • Access to water 	<ul style="list-style-type: none"> • Regulations and Commercial Limits • Traditional methods of production • Small number of producers and processors • Difficult to obtain credit
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Export of Seafood to Foreign and Domestic Markets (Cluster Scale Up) • Business expansion and development (Cluster Scale Up) • Internship and apprenticeship opportunities (Workforce Development) • Development of business incubators, accelerators, and entrepreneurship programs (Start Up Ecosystem) • Aquaculture production of oysters and other seafood (Start Up Ecosystem) 	<ul style="list-style-type: none"> • Sea level rise • Foreign competition • Decline in interest of industry

INDUSTRY TRENDS

Aquaculture/Seafood/Commercial Fishing/Marine Industries establishments decreased by 3.7% in the past five years and are projected to decrease 2% in the next two years. However, this industry cluster has a 9.9 LQ for the region. The average annual wages for the Aquaculture/Seafood/Commercial Fishing/Marine Industries in Region 6 is \$39,393. The Northern Neck and Middle Peninsula sub-regions drive the majority of this industry in the region with 604 jobs and 199 jobs as of 2021Q1 in each sub-region respectively.

While Region 6's growth for these industries is declining, historical preservation remains a key component in this industry. Targeting programs that create internship and apprenticeship opportunities with employers; developing business incubators, accelerators, and entrepreneurship startup programs; working to expand markets beyond the region; and developing aquaculture technologies will help this industry cluster grow.

Looking beyond, exploring and establishing programs in to combat sea level rise and further prepare the region's coastal resiliency efforts produce opportunities in this industry cluster. In 2018, Governor Ralph S. Northam signed Executive Order Number 24, in which he recognized that Virginia needs to increase resilience to sea level rise. Virginia is undergoing the development of the Virginia Coastal Resilience Master Plan to make the state more resilient. These planning efforts and the actions recommended give Region 6 the opportunity to expand this industry sector in future resiliency efforts.

REGIONAL INITIATIVES

Virginia Sea Grant Resiliency Ecosystem Development

This project initiated a study to complete planning activities toward building a new industry cluster in Virginia, a water management economy that integrates workforce development, research and development, innovation, and commercialization. Virginia Sea Grant completed their study in 2020 and found gaps in Region 6's resiliency efforts. Through statewide funding, Virginia Sea Grant collaborated with Region 5 to apply for implementation funding.

- **Statewide Project Theme:** Entrepreneurial Activities
- **Region 6 Priority Industry Cluster:** Professional, Scientific, and Technical Services; Aquaculture/Seafood/Commercial Fishing/Marine Industries
- **GO Virginia Request:** \$49,996
- **Match:** \$49,996
- **Source of Match:** Middle Peninsula Planning District Commission and Middle Peninsula Alliance
- **Project Type:** Enhanced Capacity Building
- **Localities:** Essex County, Gloucester County, King and Queen County, Middlesex County, Mathews County, King William County, Town of Tappahannock, Town of Urbanna, and Town of West Point.
- **How does this project create higher paying jobs?** This project creates higher paying jobs by understanding the potential economy of water-based activities that could create entrepreneurial innovations.

Middle Peninsula Seafood and Agriculture E-Marketplace Development

This project requests funding to customize the FishLine application for the Chesapeake Bay, host the application, complete website development for online purchasing, marketing the new app, and general project administration. This project was funded under GO Virginia's Economic Resiliency and Recovery funding to help regions recover from the economic effects of COVID-19. The Middle Peninsula PDC created an app call BayDirect to connect producers to consumers.

- **Statewide Project Theme:** Entrepreneurial Activities/Workforce Development
- **Region 6 Priority Industry Cluster:** Aquaculture / Seafood / Commercial Fishing / Marine Industries
- **GO Virginia Request:** \$77,000
- **Match:** \$38,500
- **Source of Match:** MPCBPAA, MPPDC, Private Sources
- **Project Type:** ERR Fast Access
- **Localities:** Essex County, Gloucester County, King and Queen County, Middlesex County, Mathews County, King William County, Town of Tappahannock, Town of Urbanna, and Town of West Point.
- **How does this project create higher paying jobs?** This project creates higher paying jobs keeping a key market open during an economic time in which primary markets are closed.

Launching a Coastal Resiliency and Adaption Economy

The Coastal Resilience and Adaptation Economy initiative takes a two-pronged approach to laying the foundation of an innovation ecosystem that will create a new, long-term, high-paying economic industry cluster. The approach: 1) Builds resilience entrepreneurship through RISE's proven business plan competition and accelerator services, including a product performance validation in Region 6's network of real-world R&D test sites (i.e. Resilience Innovation Center) as an expansion of the Hampton Roads resilience living laboratory; and 2) Forms a multi-stakeholder, business-focused Region 5-6 Consortium to engage the broader business community in education about the risks and economic impacts of sea level


rise, and builds capacity for the adoption of resilient practices. Aligning with both Region's Growth & Diversification Plans, this initiative builds critical pathways and avenues for collaboration between the two regions and rural and urban economies. Further, as this sector grows, all other sectors are buoyed by the increased regional resilience to flooding, storms, and other stressors impacting coastal Virginia. This project was funded in 2021 and is set to complete in 2023.

- **Statewide Project Theme:** Entrepreneurial Activities/Workforce Development
- **Region 6 Priority Industry Cluster:** Aquaculture / Seafood / Commercial Fishing / Marine Industries
- **GO Virginia Request:** \$2,937,163
- **Match:** \$3,696,411
- **Source of Match:** MPCBPAA, VT, ODU, VASG, Localities
- **Project Type:** Statewide Competitive
- **Localities:** Region 5 and Region 6
- **How does this project create higher-paying jobs?** This project creates higher-paying jobs by exploring new ways to combat sea-level rise and create an industry around this business.

FORESTRY/WOOD PRODUCTS AND PAPER REGION 6 INDUSTRY PROFILE

OVERVIEW

The Forestry/Wood Products and Paper sector represents industries in the wood, paper, logging, and sawmill industries. The core subsectors for Region 6 are Sawmills (NAICS 321113), Paper Mills (NAICS 322121), Logging (NAICS 113310), and Nursery and Tree Production (NAICS 111421). A detailed listing of the industries included in the sector can be found in Targeted Industry Appendix.

EMPLOYMENT	WAGES
1,909 Regional Employment	\$46,167 Avg Wages Worker / \$49,230 Avg Wages in R6
-2.2%  Avg Ann % Change Last 5 Years	2.61 Location Quotient

SECTOR SIGNIFICANCE IN REGION 6

The Forestry/Wood Products and Paper sector is concentrated in the more rural localities of Region 6. These localities are home to sawmills and other logging companies. In 2020, there were 30 Forestry and Logging establishments in Region 6, an increase from 28 establishments in 2010. The chart below demonstrates the majority of the Forestry/Wood Product sector is centered in the Middle Peninsula and southern George Washington sub-regions with some companies in the Northern Neck.

LOCALITY	EMPL	LOCALITY	EMPL
King and Queen County, Virginia	57	Spotsylvania County, Virginia	17
King William County, Virginia	43	Gloucester County, Virginia	7
Caroline County, Virginia	35	Richmond County, Virginia	6
Northumberland County, Virginia	34	Westmoreland County, Virginia	3
King George County, Virginia	27	Middlesex County, Virginia	3

West Point Paper Mill (West Point, VA), RST Timber Works (Gloucester, VA), August Lumber (West Point, VA), Northern Neck Lumber Co (Warsaw, VA), Tidewater Lumber (Essex, VA) are some of the Forestry/Wood Products industries represented in Region 6.

This cluster shows strength in its proximity to forests and natural resources needed to produce many of the products within the industry cluster. Furthermore, production plants are located near logging areas to limit transport time. However, there are limits on the natural resources used in many of these products and a small labor force. The small labor force is partly due to the high out commuting population within the region. Rappahannock Community College offers courses in Forestry Management to assist employees

in a better understanding of the industry. The industry has opportunities in creating apprenticeship programs to give local students a better idea of what an industry job is like.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">• Location to forests• Product processing plans	<ul style="list-style-type: none">• Limits on product• Lack of reliable workforce
OPPORTUNITIES	THREATS
<ul style="list-style-type: none">• Export of Wood Products to Foreign and Domestic Markets (Cluster Scale Up)• Business expansion and development (Cluster Scale Up)• Internship and apprenticeship opportunities (Workforce Development)• Development of business incubators, accelerators, and entrepreneurship programs (Start Up Ecosystem)• Shift to mechanical side of industry (Workforce Development)	<ul style="list-style-type: none">• Sea level rise• Foreign competition• Sustainability• Timber price and demand

INDUSTRY TRENDS

Forestry/Wood Products and Paper industries establishments decreased by 2.2% in the past five years and are projected to decrease by -0.7% in the next two years. However, this industry cluster has a 2.61 LQ for the region. The average annual wages for the Forestry/Wood Products and Paper industries in Region 6 is \$46,167.

While Region 6's growth for these industries is declining, historical preservation remains a key component in this industry. Targeting programs that create internship and apprenticeship opportunities with employers; working to expand markets beyond the region; and developing programs to educate workforce on new technologies will help this industry cluster grow.


REGIONAL INITIATIVES

Currently Region 6 has no initiatives that target this industry sector.

MANUFACTURING REGION 6 INDUSTRY PROFILE

OVERVIEW

The Manufacturing sector represents a wide variety of industries. The core subsectors for Region 6 are Manufacturing of Computer and Electronic Equipment, Manufacturing of Fabricated Metal and Machinery Products, Manufacturing of Food and Beverage Products including Seafood, Manufacturing of Miscellaneous Products, Manufacturing of Plastics, Rubber, and Nonmetallic Mineral Products, and Manufacturing of Wood Products and Paper. Many of Region 6's manufactured products fall into other industry clusters and therefore manufacturing is examined broadly in this industry profile. A detailed listing of the industries included in the sector can be found in Targeted Industry Appendix.

EMPLOYMENT	WAGES
1,544 Regional Employment	\$52,497 Avg Wages Worker / \$49,230 Avg Wages in R6
0.5%  Avg Ann % Change Last 5 Years	0.59 Location Quotient

SECTOR SIGNIFICANCE IN REGION 6

The Manufacturing sector is a major sector across much of Region 6. Across Region 6 there is a demand for workforce in the manufacturing cluster. The table below explores the occupations in the manufacturing cluster, their average annual wage, and the annual demand as of CY2021Q1.

6 DIGIT OCCUPATION	AVG ANN WAGES	ANNUAL DEMAND
Team Assemblers	\$30,900	27
First-Line Supervisors of Production and Operating Workers	\$59,400	18
Laborers and Freight, Stock, and Material Movers, Hand	\$27,900	23
Sawing Machine Setters, Operators, and Tenders, Wood	\$32,900	17
Paper Goods Machine Setters, Operators, and Tenders	\$42,300	15
Industrial Machinery Mechanics	\$54,800	14
Industrial Truck and Tractor Operators	\$35,800	13
Heavy and Tractor-Trailer Truck Drivers	\$43,700	12
Meat, Poultry, and Fish Cutters and Trimmers	\$25,500	10
Packaging and Filling Machine Operators and Tenders	\$32,100	13

Source: JobsEQ, CY21Q1

The regional educational institutions including Germanna Community College, Rappahannock Community College, and the University of Mary Washington offer numerous training programs that directly benefit the manufacturing industry across the region. However, there is still a gap and opportunity for the region to connect training offerings at these institutions to the needs of employers across the region. Through

stakeholder engagement conversations, businesses have indicated a need for additional training programs.

In 2020, there were 292 Manufacturing establishments in the GO Virginia Region 6, a decrease from 312 establishments ten years earlier in 2010.¹² This is an opportunity for the region. Manufacturing typically requires larger sites with utility service (water, sewer, gas) on the site. There is a limited number of these business ready sites in the region. Those sites that are deemed business ready are primarily located in the Fredericksburg sub-region. There is an opportunity for the region to expand their number of business ready sites to accommodate manufacturing companies to grow this industry cluster in the region. Region 6 contracted with Draper Aden Associates (DAA) in 2021 to conduct a site analysis of Virginia Business Ready Sites (VBRSP) characterized sites in Region 6. DAA identified a total of 83 characterized sites; 79 greater than 10 acres and 74 greater than 25 acres. These sites present opportunities for the manufacturing industry sector.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">• Regional educational institutions providing quality training programs at all levels (from apprentice programs to four-year engineering degrees)• Several high-profile manufacturers already successfully operating in the region	<ul style="list-style-type: none">• Workforce soft skills challenges• Younger workforce is hard to retain• Trainings at educational institutions do not align with industry needs
OPPORTUNITIES	THREATS
<ul style="list-style-type: none">• Align educational institutions training programs to industry needs• Develop business ready sites for manufacturing• Work with K-12 on developing a pipeline of workforce ready students• Establish internships, apprenticeships, and on the job training programs with businesses in the region• Encourage entrepreneurship in product creation	<ul style="list-style-type: none">• Lack of available business ready sites• Manufacturing is declining across the US• Off shoring of manufacturing

INDUSTRY TRENDS

The Manufacturing sector increased by 0.5% in the past five years and is projected to decrease by -0.9% in the next two years. The average annual wage for this industry across Region 6 is \$52,497, above the average annual wage for the region of \$49,230. The distribution of this industry across Region 6 is concentrated in the Fredericksburg sub-region, 762 jobs, and evenly distributed in the Northern Neck, 382 jobs and Middle Peninsula, 309 jobs. When taking into account the population distribution in each of these regions, manufacturing is fairly evenly spread across Region 6.

¹² Source Jobs EQ, CY2021Q1

While growth in this industry is projected to decline in the next two years, this industry remains a targeted sector because of its location quotient of 0.59%, the history of manufacturing across the region, and its high wages. Region 6 has 292 manufacturing businesses that on average pay above the region's median income. Targeting programs that create internship and apprenticeship opportunities with employers; developing training programs at regional education institutions; working to expand markets beyond the region; and developing new business ready sites will help this industry cluster grow.

Looking beyond, exploring ways to connect in with statewide manufacturing groups and leverage resourced such as GENEDGE will help grow this industry cluster. Amidst the COVID-19 pandemic numerous supply chains were affected by overseas product issues. GENEDGE received statewide competitive GO Virginia funding to invest in services for small and medium size manufacturers from across Virginia with the potential to address reducing supply chain risk of critical technologies via improved capability and capacity of existing companies. Region 6 has the opportunity to expand efforts in creating new onshore products.

REGIONAL INITIATIVES

Commercial Kitchen at Hull Springs

This project proposes a feasibility study for a commercial kitchen located at Longwood Hull Springs in Westmoreland County. Should the results of the study indicate that a commercial kitchen establishment would be feasible in the Northern Neck, the idea is to co-locate the facility in the dining hall at Longwood Hull Springs for food preparation for resident students and faculty members.

- Statewide Project Theme: Entrepreneurial Activities
- Region 6 Priority Industry Cluster: Manufacturing
- GO Virginia Request: \$50,000
- Match: \$50,000
- Source of Match: US Department of Agriculture-Rural Development
- Project Type: Enhanced Capacity Building
- Localities: Westmoreland County and Northumberland County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing understanding the ecosystem in which food manufacturers can operate a commercial kitchen.

Northern Neck Sites, Buildings, and Infrastructure Study

This project will complete a site, building, and infrastructure study of the Northern Neck region. GO Virginia funding will be used to 1) review all inventory of sites and building in the region; 2) create a feasibility study for three potential commercial/industrial sites located in three counties; 3) complete an infrastructure capacity evaluation to address potential business growth in two localities.

- Statewide Project Theme: Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services; Manufacturing
- GO Virginia Request: \$88,000
- Match: \$0
- Source of Match: No match required
- Localities: Northumberland County, Richmond County, Westmoreland County, Lancaster County

- How does this project create higher paying jobs? This project creates higher paying jobs by providing a path to procuring the right facilities, appropriately sized, and located to achieve the higher-wage job growth in the priority industries.

Middle Peninsula Alliance Site Characterization

This project will complete a site characterization study of up to 16 sites in the Middle Peninsula region. GO Virginia funding will be used to study of up to 16 sites in the Middle Peninsula; recommend sites for further evaluation of development as a regionally-owned property; provide recommendations on market potential for properties in the ownership of the Middle Peninsula Public Access Authority; and make recommendations on steps to take to create a nutrient bank.

- Statewide Project Theme: Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services; Manufacturing
- GO Virginia Request: \$85,000
- Match: \$5,200
- Source of Match: Middle Peninsula Alliance
- Localities: Essex County, Gloucester County, King & Queen County, King William County, Middlesex County, and Mathews County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing a path to procuring the right facilities, appropriately sized, and located to achieve the higher-wage job growth in the priority industries.

Fredericksburg Regional Industrial Facilities Authority Study

This project will form a Regional Industrial Facilities Authority (RIFA) in accordance with the Virginia Regional Industrial Facilities Act (Va. Code Section 15.2-6400-6416) for the City of Fredericksburg, Caroline County, King George County, Stafford County, and Spotsylvania County.

- Statewide Project Theme: Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Manufacturing
- GO Virginia Request: \$14,665
- Match: \$7,335
- Source of Match: City of Fredericksburg, Caroline County, King George County, Stafford County, Spotsylvania County, Fredericksburg Regional Alliance
- Project Type: Enhanced Capacity Building
- Localities: City of Fredericksburg, Caroline County, King George County, Stafford County, and Spotsylvania County
- How does this project create higher paying jobs? This project creates higher paying jobs by setting up the framework for all the localities to create a RIFA that will enable shared revenue capabilities in site development projects.

Welding Training Program

This project creates a new welding training program at Rappahannock Community College. GO Virginia funds will be used to equip a welding training facility with 15 workstations and train 40 welders for employment at local businesses within Region 6.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Manufacturing

- GO Virginia Request: \$130,000
- Match: \$130,000
- Source of Match: Westmoreland County, Bay Consortium Workforce Development Board, Carry-On Trailer Corporation, Northern Neck Chesapeake Bay Region Partnership, Northumberland County, and Rappahannock Community College
- Project Type: Implementation
- Localities: Westmoreland County and Northumberland County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing welding training classes projected to pay at \$22/hr for those who complete the program.

Northern Neck Workforce Training Feasibility and Site Selection Study

This project will examine current and future workforce needs and the requirements for undertaking appropriate training to meet the available jobs of today and in the future. GO Virginia funding will be used for an assessment that will include a blueprint of what is needed by local companies and other workforce needs, prioritization for implementation, cost estimates, and the necessary steps to improve the quality and quantity of workforce training in the region.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Manufacturing
- GO Virginia Request: \$62,500
- Match: \$62,500
- Source of Match: US Department of Labor
- Project Type: Enhanced Capacity Building
- Localities: Richmond County, Westmoreland County, Lancaster County, Northumberland County, Essex County, Gloucester County
- How does this project create higher paying jobs? This project creates higher paying jobs by understanding what training needs are necessary to create higher paying jobs in this sub-region.

Fredericksburg Region Industry Cluster Analysis

This study will focus on identifying detailed 4-digit NAICS level industries within the broader 2-digit industries already identified in the Growth and Diversification Plan such as Manufacturing, Distribution and Logistics, IT and Data Centers, and Professional Services. It is at this 4-digit level that the Fredericksburg Region Industry Cluster Analysis would provide the most benefit to our region and individual localities.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Manufacturing
- GO Virginia Request: \$30,000
- Match: \$15,000
- Source of Match: Fredericksburg Regional Alliance, Vakos, Transurban, Germanna Community College
- Project Type: Enhanced Capacity Building
- Localities: City of Fredericksburg, Caroline County, King George County, Stafford County, and Spotsylvania County

- How does this project create higher paying jobs? This project creates higher paying jobs by providing understanding of the current industries within the Fredericksburg region to attract new companies to the region and expand current companies.

Westmoreland Workforce Training Center Extension Project


This project requested GO Virginia ERR Fast Access funds to fund the rent and utilities of the program for 1 additional year due to the impact COVID-19 had on the training program.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Manufacturing
- GO Virginia Request: \$36,000
- Match: \$18,000
- Source of Match: Westmoreland County
- Localities: Westmoreland County, Northumberland County
- How does this project create higher paying jobs? This project creates higher paying jobs by training 30 welders and 10 machinists over a one year period.

DISTRIBUTION / LOGISTICS REGION 6 INDUSTRY PROFILE

OVERVIEW

The Distribution/Logistics sector represents a wide variety of industries. The core subsectors for Region 6 are General Warehousing and Storage (NAICS 493110), General Freight Trucking (NAICS 484110), Specialized Freight (NAICS 484220), Wholesale Trade Agents and Brokers (NAICS 425120), Industrial Machinery and Equipment Merchant Wholesalers (NAICS 423830), and General Freight Trucking, Long-Distance, Truckload (NAICS 484121). A detailed listing of the industries included in the sector can be found in Targeted Industry Appendix.

EMPLOYMENT	WAGES
8,431 Regional Employment	\$49,419 Avg Wages Worker / \$49,230 Avg Wages in R6
2.3%  Avg Ann % Change Last 5 Years	0.76 Location Quotient

SECTOR SIGNIFICANCE IN REGION 6

The Distribution/Logistics sector is predominately focused in the Fredericksburg region with some activity across the rest of the region. The table below explores some of the occupations in the Distribution/Logistics cluster, their average annual wage, and the annual demand as of CY2021Q1.

6-DIGIT OCCUPATION	AVG ANN WAGES	ANNUAL DEMAND
Heavy and Tractor-Trailer Truck Drivers	\$43,800	32
Laborers and Freight, Stock, and Material Movers, Hand	\$28,800	6
Bus and Truck Mechanics and Diesel Engine Specialists	\$49,400	2
Bus Drivers, Transit and Intercity	\$38,500	3
Light Truck Drivers	\$39,500	2
Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	\$106,500	1
Dispatchers, Except Police, Fire, and Ambulance	\$37,100	2
Office Clerks, General	\$33,400	2
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	\$53,300	2
Aircraft Mechanics and Service Technicians	\$58,600	1
Remaining Component Occupations	\$61,000	19

The Distribution/Logistics industry sector has strength in the Fredericksburg part of the region. Access to major highways, rail, and distribution centers allow this industry to thrive. However, there is often heavy traffic in the region that can hurt business. In other sub-regions, the lack of access to major highways limits the types of distribution/logistic industry that want to locate to that area. Furthermore, the lack of business ready sites that are large enough to accommodate distribution/logistic businesses, is a hinderance in the region. The region has an opportunity to prepare better sites for development within this industry cluster. The lack of currently available sites will hinder the region as other regions compete for businesses to locate on already prepared sites.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">• Access to major highways• Access to major railways• Warehousing and distribution centers	<ul style="list-style-type: none">• Availability of sites that can be distribution centers• Traffic in region
OPPORTUNITIES	THREATS
<ul style="list-style-type: none">• Prepare sites for development	<ul style="list-style-type: none">• Prepared sites in other regions of the state

INDUSTRY TRENDS

In 2020, there were 55 Transportation and Logistics (US Cluster Mapping) establishments in Region 6 (per covered employment establishment counts), a decrease from 61 establishments ten years earlier in 2010.¹³ Over the next two years the distribution/logistic industry cluster is expected to expand by 0.5% with the creation of 703 jobs. This is large opportunity for the region. The region has the opportunity to meet the needs of businesses within the region and attract new businesses into the region. By focusing on creating job training programs that will meet the needs of employers and preparing sites for new businesses, the region can set itself up for success and growth of this industry cluster.

REGIONAL INITIATIVES

The region currently does not have any initiatives that target this industry cluster.

¹³ Source: JobsEQ®, <http://www.chmuraecon.com/jobseq>

INFORMATION / DATA CENTERS REGION 6 INDUSTRY PROFILE

The Information/Data Centers industry sectors represents jobs in the Data Processing, Hosting, and Related Services (NACIS 58210) industry. This sector also focuses on encouraging the development of “data center certification” sites in the region. Currently there are only two certified sites in the region – both located in Stafford County.

EMPLOYMENT

1,002

Regional Employment

-3.7% 

Avg Ann % Change Last 5 Years

WAGES

\$41,306

Avg Wages Worker / \$49,230 Avg Wages in R6

0.77

Location Quotient

SECTOR SIGNIFICANCE IN REGION 6

The Information/Data Centers industry sector in Region 6 focuses around jobs such as Software Developers and Software Quality Assurance Analysts and Testers, Computer Systems Analysts, Computer and Information Systems Managers, Computer Occupations, Information Security Analysts, and Network and Computer Systems Administrators. The table below explores some of the occupations in the Information/Data Centers industry sector, their average annual wage, and the annual demand as of CY2021Q1.

6-DIGIT OCCUPATION	EMPL	AVG ANN WAGES	ANNUAL DEMAND
Software Developers and Software Quality Assurance Analysts and Testers	36	\$100,300	3
Computer Systems Analysts	9	\$96,400	1
Computer and Information Systems Managers	8	\$147,400	1
Computer Occupations, All Other	8	\$107,200	1
Information Security Analysts	7	\$102,900	1
Network and Computer Systems Administrators	7	\$84,300	1
Management Analysts	6	\$92,800	1

These occupations pay well above the region’s median income. This industry sector is primarily located in the Fredericksburg sub-region. Of the 1,002 jobs, 701 are located in the Fredericksburg sub-region, 89 in the Northern Neck, and 78 in the Middle Peninsula. The region shows strength in that nearly every firm relies on some form of information technology, data hosting, or cybersecurity. Education institutions in the region are hearing the needs of employers and providing training programs that can create a skilled workforce to meet their needs. However, there is a lack of available prepared sites to host data centers in the region. This is an opportunity for the region. Furthermore, education institutions can continue to expand their programming to continue to meet the needs of employers.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Virtually every firm relies on some form of information technology, data hosting, or cybersecurity • Proximity to Washington DC • Education institutions offering training programs 	<ul style="list-style-type: none"> • Access to sites that can be distribution centers
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Prepare sites for development • Workforce training to meet industry standards 	<ul style="list-style-type: none"> • Prepared sites in other regions of the state • Under skilled workforce

INDUSTRY TRENDS

In 2020, there were 15 Data Processing, Hosting, and Related Services establishments in the region (per covered employment establishment counts), a decrease from 27 establishments ten years earlier in 2010. In 2020, there were 122 Information establishments in the region (per covered employment establishment counts), a decrease from 164 establishments ten years earlier in 2010.¹⁴ Over the next two years the industry cluster is expected to grow 0.5% with the creation of 65 jobs.

REGIONAL INITIATIVES

Establishing a RIoT Accelerator Program in the Rappahannock Regional Entrepreneur Ecosystem

This project will utilize GO Virginia funds to expand entrepreneurial support programs in the Rappahannock Region (Rapp Region). These programs include the proven RIoT Accelerator Program (RAP) and additional community-focused programming across the Rapp-Region, housed in the technology-based Virginia Smart Community Testbed in Stafford. The Testbed is an initiative spearheaded by the Center for Innovative Technology (CIT) and Stafford to foster and create new Smart Technologies and attract the entrepreneurs that develop them in Virginia. In partnership with CIT, GO Virginia will seed fund a Technology Specialist for the Testbed. The Specialist will coordinate entrepreneurial opportunities in the Testbed and seed funds to foster pilot project for entrepreneurs. Together with the local RIoT VA-RAP Lead, they will play an integral part in the project. The VA-RAP Lead works with entrepreneurs around their entire business, including revenue, hiring and capital growth while the Tech Specialist advises on the technology-side and integrating entrepreneurs into pilot projects or with other tech companies connected to the Testbed. Go Virginia funds will be used to pay for a portion of salaries, equipment, outreach, and workshops.

- Statewide Project Theme: Entrepreneurial Activities
- Region 6 Priority Industry Cluster: Information/Data Centers and Professional/Scientific/Technical Services
- GO Virginia Request: \$215,000
- Match: \$204,500

¹⁴ Source: JobsEQ®, <http://www.chmuraecon.com/jobseq>

- Source of Match: Stafford County (cash & in-kind); City of Fred (in-kind); King George County (cash & in-kind); RIOT; CIT
- Project Type: Implementation
- Localities: City of Fredericksburg, Caroline, King George, Stafford, Spotsylvania
- How does this project create higher paying jobs? This project creates higher paying jobs by providing training to companies to grow their businesses in high growth sectors.

PamunkeyNet Business Plan

This project assists with the design and implementation of a sustainable business model for high-speed broadband delivery to underserved areas of Region 6. GO Virginia funds will be utilized for the development of a business plan and the creation of a new legal enterprise owned by the Pamunkey Tribe, which will serve as a conduit to currently untapped federal resources for broadband development. State broadband resources previously deployed in the region resulted in broadband infrastructure plans, but a business plan is still vital to the region's ability to seek any available resources for broadband implementation.

- Statewide Project Theme: Broadband
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Information/Data Centers; Manufacturing
- GO Virginia Request: \$50,000
- Match: \$83,000
- Source of Match: Fredericksburg Regional Alliance, Middle Peninsula Alliance, Middle Peninsula Planning District Commission, Essex County, Gloucester County and EDA, King & Queen County, King William County and EDA, Mathews County, Caroline County, the City of Fredericksburg, King George County, Spotsylvania County, Stafford County, Lancaster County, Richmond County, and the Towns of Tappahannock and West Point.
- Project Type: Enhanced Capacity Building
- Localities: Essex County, Gloucester County and EDA, King & Queen County, King William County and EDA, Mathews County, Caroline County, the City of Fredericksburg, King George County, Spotsylvania County, Stafford County, Lancaster County, Richmond County, and the Towns of Tappahannock and West Point.
- How does this project create higher paying jobs? This project creates higher paying jobs by providing a high performance backbone between towers and local access points to businesses, residents, and institutions that can ultimately utilize affordable and reliable high-speed capacity for the retention, formation, and attraction of higher-paying jobs.

Germanna Tech Talent Pipeline

This project will utilize GO Virginia funds to develop two new curriculums to train a workforce in information technology (IT), engineering, computer science and cyber related professions; host two summer camps for middle/high school students; and develop a web portal to engage students in jobs that meet their credentials. GO Virginia funds will be used to 1) purchase and install specialized lab equipment in 4 existing GCC classrooms, 2) train and certify 20 middle and high school instructors, 3) Cover roughly half the costs of the outreach activities in area middle and high schools, and 4) create and implement the web portal and communication/promotion campaign.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Manufacturing, Logistics/Distribution, Information/Data Centers, and Professional/Scientific/Technical Services
- GO Virginia Request: \$634,938
- Match: \$398,000
- Source of Match: Germanna Community College
- Project Type: Implementation
- Localities: City of Fredericksburg, Caroline, King George, Stafford, Spotsylvania
- How does it create high paying jobs? This project creates higher paying jobs by providing training to over 200 students in the IT and computer science related industries.

PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES REGION INDUSTRY PROFILE

The Professional, Scientific, and Technical Services industry sectors represents jobs in Engineering Services (NAICS 541330), Computer Systems Design Services (NAICS 541512), and Computer Related Services (NAICS 541519).

EMPLOYMENT

11,182

Regional Employment

3.6% 

Avg Ann % Change Last 5 Years

WAGES

\$91,108

Avg Wages Worker / \$49,230 Avg Wages in R6

0.98

Location Quotient

SECTOR SIGNIFICANCE IN REGION 6

The Professional, Scientific, and Technical Services industry sector in Region 6 focuses around jobs such as Software Developers and Software Quality Assurance Analysts and Testers, Computer Systems Analysts, Management Analysts, and Engineers. The table below explores some of the occupations in the Professional, Scientific, and Technical Services industry sector, their average annual wage, and the annual demand as of CY2021Q1.

6-DIGIT OCCUPATION	EMPL	AVG ANN WAGES	ANNUAL DEMAND
Software Developers and Software Quality Assurance Analysts and Testers	1,125	\$100,300	125
Management Analysts	784	\$100,800	94
Computer Systems Analysts	357	\$99,100	35
Civil Engineers	344	\$91,800	29

These occupations pay well above the region's median income.

The Professional, Scientific, and Technical Services industry cluster is primarily focused in the Fredericksburg sub-region, however, does have distribution across all the region. When accounting for population changes across the region, the industry cluster is distributed across all of the region. This sector is comprised of establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries. Region 6 strengths in this industry cluster are the region's location to major cities and the education levels of the population. However, the region lacks a strong connection between the businesses in the community and their needs and what is offered at the community college and university levels. There is also a lack of support for entrepreneurs who would potentially want to start a business in this cluster. The Northern Neck Workforce Training Feasibility and Site Selection study is working on

identifying gaps in the training in the region and the Establishing a RIoT Accelerator Program in the Rappahannock Regional Entrepreneur Ecosystem is working on helping entrepreneurs.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">• Access to DC, Richmond, and Hampton Roads• Highly educated population	<ul style="list-style-type: none">• Lack of training programs at universities and community colleges• Lack of entrepreneurial support services
OPPORTUNITIES	THREATS
<ul style="list-style-type: none">• Better matching of needs of industry with programs offered at universities and community colleges• Development of entrepreneurial support system	<ul style="list-style-type: none">• Other regions developing economies

INDUSTRY TRENDS

The Professional, Scientific, and Technical Services industry cluster establishments increased from 1,215 in 2010 to 1,316 in 2020. Employment across this sector has increased 3.6% in the past five years and is projected to grow 1.5% in the next two years. This industry cluster has a 0.98 LQ for the region. The average annual wages across the region for the Professional, Scientific, and Technical Services industry cluster is \$91,108, well above the region's median targeted income for job creation.

While the industry is expanding, the region can continue to assist this cluster. Targeting programs that create internship and apprenticeship opportunities with employers; developing business incubators, accelerators, and entrepreneurship startup programs; working to expand markets beyond the region will help this industry cluster grow.

REGIONAL INITIATIVES

Fredericksburg Region Cyber & Smart Tech Entrepreneurial Development Program

This project initiates a to assess the market demand for a Cyber and Smart Tech Entrepreneur program and the capacity of Stafford County's Economic Development Authority and Economic Development and Tourism Department to deliver such a program. GO Virginia funds will be utilized for the hiring of a consultant, RIoT, to understand the current ecosystem and plan ways to move it forward.

- Statewide Project Theme: Entrepreneurial Activities
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services
- GO Virginia Request: \$97,500
- Match: \$75,000
- Source of Match: Stafford County EDA, Stafford County Economic Development and Tourism, City of Fredericksburg, and King George County, OST, Inc. RIoT, Cyber Bytes Foundation, UMW Stafford, Germanna Community College, UMW Economic Development Department, and CIT
- Project Type: Enhanced Capacity Building
- Localities: Stafford County, City of Fredericksburg, King George County

- How does this project create higher paying jobs? This project creates higher paying jobs by providing understanding the ecosystem in which cyber entrepreneurs can build and grow in.

Virginia Sea Grant Resiliency Ecosystem Development

This project initiates a study to complete planning activities toward building a new industry cluster in Virginia, a water management economy that integrates workforce development, research and development, innovation, and commercialization.

- Statewide Project Theme: Entrepreneurial Activities
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services
- GO Virginia Request: \$49,996
- Match: \$49,996
- Source of Match: Middle Peninsula Planning District Commission and Middle Peninsula Alliance
- Project Type: Enhanced Capacity Building
- Localities: Essex County, Gloucester County, King and Queen County, Middlesex County, Mathews County, King William County, Town of Tappahannock, Town of Urbanna, and Town of West Point.
- How does this project create higher paying jobs? This project creates higher paying jobs by understanding the potential economy of water-based activities that could create entrepreneurial innovations.

Establishing a RIoT Accelerator Program in the Rappahannock Regional Entrepreneur Ecosystem

This project will utilize GO Virginia funds to expand entrepreneurial support programs in the Rappahannock Region (Rapp Region). These programs include the proven RIoT Accelerator Program (RAP) and additional community-focused programming across the Rapp-Region, housed in the technology-based Virginia Smart Community Testbed in Stafford. The Testbed is an initiative spearheaded by the Center for Innovative Technology (CIT) and Stafford to foster and create new Smart Technologies and attract the entrepreneurs that develop them in Virginia. In partnership with CIT, GO Virginia will seed fund a Technology Specialist for the Testbed. The Specialist will coordinate entrepreneurial opportunities in the Testbed and seed funds to foster pilot project for entrepreneurs. Together with the local RIoT VA-RAP Lead, they will play an integral part in the project. The VA-RAP Lead works with entrepreneurs around their entire business, including revenue, hiring and capital growth while the Tech Specialist advises on the technology-side and integrating entrepreneurs into pilot projects or with other tech companies connected to the Testbed. Go Virginia funds will be used to pay for a portion of salaries, equipment, outreach, and workshops.

- Statewide Project Theme: Entrepreneurial Activities
- Region 6 Priority Industry Cluster: Information/Data Centers and Professional/Scientific/Technical Services
- GO Virginia Request: \$215,000
- Match: \$204,500
- Source of Match: Stafford County (cash & in-kind); City of Fred (in-kind); King George County (cash & in-kind); RIoT; CIT
- Project Type: Implementation
- Localities: City of Fredericksburg, Caroline, King George, Stafford, Spotsylvania
- How does this project create higher paying jobs? This project creates higher paying jobs by providing training to companies to grow their businesses in high growth sectors.

Flex Space Due Diligence

This project initiates a study for the site characterization and building development of a 20,000 square foot flexible office building in the Town of Montross. GO Virginia funds will be utilized for due diligence activities including a Phase 1 Environmental Site Assessment, Threatened and Endangered Species Review, Archaeological and Architectural Review, geographic and topographic surveys, and schematic site and building designs.

- Statewide Project Theme: Regional Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services
- GO Virginia Request: \$50,000
- Match: \$50,000
- Source of Match: Westmoreland County and the Northern Neck Chesapeake Bay Region Partnership
- Project Type: Enhanced Capacity Building
- Localities: Westmoreland County and the Town of Montross
- How does this project create higher paying jobs? This project creates higher paying jobs by providing a potential space for relocation for businesses that met the targeted priority industry sectors.

Northern Neck Sites, Buildings, and Infrastructure Study

This project will complete a site, building, and infrastructure study of the Northern Neck region. GO Virginia funding will be used to 1) review all inventory of sites and building in the region; 2) create a feasibility study for three potential commercial/industrial sites located in three counties; 3) complete an infrastructure capacity evaluation to address potential business growth in two localities.

- Statewide Project Theme: Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services; Manufacturing
- GO Virginia Request: \$88,000
- Match: \$0
- Source of Match: No match required
- Localities: Northumberland County, Richmond County, Westmoreland County, Lancaster County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing a path to procuring the right facilities, appropriately sized, and located to achieve the higher-wage job growth in the priority industries.

Middle Peninsula Alliance Site Characterization

This project will complete a site characterization study of up to 16 sites in the Middle Peninsula region. GO Virginia funding will be used to study of up to 16 sites in the Middle Peninsula; recommend sites for further evaluation of development as a regionally-owned property; provide recommendations on market potential for properties in the ownership of the Middle Peninsula Public Access Authority; and make recommendations on steps to take to create a nutrient bank.

- Statewide Project Theme: Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services; Manufacturing
- GO Virginia Request: \$85,000
- Match: \$5,200

- Source of Match: Middle Peninsula Alliance
- Localities: Essex County, Gloucester County, King & Queen County, King William County, Middlesex County, and Mathews County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing a path to procuring the right facilities, appropriately sized, and located to achieve the higher-wage job growth in the priority industries.

Fredericksburg Regional Industrial Facilities Authority Study

This project will form a Regional Industrial Facilities Authority (RIFA) in accordance with the Virginia Regional Industrial Facilities Act (Va. Code Section 15.2-6400-6416) for the City of Fredericksburg, Caroline County, King George County, Stafford County, and Spotsylvania County.

- Statewide Project Theme: Site Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Manufacturing
- GO Virginia Request: \$14,665
- Match: \$7,335
- Source of Match: City of Fredericksburg, Caroline County, King George County, Stafford County, Spotsylvania County, Fredericksburg Regional Alliance
- Project Type: Enhanced Capacity Building
- Localities: City of Fredericksburg, Caroline County, King George County, Stafford County, and Spotsylvania County
- How does this project create higher paying jobs? This project creates higher paying jobs by setting up the framework for all the localities to create a RIFA that will enable shared revenue capabilities in site development projects.

Cybersecurity Certification Program

This project establishes a Certified Information Systems Security Professional (CISSP) certification program at UMW and equip 70 of the region's citizens with this certification to pursue employment at local businesses within the region. GO Virginia funds will be used to pay for course programming and instructor costs.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services
- GO Virginia Request: \$110,000
- Match: \$110,000
- Source of Match: City of Fredericksburg, King George County, Stafford County, University of Mary Washington, Germanna Community College, and Rappahannock Community College
- Localities: City of Fredericksburg, King George County, and Stafford County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing training towards a CISSP certification that provide jobs at above the regional average.

Northern Neck Workforce Training Feasibility and Site Selection Study

This project will examine current and future workforce needs and the requirements for undertaking appropriate training to meet the available jobs of today and in the future. GO Virginia funding will be used for an assessment that will include a blueprint of what is needed by local companies and other workforce

needs, prioritization for implementation, cost estimates, and the necessary steps to improve the quality and quantity of workforce training in the region.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Manufacturing
- GO Virginia Request: \$62,500
- Match: \$62,500
- Source of Match: US Department of Labor
- Project Type: Enhanced Capacity Building
- Localities: Richmond County, Westmoreland County, Lancaster County, Northumberland County, Essex County, Gloucester County
- How does this project create higher paying jobs? This project creates higher paying jobs by understanding what training needs are necessary to create higher paying jobs in this sub-region.

Fredericksburg Region Industry Cluster Analysis

This study will focus on identifying detailed 4-digit NAICS level industries within the broader 2-digit industries already identified in the Growth and Diversification Plan such as Manufacturing, Distribution and Logistics, IT and Data Centers, and Professional Services. It is at this 4-digit level that the Fredericksburg Region Industry Cluster Analysis would provide the most benefit to our region and individual localities.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Professional, Scientific, and Technical Services; Manufacturing
- GO Virginia Request: \$30,000
- Match: \$15,000
- Source of Match: Fredericksburg Regional Alliance, Vakos, Transurban, Germanna Community College
- Project Type: Enhanced Capacity Building
- Localities: City of Fredericksburg, Caroline County, King George County, Stafford County, and Spotsylvania County
- How does this project create higher paying jobs? This project creates higher paying jobs by providing understanding of the current industries within the Fredericksburg region to attract new companies to the region and expand current companies.

Good Jobs Here

This project will complete planning activities towards documenting a 1) better focus all the region's economic development efforts, 2) draw together a variety of elements and organizations to have a larger and more sustained impact, 3) increase the use of available Go Virginia funds for successful and innovative projects, and 4) prepare the community for an even more positive future.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services
- GO Virginia Request: \$50,000
- Match: \$9,900
- Source of Match: George Washington Regional Commission

- Localities: City of Fredericksburg, Caroline County, King George County, Stafford County, Spotsylvania County
- How does this project create higher paying jobs? This project creates higher paying jobs by understanding the current landscape of jobs within the region and creating a plan to grow jobs within the Fredericksburg area.

Germanna Tech Talent Pipeline

This project will utilize GO Virginia funds to develop two new curriculums to train a workforce in information technology (IT), engineering, computer science and cyber related professions; host two summer camps for middle/high school students; and develop a web portal to engage students in jobs that meet their credentials. GO Virginia funds will be used to 1) purchase and install specialized lab equipment in 4 existing GCC classrooms, 2) train and certify 20 middle and high school instructors, 3) Cover roughly half the costs of the outreach activities in area middle and high schools, and 4) create and implement the web portal and communication/promotion campaign.

- Statewide Project Theme: Workforce Development
- Region 6 Priority Industry Cluster: Manufacturing, Logistics/Distribution, Information/Data Centers, and Professional/Scientific/Technical Services
- GO Virginia Request: \$634,938
- Match: \$398,000
- Source of Match: Germanna Community College
- Project Type: Implementation
- Localities: City of Fredericksburg, Caroline, King George, Stafford, Spotsylvania
- How does it create high paying jobs? This project creates higher paying jobs by providing training to over 200 students in the IT and computer science related industries.

TeleHealth Needs Assessment

This project requested GO Virginia ERR Fast Access funds to complete a study to understand the ability to host a telehealth center in the future King and Queen TeleWork Incubation center.

- Statewide Project Theme: Workforce Development/Entrepreneurial Activities
- Region 6 Priority Industry Cluster: Professional, Scientific and Technical Services
- GO Virginia Request: \$50,000
- Match: \$25,000
- Source of Match: King and Queen County
- Localities: King and Queen County, Town of West Point
- How does this project create higher paying jobs? This project creates higher paying jobs by allowing employers to have a facility close to work for employees to receiving medical testing.

SKILLS GAP ANALYSIS OF TARGETED INDUSTRY CLUSTERS

The 2019 Region 6 Growth and Diversification Plan highlighted shortfalls in the pipeline of skilled workers. Across the region, Region 6 has a sufficient available regional labor pool to support targeted industry clusters. These shortfalls centered around the need for more workers with baccalaureate degrees and “middle-skill” occupations that require a two-year post-secondary certificate or less.

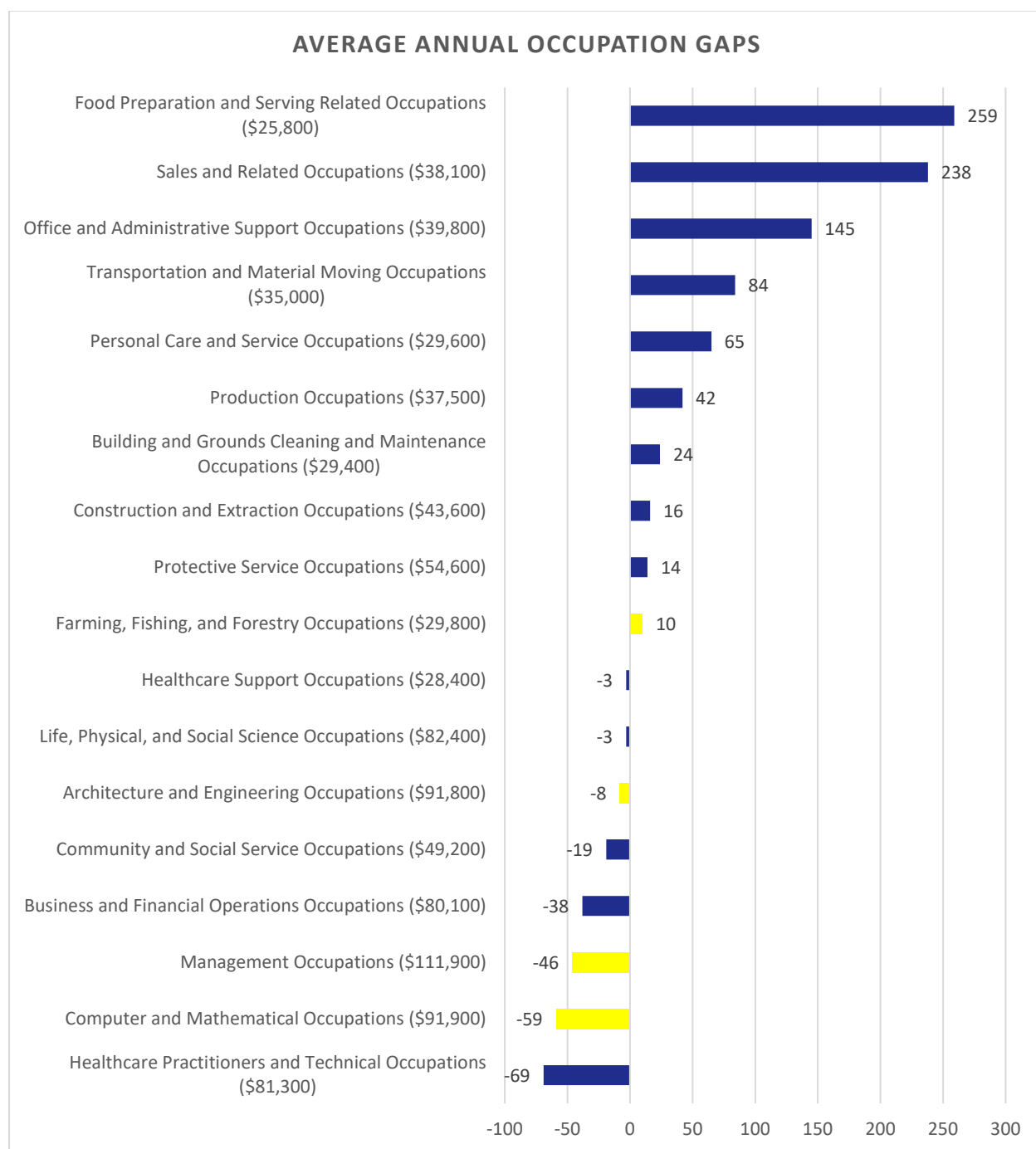
The analysis of regional occupational employment showed that the available regional labor pool exceeded current employment in each of the identified targeted industry clusters. However, there were two cases where that margin was noticeably narrower.

In the Professional, Scientific, Technical Services there were limitations in the regional labor pool available to certain industries within the cluster. Specifically, the Information Security Analysts, Software Developers, and Management Occupations. Gaps related to this industry can be traced to the need of specialized credentialing related to the industry. As of October 2021, there were 85 job postings requiring Cisco Certified Network Associate (CCNA) and 65 requiring CompTIA Security+ CE (Continuing Education) Certification. Germanna Community College offers certification preparation courses to students, however there is still a demand in the community for skilled professionals.

In the Transportation and Warehousing industry cluster, there were limitations in the regional labor pool available to certain industries within the cluster particularly in the Truck Transportation industry. There is a high demand for individuals with a Commercial Driver's License (CDL). As of October 2021, there were 86 job listings in the region requiring a CDL.

The stakeholder work group on workforce development issues recommended that there be a stronger emphasis on work-based learning experiences starting with programs in the local school divisions and continuing through the community college and university systems. Programs such as apprenticeships, internships, career and technical education and credentialing are all based on work-based learning experiences. Stakeholders noted exposure to in-demand career options should start in middle school and continue with work-based skills development in high school and in higher education institutions.

The table below examines the average annual occupation gaps over the next five years within Region 6. Negative gaps represent occupations where expected demand exceeds supply, meaning more training or support will be needed across the region to grow occupation supply enough to meet the demands of businesses within the region. The occupations highlighted in yellow represent those in which Region 6 priority industry clusters are located. A detailed view of skills gaps by industry cluster can be found in the skills gap appendix.



The Average Annual Occupation Gap table demonstrates over the next five years Region 6 will need focus efforts on Computer and Mathematical Occupations, Management Occupations, and Architecture and Engineering Occupations (Professional, Scientific and Technical Services industry cluster).

When examining total demand of workers by each of the priority industry clusters there is a clear demand for workers in each of the priority industry clusters.

OCCUPATION DISTRIBUTION					
	Current	2-Year Demand			
Priority Industry Cluster	Empl	Exits	Transfers	Empl Growth	Total Demand
Aquaculture/Seafood/Commercial Fishing/Marine Industries	860	61	128	-35	154
Forestry/Wood Products and Paper	1,909	142	314	-28	428
Manufacturing	1,544	105	209	-27	287
Distribution/Logistics	8,431	664	1,290	67	2,021
Information/Data Centers	1,002	63	140	6	209
Professional, Scientific and Technical Services	11,182	643	1,497	330	2,470

However, the Aquaculture/Seafood/Commercial Fishing/Marine Industries, Forestry/Wood Products and Paper, and Manufacturing clusters are projected to see a decline in employment growth over the next two years regionally.

The Aquaculture/Seafood/Commercial Fishing/Marine Industries, Forestry/Wood Products and Paper, and Manufacturing clusters are predominated in the Northern Neck and Middle Peninsula sub-regions. When examining demand for these industries in these sub-regions, there is not a high of a loss over the next two years.

OCCUPATION DISTRIBUTION - NORTHERN NECK, VA PDC 17					
	Current	2-Year Demand			
Priority Industry Cluster	Empl	Exits	Transfers	Empl Growth	Total Demand
Aquaculture/Seafood/Commercial Fishing/Marine Industries	604	48	79	-27	100
Forestry/Wood Products and Paper	392	32	60	-5	88
Manufacturing	382	27	46	-9	64

OCCUPATION DISTRIBUTION – MIDDLE PENINSULA, VA PDC 18					
	Current	2-Year Demand			
Priority Industry Cluster	Empl	Exits	Transfers	Empl Growth	Total Demand
Aquaculture/Seafood/Commercial Fishing/Marine Industries	199	15	15	-7	33
Forestry/Wood Products and Paper	1,023	79	145	-14	210
Manufacturing	309	24	40	-9	55

GO Virginia Region 6 has the following educational institutions that are used to train workers and fill the needs of companies in the region:

- University of Mary Washington
- Germanna Community College
- Rappahannock Community College
- Northern Neck Technical Center
- Virginia Institute of Marine Sciences
- K-12 Public Education in Each Locality

- Commonwealth Governor's School
- Chesapeake Bay Governor's School

The following table examines current certifications demands in the region as of October 2021. There is a high demand for additional credentialing in the Distribution/Logistics and Professional, Scientific and Technical Services industry clusters.

CERTIFICATIONS	
Certification Name	Total Ads
Commercial Driver's License (CDL)	86
Cisco Certified Network Associate (CCNA)	85
CompTIA Security+ CE (Continuing Education) Certification	65
Certified Public Accountant (CPA)	53
Certified ScrumMaster (CSM)	46
Cisco Certified Network Professional (CCNP)	42
Systems Security Certified Practitioner (SSCP)	39
Certified Information Systems Auditor (CISA)	37
GIAC Security Essentials Certification (GSEC)	37
Certified Information Security Manager (CISM)	31
CompTIA Advanced Security Practitioner (CASP)	30
Class B Commercial Driver's License (CDL-B)	27
Engineer in Training (EIT)	27
GIAC Certified Incident Handler (GCIH)	26
Microsoft Certified Solutions Associate (MCSA)	26
Certified Cloud Security Professional (CCSP)	22
Certified Ethical Hacker (C/EH)	22
Microsoft Certified Solutions Expert (MCSE)	22
Microsoft Technology Associate (MTA)	22
Amazon Web Services Certification (AWS Certification)	21
AED Essentials	18
GIAC Security Leadership Certification (GSLC)	18
Microsoft Certified Technology Specialist (MCTS)	16
Certification in Risk and Information Systems Control (CRISC)	15
Information Technology Infrastructure Library Certification (ITIL)	15
AWS Certified Security	13
EPA Universal Certification	13
Forklift Certified	13
Cisco Certified Internetwork Expert (CCIE)	12
GIAC Certified Enterprise Defender (GCED)	12
Network+ Certification	12
AWS Certified Solutions Architect	11
GAIC Reverse Engineering Malware (GREM)	11
GIAC Certified Forensics Analyst (GCFA)	11
Certified Scrum Developer (CSD)	10

IDENTIFICATION OF PLAN GOALS AND ACTIONABLE STRATEGIES

From May 25th, 2021 through July 14th, 2021 Region 6 held seven stakeholder engagement sessions with partners throughout the region to provide input and share views about the current and future state of the Region's economy.

SUMMARY OF STAKEHOLDER ENGAGEMENT SESSIONS

GO Virginia Region 6 contracted with the Fredericksburg Regional Alliance and The Chapman Company to conduct an analysis of the region's entrepreneurial landscape and facilitate stakeholder engagement around entrepreneurship in the region; Draper Aden Associates to examine all currently characterized sites in Region 6 and facilitate site development conversations; and the Center for Economic and Community Engagement at Virginia Tech to facilitate workforce development conversations. These consultant reports helped shape the conversations of the stakeholder engagement sessions and the priorities outlined below. These reports can be found in the appendix of this document.

Session 1 laid the groundwork for stakeholders to understand the importance of all three priority areas as fundamental tools for successful economic development; understand the current status of assets of these priority areas in GO Virginia Region 6; and understand the linkage of all three priority areas as it relates to the economic health of the entire Region.

Sessions 2 and 3 divided stakeholders into the priority investment areas of Entrepreneurship Ecosystem Development, Site Development, and Workforce Development. Each investment area held individual meetings in which stakeholders discussed the gaps in the region and actionable strategies to recommend to the Council to help close these gaps.

Below outlines the priorities for the region identified through these stakeholder engagement sessions.

ENTREPRENEURSHIP ECOSYSTEM

Problem: What activities can we undertake to foster the development of entrepreneurial companies? How can we foster an environment where existing small and medium businesses can grow?

GO Virginia Region 6's economy is a combination of urban and rural. The Greater Fredericksburg region is impacted by suburban sprawl from Northern Virginia and many companies have expanded or moved to the Fredericksburg region from DC, Northern Virginia, or elsewhere due to the proximity of the DC area. These companies are primarily in the Information / Data Centers or Professional, Scientific and Technical Services industry clusters. The Northern Neck and Middle Peninsula sub-regions face a different challenge because their entrepreneurs tend to focus on the industry cluster Aquaculture / Seafood / Commercial Fishing / Marine Industries, Forestry / Wood Products / Paper, and Manufacturing. Regardless of the industry cluster, the region as a whole has not connected entrepreneurs with resources available throughout the region to help them grow and prosper in the region.

Region 6 contracted with the Chapman Company with consultation from the Fredericksburg Regional Alliance in 2021 to conduct an update of the region's entrepreneurship landscape. The broad consensus among stakeholders and empirical findings was that entrepreneurial programs, assistance, facilities and

access to capital needed to be expanded throughout the region. The entrepreneurial expansion needs to happen both programmatically and geographically since there are significant gaps in types of services available and access to those services. Expansion of youth entrepreneurship programs, expanded incubator/accelerator/co-working facilities, expanded small business development services, additional business plan competitions and additional financial resources are needed in the region. There was also agreement that greater regional cooperation was needed to augment the delivery of entrepreneurial programs in the region. The following goals, objectives, and strategies have been developed from this report, PowerPoint, and stakeholder engagement sessions as conducted by the Chapman Company.

GOAL 1 Develop a strong entrepreneurial ecosystem

OBJECTIVE Establish an entrepreneurship ecosystem hub in the region

Strategy 1 Develop an entrepreneurial ecosystem development plan for the region

Performance Measure Development of a plan to use GO Virginia funds to address critical gaps as identified by TEconomy in the 2021 update and the Chapman Company as contracted by Region 6

Strategy 2 Develop a robust network of entrepreneurs from both 'main street businesses' and 'high growth businesses'

Performance Measure Companies served, new sales by small- and medium-sized establishments (SMEs) in target clusters

Strategy 3 Develop programming to help businesses at all stages develop and grow.

Performance Measure Number of businesses served at the startup, growth, and maturity stages of development

Strategy 4 Capitalize on the large concentration of veteran population in the region to foster prospective entrepreneurs.

Performance Measure Number of veterans served in new business creation programming

GOAL 2 Identify, empower, and support entrepreneurs

OBJECTIVE Promote the development of 'main street businesses' and 'high growth businesses'

Strategy 1 Connect to existing and develop new activities aimed to support entrepreneurs.

Performance Measure Number of entrepreneurs connected to startup business programming

Strategy 2 Build awareness around existing business support programs and resources in the region.

Performance Measure Number of companies connected to business support programs in each sub-region

GOAL 3 Enhance technology commercialization from research centers and institutions

OBJECTIVE Develop and construct a technology commercialization system

Strategy 1 Provide counseling, mentoring and other instructional programs for technology and venture-backed startups, to facilitate innovators bringing new technologies to the marketplace.

Performance Measure Number of businesses connected to mentoring programs

Strategy 2 Create industry review council to provide insight and expertise on technology commercialization opportunities.

Performance Measure Change in number of new business startups, increasing the value of commercialized IP

Strategy 3 Foster the development of maker's spaces for idea exploration.

Performance Measure Number of entrepreneurs served

MEASURES OF PERFORMANCE

Measures of Performance are specific to each strategy outlined above. Region 6 will look to the grant applicant to define the measure of performance for each project. Region 6 will use the GO Virginia Project Guidance and Metrics and Project Performance Metrics as outlined by the Department of Housing and Community Development (DHCD) as benchmark for each project. In determining progress towards achieving each of the strategies outlined above, Region 6 has defined specific performance metrics for each strategy as outlined with each strategy.

PROJECT PIPELINE

The following Project Pipeline is a summary of known and proposed projects that are currently underway or being developed in the region to assist the region in meeting the goals as outlined above as of October 2021.

FUNDED PROJECTS

- Fredericksburg Region Cyber & Smart Tech Entrepreneurial Development Program
 - Completed: June 2021
- Establishing a RIOT Accelerator Program in the Rappahannock Regional Entrepreneur Ecosystem
 - Planned Close Date: June 2023
- Commercial Kitchen at Hull Springs
 - Planned Close Date: June 2022
- Virginia Sea Grant Resiliency Ecosystem Development
 - Completed: December 2020
- Launching a Coastal Resilience and Adaptation Economy
 - Planned Close Date: March 2023

PROJECTS IN DEVELOPMENT

- RIOT Pre-Accelerator Program
 - Planned Approval: December 2021
- Establishing an Entrepreneurial Ecosystem Study
 - Planned Approval: Spring 2022

SITE DEVELOPMENT

Problem: How can the region collaborate regionally to increase the inventory of shovel ready sites in the region to attract prospects? Keep in mind that the VEDP's VBRS and GO Virginia are not mutually exclusive and can be combined to solve this problem.

In 2019, the Virginia Economic Development Partnership (VEDP) examined and characterized 466 sites across the State to determine the types and amount of investment required to make these sites shovel-ready. The VEDP Site Characterization process evaluated each property using a 5-level tiered system to show the degree of readiness for economic development. The sites readiness scoring system, along with

a prioritization process guided by VEDP and aligned with each region's Growth and Diversification Plan, should serve as a guide to site investments by GO Virginia.

In 2021, Region 6 contracted with Draper Aden Associates (DAA) to examine and create a list of all characterized sites in the region over 10 acres. In 2021, the Department of Housing and Community Development (DHCD) and GO Virginia updated Site Development project guidance to define "regionally significant" sites. This guidance is found on GO Virginia's website hosted by DHCD and guides the types of projects Region 6 will fund. DAA found 83 characterized sites in Region 6. VEDP defines business ready sites on a 5-level tiered system. As full definition of the tier rating system can be found on VEDP's website. Sites that are unranked have not had characterization reports completed. Sites ranked at tiers 1 and 2 are not seen as business ready. Sites ranked at tiers 3, 4, or 5 are more likely to be purchased by businesses for the purposes of development in targeted industry clusters.

DAA found that of the available sites and buildings, they are concentrated in the Fredericksburg sub-region. There are few publicly owned sites in the region. While GO Virginia funds can be used to improve privately owned sites, there are provisions that must be in place to agree to advance the site towards the region's prioritized industry clusters. The Manufacturing and Distribution/Logistics (priority industry clusters) typically require larger sites with utility service (water, sewer and gas) – there is a limited selection of sites meeting these industry standards. DAA found that Region 6 had two sites ranked at a tier 4, 0 at a tier 3, and 63 sites at a tier 2. Of those tier 2 sites, 42 were greater than 25 available acres with compatible zoning for the entire available acreage. The following goals, objectives, and strategies were created based on the findings of DAA and their recommended strategies. The full report by DAA can be found in the appendix of this plan.

GOAL 1 Increase the number of business ready sites within the region to either Tier 3, Tier 4, or Tier 5 sites.

OBJECTIVE Fund regionally significant sites grouped around priority industry clusters to move up the Virginia Business Ready Sites Program (VBRSP) tier scale to either Tier 3, Tier 4, or Tier 5 sites within 24 months.

Strategy 1 Ensure the understanding of the importance of site development and available sites with local elected officials and county administrators; public and private utility companies; utility cooperatives; regional planning organizations; and local and regional economic development organizations.

Performance Measure Number of partners engaged in site development.

Strategy 2 Support localities efforts in determining best grouping of sites from prioritization list.

Performance Measure Prioritization lists created on locality and regional levels.

Strategy 3 Fund regionally significant sites based on prioritized list to either Tier 3, Tier 4, or Tier 5 sites.

Performance Measure Number of regionally significant site development projects funded

GOAL 2 Increase the number of site characterizations across the region.

OBJECTIVE Fund regionally significant sites grouped around priority industry clusters to become characterized as defined by the Virginia Business Ready Sites Program (VBRSP) tier scale.

- Strategy 1** Develop list of uncharacterized sites and determine regional significance.
Performance Measure List of new uncharacterized sites created.
- Strategy 2** Support localities in characterizing previously uncharacterized sites and define a prioritization list.
Performance Measure Prioritization lists created on locality and regional levels.

MEASURES OF PERFORMANCE

Measures of Performance are specific to each strategy outlined above. Region 6 will look to the grant applicant to define the measure of performance for each project. Region 6 will use the GO Virginia Project Guidance and Metrics and Project Performance Metrics as outlined by the Department of Housing and Community Development (DHCD) as benchmark for each project. In determining progress towards achieving each of the strategies outlined above, Region 6 has defined specific performance metrics for each strategy as outlined with each strategy.

PROJECT PIPELINE

The following Project Pipeline is a summary of known and proposed projects that are currently underway or being developed in the region to assist the region in meeting the goals as outlined above as of October 2021.

FUNDED PROJECTS

- Flex Space Due Diligence
 - Completed: April 2020
- PamunkeyNet Business Plan
 - Completed: December 2020
- Northern Neck Sites, Buildings, and Infrastructure Study
 - Completed: July 2020
- Middle Peninsula Alliance Site Characterization
 - Completed: June 2020
- Fredericksburg Regional Industrial Facilities Authority Study
 - Planned Close Date: December 2021

PROJECTS IN DEVELOPMENT

- As of October 2021, Region 6 has no planned Site Development projects.

WORKFORCE DEVELOPMENT

Problem: How can we solve the three major workforce challenges that the region faces: 1. Aligning Virginia talent with current and prospective job opportunities, 2. Adapting education and training programs to meet current and prospective Virginia business needs, and 3. Attracting and retaining talent from outside Virginia.

GO Virginia Region 6's workforce development efforts face major gaps between the needs of employers and the region's education institutions. The region faces issues in soft skills training, work-based learning

and internships, and career pathways and K-12 career preparation. The region lacks variety in pathways to help workers who are just entering the workforce or switching careers, leveraging existing non-degree training and certification programs, expanding apprenticeship and internship opportunities, and programs supporting exiting military, where possible. Region 6 contracted with Virginia Tech's Center for Economic and Community Engagement (CECE) to facilitate stakeholder engagement sessions around workforce development challenges in the region. The following goals, objectives, and strategies were created based on the findings of CECE and their recommended strategies. The full report by CECE can be found in the appendix of this plan.

GOAL 1 Adapt education and training programs to meet current and prospective business needs

OBJECTIVE Strengthen and expand non-degree programs (e.g., certifications and credentials) that meet the needs of regional employers.

Strategy 1 Complete Rappahannock Workforce Study

Performance Measure Completion of Rappahannock Workforce Study

Strategy 2 Implement Action Items Determined in Rappahannock Workforce Study

Performance Measure Implementation of Rappahannock Workforce Study

Strategy 3 Examine current course offerings and gaps amongst Community Colleges and Universities with the needs of employers.

Performance Measure Course offerings compared to job postings in the region.

Strategy 4 Determine training gaps based on needs from employers.

Performance Measure Number of companies engaged.

Strategy 5 Organize regional cluster networks to promote collaborative workforce development and training solutions.

Performance Measure Participating companies, cluster employment.

GOAL 2 Align Region 6 Talent with Current and Prospective Job Opportunities.

OBJECTIVE Establish internship programs that connect students with employers in the region in priority industry sectors.

Strategy 1 Engage employers in priority industries and determine current programs.

Performance Measure Participating employers and education institutions.

Strategy 2 Develop internship programs for employers in small to mid-sized companies (SMEs).

Performance Measure Number of SMEs participating in internship program creation, jobs created/retained due to training

OBJECTIVE Establish programs for high school students to learn about jobs in the region and a pathway to entry.

Strategy 1 Engage K-12 schools to strengthen and expand non-college degree programs (e.g., certifications and credentials)

Performance Measure Certifications and credentials granted

Strategy 2 Enhance job shadowing programs with employers.

Performance Measure Number of companies participating in job shadowing program creations.

Strategy 3 Establish regional career exhibitions to connect students with summer job opportunities.

- Performance Measure* Program placements, completions, placements in summer job positions.
- GOAL 3** Attract and Retain Talent in the Region
- OBJECTIVE** Establish pathway programs for workers within the region for career advancement.
- Strategy 1** Develop work-based learning opportunities that incorporate soft skills training to keep employees.
- Performance Measure* Program placements, completions, placements in permanent full-time positions
- Strategy 2** Strengthen and expand programs that prepare mid-career personnel with the skills and certifications necessary to enter priority industry fields.
- Performance Measure* Program placements, completions, placements in permanent full-time positions

MEASURES OF PERFORMANCE

Measures of Performance are specific to each strategy outlined above. Region 6 will look to the grant applicant to define the measure of performance for each project. Region 6 will use the GO Virginia Project Guidance and Metrics and Project Performance Metrics as outlined by the Department of Housing and Community Development (DHCD) as benchmark for each project. In determining progress towards achieving each of the strategies outlined above, Region 6 has defined specific performance metrics for each strategy as outlined with each strategy.

PROJECT PIPELINE

The following Project Pipeline is a summary of known and proposed projects that are currently underway or being developed in the region to assist the region in meeting the goals as outlined above as of October 2021.

FUNDED PROJECTS

- Welding Training Program
 - Completed: August 2020
- Virginia Sea Grant Resiliency Ecosystem Development
 - Completed: December 2020
- Northern Neck Workforce Training Feasibility & Site Selection Study
 - Planned Close Date: December 2021
- Cyber Certification Program
 - Planned Close Date: January 2022
- Germanna Community College Tech Talent Pipeline
 - Planned Close Date: January 2023
- Commercial Kitchen at Hull Springs
 - Planned Close Date: June 2022

PROJECTS IN DEVELOPMENT

- Northern Neck Workforce Training Implementation
 - Spring 2022

STRATEGIC PARTNERS FOR COLLABORATION

The following are opportunities for collaboration or complementary efforts for each of the strategies outlined above.

ENTREPRENEURSHIP DEVELOPMENT

POTENTIAL PARTNERS

- Fredericksburg Regional Alliance (FRA) – the FRA has indicated to the Region 6 a desire to lead entrepreneurship ecosystem development efforts across the region. The FRA is currently the regional economic development organization for the Fredericksburg region, however has the ability and desire to coordinate efforts to expand entrepreneurship services and assist entrepreneurs across Region 6.
- GENEDGE – GENEDGE received funding from GO Virginia through statewide competitive funding to assist each region to invest in services for small and medium size manufacturers from across Virginia with the potential to address reducing supply chain risk of critical technologies via improved capability and capacity of existing companies. This is an opportunity for the region to expand our existing businesses.
- Virginia Small Business Development Center – Virginia SBDC received funding from GO Virginia through statewide competitive funding to assist technology start ups grow. VA SBDC will hire regional coordinators to assist businesses in their growth. This is an opportunity for the region to connect entrepreneurs with state services.
- RIOT – RIOT is a North Carolina based entrepreneur service provided expanding in Virginia. With initial work completed in the Fredericksburg region, the region has an opportunity to expand RIOT's services further into the region.

OTHER POTENTIAL PARTNERS

- Business support providers - GENEDGE Alliance
- Industry groups
- Economic Development Organizations
- Chambers of Commerce
- Area incubators and accelerators
- Universities – University of Mary Washington
- Relevant state organizations - Virginia Economic Development Partnership, Center for Innovative Technology
- Private sector companies
- Area incubators and accelerators
- Federal research agencies - Naval Support Facility Dahlgren

POTENTIAL SOURCES OF MATCHING FUNDS

- Virginia's Center for Innovative Technology (CIT)
- Community Foundations

- Department of Housing and Community Development (DHCD) – Community Business Launch, Building Entrepreneurial Communities, CBDG Planning Grants
- GENEDGE
- Industry groups and associations
- Kaufman Foundation
- Local Government
- Private sector companies
- Small Business Administration (SBA)
- UMW Small Business Development Center (SBDC)
- US Department of Agriculture (USDA) – Rural Development
- Virginia Economic Development Partnership (VEDP)– International Trade

SITE DEVELOPMENT

POTENTIAL PARTNERS

- Regional Economic Development Organizations (REDOs) – the REDOs in each sub-region of the region are potential partners in site development projects across the region. The REDOs typically assist localities in marketing their sites to potential companies and have an interest in seeing industry grow in the region.
- Localities – each locality is key in developing a list of regionally significant sites and creating a prepared site.
- Private land owners – GO Virginia funds can be used to develop privately owned sites in conjunction with the localities. Private land owners will have to work collaboratively with the localities to develop the land and market it for targeted industry development.

POTENTIAL SOURCES OF MATCHING FUNDS

- Local jurisdictions
- Private sector companies
- Virginia Economic Development Partnership (VEDP)
- Department of Housing and Community Development (DHCD) – Industrial Revitalization Fund
- US Department of Agriculture (USDA) – Rural Development
- Virginia Department of Transportation (VDOT) – Industrial Access Road Program
- US Economic Development Administration (US EDA)

WORKFORCE DEVELOPMENT

POTENTIAL PARTNERS

- Community Colleges – Community colleges play a critical role in workforce development across the nation. They have a broad mission to provide academic programming and skills training to prepare students for jobs or to transfer to four-year colleges and universities.

- Local School Divisions – Students shall (i) complete an Advanced Placement, honors, International Baccalaureate, or dual enrollment course; or (ii) complete a high-quality work-based learning experience, as established by Board guidance on work-based learning; or (iii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the advanced studies diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment. This graduation requirement positions the region to engage students at the high school level to fill gaps in training and workforce across the region in a variety of industries.
- Northern Neck Technical Center – a career and technical education (CTE) center located in the Northern Neck. This facility already trains many students for in-demand jobs in the region. Expanding the efforts of the facility could help grow the workforce.
- University of Mary Washington – the only four-year institution in the region, with numerous Continuing and Professional Studies programs, UMW is a key partner for future GO Virginia projects.
- Workforce Development Board (WDB) – the Workforce Development Board administers the federally funded employment & training programs which serve adults and youth from low-income family (economically disadvantaged) and other eligible workers who have lost their jobs. The Workforce Development Area supports public/private partnerships involving local government, business and industry, labor, education and training institutions, employment services, and community support organizations. The WDB is a key partner in collaborating with businesses across the region to utilize GO Virginia funds.

OTHER POTENTIAL PARTNERS

- Chamber of Commerce
- Colleges and universities – University of Mary Washington, Virginia Institute of Marine Science
- Economic Development Authorities
- Goodwill Industries
- Industry groups
- Localities
- Private and non-profit training providers
- Private sector companies
- Public school systems, particularly Career and Technical Education Programs
- Regional Economic Development Organizations (REDOs)
- Regional Workforce Boards
- United Way

POTENTIAL SOURCES OF MATCHING FUNDS:

- Workforce Innovation and Opportunity Act funding
- Local jurisdictions

- Regional foundations
- Private sector companies
- Industry groups and associations

APPENDIX A: TARGETED INDUSTRY CLUSTERS

GO VIRGINIA REGION 6 – ALL INDUSTRIES

TARGETED INDUSTRIES IN REGION 6 HIGHLIGHTED IN YELLOW

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
	Total - All Industries	170,097	\$49,230	1.00	4,712	0.6%	39,369	15,922	21,319	2,127	0.6%
11	Agriculture, Forestry, Fishing and Hunting	1,970	\$34,806	0.85	-188	-1.8%	401	181	244	-24	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	267	\$48,354	0.40	15	1.1%	59	18	37	4	0.8%
22	Utilities	992	\$77,771	1.10	43	0.9%	181	65	114	2	0.1%
23	Construction	11,469	\$47,791	1.15	509	0.9%	2,357	809	1,446	101	0.4%
31	Manufacturing	5,399	\$54,328	0.39	-493	-1.7%	1,036	412	705	-81	-0.8%
42	Wholesale Trade	4,151	\$53,239	0.64	-385	-1.8%	866	328	543	-5	-0.1%
44	Retail Trade	22,917	\$29,721	1.31	-445	-0.4%	6,022	2,699	3,409	-87	-0.2%
48	Transportation and Warehousing	6,353	\$50,526	0.79	1,669	6.3%	1,450	578	782	90	0.7%
51	Information	1,688	\$48,026	0.50	-363	-3.8%	327	118	208	1	0.0%
52	Finance and Insurance	8,244	\$64,779	1.17	446	1.1%	1,604	585	958	61	0.4%
53	Real Estate and Rental and Leasing	2,327	\$46,575	0.78	141	1.3%	479	214	256	8	0.2%
54	Professional, Scientific, and Technical Services	12,327	\$82,334	1.04	1,551	2.7%	2,523	794	1,340	389	1.6%
55	Management of Companies and Enterprises	1,827	\$92,293	0.70	268	3.2%	351	122	209	20	0.5%
56	Administrative and Support and Waste Management and Remediation Services	7,076	\$37,184	0.66	844	2.6%	1,765	695	947	122	0.9%
61	Educational Services	16,992	\$42,580	1.21	-118	-0.1%	3,349	1,518	1,638	193	0.6%
62	Health Care and Social Assistance	21,972	\$47,681	0.88	931	0.9%	4,917	2,061	2,131	725	1.6%
71	Arts, Entertainment, and Recreation	2,811	\$27,340	0.96	-494	-3.2%	868	357	441	70	1.2%
72	Accommodation and Food Services	14,751	\$18,485	1.08	-1,300	-1.7%	5,042	2,123	2,675	243	0.8%
81	Other Services (except Public Administration)	9,160	\$28,669	1.23	11	0.0%	2,209	956	1,141	112	0.6%
92	Public Administration	16,899	\$92,470	2.03	1,639	2.1%	3,225	1,316	1,789	120	0.4%
99	Unclassified	503	\$42,198	2.88	431	47.3%	120	48	66	6	0.6%

Source: [JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

GO VIRGINIA REGION 6 – MANUFACTURING

NOT ALL INDUSTRIES LISTED BELOW ARE TARGETED IN REGION 6

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	286	\$71,723	4.34	167	19.1%	49	19	33	-3	-0.6%
327320	Ready-Mix Concrete Manufacturing	269	\$57,869	2.43	-7	-0.5%	46	21	35	-10	-1.9%
336340	Motor Vehicle Brake System Manufacturing	132	\$32,682	5.28	-28	-3.8%	25	10	18	-2	-0.7%
337110	Wood Kitchen Cabinet and Countertop Manufacturing	122	\$35,078	0.89	-48	-6.5%	23	10	15	-2	-0.8%
326199	All Other Plastics Product Manufacturing	121	\$38,375	0.37	-38	-5.3%	25	9	17	-1	-0.5%
332312	Fabricated Structural Metal Manufacturing	85	\$50,107	0.83	22	6.1%	18	6	12	0	0.1%
327390	Other Concrete Product Manufacturing	74	\$49,482	1.19	-34	-7.3%	13	6	10	-2	-1.7%
339950	Sign Manufacturing	74	\$31,219	0.72	8	2.4%	14	6	9	-1	-0.4%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	65	\$45,247	0.72	49	32.3%	13	5	9	-1	-0.5%
339999	All Other Miscellaneous Manufacturing	55	\$49,043	0.69	-7	-2.4%	11	4	7	-1	-0.5%
334413	Semiconductor and Related Device Manufacturing	52	\$133,774	0.25	13	6.1%	10	4	6	0	0.0%
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	33	\$82,922	0.58	30	68.9%	4	2	4	-2	-2.7%
314994	Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills	26	\$23,484	4.20	9	8.9%	5	2	3	-1	-1.4%
332323	Ornamental and Architectural Metal Work Manufacturing	22	\$35,242	0.44	-13	-8.7%	4	2	3	0	-0.6%
314999	All Other Miscellaneous Textile Product Mills	19	\$25,934	0.57	5	6.8%	4	2	2	0	-0.3%
314910	Textile Bag and Canvas Mills	14	\$29,934	0.50	-4	-4.7%	3	1	2	0	-1.4%
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	13	\$38,375	0.81	-3	-3.8%	2	1	2	0	-1.0%
332322	Sheet Metal Work Manufacturing	12	\$36,033	0.10	1	1.1%	3	1	2	0	0.6%
334290	Other Communications Equipment Manufacturing	11	\$64,384	0.53	-10	-12.1%	1	1	1	-1	-3.1%
326140	Polystyrene Foam Product Manufacturing	9	\$37,338	0.26	-28	-24.9%	2	1	1	0	-0.5%
339910	Jewelry and Silverware Manufacturing	9	\$15,866	0.30	-2	-3.9%	2	1	1	0	-0.7%
333922	Conveyor and Conveying Equipment Manufacturing	7	\$48,392	0.20	7	61.2%	1	1	1	0	-0.6%
333991	Power-Driven Handtool Manufacturing	7	\$50,368	0.69	3	13.5%	1	1	1	0	0.2%
339991	Gasket, Packing, and Sealing Device Manufacturing	7	\$32,016	0.19	-1	-2.9%	1	1	1	0	-0.4%
336390	Other Motor Vehicle Parts Manufacturing	4	\$36,581	0.03	-11	-23.4%	1	0	1	0	0.3%
339112	Surgical and Medical Instrument Manufacturing	4	\$63,888	0.03	2	11.1%	1	0	0	0	0.4%
339114	Dental Equipment and Supplies Manufacturing	3	\$55,266	0.16	-5	-18.3%	1	0	0	0	0.0%
333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing	2	\$55,882	0.08	-6	-23.3%	0	0	0	0	0.2%
337121	Upholstered Household Furniture Manufacturing	2	\$17,835	0.03	-6	-26.3%	0	0	0	0	-0.6%
339992	Musical Instrument Manufacturing	2	\$15,866	0.17	-2	-10.3%	0	0	0	0	-1.3%

336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	1	\$23,030	0.01	-4	-30.7%	0	0	0	0	-1.0%
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	1	\$42,076	0.01	0	n/a	0	0	0	0	0.2%
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing	0	n/a	0.00	-3	n/a	0	0	0	0	-1.8%
333993	Packaging Machinery Manufacturing	0	n/a	0.00	-7	n/a	0	0	0	0	-1.1%
339115	Ophthalmic Goods Manufacturing	0	n/a	0.00	-9	n/a	0	0	0	0	-1.0%
	GOVA6 Manufacturing	1,544	\$52,497	0.59	41	0.5%	285	115	196	-26	-0.9%

[Source: JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

GO VIRGINIA REGION 6 – PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES

NOT ALL INDUSTRIES LISTED BELOW ARE TARGETED IN REGION 6

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
541330	Engineering Services	2,082	\$96,613	1.70	748	9.3%	364	118	217	28	0.7%
541512	Computer Systems Design Services	2,058	\$104,368	1.72	182	1.9%	436	98	223	115	2.8%
551114	Corporate, Subsidiary, and Regional Managing Offices	1,801	\$91,967	0.71	249	3.0%	345	121	205	19	0.5%
541611	Administrative Management and General Management Consulting Services	1,320	\$91,382	1.52	285	5.0%	303	88	154	61	2.3%
541511	Custom Computer Programming Services	1,199	\$93,892	1.06	-4	-0.1%	255	57	130	69	2.8%
541110	Offices of Lawyers	520	\$72,356	0.41	-38	-1.4%	80	35	46	-1	-0.1%
541614	Process, Physical Distribution, and Logistics Consulting Services	466	\$83,712	2.92	249	16.5%	112	32	55	25	2.7%
541380	Testing Laboratories	244	\$95,246	1.26	-26	-2.0%	45	16	29	0	0.0%
541860	Direct Mail Advertising	237	\$48,151	5.11	168	28.1%	50	19	30	1	0.2%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	217	\$71,135	0.41	-105	-7.6%	36	12	24	0	0.0%
541613	Marketing Consulting Services	154	\$83,010	0.43	9	1.2%	31	10	18	3	1.0%
541519	Other Computer Related Services	146	\$92,994	1.06	25	3.8%	31	7	16	8	2.7%
541618	Other Management Consulting Services	140	\$70,973	1.09	28	4.6%	32	9	16	6	2.2%
541370	Surveying and Mapping (except Geophysical) Services	128	\$47,298	2.06	26	4.7%	22	8	13	0	0.0%
541620	Environmental Consulting Services	57	\$65,255	0.51	15	6.3%	12	4	7	2	1.4%
541191	Title Abstract and Settlement Offices	47	\$53,579	0.63	-3	-1.3%	7	3	4	0	0.0%
541720	Research and Development in the Social Sciences and Humanities	47	\$70,035	0.66	-29	-9.2%	9	3	6	1	0.7%
541820	Public Relations Agencies	42	\$67,200	0.53	4	2.2%	8	3	5	0	-0.1%
541890	Other Services Related to Advertising	36	\$28,885	0.36	-4	-2.0%	7	3	5	0	0.1%
541350	Building Inspection Services	35	\$53,838	1.07	16	12.7%	6	2	4	0	0.1%
541310	Architectural Services	27	\$55,631	0.12	-19	-10.0%	4	2	3	-1	-1.0%
541810	Advertising Agencies	27	\$43,505	0.11	9	8.5%	5	2	3	0	-0.8%
551112	Offices of Other Holding Companies	27	\$164,296	0.33	19	29.7%	6	2	3	1	1.3%
541360	Geophysical Surveying and Mapping Services	23	\$91,838	1.35	-11	-7.2%	4	1	2	0	-0.1%
541320	Landscape Architectural Services	20	\$43,811	0.39	-2	-1.8%	2	1	2	-1	-2.3%
541830	Media Buying Agencies	19	\$86,550	0.94	13	28.5%	4	1	2	0	0.1%
541340	Drafting Services	18	\$62,949	1.02	-3	-3.5%	3	1	2	0	-0.1%
541612	Human Resources Consulting Services	18	\$60,390	0.17	-2	-2.4%	3	1	2	0	-0.3%
541713	Research and Development in Nanotechnology	7	\$88,334	0.24	-7	-12.9%	1	0	1	0	0.5%
541850	Outdoor Advertising	7	\$87,408	0.17	3	15.5%	1	1	1	0	-0.3%
541199	All Other Legal Services	5	\$60,139	0.15	4	25.3%	1	0	0	0	-0.1%

541714	Research and Development in Biotechnology (except Nanobiotechnology)	3	\$33,346	0.01	-5	-19.9%	0	0	0	0	-1.6%
541840	Media Representatives	3	\$56,779	0.11	-4	-17.1%	0	0	0	0	-0.6%
541870	Advertising Material Distribution Services	3	\$42,559	0.21	2	30.7%	1	0	0	0	-0.3%
	GOVA6 Professional Services	11,182	\$91,108	0.98	1,793	3.6%	2,239	663	1,229	346	1.5%

[Source: JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

GO VIRGINIA REGION 6 – LOGISTICS AND DISTRIBUTION

NOT ALL INDUSTRIES LISTED BELOW ARE TARGETED IN REGION 6

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
493110	General Warehousing and Storage	1,620	\$35,150	1.16	1,085	24.8%	433	148	240	44	1.4%
484110	General Freight Trucking, Local	549	\$45,773	1.54	46	1.8%	116	46	70	0	0.0%
492110	Couriers and Express Delivery Services	544	\$34,066	0.59	133	5.8%	140	49	80	12	1.1%
484220	Specialized Freight (except Used Goods) Trucking, Local	442	\$46,957	1.70	38	1.8%	96	37	57	2	0.2%
484210	Used Household and Office Goods Moving	373	\$51,954	3.49	-69	-3.4%	85	31	48	6	0.7%
425120	Wholesale Trade Agents and Brokers	354	\$60,859	0.65	108	7.6%	82	27	46	9	1.2%
423830	Industrial Machinery and Equipment Merchant Wholesalers	349	\$56,924	0.97	28	1.7%	69	26	44	-2	-0.3%
484121	General Freight Trucking, Long-Distance, Truckload	294	\$55,428	0.44	2	0.2%	61	24	38	-1	-0.2%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	290	\$34,976	2.06	-77	-4.6%	64	24	38	2	0.3%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	275	\$107,547	1.09	-11	-0.8%	55	19	34	2	0.4%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	193	\$72,341	0.66	-46	-4.2%	36	13	24	-2	-0.4%
423930	Recyclable Material Merchant Wholesalers	166	\$42,125	1.52	2	0.2%	33	13	22	-1	-0.4%
492210	Local Messengers and Local Delivery	163	\$25,720	0.90	114	27.3%	46	14	20	12	3.5%
424490	Other Grocery and Related Products Merchant Wholesalers	161	\$51,805	0.63	-128	-11.0%	35	14	22	-1	-0.2%
424410	General Line Grocery Merchant Wholesalers	134	\$52,464	0.51	-425	-24.9%	32	12	18	2	0.7%
424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	126	\$32,069	2.45	46	9.4%	26	10	17	-1	-0.6%
484122	General Freight Trucking, Long-Distance, Less Than Truckload	106	\$56,406	0.36	-29	-4.7%	24	9	14	1	0.7%
423140	Motor Vehicle Parts (Used) Merchant Wholesalers	103	\$54,244	4.19	6	1.3%	22	8	14	0	0.2%
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	95	\$39,707	0.92	27	6.8%	18	8	13	-2	-0.9%
493190	Other Warehousing and Storage	93	\$40,479	1.62	18	4.5%	24	8	14	2	1.1%
424910	Farm Supplies Merchant Wholesalers	92	\$46,462	0.70	-7	-1.4%	17	8	12	-3	-1.4%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	91	\$43,885	0.80	-17	-3.3%	17	7	12	-1	-0.7%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	89	\$52,287	0.74	25	6.7%	19	7	12	0	0.0%
423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	89	\$68,968	0.86	0	-0.1%	19	7	11	1	0.4%

424460	Fish and Seafood Merchant Wholesalers	87	\$35,689	2.90	-10	-2.1%	18	7	12	-1	-0.7%
423440	Other Commercial Equipment Merchant Wholesalers	82	\$53,303	1.36	81	148.4%	15	6	10	0	-0.2%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	81	\$59,862	0.41	34	11.6%	17	6	11	0	0.1%
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers	79	\$45,137	1.80	24	7.4%	17	6	11	0	0.3%
424450	Confectionery Merchant Wholesalers	79	\$43,954	1.23	33	11.2%	18	7	11	0	0.1%
424810	Beer and Ale Merchant Wholesalers	78	\$42,818	0.62	-23	-5.0%	17	7	11	0	-0.2%
424690	Other Chemical and Allied Products Merchant Wholesalers	77	\$65,292	0.59	-32	-6.8%	16	6	10	1	0.4%
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	70	\$38,909	0.37	3	0.8%	14	6	9	-1	-0.5%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	70	\$58,236	0.98	10	3.1%	15	6	9	0	0.0%
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	58	\$68,055	0.58	-3	-0.9%	14	5	8	1	0.7%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	56	\$59,959	0.46	-10	-3.2%	11	4	7	0	-0.4%
424710	Petroleum Bulk Stations and Terminals	52	\$52,867	1.37	20	10.4%	10	4	7	-1	-1.1%
423220	Home Furnishing Merchant Wholesalers	50	\$51,471	0.71	40	37.6%	11	4	7	0	0.0%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	46	\$32,030	0.42	-21	-7.3%	8	3	6	-1	-1.4%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	43	\$35,327	0.40	20	13.5%	9	4	6	-1	-0.7%
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	40	\$56,189	0.50	7	3.7%	9	3	5	0	0.1%
423460	Ophthalmic Goods Merchant Wholesalers	37	\$60,873	1.55	37	n/a	7	3	5	0	-0.2%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	36	\$52,316	0.58	15	12.0%	7	3	5	0	-0.3%
424940	Tobacco and Tobacco Product Merchant Wholesalers	35	\$45,218	1.25	1	0.7%	7	3	5	0	-0.5%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	34	\$65,468	0.45	-5	-2.8%	7	3	5	0	-0.7%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	33	\$60,088	0.23	32	91.5%	8	3	4	1	0.8%
424130	Industrial and Personal Service Paper Merchant Wholesalers	33	\$52,234	0.45	-9	-4.8%	7	3	4	0	-0.6%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	33	\$63,753	0.22	-26	-10.9%	7	3	4	0	0.5%
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	29	\$43,075	0.75	5	3.9%	6	2	4	0	0.2%

424920	Book, Periodical, and Newspaper Merchant Wholesalers	29	\$18,715	0.73	23	37.9%	5	2	4	-1	-1.5%
423130	Tire and Tube Merchant Wholesalers	26	\$40,005	0.76	17	25.0%	5	2	3	0	-0.6%
493130	Farm Product Warehousing and Storage	26	\$29,167	2.06	-13	-8.1%	6	2	4	0	0.0%
423920	Toy and Hobby Goods and Supplies Merchant Wholesalers	25	\$49,042	1.00	13	15.2%	5	2	3	0	-0.2%
483211	Inland Water Freight Transportation	25	\$43,557	1.03	4	3.7%	5	2	3	0	-0.4%
423420	Office Equipment Merchant Wholesalers	23	\$39,468	0.27	13	17.7%	4	2	3	0	-0.9%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	22	\$87,346	0.08	-14	-9.4%	4	2	3	0	-0.6%
423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers	18	\$47,659	0.40	6	8.5%	3	1	2	0	-0.7%
424510	Grain and Field Bean Merchant Wholesalers	18	\$39,428	0.37	11	22.8%	4	2	3	0	-0.7%
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	16	\$43,309	0.24	-9	-8.0%	3	1	2	0	-0.8%
424330	Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	13	\$44,658	0.16	-120	-37.6%	2	1	2	0	-1.0%
424320	Men's and Boys' Clothing and Furnishings Merchant Wholesalers	12	\$41,436	0.38	-9	-10.1%	3	1	2	0	-0.1%
423390	Other Construction Material Merchant Wholesalers	10	\$55,807	0.29	-11	-13.6%	2	1	1	0	0.0%
487210	Scenic and Sightseeing Transportation, Water	8	\$19,583	0.56	-7	-12.0%	2	1	1	0	-0.4%
423710	Hardware Merchant Wholesalers	7	\$45,064	0.08	-14	-18.9%	2	1	1	0	-0.4%
423840	Industrial Supplies Merchant Wholesalers	7	\$48,263	0.06	4	16.3%	1	1	1	0	-1.3%
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	7	\$52,148	0.19	3	10.7%	1	1	1	0	-1.5%
423210	Furniture Merchant Wholesalers	5	\$46,980	0.09	-16	-24.1%	1	0	1	0	-1.7%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	5	\$71,563	0.03	-4	-11.7%	1	0	1	0	-0.3%
425110	Business to Business Electronic Markets	4	\$17,984	0.10	-17	-29.1%	1	0	0	0	-2.4%
424120	Stationery and Office Supplies Merchant Wholesalers	3	\$34,453	0.06	-15	-29.3%	1	0	0	0	-0.8%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	2	\$56,550	0.06	-5	-19.2%	0	0	0	0	-0.7%
424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	2	\$24,131	0.06	0	2.9%	0	0	0	0	-2.4%
424420	Packaged Frozen Food Merchant Wholesalers	2	\$61,791	0.05	-6	-26.0%	0	0	0	0	-1.7%
487110	Scenic and Sightseeing Transportation, Land	2	\$21,454	0.16	-2	-11.4%	1	0	0	0	1.8%
423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	1	\$66,216	0.04	1	n/a	0	0	0	0	-0.1%
424340	Footwear Merchant Wholesalers	1	\$24,131	0.03	0	-3.5%	0	0	0	0	-2.4%
424470	Meat and Meat Product Merchant Wholesalers	1	\$73,054	0.01	0	-10.6%	0	0	0	0	-2.5%

424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	1	\$77,234	0.02	0	n/a	0	0	0	0	-0.9%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	1	\$38,602	0.04	-11	-40.0%	0	0	0	0	-1.7%
493120	Refrigerated Warehousing and Storage	1	\$30,185	0.01	0	n/a	0	0	0	0	-1.1%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0	n/a	0.00	-1	n/a	0	0	0	0	-2.5%
424520	Livestock Merchant Wholesalers	0	n/a	0.00	-6	n/a	0	0	0	0	-1.0%
483111	Deep Sea Freight Transportation	0	n/a	0.00	0	n/a	0	0	0	0	-2.2%
483113	Coastal and Great Lakes Freight Transportation	0	n/a	0.00	0	n/a	0	0	0	0	-2.2%
	GOVA6 Logistics/Distribution	8,431	\$49,419	0.76	908	2.3%	1,914	703	1,135	76	0.5%

[Source: JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

GO VIRGINIA REGION 6 – INFORMATION AND DATA CENTERS

NOT ALL INDUSTRIES LISTED BELOW ARE TARGETED IN REGION 6

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
519120	Libraries and Archives	498	\$29,448	2.73	0	0.0%	109	33	60	17	1.7%
518210	Data Processing, Hosting, and Related Services	233	\$57,920	0.55	81	9.0%	45	13	26	5	1.1%
511110	Newspaper Publishers	99	\$25,238	0.72	-256	-22.5%	9	7	12	-10	-5.4%
519190	All Other Information Services	53	\$151,185	1.67	14	6.5%	11	3	6	1	1.4%
511120	Periodical Publishers	52	\$49,510	0.57	-41	-11.0%	7	4	6	-3	-2.7%
511130	Book Publishers	33	\$19,671	0.54	17	16.0%	3	2	4	-3	-4.8%
519130	Internet Publishing and Broadcasting and Web Search Portals	30	\$58,285	0.09	-19	-9.2%	5	2	4	0	0.0%
511140	Directory and Mailing List Publishers	3	\$41,582	0.18	1	4.7%	0	0	0	0	-3.2%
519110	News Syndicates	1	\$34,239	0.06	0	-8.6%	0	0	0	0	-0.7%
517410	Satellite Telecommunications	0	n/a	0.00	-2	n/a	0	0	0	0	-0.7%
	GOVA6 Information/Data Centers	1,002	\$41,306	0.77	-205	-3.7%	195	65	119	11	0.5%

[Source: JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

GO VIRGINIA REGION 6 – FORESTRY/WOOD PRODUCTS/PAPER

NOT ALL INDUSTRIES LISTED BELOW ARE TARGETED IN REGION 6

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
321113	Sawmills	550	\$35,660	5.97	58	2.2%	110	44	79	-13	-1.2%
322121	Paper (except Newsprint) Mills	413	\$62,891	7.14	32	1.6%	82	30	54	-2	-0.3%
113310	Logging	237	\$45,898	3.24	1	0.1%	48	17	38	-7	-1.6%
111421	Nursery and Tree Production	196	\$30,042	2.17	-77	-6.4%	50	17	32	1	0.2%
321114	Wood Preservation	119	\$41,476	9.93	40	8.4%	24	10	17	-3	-1.2%
321999	All Other Miscellaneous Wood Product Manufacturing	91	\$35,513	2.70	39	12.0%	17	8	12	-2	-1.2%
321912	Cut Stock, Resawing Lumber, and Planing	79	\$31,778	5.00	-75	-12.5%	15	6	11	-2	-1.1%
111419	Other Food Crops Grown Under Cover	47	\$37,237	1.76	11	5.7%	13	4	8	1	1.5%
111191	Oilseed and Grain Combination Farming	44	\$38,395	2.21	-5	-2.0%	11	4	7	0	0.3%
321920	Wood Container and Pallet Manufacturing	34	\$38,721	0.49	-191	-31.3%	7	3	5	-1	-0.9%
111110	Soybean Farming	30	\$41,300	5.28	2	1.1%	8	3	5	0	-0.1%
111199	All Other Grain Farming	27	\$45,549	5.21	-13	-7.7%	7	2	4	0	0.6%
111150	Corn Farming	13	\$35,512	0.63	0	0.7%	3	1	2	0	0.0%
321911	Wood Window and Door Manufacturing	8	\$47,573	0.13	-17	-20.2%	2	1	1	0	-0.8%
111422	Floriculture Production	6	\$39,771	0.12	-14	-22.2%	1	0	1	0	-0.1%
111140	Wheat Farming	4	\$43,544	0.67	-1	-3.2%	1	0	1	0	-0.1%
321918	Other Millwork (including Flooring)	3	\$16,773	0.08	-12	-26.3%	1	0	0	0	-1.0%
111130	Dry Pea and Bean Farming	2	\$37,004	2.83	2	33.4%	1	0	0	0	0.9%
113110	Timber Tract Operations	2	\$32,573	0.19	0	1.7%	0	0	0	0	0.9%
113210	Forest Nurseries and Gathering of Forest Products	2	\$24,901	0.72	0	-4.2%	1	0	0	0	2.6%
321992	Prefabricated Wood Building Manufacturing	1	\$14,787	0.05	-9	-37.6%	0	0	0	0	-1.0%
	GOVA6 Forestry/Wood Products/Paper	1,909	\$46,167	2.61	-230	-2.2%	402	151	278	-27	-0.7%

[Source: JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

GO VIRGINIA REGION 6 – AQUACULTURE/SEAFOOD/COMMERCIAL FISHING/MARINE INDUSTRIES

NOT ALL INDUSTRIES LISTED BELOW ARE TARGETED IN REGION 6

NAICS	Industry	Current			5-Year History		2-Year Forecast				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
311710	Seafood Product Preparation and Packaging	479	\$40,569	12.31	-204	-6.9%	85	43	68	-25	-2.7%
114111	Finfish Fishing	187	\$45,486	9.66	10	1.2%	27	11	20	-5	-1.4%
114112	Shellfish Fishing	137	\$30,017	7.34	7	1.1%	20	8	15	-3	-1.0%
112512	Shellfish Farming	49	\$42,086	17.22	10	4.6%	10	4	8	-2	-1.6%
114119	Other Marine Fishing	10	\$26,825	5.52	1	2.4%	1	1	1	0	-1.1%
112511	Finfish Farming and Fish Hatcheries	0	n/a	0.00	-2	n/a	0	0	0	0	0.0%
	GOVA6 Seafood Processing/Aquaculture/Commercial Fishing	860	\$39,393	9.90	-178	-3.7%	144	67	112	-34	-2.0%

[Source: JobsEQ®](#) | Data as of 2020Q3 | All data based upon a four-quarter moving average | Exported on: Monday, March 29, 2021 4:44 PM

APPENDIX B: SKILLS GAP BY OCCUPATION

GO VIRGINIA REGION 6 – OCCUPATION DISTRIBUTION – MANUFACTURING

NOT ALL OCCUPATIONS LISTED BELOW ARE TARGETED IN REGION 6

SOC	Occupation	Current		2-Year Demand			
		Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
51-2092	Team Assemblers	119	\$28,400	9	17	-5	20
53-3032	Heavy and Tractor-Trailer Truck Drivers	60	\$42,200	5	8	-2	11
51-1011	First-Line Supervisors of Production and Operating Workers	55	\$56,900	3	8	-1	10
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	54	\$32,300	5	8	-1	11
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	41	\$38,500	3	6	-2	7
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	35	\$27,400	3	7	0	9
51-7011	Cabinetmakers and Bench Carpenters	35	\$38,300	3	4	0	7
51-4121	Welders, Cutters, Solderers, and Brazers	34	\$43,100	2	6	0	8
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	30	\$65,200	2	4	0	6
17-2112	Industrial Engineers	29	\$93,300	1	3	0	4
11-1021	General and Operations Managers	25	\$131,000	1	3	0	4
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	24	\$107,000	1	3	0	3
51-4041	Machinists	24	\$42,500	2	3	0	5
43-5071	Shipping, Receiving, and Inventory Clerks	24	\$32,800	2	3	-1	4
51-6031	Sewing Machine Operators	23	\$24,100	3	2	0	5
49-9041	Industrial Machinery Mechanics	23	\$51,000	2	3	1	5
27-1024	Graphic Designers	22	\$52,600	1	3	-1	3
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	21	\$28,100	1	3	-1	4
49-9071	Maintenance and Repair Workers, General	21	\$41,600	1	3	0	4
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	21	\$31,600	2	3	-1	4
43-9061	Office Clerks, General	21	\$33,100	2	3	-1	4
17-2072	Electronics Engineers, Except Computer	21	\$118,000	1	2	0	3
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	20	\$34,000	2	3	0	4
51-9141	Semiconductor Processing Technicians	19	\$38,300	1	3	0	4
51-9199	Production Workers, All Other	18	\$33,700	1	3	0	4
17-3023	Electrical and Electronic Engineering Technologists and Technicians	18	\$74,100	1	2	0	3
51-9198	Helpers--Production Workers	17	\$24,500	2	3	0	5
43-4051	Customer Service Representatives	16	\$37,100	1	3	-1	4
53-7051	Industrial Truck and Tractor Operators	16	\$35,100	1	3	0	3
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	15	\$31,900	1	2	0	3

51-2099	Assemblers and Fabricators, All Other	15	\$28,900	1	2	-1	3
17-2141	Mechanical Engineers	14	\$101,800	1	1	0	2
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	14	\$31,500	1	2	0	3
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	14	\$31,000	1	2	0	3
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	13	\$77,800	1	2	-1	2
43-5061	Production, Planning, and Expediting Clerks	13	\$51,200	1	2	0	3
43-3031	Bookkeeping, Accounting, and Auditing Clerks	13	\$41,400	2	1	0	3
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	13	\$33,200	1	2	0	2
53-7064	Packers and Packagers, Hand	13	\$24,600	2	2	0	3
11-3051	Industrial Production Managers	12	\$110,300	1	1	0	2
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	12	\$110,500	1	1	0	2
13-2011	Accountants and Auditors	12	\$75,200	1	2	0	2
17-3026	Industrial Engineering Technologists and Technicians	12	\$55,300	1	1	0	2
17-2071	Electrical Engineers	11	\$109,000	0	1	0	2
51-9161	Computer Numerically Controlled Tool Operators	11	\$36,500	1	2	0	2
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	10	\$33,800	1	2	0	2
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	10	\$45,600	1	2	0	2
51-9111	Packaging and Filling Machine Operators and Tenders	10	\$28,700	1	1	0	2
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	9	\$39,000	1	1	0	1
53-7065	Stockers and Order Fillers	8	\$27,800	1	1	0	2
11-9041	Architectural and Engineering Managers	8	\$139,500	0	1	0	1
43-1011	First-Line Supervisors of Office and Administrative Support Workers	8	\$60,000	1	1	0	1
51-2041	Structural Metal Fabricators and Fitters	8	\$37,900	0	1	0	1
51-9071	Jewelers and Precious Stone and Metal Workers	8	\$36,400	1	1	0	2
17-2061	Computer Hardware Engineers	7	\$109,400	0	1	0	1
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	7	\$33,900	1	1	0	1
13-1071	Human Resources Specialists	7	\$74,700	0	1	0	1
13-1198	Project Management Specialists and Business Operations Specialists, All Other	7	\$96,800	0	1	0	1
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	6	\$33,900	0	1	0	1

51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	6	\$27,500	1	1	0	2
13-1051	Cost Estimators	6	\$66,000	0	1	0	1
27-1021	Commercial and Industrial Designers	6	\$57,800	0	1	0	1
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	6	\$91,900	0	1	0	1
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	6	\$69,000	0	1	0	1
47-2211	Sheet Metal Workers	6	\$47,100	0	1	0	1
13-1161	Market Research Analysts and Marketing Specialists	6	\$72,200	0	1	0	1
51-4111	Tool and Die Makers	6	\$46,200	0	1	0	1
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	5	\$32,400	0	1	0	1
13-1081	Logisticians	5	\$81,100	0	1	0	1
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	5	\$52,500	0	1	0	1
11-3031	Financial Managers	5	\$129,900	0	1	0	1
51-6093	Upholsterers	5	\$30,300	0	1	0	1
47-2061	Construction Laborers	5	\$30,200	0	1	0	1
47-2031	Carpenters	5	\$40,800	0	1	0	1
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	5	\$47,100	0	1	0	1
15-1244	Network and Computer Systems Administrators	5	\$83,000	0	1	0	1
49-9043	Maintenance Workers, Machinery	5	\$47,900	0	1	0	1
51-5112	Printing Press Operators	4	\$39,300	0	1	0	1
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	4	\$31,000	0	1	0	1
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	4	\$81,300	0	1	0	1
53-3033	Light Truck Drivers	4	\$35,400	0	1	0	1
11-3021	Computer and Information Systems Managers	4	\$149,800	0	1	0	1
53-7063	Machine Feeders and Offbearers	4	\$27,100	0	1	0	1
51-6091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	4	\$33,800	0	1	0	1
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	4	\$26,300	1	1	0	1
47-2111	Electricians	4	\$54,000	0	1	0	1
49-9099	Installation, Maintenance, and Repair Workers, All Other	4	\$40,600	0	1	0	1
17-3013	Mechanical Drafters	4	\$60,000	0	1	0	1
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	4	\$59,000	0	1	0	1

51-4193	Plating Machine Setters, Operators, and Tenders, Metal and Plastic	4	\$29,800	0	1	0	1
17-2199	Engineers, All Other	4	\$123,700	0	0	0	1
11-2022	Sales Managers	4	\$142,200	0	1	0	1
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	4	\$38,900	0	1	0	1
51-7021	Furniture Finishers	4	\$28,500	0	0	0	1
15-1232	Computer User Support Specialists	4	\$51,600	0	0	0	1
43-5032	Dispatchers, Except Police, Fire, and Ambulance	4	\$37,200	0	0	0	0
11-3061	Purchasing Managers	3	\$105,100	0	0	0	1
15-1211	Computer Systems Analysts	3	\$95,200	0	0	0	0
47-2073	Operating Engineers and Other Construction Equipment Operators	3	\$43,000	0	1	0	1
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	3	\$64,500	0	1	0	1
13-1111	Management Analysts	3	\$90,500	0	0	0	1
51-2031	Engine and Other Machine Assemblers	3	\$32,100	0	1	0	1
47-2044	Tile and Stone Setters	3	\$33,800	0	0	0	1
51-9194	Etchers and Engravers	3	\$34,200	0	0	0	1
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	3	\$90,600	0	0	0	0
11-1011	Chief Executives	3	\$178,500	0	0	0	0
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	3	\$28,000	0	0	0	1
51-9191	Adhesive Bonding Machine Operators and Tenders	3	\$31,300	0	1	0	1
43-4171	Receptionists and Information Clerks	3	\$29,400	0	0	0	1
11-2021	Marketing Managers	2	\$143,600	0	0	0	0
11-3013	Facilities Managers	2	\$102,500	0	0	0	0
13-1151	Training and Development Specialists	2	\$57,800	0	0	0	1
41-1012	First-Line Supervisors of Non-Retail Sales Workers	2	\$93,000	0	0	0	0
51-9022	Grinding and Polishing Workers, Hand	2	\$29,400	0	0	0	0
41-9031	Sales Engineers	2	\$122,200	0	0	0	1
43-6011	Executive Secretaries and Executive Administrative Assistants	2	\$61,300	0	0	0	0
51-9123	Painting, Coating, and Decorating Workers	2	\$30,100	0	0	0	0
11-3121	Human Resources Managers	2	\$122,700	0	0	0	0
47-2051	Cement Masons and Concrete Finishers	2	\$40,700	0	0	0	1
15-1212	Information Security Analysts	2	\$113,400	0	0	0	0
41-2031	Retail Salespersons	2	\$25,500	0	0	0	1
17-3027	Mechanical Engineering Technologists and Technicians	2	\$59,100	0	0	0	0
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	2	\$31,000	0	0	0	0
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	2	\$36,300	0	0	0	0

51-2021	Coil Winders, Tapers, and Finishers	2	\$31,400	0	0	0	0
51-2051	Fiberglass Laminators and Fabricators	2	\$27,000	0	0	0	0
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	2	\$70,500	0	0	0	0
51-9031	Cutters and Trimmers, Hand	2	\$29,700	0	0	0	0
15-1251	Computer Programmers	2	\$88,700	0	0	0	0
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	2	\$25,500	0	0	0	0
43-4151	Order Clerks	2	\$30,200	0	0	0	0
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	2	\$52,200	0	0	0	0
19-5011	Occupational Health and Safety Specialists	2	\$69,600	0	0	0	0
15-1245	Database Administrators and Architects	2	\$84,700	0	0	0	0
51-9162	Computer Numerically Controlled Tool Programmers	2	\$49,100	0	0	0	0
27-3042	Technical Writers	2	\$74,100	0	0	0	0
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	2	\$27,500	0	0	0	0
15-1299	Computer Occupations, All Other	2	\$97,700	0	0	0	0
51-4199	Metal Workers and Plastic Workers, All Other	2	\$33,800	0	0	0	0
51-6099	Textile, Apparel, and Furnishings Workers, All Other	2	\$25,700	0	0	0	0
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	2	\$22,600	0	0	0	0
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	2	\$34,600	0	0	0	0
17-2131	Materials Engineers	1	\$102,800	0	0	0	0
49-9098	Helpers--Installation, Maintenance, and Repair Workers	1	\$29,800	0	0	0	0
15-1231	Computer Network Support Specialists	1	\$66,200	0	0	0	0
53-7021	Crane and Tower Operators	1	\$59,000	0	0	0	0
15-1241	Computer Network Architects	1	\$116,800	0	0	0	0
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	1	\$48,700	0	0	0	0
43-3051	Payroll and Timekeeping Clerks	1	\$49,400	0	0	0	0
19-4031	Chemical Technicians	1	\$47,400	0	0	0	0
43-3061	Procurement Clerks	1	\$42,900	0	0	0	0
47-2221	Structural Iron and Steel Workers	1	\$44,000	0	0	0	0
53-7011	Conveyor Operators and Tenders	1	\$31,800	0	0	0	0
47-2152	Plumbers, Pipefitters, and Steamfitters	1	\$50,200	0	0	0	0
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	1	\$36,200	0	0	0	0
17-3012	Electrical and Electronics Drafters	1	\$77,900	0	0	0	0
11-3071	Transportation, Storage, and Distribution Managers	1	\$103,300	0	0	0	0
13-1041	Compliance Officers	1	\$71,500	0	0	0	0
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	1	\$39,800	0	0	0	0
17-3011	Architectural and Civil Drafters	1	\$56,300	0	0	0	0

43-3021	Billing and Posting Clerks	1	\$40,200	0	0	0	0
33-9032	Security Guards	1	\$36,900	0	0	0	0
23-1011	Lawyers	1	\$148,500	0	0	0	0
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	1	\$42,300	0	0	0	0
49-9044	Millwrights	1	\$50,600	0	0	0	0
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$32,200	0	0	0	0
51-6051	Sewers, Hand	1	\$25,400	0	0	0	0
51-8099	Plant and System Operators, All Other	1	\$55,900	0	0	0	0
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	1	\$33,700	0	0	0	0
15-1257	Web Developers and Digital Interface Designers	1	\$70,500	0	0	0	0
47-2121	Glaziers	1	\$39,600	0	0	0	0
51-9081	Dental Laboratory Technicians	1	\$43,700	0	0	0	0
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1	\$53,000	0	0	0	0
27-1019	Artists and Related Workers, All Other	1	\$65,800	0	0	0	0
17-3019	Drafters, All Other	1	\$50,700	0	0	0	0
19-2031	Chemists	1	\$102,200	0	0	0	0
47-2022	Stonemasons	1	\$40,900	0	0	0	0
15-2031	Operations Research Analysts	1	\$88,700	0	0	0	0
51-7031	Model Makers, Wood	1	\$50,700	0	0	0	0
27-3031	Public Relations Specialists	1	\$84,700	0	0	0	0
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	1	\$31,700	0	0	0	0
17-2051	Civil Engineers	1	\$93,100	0	0	0	0
51-6092	Fabric and Apparel Patternmakers	1	\$41,800	0	0	0	0
51-6052	Tailors, Dressmakers, and Custom Sewers	1	\$33,000	0	0	0	0
51-6021	Pressers, Textile, Garment, and Related Materials	1	\$17,500	0	0	0	0
13-2031	Budget Analysts	1	\$99,800	0	0	0	0
27-1012	Craft Artists	1	\$38,400	0	0	0	0
13-1022	Wholesale and Retail Buyers, Except Farm Products	1	\$78,300	0	0	0	0
53-7121	Tank Car, Truck, and Ship Loaders	1	\$40,600	0	0	0	0
	Total	1,544	n/a	105	209	-27	287

Source: JobsEQ® | Data as of 2020Q3 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding. | Exported on: Wednesday, March 31, 2021 4:13 PM

GO VIRGINIA REGION 6 – OCCUPATION DISTRIBUTION – PROFESSIONAL SERVICES

NOT ALL OCCUPATIONS LISTED BELOW ARE TARGETED IN REGION 6

SOC	Occupation	Current		2-Year Forecast			
		Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	1,024	\$98,000	33	133	64	230
13-1111	Management Analysts	681	\$95,300	46	93	25	163
15-1211	Computer Systems Analysts	388	\$93,300	16	45	15	76
17-2051	Civil Engineers	346	\$92,100	14	40	4	59
11-1021	General and Operations Managers	297	\$156,200	13	42	10	66
23-1011	Lawyers	279	\$122,800	12	15	2	28
15-1232	Computer User Support Specialists	267	\$53,100	11	38	14	62
13-1198	Project Management Specialists and Business Operations Specialists, All Other	256	\$95,800	15	38	9	61
43-4051	Customer Service Representatives	235	\$36,900	23	42	4	69
13-1161	Market Research Analysts and Marketing Specialists	235	\$66,100	13	42	13	67
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	226	\$80,700	15	48	10	73
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	221	\$124,500	11	23	2	36
43-9061	Office Clerks, General	217	\$35,300	25	28	2	55
11-3021	Computer and Information Systems Managers	214	\$143,300	8	29	9	46
13-2011	Accountants and Auditors	204	\$76,200	12	28	6	47
15-1244	Network and Computer Systems Administrators	203	\$85,500	8	23	8	39
15-1212	Information Security Analysts	179	\$99,800	6	25	16	47
15-1299	Computer Occupations, All Other	175	\$102,600	7	22	6	36
43-3031	Bookkeeping, Accounting, and Auditing Clerks	152	\$43,100	19	17	1	37
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	147	\$41,400	15	18	-1	32
13-1071	Human Resources Specialists	145	\$79,400	9	23	6	38
23-2011	Paralegals and Legal Assistants	143	\$47,600	10	22	3	34
17-2141	Mechanical Engineers	142	\$103,700	6	14	2	22
15-1251	Computer Programmers	127	\$84,600	4	14	1	19
17-2071	Electrical Engineers	112	\$105,600	5	11	4	20
11-3031	Financial Managers	111	\$139,100	5	14	5	24
43-1011	First-Line Supervisors of Office and Administrative Support Workers	108	\$63,000	8	15	1	24
15-1241	Computer Network Architects	102	\$107,700	3	12	4	19
17-1011	Architects, Except Landscape and Naval	93	\$79,300	5	10	0	14
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	91	\$92,100	4	12	3	19
11-9041	Architectural and Engineering Managers	89	\$137,500	3	10	2	15
17-3011	Architectural and Civil Drafters	80	\$57,000	5	11	0	17

13-1151	Training and Development Specialists	78	\$69,400	5	13	4	22
43-6011	Executive Secretaries and Executive Administrative Assistants	77	\$61,900	8	9	-2	15
15-1231	Computer Network Support Specialists	75	\$66,900	3	11	3	17
47-4011	Construction and Building Inspectors	73	\$57,500	8	10	1	19
15-1257	Web Developers and Digital Interface Designers	68	\$70,300	3	9	3	14
11-2021	Marketing Managers	67	\$143,500	3	10	2	15
17-3022	Civil Engineering Technologists and Technicians	66	\$49,600	5	9	1	14
15-2031	Operations Research Analysts	65	\$92,700	4	6	5	14
15-1245	Database Administrators and Architects	64	\$88,600	3	7	3	13
17-2199	Engineers, All Other	64	\$116,700	3	6	1	10
13-1081	Logisticians	63	\$78,400	3	10	2	15
17-3023	Electrical and Electronic Engineering Technologists and Technicians	60	\$75,700	4	8	1	13
17-3031	Surveying and Mapping Technicians	57	\$43,700	3	10	0	14
19-2041	Environmental Scientists and Specialists, Including Health	57	\$73,700	2	11	2	15
27-3031	Public Relations Specialists	57	\$83,500	4	9	1	13
17-2112	Industrial Engineers	54	\$100,200	2	6	2	10
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	53	\$44,700	4	9	-1	11
11-1011	Chief Executives	52	\$182,300	3	5	0	7
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	50	\$89,500	3	8	2	14
43-6012	Legal Secretaries and Administrative Assistants	48	\$51,600	5	5	-2	8
27-1024	Graphic Designers	48	\$63,000	3	7	1	12
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	47	\$75,900	3	6	1	10
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	47	\$73,300	3	8	2	12
11-2022	Sales Managers	47	\$157,300	2	7	2	10
17-1022	Surveyors	46	\$57,400	2	5	0	7
17-2081	Environmental Engineers	41	\$87,100	2	4	1	7
13-1041	Compliance Officers	41	\$72,400	2	5	1	9
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	40	\$89,100	3	6	0	9
41-3011	Advertising Sales Agents	40	\$56,700	3	8	0	11
11-3121	Human Resources Managers	39	\$130,400	2	5	1	8
43-4171	Receptionists and Information Clerks	39	\$31,000	5	6	0	10
27-1026	Merchandise Displayers and Window Trimmers	38	\$27,300	2	5	0	8
43-3021	Billing and Posting Clerks	37	\$42,500	3	5	0	8
11-3013	Facilities Managers	37	\$108,400	2	4	1	8
17-2072	Electronics Engineers, Except Computer	37	\$115,400	2	4	1	6
43-5061	Production, Planning, and Expediting Clerks	37	\$55,100	3	6	1	9
27-3042	Technical Writers	35	\$72,800	2	5	1	9
49-9071	Maintenance and Repair Workers, General	33	\$44,400	2	4	1	8
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	32	\$28,700	3	7	1	11
17-2061	Computer Hardware Engineers	31	\$113,000	1	3	0	5

41-1012	First-Line Supervisors of Non-Retail Sales Workers	29	\$107,800	2	4	1	7
15-1221	Computer and Information Research Scientists	29	\$113,500	1	4	2	7
27-1011	Art Directors	27	\$77,300	3	3	0	6
17-2011	Aerospace Engineers	27	\$123,400	1	2	1	4
53-7065	Stockers and Order Fillers	26	\$27,800	3	5	1	8
23-2099	Legal Support Workers, All Other	24	\$76,100	2	3	0	4
11-9111	Medical and Health Services Managers	24	\$128,000	1	3	1	5
41-9011	Demonstrators and Product Promoters	24	\$28,800	5	4	0	9
13-1141	Compensation, Benefits, and Job Analysis Specialists	23	\$70,800	2	3	1	6
41-9031	Sales Engineers	22	\$121,000	1	4	1	6
19-4042	Environmental Science and Protection Technicians, Including Health	21	\$43,100	1	4	1	6
11-3061	Purchasing Managers	21	\$119,600	1	3	1	4
19-4031	Chemical Technicians	21	\$44,000	1	3	0	4
43-5071	Shipping, Receiving, and Inventory Clerks	21	\$34,900	1	3	0	4
17-3013	Mechanical Drafters	21	\$59,200	1	3	0	4
29-1141	Registered Nurses	20	\$73,400	1	1	1	3
13-1051	Cost Estimators	19	\$75,800	1	3	0	4
17-3027	Mechanical Engineering Technologists and Technicians	19	\$60,700	1	3	0	4
43-3011	Bill and Account Collectors	19	\$44,700	2	3	0	4
19-2031	Chemists	19	\$95,900	1	3	0	4
13-1022	Wholesale and Retail Buyers, Except Farm Products	19	\$90,700	1	3	0	4
29-2098	Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other	18	\$48,500	1	1	1	3
17-3025	Environmental Engineering Technologists and Technicians	18	\$47,100	1	2	0	4
17-1012	Landscape Architects	17	\$76,300	1	2	0	3
53-3032	Heavy and Tractor-Trailer Truck Drivers	17	\$43,500	2	3	1	5
11-9021	Construction Managers	17	\$99,100	1	2	1	3
43-3051	Payroll and Timekeeping Clerks	17	\$51,000	2	2	0	4
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	17	\$28,700	2	2	0	4
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	17	\$43,400	1	3	0	4
13-2031	Budget Analysts	16	\$91,600	1	2	1	3
43-4131	Loan Interviewers and Clerks	16	\$38,600	1	2	0	4
15-2098	Data Scientists and Mathematical Science Occupations, All Other	16	\$81,400	1	2	1	4
19-5011	Occupational Health and Safety Specialists	15	\$73,800	1	1	1	2
51-1011	First-Line Supervisors of Production and Operating Workers	15	\$68,700	1	2	0	4
13-2072	Loan Officers	15	\$68,500	1	2	0	3
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	15	\$72,000	1	2	0	3
43-9199	Office and Administrative Support Workers, All Other	14	\$43,000	1	2	0	4
11-2011	Advertising and Promotions Managers	14	\$108,500	1	2	0	3
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	14	\$39,000	1	2	0	4

13-1121	Meeting, Convention, and Event Planners	14	\$60,500	1	2	1	4
19-4021	Biological Technicians	13	\$49,200	0	2	0	3
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	13	\$28,600	2	2	0	4
19-1042	Medical Scientists, Except Epidemiologists	13	\$99,600	0	2	0	2
27-1025	Interior Designers	13	\$54,600	1	2	0	3
19-3051	Urban and Regional Planners	13	\$72,900	0	2	0	3
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	13	\$72,900	1	2	0	3
49-2011	Computer, Automated Teller, and Office Machine Repairers	13	\$40,400	1	2	1	4
41-3031	Securities, Commodities, and Financial Services Sales Agents	13	\$98,800	1	2	0	3
27-3043	Writers and Authors	13	\$70,000	1	2	0	3
43-9021	Data Entry Keyers	13	\$31,700	1	2	0	2
15-2041	Statisticians	12	\$85,800	1	2	1	3
33-9032	Security Guards	12	\$44,400	1	2	0	4
17-3012	Electrical and Electronics Drafters	12	\$60,500	1	2	0	3
11-9121	Natural Sciences Managers	12	\$120,100	1	2	0	2
27-3041	Editors	11	\$71,700	1	2	0	3
43-4071	File Clerks	11	\$35,200	1	1	0	3
47-2061	Construction Laborers	11	\$27,000	1	2	0	3
23-2093	Title Examiners, Abstractors, and Searchers	11	\$39,500	1	1	0	2
17-2161	Nuclear Engineers	11	\$120,400	0	1	0	2
37-3011	Landscaping and Groundskeeping Workers	10	\$32,400	1	2	0	3
19-4061	Social Science Research Assistants	10	\$46,100	1	2	0	3
43-9041	Insurance Claims and Policy Processing Clerks	10	\$41,000	1	1	0	2
11-3071	Transportation, Storage, and Distribution Managers	10	\$115,500	1	1	0	2
41-9041	Telemarketers	10	\$28,400	1	2	0	3
11-3051	Industrial Production Managers	10	\$129,900	0	1	0	2
17-3026	Industrial Engineering Technologists and Technicians	10	\$55,200	1	1	0	2
19-4099	Life, Physical, and Social Science Technicians, All Other	9	\$59,900	1	2	0	3
19-3011	Economists	9	\$112,000	0	1	1	2
27-2012	Producers and Directors	9	\$80,500	0	2	0	2
17-2041	Chemical Engineers	9	\$103,000	0	1	0	2
11-3131	Training and Development Managers	9	\$130,400	1	1	0	2
47-2111	Electricians	9	\$55,900	1	2	0	2
41-9022	Real Estate Sales Agents	9	\$59,400	1	1	0	2
11-2033	Fundraising Managers	9	\$155,900	0	1	0	2
43-4111	Interviewers, Except Eligibility and Loan	9	\$30,400	1	1	0	2
13-2041	Credit Analysts	9	\$84,300	0	1	0	2
19-2042	Geoscientists, Except Hydrologists and Geographers	8	\$92,600	0	2	0	2
19-3099	Social Scientists and Related Workers, All Other	8	\$97,200	1	1	0	2
41-2031	Retail Salespersons	8	\$28,000	1	2	0	3
49-9052	Telecommunications Line Installers and Repairers	8	\$61,000	0	2	0	2
27-1021	Commercial and Industrial Designers	8	\$69,300	1	1	0	2

53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	8	\$57,000	1	1	0	2
53-7051	Industrial Truck and Tractor Operators	8	\$35,600	1	1	0	2
43-5011	Cargo and Freight Agents	8	\$35,900	1	1	0	2
53-3033	Light Truck Drivers	8	\$37,500	1	1	0	2
17-1021	Cartographers and Photogrammetrists	8	\$77,900	0	1	0	1
43-5032	Dispatchers, Except Police, Fire, and Ambulance	8	\$42,100	1	1	0	2
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	8	\$64,800	1	1	0	2
17-2121	Marine Engineers and Naval Architects	7	\$89,800	0	1	0	1
13-2052	Personal Financial Advisors	7	\$113,600	0	1	0	1
51-4041	Machinists	7	\$50,000	1	1	0	2
43-3061	Procurement Clerks	7	\$46,800	1	1	0	2
17-2131	Materials Engineers	7	\$107,500	0	1	0	1
19-1021	Biochemists and Biophysicists	7	\$97,800	0	1	0	1
11-2032	Public Relations Managers	7	\$145,600	0	1	0	1
51-5112	Printing Press Operators	7	\$43,600	1	1	0	2
41-9099	Sales and Related Workers, All Other	7	\$45,100	1	1	0	2
27-1014	Special Effects Artists and Animators	6	\$57,500	1	1	0	2
31-1122	Personal Care Aides	6	\$25,300	1	1	0	2
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	6	\$100,800	0	1	0	1
49-9041	Industrial Machinery Mechanics	6	\$57,400	0	1	0	1
17-3021	Aerospace Engineering and Operations Technologists and Technicians	6	\$69,500	0	1	0	1
41-1011	First-Line Supervisors of Retail Sales Workers	6	\$50,300	0	1	0	2
13-2061	Financial Examiners	6	\$99,100	0	1	0	1
43-5021	Couriers and Messengers	6	\$31,000	0	1	0	1
19-3091	Anthropologists and Archeologists	5	\$60,200	0	1	0	1
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	5	\$35,100	1	1	0	2
25-9031	Instructional Coordinators	5	\$79,900	1	1	0	1
13-1031	Claims Adjusters, Examiners, and Investigators	5	\$58,100	0	1	0	1
43-3071	Tellers	5	\$31,200	1	1	0	1
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	5	\$57,300	0	1	0	1
43-4199	Information and Record Clerks, All Other	5	\$45,200	1	1	0	1
19-4045	Geological and Hydrologic Technicians	5	\$38,100	0	1	0	1
47-2031	Carpenters	5	\$48,400	0	1	0	1
21-1018	Substance Abuse, Behavioral Disorder, and Mental Health Counselors	5	\$48,500	0	1	0	1
43-6013	Medical Secretaries and Administrative Assistants	5	\$36,400	1	1	0	1
19-2012	Physicists	5	\$109,100	0	1	0	1
19-1022	Microbiologists	5	\$95,100	0	1	0	1

49-3023	Automotive Service Technicians and Mechanics	5	\$52,200	0	1	0	1
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	5	\$58,700	0	1	0	1
51-2092	Team Assemblers	5	\$30,400	0	1	0	1
11-9051	Food Service Managers	5	\$68,400	0	1	0	1
19-2099	Physical Scientists, All Other	5	\$114,800	0	1	0	1
43-4061	Eligibility Interviewers, Government Programs	4	\$43,000	0	1	0	1
27-4011	Audio and Video Technicians	4	\$53,100	0	1	0	1
13-1131	Fundraisers	4	\$67,400	0	1	0	1
51-4121	Welders, Cutters, Solderers, and Brazers	4	\$48,300	0	1	0	1
47-2152	Plumbers, Pipefitters, and Steamfitters	4	\$50,200	0	1	0	1
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	4	\$38,100	0	1	0	1
11-3111	Compensation and Benefits Managers	4	\$121,800	0	1	0	1
13-2053	Insurance Underwriters	4	\$56,900	0	1	0	1
33-9021	Private Detectives and Investigators	4	\$45,000	0	1	0	1
27-1029	Designers, All Other	4	\$70,600	0	1	0	1
43-4151	Order Clerks	4	\$31,700	0	1	0	1
15-2011	Actuaries	4	\$93,900	0	1	0	1
51-2099	Assemblers and Fabricators, All Other	4	\$31,000	0	1	0	1
41-3021	Insurance Sales Agents	4	\$58,600	0	1	0	1
19-3094	Political Scientists	4	\$112,200	0	1	0	1
19-5012	Occupational Health and Safety Technicians	4	\$49,800	0	0	0	1
49-9099	Installation, Maintenance, and Repair Workers, All Other	4	\$48,100	0	1	0	1
53-7064	Packers and Packagers, Hand	4	\$26,100	1	1	0	1
43-9071	Office Machine Operators, Except Computer	4	\$33,300	0	1	0	1
51-9199	Production Workers, All Other	4	\$33,000	0	1	0	1
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	4	\$81,000	0	0	0	1
21-1093	Social and Human Service Assistants	4	\$34,900	0	1	0	1
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4	\$52,300	0	1	0	1
19-1029	Biological Scientists, All Other	4	\$95,100	0	1	0	1
29-1051	Pharmacists	4	\$110,000	0	0	0	1
25-3097	Tutors and Teachers and Instructors, All Other	3	\$64,200	0	0	0	1
17-2031	Bioengineers and Biomedical Engineers	3	\$99,200	0	0	0	1
47-2073	Operating Engineers and Other Construction Equipment Operators	3	\$42,700	0	1	0	1
11-9141	Property, Real Estate, and Community Association Managers	3	\$74,400	0	0	0	1
11-3012	Administrative Services Managers	3	\$111,300	0	0	0	1
35-3023	Fast Food and Counter Workers	3	\$23,600	1	1	0	1
43-3099	Financial Clerks, All Other	3	\$41,400	0	1	0	1
31-9092	Medical Assistants	3	\$36,300	0	1	0	1
29-2012	Medical and Clinical Laboratory Technicians	3	\$52,400	0	0	0	1
49-3011	Aircraft Mechanics and Service Technicians	3	\$66,400	0	0	0	1
21-1021	Child, Family, and School Social Workers	3	\$52,100	0	0	0	1

17-2171	Petroleum Engineers	3	\$131,700	0	0	0	1
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	3	\$69,200	0	0	0	1
11-9151	Social and Community Service Managers	3	\$89,100	0	0	0	1
31-9094	Medical Transcriptionists	3	\$29,400	0	1	0	1
47-5097	Earth Drillers, Except Oil and Gas; and Explosives Workers, Ordnance Handling Experts, and Blasters	3	\$46,100	0	1	0	1
19-4013	Food Science Technicians	3	\$38,500	0	1	0	1
29-9098	Health Information Technologists, Medical Registrars, Surgical Assistants, and Healthcare Practitioners and Technical Workers, All Other	3	\$86,200	0	0	0	0
17-3019	Drafters, All Other	3	\$51,600	0	0	0	1
27-1022	Fashion Designers	3	\$54,400	0	0	0	1
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	3	\$36,900	0	0	0	1
49-9098	Helpers--Installation, Maintenance, and Repair Workers	3	\$33,600	0	0	0	1
29-2061	Licensed Practical and Licensed Vocational Nurses	3	\$44,900	0	0	0	1
53-3099	Motor Vehicle Operators, All Other	3	\$30,100	1	0	0	1
51-9198	Helpers--Production Workers	3	\$27,500	0	1	0	1
21-1022	Healthcare Social Workers	3	\$58,500	0	0	0	1
51-8031	Water and Wastewater Treatment Plant and System Operators	3	\$45,900	0	0	0	1
21-1091	Health Education Specialists	2	\$78,700	0	0	0	1
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	2	\$46,300	0	0	0	1
43-4041	Credit Authorizers, Checkers, and Clerks	2	\$37,400	0	0	0	1
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	2	\$53,800	0	0	0	1
29-2052	Pharmacy Technicians	2	\$34,600	0	0	0	1
29-2011	Medical and Clinical Laboratory Technologists	2	\$52,800	0	0	0	0
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	2	\$48,300	0	0	0	1
31-1121	Home Health Aides	2	\$25,900	0	0	0	1
53-2012	Commercial Pilots	2	\$110,900	0	0	0	1
15-2021	Mathematicians	2	\$107,600	0	0	0	1
21-1012	Educational, Guidance, and Career Counselors and Advisors	2	\$73,500	0	0	0	1
19-2032	Materials Scientists	2	\$78,600	0	0	0	0
19-1013	Soil and Plant Scientists	2	\$74,900	0	0	0	1
41-2011	Cashiers	2	\$23,600	0	0	0	1
37-2012	Maids and Housekeeping Cleaners	2	\$22,400	0	0	0	1
51-9161	Computer Numerically Controlled Tool Operators	2	\$42,800	0	0	0	0
19-1012	Food Scientists and Technologists	2	\$76,400	0	0	0	1
27-3091	Interpreters and Translators	2	\$81,600	0	0	0	1
25-4022	Librarians and Media Collections Specialists	2	\$80,100	0	0	0	0
43-2011	Switchboard Operators, Including Answering Service	2	\$29,700	0	0	0	0
13-2023	Appraisers and Assessors of Real Estate	2	\$59,500	0	0	0	0
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	2	\$39,600	0	0	0	0

33-9098	School Bus Monitors and Protective Service Workers, All Other	2	\$51,400	1	0	0	1
13-1075	Labor Relations Specialists	2	\$82,900	0	0	0	0
43-4011	Brokerage Clerks	2	\$45,900	0	0	0	0
31-1131	Nursing Assistants	2	\$30,100	0	0	0	0
41-2021	Counter and Rental Clerks	2	\$28,300	0	0	0	1
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	2	\$52,000	0	0	0	0
19-3022	Survey Researchers	2	\$68,600	0	0	0	0
21-1015	Rehabilitation Counselors	2	\$41,800	0	0	0	0
49-9043	Maintenance Workers, Machinery	2	\$58,100	0	0	0	0
19-1023	Zoologists and Wildlife Biologists	2	\$80,600	0	0	0	0
51-6031	Sewing Machine Operators	2	\$26,100	0	0	0	0
19-2021	Atmospheric and Space Scientists	2	\$101,600	0	0	0	0
47-4041	Hazardous Materials Removal Workers	2	\$44,700	0	0	0	1
19-3032	Industrial-Organizational Psychologists	2	\$124,500	0	0	0	0
29-1228	Physicians, All Other; and Ophthalmologists, Except Pediatric	2	\$140,500	0	0	0	0
53-6051	Transportation Inspectors	2	\$91,900	0	0	0	0
43-4141	New Accounts Clerks	2	\$34,000	0	0	0	0
13-2071	Credit Counselors	2	\$46,700	0	0	0	0
53-6041	Traffic Technicians	2	\$46,600	0	0	0	0
33-1091	First-Line Supervisors of Security Workers	2	\$70,700	0	0	0	0
53-3031	Driver/Sales Workers	2	\$35,200	0	0	0	0
21-1099	Community and Social Service Specialists, All Other	2	\$55,800	0	0	0	0
41-9021	Real Estate Brokers	2	\$67,900	0	0	0	0
27-4021	Photographers	1	\$58,800	0	0	0	0
49-9051	Electrical Power-Line Installers and Repairers	1	\$50,700	0	0	0	0
47-2142	Paperhangers	1	\$36,100	0	0	0	0
27-3099	Media and Communication Workers, All Other	1	\$54,600	0	0	0	0
21-1023	Mental Health and Substance Abuse Social Workers	1	\$52,600	0	0	0	0
27-4032	Film and Video Editors	1	\$57,900	0	0	0	0
25-2059	Special Education Teachers, All Other	1	\$102,300	0	0	0	0
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	1	\$30,600	0	0	0	0
41-3041	Travel Agents	1	\$44,400	0	0	0	0
39-9031	Exercise Trainers and Group Fitness Instructors	1	\$42,400	0	0	0	1
49-9069	Precision Instrument and Equipment Repairers, All Other	1	\$53,500	0	0	0	0
19-4012	Agricultural Technicians	1	\$37,100	0	0	0	0
43-9081	Proofreaders and Copy Markers	1	\$41,900	0	0	0	0
29-1123	Physical Therapists	1	\$82,600	0	0	0	0
43-4031	Court, Municipal, and License Clerks	1	\$36,600	0	0	0	0
19-3041	Sociologists	1	\$78,500	0	0	0	0
29-1031	Dietitians and Nutritionists	1	\$54,500	0	0	0	0
47-4099	Construction and Related Workers, All Other	1	\$44,100	0	0	0	0
21-1094	Community Health Workers	1	\$47,500	0	0	0	0
51-8013	Power Plant Operators	1	\$49,200	0	0	0	0

35-3031	Waiters and Waitresses	1	\$25,800	0	0	0	1
27-4031	Camera Operators, Television, Video, and Film	1	\$50,400	0	0	0	0
25-3021	Self-Enrichment Teachers	1	\$34,400	0	0	0	0
29-1171	Nurse Practitioners	1	\$94,800	0	0	0	0
43-9022	Word Processors and Typists	1	\$41,100	0	0	0	0
43-9031	Desktop Publishers	1	\$60,400	0	0	0	0
51-9111	Packaging and Filling Machine Operators and Tenders	1	\$30,700	0	0	0	0
19-2043	Hydrologists	1	\$84,600	0	0	0	0
19-1099	Life Scientists, All Other	1	\$78,100	0	0	0	0
43-9111	Statistical Assistants	1	\$43,300	0	0	0	0
13-1021	Buyers and Purchasing Agents, Farm Products	1	\$90,200	0	0	0	0
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	1	\$39,500	0	0	0	0
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1	\$38,900	0	0	0	0
39-9011	Childcare Workers	1	\$27,500	0	0	0	0
39-1098	First-Line Supervisors of Personal Service and Entertainment and Recreation Workers, Except Gambling Services	1	\$48,400	0	0	0	0
49-9062	Medical Equipment Repairers	1	\$56,700	0	0	0	0
47-2141	Painters, Construction and Maintenance	1	\$38,900	0	0	0	0
51-5113	Print Binding and Finishing Workers	1	\$36,400	0	0	0	0
19-1031	Conservation Scientists	1	\$72,600	0	0	0	0
19-4092	Forensic Science Technicians	1	\$68,400	0	0	0	0
31-9097	Phlebotomists	1	\$34,400	0	0	0	0
51-5111	Prepress Technicians and Workers	1	\$51,700	0	0	0	0
49-2098	Security and Fire Alarm Systems Installers	1	\$53,700	0	0	0	0
53-6021	Parking Attendants	1	\$18,600	0	0	0	0
51-8091	Chemical Plant and System Operators	1	\$45,300	0	0	0	0
29-2034	Radiologic Technologists and Technicians	1	\$65,400	0	0	0	0
51-4061	Model Makers, Metal and Plastic	1	\$49,100	0	0	0	0
25-1194	Career/Technical Education Teachers, Postsecondary	1	\$60,600	0	0	0	0
19-1032	Foresters	1	\$62,400	0	0	0	0
19-3093	Historians	1	\$84,100	0	0	0	0
29-2053	Psychiatric Technicians	1	\$33,800	0	0	0	0
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1	\$36,400	0	0	0	0
49-2091	Avionics Technicians	1	\$68,800	0	0	0	0
19-4051	Nuclear Technicians	1	\$88,900	0	0	0	0
39-9098	Crematory Operators and Personal Care and Service Workers, All Other	1	\$19,600	0	0	0	0
43-4081	Hotel, Motel, and Resort Desk Clerks	1	\$23,400	0	0	0	0
43-4021	Correspondence Clerks	1	\$37,500	0	0	0	0
25-4031	Library Technicians	1	\$36,800	0	0	0	0

51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	1	\$48,100	0	0	0	0
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	1	\$53,500	0	0	0	0
51-4111	Tool and Die Makers	1	\$49,300	0	0	0	0
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	1	\$36,700	0	0	0	0
35-1011	Chefs and Head Cooks	1	\$54,700	0	0	0	0
51-8012	Power Distributors and Dispatchers	1	\$77,900	0	0	0	0
13-2082	Tax Preparers	1	\$45,000	0	0	0	0
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	1	\$56,200	0	0	0	0
25-9045	Teaching Assistants, Except Postsecondary	1	\$31,100	0	0	0	0
43-2099	Communications Equipment Operators, All Other	1	\$46,900	0	0	0	0
11-9039	Education Administrators, All Other	1	\$106,400	0	0	0	0
11-9161	Emergency Management Directors	1	\$90,500	0	0	0	0
25-2011	Preschool Teachers, Except Special Education	1	\$37,700	0	0	0	0
39-2021	Animal Caretakers	1	\$30,300	0	0	0	0
33-2011	Firefighters	1	\$57,600	0	0	0	0
53-2022	Airfield Operations Specialists	1	\$74,100	0	0	0	0
47-2211	Sheet Metal Workers	1	\$56,700	0	0	0	0
51-8021	Stationary Engineers and Boiler Operators	1	\$66,300	0	0	0	0
35-2021	Food Preparation Workers	1	\$26,000	0	0	0	0
47-2221	Structural Iron and Steel Workers	1	\$40,800	0	0	0	0
19-3031	Clinical, Counseling, and School Psychologists	1	\$73,400	0	0	0	0
39-9041	Residential Advisors	1	\$39,300	0	0	0	0
47-3019	Helpers, Construction Trades, All Other	1	\$35,300	0	0	0	0
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	1	\$34,400	0	0	0	0
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	1	\$25,500	0	0	0	0
35-2012	Cooks, Institution and Cafeteria	1	\$29,900	0	0	0	0
49-9081	Wind Turbine Service Technicians	1	\$57,300	0	0	0	0
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	1	\$62,700	0	0	0	0
29-1128	Exercise Physiologists	1	\$51,600	0	0	0	0
51-3092	Food Batchmakers	1	\$29,500	0	0	0	0
49-2092	Electric Motor, Power Tool, and Related Repairers	1	\$32,200	0	0	0	0
27-4012	Broadcast Technicians	1	\$55,500	0	0	0	0
25-9021	Farm and Home Management Educators	1	\$55,700	0	0	0	0
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	1	\$28,200	0	0	0	0
49-2097	Audiovisual Equipment Installers and Repairers	1	\$44,900	0	0	0	0
29-1127	Speech-Language Pathologists	1	\$93,000	0	0	0	0
21-2011	Clergy	1	\$40,500	0	0	0	0
53-3052	Bus Drivers, Transit and Intercity	1	\$33,500	0	0	0	0
29-1122	Occupational Therapists	1	\$89,500	0	0	0	0

27-1019	Artists and Related Workers, All Other	1	\$85,100	0	0	0	0
51-9162	Computer Numerically Controlled Tool Programmers	1	\$50,200	0	0	0	0
39-9032	Recreation Workers	1	\$25,500	0	0	0	0
51-4192	Layout Workers, Metal and Plastic	1	\$45,000	0	0	0	0
39-6011	Baggage Porters and Bellhops	1	\$19,600	0	0	0	0
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	1	\$50,800	0	0	0	0
19-1041	Epidemiologists	1	\$84,400	0	0	0	0
29-1215	Family Medicine Physicians	1	\$173,100	0	0	0	0
47-5012	Rotary Drill Operators, Oil and Gas	1	\$39,300	0	0	0	0
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	1	\$52,100	0	0	0	0
47-5081	Helpers--Extraction Workers	1	\$28,700	0	0	0	0
47-5013	Service Unit Operators, Oil and Gas	1	\$42,400	0	0	0	0
17-2021	Agricultural Engineers	1	\$102,000	0	0	0	0
29-2042	Emergency Medical Technicians	1	\$49,900	0	0	0	0
	Total	11,182	n/a	643	1,497	330	2,470

Source: JobsEQ® | Data as of 2020Q3 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding. | Exported on: Wednesday, March 31, 2021 4:13 PM

GO VIRGINIA REGION 6 – OCCUPATION DISTRIBUTION – LOGISTICS AND DISTRIBUTION

NOT ALL OCCUPATIONS LISTED BELOW ARE TARGETED IN REGION 6

SOC	Occupation	Current		2-Year Demand			
		Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,396	\$42,600	116	206	9	331
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,032	\$27,200	98	204	23	325
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	588	\$65,100	35	87	1	124
53-3033	Light Truck Drivers	477	\$42,300	41	74	12	127
53-7065	Stockers and Order Fillers	446	\$27,700	47	75	5	126
53-7051	Industrial Truck and Tractor Operators	366	\$35,700	23	63	6	91
43-5071	Shipping, Receiving, and Inventory Clerks	203	\$33,200	13	26	-2	38
43-4051	Customer Service Representatives	197	\$35,500	19	33	-2	50
43-9061	Office Clerks, General	196	\$33,000	22	25	-2	44
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	196	\$53,200	13	31	4	48
11-1021	General and Operations Managers	177	\$116,900	8	24	2	33
41-1012	First-Line Supervisors of Non-Retail Sales Workers	131	\$89,500	8	16	-3	21
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	129	\$48,000	7	17	2	26
53-7064	Packers and Packagers, Hand	119	\$26,400	14	20	-1	33
43-3031	Bookkeeping, Accounting, and Auditing Clerks	117	\$40,100	14	13	-2	25
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	114	\$82,200	7	17	0	24
53-3031	Driver/Sales Workers	108	\$28,300	9	16	2	27
43-1011	First-Line Supervisors of Office and Administrative Support Workers	97	\$56,600	7	13	0	21
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	69	\$37,700	7	8	-1	13
49-9071	Maintenance and Repair Workers, General	62	\$42,300	5	8	1	14
43-5032	Dispatchers, Except Police, Fire, and Ambulance	62	\$38,200	4	7	1	12
43-5021	Couriers and Messengers	57	\$33,000	4	6	0	11
41-2022	Parts Salespersons	51	\$34,000	4	8	0	12
13-2011	Accountants and Auditors	50	\$71,200	3	7	0	10
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	50	\$97,900	2	6	1	9
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	47	\$68,400	3	9	1	13
49-9041	Industrial Machinery Mechanics	46	\$44,300	3	6	1	10
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	45	\$65,300	3	5	0	9
13-1161	Market Research Analysts and Marketing Specialists	43	\$63,200	2	7	1	11
41-2031	Retail Salespersons	42	\$29,000	5	8	0	13
11-2022	Sales Managers	42	\$138,200	2	6	0	8
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	42	\$47,100	3	6	0	8

11-3071	Transportation, Storage, and Distribution Managers	39	\$93,100	2	5	1	7
13-1198	Project Management Specialists and Business Operations Specialists, All Other	39	\$83,000	2	6	1	8
43-5061	Production, Planning, and Expediting Clerks	38	\$47,400	3	6	1	9
49-2011	Computer, Automated Teller, and Office Machine Repairers	36	\$42,100	2	6	0	8
15-1232	Computer User Support Specialists	34	\$51,600	1	4	0	6
13-1071	Human Resources Specialists	31	\$71,700	2	5	0	7
27-1026	Merchandise Displayers and Window Trimmers	31	\$28,100	2	4	0	6
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	30	\$38,100	2	5	-1	7
43-4151	Order Clerks	29	\$29,700	2	4	0	6
49-3023	Automotive Service Technicians and Mechanics	27	\$47,600	2	4	0	6
13-1022	Wholesale and Retail Buyers, Except Farm Products	27	\$76,500	2	4	0	5
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	26	\$30,400	3	4	1	8
51-2092	Team Assemblers	25	\$28,200	2	4	0	6
13-1081	Logisticians	25	\$74,400	1	4	0	5
13-1151	Training and Development Specialists	24	\$57,900	2	4	1	6
13-1111	Management Analysts	24	\$85,800	2	3	0	5
51-9111	Packaging and Filling Machine Operators and Tenders	24	\$29,000	2	4	0	6
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	22	\$102,100	1	2	0	3
51-1011	First-Line Supervisors of Production and Operating Workers	21	\$55,900	1	3	0	4
49-3041	Farm Equipment Mechanics and Service Technicians	21	\$35,700	1	3	0	4
43-3021	Billing and Posting Clerks	21	\$39,500	2	3	0	4
49-9099	Installation, Maintenance, and Repair Workers, All Other	21	\$40,200	2	3	0	5
11-3031	Financial Managers	21	\$123,400	1	2	1	4
15-1244	Network and Computer Systems Administrators	20	\$79,600	1	2	0	3
41-2021	Counter and Rental Clerks	20	\$31,800	2	3	0	5
51-2099	Assemblers and Fabricators, All Other	19	\$28,500	2	3	0	4
41-2011	Cashiers	19	\$22,000	3	4	0	7
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	19	\$78,500	1	3	0	4
53-7063	Machine Feeders and Offbearers	18	\$29,000	2	3	1	6
43-5011	Cargo and Freight Agents	18	\$35,000	1	2	0	4
53-7061	Cleaners of Vehicles and Equipment	17	\$26,700	2	3	0	5
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	17	\$34,100	2	2	1	5
41-1011	First-Line Supervisors of Retail Sales Workers	16	\$49,600	1	2	0	4
15-1211	Computer Systems Analysts	16	\$88,200	1	2	0	2
41-9031	Sales Engineers	16	\$127,500	1	3	0	4
43-4171	Receptionists and Information Clerks	15	\$28,300	2	2	0	4
49-9062	Medical Equipment Repairers	14	\$53,900	1	2	0	3
11-3021	Computer and Information Systems Managers	13	\$134,200	1	2	0	2
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	13	\$26,800	1	3	0	4
53-5021	Captains, Mates, and Pilots of Water Vessels	13	\$62,900	1	2	0	2
11-1011	Chief Executives	12	\$169,400	1	1	0	1

43-6011	Executive Secretaries and Executive Administrative Assistants	12	\$54,600	1	1	-1	2
33-9032	Security Guards	12	\$33,800	1	2	0	4
11-3013	Facilities Managers	12	\$95,000	1	1	0	2
11-2021	Marketing Managers	12	\$132,900	1	2	0	2
17-2112	Industrial Engineers	12	\$85,900	1	1	0	2
15-1299	Computer Occupations, All Other	11	\$87,300	0	1	0	2
17-2141	Mechanical Engineers	11	\$100,400	0	1	0	2
51-9199	Production Workers, All Other	11	\$28,900	1	2	0	3
51-4121	Welders, Cutters, Solderers, and Brazers	10	\$44,700	1	2	0	2
51-4041	Machinists	10	\$43,300	1	1	0	2
53-7011	Conveyor Operators and Tenders	10	\$30,900	1	2	0	3
41-9099	Sales and Related Workers, All Other	10	\$37,700	1	2	0	3
27-1024	Graphic Designers	10	\$57,500	1	1	0	2
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	10	\$49,000	1	1	0	2
53-5011	Sailors and Marine Oilers	10	\$33,800	1	2	0	2
53-3099	Motor Vehicle Operators, All Other	9	\$40,000	2	1	0	4
15-1231	Computer Network Support Specialists	9	\$63,800	0	1	0	2
43-3011	Bill and Account Collectors	9	\$44,100	1	1	0	2
11-3061	Purchasing Managers	8	\$103,800	0	1	0	2
49-9098	Helpers--Installation, Maintenance, and Repair Workers	8	\$29,700	1	1	0	2
13-1051	Cost Estimators	8	\$63,200	0	1	0	2
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	8	\$83,400	0	1	0	1
13-1041	Compliance Officers	8	\$66,800	0	1	0	1
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	7	\$33,700	1	1	0	2
49-2092	Electric Motor, Power Tool, and Related Repairers	7	\$40,800	1	1	0	2
41-9011	Demonstrators and Product Promoters	7	\$29,300	2	1	0	3
43-3061	Procurement Clerks	7	\$42,500	1	1	0	1
11-3121	Human Resources Managers	7	\$112,600	0	1	0	1
19-5011	Occupational Health and Safety Specialists	7	\$68,800	0	1	0	1
15-1212	Information Security Analysts	7	\$99,200	0	1	0	1
17-3023	Electrical and Electronic Engineering Technologists and Technicians	6	\$76,400	0	1	0	1
43-3051	Payroll and Timekeeping Clerks	6	\$47,900	1	1	0	1
43-9021	Data Entry Keyers	6	\$31,000	1	1	0	1
49-3021	Automotive Body and Related Repairers	6	\$50,400	0	1	0	1
15-1241	Computer Network Architects	6	\$107,200	0	1	0	1
15-1251	Computer Programmers	6	\$82,200	0	1	0	1
15-1245	Database Administrators and Architects	6	\$89,700	0	1	0	1
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	6	\$28,900	1	1	0	1
49-3093	Tire Repairers and Changers	5	\$27,700	0	1	0	1
45-2091	Agricultural Equipment Operators	5	\$35,000	0	1	0	2

51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	5	\$33,500	0	1	0	1
53-7021	Crane and Tower Operators	5	\$58,400	0	1	0	1
29-2052	Pharmacy Technicians	5	\$32,000	0	1	0	1
11-3051	Industrial Production Managers	5	\$111,800	0	1	0	1
51-9198	Helpers--Production Workers	5	\$24,600	1	1	0	2
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	5	\$41,800	0	1	0	1
27-1022	Fashion Designers	5	\$50,400	0	1	0	1
51-3092	Food Batchmakers	5	\$29,500	1	1	0	1
49-9043	Maintenance Workers, Machinery	5	\$49,400	0	1	0	1
43-9199	Office and Administrative Support Workers, All Other	4	\$40,500	0	1	0	1
15-1257	Web Developers and Digital Interface Designers	4	\$69,800	0	1	0	1
33-9098	School Bus Monitors and Protective Service Workers, All Other	4	\$39,100	1	1	0	2
17-2072	Electronics Engineers, Except Computer	4	\$113,400	0	0	0	1
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	4	\$33,300	0	1	0	1
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	4	\$30,600	0	1	0	1
47-2031	Carpenters	4	\$39,500	0	1	0	1
53-5031	Ship Engineers	4	\$70,700	0	1	0	1
27-1023	Floral Designers	4	\$28,200	0	1	0	1
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	4	\$34,100	0	1	0	1
17-2199	Engineers, All Other	4	\$115,500	0	0	0	1
15-2031	Operations Research Analysts	4	\$87,200	0	0	0	1
51-5112	Printing Press Operators	4	\$41,100	0	1	0	1
13-1021	Buyers and Purchasing Agents, Farm Products	4	\$77,000	0	1	0	1
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	4	\$55,100	0	1	0	1
53-6098	Aircraft Service Attendants and Transportation Workers, All Other	4	\$43,300	0	1	0	1
17-2071	Electrical Engineers	3	\$103,300	0	0	0	1
27-3031	Public Relations Specialists	3	\$77,500	0	1	0	1
53-7121	Tank Car, Truck, and Ship Loaders	3	\$42,100	0	1	0	1
41-9041	Telemarketers	3	\$27,700	0	1	0	1
11-9041	Architectural and Engineering Managers	3	\$135,800	0	0	0	1
47-2111	Electricians	3	\$53,200	0	1	0	1
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	3	\$34,200	0	1	0	1
47-2073	Operating Engineers and Other Construction Equipment Operators	3	\$42,700	0	1	0	1
51-9196	Paper Goods Machine Setters, Operators, and Tenders	3	\$39,300	0	1	0	1
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	3	\$31,400	0	0	0	1
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	3	\$59,600	0	1	0	1
43-4071	File Clerks	3	\$32,300	0	0	0	1
43-9071	Office Machine Operators, Except Computer	3	\$33,000	0	0	0	1
49-2098	Security and Fire Alarm Systems Installers	3	\$48,400	0	1	0	1

51-3021	Butchers and Meat Cutters	3	\$32,200	0	1	0	1
13-2041	Credit Analysts	3	\$72,900	0	0	0	0
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	3	\$46,400	0	0	0	1
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	3	\$63,100	0	0	0	1
51-6031	Sewing Machine Operators	3	\$23,900	0	0	0	1
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	3	\$27,400	0	1	0	1
29-1051	Pharmacists	3	\$108,000	0	0	0	0
51-9083	Ophthalmic Laboratory Technicians	3	\$35,900	0	0	0	1
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	3	\$30,900	0	0	0	1
49-3011	Aircraft Mechanics and Service Technicians	3	\$72,600	0	0	0	1
35-2021	Food Preparation Workers	3	\$23,200	0	1	0	1
53-7199	Material Moving Workers, All Other	3	\$40,300	0	0	0	1
37-3011	Landscaping and Groundskeeping Workers	3	\$28,200	0	1	0	1
27-1025	Interior Designers	3	\$52,900	0	0	0	1
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	3	\$44,000	0	0	0	1
27-1021	Commercial and Industrial Designers	3	\$61,600	0	0	0	1
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	2	\$31,400	0	0	0	1
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	2	\$30,900	0	0	0	1
43-4199	Information and Record Clerks, All Other	2	\$42,800	0	0	0	1
23-1011	Lawyers	2	\$128,700	0	0	0	0
45-2041	Graders and Sorters, Agricultural Products	2	\$29,000	0	1	0	1
35-3023	Fast Food and Counter Workers	2	\$21,700	0	0	0	1
47-2061	Construction Laborers	2	\$29,000	0	0	0	1
53-6051	Transportation Inspectors	2	\$77,300	0	0	0	1
49-9031	Home Appliance Repairers	2	\$36,500	0	0	0	1
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	2	\$23,100	0	0	0	1
53-1041	Aircraft Cargo Handling Supervisors	2	\$58,000	0	0	0	1
51-3011	Bakers	2	\$26,400	0	0	0	1
19-5012	Occupational Health and Safety Technicians	2	\$54,500	0	0	0	0
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	2	\$48,300	0	1	0	1
43-4041	Credit Authorizers, Checkers, and Clerks	2	\$33,700	0	0	0	0
17-2061	Computer Hardware Engineers	2	\$103,400	0	0	0	0
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	2	\$32,800	0	0	0	1
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	2	\$78,400	0	0	0	0
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	2	\$38,700	0	0	0	0
53-6031	Automotive and Watercraft Service Attendants	2	\$23,200	0	0	0	1
11-3131	Training and Development Managers	2	\$118,300	0	0	0	0
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	2	\$39,800	0	0	0	0

51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	2	\$38,300	0	0	0	0
53-6021	Parking Attendants	2	\$21,800	0	0	0	1
51-9071	Jewelers and Precious Stone and Metal Workers	2	\$40,400	0	0	0	0
53-2011	Airline Pilots, Copilots, and Flight Engineers	2	\$160,600	0	0	0	0
33-9021	Private Detectives and Investigators	2	\$49,000	0	0	0	0
27-3042	Technical Writers	2	\$73,500	0	0	0	0
17-2031	Bioengineers and Biomedical Engineers	2	\$88,600	0	0	0	0
47-2152	Plumbers, Pipefitters, and Steamfitters	2	\$44,100	0	0	0	0
51-7011	Cabinetmakers and Bench Carpenters	2	\$41,600	0	0	0	0
39-7011	Tour Guides and Escorts	2	\$27,100	0	0	0	1
13-1121	Meeting, Convention, and Event Planners	2	\$53,000	0	0	0	0
51-9161	Computer Numerically Controlled Tool Operators	1	\$37,500	0	0	0	0
17-3026	Industrial Engineering Technologists and Technicians	1	\$52,000	0	0	0	0
13-1141	Compensation, Benefits, and Job Analysis Specialists	1	\$65,700	0	0	0	0
49-9069	Precision Instrument and Equipment Repairers, All Other	1	\$49,400	0	0	0	0
19-2031	Chemists	1	\$100,900	0	0	0	0
53-3052	Bus Drivers, Transit and Intercity	1	\$38,100	0	0	0	0
29-1126	Respiratory Therapists	1	\$59,000	0	0	0	0
17-3013	Mechanical Drafters	1	\$52,700	0	0	0	0
49-9096	Riggers	1	\$42,000	0	0	0	0
13-2031	Budget Analysts	1	\$87,100	0	0	0	0
49-2097	Audiovisual Equipment Installers and Repairers	1	\$37,300	0	0	0	0
17-3027	Mechanical Engineering Technologists and Technicians	1	\$58,400	0	0	0	0
15-1221	Computer and Information Research Scientists	1	\$119,100	0	0	0	0
51-3023	Slaughterers and Meat Packers	1	\$26,400	0	0	0	0
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	1	\$48,800	0	0	0	0
51-4199	Metal Workers and Plastic Workers, All Other	1	\$34,700	0	0	0	0
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$28,100	0	0	0	0
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	1	\$34,900	0	0	0	0
47-5013	Service Unit Operators, Oil and Gas	1	\$44,900	0	0	0	0
51-2041	Structural Metal Fabricators and Fitters	1	\$37,900	0	0	0	0
51-7021	Furniture Finishers	1	\$30,000	0	0	0	0
47-2211	Sheet Metal Workers	1	\$46,200	0	0	0	0
19-4031	Chemical Technicians	1	\$46,400	0	0	0	0
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$34,800	0	0	0	0
47-4021	Elevator and Escalator Installers and Repairers	1	\$67,900	0	0	0	0
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	1	\$32,500	0	0	0	0
45-2099	Agricultural Workers, All Other	1	\$32,100	0	0	0	0

49-9044	Millwrights	1	\$49,600	0	0	0	0
29-1141	Registered Nurses	1	\$65,200	0	0	0	0
33-1091	First-Line Supervisors of Security Workers	1	\$58,500	0	0	0	0
47-5071	Roustabouts, Oil and Gas	1	\$35,800	0	0	0	0
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	1	\$54,200	0	0	0	0
51-9011	Chemical Equipment Operators and Tenders	1	\$37,500	0	0	0	0
51-9191	Adhesive Bonding Machine Operators and Tenders	1	\$32,200	0	0	0	0
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	1	\$31,400	0	0	0	0
49-9061	Camera and Photographic Equipment Repairers	1	\$34,900	0	0	0	0
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	1	\$55,400	0	0	0	0
41-3031	Securities, Commodities, and Financial Services Sales Agents	1	\$101,000	0	0	0	0
19-4099	Life, Physical, and Social Science Technicians, All Other	1	\$59,200	0	0	0	0
11-2011	Advertising and Promotions Managers	1	\$81,600	0	0	0	0
23-2093	Title Examiners, Abstractors, and Searchers	1	\$39,000	0	0	0	0
51-9193	Cooling and Freezing Equipment Operators and Tenders	1	\$37,100	0	0	0	0
53-7072	Pump Operators, Except Wellhead Pumpers	1	\$44,900	0	0	0	0
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	1	\$61,900	0	0	0	0
15-2098	Data Scientists and Mathematical Science Occupations, All Other	1	\$81,400	0	0	0	0
27-3041	Editors	1	\$61,600	0	0	0	0
39-2021	Animal Caretakers	1	\$27,500	0	0	0	0
51-9162	Computer Numerically Controlled Tool Programmers	1	\$49,500	0	0	0	0
27-1011	Art Directors	1	\$73,600	0	0	0	0
43-2011	Switchboard Operators, Including Answering Service	1	\$28,200	0	0	0	0
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$38,800	0	0	0	0
45-4022	Logging Equipment Operators	1	\$43,800	0	0	0	0
11-2033	Fundraising Managers	1	\$145,400	0	0	0	0
51-6011	Laundry and Dry-Cleaning Workers	1	\$21,600	0	0	0	0
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	1	\$31,700	0	0	0	0
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	1	\$33,300	0	0	0	0
17-3022	Civil Engineering Technologists and Technicians	1	\$49,800	0	0	0	0
27-1029	Designers, All Other	1	\$58,300	0	0	0	0
17-2051	Civil Engineers	1	\$89,300	0	0	0	0
13-1075	Labor Relations Specialists	1	\$71,100	0	0	0	0
47-2221	Structural Iron and Steel Workers	1	\$44,800	0	0	0	0
19-4013	Food Science Technicians	1	\$37,800	0	0	0	0
11-9121	Natural Sciences Managers	1	\$119,700	0	0	0	0
51-9082	Medical Appliance Technicians	1	\$44,300	0	0	0	0
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	1	\$28,500	0	0	0	0
11-9021	Construction Managers	1	\$81,500	0	0	0	0
11-3012	Administrative Services Managers	1	\$97,200	0	0	0	0

51-9141	Semiconductor Processing Technicians	1	\$38,300	0	0	0	0
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	1	\$92,700	0	0	0	0
29-2098	Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other	1	\$39,300	0	0	0	0
49-9011	Mechanical Door Repairers	1	\$37,100	0	0	0	0
51-6093	Upholsterers	1	\$29,400	0	0	0	0
35-2012	Cooks, Institution and Cafeteria	1	\$29,800	0	0	0	0
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1	\$34,500	0	0	0	0
51-9022	Grinding and Polishing Workers, Hand	1	\$28,900	0	0	0	0
19-1013	Soil and Plant Scientists	1	\$72,500	0	0	0	0
37-2012	Maids and Housekeeping Cleaners	1	\$23,100	0	0	0	0
51-6099	Textile, Apparel, and Furnishings Workers, All Other	1	\$27,600	0	0	0	0
23-2011	Paralegals and Legal Assistants	1	\$55,300	0	0	0	0
51-3093	Food Cooking Machine Operators and Tenders	1	\$25,400	0	0	0	0
17-3011	Architectural and Civil Drafters	1	\$55,400	0	0	0	0
17-2041	Chemical Engineers	1	\$96,400	0	0	0	0
43-9041	Insurance Claims and Policy Processing Clerks	1	\$41,000	0	0	0	0
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$31,500	0	0	0	0
27-4021	Photographers	1	\$42,000	0	0	0	0
19-1042	Medical Scientists, Except Epidemiologists	1	\$95,400	0	0	0	0
35-3031	Waiters and Waitresses	1	\$26,500	0	0	0	0
51-9194	Etchers and Engravers	1	\$29,400	0	0	0	0
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	1	\$33,800	0	0	0	0
49-3092	Recreational Vehicle Service Technicians	1	\$38,700	0	0	0	0
	Total	8,431	n/a	664	1,290	67	2,021

Source: JobsEQ® | Data as of 2020Q3 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding. | Exported on: Wednesday, March 31, 2021 4:13 PM

GO VIRGINIA REGION 6 – OCCUPATION DISTRIBUTION – INFORMATION/DATA CENTERS

NOT ALL OCCUPATIONS LISTED BELOW ARE TARGETED IN REGION 6

SOC	Occupation	Current		2-Year Demand			
		Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	118	\$108,000	4	15	5	24
27-3041	Editors	60	\$59,000	3	9	-2	11
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	54	\$77,700	3	11	2	16
43-4051	Customer Service Representatives	51	\$38,500	5	9	0	13
13-1161	Market Research Analysts and Marketing Specialists	35	\$75,900	2	6	1	9
41-3011	Advertising Sales Agents	31	\$51,000	2	6	-1	7
27-3023	News Analysts, Reporters, and Journalists	27	\$66,000	2	5	-1	5
15-1232	Computer User Support Specialists	25	\$56,600	1	3	0	5
11-3021	Computer and Information Systems Managers	24	\$161,800	1	3	1	5
15-1257	Web Developers and Digital Interface Designers	24	\$76,700	1	3	0	4
11-1021	General and Operations Managers	22	\$148,600	1	3	0	4
25-4022	Librarians and Media Collections Specialists	22	\$63,900	3	2	1	5
15-1211	Computer Systems Analysts	22	\$94,400	1	2	0	4
43-4121	Library Assistants, Clerical	21	\$25,500	3	3	0	7
43-9061	Office Clerks, General	21	\$33,000	2	3	-1	4
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	20	\$111,000	1	2	0	3
25-4031	Library Technicians	17	\$34,400	3	2	0	6
15-1299	Computer Occupations, All Other	16	\$100,900	1	2	0	3
15-1244	Network and Computer Systems Administrators	16	\$86,200	1	2	0	3
13-1111	Management Analysts	15	\$90,900	1	2	0	3
13-1198	Project Management Specialists and Business Operations Specialists, All Other	14	\$97,900	1	2	0	3
13-2011	Accountants and Auditors	14	\$81,400	1	2	0	3
43-1011	First-Line Supervisors of Office and Administrative Support Workers	13	\$62,500	1	2	0	3
27-1024	Graphic Designers	12	\$51,900	1	1	-1	2
13-1071	Human Resources Specialists	10	\$93,500	1	2	0	2
11-2021	Marketing Managers	10	\$155,300	0	1	0	2
43-3031	Bookkeeping, Accounting, and Auditing Clerks	10	\$42,200	1	1	0	2
15-1245	Database Administrators and Architects	9	\$92,500	0	1	0	2
15-1212	Information Security Analysts	8	\$100,500	0	1	1	2
11-2022	Sales Managers	8	\$168,100	0	1	0	2
15-1241	Computer Network Architects	8	\$118,100	0	1	0	1
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	8	\$26,800	1	1	-1	1
15-1231	Computer Network Support Specialists	8	\$70,300	0	1	0	1
15-1251	Computer Programmers	7	\$94,500	0	1	0	1

11-3031	Financial Managers	7	\$154,300	0	1	0	2
41-1012	First-Line Supervisors of Non-Retail Sales Workers	7	\$96,900	1	1	0	1
43-9021	Data Entry Keyers	7	\$29,300	1	1	0	1
13-1151	Training and Development Specialists	7	\$75,700	0	1	0	2
23-1011	Lawyers	7	\$122,100	0	0	0	1
27-3043	Writers and Authors	7	\$61,600	1	1	0	1
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	7	\$96,900	0	1	0	1
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	7	\$64,200	0	1	0	1
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	7	\$39,800	1	1	0	1
51-5112	Printing Press Operators	6	\$43,800	0	1	-1	1
41-9041	Telemarketers	6	\$30,100	1	1	0	2
43-6011	Executive Secretaries and Executive Administrative Assistants	6	\$66,700	1	1	0	1
27-3031	Public Relations Specialists	6	\$80,000	0	1	0	1
27-2012	Producers and Directors	5	\$66,500	0	1	0	1
15-2031	Operations Research Analysts	5	\$94,400	0	0	0	1
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	4	\$31,800	1	1	0	1
43-9071	Office Machine Operators, Except Computer	3	\$30,300	0	0	0	1
11-3121	Human Resources Managers	3	\$150,000	0	0	0	1
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	3	\$75,900	0	1	0	1
11-1011	Chief Executives	3	\$189,900	0	0	0	0
27-1011	Art Directors	3	\$71,300	0	0	0	1
27-3042	Technical Writers	3	\$73,500	0	0	0	1
53-3031	Driver/Sales Workers	3	\$27,600	0	0	0	0
43-5061	Production, Planning, and Expediting Clerks	3	\$50,000	0	0	0	1
49-9071	Maintenance and Repair Workers, General	3	\$48,400	0	0	0	1
11-3013	Facilities Managers	3	\$109,400	0	0	0	1
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	3	\$30,400	0	0	0	0
43-4151	Order Clerks	2	\$32,300	0	0	0	1
13-1121	Meeting, Convention, and Event Planners	2	\$64,800	0	0	0	1
51-5111	Prepress Technicians and Workers	2	\$42,800	0	0	0	0
15-1221	Computer and Information Research Scientists	2	\$107,400	0	0	0	0
53-3033	Light Truck Drivers	2	\$37,400	0	0	0	0
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	2	\$91,700	0	0	0	0
43-9031	Desktop Publishers	2	\$46,500	0	0	0	0
43-4171	Receptionists and Information Clerks	2	\$28,900	0	0	0	0
27-1014	Special Effects Artists and Animators	2	\$69,600	0	0	0	1
43-3021	Billing and Posting Clerks	2	\$39,400	0	0	0	0
13-1041	Compliance Officers	2	\$71,300	0	0	0	0
43-5071	Shipping, Receiving, and Inventory Clerks	2	\$32,800	0	0	0	0

43-9199	Office and Administrative Support Workers, All Other	2	\$34,600	0	0	0	0
25-4011	Archivists	2	\$57,700	0	0	0	1
43-9081	Proofreaders and Copy Markers	2	\$35,000	0	0	0	0
33-9032	Security Guards	2	\$39,200	0	0	0	1
41-9099	Sales and Related Workers, All Other	2	\$45,000	0	0	0	0
27-4021	Photographers	2	\$53,900	0	0	0	0
13-1141	Compensation, Benefits, and Job Analysis Specialists	2	\$74,800	0	0	0	0
17-2061	Computer Hardware Engineers	2	\$110,400	0	0	0	0
11-2033	Fundraising Managers	2	\$151,800	0	0	0	0
53-7064	Packers and Packagers, Hand	2	\$22,800	0	0	0	0
11-2011	Advertising and Promotions Managers	2	\$86,300	0	0	0	0
41-9031	Sales Engineers	1	\$123,600	0	0	0	0
51-1011	First-Line Supervisors of Production and Operating Workers	1	\$55,000	0	0	0	0
13-1081	Logisticians	1	\$80,800	0	0	0	0
15-2098	Data Scientists and Mathematical Science Occupations, All Other	1	\$86,600	0	0	0	0
51-5113	Print Binding and Finishing Workers	1	\$37,200	0	0	0	0
53-7063	Machine Feeders and Offbearers	1	\$24,500	0	0	0	0
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	1	\$46,600	0	0	0	0
43-3051	Payroll and Timekeeping Clerks	1	\$58,700	0	0	0	0
27-4011	Audio and Video Technicians	1	\$56,500	0	0	0	0
23-2093	Title Examiners, Abstractors, and Searchers	1	\$36,800	0	0	0	0
43-3011	Bill and Account Collectors	1	\$48,900	0	0	0	0
27-4032	Film and Video Editors	1	\$56,600	0	0	0	0
53-7065	Stockers and Order Fillers	1	\$25,300	0	0	0	0
25-3097	Tutors and Teachers and Instructors, All Other	1	\$49,400	0	0	0	0
43-4071	File Clerks	1	\$35,700	0	0	0	0
41-9022	Real Estate Sales Agents	1	\$52,000	0	0	0	0
25-9031	Instructional Coordinators	1	\$68,900	0	0	0	0
13-1131	Fundraisers	1	\$61,300	0	0	0	0
41-2031	Retail Salespersons	1	\$24,600	0	0	0	0
43-4199	Information and Record Clerks, All Other	1	\$40,600	0	0	0	0
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	1	\$51,100	0	0	0	0
15-2041	Statisticians	1	\$86,400	0	0	0	0
11-3131	Training and Development Managers	1	\$131,400	0	0	0	0
23-2011	Paralegals and Legal Assistants	1	\$64,900	0	0	0	0
27-4012	Broadcast Technicians	1	\$60,100	0	0	0	0
27-3099	Media and Communication Workers, All Other	1	\$52,500	0	0	0	0
51-9198	Helpers--Production Workers	1	\$23,800	0	0	0	0
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	1	\$81,000	0	0	0	0
11-3012	Administrative Services Managers	1	\$110,700	0	0	0	0
13-2031	Budget Analysts	1	\$94,300	0	0	0	0
27-4031	Camera Operators, Television, Video, and Film	1	\$57,400	0	0	0	0

29-2098	Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other	1	\$44,900	0	0	0	0
25-4012	Curators	1	\$72,500	0	0	0	0
43-5032	Dispatchers, Except Police, Fire, and Ambulance	1	\$39,900	0	0	0	0
11-3061	Purchasing Managers	1	\$122,600	0	0	0	0
	Total	1,002	n/a	63	140	6	209

Source: JobsEQ® | Data as of 2020Q3 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding. | Exported on: Wednesday, March 31, 2021 4:13 PM

GO VIRGINIA REGION 6 – OCCUPATION DISTRIBUTION – FORESTRY/PAPER/WOOD PRODUCTS

NOT ALL OCCUPATIONS LISTED BELOW ARE TARGETED IN REGION 6

SOC	Occupation	Current		2-Year Demand			
		Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	188	\$26,700	15	47	1	63
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	158	\$30,800	9	26	-4	31
51-9196	Paper Goods Machine Setters, Operators, and Tenders	133	\$41,500	8	20	-1	28
45-4022	Logging Equipment Operators	127	\$43,900	9	29	-3	36
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	92	\$25,000	8	17	-2	23
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	80	\$27,200	8	13	-1	20
53-7051	Industrial Truck and Tractor Operators	76	\$33,800	4	12	-1	15
11-9013	Farmers, Ranchers, and Other Agricultural Managers	75	\$74,200	10	6	1	16
53-3032	Heavy and Tractor-Trailer Truck Drivers	64	\$39,400	5	9	-2	12
49-9041	Industrial Machinery Mechanics	55	\$52,600	4	7	1	11
51-1011	First-Line Supervisors of Production and Operating Workers	46	\$57,700	3	6	-1	8
51-2092	Team Assemblers	44	\$27,300	3	6	-2	7
51-9198	Helpers--Production Workers	36	\$26,500	4	7	-1	10
49-9071	Maintenance and Repair Workers, General	30	\$41,600	2	4	0	5
43-9061	Office Clerks, General	27	\$31,300	3	3	-1	5
53-7063	Machine Feeders and Offbearers	25	\$27,400	2	4	-1	6
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	22	\$52,500	2	5	0	6
11-1021	General and Operations Managers	22	\$114,900	1	3	0	3
45-4021	Fallers	21	\$44,700	2	5	-1	5
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	19	\$68,100	1	3	0	4
45-2091	Agricultural Equipment Operators	18	\$34,600	2	5	0	7
49-9044	Millwrights	18	\$43,100	1	2	0	3
51-9199	Production Workers, All Other	18	\$36,000	1	3	0	4
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	18	\$38,500	1	3	-1	3
45-4023	Log Graders and Scalers	17	\$38,500	1	4	0	5
45-4029	Logging Workers, All Other	16	\$42,000	1	4	-1	4
43-3031	Bookkeeping, Accounting, and Auditing Clerks	16	\$39,000	2	2	-1	3
43-5071	Shipping, Receiving, and Inventory Clerks	15	\$37,700	1	2	-1	2
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	13	\$34,900	1	1	-1	2
47-2111	Electricians	12	\$50,400	1	2	0	3
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	12	\$40,500	1	2	0	2
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	12	\$74,900	1	1	0	2
19-1032	Foresters	11	\$61,700	0	2	0	2
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	11	\$32,700	1	1	0	2

51-7011	Cabinetmakers and Bench Carpenters	11	\$36,000	1	1	0	2
17-2112	Industrial Engineers	11	\$86,400	0	1	0	1
51-9111	Packaging and Filling Machine Operators and Tenders	10	\$32,500	1	1	0	2
51-8021	Stationary Engineers and Boiler Operators	10	\$45,000	1	1	0	2
13-2011	Accountants and Auditors	10	\$68,000	1	1	0	2
49-9043	Maintenance Workers, Machinery	9	\$51,000	1	1	0	2
47-2031	Carpenters	9	\$29,800	1	1	0	2
11-3051	Industrial Production Managers	9	\$102,000	0	1	0	1
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	9	\$73,200	1	1	0	1
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	9	\$23,500	1	1	0	2
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	9	\$43,200	1	1	0	1
53-7065	Stockers and Order Fillers	8	\$29,500	1	1	0	2
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	8	\$59,800	0	1	0	1
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	7	\$39,500	0	1	0	2
51-7099	Woodworkers, All Other	7	\$31,500	1	1	0	2
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	7	\$36,200	1	1	0	2
51-4194	Tool Grinders, Filers, and Sharpeners	7	\$33,800	1	1	0	2
43-5061	Production, Planning, and Expediting Clerks	6	\$54,300	0	1	0	1
51-2099	Assemblers and Fabricators, All Other	6	\$27,900	0	1	0	1
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	6	\$55,500	0	1	0	1
43-1011	First-Line Supervisors of Office and Administrative Support Workers	6	\$55,400	0	1	0	1
45-2041	Graders and Sorters, Agricultural Products	6	\$28,300	1	1	0	2
43-4051	Customer Service Representatives	5	\$36,600	1	1	0	1
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	5	\$107,500	0	1	0	1
53-3033	Light Truck Drivers	5	\$34,000	0	1	0	1
37-3011	Landscaping and Groundskeeping Workers	5	\$27,400	0	1	0	1
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	5	\$37,700	0	1	0	1
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	4	\$40,900	0	1	0	1
47-2073	Operating Engineers and Other Construction Equipment Operators	4	\$35,000	0	1	0	1
53-7064	Packers and Packagers, Hand	4	\$24,700	1	1	0	1
53-7011	Conveyor Operators and Tenders	4	\$32,700	0	1	0	1
13-1071	Human Resources Specialists	4	\$70,200	0	1	0	1
37-3013	Tree Trimmers and Pruners	4	\$40,500	0	1	0	1
33-9032	Security Guards	3	\$28,600	0	1	0	1
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	3	\$45,200	0	0	0	1
13-1198	Project Management Specialists and Business Operations Specialists, All Other	3	\$81,100	0	0	0	1
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	3	\$34,100	0	1	0	1

51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	3	\$33,200	0	1	0	1
11-1011	Chief Executives	3	\$168,000	0	0	0	0
53-7021	Crane and Tower Operators	3	\$42,000	0	0	0	1
45-2099	Agricultural Workers, All Other	3	\$38,700	0	1	0	1
51-4121	Welders, Cutters, Solderers, and Brazers	3	\$43,200	0	0	0	1
51-9011	Chemical Equipment Operators and Tenders	2	\$35,600	0	0	0	1
43-3051	Payroll and Timekeeping Clerks	2	\$46,100	0	0	0	0
11-3031	Financial Managers	2	\$114,300	0	0	0	0
11-2022	Sales Managers	2	\$138,000	0	0	0	0
51-4041	Machinists	2	\$49,800	0	0	0	0
51-9191	Adhesive Bonding Machine Operators and Tenders	2	\$33,800	0	0	0	1
17-3026	Industrial Engineering Technologists and Technicians	2	\$48,300	0	0	0	0
47-2061	Construction Laborers	2	\$21,900	0	0	0	0
53-7061	Cleaners of Vehicles and Equipment	2	\$27,700	0	0	0	1
19-5011	Occupational Health and Safety Specialists	2	\$64,500	0	0	0	0
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	2	\$33,000	0	0	0	0
11-3013	Facilities Managers	2	\$100,200	0	0	0	0
11-3061	Purchasing Managers	2	\$94,800	0	0	0	0
43-4171	Receptionists and Information Clerks	2	\$26,700	0	0	0	0
49-9098	Helpers--Installation, Maintenance, and Repair Workers	2	\$30,800	0	0	0	0
17-2141	Mechanical Engineers	2	\$101,700	0	0	0	0
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	2	\$58,500	0	0	0	0
49-3041	Farm Equipment Mechanics and Service Technicians	2	\$35,400	0	0	0	0
15-1244	Network and Computer Systems Administrators	2	\$79,100	0	0	0	0
47-2152	Plumbers, Pipefitters, and Steamfitters	2	\$49,200	0	0	0	0
51-5112	Printing Press Operators	2	\$43,200	0	0	0	0
13-1081	Logisticians	1	\$78,100	0	0	0	0
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	1	\$31,700	0	0	0	1
51-8031	Water and Wastewater Treatment Plant and System Operators	1	\$47,300	0	0	0	0
43-6011	Executive Secretaries and Executive Administrative Assistants	1	\$52,600	0	0	0	0
45-4011	Forest and Conservation Workers	1	\$31,600	0	0	0	0
49-9099	Installation, Maintenance, and Repair Workers, All Other	1	\$48,300	0	0	0	0
17-2071	Electrical Engineers	1	\$103,800	0	0	0	0
35-2013	Cooks, Private Household	1	\$41,200	0	0	0	0
11-3121	Human Resources Managers	1	\$110,200	0	0	0	0
41-1012	First-Line Supervisors of Non-Retail Sales Workers	1	\$95,100	0	0	0	0
13-1051	Cost Estimators	1	\$53,700	0	0	0	0
15-1232	Computer User Support Specialists	1	\$51,600	0	0	0	0
43-3061	Procurement Clerks	1	\$39,900	0	0	0	0
11-9041	Architectural and Engineering Managers	1	\$115,800	0	0	0	0
13-1111	Management Analysts	1	\$83,100	0	0	0	0

17-2199	Engineers, All Other	1	\$106,200	0	0	0	0
53-7041	Hoist and Winch Operators	1	\$41,400	0	0	0	0
15-1299	Computer Occupations, All Other	1	\$92,900	0	0	0	0
17-3023	Electrical and Electronic Engineering Technologists and Technicians	1	\$77,300	0	0	0	0
19-4031	Chemical Technicians	1	\$54,200	0	0	0	0
21-2021	Directors, Religious Activities and Education	1	\$49,100	0	0	0	0
11-3071	Transportation, Storage, and Distribution Managers	1	\$93,900	0	0	0	0
13-1151	Training and Development Specialists	1	\$61,000	0	0	0	0
51-8013	Power Plant Operators	1	\$45,800	0	0	0	0
43-3021	Billing and Posting Clerks	1	\$36,100	0	0	0	0
19-1013	Soil and Plant Scientists	1	\$72,100	0	0	0	0
37-2012	Maids and Housekeeping Cleaners	1	\$23,800	0	0	0	0
41-2031	Retail Salespersons	1	\$28,400	0	0	0	0
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$33,100	0	0	0	0
17-2081	Environmental Engineers	1	\$81,900	0	0	0	0
51-8099	Plant and System Operators, All Other	1	\$59,800	0	0	0	0
19-2099	Physical Scientists, All Other	1	\$114,600	0	0	0	0
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	1	\$37,800	0	0	0	0
51-6042	Shoe Machine Operators and Tenders	1	\$27,700	0	0	0	0
15-1211	Computer Systems Analysts	1	\$85,100	0	0	0	0
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1	\$83,800	0	0	0	0
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	1	\$63,500	0	0	0	0
43-5032	Dispatchers, Except Police, Fire, and Ambulance	1	\$38,400	0	0	0	0
13-1021	Buyers and Purchasing Agents, Farm Products	1	\$74,800	0	0	0	0
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	1	\$84,100	0	0	0	0
17-3011	Architectural and Civil Drafters	1	\$49,000	0	0	0	0
49-2092	Electric Motor, Power Tool, and Related Repairers	1	\$58,800	0	0	0	0
53-7081	Refuse and Recyclable Material Collectors	1	\$38,100	0	0	0	0
11-3021	Computer and Information Systems Managers	1	\$124,100	0	0	0	0
15-1231	Computer Network Support Specialists	1	\$70,300	0	0	0	0
45-2011	Agricultural Inspectors	1	\$40,100	0	0	0	0
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	1	\$79,100	0	0	0	0
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	1	\$43,500	0	0	0	0
51-3011	Bakers	1	\$26,400	0	0	0	0
33-2011	Firefighters	1	\$49,600	0	0	0	0
51-7021	Furniture Finishers	1	\$28,300	0	0	0	0

	Total	1,909	n/a	142	314	-28	428
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Source: JobsEQ® | Data as of 2020Q3 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding. | Exported on: Wednesday, March 31, 2021 4:13 PM

GO VIRGINIA REGION 6 – OCCUPATION DISTRIBUTION – SEAFOOD PROCESSING/AQUACULTURE/COMMERCIAL FISHING

NOT ALL OCCUPATIONS LISTED BELOW ARE TARGETED IN REGION 6

SOC	Occupation	Current		2-Year Demand			
		Empl	Avg Ann Wages	Exits	Transfers	Empl Growth	Total Demand
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	140	\$104,400	7	13	-4	16
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	132	\$23,100	10	20	-7	23
45-3031	Fishing and Hunting Workers	129	n/a	9	30	-4	35
51-9111	Packaging and Filling Machine Operators and Tenders	38	\$25,000	3	5	-2	6
53-7064	Packers and Packers, Hand	37	\$22,600	4	6	-2	8
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	26	\$46,400	2	4	1	7
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	25	\$31,600	2	6	-1	7
51-1011	First-Line Supervisors of Production and Operating Workers	22	\$45,700	1	3	-1	3
51-3092	Food Batchmakers	18	\$30,100	2	3	-1	4
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	16	\$24,300	1	3	-1	3
11-9013	Farmers, Ranchers, and Other Agricultural Managers	14	\$74,200	2	1	0	2
49-9071	Maintenance and Repair Workers, General	12	\$38,600	1	1	-1	2
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	11	\$31,700	1	2	-1	1
11-1021	General and Operations Managers	10	\$115,800	0	1	0	1
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	10	\$24,300	1	1	-1	2
43-9061	Office Clerks, General	10	\$29,200	1	1	-1	1
49-9041	Industrial Machinery Mechanics	9	\$47,300	1	1	0	1
39-2021	Animal Caretakers	8	\$24,900	1	1	0	2
53-5021	Captains, Mates, and Pilots of Water Vessels	7	\$67,900	0	1	0	1
43-5071	Shipping, Receiving, and Inventory Clerks	7	\$33,100	0	1	0	1
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	6	\$61,200	0	1	0	1
53-3032	Heavy and Tractor-Trailer Truck Drivers	6	\$38,200	1	1	0	1
53-7051	Industrial Truck and Tractor Operators	6	\$29,300	0	1	0	1
53-3033	Light Truck Drivers	6	\$35,600	0	1	0	1
51-2092	Team Assemblers	6	\$32,100	0	1	-1	1
51-3099	Food Processing Workers, All Other	5	\$21,400	0	1	0	1
51-9198	Helpers--Production Workers	5	\$22,700	1	1	0	1
43-3031	Bookkeeping, Accounting, and Auditing Clerks	5	\$40,800	1	1	0	1
53-7061	Cleaners of Vehicles and Equipment	5	\$31,000	0	1	0	1
51-9199	Production Workers, All Other	5	\$27,100	0	1	0	1
37-3011	Landscaping and Groundskeeping Workers	4	\$27,900	0	1	0	1
53-7065	Stockers and Order Fillers	4	\$23,200	0	1	0	1
45-2041	Graders and Sorters, Agricultural Products	4	\$27,100	0	1	0	1
33-9032	Security Guards	4	\$32,000	0	1	0	1
53-5011	Sailors and Marine Oilers	4	\$60,200	0	1	0	1

33-9011	Animal Control Workers	4	\$36,800	0	0	0	1
43-1011	First-Line Supervisors of Office and Administrative Support Workers	3	\$59,300	0	0	0	0
43-9021	Data Entry Keyers	3	\$31,000	0	0	0	0
11-3051	Industrial Production Managers	3	\$99,700	0	0	0	0
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	3	\$38,700	0	0	0	0
53-5031	Ship Engineers	3	\$68,300	0	1	0	1
41-2011	Cashiers	3	\$21,300	0	1	0	1
47-2073	Operating Engineers and Other Construction Equipment Operators	3	\$43,000	0	0	0	1
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	3	\$66,900	0	0	0	0
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	3	\$29,800	0	0	0	1
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	3	\$44,800	0	0	0	0
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	2	\$26,700	0	1	0	1
17-2161	Nuclear Engineers	2	\$110,300	0	0	0	0
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	2	\$42,600	0	0	0	1
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	2	\$22,900	0	0	0	0
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	2	\$28,800	0	0	0	0
51-3093	Food Cooking Machine Operators and Tenders	2	\$25,400	0	0	0	0
13-2011	Accountants and Auditors	2	\$72,300	0	0	0	0
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	2	\$23,100	0	0	0	0
13-1071	Human Resources Specialists	2	\$62,200	0	0	0	0
47-2111	Electricians	2	\$61,600	0	0	0	0
45-4022	Logging Equipment Operators	2	\$43,800	0	0	0	0
51-9193	Cooling and Freezing Equipment Operators and Tenders	2	\$28,000	0	0	0	0
19-4013	Food Science Technicians	1	\$39,000	0	0	0	0
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	1	\$75,900	0	0	0	0
43-5061	Production, Planning, and Expediting Clerks	1	\$50,700	0	0	0	0
43-4051	Customer Service Representatives	1	\$35,800	0	0	0	0
45-2091	Agricultural Equipment Operators	1	\$34,600	0	0	0	0
35-2021	Food Preparation Workers	1	\$20,000	0	0	0	0
41-2031	Retail Salespersons	1	\$26,000	0	0	0	0
49-9043	Maintenance Workers, Machinery	1	\$43,800	0	0	0	0
19-5011	Occupational Health and Safety Specialists	1	\$69,800	0	0	0	0
17-2141	Mechanical Engineers	1	\$102,600	0	0	0	0
13-1111	Management Analysts	1	\$91,300	0	0	0	0
37-2012	Maids and Housekeeping Cleaners	1	\$21,800	0	0	0	0
11-3031	Financial Managers	1	\$120,200	0	0	0	0
11-3013	Facilities Managers	1	\$89,000	0	0	0	0
35-2012	Cooks, Institution and Cafeteria	1	\$26,300	0	0	0	0

45-2021	Animal Breeders	1	\$49,300	0	0	0	0
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1	\$40,000	0	0	0	0
11-1011	Chief Executives	1	\$158,900	0	0	0	0
49-9098	Helpers--Installation, Maintenance, and Repair Workers	1	\$28,800	0	0	0	0
13-1161	Market Research Analysts and Marketing Specialists	1	\$66,900	0	0	0	0
39-2011	Animal Trainers	1	\$33,000	0	0	0	0
51-6042	Shoe Machine Operators and Tenders	1	\$27,700	0	0	0	0
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	1	\$33,600	0	0	0	0
51-2099	Assemblers and Fabricators, All Other	1	\$32,700	0	0	0	0
11-2022	Sales Managers	1	\$160,800	0	0	0	0
45-4029	Logging Workers, All Other	1	\$41,900	0	0	0	0
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	1	\$25,600	0	0	0	0
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	1	\$33,400	0	0	0	0
15-1211	Computer Systems Analysts	1	\$90,400	0	0	0	0
43-3021	Billing and Posting Clerks	1	\$41,800	0	0	0	0
19-1012	Food Scientists and Technologists	1	\$71,800	0	0	0	0
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	1	\$65,300	0	0	0	0
53-3031	Driver/Sales Workers	1	\$31,000	0	0	0	0
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	1	\$35,900	0	0	0	0
45-2099	Agricultural Workers, All Other	1	\$35,300	0	0	0	0
	Total	860	n/a	61	128	-35	154

Source: JobsEQ® | Data as of 2020Q3 except wages which are as of 2019. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ. Note: Figures may not sum due to rounding. | Exported on: Wednesday, March 31, 2021 4:13 PM

APPENDIX C: ENTREPRENEURSHIP

The following document was written by the Chapman Company in consultation with Fredericksburg Regional Alliance at the request of the GO Virginia Region 6 Council. The Chapman Company answered the following RFP:

In 2018, the Department of Housing and Community Development (DHCD) engaged TEconomy Partners, LLC to provide each GO Virginia region with an independent and objective assessment of its entrepreneurial development position, to facilitate a situational assessment of the region's entrepreneurial ecosystem, and to help identify priority actions to strengthen the ecosystem. Each region was provided with the baseline assessment that can be utilized by the regional council to develop a pipeline of initial projects to support regional entrepreneurship.

Specifically, we are seeking a consultant who will be able to do the following:

1. Review the 2018 TEconomy report for Region 6 and determine what has happened since that plan.
2. Inventory all the entrepreneurial assets and identify gaps in Region 6.
3. Facilitate three (3) to four (4) stakeholder engagement sessions in coordination with Region 6 staff to determine priorities in Region 6 Growth and Diversification Plan.
4. Propose initiatives that can be undertaken by the region to build the entrepreneurship ecosystem.

The deliverable will be an inventory of assets and identification of gaps that will become a component of the Region 6 Growth and Diversification Plan. The consultant will work with Region 6 staff to determine from the stakeholder engagement sessions and action plan the goals, objectives, and actions that can be incorporated into the Region 6 Growth and Diversification Plan update.

This asset inventory and gap analysis along with stakeholder-led goals, objectives, and actions will need to be completed by August 15, 2021. To meet this deadline, the estimated timeline for this contract is as follows:

- March 5 – GWRC solicits proposals
- March 19 – Proposals due to GWRC
- March 22 – March 26 – Candidates meet with Region 6 staff to discuss proposals
- April 1 – GO Virginia Region 6 Executive Committee makes a selection and GWRC executes contract(s)
- July 15 – Draft Analysis to Region 6 Staff
- August 15 – Final Analysis Plan to Region 6 Staff

The recommendations in the following document were used to inform the priorities outlined in the GO Virginia Region 6 2022-2023 Growth and Diversification Plan update. The scope of this report was intentionally wholistic to inform entrepreneurship broadly, but the recommendations included in the Growth and Diversification plan are those that would eligible GO Virginia activities.



GO VIRGINIA REGION 6 ENTREPRENEURSHIP ECOSYSTEM DEVELOPMENT

2021 Growth and Diversification Plan Update

Written By: Chapman Company in consultation
with Fredericksburg Regional Alliance

The Fredericksburg Regional Alliance (“FRA”) received a contract from Go Virginia and retained Chapman and Company to provide a review and update to the Teconomy Entrepreneurship Report – created in 2018. This update is provided in the attached PowerPoint presentation. This whitepaper document is intended to act as a basic guide of the update and the general recommendations provided by Chapman and Company.

The three central themes of the recommendations are these:

- (1) Region 6 needs to identify and enable entrepreneurs at a greater rate than they are and then tell the stories of these entrepreneurs.
- (2) Region 6 should connect more explicitly across the region and to adjoining regions – specifically Richmond, the DC Metro, and Hampton Roads.
- (3) Region 6 should work to facilitate programming targeted at active entrepreneurs – not just people interested in the concepts.

When individuals are starting companies, they are uniquely difficult to identify because they do not necessarily broadcast their intent to start. Moreover, in specific fields, such as technology or consulting, these companies are often run out of a person’s basement or garage. Thus, there is no signal that the individual is starting a company. Thus, it is critical that region’s seeking to engage entrepreneurs early in the process are actively ping the community with information and events. Region 6 does not have this active searching profile today.

One way that communities have been able to create an active search is to hire an ecosystem builder whose sole purpose is to find entrepreneurs and engage with them. Many ecosystem builders will spend time getting coffee with network hubs and creating targeted programs not with the purpose of teaching or telling entrepreneurs something but instead with the purpose of gathering entrepreneurs together and finding new people to pull into the ecosystem. For example, founder’s lunches occur in many communities with the intent of gathering a peer network to share stories – but also to scour the founders for new people who might be curious about their founder’s journey. These people are often new founders. These entrepreneurs are not necessarily going to start a business imminently, but discovering and engaging with them early in the process is critical. Today, Region 6 does not have this mechanism in place. Having a person doing this is critical.

One way that communities have built their networks into markets such as the larger market over the hill – DC in the case of Region 6 – is by pulling venture capitalists from that market to talk about their firms and their investment profile. Entrepreneurs know that they will need capital. They also know that they will have a hard time building a relationship without an introduction or an opportunity to meet face-to-face. Some events that are casual but specifically include venture investors will draw out entrepreneurs. However, it is essential that the internal startup network of founders and early-stage companies begins first. Building the network to get speakers should start now – but the actual speakers and events can potentially wait until 2022.

As an example, regular interaction with venture investors in DC, Maryland, and Virginia could begin now to establish the network and the relationships can be maintained by an ecosystem director in the future. Twenty firms have made more than five investments (sub \$5 million) since the beginning of 2019. More than 1100 have made investments in the region since that time, but only one project has been funded in Fredericksburg and the surrounding Region 6. Fad Mania received \$150k from Y

Combinator and Makers Fund. According to both Crunchbase and Pitchbook, Dr. Stoner's and Plantsmap.com have both received outside funding – but from undisclosed investors. No other companies in the region received outside venture investment according to the two databases. Thus, it is critical that 1) new ventures begin and 2) funding connections are built.

Much of the programming in the region seems targeted at investors or main street business owners. The region needs to add additional programming that specifically targets high growth companies. The most likely candidates for high growth startup activity are around the Department of Defense, Aerospace, and other high-tech businesses. In addition, exporting commodity businesses such as timber and food may provide an avenue for additional high growth business development. Technology businesses are not the only type of high growth business. But, with the proximity to the District and Richmond, the northern part of Region 6 seems well-suited to become a technology engine for the region – using existing depth of talent and ties to the defense industry.

Lastly, working across the region is critical to building capacity and aptitude in the whole region. For example, an inventors and makers club could meet in many parts of the region on a monthly basis, bringing together tinkers and makers of all types – while also introducing them to e-commerce, intellectual property, packaging, shipping, and other key concepts for selling products. This would be a particularly powerful program in concert with the strong, evolving main street businesses in the region.

Region 6 has significant opportunities to capitalize on economic development opportunities suggested by their geography, expertise, and entrepreneurial talent. However, it is critical that the focus be on the entrepreneur and the startup – not just on the regional entrepreneurial support organizations. That being said, an ecosystem builder will likely be able to unlock the capabilities of the region through focused conversations and communication. Moreover, these conversations could be bolstered by the existing support organizations by intentionally targeting speakers and relationships (that are extended to the entrepreneur) from the surrounding significant capital and startup communities.

An Overview of Entrepreneurial Ecosystems

The pandemic revealed many weaknesses in the United States economy, but it also revealed the incredible strength and resiliency of the main street business and of the role of entrepreneurship in building many of the communities in this country. As such, many are recognizing the key role of entrepreneurship in economic development. This growing awareness is bolstered by the expanding economic research into entrepreneurship and its role in creating jobs. For example, in a 2009 paper, “Where Will the Jobs Come From?”, Bob Litan and Dane Stangler explained that virtually all net new jobs come from young businesses (less than five years old).¹ In this paper, Litan and Stangler explain that small business employ more than 50% of the workers in the United States, but YOUNG businesses are the key to job creation. This idea of young businesses is often used to justify business programming for small or main street businesses. This is an incorrect read. Businesses of all sizes and shapes are constantly evolving. This means that the key is to create an environment where businesses can begin to confront a local opportunity to make money. However, it also means that there is a pathway for graceful death associated with main street businesses. Many communities strangle development by trying to hold too tightly to the past business environment. Across Region 6, it is apparent that many of the smaller communities have opportunities to build exciting, dynamic main street experiences – but

¹ https://www.kauffman.org/wp-content/uploads/2019/12/where_will_the_jobs_come_from.pdf

these experiences will likely look and feel different than those of the 1980s or even the 2010s. Embracing the change includes empowering businesses to grow and utilize alternative business models (including e-commerce, delivery, and other opportunities to serve the broader region).

Communities are therefore finding new ways to encourage businesses to start. One way to do this is to examine and change local business rules if they are impeding businesses from targeted business activities. The goal is economic progress and jobs – and sometimes local statues are slowing the progress through hindering business creation (often through ignorance, rather than intentional activity).

Young firms create virtually all net new jobs in the United States.²³ This means that they are critical to economic development. As such, many scholars have begun to research how and why these firms start. The short summary is that local ecosystems play a critical role in facilitating and easing the ability of entrepreneurs to start something new.

This section of the paper attempts to better tie the research in Region 6 to the role of the entrepreneurial ecosystem – elaborating on why the ecosystem is the primary means of intervention – rather than small business planning efforts. An entrepreneurial ecosystem is the system of support that surrounds an entrepreneur during the business creation process. It helps them find collaborators, mentors, customers, and employees. It helps them find the appropriate level and type of capital. It supports them with training, physical space, knowledge, and policy. Lastly, it empowers them to succeed, tells their story as they succeed (and fail), and it creates a shared narrative of the community's economic growth. A robust entrepreneurial ecosystem will appear differently in every community, successful or not, but it will include many fundamental components (though different actors) across all of the individual places.

Thus, Region 6 will have different focal points across various communities, counties, and sub-regions. So, while it is one region, the way that Stafford and Spotsylvania counties approach programming and growth will be (and should be) different than King George, King William, and King and Queen counties. For example, the northern section of the region has a tremendous opportunity to piggy back on the metro expansion of the District of Columbia in government services and technology growth. These areas fit high growth venture development better than some of the food-related or commodity-related businesses from other parts of the region.

Startups come in two basic flavors: main street businesses (sometimes called small businesses or “MSBs”) and scalable businesses (sometimes called high growth businesses or “HGBs”).

Main street businesses (“MSBs”) are destined to grow into what many refer to as small businesses, but in fact, represent an essential form of business development in communities. In particular, main street businesses provide three key ingredients for ecosystems. First, they provide critical, base level employment and industry for the creation of other businesses. For example, in Irvington and similar towns with heavy transience of buyers, many of the main street businesses actually pull dollars in from the surrounding regions through tourism, restaurants, and local gatherings. These businesses will likely

² <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.28.3.3>

³ <https://www.census.gov/content/dam/Census/library/working-papers/2017/adrm/carra-wp-2017-03.pdf>

be dependent on people coming into the town rather than exporting their products to another location – but they act as buoys for experience and culture that keep the towns and their communities healthy.

Second, they often provide the early capital for new high growth businesses. Doctors, lawyers, small business entrepreneurs, and bankers often are the backbone of early-stage angel groups. This capital is used as the seed money to grow and accelerate other MSBs, but usually high growth businesses. In other words, the equity capital that is the foundation of many burgeoning high tech, exportable industries was originally the capital of MSBs (and the willingness to deploy that capital into HGBs). This is particularly true in growing areas – such as Spotsylvania and Stafford. These areas have significant per capital income and wage differences, driven by the professionals of the region. This means that the wealth generated and retained in these places can be leveraged by the entire region as angel capital and early customer capital for the right type of high growth business.

Third, main street businesses accelerate the spread of capital through local economies. According to the American Independent Business Alliance, 48% of dollars spent at a local small business will be re-circulated in a local economy compared to 14% by chains⁴. This does not mean that the money moves from one small business to another but instead it circulates throughout the entire economy at a much higher rate. This is called the multiplier effect by economists. For example, when Chapman and Company did its first program in West Point, two local business owners provided key services – food and marketing. These businesses do not have customers all over the country, instead they are pretty dependent on local opportunities. But, the money spent at these businesses gets spread in the form of purchases to other businesses and deposited in a local bank where it can be lent to people in the community. Thus, finding outside sources of capital and pulling into local (non-chain) main street businesses is a critical means for driving the economy of Region 6.

The ecosystem framework is built on the idea that finding and empowering entrepreneurs is critical. This cannot be under-stated. Entrepreneurship is built by singular individuals and small teams – called entrepreneurs. And, **THE** most important thing that a community seeking growth can do is to identify, empower, and support entrepreneurs. To do this, a variety of other elements act as support structures that provide guardrails and empowerment to new business formation. Using this basic model, Chapman and Company has created a basic mental map for communities to consider when thinking and strategizing about their entrepreneurial ecosystem.

⁴ <https://www.amiba.net/resources/multiplier-effect/>

- CHAPCO METHOD -



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The center of every entrepreneurial ecosystem is the entrepreneur. Recent scholarship and practice has begun to separate this section into something called a “Startup Community”. This orientation is slightly different from ecosystem building in that it focuses exclusively on the finding and empowering of entrepreneurs and their startups. This is essential, but Chapco believes that is part of, not separate from ecosystem building. In other words, books like “The Startup Community Way” by Brad Feld and Ian Hathaway are part of ecosystem building, not a replacement for ecosystem building. But, that book provides a number of excellent activities that can help regions find and engage their entrepreneurs.

There are two kinds of businesses – main street business (MSBs) and high growth businesses (HGBs). Our definition of a main street business is one that provides a product or service to a limited geography. These businesses include locally owned restaurants, optometry clinics, auto shops, and others. As a mental experiment consider these businesses and where their customers originate. Few people would drive more than an hour to go to the auto maintenance shop or the optometrist. Thus, they generally serve their local geography – a neighborhood, county, or their immediate vicinity.

Conversely, other businesses referred to as scalable businesses (or high growth businesses) provide services to markets that are more than 50 miles away, require specialization, and generally are targeting large (\$1B+), addressable markets. Most software businesses fit in this category – but, so do most manufacturing, mining, cleantech, and biotechnology ones. High growth businesses are critical for regions because they generate capital and wealth for the region. Without exports, a single town or region would not have dollars to circulate through main street businesses. Thus, a good ecosystem will have high growth businesses and main street businesses. Region 6 has multiple opportunities to grow technology businesses, but it also should not ignore export businesses targeted at food and lumber. Moreover, in many ways, one of the best opportunities for growth for the region is tourism which blends to the two business types.

For scalable businesses, the target customer is not ONLY local. The first customers and early adopters probably will be from the immediate vicinity (so that a business can support them from a Region 6 home base), and thus, recruiting businesses from the region to be early customers is extremely important. This is a good place for the FRA to spend time and energy in building a coalition of early adopters.

Second, the market opportunity is usually much larger. For example, a good size restaurant maximizes revenue by throughput on the tables in the dining room multiplied by price. This creates a maximum revenue opportunity that is often in the low seven figures (\$1-3 million). Conversely, a high growth business often has economies of scale that are created by doing something where the margins increase by increasing sales. For example, a manufacturer will receive preferred pricing on components with higher purchase volumes. This means that a company can potentially grow dramatically and increase wealth and volumes at the same time. In a well-functioning ecosystem, scalable businesses are the apex trees in the forest. They provide long-lived jobs, investment, and wealth for a community – scattering contracts, philanthropic donations, and other key capital across the market.

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Chapman and Company uses four primary categories to organize the elements of an entrepreneurial ecosystem – beyond the entrepreneur. These categories are not fixed or permanent, and many programs have purposes that cross between the elements. So, we tend to say that they provide a mental map of how ecosystems work, rather than a linear map. The four elements are:

- 1) Financial Capital
- 2) Knowledgeable Community
- 3) Connecting Activities
- 4) Structure

Each provides a key organizing principle to the ecosystem - focusing builder activities. For example, in identifying weaknesses in the capital environment, an ecosystem builder can build necessary structures, relationships, and policy. This whole program of work resides in the Financial Capital element, even though policy generally also falls within structure, and relationships within connecting activities. The point is that systemwide efforts and change don't have firm boundaries of activities. In addition, this means that many service providers will blur their traditional lines of demarcation. Ensuring that these blurrings do not become tension points for the ecosystem is also a good place for an ecosystem builder

to smooth feelings and potential anxiety about roles and responsibilities. Ultimately, the ecosystem does not belong to a single organization nor does a section belong to an organization. Instead, the collective wisdom of the region should be strengthen the ecosystem in innumerable ways through their work with and for entrepreneurs.

Financial Capital

Region 6 would benefit from an angel group and from more connections to venture capitalists. But, this is not the only part of financial capital that matters. Only 1% or fewer companies formed will receive equity capital. Thus, capital should be a conversation that goes beyond just venture or risk capital to include bank debt, federal grants, local grants, and even microloans. Moreover, the ecosystem should oversee many more functions within capital beyond just money. Capital markets include strong elements that facilitate good governance, transparency, and regular liquidity. Many regions similar to Region 6 have struggled when confronted with capital market failures, not just a dearth of capital.

The best capital is that which does not need to be repaid – grants or awards. Some states, cities, and regions have grant programs that help spur entrepreneurship with free, non-dilutive grants to businesses. For example, the Arch Grants program in St. Louis is globally recognized as having been a critical component of that region's efforts to grow its entrepreneurial base. This program provides a small grant, which must be matched by other dollars, to businesses that show promise and commit to locating in the community for a period of time. Lincoln, Nebraska has built the Launch Lincoln program as means of replicating on a smaller scale the Arch Grants program. This may be a program that Region 6 could implement.

Similarly, national programs (such as the SBIR/STTR grant program) provide incentives for businesses to be created and grow. Kentucky has created a strong program to encourage SBIR/STTR grants, called Phase 0, providing matching grants and grants to fill out applications. This type of program could be utilized in Region 6 as a way to grow its local SBIR/STTR company portfolio. Virginia, as a whole, has built a very strong SBIR/STTR portfolio, but as seen in the map below – many of those grants are in DC proper – not Region 6. That being said, Region 6 has the opportunity to grow its share of this pie. In particular, Defense Department SBIR grants associated with advanced materials, aerospace, and weapons systems may be places where the proximity and close working relationship with Naval Surface Warfare Center Dahlgren Division (NSWCDD) may be beneficial. The FRA currently holds a Partnership Intermediary Agreement (PIA) with the NSWCDD.

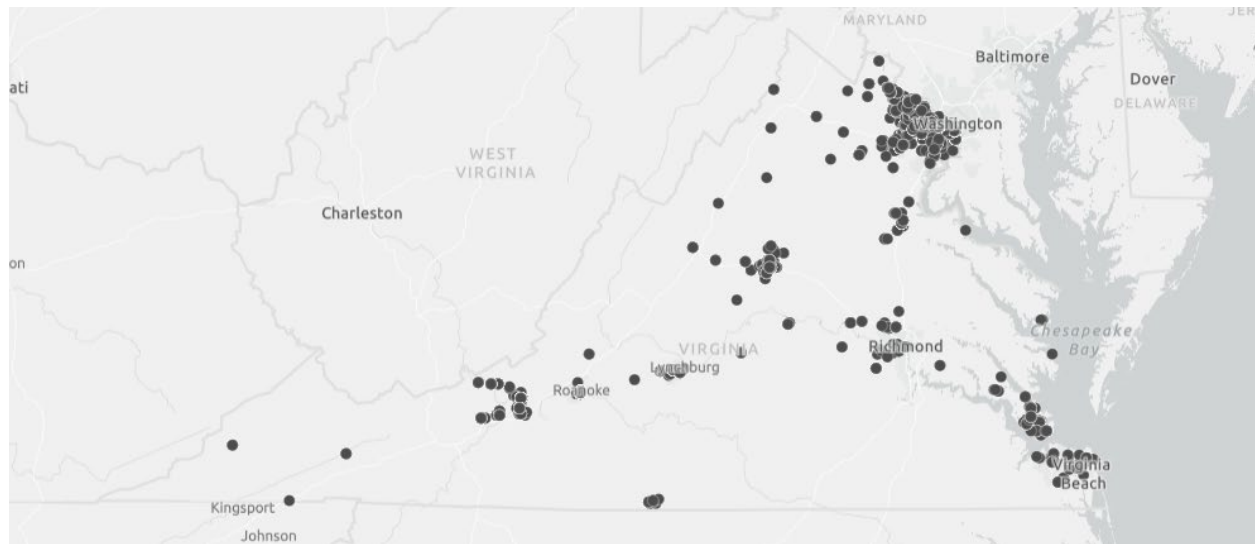


Figure 1: Map of SBIR/STTR Companies from Virginia 2010-2018

Second, debt is critical for many main street businesses. Specifically, many businesses that are formed by those that lack credit (and are often poor) are built around Community Development Financial Institutions (CDFIs) that help provide early capital to these entrepreneurs. In examining Region 6, the disparity of wealth and wages between the urban parts of the region (mostly north) and the rural parts creates a stark contrast. Finding ways to get capital to main street businesses in the Middle Peninsula and Northern Neck will be a critical way for the region to change its financial balance, or at least improve the opportunities for main street businesses in the more rural parts of the community.

Finally, early-stage equity capital (sometimes called risk capital) is also necessary. Venture capital is actually a class of risk capital – not the only class. Investors use personal, pooled, or institutional capital to buy equity in new companies. Once formed an angel group will provide a means to invest in some local companies, but it will also act as a magnet to attract nascent entrepreneurs to programs and people in the region. These companies are often HGBs, rather than MSBs because of the opportunity to generate a large return through either the sale of the company, sale of the investors stake, or a public offering by the company. In other words, risk capital buys percentage ownership in private enterprises – providing those enterprises with money to grow, but also with connections, expertise, and advice. Region 6 appears to have a burgeoning pool of potential angels and early organization efforts are being made by the FRA to establish an angel group with the hope of delegating to an ecosystem builder in the future.

As we examined Region 6 compared to similarly situated communities, the region performs below average regarding risk capital investments. This was surprising because of its proximity to relatively strong investment groups in Richmond and DC. We believe that creating an angel group and pulling in speakers or other key regional investment players for “office hours” or something similar could bear immediate short-term fruit in seeing multiple investment deals manifest in 2021 and 2022. We are bullish on the ability of the region to shift the number of high growth investments per year forward quickly.

Knowledgeable Community

Systems thinking is difficult because it requires us to shift from a project orientation to a complex organization orientation – meaning that we have to manage multiple, parallel tracks – not just point-to-point ones. Ecosystem building at its core is built on the understanding that the entrepreneurial framework is a complex economic system. Thus, it is also important that information be shared out and understood by many disparate elements in the system. This requires teamwork and coordination – not silos and super heroes.

Building an ecosystem requires many actors and agents to work directionally together. A single organization or person cannot have the impact of multiple organizations and people. But, a single ecosystem builder working across organizations to share information and create collaborative opportunities can have an outsized impact in places such as Region 6. Thus, it is critical that an ecosystem builder work to move many organizations forward, not just the one that they are managing.

This implies a growing intelligence across the people involved. Three ways to improve this overall understanding are: 1) telling entrepreneur stories as if they were local heroes, 2) sharing a common lexicon – often through written blogs and social media, 3) social governance – protecting entrepreneurs from those that would prey on their naivete⁵.

Organizations, such as the FRA or Region 6 Council, should be attempting to amplify existing stories and messages – not create them. Thus, both organizations and similarly situated ones should be utilizing their communication tools to circulate information regarding programming and exciting new companies. These high level organizations have the ability to find early diamonds and share them with the community in new and exciting ways. Most other ESOs struggle to build that type of social prowess because they have niche offerings. Thus, umbrella and regionwide organizations bear a special burden in communicating and educating about companies and strong programs. For example, the University of Mary Washington has strong entrepreneurial programs, but most of the conversation about UMW was about what they were not – a powerhouse research university, not what they were. It is important to focus and tell the stories about the companies and students that are emerging. This positivity will play a key role in building better technology transfer and targeted relationships in the future.

Connecting Activities

Connecting activities include events, but many connecting activities do not occur at events. For example, one key way that FRA helped Chapco was to provide warm introductions to key stakeholders. This allowed Chapco to do a variety of interviews and ask questions of these interviewees in one on one situations. The value of warm introductions to a founder is significant. And the ESOs of Region 6 are extremely well-connected to each other and key stakeholders. Thus, it is critical to use this super power to further the success of individual startup companies.

⁵ Social governance is a term used to describe non-formal governance. One common example is the proactively shared wisdom between founders about specific funders – such as the behavior of a bad actor. Generally, this type of social governance begins to emerge as entrepreneurs know and communicate with their peers more regularly rather than through ESOs. This type of communication may start online via social media or a shared news haven, but in general, the goal of building social governance is to create less friction in the environment.

But, because the central part of the ecosystem is the entrepreneur – connections must go beyond events. To frame this element, think of the ways that entrepreneurs get connected to talent, customers, capital, and other support structures. These elements are the lifeblood for entrepreneurs, and yet in many ways, few entrepreneurs are well-positioned to connect themselves. They need the system of people around them to help provide a helping hand. This happens at a networking event, and thus, it is easier to recognize. But so much more happens through digital introductions, google searches, marketing approaches, etc. A high percentage is still simply serendipity. Making connections less lucky and more structured should be the goal of connecting activities. The more intentional and warm the connection, the easier it is for the entrepreneur to succeed.

There are three fundamental goals in connecting activities. First, entrepreneurs need to be able to plug into the network of an ecosystem easily. Ask the question, if I was totally new to Region 6, how would I find the ecosystem. Do you have open doors and welcome mats. Some successful programs around the country include the Welcome Video in Charlotte. This is a :90 second video that is shot every quarter to talk about welcoming activities for entrepreneurs and those interested in entrepreneurship. The Kauffman Foundation started and now sponsors an activity called “One Million Cups”. This is a Wednesday morning coffee meeting where a new founder will talk for six minutes and receive feedback and questions. It is bookended by coffee and networking. The entire program takes about one hour. The goal of these programs is not to solve anything – but instead to create an easy entry point for people that are interested but do not know how to get involved.

Second, having a common language and clear illustrations of successful entrepreneurs across the spectrum is important. This reinforces the category – knowledgeable community, but it also creates a means for better connectivity because there is growing reputation and knowledge of each other in the entrepreneurial cohorts. Thus, ensuring that companies, entrepreneurs, and ESOs are building strong blogs, good social presences, and open communication channels are all important means to build an environment ripe for connecting. Moreover, the goal is not to simply tell stories of forty year-old former startups – but to reinvigorate our storytelling with new heroes and leaders regularly. Who is doing interesting things and are you communicating that not just through telling them, but introducing others to them. Clay and Milk in Des Moines does an excellent job of telling these early entrepreneurial stories with a daily article that identifies an entrepreneur or key happening in entrepreneurship across the State of Iowa. But, more than just writing about them, Geoff Wood is excellent about pulling those entrepreneurs into activities at his co-working space, Gravitare, and pushing them to people that can help them grow their companies. For example, he is particularly good at leveraging relationships with Principal and other large corporate headquarters in Des Moines to drive entrepreneurs into those organizations for potential sales. This is a good illustration of how the elements of the ecosystem reinforce each other and overlap. This is not linear, nor is the ecosystem a fixed set of things. Instead, it is a group of interlocking elements that often facilitate and make others easier.

Third, small actions matter and certain players can have outsized impact in small actions. In communities, some individuals have outsized impact because of their unique network. For example, my friend, Kyle Peterson is a commentator for college baseball on ESPN. Through this work, Kyle knows many, many people that not only do I not know, but most of the people he interacts through his day job as the lead for Colliers (real estate brokerage) in Omaha do not know. Thus, his ability to have an outsized networking impact is significant because he has a unique, non-overlapping network for most

people. It is critical to identify these types of people in the Region. Three specific types of people would be particularly impactful.

First, the region has a deep bench of veterans, and on a per capita basis, these veterans own more businesses than average, receive more SBIRs, and generally outperform the average for the country. Can you double down on this strength by building very specific networks into funding sources for veterans, the military, technology businesses tied to military capabilities, etc.? The answer is yes – but it is greatly improved if you can leverage a person who has deep ties to the National Science Foundation, NIH, or other federal grant writing programs. Connectivity into these funding sources is the primary first step to dramatically increasing activity. Is there someone in the region who already is deeply entrenched with the people making these decisions? How do you find that person (or people)? No one in our travels highlighted an individual with this connectivity – but one person of this type is probably worth \$10-20 million per year in economic activity.

Second, the venture capital activity in the region is far below what it should be. This can be combatted through adding an angel fund and increasing risk capital funds in the region. But it also needs outside capital to be induced to come to Region 6. Who is the person that is building those bridges? The FRA engages with CIT on a regular basis. An individual who is working on this is uniquely important because of their ability to do warm introductions. Sometimes this person is a founder, but we have found that blog writers and event planners often have the ability but do not actualize this into warm connections. The point is that the person with the connections sometimes does not understand their own value. Finding the people who have a unique set of connections is critical, and they are not necessarily the most powerful person in the region. Instead, they are often a bit eccentric and often under-utilized people who have vast experience from outside the region. Finding them is hugely impactful.

Third, in one of the conversations held as part of the research for this paper, the group discussed the role of immigrants. One key group that is often under-connected is immigrant populations. Understanding the clusters of immigrants and being intentional about being welcoming and connecting can have a big entrepreneurial impact. Immigrants create a disproportionate number of high growth and unicorn businesses. They also tend to move to places full of other immigrants with similar backgrounds – refugees from the same country or even city, common language groups, etc. Thus, finding people that cross between the existing mainstream ecosystem and into immigrant communities is an excellent way to dramatically increase the region's output and ability to recruit more entrepreneurial immigrants from those immigrant communities.

Structure

Structure is the element by which most entrepreneurial support organizations participate in the ecosystem. Universities, non-profits, policymakers, etc. are part of the structure, the unique fabric that makes the region special. However, there remain entrepreneurial support organization gaps. For example, there is limited tech transfer infrastructure or opportunity. This was specifically mentioned in the context of UMW and NSWCCD. However, this is a significant opportunity for the region that will take years to actualize because it requires intentional ongoing efforts. Progress has been made. As an example, PIA's exists with King George, VEDP, CIT GWRC, and Stafford.. The PIA group meets on a quarterly basis. This is something that needs consistent focus and support to bear fruit in the years to come.

When considering the rest of the area, there are limited high growth business programming pieces, and even some of the programming for main street businesses appears to be spread thin. For example, when we were in West Point in late May, the state SBDC had sent an expert to the region to work with businesses. This type of program of tying main street businesses into the state's SBDC and other key ESOs, such as the CDFI funders or the community colleges, is great. But, it needs to expand to help businesses with key growth and scaling problems – such as building a web site, e-commerce site, and working on logistics and delivery. These types of programs would help the Region but they probably cannot be executed by a single community. Thus, building programming that travels or is mobile should be a key consideration for future efforts.

The University of Mary Washington and the community college systems (Rappahannock and Germanna, in particular) have good entrepreneurial programs that are helping students build skills. In particular, we were impressed by Germanna's technical programs around cybersecurity and networking. However, across the region, cyber, data analytics, and software development are playing more important roles in entrepreneurship and company expansion. It is critical that entrepreneurship is coupled with the ability to build software products or services companies for the 21st century. Many of the programs appear to target either main street business development or technical capacity, but there are not a lot of high growth startup relevant classes in the university system in the region. Coupled with the broadband limits, some of the areas will have struggles to build high growth technology businesses. This may create some disparity between the northern part of the region with some of the other counties and sub-regions.

Lastly, the local communities seem to have vastly different approaches to economic development. Some simply want no or limited development. Others want development, but on their terms, and others are extremely aggressive at pursuing a pro-growth attitude. This diversity is okay, but it prevents clarity for an entrepreneurial agenda. The reality is that communities will be left behind others, regardless of intent – but particularly if community leadership believes they can block the expansion of DC or the intervention of younger people who have certain desires regarding amenities (like broadband and coffee). This means that local jurisdictions will receive increasing pressure from residents over the next couple of years to change. Many of the areas within the region are primed for rapid expansion, but those that are not will create potential barriers for region-wide grants, expansion, education or other pro-active programs to help entrepreneurs succeed. It would be useful for Region 6 to identify some pro-growth policies that could be described without being politicized. For example, better infrastructure for rural counties appears to be generally preferred – but paying for the infrastructure is an issue. Finding ways to discuss this type of upgrade will help the region, but it may also create an opportunity to have discussions about harder issues where some communities may lose despite their best efforts.

Vision, Mission, and Metrics

The region does not share a common vision. Instead, progress is considered to be “a more” problem. If we just have more, then we will be happy. This type of philosophy can lead to unintended and often poor outcomes. Instead, it is important that the region and the individual communities share a vision – such as the importance of veterans and veteran owned businesses. This shared vision allows the whole region to benefit from small actions of individual communities.

For example, starting a region wide campaign to put veteran-owned, disabled veteran-owned, and veteran spouse-owned stickers on retail businesses will help build regionwide camaraderie and differentiate the region from others in Virginia.

One key point, that should be emphasized, is that visions need to be created by the region – not by outside consultants. What is core to the being of the people – why do you all live together and choose to live in the region. There are clearly ties and themes – beauty, history, proximity to key military posts, etc. But, the region should build a vision for 20 years – knowing that it will still be 20 years away in 20 years. This 20 year approach will put the community’s vision before the individual community leader or single organization – instead it becomes part of a shared identity as the community co-creates the future.

Each organization’s mission is then embedded within the overall vision. FRA may choose a tiny subset – but it would still be a key part of the overall vision. The mission of the organization is driven not by trying to shift the vision – but by saying how does my organization fit within and help achieve this vision.

Once that is all decided then key performance metrics can be decided upon for a real-time or near-time dashboard. This process will help inform future work and future reports of this type. TEconomy laid out general standards for the whole state, and some of those standards are likely to end up in Region 6’s plan, but others seem to fit poorly, such as the comparable community analysis. As such, Chapman and Company has attempted to use the TEconomy report as a guide – but has not relied on trying to replicate each point with two or three years additional data. Thus, some of the next section will look familiar, and some will be completely new. Moreover, some of the things in the TEconomy report will simply be ignored for either lack of clarity about purpose or because other similar data seems more relevant.

To conclude this section, building an entrepreneurial ecosystem in Region 6 involves the creation, evolution, and refinement of multiple elements. The first and most important element of building an ecosystem is finding and engaging entrepreneurs. If the region is able to make strides in one element over the next couple of years, this is clearly the most important thing that the region can do. **Find your entrepreneurs, embrace, and encourage them, and tell their stories effectively to the entire region to inspire and grow even more.**

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Region 6: Mary Ball Washington Region Entrepreneurial Ecosystem Review

We have organized this report and our attached presentation along the lines of our ecosystem map. This mental map is good guide for us. We have also tried to simplify some of our analysis into easy to follow buckets – good, bad, ugly. This is not a true review of those aspects but an attempt to provide quick guidance to those reading the report or simply seeing the slides.

Entrepreneur in the Middle

The Good

Region 6 has seen some growth in applications, establishments, jobs, and increase in young companies since the TEconomy report. In particular, Stafford and Spotsylvania counties have seen significant increases in all startup metrics. For example, Stafford county has the highest application rate in the

region – and applications increased by 70%+ over the previous five years. This data signals significant main street business growth.

Region 6 New Business Application Rate 2015-2020

Region 6 County	Net increase 2015 to 2020	Total Increase	Increase per year
Caroline	84	70%	11.6%
Essex	38	67%	11.2%
Gloucester	99	68%	11.3%
King and Queen	18	62%	10.3%
King George	34	83%	13.9%
King William	46	70%	11.6%
Lancaster	47	66%	11.0%
Mathews	15	77%	12.9%
Middlesex	32	69%	11.5%
Northumberland	38	68%	11.3%
Richmond	36	51%	8.4%
Westmoreland	-2	0%	0.0%
Fredericksburg City	171	66%	11.0%
Spotsylvania	472	71%	11.9%
Stafford	910	58%	9.7%

656 Total

US Average 10.8%

VA Average 12.8%

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Region 6 Establishments 2015-2020

Region 6 County	Establishments 2020	% Change	Less than 5 years old
Caroline	574	13.4%	132
Essex	332	-3.3%	76
Fredericksburg city	1,607	-0.5%	370
Gloucester	956	3.8%	220
King and Queen	145	-4.1%	33
King George	593	0.0%	136
King William	422	10.7%	97
Lancaster	467	-1.1%	107
Mathews	195	0.0%	45
Middlesex	360	2.2%	83
Northumberland	346	3.5%	80
Richmond	202	2.5%	46
Spotsylvania	3,147	8.8%	724
Stafford	2,872	10.7%	661
Westmoreland	387	12.4%	89
Virginia	387	12.4%	89

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certain counties – Westmoreland (where there is an actual loss of 2 establishments) and Essex, for example – is not nearly as significant as in other parts of the region – there are still some positive indicators. Specifically, this does not mean that every indicator is positive, but that taken collectively, the information suggests some growth.

In addition, Fredericksburg does particularly well for the size of the city in the Inc. 5000 rankings. So while the region's performance is more average, the Fredericksburg community should be proud at placing five companies on the list for 2019 (6 total for the region) and six for 2020 (7 total for the region). This is a slight bump from the TEconomy report numbers. In addition, many of the companies do not duplicate meaning that Fredericksburg probably has a slightly larger number of companies that qualify than reported.

INC 5000 COMPANIES 2019

	NAME	GROWTH	INDUSTRY	CITY
#4954	COGENT SOLUTIONS	53%	GOVERNMENT SERVICES	FREDERICKSBURG
#4028	INTELLIWARE	81%	GOVERNMENT SERVICES	FREDERICKSBURG
#4940	TEKLA RESEARCH	54%	GOVERNMENT SERVICES	FREDERICKSBURG
#2552	OBSIDIAN SOLUTIONS GROUP	244%	GOVERNMENT SERVICES	FREDERICKSBURG
#1204	FEDERAL STRATEGIES	340%	GOVERNMENT SERVICES	FREDERICKSBURG
#618	FLETCHER CONSTRUCTIONS	338%	CONSTRUCTION	STAFFORD

INC 5000 COMPANIES 2020

	NAME	GROWTH	INDUSTRY	CITY
#4872	SYSTEMS TECHNOLOGY FORUM	59%	GOVERNMENT SERVICES	FREDERICKSBURG
#4853	RPI GLORY	59%	SECURITY	FREDERICKSBURG
#4256	TEKLA RESEARCH	79%	GOVERNMENT SERVICES	FREDERICKSBURG
#2552	WEB BUSINESS SOLUTIONS	161%	GOVERNMENT SERVICES	FREDERICKSBURG
#1759	BELCHER REAL ESTATE	244%	REAL ESTATE	FREDERICKSBURG
#1319	ETRANSERVICES CORP	338%	GOVERNMENT SERVICES	FREDERICKSBURG
#1041	G CUBED	446%	IT MANAGEMENT	STAFFORD

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The Bad

However, this success in business creation is not mirrored by all of the other high growth business indicators – such as venture capital and SBIR. Instead, these startup rates and funding rates remain low and below the average of the peer communities. This can be a signal that there is not enough capital, but in the case of Region 6, proximity to capital in DC and Richmond would suggest that it is not just that issue. Instead, the number of potential deals seeking capital or targeting high growth markets appears stunted.

Venture Capital Investment

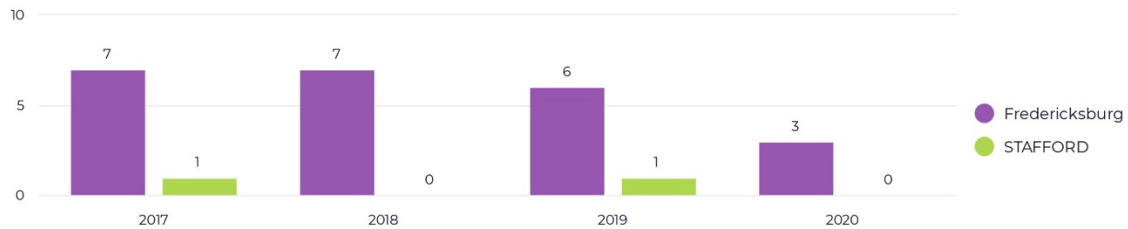
2016-2021



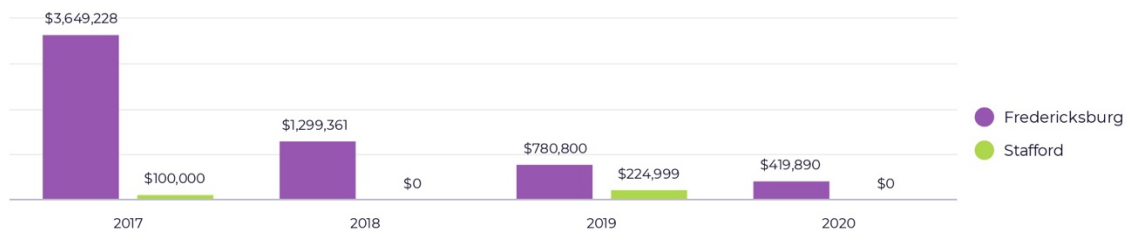
20

C/C

SBIR Award Count 2017-2020



SBIR Award Amounts 2017-2020



19

C/C

It is unclear why this is occurring – but there are three pretty telling themes that were discussed by regional leaders and are supported by data. First, exporting specific types of tech talent to other communities may mean that people who live in Region 6 are starting companies in other locations. The proximity to DC makes this a real possibility. In addition, multiple people provided examples of people that had started companies in DC or Richmond but actually lived in Region 6. Finding a way to hold onto these companies would have an immediate positive impact.

Second, certain types of businesses that normally arise in and around military installations are occurring – but the technology counterparts are not. In looking at Colorado Springs and Wilmington, NC, both had multiple technology companies start in the last couple years alongside missions and small defense contractors. And in looking at Region 6 data, many of the successful Inc. 5000 companies are technical consulting or government services, but the comparable high growth technology business is not in the region. Instead, they appear to be located in the DC area further north of the region.

Third, the number of other types of non-military, non-government high growth startups in the region appears to be pretty minimal. While there is significant population across the region, there are limited innovation opportunities that are backed by venture capital in the dominant industries of the region – seafood, agriculture, lumber, and manufacturing. While there are companies that grow in these spaces, they are absent from the data because they do not regularly attempt to raise outside capital. This may be the case, but other information on companies in the region suggest that this is not generally true. For example, in a pull of all transactions in Pitchbook’s database in the state since 2010, there were no strong examples of regional companies with large financings that were not either local businesses or technology ones.

The region needs more high growth business creation. Good examples of historical companies that have succeeded in the region include JRM Technologies, QRC Technologies, Syntronics, and EOIR Technologies. Each of these companies are high growth that have received outside capital and are tied to the existing industry, but there are not a lot of other businesses in the region that have received any outside capital and that export. So, for example, since 2010, the largest rounds include home builders, hospitals, banks, funeral homes, and other local businesses – but no manufacturers.

The Ugly

Region 6 Firm Ownership

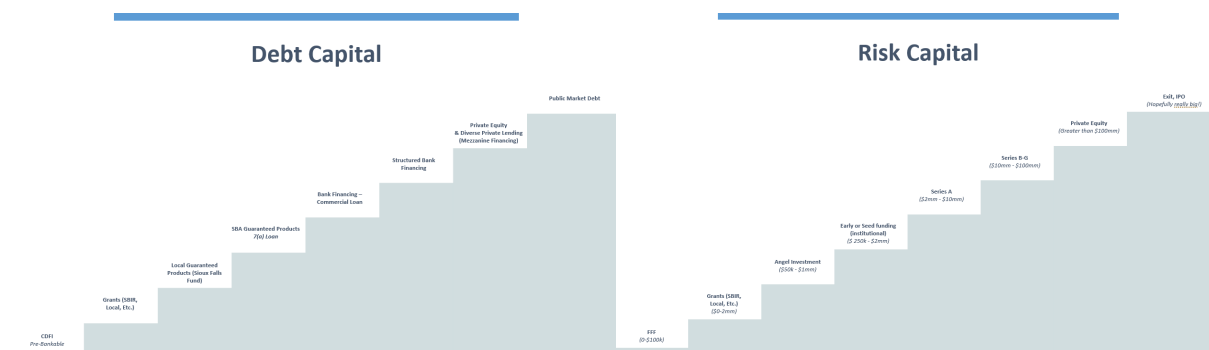
County	Total Firms	Women Owned	Minority Owned	Vet Owned	Ownership Rate
Caroline	2,177	40%	28%	12%	7%
Essex	842	27%	17%	17%	8%
Fredericksburg	2,635	36%	21%	9%	9%
Gloucester	3,133	27%	6%	15%	8%
King and Queen	424	12%	22%	21%	6%
King George	1,554	36%	24%	10%	6%
King William	1,207	37%	9%	11%	7%
Lancaster	1,640	31%	7%	10%	15%
Mathews	978	39%	6%	7%	11%
Middlesex	971	23%	7%	18%	9%
Northumberland	1,470	28%	14%	10%	12%
Richmond (co)	688	30%	17%	17%	8%
Spotsylvania	9,151	37%	22%	13%	7%
Stafford	8,581	38%	26%	16%	6%
Westmoreland	1,250	37%	17%	20%	7%

The rate of minority business ownership is unusually low for a region with such significant non-white populations. For example, the rate of minority business ownership in Lancaster County is 7%, compared to a non-white population of 31.7%. While there are a couple exceptions in the region, the rate of non-white business ownership in the region is noteworthy. It significantly lags the national average (29.9%) in every measured region. This is particularly surprising because the rate of women-owned businesses is in-line (although slightly below in some instances – including the horrific 11.8% ownership rate in King

and Queen) with that of the national average (37.1%). And veteran owned business ownership in Region 6 counties (average across counties is 13.8%) exceeds the national average (9.5%) – again suggesting that this is an untapped opportunity to utilize to strengthen the region. Simply put, the number of minority owned businesses in the region is significantly below what one might expect.

Financial Capital

Existing capital sources in Region 6 are okay, but there are gaps in the capital pyramid that make creating certain types of businesses particularly difficult. For example, the region does reasonably well in SBIR grants per capita – but it does not have any meaningful local grant programs for high growth businesses. Thus, creating programs in this space may be helpful to get the ball rolling regarding venture and risk capital.



The Good

The main street business capital availability seems strong. Using SBA 7(a) loans and PPP loan data, the region looks to be performing well. In particular, DC military credit unions (Langley FCU, Navy FCU, etc.), Atlantic Union, and Virginia Partners Bank were all active lenders over the last decade. These local

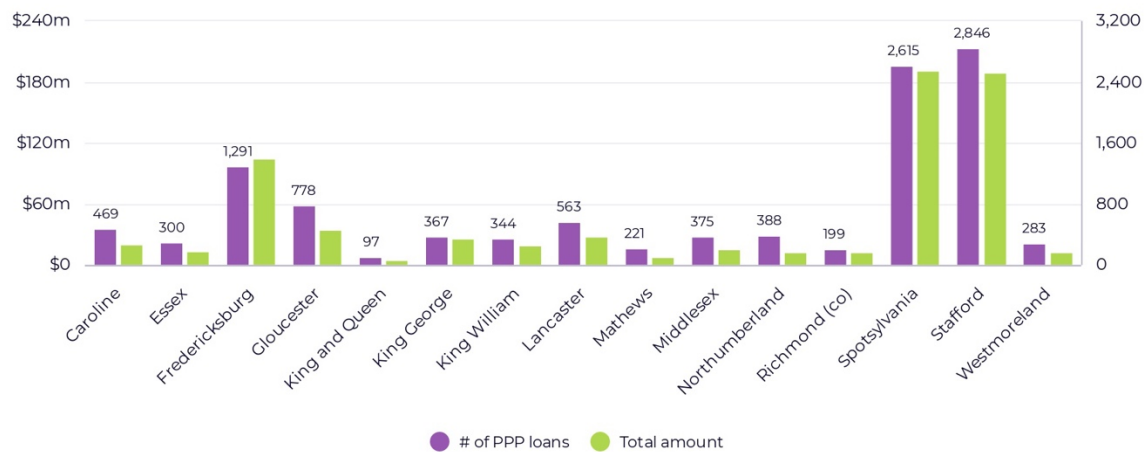
Region Six SBA 7a Loans 2015-2021



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Region Six PPP Loan data



28



loans as small as \$2500 and many loans that were less than \$25,000. This suggests an engaged banking community because the paperwork for a small loan is still significant. That again is unusual and positive.

And, importantly, the small loans is not a signal of a weak CDFI community. Multiple CDFIs are active in the region, providing loans to un-bankable businesses. For example, Virginia Community Capital has loaned in the rural parts of Region 6, more than \$16 million dollars. This again is a good sign. So, as a summary statement, the early stage main street business loans were good.

One way that an individual community might improve their specific take is to focus on main street lending vehicles. In other parts of Virginia, some small locales have built evergreen, revolving loan funds to focus local business ownership (and occupancy) on main street regions of their communities. With as many interesting and well-kept main streets, Region 6 might be well-served to follow suit.

The bad

Early stage risk capital is limited in the region. As previously mentioned The FRA is working to help organize an angel group in the near-term. There is not a local venture culture, although Joel Griffin's efforts will likely change that in the near term.

Risk capital is necessary to help spur many types of innovation. In particular, Region 6 has three primary drivers of technology that may create key opportunities for risk capital investment. NSWCDD NSF is the most obvious, and to date, this station and its key missions have not produced as many technology opportunities as maybe possible in the future (see section on NSWCDD in structure). The Virginia Institute of Marine Sciences has a number of test beds and research projects in the region. There appears to be a significant number of burgeoning seafood related opportunities that are arising from this research and other research projects affiliated with other institutions, but they require outside capital to commercialize. Finding ways to finance, probably including some equity financing, seems like a strong strategy for many of the bay communities in the region. Third, the University of Mary Washington, while not a powerhouse research institution, has many of the makings of an untapped gem. However, without capital, the likelihood of good early-stage companies remaining in the region is low. They will move to capital sources and early customers in DC and Richmond. This means that Region 6 has to be particularly attentive to those types of opportunities to help retain technologists and talent in the region.

The Ugly

Finding \$100k and less should not be a challenge for companies in a region that has such apparent wealth and technology density as Region 6. And yet, it is hard to find examples of companies that have stayed in region and found small pools of capital to get started. Three of the companies in Pitchbook and Crunchbase left the region to join accelerators in other parts of the country or state.

The key to capital provision is not just to be able to help find \$10 million but to make finding \$100k frictionless and relatively transparent. The research group asked many people in the region where to go for \$100k and the results of those inquiries were disappointing. The entrepreneur's average score on availability of capital was a 5.1 out of 10. That is not great. Many of the comments suggested a need for small amounts of capital through microloans or small equity investments. This suggests that there is a gap for either small grants or investments in local businesses.

Structure

The Good

The employment indicators and general population growth in the region are extremely positive, creating an environment that makes entrepreneurship more vital to continued economic prosperity. Even amongst the significant downward turn in the economy during the COVID-19 pandemic, jobs were above 2015 levels. While certain communities and industries were adversely affected by COVID, the region retained and grew over the measured period.

Region 6 Employment 2015-2020

Region 6 County	Employment 2020	% Change	Change in employment
Caroline	4,007	-0.6%	-23
Essex	2,975	-13.1%	-448
Fredericksburg city	19,294	-4.4%	-887
Gloucester	7,353	0.6%	42
King and Queen	825	25.6%	168
King George	5,813	10.0%	527
King William	3,067	1.2%	37
Lancaster	3,921	-2.2%	-90
Mathews	1,132	3.2%	35
Middlesex	2,189	1.2%	26
Northumberland	2,104	1.1%	23
Richmond	1,803	-0.3%	-6
Spotsylvania	29,746	1.7%	501
Stafford	33,810	8.7%	2,716
Westmoreland	2,266	-8.4%	-208

Moreover, wages in the region also increased when compared to the 2015 BLS OES data set. And, the number of cool jobs also increased. Moreover, Region 6's cool jobs continued to be above the nation's average. This suggests a strong STEM workforce.

The library system in the region received strong positive feedback through both the surveys and the local engagements in Irvington, West Point, and Fredericksburg. The feedback provided suggested that there was strong programming, engaged library staff, and a means to facilitate region wide communication and engagement. This is unusual around the country. We would suggest using the library system as a local physical hub for programming in targeted areas – particularly makers and inventors clubs. Successful library programs in St. Louis, Missouri have acted as a strong support system for main street business programming, particularly around competitive research and economic gardening initiatives.

The state's public policy environment is one of the most progressive in the country (with Colorado). GO Virginia is a strong initiative that has good funding and programming. Finding ways to use the state's programs to leverage opportunities in Region 6 is important to the long-term success of entrepreneurial

initiatives. In particular, the expanding role of CIT for ecosystem building is important, but it is more important to find ways to jumpstart early-stage capital from state level agencies and pseudo-governmental programs. Moreover, using state funding to fund at least one and potentially two ecosystem builders may be a significant benefit for the region.

The University of Mary Washington has programs and facilities for entrepreneurs – particularly the StartUpUMW program. On the website, the program lauds 92 students, 34 businesses launched, and 56 internships. However, this program was not described in the surveys, interviews, in-person sessions, or by key personnel in the region. This suggests that the program has some communication weaknesses regarding its success and efforts. Ensuring that programs like this one are not just academic exercises but real-world experiences require the university and its students to be more vocal and engaged in the broader communities' efforts.

The Bad

While the cool jobs numbers were strong for the region, certain counties were significantly below the national average. These counties also had significantly lower average household income and educational attainment. This suggests that the entrepreneurial structure of the region has significant differences in sub-regions. It is important to acknowledge this issue and work to improve high school and community college tech programs. regions have partnered with local employers to build technology labs and extracurricular programs – such as robotics programs, coding academies, and STEM summer camps that blend local knowledge with national science programming. These would strengthen the local learning environment, potentially enlist retired government/military experts as instructors, and lay the foundation for improved technology talent capacity.

The broadband situation in a couple of counties is not consistent with the rest of the State of Virginia. Only 34.1% of King and Queen County residents have access to broadband greater than 25Mbps according to Broadband Now. Other counties in the region also have poor internet access (King William (57%), Caroline (66.4%), Essex (69.2%), and Richmond (59.7%)).

The region needs to be more intentional about building programming targeting specific types of entrepreneurs. First, the most glaring opportunity involves veteran programming to start businesses. Many of the participants in our exercises, surveys, and interviews were veterans. Finding ways to engage across the region would have an impact. Second, immigrants could be targeted more explicitly for entrepreneurial programming. Again, this was a suggestion that came out of the small group discussion. Third, programming for inventors and makers may be particularly attractive in the region. There appears to be a significant opportunity tied to hardware and manufacturing products. Moreover, from conversations, many expressed the interest in having more of these types of programs and potentially dedicated makers' spaces. This aligns well with successful veteran and military focused programs in other parts of the country – including NavalX in California.

The ugly

Technology transfer was bemoaned in virtually every conversation in the region. This did not strictly revolve around an institution but was seen as an opportunity that was consistently missed. Improving technology transfer may require programmatic intervention and financial capital, but based on the feedback from the region, this seems like a pressing opportunity.

We would place the structure of food related businesses and cooperation in this category as well. The region has many strong food businesses, but most have existed for a long time. Startups in the space seem to be drowned out of the conversations because they are not as glamorous as technology businesses. But, with the amount of crabs, oysters, and seafood businesses that have been created in the region, intentionality to building bigger businesses may bear success quickly. Specifically, while DC and Richmond have been decried as having negative effects in this paper, they are also big markets where finding ways into kitchens and restaurants could shift significant financial resources to Region 6. Being intentional about coordinating and exporting products from Region 6 to the tables in close proximity by appealing to local culture, sustainability, and palates should be a top priority.

Knowledgeable Community

Having a knowledgeable community is not just about having a highly educated workforce (although Region 6 has that). It is about having a community that understands and values entrepreneurship. Simply put, few people understand the heartaches and pain associated with owning and operating a business. And without understanding and empathy, it is hard to cultivate an entrepreneurial ecosystem. Region 6 has work to do to effectuate a deeper understanding of the entrepreneur's journey and of the structural support provided by an ecosystem.

The Good

The technical knowledge of the region is strong. Only Colorado Springs and Huntsville (among the peer cities) had higher rates of cool jobs. This means that the environment in Region 6 has a significant number of STEM related jobs. It can be difficult in a state, such as Virginia, that has such technical and knowledge worker density to realize the advantage in Region 6 associated with its talented workforce. But, the reality is that the region does have a strong workforce – particularly in software development and other information technology jobs. When we consider technical knowledge in the world of entrepreneurship, we typically are looking at the capacity of a region to provide experts that can solve difficult innovation dilemmas through industrial and technical knowledge. In the peer group, Huntsville, Alabama is a good example of a community that has leveraged their technical capacity to grow numerous information systems, cybersecurity, and other technical businesses.

Cool Jobs Comparisons

	Cool Jobs	Workforce	%
Region 6	15,580	231,258	6.740%
Pensacola, Florida	7,060	175,850	4.010%
Colorado Springs, Colorado	24,780	278,210	8.910%
Beaufort, South Carolina	1,980	74,310	2.660%
Wilmington, North Carolina	6,950	126,760	5.480%
Shreveport, Louisiana	4,260	164,210	2.590%
Anchorage, Alaska	10,420	164,520	6.330%
Huntsville, Alabama	38,360	230,800	16.620%
Virginia	329,440	3,701,220	8.900%
United States	8,398,800	139,099,570	6.040%

The Bad

The region does not have a clear programming calendar or plan. It is unclear to me from spending time in the region how I would plug into the various programs and institutions to become an entrepreneur or to find help on a specific problem. I was able to find the SBDC website through various searches, but if I did not know what that type of organization was called, it would have been a challenge. This is true of other introductory elements. As mentioned in the introduction, we would recommend creating more openings for new people interest in the ecosystem to enter. A shared welcome video with actionable steps would be particularly valuable as it is likely to score high on Google's search algorithm.

There also appears to be the capacity (i.e. knowledge) and space (i.e. the libraries), but there does not appear to be dedicated efforts to work with inventors and makers across the region. Instead, it appears that the towns (and sometimes counties) are attempting to build one-off programs for this clientele. Particularly with the robust knowledge associated with technical degrees and educational attainment in the region, classes targeting this group may bear fruit. Coupling those classes with e-commerce and web site building classes may also be helpful. These would additionally assist many main street businesses with their efforts.

The Ugly

There was no place to go to learn about entrepreneurs that were just starting and having early success. There is no blog, podcast, or social media account (that we could find) that was consistently, regionally discussing Region 6's entrepreneurial ecosystem. This meant that it was difficult to find hero stories. It also means that setting up events was a challenge because it required word of mouth and direct invitations. This creates an environment that is hard to enter if you do not know the right people. So, key people – such as Curry Roberts, Larkin Garbee, and Liz Povar – play an outsized role in bringing people to the table today. If there was an asynchronous communication tool that provided stories and event invites, the ecosystem would be able to operate more smoothly, and future succession would be easier as it would be able to build over multiple platforms, not just through personal relationships.

Connecting Activities

The region is connected to each other and that means that the network density is relatively strong. However, it appears to be built on the backs of relatively few actors – meaning that succession and future network density maybe in jeopardy. Thus, it is incumbent on the region to build bench strength into the fabric of their programming and activities. Second, the relative connectivity outside of the region appears to be weak in key areas – particularly funding and early customers. Building network density in both areas would improve the capability of startups in the region to access capital and customers.

The Good

Regional leaders regularly provided positive feedback about each other. In both written surveys and in person interviews, people were complimentary of others, even those with whom they competed or did not have self-interest to praise. This is not always the case and suggests that the region does have many of the connectivity building blocks necessary to build a regional work plan and have success. For example, we worked in multiple sub-regions and with many organizations and each were quick to respond to e-mails and connect us to people that we met at their programs. This is a good backbone for an ecosystem and for support organizations, generally.

The events in the rural parts of the region had significant participation from female business owners and starters, and many minorities as well. These programs suggested a keen desire to be inclusive and make sure that people of color and women are well-represented at the table. This is one reason that the data about minority business ownership was so surprising because it appeared from our experience in the region that there was strong minority business ownership, presence, and voice. Again, this participation is suggesting of an environment that is being cultivated to be inclusive.

In June, the FRA coordinated a dinner in Fredericksburg which was well-attended by a variety of business leaders from the region. This dinner was well-curated and provided a variety of business topics and discussion. Moreover, the community leaders were in touch with main street businesses and adequately expressed a desire for high growth businesses. While it was a curated group, there was good discussion about a variety of second-level (harder) topics in ecosystem building. It also led to action, including the advent of the nascent angel group.

The Bad

It seems like Fredericksburg and the DC suburbs don't fit well with the rest of the region, and there were times when the two communities did not appear to have strong desire to actively mix. This is more about attitude than reality – but there appears to still be work to break down programming silos between the northern part and southern part of the region. This separation also appeared to exist in food producers and food purveyors. And this is why the separation needs to be reduced, because it hurts both types of startups. The network that can help folks growing or harvesting food needs access to the DC market, and the Fredericksburg, Stafford, and Spotsylvania people are positioned to provide said access. This is also true regarding additional military support to the Hampton Roads region which seemed to have weaker ties to the DC area than the rural areas in the southern part of Region 6 from which many military and retired military commute.

The Ugly

There were few people that saw their role as an ecosystem builder. Thus, they were often looking to further their own or a narrow agenda, rather than seeing the importance of improving the entire ecosystem. This is one reason that a dedicated ecosystem builder will be so beneficial – to model systemwide strategy, rather than potential competition between people and places within the same region. An ecosystem builder can also help to coordinate the best programs from various rural places and extend them into other parts of the region.

Final Recommendations

The recommendations section of these whitepapers could last for pages and pages, and we prefer to embed our recommendation as we discuss our observations, the data, and the suggestions of the community. However, we do try to summarize recommendations at the end of the whitepaper to allow for quick communication and clarity.

#1 Find your entrepreneurs (particularly your high growth ones).

Region 6 needs to find its entrepreneurs more effectively. The business ownership rate is relatively high (above the national average), and the main street business presence is clear. However, it was hard to find and talk about high growth entrepreneurship in the region, except with a small group of people. Many simply wanted it to happen without a clear path. It starts with the entrepreneurs. The positive is that success does not require thousands of said entrepreneurs, instead significant progress can be had with only a handful or two.

#2 Program for the strong main streets and main street businesses in the region.

The region had beautiful main streets that often (post COVID) had open bays. And, in many of the bays were stores that would be attractive to tourists and to purchasers who preferred local artisans or makers. Simply put, Region 6 is near big markets. It is an attractive place to visit. And it has a strong workforce and smart entrepreneurs. Help those who work on main street to reach the urban markets in the Mid-Atlantic. This probably requires outreach, programming, and intentional help to understand the exact learning needs of key types of companies.

#3 Federal Contracting & #4 Technology Transfer

While not the same, the two types of recommendations go hand in hand. First, build better connectivity to key organizations that can help facilitate. For example, understanding the grant process will help both recommendations. Building deeper connections that the Department of Defense will help both processes. Having venture capital and other forms of risk capital (and startup grants) will be beneficial for both. While there is nascent business development in these segments, intentionally building networks, capital, and relationships that can become a customer will greatly help those companies that are seeking to build businesses in this space.

#5 DC is expanding

The DC suburbs saw tremendous growth over the last five years. Population and talent are creeping into Region 6. Instead of trying to hide from this fact, embrace it and make the transition to exurb smoother. But also, think about how to retain businesses that are being started by this same group of people. Rather than driving to Alexandria because of its proximity to power, capital, and customers, help sell new entrepreneurs on potential benefits of Region 6 and alleviate the negative impact of being slightly further away (better one day a week commuting options, more capital providers coming to the Region to present and invest, direct relationships with customers).

#7 Veterans

Region 6 has a lot of veterans. This is unusual in the country, but maybe not in Virginia or the region. Be intentional about making the region the premier place for military retirement. Honor business owners connected to the military. Find ways to train new military retirees in business building and key entrepreneurial skills – possibly as technical experts or salespeople. The point is that the region should embrace its relationship with military.

#8 Inventors, Makers, and Libraries

Across the region we met retired people who were extremely talented and looking for their own next thing – usually a hobby business. There were also makers and inventors who were building things. Help them start businesses. The region has many resources to facilitate immediate programming to this group (many of whom are also veterans), but libraries may be one of the best. Think about assets that can be used or reused to improve the ecosystem – rather than trying to build new ones or force them into uncomfortable fits. Libraries are great because they are free, have space, resource experts, and parking. Weirdly, the last may be one of the biggest reasons that other programs on college and community college campus struggle around the country. Be intentional about the little things. And listen to what entrepreneurs and proto-entrepreneurs want. Free parking is always a plus.

APPENDIX D: WORKFORCE DEVELOPMENT

The following document was written by Virginia Tech Center for Economic and Community Engagement (VT CECE) at the request of the GO Virginia Region 6 Council. VT CECE answered the following RFP:

GWRC is soliciting interest for consultant support with the stakeholder engagement component of our Growth and Diversification Plan update. Specifically, we are seeking a consultant who will be able to do the following:

- Facilitate three (3) to four (4) stakeholder engagement sessions in coordination with Region 6 staff to determine priorities in Region 6 Growth and Diversification plan in the Workforce/Talent Development Priority Investment Area.
 - a. *Issue: How can we solve the major workforce challenges that the region faces...?*
 - b. What specific skills/credentialing/experience/education is already being offered in the region to help employers have a prepared workforce in the Region 6 Industry Cluster areas?
 - c. What gaps exist in skills/credentialing/experience/education that are preventing employers from finding a qualified workforce in the Region 6 Industry Cluster areas?
 - d. Are current efforts adequate to address shortages and support long-term growth in the Region 6 Industry Clusters?
 - e. What Region 6 projects have concluded, are currently funded, or are in the pipeline that has/can assist with creating a qualified and trained workforce in the Region 6 Industry Clusters?

Currently Region 6 is funding a study to be completed by the Northern Neck Planning District Commission that examines current and future workforce needs and the requirements for undertaking appropriate training to meet the available jobs of today and in the future. GO Virginia funding is used for an assessment that will include a blueprint of what is needed by local companies and other workforce needs, prioritization for implementation, cost estimates, and the necessary steps to improve the quality and quantity of workforce training in the region. This study will conclude in April 2021. The facilitator will need to review this report and incorporate its findings into sessions.

The deliverable will be 3-4 facilitated stakeholder sessions with summaries provided to Region 6 staff to identify the goals, objectives, and actions that can be incorporated into the Region 6 Growth and Diversification Plan update.

These facilitated sessions will need to be completed by July 15, 2021. To meet this deadline, the estimated timeline for this contract is as follows:

- March 5 – GWRC solicits proposals
- March 19 – Proposals due to GWRC
- March 22 – March 26 – Candidates meet with Region 6 staff to discuss proposals
- April 1 – GO Virginia Region 6 Executive Committee makes a selection and GWRC executes contract(s)
- July 15 – Final Summaries to Region 6 Staff

The following document outlines recommendations for workforce development efforts for GO Virginia Region 6. The scope of this report was intentionally wholistic to inform workforce development broadly. The recommendations included in the growth and diversification plan are those that would eligible GO Virginia activities.

GO Virginia Region 6: Workforce & Talent Facilitation Report

Report prepared by the Virginia Tech Center for Economic and Community Engagement

Afroze Mohammed & Mallory T. Tuttle

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Acknowledgements

This report was commissioned by the George Washington Regional Commission (GWRC) that serves as the support organization for GO Virginia Region 6, which includes the George Washington Region, Northern Neck, and Middle Peninsula. The project aimed to identify workforce & talent specific goals, objectives and actions that could be incorporated into the region's updated GO Virginia Growth and Diversification Plan. Funding for this work was provided through a Region 6 GO Virginia grant.

Executive Summary

The goal of this project is to identify workforce & talent specific goals, objectives and actions that could be incorporated into the GO Virginia Region 6 updated Growth and Diversification Plan. This report provides a summary of multiple facilitated discussions regarding workforce & talent that addressed the following topics:

- Current status of workforce in the region;
- Identified regional workforce & talent gaps;
- Regional ongoing efforts and project inventory;
- External projects and potential ideas for replication;
- Proposed actionable solutions

The region is very diverse in geography and industry and boasts robust assets that contribute to its favorable business climate. With a total population of 508,626 and an unemployment rate of 3.1%, the region is home to high-performing priority industry clusters ranging from aquaculture and seafood processing to IT and Data Centers. Large industry employers and government/research facilities are located in the Mary Ball Washington region spanning from Stafford to Matthews County. The region has several projects/studies currently underway or recently completed with a specific focus on workforce & talent.

Despite the region's strengths there are notable challenges that GO Virginia Region 6 faces related to soft skills training, work-based learning/internships, career pathways/K-12 career preparation and leveraging federal opportunities. We recommend that teams and working groups of stakeholders who actively participated in facilitated workforce and talent sessions coalesce to advance project ideas outlined and to continue to brainstorm actionable strategies by learning from other regions, developing new or revised strategies that specifically fit the needs and regional priority industry clusters of Region 6. The facilitation process proved that GO Virginia Region 6 has both workforce & talent challenges, opportunities, and potential solutions as well as invested stakeholders who are interested and willing to spend time to continue working towards addressing regional workforce and talent needs.

Current Status of Workforce

GO Virginia Region 6, also known as the Mary Ball Washington Regional Council, consists of the city of Fredericksburg; and the counties of Caroline, Essex, Gloucester, King and Queen, King George, King William, Lancaster, Mathews, Middlesex, Northumberland, Richmond, Spotsylvania, Stafford, and Westmoreland. With a total population of 508,626 and an unemployment rate of 3.1% Region 6 is very diverse as can be seen from its topography to the workforce. The region's high-performing priority industry clusters range from aquaculture and seafood processing to IT and Data Centers. Regional assets include robust and expanding transportation systems/infrastructure that connect the region. The region's water-based assets, the variations between different areas, as well as its positioning between Greater D.C., Richmond and Hampton Roads areas are widely viewed as both assets and challenges.

Currently, the region is home to many workforce and talent assets including but not limited to: University of Mary Washington, Germanna Community College, Rappahannock Community College, Northern Neck Technical Center and Fredericksburg Center for Advanced Technology. Major employers and government/research facilities worth noting include GEICO, WestRock, Rappahannock Electric Cooperative, Marine Corps Base Quantico, Naval Surface Warfare Center – Dahlgren Division, and the Virginia Institute of Marine Science. Other workforce & talent assets include the local Planning District Commissions (PDCs), Regional Economic Development Organizations (REDOs) and regional workforce development board.

Region 6 At-A-Glance



Source: <https://govirginia.org/regions/six/>

Ongoing Efforts & Regional Project Inventory

GO Virginia Region 6 has notable projects/studies currently underway or recently completed that focus on workforce and talent. These projects include examples below and a complete list can be found the [GO Virginia Region 6 website](#).

- Northern Neck Workforce Training Feasibility & Site Selection Study
 - Study is to include an assessment of the Rappahannock Community College 12-county service area to determine the demand for workforce training, estimate the cost for training delivery options for every type of training, determine potential building/site locations, provide a regional site selection analysis, and recommendations for further steps.
- Welding Training Program
 - Project creates a new welding training program at Rappahannock Community College. GO Virginia funds will be used to equip a welding training facility with 15 workstations and train 40 welders for employment at local businesses within region.
- Virginia Sea Grant Resiliency Ecosystem Development
 - Study to complete planning activities toward building a new industry cluster in Virginia, a water management economy that integrates workforce development, research and development, innovation, and commercialization.
- Cyber Certification Program
 - Project establishes a Certified Information Systems Security Professional (CISSP) certification program at UMW and equip 70 of the region's citizens with this certification to pursue employment at local businesses within the region.
- Germanna Community College Tech Talent Pipeline
 - Project will develop two new curriculums to train a workforce in information technology (IT), engineering, computer science and cyber-related professions; host two summer camps for middle/high school students; and develop a web portal to engage students in jobs that meet their credentials.
- Commercial Kitchen at Hull Springs
 - Feasibility study for a commercial kitchen located at Longwood Hull Springs in Westmoreland County. Should the results of the study indicate that a commercial kitchen establishment is feasible in the Northern Neck, the idea is to co-locate the facility in the dining hall at Longwood Hull Springs for food preparation for resident students and faculty members.

We recommend that the Northern Neck Workforce Training Feasibility and Site Selection Study be provided to participants from the facilitated workforce & talent sessions.

External Projects & Potential Ideas

Throughout the facilitation sessions multiple examples of external workforce and talent projects underway in other GO Virginia regions were shared. Brief descriptions including a grant overview, theme(s) and location are provided below. We recommend that GO Virginia Region 6 consider replicating or using the examples below as a starting point in developing new workforce and talent projects to align with regional priority industry clusters. Stakeholders in other regions are willing and able to share their projects, processes, and outcomes.

- [**Ignite Tech Talent Pipeline**](#) (Region 1 and expanded to Region 2)
 - Overview: United Way of Southwest Virginia developed a talent pipeline that: assesses employer needs, provides career guidance for young people, expands internship experiences, increases the secondary and post-secondary education systems' capacity to prepare students for occupations in priority industries & high demand occupations.
 - Theme(s): Career pathways/internships
- [**Stopping the Brain Drain Strategy Development**](#) (Region 2)
 - Overview: Enhanced capacity-building project created a talent attraction and retention plan to help reduce the out-migration of recent graduates from the region's 25 colleges and universities. GO Virginia funds used to identify the regions' challenges through surveys, focus groups, and interviews, produce an action plan for recruiting and retaining talent, and establish a new Talent Action Coalition to implement talent-focused programming.
 - Theme(s): Career pathways
- [**Developing a Destination for Talent**](#) (Region 2)
 - Overview: Partnership with Virginia Tech's Career and Professional Development, Onward New River Valley, the Roanoke Regional Partnership. This project connects regional employers to the best talent at Virginia Tech through internships and classroom-based projects. Efforts are focused on the regional economic priority clusters including Manufacturing, Life Sciences and Health Care, Food and Beverage Processing, and Emerging Technologies and IT.
 - Theme(s): Career pathways/internships, work-based & soft skills training
- [**Experiential Learning in Tech Employment \(ELITE\) Internship Program**](#) (Region 2)
 - Overview: Partnership of Roanoke-Blacksburg Technology Council (RBTC), regional employers, and local professional internship organizations (i.e. Exelaraion) that are focused on providing experiential learning to software developers via a professionally-managed hometown internship program.
 - Theme(s): Career pathways/internships, work-based & soft skills training
- [**Hampton Roads Workforce Council Talent Implementation**](#) (Region 5)
 - Overview: Hampton Roads Workforce Council will build a talent pipeline for the

regional maritime industry, including: Extensive employer engagement, aligning higher education curriculum and mandatory job requirements, on-the-job and incumbent worker training, regional apprenticeships, military/veteran outreach, college student engagement, graduate retention and soft skills development, and workforce development alliances.

- Themes: Career pathways, work-based & soft skills training

Workforce & Talent Gaps and Opportunities

Workforce and talent challenges are not limited to GO Virginia Region 6 and as such competition for qualified employees is increasing. Facilitated breakout group discussions uncovered four main workforce and talent gaps in Region 6:

- Soft Skills Training
- Work-based Learning and Internships
- Career Pathways and K-12 Career Preparation
- Leveraging Federal Opportunities

In practice, there are many overlaps between these four areas and initiatives to address one area are likely to have an impact on others.

SOFT SKILLS TRAINING

- **Employee Work Readiness** and soft skills training were discussed frequently as a major issue. The need for employees to understand the importance of arriving to work on-time, knowing virtual etiquette with Zoom calls (camera and microphone), proper business attire, etc.
- **Impact of Standards of Learning.** SOL tests make soft skills training more difficult as there are less opportunities for experiential learning.
- **Managerial Training.** There was also mention of managers being promoted without being prepared to lead and be successful in their new roles – especially given the impact COVID-19 has had on the workforce.
- **Connections:** Soft skills training should be connected to work-based learning/internships as a way to enhance experience and education.

WORK-BASED LEARNING AND INTERNSHIPS

- **Importance of Work-Based Learning.** Participants emphasized the need and value of more work-based learning/internship programs. There is a perceived gap between education and industry and these types of programs have the potential to bridge that gap. They also support and address the need for soft skills training as well as provide career pathways/preparation prior to graduating from high school.
- **Aquaculture Needs:** Specific needs were discussed in the aquaculture industry for oyster growing and the remedial/basic skills required to do the job. Apprenticeship programming is lacking in this industry.

- **Paid Internships Needed:** Unpaid internships are not accessible options for all students. Focus should be placed on paid internships opportunities to serve a greater population. Another option might be for schools to provide credit for internships.
- **Job Shadowing:** It would be valuable to expand opportunities to shadow multiple jobs to better see the day-to-day tasks, skills and gain a more detailed view of specific positions. There is a need to seek out opportunities for grant funding to support school counselors in establishing a job shadowing program in which students could rotate through multiple positions in different industries to gain better understanding of career pathways. This could be a good fit for students who are too young to participate in internships or for short-term timelines.

CAREER PREPARATION AND PATHWAYS FOR K-12 STUDENTS

- **Communication** barriers exist between educators and industry and should be addressed. For example, students may not be aware if they have mechanical aptitude for a specific job and also don't know if there are jobs available in that field. High school students need better information about their career options. Job shadowing, discussed above, was cited as a great way for students to gain first-hand knowledge.
- **Entrepreneurship** is another pathway for students. Suggestion that students be taught about entrepreneurship as a way to make a living. What if every high school student earned a business license? Others suggested that retired regional entrepreneurs could provide mentorship and funding.
- **Models:** Other initiatives should be explored as exemplars such as 4H programs. How can after school programs play a part? Stakeholders noted that youth entrepreneurship programs that could be models exist in other places.
- **Brain Drain:** Need to address brain drain from the region due to students leaving for education and not returning because they aren't aware of employment opportunities. It would be very helpful for students to get their first work experience in the region to learn of local opportunities and make professional connections.
- **School System Realities:** High school guidance counselors are doing the best they can but have limited capacity due to ratio of 600:1 in some places. Furthermore, due to declining populations in some areas and funding shortages, it is difficult for school systems to find teachers with the right credentials in certain fields.
- **Industry Involvement:** need to determine ways to involve industry to be proactive vs. having the K-12 system required to lead outreach efforts. There is no program to educate industry on how to best partner with the school systems. Numerous suggestions were made on ideas for industry involvement, including having companies provide a "speakers bureau" of company representatives who could speak at schools or "Zoom" in; retired entrepreneurs in region

could provide mentoring and potentially funding for entrepreneurially inclined students. WestRock noted programs they have in the school system to let students know about career opportunities; WestRock in turn is recruiting their future employees. Virtual tours of companies were cited as another effective method for students to learn about careers and opportunities beyond what is immediately visible to them.

- **Partnerships:** Continued partnerships between K-12 schools, community colleges, local universities and industry are needed to strengthen current and future programs. Other organizations, like Chambers of Commerce and Rotary Clubs could be very helpful in coalescing their members to develop career pathways for students.
- **Student Reluctance:** Students are provided opportunities for career preparation (i.e. mock interviews, resume writing, etc.) but attendance doesn't accurately depict the need for these experiential education opportunities. Students sometimes don't see the value and will not follow through on leveraging available (mostly free) resources.

LEVERAGING FEDERAL OPPORTUNITIES

- **Security Clearance Requirements**
 - i. Security clearances were identified as a difficult requirement to meet: you need a job to obtain a security clearance but cannot obtain the job without a security clearance. Security clearances also require specific schooling to support this type of need/career path – would need to educate younger workforce about these opportunities prior to leaving high school.
 - ii. Credit, criminal and driving records hinder students from obtaining a job and/or security clearance. Even minor blemishes are having a large and lasting negative impact. Students need to understand the importance of “keeping their records clean.” They need to know this information starting at the middle school level. Stakeholders felt that students needed to keep their minds open to working in the Department of Defense.
- **Preparing for Upcoming Federal Funding Opportunities**
 - i. Connect and leverage resources needed to advance efforts specific to addressing workforce & talent challenges. Given location and assets, there should be more focused efforts on utilizing federal funding to have a great impact in the region.
 - ii. Greater communication is needed with Naval Surface Warfare Center – Dahlgren Division to understand their hiring needs.

ADDITIONAL THEMES

- **Importance of Library System:** Several participants noted the importance of library systems in serving as regional connectors in addition to providing information resources.

- **Customer Discovery:** Some stakeholders stressed the importance of surveying or interviewing companies in the region to ask them what their needs are. There was also interest in understanding initiatives in other areas that are “uniquely good.”
- **Engagement of Regional Workforce Development Board:** Multiple participants were unfamiliar with the work and efforts underway through the regional workforce development board. Developing a “road-show” to present to various communities of GO VA Region 6 to explain the workforce board’s mission, goals, current and future work would be valuable in connecting people and resources.
- **Mentorship:** Leverage experiences and knowledge of mature workforce to support younger generation preparing to enter the workforce full-time. Potential ideas to explore included establishing mentor networks or reciprocal mentorship programs (traditional mentoring pairs flipped roles and mentors also receive mentorship from their mentees). Providing students with an opportunity to connect with community leaders and not their parents/guardians elevates the learning opportunities.

SUMMARY

Overall, there was a need for greater understanding about what other companies, organizations, school systems, etc. are doing to address workforce and talent gaps in the region. The regional entity that would most naturally serve as a convener of this type of work was identified as the local workforce development board for the region, but it would be helpful for the boards to more fully communicate their past efforts and current work, based on comments made by stakeholders participating in the facilitation sessions. Including this group and helping to communicate updates to stakeholders moving forward would be strongly recommended. Some stakeholders also perceived the need for roundtable stakeholder meetings for specific industry clusters, noting that there may be unique needs in different industry groups.

A major theme that ran through the discussions was the willingness of regional stakeholders to collaborate to develop initiatives that would solve regional workforce needs.

Proposed Actionable Solutions

It is proposed that teams/working groups of stakeholders who actively participated in facilitated workforce and talent sessions coalesce to advance project ideas outlined and to continue to brainstorm actionable strategies by learning from other regions, developing new and revised strategies that best fit the needs and regional priority industry clusters of GO Virginia Region 6.

The potential projects or elements of projects identified and discussed during the facilitated session include:

- **Middle School Career Exploration** – Establish connections between employers and K-12 school systems in region. Plan for a specific number of days in each school year for in-person field trips or pre-recorded behind-the-scenes video tours of multiple regional employers (i.e. Chick-fil-A virtual tour example).
- **High School Internship Graduation Requirement** – Similar to the 4-year higher education requirement for most majors, require high school students to participate in a documented and approved internship or work-based learning program prior to graduation. Alternate variation – position the internship as an elective that provides students who complete the experience with some type of formal recognition at graduation ceremony (i.e. medal, verbal recognition, etc.).
- **Dress for Success Day** – Schedule a “Dress for Success Day” once a month for local high schools to focus on soft skill training (i.e. how to dress/access to business clothes, host mock interviews, resume writing workshops, etc.). In order to align with GO VA requirements this specific suggestion would need to be integrated into a larger workforce project/idea
- **Workforce Academies** – Approved and vetted companies/organizations opt into a program where they are provided with interns to learn entry-level skills and beyond. Participating companies/organizations are provided a stipend for participants and interns could be paid from grant funding.
- **Chamber of Commerce Led Initiatives:** Local Chambers of Commerce could play a key role in enlisting their members to collaborate with the K-12 school system to provide work-based learning opportunities. Having different organizations commit to conducting specific tasks is critical.
- **Other Ideas** – Establish a localized steering committee (multiple organizations) that can develop initiatives based on existing programs (i.e. Urban Alliance, etc.). It would be helpful for regional stakeholders to get a preview of findings of the Northern Neck Workforce Training Feasibility and Site Selection Study in order to start thinking about how to implement ideas recommended in the report.

It is important to note across all of the workforce and talent gaps identified and discussed, participants strongly agreed that addressing these gaps earlier (elementary and middle school) and also during the summer would be worth further consideration. Participants mentioned research that supported the claim that middle school programs lead to higher proficiency in high school.

In summary, the facilitation process proved that GO Virginia Region 6 has both workforce and talent challenges, opportunities, and potential solutions. The community-minded and invested stakeholders who shared their time and insight for these sessions is a key regional asset. These stakeholders are interested and willing to continue working to address workforce and talent needs to improve outcomes for individuals, businesses, and the community as a whole.

APPENDIX E: SITE DEVELOPMENT

The following document was written by Draper Aden Associates (DAA) at the request of the GO Virginia Region 6 Council. Draper Aden Associates answered the following RFP:

GWRC is soliciting interest for consultant support to conduct a regional site prioritization based on site development guidance issued by GO Virginia, Department of Housing and Community Development (DHCD), and the Virginia Economic Development Partnership (VEDP) and engage regional stakeholders in the process. Specifically, we are seeking a consultant who will be able to do the following:

1. Inventory all sites and buildings in the Region 6 footprint.
 - a. In 2020, the Northern Neck Planning District Commission and Middle Peninsula Alliance each conducted their own sites and buildings inventories using Region 6 Capacity Building funds. The consultant will need to review these reports and determine if additional sites need to be studied.
2. Determine if each site is a publicly or privately owned site.
3. Determine how each site best fits within the Region 6 Targeted Industry Clusters.
4. Determine each site's location competitiveness and developability based on the Region 6 footprint.
5. Rank order each site in terms of cost to tier the site to a Tier 4 on VEDP's ranking scale versus potential return on investment based on Region 6's targeted industry clusters and what would be a potentially viable industry/industries at that location.
6. Facilitate three (3) to four (4) stakeholder engagement sessions in coordination with Region 6 staff to determine priorities in Region 6 Growth and Diversification Plan.
 - a. Issue: How can we collaborate regionally to increase the inventory of shovel-ready sites in the region to attract prospects?

The deliverable will be an analysis and prioritization of all the sites in Region 6 relative to the region's total portfolio of available sites using an objective, data-driven process that assesses each site's location competitiveness and developability. Region 6 staff are open to discussing with the consultant additional or different metrics to be used to meet this goal.

This prioritization will need to be completed by July 30, 2021. To meet this deadline, the estimated timeline for this contract is as follows:

- March 5 – GWRC solicits proposals
- March 19 – Proposals due to GWRC
- March 22 – March 26 – Candidates meet with Region 6 staff to discuss proposals
- April 1 – GO Virginia Region 6 Executive Committee makes a selection and GWRC executes contract(s)
- July 1 – Draft Analysis and Prioritization Plan to Region 6 Staff
- July 30 – Final Analysis and Prioritization Plan to Region 6 Staff

The following document outlines recommendations on how the Region 6 Council should prioritize site development across the region. Sites were comprised of those provided to the Virginia Economic Development Partnership in their 2019 Site Characterization update and additional sites localities provided to DAA during the growth and diversification plan update. The Region 6 Council recognizes that there may be new sites that come on the market and will use the quantitative and qualitative methods provided here to determine the ranking of those new sites.

Regional Site Prioritization

Mary Ball Washington Region 6 Growth and Diversification Plan Update



George Washington Regional Commission
406 Princess Anne Street
Fredericksburg, VA 22401

July 30, 2021

DAA Project No.: 2100740



Draper Aden Associates
Engineering • Surveying • Environmental Services

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Mary Ball Washington Region 6 Growth and Diversification Plan Update

Regional Site Prioritization – Current VBRSP Characterized Sites

- 1 Site, Acreage and Zoning
- 2 VBRSP Tier Status
- 3 Acreage and Infrastructure
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Attachments

- A Virginia Growth and Opportunity Fund (GO Virginia)
Regional Site Development Project Guidance
- B Go Virginia Board Policy #9
- C GO Virginia Region 6-Recap and Observations
Stakeholder Work Sessions on Site Development

1. Introduction

One of GO Virginia's program requirements is for each regional council to provide an update to its Growth & Diversification Plan every two years. The plan and its update are used to outline the economic development needs that should be addressed through GO Virginia funding, and the types of innovative potential projects that could achieve this within the region – including site characterizations, due diligence and development of regionally significant sites.

George Washington Regional Commission (GWRC) and the Mary Ball Washington GO Virginia Region 6 are working toward prioritizing potential and currently marketed economic development sites throughout the greater Fredericksburg, Middle Peninsula and Northern Neck region of Virginia to determine the best use of potential local and GO Virginia funding to “increase the inventory of shovel-ready sites in the region to attract prospects.” This report is provided to recommend sites for future regional investment to advance the tier level and identify opportunities for regional cooperation.

2. GO Virginia Funding

One major source of funding in the Commonwealth of Virginia for site advancement projects (planning and implementation) is via the Virginia Growth and Opportunity Fund (GO Virginia) Regional Site Development Project Guidance (Attachment A) and Go Virginia Board Policy #9 (Attachment B). The following is a list of general provisions of GO Virginia Board Policy #9; refer to the attachments for additional detail.

1. Activities must advance sites towards becoming a Tier 4 level under the Virginia Business Ready Sites Program (VBRSP) tier program. Refer to Section 3 of this report.
2. Ownership can be public or private. If private, a contractual agreement must be in place.
3. There must be collaboration of at least two (2) localities.
4. Localities agree to equally contribute to the project through cost and/or revenue sharing.
5. Sites must be at least 25 contiguous acres. There is a waiver provision if the site is less than 25 acres and is deemed “regionally significant.”
6. Sites must support industries identified in the Region 6 Growth & Diversification Plan.

3. Virginia Business Ready Sites Program

In 2015, the Virginia General Assembly passed legislation to create and fund the Virginia Business Ready Sites Program (VBRSP) to be administered by the Virginia Economic Development Partnership (VEDP). The VBRSP was established to promote development and characterization of sites to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment.

VBRSP evaluates current available land – both publicly and privately owned – in a tiered system, where Tier 1 is basically raw land, and Tier 5 is a “pad-ready” site, the latter being most attractive to site selection consultants, commercial realtors and businesses and manufacturers desiring to move or expand to Virginia. Site characterizations are designed to assess the level of existing development at a site and the additional investments required to bring the site to a level that will enable the site to be more attractive for industrial economic development purposes. The only requirement for a site to be characterized by VEDP is that it is listed in VA SCAN, VEDP's database of economic development sites.

The following is a summary of the site characterization tier levels.

Tier 1 Site is identified, there is an agreement with the local economic developer to market, and the site is listed in VA SCAN, VEDP's database of economic development sites.

Tier 2 There is an established sales price, and the site is compatible with the Comprehensive Plan.

Tier 3 The site is zoned for an industrial and/or manufacturing use (or similar), and due diligence is completed. Due diligence includes the following information.

1. Preliminary Geotechnical Exploration & Report
2. Boundary Survey
3. Topographic Survey
4. Phase I Environmental Site Assessment
5. Waters of the US Delineation and Determination (within past 5 years)
6. Cultural Resources Review
7. Threatened & Endangered Species Review
8. Master Plan Development
9. Preliminary Engineering Report

Tier 4 Infrastructure improvements are designed and permitted, and can be constructed within 12 months

Tier 5 The improvements are under construction and/or the site is pad ready and all infrastructure is available.

4. Sites Inventory

4.1 Criteria

The Mary Ball Washington GO Virginia Region 6 sites included in this report meet the following conditions.

1. 10 available acres or greater
2. Currently characterized using the Virginia Business Ready Sites Program (VBRSP) tier program

4.2 Identification Sources

1. Previous studies provided by Mary Ball Washington GO Virginia Region 6 and prepared by Draper Aden Associates.
2. The Mary Ball Washington Region VAScan Sites Assessment Summary, developed by Draper Aden Associates in 2017. Refer to the Mary Ball Washington Region's original Growth & Diversification Plan.
3. VBRSP site characterization reports developed prior to and as part of the VEDP 2019 project.
4. The 2020 inventories done by the Northern Neck Planning District Commission and the Middle Peninsula Alliance using Region 6 Capacity Building funds.
5. VAScan database.

4.3 Summary

Refer to Table 1 for a listing of the sites, locality, available acreage, current and next potential VBRSP tier level, and current zoning.

1. All Tiers: Total number of VBRSP characterized sites	83
a. Greater than 10 available acres	79
b. Greater than 25 available acres	74
2. Tier 4: Total number of VBRSP characterized sites	2
a. Greater than 10 available acres	2
b. Greater than 25 available acres	2
3. Tier 3: Total number of VBRSP characterized sites	0
4. Tier 2: Total number of VBRSP characterized sites	63
a. Greater than 25 available acres with compatible zoning for the entire available acreage	42

With only two tier 4 sites throughout the region, there is a lack of available pad-ready sites to offer prospects.

5. Sites Analysis

Draper Aden Associates completed a desktop review of readily, available information for the 83 identified sites within Region 6 to determine the site readiness of each site. Refer to Table 1 for a complete listing of the 83. Sources reviewed included reports and information listed in Section 4.2 of this report. The following sections of this report are based on our review of this readily, available information.

5.1 VBRSP Status

Table 2 presents each site versus the current and next potential VBRSP tier level, as well as a 'check mark' for items completed for each sites, as per the available information reviewed. This table is a visual representation of the tasks completed and yet to be completed towards achieving VBRSP Tier 4 and 5 status.

5.2 Available and Developable Acreage

Available Acreage is the sum of parcels currently undeveloped within a particular site. The available acreage for a site with no existing development will be the same as the total acreage.

Developable acreage is acreage that is suitable for construction-area that is realistic / probable for development of an economic development or industrial facility. The estimated developable acreage is the portion of the site that can be developed through normal permitting processes, including impacts to waters of the US or floodplains, and are not encumbered by major infrastructure facilities, extremely steep slopes, significant isolated water bodies and/or waters of the US (wetlands and streams), historical and/or cultural features, and/or floodways.

Table 3 provides the available and estimated developable acreage, and the percentage of developable versus available. This is an important factor when analyzing the estimated return on investment when considering which sites to fund for advancement.

5.3 Infrastructure Availability and Capacity

The infrastructure analysis shown on Table 3 focuses on public infrastructure (roads, water and sanitary sewer), not private utilities. Electrical, gas and fiber services to a site are equally important to industrial development; however, typically the service providers will extend services, if the return on investment is economically viable. The following scoring criteria based on the following Site Evaluation Matrix used by VEDP for the development of the 2019 Enhanced Site Characterization Study. The higher the score the readier a site is for development and less costly it is to provide the needed infrastructure.

Transportation Access

<u>Distance To a 4-Lane Highway</u>	<u>Points</u>
Within 1 road mile	10
1 - 2 road miles	8
2 - 5 road miles	6
5 - 10 road miles	4
10 - 20 road miles	2
20+ road miles	0

Water Availability / Capacity

	<u>Points</u>
On-Site /Adjacent w/ No System Upgrades Anticipated	10
Extension of Main < 2500' w/ No System Upgrade Anticipated	8
On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
Major System Upgrades Anticipated	2
No Public System Available / Well System Required	0

Sanitary Sewer Availability / Capacity

	<u>Points</u>
On-Site /Adjacent w/ No System Upgrades Anticipated	10
Extension of Main < 2500' w/ No System Upgrade Anticipated	8
On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
Major System Upgrades Anticipated	2
No Public System Available / Onsite Septic Required	0

No Upgrades: > 1,000 GPD / acre or 250,000 GPD available at the SITE (whichever is less)

Minor Upgrades: < 1,000 GPD / acre or 250,000 GPD available at the SITE (whichever is less)

Major Upgrades: < 1,000 GPD / acre or 250,000 GPD available at the PLANT (whichever is less)

5.4 Market Sector Suitability

Table 4 is a summary of VEDPs 2019 ranking of the sites (high versus low) for a few of the Region's targeted markets: Advanced manufacturing (large and small scale), light manufacturing (large and small scale), and distribution and logistics (large and small scale). Note: VEDP did not provide this data for each site.

5.5 Recommendations for Advancement

It is critical that localities and/or the region invest in site readiness planning and implementation projects to increase the inventory of Tier 4 sites in the region. Based on the research and analysis described above, the following sites are recommended to be considered for further site due diligence to advance the sites to Tier 3, 4, and 5.

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage
VA Gateway	Stafford County	2	5	26	26
West Point Industrial Park	King William County	2	4	66	66
Airlee Industrial and Data Center Site	Caroline County	2	3	184	184
Renaissance Business Park (5971A)	Stafford County	2	3	162	162
Ladysmith Industrial Park	Caroline County	2	3	87	87
Caroline Commerce Center	Caroline County	2	3	300	250
Battlefield Industrial Park - Tyler St/Belman Rd	Fredericksburg, City of	2	3	62	62
Back 40 Site	Spotsylvania County	2	3	51	51
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101
King George Industrial Park	King George County	2	3	148	88

Table 5 provides order of magnitude estimates of probable costs to advance these sites to the next tier level.

6. Regional Cooperation

6.1 Stakeholder Work Sessions Outcomes

The GO Virginia Regional Site Development Project Guidance require that funding applications "...demonstrate meaningful outreach and commitment to a planning process that engages a variety of stakeholders, including public and private utility companies, utility cooperatives, local governments, regional planning organizations, and local and regional economic development organizations. The result of this outreach and planning process should enable to Regional Council to make informed decisions in prioritizing sites across the region...."

Three work sessions were facilitated to determine how regional stakeholders can collaborate regionally to increase the inventory of shovel-ready sites to attract prospects, and to receive input on the elements that should be considered in developing a prioritization matrix for evaluation of sites.

The major outcomes from the facilitated stakeholder sessions are summarized below; details are provided in Attachment C.

1. There is a perception of apathy or lack of interest in regional collaboration among several of the communities in the Region.
2. Currently there are minimal partnering activities between localities in the Region.
3. Several of the participants – particularly those in economic development roles – discussed the political nature of site development and, therefore, the sensitivity of undertaking site advancement activities or even conversations regarding regional collaboration with local leaders.
4. It is unclear if the Regional Council has formally defined Site Development as a priority investment area for Region 6, including established goals and timelines.
5. While the Council's goal of getting input on prioritization of sites from the Region's partners was outlined in the stakeholder work sessions, DHCD's expectations of what this entails needed further clarification.
6. There seems to be consensus and interest in advancing due diligence efforts on several sites in Region 6, as everyone seems to understand it is a necessary starting point.

7. Although some of the participants recognize GO Virginia as a way to leverage other funds (e.g. local government dollars, private sector expenditures, federal funds), there is skepticism around whether the funding is substantial enough to really induce collaboration within the Region – especially for site implementation projects;
8. Several participants expressed the need for Regional Council members to help facilitate discussions about partnering and collaborations between the localities, as well as to help with introductions and identifying/fostering potential partnering opportunities;

6.2 Recommendations

1. The Regional Council should initiate deliberate “outreach” to elected officials and local administrators by inviting them to attend the Council’s quarterly meetings. These meetings will inform local leaders about GO Virginia and reiterate the importance of and benefits that can come from collaborative initiatives.
2. The importance of diversifying the Region’s economy, its composition of businesses, and the need to create long-term options for business growth does not seem to be fully understood or embraced. Therefore, some additional economic development education of community leaders may be helpful in gaining support for site development efforts.
3. To enhance opportunities for securing site implementation grants from GO Virginia, the Regional Council may want to consider one or more sites for future regional/sub-regional business parks as a subsequent phase of the prioritization process.
4. Sites advancement activities—whether via due diligence or implementation projects—should be defined over the long-term and slated for funding on an annual or biennial basis. This will allow Council to revisit or update prioritized sites, particularly if any of them are sold, rezoned, or as new properties or partners are identified.
5. As the Region 6 Council moves forward with prioritizing the list of sites evaluated and characterized by Draper Aden Associates, the following questions should be considered:
 - a. Is the site suitable for and able to accommodate the Region’s targeted sectors, particularly given its size and location?
 - b. How/why is the site “regionally significant?”

- c. Will the required due diligence or site improvement activities advance the site to Tier 4 or 5?
- d. Are the expenditures needed to advance or improve the site cost-effective relative to potential public investments that could be made in other/comparable sites in the region?
- e. Will the localities be willing and able to “materially participate” in the proposed site investment(s)?

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 1
Site, Acreage, and Zoning

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning
Thornburg Towne Center	Spotsylvania County	4	5	100	100	C-3
Richmond County Commerce Center	Richmond County	4	5	101	30	Industrial
Venture Business Park	Stafford County	2	5	33	33	B-2
VA Gateway	Stafford County	2	5	26	26	M-1
West Point Industrial Park	King William County	2	4	66	66	M-1/unzoned
Red Hill Site	Middlesex County	2	4	5	5	Village Community
Bon Secours Site	Middlesex County	2	4	6	2	Village Community
Luck Stone Industrial Park	Caroline County	2	3	675	675	RP
Gilman Tract East	Spotsylvania County	2	3	620	620	A-2
Carmel Church Station Super Site (east of RR and west of I-95)	Caroline County	2	3	522	522	PMUD
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337	PMUD
Gilman Tract West	Spotsylvania County	2	3	322	322	A-2
Tappahannock-Essex County Airport Site	Essex County	2	3	477	293	A-1
West Point Airport Site	King and Queen County	2	3	276	276	Industrial
Cleydael	King George County	2	3	265	265	C-2 Lt Industrial R-1
Fontainebleu Industrial Park	King William County	2	3	260	260	Industrial
Caroline Commerce Center	Caroline County	2	3	300	250	M-1
Centreport Parkway Property	Stafford County	2	3	260	248	M-1 Lt Industrial A-1

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
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TABLE 1
Site, Acreage, and Zoning

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning
68 Oakenwold Ln (3780)	Stafford County	2	3	231	231	A-1 R-2 B-2
Stafford East - Univ. of Mary Washington Foundation	Stafford County	2	3	227	227	M-1, Light Industrial
The King Carter	Lancaster County	2	3	300	222	R2
Coleman Family Farm	Spotsylvania County	2	3	201	201	I-2
WHC Property	Caroline County	2	3	200	200	M-1
Webster 200 Site	Spotsylvania County	2	3	200	200	A-1
Orrock Farm-Spotsylvania	Spotsylvania County	2	3	198	198	A-2
Airlee Industrial and Data Center Site	Caroline County	2	3	184	184	M-1
Renaissance Business Park (5971A)	Stafford County	2	3	162	162	M-2
Gray Property	Caroline County	2	3	157	144	M-1 & RP
Webster 140 Site	Spotsylvania County	2	3	139	139	A-2
Gutierrez Site	Spotsylvania County	2	3	129	129	A-2 (Agricultural)
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101	I-1
George Washington Village	Stafford County	2	3	1078	95	M-1
5630 Morris Road	Spotsylvania County	2	3	95	95	A-2
King George Industrial Park	King George County	2	3	148	88	Industrial
Ladysmith Industrial Park	Caroline County	2	3	87	87	Industrial & Commercial

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 1
Site, Acreage, and Zoning

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning
Riverside - Honey Farm Parcel	Stafford County	2	3	86	86	Light Industrial
0 Hollywood Farm Road (6075)	Stafford County	2	3	83	83	M-2
Thompson Industrial Parcels 82-17-A & 82-17-B	Caroline County	2	3	80	80	PMUD
Stafford Airport Industrial Park (3813 - 3833)	Stafford County	2	3	64	64	A-1
Battlefield Industrial Park - Tyler St/Belman Rd	Fredericksburg, City of	2	3	62	62	I2
Groupe Site (38-14F)	Stafford County	2	3	61	61	M-1
515 Lansdowne Road	Spotsylvania County	2	3	60	60	I-1
Back 40 Site	Spotsylvania County	2	3	51	51	I-2
Canterbury Property	King and Queen County	2	3	50	50	Agricultural
King William Commerce Park	King William County	2	3	70	50	Business (B-2)
Jones Ladysmith Road Site	Caroline County	2	3	45	45	M-1 & Commercial
Farrish Property	Caroline County	2	3	45	45	M-1
North View	Caroline County	2	3	40	40	Business Commercial Light Industrial
80-100 Sanford Dr at Riverside (39 acres)	Stafford County	2	3	39	39	M-1, Light Industrial
Marshall Property	Caroline County	2	3	38	38	M-1
Route 33 Site	King and Queen County	2	3	38	38	General Business
7020 Harrison Road	Spotsylvania County	2	3	37	37	O-1
Newcomb Property	King William County	2	3	36	36	Agricultural

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 1
Site, Acreage, and Zoning

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning
Shimco LLC Property (8 parcels)	Stafford County	2	3	35	35	M-1, B-2
Hummel Airfield	Middlesex County	2	3	34	34	Waterfront Commercial
5008 Mudd Tavern Road	Spotsylvania County	2	3	32	32	C-3
Westgate Center	Stafford County	2	3	30	30	B-2
Lagrange Industrial Park	Essex County	2	3	62	29	M-1 / M-2
2705 Jefferson Davis Hwy - Austin Park Centre (28 acres)	Stafford County	2	3	29	29	B-2, Urban Commercial
N Situs - Celebrate Virginia	Stafford County	2	3	21	21	M2
Gloucester Business Park	Gloucester County	2	3	70	17	I-1
9040 Jefferson Davis Hwy	Spotsylvania County	2	3	16	16	C-3/ R-U
10813 Rollingwood Drive	Spotsylvania County	2	3	33	15	R-1
Locust Hill Site	Middlesex County	2	3	9	9	Low-Density Rural
Bohannon Business Park	King and Queen County	2	3	8	8	GB
Old Page Middle School	Gloucester County	1	4	15	15	SC-1
Thornburg Miller Tract	Spotsylvania County	1	3	32	25	I-1
Potomac-Stafford/ Widewater	Stafford County	1	2	2200	2200	A-1
Orrock-Simms Property	Caroline County	1	2	590	590	Rural Preservation
Roseman Mega Site	Caroline County	1	2	550	500	RP, M1
Ladysmith Mega Site	Caroline County	1	2	470	400	RP, M1

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 1
Site, Acreage, and Zoning

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning
Taylor Property	King George County	1	2	368	368	A-1
Simons Property	King William County	1	2	242	242	Residential
498 Caisson Rd	Stafford County	1	2	241	241	A-1
Amireh Site	Caroline County	1	2	200	200	Rural Preservation
South Garden/ Broaddus Farm	Spotsylvania County	1	2	180	180	A-2 & RP
Ronald Smith I-95 Site	Caroline County	1	2	147	147	Rural Preservation
EDA Data Center Site	Caroline County	1	2	125	114	Rural Preservation
Virginia Bazaar Property	Caroline County	1	2	97	97	B-1
Hylton Shannon	Fredericksburg, City of	1	2	90	90	R-2
6976 Courthouse Road	Spotsylvania County	1	2	69	69	A-3
Buckley Hall Road	Mathews County	1	2	69	69	Business-2 District Rural District
Hamlet - 65-100 Acres at Ladysmith Road & Green Road	Caroline County	1	2	100	65	RP

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 2
VBRSP Tier Status

							Virginia Business Ready Sites Program Tier Level Criteria															
							1	2	3								Recommended Yet Not Req'd for Tier 3		4		5	
Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning	Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months	Pad Ready	Site is ready for a Prospect to build
Thornburg Towne Center	Spotsylvania County	4	5	100	100	C-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		
Richmond County Commerce Center	Richmond County	4	5	101	30	Industrial	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		
Venture Business Park	Stafford County	2	5	33	33	B-2	✓	✓	✓								✓	n/a		✓	✓	
VA Gateway	Stafford County	2	5	26	26	M-1	✓	✓	✓								✓	n/a		✓	✓	✓
West Point Industrial Park	King William County	2	4	66	66	M-1/unzoned	✓	✓	✓								✓	n/a		✓	✓	
Red Hill Site	Middlesex County	2	4	5	5	Village Community	✓	✓												✓		
Bon Secours Site	Middlesex County	2	4	6	2	Village Community	✓	✓		✓		✓	✓				✓			✓	✓	
Luck Stone Industrial Park	Caroline County	2	3	675	675	RP	✓	✓														
Gilman Tract East	Spotsylvania County	2	3	620	620	A-2	✓	✓														

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 2
VBRSP Tier Status

							Virginia Business Ready Sites Program Tier Level Criteria															
							1	2	3								Recommended Yet Not Req'd for Tier 3		4		5	
									Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months
Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning																
Carmel Church Station Super Site (east of RR and west of I-95)	Caroline County	2	3	522	522	PMUD	✓	✓	✓		✓											
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337	PMUD	✓	✓	✓		✓											
Gilman Tract West	Spotsylvania County	2	3	322	322	A-2	✓	✓				✓										
Tappahannock-Essex County Airport Site	Essex County	2	3	477	293	A-1	✓	✓														
West Point Airport Site	King and Queen County	2	3	276	276	Industrial	✓	✓	✓													
Cleydael	King George County	2	3	265	265	C-2 Lt Industrial R-1	✓	✓		✓	✓					✓						
Fontainebleu Industrial Park	King William County	2	3	260	260	Industrial	✓	✓	✓													
Caroline Commerce Center	Caroline County	2	3	300	250	M-1	✓	✓	✓	? - No PJD	✓					✓	✓					
Centreport Parkway Property	Stafford County	2	3	260	248	M-1 Lt Industrial A-1	✓	✓														

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 2
VBRSP Tier Status

							Virginia Business Ready Sites Program Tier Level Criteria															
							1	2	3								Recommended Yet Not Req'd for Tier 3		4		5	
Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning	Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months	Pad Ready	Site is ready for a Prospect to build
68 Oakenwold Ln (3780)	Stafford County	2	3	231	231	A-1 R-2 B-2	✓	✓														
Stafford East - Univ. of Mary Washington Foundation	Stafford County	2	3	227	227	M-1, Light Industrial	✓	✓	✓													
The King Carter	Lancaster County	2	3	300	222	R2	✓	✓														
Coleman Family Farm	Spotsylvania County	2	3	201	201	I-2	✓	✓	✓													
WHC Property	Caroline County	2	3	200	200	M-1	✓	✓	✓													
Webster 200 Site	Spotsylvania County	2	3	200	200	A-1	✓	✓								✓						
Orrock Farm-Spotsylvania	Spotsylvania County	2	3	198	198	A-2	✓	✓		✓		✓		✓	✓	✓						
Airlee Industrial and Data Center Site	Caroline County	2	3	184	184	M-1	✓	✓	✓	✓				✓	✓	✓	✓					
Renaissance Business Park (5971A)	Stafford County	2	3	162	162	M-2	✓	✓	✓													

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Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning	Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months	Pad Ready	Site is ready for a Prospect to build
Gray Property	Caroline County	2	3	157	144	M-1 & RP	✓	✓														
Webster 140 Site	Spotsylvania County	2	3	139	139	A-2	✓	✓														
Gutierrez Site	Spotsylvania County	2	3	129	129	A-2 (Agricultural)	✓	✓														
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101	I-1	✓	✓	✓													
George Washington Village	Stafford County	2	3	1078	95	M-1	✓	✓	✓													
5630 Morris Road	Spotsylvania County	2	3	95	95	A-2	✓	✓														
King George Industrial Park	King George County	2	3	148	88	Industrial	✓	✓	✓		✓	✓				✓						
Ladysmith Industrial Park	Caroline County	2	3	87	87	Industrial & Commercial	✓	✓	✓													

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Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning	Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months	Pad Ready	Site is ready for a Prospect to build
Riverside - Honey Farm Parcel	Stafford County	2	3	86	86	Light Industrial	✓	✓	✓													
0 Hollywood Farm Road (6075)	Stafford County	2	3	83	83	M-2	✓	✓	✓													
Thompson Industrial Parcels 82-17-A & 82-17-B	Caroline County	2	3	80	80	PMUD	✓	✓	✓													
Stafford Airport Industrial Park (3813 - 3833)	Stafford County	2	3	64	64	A-1	✓	✓														
Battlefield Industrial Park - Tyler St/Belman Rd	Fredericksburg, City of	2	3	62	62	I2	✓	✓	✓	✓				✓		✓						
Groupe Site (38-14F)	Stafford County	2	3	61	61	M-1	✓	✓	✓													
515 Lansdowne Road	Spotsylvania County	2	3	60	60	I-1	✓	✓	✓													
Back 40 Site	Spotsylvania County	2	3	51	51	I-2	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓			
Canterbury Property	King and Queen County	2	3	50	50	Agricultural	✓	✓														

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VBRSP Tier Status

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							1	2	3										Recommended Yet Not Req'd for Tier 3		4		5
									Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months	
Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Current Zoning																	
King William Commerce Park	King William County	2	3	70	50	Business (B-2)	✓	✓	✓														
Jones Ladysmith Road Site	Caroline County	2	3	45	45	M-1 & Commercial	✓	✓	✓								n/a						
Farrish Property	Caroline County	2	3	45	45	M-1	✓	✓	✓								n/a						
North View	Caroline County	2	3	40	40	Business Commercial Light Industrial	✓	✓	✓														
80-100 Sanford Dr at Riverside (39 acres)	Stafford County	2	3	39	39	M-1, Light Industrial	✓	✓	✓								n/a						
Marshall Property	Caroline County	2	3	38	38	M-1	✓	✓	✓								n/a						
Route 33 Site	King and Queen County	2	3	38	38	General Business	✓	✓	✓								n/a						
7020 Harrison Road	Spotsylvania County	2	3	37	37	O-1	✓	✓	✓														
Newcomb Property	King William County	2	3	36	36	Agriculatural	✓	✓															
Shimco LLC Property (8 parcels)	Stafford County	2	3	35	35	M-1, B-2	✓	✓	✓								n/a						

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Hummel Airfield	Middlesex County	2	3	34	34	Waterfront Commercial	✓	✓	✓									n/a				
5008 Mudd Tavern Road	Spotsylvania County	2	3	32	32	C-3	✓	✓	✓													
Westgate Center	Stafford County	2	3	30	30	B-2	✓	✓	✓									n/a				
Lagrange Industrial Park	Essex County	2	3	62	29	M-1 / M-2	✓	✓	✓													
2705 Jefferson Davis Hwy - Austin Park Centre (28 acres)	Stafford County	2	3	29	29	B-2, Urban Commercial	✓	✓	✓									n/a				
N Situs - Celebrate Virginia	Stafford County	2	3	21	21	M2	✓	✓	✓													
Gloucester Business Park	Gloucester County	2	3	70	17	I-1	✓	✓	✓			✓	✓				✓	n/a	n/a	✓		
9040 Jefferson Davis Hwy	Spotsylvania County	2	3	16	16	C-3/ R-U	✓	✓														
10813 Rollingwood Drive	Spotsylvania County	2	3	33	15	R-1	✓	✓														

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Locust Hill Site	Middlesex County	2	3	9	9	Low-Density Rural	✓	✓				✓										
Bohannon Business Park	King and Queen County	2	3	8	8	GB	✓	✓	✓									n/a				
Old Page Middle School	Gloucester County	1	4	15	15	SC-1	✓															
Thornburg Miller Tract	Spotsylvania County	1	3	32	25	I-1	✓	✓				✓		✓	✓	✓		n/a				
Potomac-Stafford/ Widewater	Stafford County	1	2	2200	2200	A-1	✓															
Orrock-Simms Property	Caroline County	1	2	590	590	Rural Preservation	✓	✓														
Roseman Mega Site	Caroline County	1	2	550	500	RP, M1	✓	✓														
Ladysmith Mega Site	Caroline County	1	2	470	400	RP, M1	✓	✓														
Taylor Property	King George County	1	2	368	368	A-1	✓	?														
Simons Property	King William County	1	2	242	242	Residential	✓															

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498 Caisson Rd	Stafford County	1	2	241	241	A-1	✓															
Amireh Site	Caroline County	1	2	200	200	Rural Preservation	✓	✓														
South Garden/ Broaddus Farm	Spotsylvania County	1	2	180	180	A-2 & RP	✓															
Ronald Smith I-95 Site	Caroline County	1	2	147	147	Rural Preservation	✓	✓														
EDA Data Center Site	Caroline County	1	2	125	114	Rural Preservation	✓															
Virginia Bazaar Property	Caroline County	1	2	97	97	B-1	✓	✓	✓													
Hylton Shannon	Fredericksburg, City of	1	2	90	90	R-2	✓				✓	✓	✓									
6976 Courthouse Road	Spotsylvania County	1	2	69	69	A-3	✓															
Buckley Hall Road	Mathews County	1	2	69	69	Business-2 District Rual District	✓															
Hamlet - 65-100 Acres at Ladysmith Road & Green Road	Caroline County	1	2	100	65	RP	✓															

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Regional Site Prioritization
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TABLE 3
Acreage and Infrastructure

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Developable Acreage	Largest Contiguous	% Developable vs. Available	Current Zoning	Water Availability / Capacity	Water Availability / Capacity-SCORE	Wastewater Availability / Capacity	Wastewater Availability / Capacity - SCORE
Richmond County Commerce Center	Richmond County	4	5	101	30	30	30	100%	Industrial	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Thornburg Towne Center	Spotsylvania County	4	5	100	100	88	100	88%	C-3	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
VA Gateway	Stafford County	2	5	26	26	26	26	100%	M-1	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
Venture Business Park	Stafford County	2	5	33	33	24	33	72%	B-2	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Bon Secours Site	Middlesex County	2	4	6	2	2	2	100%	Village Community	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
West Point Industrial Park	King William County	2	4	66	66	62	66	94%	M-1/unzoned	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Red Hill Site	Middlesex County	2	4	5	5	4	5	80%	Village Community	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Gloucester Business Park	Gloucester County	2	3	70	17	17	7	100%	I-1	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Westgate Center	Stafford County	2	3	30	30	30	30	100%	B-2	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
N Situs - Celebrate Virginia	Stafford County	2	3	21	21	21	21	100%	M2	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Fontainebleu Industrial Park	King William County	2	3	260	260	260	200	100%	Industrial	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6

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10813 Rollingwood Drive	Spotsylvania County	2	3	33	15	15	33	100%	R-1	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Locust Hill Site	Middlesex County	2	3	9	9	9	9	100%	Low-Density Rural	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Bohannon Business Park	King and Queen County	2	3	8	8	8	8	100%	GB	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Hummel Airfield	Middlesex County	2	3	34	34	34	34	100%	Waterfront Commercial	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Ladysmith Industrial Park	Caroline County	2	3	87	87	83	40	95%	Industrial & Commercial	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
George Washington Village	Stafford County	2	3	1078	95	90	50	95%	M-1	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
Airlee Industrial and Data Center Site	Caroline County	2	3	184	184	172	184	93%	M-1	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Orrock Farm-Spotsylvania	Spotsylvania County	2	3	198	198	181	198	91%	A-2	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Thompson Industrial Parcels 82-17-A & 82-17-B	Caroline County	2	3	80	80	72	80	90%	PMUD	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101	90	101	89%	I-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Gilman Tract West	Spotsylvania County	2	3	322	322	283	221	88%	A-2	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
King George Industrial Park	King George County	2	3	148	88	77	148	88%	Industrial	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6

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Webster 140 Site	Spotsylvania County	2	3	139	139	121	57	87%	A-2	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
0 Hollywood Farm Road (6075)	Stafford County	2	3	83	83	71	72	86%	M-2	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337	286	286	85%	PMUD	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
West Point Airport Site	King and Queen County	2	3	276	276	234	276	85%	Industrial	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
King William Commerce Park	King William County	2	3	70	50	42	27	84%	Business (B-2)	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Newcomb Property	King William County	2	3	36	36	30	32	83%	Agricultural	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Canterbury Property	King and Queen County	2	3	50	50	41	50	81%	Agricultural	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Route 33 Site	King and Queen County	2	3	38	38	30	38	80%	General Business	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Gray Property	Caroline County	2	3	157	144	114	114	79%	M-1 & RP	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2
Carmel Church Station Super Site (east of RR and west of I-95)	Caroline County	2	3	522	522	412	522	79%	PMUD	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Renaissance Business Park (5971A)	Stafford County	2	3	162	162	127	162	78%	M-2	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
North View	Caroline County	2	3	40	40	31	40	78%	Business Commercial Light Industrial	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2

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Luck Stone Industrial Park	Caroline County	2	3	675	675	516	422	76%	RP	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Centreport Parkway Property	Stafford County	2	3	260	248	187	248	75%	M-1 Lt Industrial A-1	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Caroline Commerce Center	Caroline County	2	3	300	250	184	250	74%	M-1	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Marshall Property	Caroline County	2	3	38	38	27	38	70%	M-1	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Webster 200 Site	Spotsylvania County	2	3	200	200	139	200	70%	A-1	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Lagrange Industrial Park	Essex County	2	3	62	29	20	15	69%	M-1 / M-2	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2
The King Carter	Lancaster County	2	3	300	222	149	300	67%	R2	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
5008 Mudd Tavern Road	Spotsylvania County	2	3	32	32	21	32	66%	C-3	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Battlefield Industrial Park - Tyler St/Belman Rd	Fredericksburg, City of	2	3	62	62	41	33	66%	I2	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Back 40 Site	Spotsylvania County	2	3	51	51	31	51	62%	I-2	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
515 Lansdowne Road	Spotsylvania County	2	3	60	60	36	60	61%	I-1	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Shimco LLC Property (8 parcels)	Stafford County	2	3	35	35	21	11	60%	M-1, B-2	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6

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Jones Ladysmith Road Site	Caroline County	2	3	45	45	26	18	57%	M-1 & Commercial	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Farrish Property	Caroline County	2	3	45	45	25	45	57%	M-1	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
WHC Property	Caroline County	2	3	200	200	105	81	52%	M-1	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Gilman Tract East	Spotsylvania County	2	3	620	620	319	113	51%	A-2	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Gutierrez Site	Spotsylvania County	2	3	129	129	65	129	50%	A-2 (Agricultural)	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
7020 Harrison Road	Spotsylvania County	2	3	37	37	18	37	48%	O-1	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Cleydael	King George County	2	3	265	265	123	239	46%	C-2 Lt Industrial R-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Coleman Family Farm	Spotsylvania County	2	3	201	201	90	201	45%	I-2	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Groupe Site (38-14F)	Stafford County	2	3	61	61	27	23	44%	M-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
9040 Jefferson Davis Hwy	Spotsylvania County	2	3	16	16	7	16	42%	C-3/ R-U	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
5630 Morris Road	Spotsylvania County	2	3	95	95	35	95	37%	A-2	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8

Mary Ball Washington Region 6
Growth and Diversification Plan Update
Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 3
Acreage and Infrastructure

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Developable Acreage	Largest Contiguous	% Developable vs. Available	Current Zoning	Water Availability / Capacity	Water Availability / Capacity-SCORE	Wastewater Availability / Capacity	Wastewater Availability / Capacity - SCORE
Stafford East - Univ. of Mary Washington Foundation	Stafford County	2	3	227	227	77		34%	M-1, Light Industrial	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Stafford Airport Industrial Park (3813 - 3833)	Stafford County	2	3	64	64	16	12	24%	A-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
2705 Jefferson Davis Hwy - Austin Park Centre (28 acres)	Stafford County	2	3	29	29	7	7	24%	B-2, Urban Commercial	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Tappahannock-Essex County Airport Site	Essex County	2	3	477	293	69	233	24%	A-1	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
80-100 Sanford Dr at Riverside (39 acres)	Stafford County	2	3	39	39	7	7	17%	M-1, Light Industrial	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Riverside - Honey Farm Parcel	Stafford County	2	3	86	86	7	86	8%	Light Industrial	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
68 Oakenwold Ln (3780)	Stafford County	2	3	231	231	18	18	8%	A-1 R-2 B-2	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Old Page Middle School	Gloucester County	1	4	15	15	14	15	89%	SC-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2
Thornburg Miller Tract	Spotsylvania County	1	3	32	25	20	25	79%	I-1	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
South Garden/ Broadus Farm	Spotsylvania County	1	2	180	180	180	180	100%	A-2 & RP	On-Site / Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Buckley Hall Road	Mathews County	1	2	69	69	65	69	94%	Business-2 District Rural District	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Hylton Shannon	Fredericksburg, City of	1	2	90	90	75		83%	R-2		0		0
Virginia Bazaar Property	Caroline County	1	2	97	97	80	80	82%	B-1	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2

Mary Ball Washington Region 6
Growth and Diversification Plan Update
Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 3
Acreage and Infrastructure

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Developable Acreage	Largest Contiguous	% Developable vs. Available	Current Zoning	Water Availability / Capacity	Water Availability / Capacity-SCORE	Wastewater Availability / Capacity	Wastewater Availability / Capacity - SCORE
Orrock-Simms Property	Caroline County	1	2	590	590	474	590	80%	Rural Preservation	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
EDA Data Center Site	Caroline County	1	2	125	114	85	114	75%	Rural Preservation	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Taylor Property	King George County	1	2	368	368	266	300	72%	A-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Roseman Mega Site	Caroline County	1	2	550	500	350	320	70%	RP, M1	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Ronald Smith I-95 Site	Caroline County	1	2	147	147	100	100	68%	Rural Preservation	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Simons Property	King William County	1	2	242	242	162	169	67%	Residential	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Ladysmith Mega Site	Caroline County	1	2	470	400	260	400	65%	RP, M1	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Amireh Site	Caroline County	1	2	200	200	126	97	63%	Rural Preservation	On-Site / Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Hamlet - 65-100 Acres at Ladysmith Road & Green Road	Caroline County	1	2	100	65	32	65	49%	RP	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ No System Upgrades Anticipated	10
Potomac-Stafford/ Widewater	Stafford County	1	2	2200	2200	1000	2200	45%	A-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
6976 Courthouse Road	Spotsylvania County	1	2	69	69	31	69	44%	A-3	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
498 Caisson Rd	Stafford County	1	2	241	241	55	28	23%	A-1	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 4
Market Sector Suitability

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Mega Project	Super Project	Advanced Manufacturing (Large Scale)	Advanced Manufacturing (Small Scale)	Light Manufacturing (Large Scale)	Light Manufacturing (Small Scale)	Distribution & Logistics (Large Scale)	Distribution & Logistics (Small Scale)
Potomac-Stafford/ Widewater	Stafford County	1	2	2200	2200								
Luck Stone Industrial Park	Caroline County	2	3	675	675								
Gilman Tract East	Spotsylvania County	2	3	620	620								
Orrock-Simms Property	Caroline County	1	2	590	590								
Carmel Church Station Super Site (east of RR and west of I-95)	Caroline County	2	3	522	522								
Roseman Mega Site	Caroline County	1	2	550	500								
Ladysmith Mega Site	Caroline County	1	2	470	400								
Taylor Property	King George County	1	2	368	368								
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337								
Gilman Tract West	Spotsylvania County	2	3	322	322								
Tappahannock-Essex County Airport Site	Essex County	2	3	477	293								
West Point Airport Site	King and Queen County	2	3	276	276								
Cleydael	King George County	2	3	265	265			High, Low	High, Low	High, Low	High, Low		High, Low
Fontainebleu Industrial Park	King William County	2	3	260	260			High, Low	High, Low	High, Low	High, Low	Low, Low	High, Low
Caroline Commerce Center	Caroline County	2	3	300	250				Low, High			High, High	Low, High
Centreport Parkway Property	Stafford County	2	3	260	248								
Simons Property	King William County	1	2	242	242								
498 Caisson Rd	Stafford County	1	2	241	241								

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 4
Market Sector Suitability

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Mega Project	Super Project	Advanced Manufacturing (Large Scale)	Advanced Manufacturing (Small Scale)	Light Manufacturing (Large Scale)	Light Manufacturing (Small Scale)	Distribution & Logistics (Large Scale)	Distribution & Logistics (Small Scale)
68 Oakenwold Ln (3780)	Stafford County	2	3	231	231								
Stafford East - Univ. of Mary Washington Foundation	Stafford County	2	3	227	227								
The King Carter	Lancaster County	2	3	300	222								
Coleman Family Farm	Spotsylvania County	2	3	201	201			Low, High	Low, Low	Low, High	Low, Low		High, Low
WHC Property	Caroline County	2	3	200	200				Low, Low		Low, Low	High, Low	Low, Low
Webster 200 Site	Spotsylvania County	2	3	200	200								
Amireh Site	Caroline County	1	2	200	200								
Orrock Farm-Spotsylvania	Spotsylvania County	2	3	198	198								
Airlee Industrial and Data Center Site	Caroline County	2	3	184	184			Low, High	Low, High	Low, High	Low, High	Low, High	Low, High
South Garden/ Broaddus Farm	Spotsylvania County	1	2	180	180								
Renaissance Business Park (5971A)	Stafford County	2	3	162	162				High, High		High, High	Low, High	Low, High
Ronald Smith I-95 Site	Caroline County	1	2	147	147								
Gray Property	Caroline County	2	3	157	144				Low, Low		Low, Low	Low, Low	Low, Low
Webster 140 Site	Spotsylvania County	2	3	139	139								
Gutierrez Site	Spotsylvania County	2	3	129	129								
EDA Data Center Site	Caroline County	1	2	125	114								
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101				High, Low		High, Low		High, Low
Thornburg Towne Center	Spotsylvania County	4	5	100	100								

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 4
Market Sector Suitability

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Mega Project	Super Project	Advanced Manufacturing (Large Scale)	Advanced Manufacturing (Small Scale)	Light Manufacturing (Large Scale)	Light Manufacturing (Small Scale)	Distribution & Logistics (Large Scale)	Distribution & Logistics (Small Scale)
Virginia Bazaar Property	Caroline County	1	2	97	97								
George Washington Village	Stafford County	2	3	1078	95								
5630 Morris Road	Spotsylvania County	2	3	95	95								
Hylton Shannon	Fredericksburg, City of	1	2	90	90								
King George Industrial Park	King George County	2	3	148	88				High, High		High, High	High, High	High, High
Ladysmith Industrial Park	Caroline County	2	3	87	87				Low, High		Low, High		Low, High
Riverside - Honey Farm Parcel	Stafford County	2	3	86	86				High, Low		High, Low		High, Low
0 Hollywood Farm Road (6075)	Stafford County	2	3	83	83				Low, low		Low, Low	Low, Low	Low, Low
Thompson Industrial Parcels 82-17-A & 82-17-B	Caroline County	2	3	80	80								
6976 Courthouse Road	Spotsylvania County	1	2	69	69								
Buckley Hall Road	Mathews County	1	2	69	69								
West Point Industrial Park	King William County	2	4	66	66								
Hamlet - 65-100 Acres at Ladysmith Road & Green Road	Caroline County	1	2	100	65								
Stafford Airport Industrial Park (3813 - 3833)	Stafford County	2	3	64	64								
Battlefield Industrial Park - Tyler St/Belman Rd	Fredericksburg, City of	2	3	62	62								
Groupe Site (38-14F)	Stafford County	2	3	61	61				High, Low		High, Low		High, Low
515 Lansdowne Road	Spotsylvania County	2	3	60	60				Low, High		Low, High	Low, High	Low, High
Back 40 Site	Spotsylvania County	2	3	51	51				Low, High		Low, High	Low, High	Low, High

Mary Ball Washington Region 6
Growth and Diversification Plan Update – Regional Site Prioritization
Current VBRSP Characterized Sites

TABLE 4
Market Sector Suitability

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Mega Project	Super Project	Advanced Manufacturing (Large Scale)	Advanced Manufacturing (Small Scale)	Light Manufacturing (Large Scale)	Light Manufacturing (Small Scale)	Distribution & Logistics (Large Scale)	Distribution & Logistics (Small Scale)
Canterbury Property	King and Queen County	2	3	50	50								
King William Commerce Park	King William County	2	3	70	50								
Jones Ladysmith Road Site	Caroline County	2	3	45	45				Low, Low		Low, Low		Low, Low
Farrish Property	Caroline County	2	3	45	45				Low, High				Low, High
North View	Caroline County	2	3	40	40				Low, High		Low, High		Low, High
80-100 Sanford Dr at Riverside (39 acres)	Stafford County	2	3	39	39				High, Low		High, Low		High, Low
Marshall Property	Caroline County	2	3	38	38				Low, High		Low, High		Low, High
Route 33 Site	King and Queen County	2	3	38	38								
7020 Harrison Road	Spotsylvania County	2	3	37	37								
Newcomb Property	King William County	2	3	36	36								
Shimco LLC Property (8 parcels)	Stafford County	2	3	35	35				High, High		High, High		High, High
Hummel Airfield	Middlesex County	2	3	34	34								
Venture Business Park	Stafford County	2	5	33	33								
5008 Mudd Tavern Road	Spotsylvania County	2	3	32	32				Low, High		Low, High		Low, High
Westgate Center	Stafford County	2	3	30	30								
Richmond County Commerce Center	Richmond County	4	5	101	30				High, High		High, High		High, High
Lagrange Industrial Park	Essex County	2	3	62	29								
2705 Jefferson Davis Hwy - Austin Park Centre (28 acres)	Stafford County	2	3	29	29								

TABLE 4
Market Sector Suitability

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Mega Project	Super Project	Advanced Manufacturing (Large Scale)	Advanced Manufacturing (Small Scale)	Light Manufacturing (Large Scale)	Light Manufacturing (Small Scale)	Distribution & Logistics (Large Scale)	Distribution & Logistics (Small Scale)
VA Gateway	Stafford County	2	5	26	26				High, High				High, High
Thornburg Miller Tract	Spotsylvania County	1	3	32	25								

TABLE 5
Recommended Sites

									Virginia Business Ready Sites Program Tier Level Criteria																	
									1	2	3										Recommended Yet Not Req'd for Tier 3		4		5	
											Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report		Infrastructure in-place or available w/in 12 months	Pad Ready
Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Developable Acreage	% Developable vs. Available	Current Zoning																	Total Order of Magnitude Estimates of Probable Costs	
VA Gateway	Stafford County	2	5	26	26	26	100%	M-1	✓	✓	✓	\$9,800	\$10,000	\$6,500	\$7,500	\$3,500	\$3,500	\$5,000	✓	n/a	n/a	✓	✓	✓	\$45,800	
West Point Industrial Park	King William County	2	4	66	66	62	94%	M-1/unzoned	✓	✓	✓	\$11,000	\$10,000	\$13,000	\$8,000	\$4,000	\$4,000	\$6,000	✓	n/a	TBD	✓	✓		\$56,000	
Airlee Industrial and Data Center Site	Caroline County	2	3	184	184	172	93%	M-1	✓	✓	✓	✓	\$15,000	\$54,000	\$22,000	✓	✓	✓	✓	TBD	TBD				\$91,000	
Renaissance Business Park (5971A)	Stafford County	2	3	162	162	127	78%	M-2	✓	✓	✓	\$15,000	\$15,000	\$48,000	\$20,000	\$4,500	\$4,200	\$7,500	\$20,000	TBD	TBD				\$134,200	
Ladysmith Industrial Park	Caroline County	2	3	87	87	83	95%	Industrial & Commercial	✓	✓	✓	\$12,000	\$10,000	\$32,000	\$16,000	\$4,000	\$4,000	\$6,500	\$15,000	TBD	TBD				\$99,500	
Caroline Commerce Center	Caroline County	2	3	300	250	184	74%	M-1	✓	✓	✓	? - No PJD	✓	\$38,000	\$20,000	\$5,000	\$5,000	✓	✓	TBD	TBD				\$68,000	
Battlefield Industrial Park - Tyler St/Belman Rd	Fredericksburg	2	3	62	62	41	66%	I2	✓	✓	✓	✓	\$10,000	\$14,000	\$9,000	✓	\$4,000	✓	\$13,500	TBD	TBD				\$50,500	
Back 40 Site	Spotsylvania County	2	3	51	51	31	62%	I-2	✓	✓	✓	✓	✓	✓	✓	\$3,800	\$3,800	✓	✓	TBD	✓				\$7,600	
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337	286	85%	PMUD	✓	✓	✓	\$19,000	✓	\$250,000	\$85,000	\$5,000	\$5,000	\$9,500	\$75,000	TBD	TBD				\$448,500	
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101	90	89%	I-1	✓	✓	✓	\$13,000	\$20,000	\$33,000	\$12,000	\$4,000	\$4,000	\$6,500	\$17,000	TBD	TBD				\$109,500	
King George Industrial Park	King George County	2	3	148	88	77	88%	Industrial	✓	✓	✓	\$12,500	✓	✓	\$3,800	\$4,000	\$4,000	✓	\$15,000	TBD	TBD				\$39,300	

Virginia Growth and Opportunity Fund (GO Virginia) Regional Site Development Project Guidance

Section I: GO Virginia Program Intent and Regional Site Development

GO Virginia's goal is to facilitate regional collaboration to grow and diversify the economy through supporting projects leading to the creation of more, higher paying jobs through revenue derived from out-of-state sources. Programs and projects recommended by the Regional Councils and approved by the GO Virginia state board shall be consistent with the strategies and targeted industry clusters outlined in the regional growth and diversification plans.

In May 2019, the GO Virginia State Board directed the Department of Housing and Community Development (DHCD) to work with the Virginia Economic Development Partnership (VEDP) to identify strategies for aligning investments through collaboration between GO Virginia and VEDP's Virginia Business Ready Sites Program (VBRSP). Since both entities share the goal of increasing the number of business-ready sites both regionally and statewide, additional site development activities will enhance the Commonwealth's competitive position, and ultimately expand the number of economic development prospects (new and expanding businesses) that choose Virginia.

In 2019, VEDP used VBRSP funds to analyze and characterize 466 sites across the State to augment the Commonwealth's sites inventory, and to determine the types and amount of investment required to make these sites shovel-ready. The VEDP Site Characterization process evaluated each property using a 5-level tiered system to show the degree of readiness for economic development. The sites readiness scoring system, along with a prioritization process guided by VEDP and aligned with each region's Growth and Diversification Plan, should serve as a guide to site investments by GO Virginia. Likewise, GO Virginia site development projects should be aligned with the Virginia Collaborative Economic Development Act, wherever possible.

The GO Virginia State Board approved [Board Policy #9 - Use of GO Virginia Funds for Site Development Investments](#) on December 9, 2019, stating that funds may be used for regional site **planning** efforts, as well as regional site development **implementation** activities. Specifically, GO Virginia funding of regional site **planning** projects should be used to initiate due diligence activities or advance a site through the lower level tiers of the VBRSP scoring system (e.g. 1-3). For site development **implementation** projects, investments should advance properties towards achieving Tier 4 or 5 status under the Virginia Business Ready Sites Program criteria. Sites that have been previously certified as Tier 4 or 5 may be considered for funding if the applicant can demonstrate that the investment will significantly increase the marketability of the site, as well as position the property for capital investment and job creation activities.

Board Policy #9 was amended on December 7, 2020, providing for state-funded investments in sites of no less than 25 contiguous acres and, further, allowing privately-owned sites to be

considered for GO Virginia investments if they meet the program requirements. The policy amendment also allows applicants to request a waiver of the 25-acre minimum if they can demonstrate a given, individual site is of regional significance or when development of a given site will precipitate extraordinary regional opportunities. Properties smaller than 25 acres and within the boundaries of an existing regionally significant business park or industrial/commercial corridor aligned with a regional Growth & Development Plan may also be deemed as such and, therefore, considered for the waiver when the majority of park properties have already been developed. Please refer to the definition of Regionally Significant Sites outlined in Section II for additional information.

The purpose of this administrative guidance is to ensure that the board policy is implemented in a way that is equitable and fair, supportive of rural/urban development strategies, provides clarity, and allows for autonomous decision-making by Regional Councils within the framework provided by this guidance.

Further, the guidance has been developed to ensure that investment decisions are data-driven, transparent, and result in public investment that encourages alignment of both statewide and regional economic development goals, in order to maximize economic impact within regions and across the Commonwealth while protecting state and local interests.

Section II: Definitions

The following definitions are intended to provide clarity and consistency in review and implementation of Board Policy #9.

Due Diligence (Soft Costs): Due diligence is the process of investigating a parcel (s) of land for its viability and suitability for a particular project. Due diligence includes engineering, architectural or other professional services that assess the risk of undertaking development activities on a given site. Examples of typical due diligence efforts are topographical surveys, environmental site assessments (e.g. Phase 1/Phase 2 ESA), wetlands delineations, structural surveys (existing buildings), cultural and historic resources evaluations, existing infrastructure assessments, and development of preliminary conceptual plans.

Infrastructure Enhancements (Hard Costs): Infrastructure enhancement activities are those directly related to the development or strengthening of “systems” required to support public facilities essential to community and business operations. Examples of infrastructure systems include utility services such as water, wastewater, electricity, natural gas, telecommunications, storm water management facilities, and transportation networks. While buildings from which public services are delivered – such as fire stations, schools, and libraries – are often considered infrastructure, GO Virginia does not fund these types of projects. Similarly, GO Virginia funding of road construction/improvements will generally be limited to internal road systems, such as those typically found in industrial or corporate office parks, since other State programs are available to provide direct access to a given site (e.g. VDOT’s Economic Development Access Program).

Previous Site Investments: Site investment and advancement activities recognized by GO Virginia include hard or soft costs expended within the last 24 months by a private land owner, developer, college or university foundation, locality, regional group, planning district commission, or other political subdivision. These investments may be used as matching funds for site development planning or implementation grants requested from GO Virginia, as long as the costs previously incurred are directly related to the site(s) proposed for advancement in the grant application. Additionally, while not necessarily expended on an annual basis, site advancement investments consistently occurring over a five-year period prior to application will also be considered as matching funds. For redevelopment sites, funds spent on the demolition of deteriorated buildings by public or private owners can be used as matching funds, provided the activity has occurred within the last 24 months.

Public/Private Partnerships: Public/private partnerships (P3) are those that use public funds to leverage private sector investment and job creation in facilities which have regional economic benefit. While a formal P3 arrangement is not required (i.e. as outlined in the Code of Virginia for the Public-Private Transportation Act and Public-Private Education Facilities and Infrastructure Act), a defined contractual agreement between the parties must exist with the local applicant contributing public funds to this partnership. GO Virginia encourages public/private partnerships in sites applications.

Redevelopment Sites: Redevelopment sites are vacant and deteriorated properties within city or county boundaries whose poor condition creates physical and economic blight to the surrounding area in which the structure(s) is located. These structures are no longer suited for their former purpose and, in their current deteriorated condition, represent a substantial deterrent for future economic opportunity in the surrounding area and region. Sites redeveloped using GO Virginia funds must result in a net gain in the region's employment and average wage levels, not merely a shifting in these metrics from one locality to another. To be eligible for funding, redevelopment sites must also meet the criteria of being regionally significant.

Regionally Significant Sites: Any property designated as "regionally significant" should possess the following characteristics:

- 1) Development of the site(s) will facilitate or leverage private sector economic activity (i.e. job creation and capital investment) that is aligned with the Regions' Growth and Diversification Plan (targeted industry sectors), and the creation of jobs that pay higher than the regional average wage.
- 2) Properties deemed viable and developable based on the site characterization initiative conducted by VEDP in 2019, post-2019 site evaluations completed by VEDP, or another recent, comparable independent characterization study done by a qualified firm using the VBRSP criteria. A region may use GO Virginia funds to conduct a site characterization study (Sites Planning Grant) prior to an implementation grant request.
- 3) Development activities on the site(s) represent meaningful, ongoing collaboration of two or more localities. That collaboration may include activities such as:

- Creation of a Regional Industrial Facility Authority, or other similar legal structure, that allows for defined cost/revenue sharing in the development of the property;
 - Demonstration of a collective marketing effort for the site by two or more local economic development organizations and/or a regional economic development entity representing the partnering localities;
 - Joint financial contributions in initiatives that would further increase the marketability of the site or the region, such as new workforce development efforts designed to support the industries being targeted in business attraction efforts.
- 4) Development of the site(s) will support a level of economic activity that will provide regional impact, specifically net gains in targeted sector employment, average wage levels, and revenues coming into the Commonwealth.

Site Characterization: A tool used by the Virginia Business Ready Sites Program (VBRSP) to assess and designate a site's current level of readiness for economic development activity. A site development professional (e.g. civil engineer, architect, site location or land development consultant experienced with sector-based requirements) evaluates the property to classify the current level of preparedness and existing infrastructure, as well as outlines the additional steps (and estimated costs) required to bring the site to the next level of readiness – i.e. Site Characterization Tier Levels. For more information about Site Characterization, click [here](#).

Site Prioritization: A data-driven decision-making process undertaken by the Regional Council to rank properties to be targeted for development across the region. Whether formal or informal, prioritization of sites should focus on those offering good market position, elevated tier levels (see Site Tier Levels), and the most cost-effective development strategies relative to impact. Data used to inform the prioritization process may include Site Characterization reports provided by VEDP (or similar studies), economic impact models, demonstrated and substantial prospect activity (interest) in a given site, as well as prior efforts jointly undertaken by two or more localities to prepare a site(s) for business uses.

Site Tier Levels: A part of the Virginia Business Ready Sites Program (VBRSP) that describes the level of existing development of a potential site. The tiers range from Tier 1 (i.e. little to no prior planning, site assessment or development activity) to Tier 5 (i.e. site is ready for development). For more information on Site Tier Levels, click [here](#).

Virginia Business Ready Sites Program (VBRSP): A discretionary program administered by the Virginia Economic Development Partnership (VEDP) to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote Virginia's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites, using a pre-determined scoring matrix (e.g. Tiers 1-5) around the viability and development opportunities for a given property. For more information on this program, click [here](#).

Section III: Project Budget, Matching Funds and Allowable Activities

Project Budget and Matching Funds:

As with any GO Virginia grant request, site development applications (planning or implementation projects) must include a budget outlining the sources and uses of funds being directed to the project. The budget must define the investments and specific activities that will be undertaken on each site to enhance its marketability and/or development potential by targeted users.

In keeping with GO Virginia policies and goals for collaboration, site(s) development projects (planning or implementation) require participation by at least two localities in the region. Match must be provided relative to guidelines in place (Per Capita, Statewide) at the time of application and may be cash or in kind. Match contributions must be agreed to by all participating localities in the region, with partnering entities providing a match that is in proportion to the anticipated benefit they expect to receive from the project, whenever possible. Alternatively, project partners can propose a match-sharing formula noting their concurrence, as long as the match provided is directly related to the site(s) proposed for advancement in the grant application, and the match share is not being provided disproportionately by any one locality.

As noted in Section II, previous investments in a given site(s), whether public or private, may be considered match provided they were made within the last 24 months, or up to five years if regularly occurring investments can be documented. In addition, expenditures for site acquisition (including right-of-ways and easements), due diligence, environmental assessments and other “soft costs,” as well as master planning, infrastructure design and construction, offsite improvements, or similar “hard costs,” may be included as match. Other site preparation activities (e.g. clearing and grading, demolition of old structures) may also be considered as matching funds. Likewise, additional previous investments may be considered on a case-by-case basis. Further match guidance is provided in the GO Virginia Match Policy document found [here](#).

Allowable Activities:

Regional Site Development Planning

Pursuant to GO Virginia Board Policy #9, funds may be used to support regional site development planning activities. Site planning activities include characterization of properties not fully characterized previously by the Virginia Economic Development Partnership (or similar assessment process), as well as objective, data-driven site prioritization efforts within a region (e.g. feasibility studies, sector suitability analysis). In addition, planning funds may be used to develop collaborative cost/revenue sharing agreements, define and develop multi-jurisdictional organizational structures (e.g. RIFA), or establish contractual or option agreements with landowners. For site characterization projects, applicants should use the criteria and



methodology established by VEDP's Business Ready Sites Program to allow for objective, data-driven evaluation of priority sites within a region.

Applicants must demonstrate meaningful outreach and commitment to a planning process that engages a variety of stakeholders, including public and private utility companies, utility cooperatives, local governments, regional planning organizations, and local and regional economic development organizations. The result of this outreach and planning process should enable the Regional Council to make informed decisions in prioritizing sites across the region. In addition to stakeholder outreach and engagement, the planning process should include an inventory of assets, current ownership of the site(s), engineering designs, and cost estimates.

Regional Site Development Implementation

Pursuant to GO Virginia Board Policy #9, regional site development implementation activities include necessary due diligence (soft costs) and infrastructure enhancements (hard costs) that advance a site's readiness for development. Likewise, consideration will be given on a case-by-case basis to public-private partnership activities providing extraordinary regional opportunities, such as those supporting a critical unmet need of the region's targeted industry sectors. Funds awarded for implementation grants may NOT be used for property acquisition, unrelated offsite improvements, construction of speculative buildings, or demolition of existing buildings.

GO Virginia contracts for regional site development implementation projects will require that the sites improved will be marketed and/or developed for the use indicated in the application. Additionally, a repayment provision will be outlined in the contract and triggered if the site(s) is not marketed and developed to achieve the regional GO Virginia program goals.

The source of repayment of GO Virginia funds can be either public and private, including shared repayment by participating localities, their EDA/IDA, private land owner or developer, or a combination thereof as agreed to and specified in the contractual agreement. GO Virginia investments in site development implementation projects should begin to demonstrate favorable outcomes within 7-10 years of project close-out, depending on the scale of the project, as well as the projected outcomes of the project defined in the contract documents with DHCD.

Section IV: Site Development Application Process

All applications must describe activities that lead to the development of regionally significant sites - those identified by Regional Councils as priority and aligned to support industry sectors in their Growth and Diversification Plans. All projects must include collaboration of at least two localities with efforts to jointly contribute to the project through cost/revenue sharing, collaborative marketing efforts, joint workforce development activities and/or other partnerships or agreements, such as Regional Industrial Facility Authorities (RIFAs).

Recognizing the importance of partnerships in economic development activities, the GO Virginia Board will consider investments in publicly or privately-owned properties for both greenfield and redevelopment activities being led by the Regional Council when the following are met:

- 1) Sites have been reviewed and prioritized relative to the region's total portfolio of available sites using an objective, data-driven process that assesses each site's location competitiveness and developability, such as that which was used in the statewide site characterization initiative conducted by VEDP in 2019. If requesting funding for a site that was NOT included in the characterization initiative or has not been independently reviewed using a similar methodology, an applicant may request funds to support the strategic sites prioritization (i.e. Sites Planning Grant). Likewise, the applicant may apply to VEDP for assistance with characterization of other sites not previously studied; however, consultation with VEDP regarding site characterization and/or viability does not constitute an endorsement nor guarantee approval of the site development grant request;
- 2) Partnering localities must demonstrate a commitment to further advance and market the property(ies). For large-scale, multi-year site development projects, a conceptual plan or publicly-approved Capital Improvements Program (CIP) plan should be provided to demonstrate both prior and future year investments being directed to the site(s);
- 3) Site development projects on privately owned properties require a contractual agreement between the local governing body, economic development authority (EDA or IDA), or RIFA and the owner of record of the land. The agreement should be more than a memorandum of understanding, clearly outlining the commitments of all parties in marketing and developing the site(s). Specifically, the agreement should: grant access to the property for evaluation/study purposes, state the intended commercial or industrial use, and define the maximum per acre price the landowner will charge an interested buyer. Where possible, the agreement should also stipulate any necessary, future restrictions that may be placed on the sites to ensure appropriate land use and zoning remain in place, allowing for the commercial and industrial uses specified in the Region's Growth & Diversification Plan. These agreements must be in place prior to execution of a GO Virginia contract;
- 4) For site development projects leading to Tier 4 or 5 characterization, a return on investment (ROI) analysis, such as the existing model used by GO Virginia, should accompany the application. The analysis should estimate the projected employment levels, wages, and State tax revenues expected to be generated from the site(s) when fully developed. Additionally, a timeline of efforts that will be undertaken to secure a targeted sector user within five years or enhance attractiveness of the site(s) to the desired end users should be provided. This may include local government actions needed to modify tax structures, development of new incentive programs, public-private partnerships, or focused marketing campaigns;
- 5) For site development projects leading to Tier 1-3 characterizations, a formal ROI analysis is not required. However, supporting documentation outlining the following must be provided: 1) additional, usable acreage that will be made available for business uses, 2) industry sectors being targeted for these sites, 3) activities that will be jointly undertaken by participating localities and/or the regional EDO to market or support the advancement



of the site(s) and the timeframe for doing so (not to exceed 36 months), 4) a plan outlining future activities/costs to advance the site to Tier 4 or 5 status.

Regional Site Development Planning

Applicants requesting funds for regional site development planning activities must complete the Regional Site Development Planning Grant Application, included in this guidance as Attachment A.

Regional Site Development Implementation

Applicants requesting funds for regional site development implementation activities must complete the Regional Site Development Implementation Grant Application, included in this guidance as Attachment B.

DATE ISSUED: April 13, 2021

* Please note that this is a working document and may be updated periodically.

Section V: ATTACHMENTS - Applications and Site Checklists

Attachment A

Application for Regional Site Development Planning Grants & Checklist (For Administrative Approval)

1. Please list the participating localities (a minimum of two is required).
2. Provide a brief summary of the proposed project and how it relates to the Region's Economic Growth & Diversification Plan and priorities. Include the industry sectors targeted for the property(ies) being advanced.
3. Describe all partner organizations involved with the project (public or private), including the entity's role, financial or in-kind commitment, and capacity to successfully execute their duties as they relate to the project. These may include, but are not limited to, economic development entities, local governments, regional organizations, planning district commissions, land owners, or real estate development groups.
4. List any prior site advancement activities on the property(ies) in which public or private investment has occurred over the past five years, including dollars spent.
5. Has a site characterization report (or similar evaluation) previously been completed for the property(ies)? If yes, please list the methodology or group completing the evaluation and year completed.
6. Has the applicant or locality(ies) in which the site advancement activities will be undertaken consulted with VEDP about the project? If so, please note the VEDP staff member(s) with whom the discussion occurred.
7. Discuss how this site(s) was prioritized for funding by the Regional Council over other sites in the region.
8. For privately-owned sites, discuss any current contractual agreements between the locality (or their EDA/IDA) and the land owner that are in place to allow for advancement of the site(s).
9. Explain how this planning effort may lead to or contribute to the success of related future grant requests.
10. Outline the total project budget and the sources and uses for matching funds and leverage.
 - a. Does the project have the required match? If so, what are the sources/uses for these funds?



- b. Are any additional funds (public or private) or in-kind contributions serving as leverage for the project? If so, what are the sources/uses for these funds?

APPLICATION CHECKLIST

- ☐ Project Application to Regional Council
- ☐ Letter from Regional Council Chair stating support of the request
- ☐ Budget Overview: Sources & Uses Template
- ☐ Engineer's Estimate of Costs for site development activities (as applicable)
- ☐ Financial Commitment Letters and In-Kind Contribution Forms
- ☐ Property Information Form (Attachment C)
- ☐ Maps of Site to include property boundaries, transportation assets
- ☐ Draft of agreements with private property owners (if applicable)

Attachment B

Application for Regional Site Development Implementation Grants & Checklist (Application to be submitted in CAMS)

ECONOMIC IMPACT

1. Provide an Executive Summary that outlines the proposed project and associated activities included in the project budget. Identify the project goals and outcomes, and how the project relates to the region's Economic Growth and Diversification Plan and the goals of GO Virginia. *ATTACHMENTS: A 1-2-page Executive Summary should be uploaded with the application.*
2. Describe the project timeline and the specific project milestones that will be utilized to track project progress and fund disbursement. *ATTACHMENTS: Project Milestones including a proposed Drawdown Schedule should be uploaded with the application.*
3. Provide a detailed description of the metrics that will be used to measure success, both quantitative and qualitative, and how the metrics were developed. Also include a timeline of efforts/actions that will be undertaken over the next 36 months to secure a targeted sector user(s) or to enhance the marketability of the sites(s) to the desired businesses.
4. For implementation projects or site advancement efforts leading to Tier 4 or 5 characterization, include a Return on Investment (ROI) analysis outlining the projected employment levels, wages, and State tax revenues expected to be generated from the site(s) when fully developed. Discuss the methodology and calculated ROI, as well as the timeline for achieving the expected ROI. Please include the source of any data used as the basis for ROI and outcome projections. *ATTACHMENTS: Performance Measures and ROI Calculations should be uploaded with the application.*

REGIONAL COLLABORATION

5. Identify all localities or government member organizations participating on behalf of their members in the project (financially or administratively), and describe how the localities will be meaningfully engaged in the project. *ATTACHMENTS: Relevant letters of financial commitment (including in-kind contribution forms) or support from localities or local government entities should be uploaded with the application.*
6. Describe how the site(s) was prioritized for funding by the Regional Council over other sites in the region.
7. Describe how the Regional Council and project developers have consulted with local government entities regarding the strategy and implementation of the project.
8. Are there localities or other GO Virginia regions (including interstate collaborations) outside of the applying region that are participating in the project? If so, describe the nature of the collaboration and the anticipated impact.

9. Describe any private-sector or non-government partners (e.g. developers, land trusts, university foundations) participating in the project, including their role/contribution.
10. Identify cost efficiencies, repurposing of existing funds, leveraging of existing assets, or other evidence of collaboration that can be demonstrated as a result of the project.
11. Describe how the project will address regional site inventory gaps and support the growth of the region's targeted industry sectors.

PROJECT READINESS

12. Describe the applicant's capacity to successfully execute their duties as they relate to the project. These may include, but are not limited to, economic development entities, local governments, regional organizations, or planning district commissions.
13. Discuss any major barriers to successful implementation and other associated risks, along with a plan to overcome them. How will the project administrator address these barriers?
14. Describe how the Regional Council and project developers have consulted with VEDP and subject matter experts regarding the marketability and developability of the site development implementation proposal, including an overview of the feedback from the subject matter experts.
15. For privately-owned sites, outline any current contractual agreements between the locality (or their EDA/IDA) and the land owner that are in place to allow for advancement of the site(s). *ATTACHMENT: Draft of agreement with private property owners.*
16. For publicly-owned sites, a letter from City/County leadership (e.g. County Administrator) or chief elected official (e.g. Mayor, Board Chair) should be provided noting both the current and intended land use for the property (i.e. as outlined in the current Comprehensive Plan) and the locality's interest in conducting a planning activity on the property.
17. Identify the total project budget and the sources and uses for matching funds and leverage. *ATTACHMENTS: Financial commitment letters, contractual agreements, and In-Kind Contribution forms should be uploaded with the application.*
 - a. Does the project have the required match? If so, what are the sources/uses for these funds?
 - b. Does the project have the required local match? If so, what are the sources/uses for these funds?
 - c. Are any additional funds (public or private) or in-kind contributions serving as leverage for the project? If so, what are the sources/uses for these funds?

PHYSICAL PROPERTY ATTRIBUTES

Please complete a Property Information Form (Attachment C) for each site included in this application. *ATTACHMENT C: Property Information Form*

APPLICATION CHECKLIST

- ☐ Application completed in CAMS
- ☐ ATTACHMENT: 1-2 Page Executive Summary
- ☐ ATTACHMENT: Project Milestones with Drawdown Schedule
- ☐ ATTACHMENT: Engineer's estimate of costs for site development activities
- ☐ ATTACHMENT: Financial Commitment Letters and In-Kind Contribution Forms
- ☐ ATTACHMENT: Property Information Form
- ☐ ATTACHMENT: Maps of Site to include property boundaries, transportation assets
- ☐ ATTACHMENT: Draft of agreements with private property owners (if applicable)



Attachment C

Property Information Form		
Address:		
Size:	Total Acreage:	Estimated Developable Acres:
Current Zoning:		Locality Description of Current Zoning:
Original/Most Recent Use:		
Current Owner:		
Current Tier:		
Tier After Project Complete:		
Targeted Industry Sector(s):		
Was the Site Included in the VEDP Site Characterization Initiative? Yes <input type="checkbox"/> No <input type="checkbox"/>		
If yes, please answer questions below OR provide a copy of the characterization report. If No, please describe the methodology used to evaluate the developability and marketability of the site.		
Does Site Score Above the Median Developability Score for Sites in the Region? Yes <input type="checkbox"/> No <input type="checkbox"/>	Does the Site Score Above the Median Marketability Score for Sites in the Region? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If you answered no to either of the above questions, please provide a statement on why this site was selected and how this or other investments will improve the developability and marketability of the site?		



VIRGINIA INITIATIVE FOR
**GROWTH &
OPPORTUNITY**
IN EACH REGION

Identify any planned future investments by the locality that will support the GO Virginia grant project – e.g. Capital Improvements Project.

Master Plan developed for site? If yes, date and who completed:

Additional Information:



Board Policy #9

TITLE: Use of GO Virginia Funds for Site Development Investments

EFFECTIVE DATE: 12/10/2019, amended 12/7/2020

AUTHORITY: § 2.2-2486 - §2.2-2489 of the Code of Virginia

POLICY STATEMENT: It is the policy of the Virginia Growth and Opportunity Board that per capita and statewide competitive funds may be used for site development activities that increase the number of business ready sites available to accommodate the expansion or attraction of businesses in the regions' targeted industry sectors.

Activities must advance sites towards becoming a Tier 4 site using the Virginia Business Ready Sites Program tier descriptions for site readiness for sites of at least 25 contiguous acres. Applicants may request a waiver of the 25-acre minimum if they can demonstrate the site is of significant regional importance. GO Virginia investments will support regions in advancing priority sites in Tiers 1-3. Sites that have been certified as a Tier 4 or 5 may be considered for funding if the applicant can demonstrate that the investment will significantly increase the marketability of the site. The Virginia Economic Development Partnership staff will be consulted in the review of all site-related applications.

Applications must describe activities that lead to the development of regionally significant sites - those identified by regional councils as priority and aligned to support industry sectors in their Growth and Diversification Plans. All projects must include collaboration of at least two localities with efforts to jointly contribute to the project through cost/revenue sharing, joint workforce development efforts and/or other partnerships or agreements, such as Regional Industrial Facility Authorities (RIFAs).

Applicants are encouraged to consider how the Virginia Collaborative Economic Development Act could be leveraged to advance the development of the site(s) in the future.

Funds may not be used for property acquisition, construction of speculative buildings, or any site developments that benefit only a single, known end user. Funds may be used for activities such as site characterization and prioritization, site due diligence, infrastructure enhancements, and the development of cost/revenue sharing agreements, such as a RIFA.

Per Capita Funds

Regional Councils must demonstrate that they have considered VEDP site characterization and prioritization analysis and are focused on funding a limited number of sites within their region with the most potential to advance their Growth and Diversification plan, that enhance regional collaboration, and are most likely to be attract private sector investment. Regions are encouraged to consider sites' developability, location competitiveness, as well as sector suitability for their

targeted sectors. Project activities should advance site readiness for future economic development opportunities. Applicants must describe their strategy to market and promote the site to targeted end users.

Project applications that include both planning and implementation activities will be considered and reviewed on a case-by-case basis.

Planning Activities - Examples of fundable activities include site characterization and prioritization (for sites not previously fully characterized by the Virginia Economic Development Partnership) and activities to develop collaborative cost/revenue sharing agreements. Planning projects should be designed to include recommendations for future investments that would advance a site's business-readiness.

For site related funding requests for planning of less than \$100,000, the application may be submitted as an Enhanced Capacity Building (ECB) grant request.

The Board will require a 1:1 match with no local match requirement and funds awarded will count towards a region's \$250,000 annual limit for Enhanced Capacity Building activities.

Implementation – Examples of fundable activities include necessary due diligence (soft costs) and infrastructure enhancements (hard costs) that advance a site's readiness for development.

For site implementation projects that exceed \$100,000 and are using regular per capita funds, the Board will require a 1:1 match with a local match requirement of 20% or \$50,000 of the project cost, whichever is greater.

Statewide Competitive Funds

Competitive funds may be used to advance regionally-significant sites of 25 acres or more that will help grow the regions' targeted industry sectors as described in their Growth and Diversification plan while supporting the state's economic development objectives. The results of VEDP's site characterization and prioritization process will play a key role in awarding competitive funds for site development but additional elements such as regional impact will be considered.

Competitive funds will be considered for projects that have a significant regional and statewide impact. Applicants must incorporate collaborative cost/revenue sharing agreements, such as Regional Industrial Facility Authorities (RIFAs), or demonstrate joint funding commitments in workforce development, transportation, or other collaborative partnerships that demonstrates significant involvement of two or more localities.

Sites with high location competitiveness for target industries and high developability will be prioritized; however, sites not meeting these criteria will be considered but will require significant justification. Applicants must describe their strategy to market and promote the site to targeted end users.

Fundable activities include those that have the participation of two or more localities would advance the site towards a Tier 4 status and/or improve its marketability and investment potential.

For site implementation projects using competitive funds, the Board will require a 1:1 match with a local match requirement of 20% or \$50,000 of the project cost, whichever is greater.

Privately Owned Sites

GO Virginia funds may be used to provide public infrastructure investments in privately owned sites under guidelines developed by DHCD. The guidance shall establish eligibility requirements, relevant agreements with subgrantee/locality, and a grant repayment mechanism should the site cease to be used for an eligible GO Virginia use.

APPROVAL AND REVIEW: This Board policy was approved on 12/9/2019, and amended on 12/7/2020.

SUPERSESION: N/A

DHCD DIRECTOR: Erik Johnston

GO Virginia Region 6 Recap and Observations Stakeholder Work Sessions on Site Development

Summary of Session 1 – June 17, 2021

Session 1 had limited participation and only a few of the Region's local economic developers were in attendance. Many of the attendees represented private companies, although some Region 6 Council members did join the meeting.

The meeting started with the Program Coordinator outlining the purpose and goals of the Stakeholder Work sessions. It was followed by a presentation from Draper Aden including the site characterization criteria and a high-level summary of the tier levels of the sites reviewed to-date. In addition, details of GO Virginia's Site Development policy, the associated guidance, and relevant definitions pertaining to the policy provisions were explained. Questions/comments from the presentation included:

- 1) How do you avoid a conflict of interest with a public-private partnership?
- 2) Can locality investments (membership contributions) in the regional EDO (REDO) be considered as match for GO Virginia projects?
- 3) What is a reasonable number of sites to include in a due diligence grant application?
- 4) RIFA's are the only real collaborative model for GO Virginia projects.
- 5) When Region 3 looked at a sites portfolio, it went to the REDOs to get sites prioritized. Council then developed a screening matrix for applications. Regional significance was determined by "sub" regions, rather than the entire region. Should the very different sub-regions in Region 6 be considered due to their vast differences?
- 6) Redevelopment opportunities for towns in rural sub-regions should be considered.

Since the Region 6 Program Coordinator had requested that a portion of the meeting focus on regional collaboration, an input session was then initiated around this "prompt": *How can we collaborate regionally to increase the inventory of shovel ready sites in the Region 6 footprint to attract prospects?*

The guided discussion and group input (summarized below) were intended to define the basic framework of a SWOT exercise by way of these questions:

- 1) *What attributes does the region offer to businesses?*
- 2) *Is there an opportunity to create a "mega site" or regional business park (one or more)?*
- 3) *Are there impediments and challenges that keep Region 6 from achieving collaborative site development goals?*

Participant Responses and Comments on Regional Collaboration

1) Attributes of the Region:

- Interstate access
- Access to labor
- Educated workforce and 68% workforce participation rate
- Educational attainment levels are high

- Community colleges & university nearby
- Proximity to the nation's capital
- Natural beauty attracts tourists and residents
- Bridge improvements (to Northern Neck) will improve access and transportation network
- Fredericksburg's charm; quaint communities
- Remote work opportunities in rural areas, but security access limits this
- Proximity to DC, Richmond and Tidewater airports
- Growing fiber access
- Potomac River commercial shipping/boating traffic corridor
- CSX rail
- Electric power transmission/distribution is excellent
- Geography
- Cost of business is still low – comparative to RIC

2) Opportunities for mega site or regional business parks:

* It's easier to get regional cooperation in places where nothing is happening. No Region 6 jurisdictions have capacity to develop a 400+ acre site. We already have "everything else." Large sites in VA are in remote areas. The pot of money available from the State isn't big enough to incent many of the localities to collaborate on projects – especially those that have been relatively successful. No legislator has come to the region to discuss the importance of regional parks, megasites, or the money being made available.

* Has this region decided they do not have interest in a megasite?

* We don't have any crises in the region driving that kind of cooperation.

* Housing is competing with industrial development. Megasites are never brought up in conversations with elected officials. Competition for land with housing projects is getting worse. Region 6 Council members haven't really been asked to do anything – they need some direction on what they should be requesting from localities.

* Rappahannock Electric Cooperative (REC) is seeing the same lack of willingness to invest in infrastructure throughout REC's 22 county footprint.

* Scarcity is an economic reality. NoVA has 30M square feet of vacant space. 60% of the region's workforce out-commutes for higher pay and career potential. Stafford's goal is to bring more HQ office space.

* Examples of "wins" in other regions would be very helpful

* Is there an opportunity for a SCIF (Sensitive Compartmented Information Facility) site in the region?

3) Challenges/Impediments to collaborative site development in Region 6:

ATTACHMENT C

Facilitator: What needs to happen – discussions, presentations, education – to make collaboration more attractive?

* Elected officials are being asked to park money in 400-500 acres, and the carrot isn't big enough. Legislators adopted GO Virginia but aren't selling it.

* We already have several 100-acre sites.

Facilitator: Could elected officials be convinced to invest in a megasite?

* Colonial Beach just formed an ED Commission and is trying to collaborate with Westmoreland County. Approach: education regarding opportunities, but concerted effort will be required. Today's conversation leads to more and more ideas. Need to sell and understand benefits (e.g. "What's in it for me?")

* Celebrate Virginia could be redeveloped from golf to housing, business campus, 9 holes, etc. Need a bridge and a customer – along with a cooperative landowner.

Note: Comments provided in the "chat box" during the meeting need to be added here

Facilitator: Should the Region 6 Council members be part of the sites dialogue and help with regional collaboration? What role can they play?

* Council hasn't been asked or told specifically what they are supposed to do. They need to be tasked and held accountable.

* What do they need to do to leverage opportunities?

* Would love for someone to help facilitate discussions between Colonial Beach and Westmoreland.

* If we had a 500-acre site, and 3 localities willing to explore, and the cost is \$8M, how much money is available from GO Virginia? (Response from the Program Coordinator: \$2M is currently available in Region 6, but Council would likely only designate \$1.5M).

* Region 6 Council should make the decision they want to invest x-percent of their funds into a megasite, and allow localities or FRA to find the site and develop it.

* Region 6 has a unique and ultimate advantage of having workforce, but they need to communicate the lack of sites as the reason two projects were lost.

* Localities lack experience in site development.

* Large sites in Southside have had success. Region 6 has had success, although not driven by large sites. Is there just no strong feeling of need because solar, data centers, warehousing developers are building? Is there really a need for a megasite, since the FRA sub-region is doing so well?

ATTACHMENT C

- * The question is "do you want to just keep getting the same growth, or do you want to do something impactful and regionally transformational?"
- * Localities are more reactive and willing to spend money when there's a project, rather than using funds for GO Virginia projects.
- * REC is non-profit, so can't build speculatively. Education, reality checks re: costs and timelines, and lack of understanding about site readiness is significant.
- * Caroline County is about to approve a \$1M spec building. Local developer wants to put up a 65k SF speculative flex building, adjacent to an industrial building. \$128K plan review and connection fees couldn't be waived by County policy, but they're rebating them to the developer. So, there is success in getting elected officials to incentivize/invest in product.
- * Education and informing local leaders are both desperately needed.

Summary of Session 2 – July 1, 2021

Session 2 was fairly well-attended and included economic development representatives from several localities, Region 6 Council members, and one elected official.

The meeting began with a recap of the general provisions of GO Virginia Board Policy #9 (governing Site Development):

- Activities must advance sites towards becoming a Tier 4 level under VBRSP
- Ownership can be public or private
- Collaboration of at least two (2) localities
- Localities agree to equally contribute to the project through cost/revenue sharing
- Sites must be at least 25 contiguous acres (waiver provision if <25 acres & "regionally significant")
- Sites must support industries identified in the regional G&D Plan

The targeted sectors in the Region 6 Growth and Diversification Plan were also reviewed:

- Aquaculture/seafood/commercial fishing/marine industries
- Forestry/Wood Products/Paper
- Manufacturing
- Distribution & Logistics
- IT/Data Centers
- Professional/Scientific/Tech Services

Prior to review of the sites analyzed by Draper Aden's engineering staff (led by Carolyn Howard), participants were asked to consider the following questions as some of the properties were presented:

- 1) *Does the site meet the GO Virginia criteria?*
- 2) *Where can collaboration be achieved?*

- 3) *Can/will collaborating localities "materially participate?"*
- 4) *Where can economic development opportunities be achieved the quickest and be most impactful on the region?*

Participant Responses and Comments on Regional Collaboration and Sites Opportunities

While an in-depth, group discussion around every site reviewed by Draper Aden did not take place, many of the participants offered important commentary, either by voice or "chat box" (as noted below).

- To my knowledge, the "West Point Industrial Park" (King & Queen County) does not have public water/sewer and, unless you have spoken with local leadership in the last year, there is little interest in bringing it to the site. Additionally, to my knowledge, there has been limited interest in a multi-locality approach to resolving this.
- Venture Business Park – changing due to DHL project
- What is your level of confidence that all business-zoned properties are included, and what is minimum acreage?
- Site added in Westmoreland Co. (?) 5 acres
- "Chat" Comment: I can't speak on behalf of the MidPen, but offer these personal (informed) opinions: If the MP region were interested in a collaborative approach, the KQ site would be worth considering. But, they don't seem to have that interest (and KQ County has no interest in extending water/sewer itself). Also, the West Point Industrial Park is too small to really be regionally impactful. In the case of the Essex and King William sites, both localities have previously indicated interest in site development, they just have limited experience and understanding of how to find resources. So, if the Region wants to ensure at least one site is in the MidPen, Fountainbleu and the Tappahannock Airport site (old) are the best choices. "
- Can the group consider opportunities to clump sites together to raise them to higher tier levels? This is the time for economic developers to add to the conversation.
- We have been asked by DHCD for sites to be prioritized. Difficulty in comparing large acreage site on I-95 with one on the Northern Neck. May need to do this by sub-region.
- Are any of these localities working together on anything? Critical/key point.
- No RIFA or revenue sharing on Northern Neck is in place. Collaboration is via joint marketing efforts.
- Being a small business person – given significant capability differences, Council should consider looking at subregions individually, and sites are evaluated based on willingness to collaborate, particularly in rural areas. Third, a site in the FRA region could be an employment center for the rural subregions. Sites in MidPen and NN probably are unlikely to employ Fred region people.
- Route 301 bridge replacement opens opportunities in King George for more rural areas. But will those communities see that as an opportunity?
- Two sites in KW and Essex could be targeted to sectors Region 6 is interested in – but there are no partnerships or relationships currently.
- Do you see relationship-building as Region 6's role?
- YES! There are more opportunities for NN/MP to collaborate than we are exploiting.
- Beware what you wish for! We want to collaborate, but there are many outside influences that can prevent an Economic Developer from successfully developing a site for an entire

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region. Localities need to have discussions, then go through chain of command – rather than GO VA making it happen. Some localities count on the Fredericksburg Regional Alliance (FRA) to facilitate those discussions. FRA is highly competitive, but King George doesn't have utilities to compete. But, we still need due diligence. If there's money to be used, we need to pursue it.

- There's a real political element in what we do. Sensitivity to that will allow us to be more constructive. The first project that comes along isn't always the right thing to do. Caroline has a significant announcement coming soon. Board of Supervisors is now considering what the County's targets really are and should be. Regionalism will be helpful to that political sensitivity.
- It all comes down to who wants to work together. Let it be known, and others will join. Trying to push regionalism won't work.
- We have very few sites relative to other areas in VA and we need to leverage what we have, as NOVA wave comes our way. Faith's comment re "leaving money on the table" makes me wonder how we can do that and move the region forward.
- I don't want my community to go it alone. Residential growth is great, but costly for services. We want growth that creates more sustainable economic vitality. We are tourist-driven, which is cyclical and not ideal for businesses. Need to improve our workforce and entrepreneurial capabilities. Out-commuting, particularly to Fred region, is increasing – preferable than going to DC. Partnering with Westmoreland County is attractive. New era for us – pushing to develop. Teleworking is an opportunity. Don't want to leave \$ on the table, either.
- What Council can do to support and advance localities is to help facilitate introductions of potential collaborators and to introduce GO Virginia capabilities. There is credibility there.
- GO Virginia has money to invest in site development. Looking at the list, there are two Tier 4 sites, and the rest are Tier 2. Lots of opportunity to get sites elevated in Tier levels. Funding requires collaboration. Site development is one of the important things the Council needs to do.
- Council should look at competition within sub-regions. FRA has already worked with DAA to do this. Private landowner on our one Tier 4 paid for due diligence and engineering, and wouldn't want our participation. Money is significant, but there's not enough to incentivize collaboration. RTP in NC was significantly funded by the State. Incentivization is higher for more rural areas. We should be using money for due diligence, prioritized by sub-region (because that's what DHCD will be looking at) – but to develop something like RTP will require substantial State funding.
- Are you suggesting this region develop a strategic plan for site development, including prioritization, as a possible solution to moving forward in a collaborative way?
- Include public vs. private ownership in criteria in prioritizing sites since ownership has some impact on the level of cooperation.
- Need to come up with Top 10 or Top 15 sites.
- DAA will provide an engineering-based prioritization with cost estimates to elevate to higher tiers.
- Given the list of sites, would you consider providing information as to viability (political, etc.).
- Need for due diligence before rezoning.
- Should we eliminate agricultural land from the list? (No strong answer.)
- Would have helped to have sent out an earlier memo to ask: 1) What localities are interested in participating in a regional site project (a conversation facilitated by Region with the county

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administrator and BOS), prior to the meeting this morning would have helped. 2) Ask localities to go through all the sites provided today prior to the meeting and prioritize which sites your County may be interested in.

- Gloucester is part of the Eastern Virginia RIFA with Hampton Roads and we did not commit to the first project the RIFA Board voted to pursue. I have been told that Gloucester is not going to fund any development outside of Gloucester and believe that to be true.

Primary take-aways and observations from Stakeholder Work sessions

- ⇒ There is a perception of apathy or lack of interest in regional collaboration among several of the communities in the Region;
- ⇒ Existing relationships and previous partnering activities between localities in the Region have been minimal at best;
- ⇒ Several of the participants – particularly those in economic development roles – discussed the political nature of site development and, therefore, the sensitivity of undertaking site advancement activities or even conversations around that topic with local leaders;
- ⇒ It is unclear if the Regional Council has formally defined Site Development as a priority investment area for Region 6, including established goals and timelines for this to occur;
- ⇒ While the Council's goal of getting input on prioritization of sites from the Region's partners was outlined in the Stakeholder Work sessions, DHCD's expectations of what this entails needed further clarification (i.e. the data-driven, criteria-based assessment currently being conducted by DAA);
- ⇒ There seems to be consensus and interest in advancing due diligence efforts on several sites in Region 6, as everyone seems to understand it is a necessary starting point;
- ⇒ Although some of the participants recognize GO Virginia as a way to leverage other funds (e.g. local government dollars, private sector expenditures, federal funds), there is skepticism around whether State funding is substantial enough to really induce collaboration within the Region – especially for site implementation projects;
- ⇒ Several participants expressed the need for Regional Council members to help facilitate discussions about partnering and collaborations between the localities, as well as to help with introductions and identifying/fostering potential partnering opportunities;

Recommendations

- 1) The Regional Council may want to initiate deliberate "outreach" to elected officials and local administrators, by inviting them to attend the Council's quarterly meetings. This can help to inform local leaders about GO Virginia and reiterate the importance of and benefits that can come from collaborative initiatives.
- 2) The importance of diversifying the Region's economy, its composition of businesses, and the need to create long-term options for business growth doesn't seem to be fully understood or embraced. Therefore, some additional economic development education of community leaders may be helpful in gaining support for site development efforts.

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- 3) To enhance opportunities for securing site implementation grants from GO Virginia, the Regional Council may want to consider one or more sites for future regional/sub-regional business parks as a subsequent phase of the prioritization process.
- 4) Sites advancement activities – whether via due diligence or implementation projects – should be defined over the long-term and slated for funding on an annual or biennial basis. This will allow Council to revisit or update prioritized sites, particularly if any of them are sold, rezoned, or as new properties or partners are identified.
- 5) As the Region 6 Council moves forward with prioritizing the list of sites evaluated and characterized by Draper Aden Associates, the following questions should be considered:
 - a. Is the site suitable for and able to accommodate the Region's targeted sectors, particularly given its size and location?
 - b. How/why is the site "regionally significant?"
 - c. Will the required due diligence or site improvement activities advance the site to Tier 4 or 5?
 - d. Are the expenditures needed to advance or improve the site cost-effective relative to potential public investments that could be made in other/comparable sites in the region?
 - e. Will the localities be willing and able to "materially participate" in the proposed site investment(s)?

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

Site Name	Locality	Current VBRSP Tier Level	Next Potential Tier Level	Total Acres	Available Acreage	Developable Acreage	Largest Contiguous	% Developable vs. Available	Approx. Building Yield (SF / Acre)	Current Zoning	Identified Site	Compatible with Comp. Plan	Zoned-Industrial / Commercial	Waters of the US Determination	Preliminary Geotechnical Study	Boundary Survey	Topographic Survey	Cultural Resources Review	Threatened & Endangered Species Review	Phase 1 ESA	Master Plan (Est. of Development Cost)	Traffic Impact Analysis	Preliminary Engineering Report	Infrastructure in-place or available w/in 12 months	Pad Ready	Site is ready for a Prospect to build	Transportation Access to Interstate or 4-lane Hwy	Transportation Access SCORE	Water Availability / Capacity	Water Availability / Capacity SCORE	Wastewater Availability / Capacity	Wastewater Availability / Capacity - SCORE
Thornburg Towne Center	Spotsylvania County	4	5	100	100	88	100	88%		C-3	X	X	X	X	X	X	X	X	X	X	X			X			Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Richmond County Commerce Center	Richmond County	4	5	101	30	30	30	100%		Industrial	X	X	X	X	X	X	X	X	X	X	X		X	X			Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Luck Stone Industrial Park	Caroline County	2	3	675	675	516	422	76%	6200	RP	X	X															Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Gilman Tract East	Spotsylvania County	2	3	620	620	319	113	51%	4000	A-2	X	X															1 - 2 road miles	8	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Carmel Church Station Super Site (east of RR and west of I-95)	Caroline County	2	3	522	522	412	522	79%		PMUD	X	X	X		X												1 - 2 road miles	8	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Carmel Church Station Parcels 82-9-A, 82-12-B, 92-3-B2, 92-A-27 (portion west of RR)	Caroline County	2	3	337	337	286	286	85%		PMUD	X	X	X		X												1 - 2 road miles	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Gilman Tract West	Spotsylvania County	2	3	322	322	283	221	88%	6800	A-2	X	X				X											Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Tappahannock-Essex County Airport Site	Essex County	2	3	477	293	69	233	24%	1500	A-1	X	X															Within 1 road mile	10	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
West Point Airport Site	King and Queen County	2	3	276	276	234	276	85%		Industrial	X	X	X														Within 1 road mile	10	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

Cleydael	King George County	2	3	265	265	123	239	46%	4000	C-2 Lt Industrial R-1	X	X		X	X						X											Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Fontainebleu Industrial Park	King William County	2	3	260	260	260	200	100%	3300	Industrial	X	X	X																			2 - 5 road miles	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Caroline Commerce Center	Caroline County	2	3	300	250	184	250	74%	4800	M-1	X	X	X	? - No PJD	X							X	X									1 - 2 road miles	8	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Centerport Parkway Property	Stafford County	2	3	260	248	187	248	75%	8900	M-1 Lt Industrial A-1	X	X																				1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
68 Oakenwold Ln (3780)	Stafford County	2	3	231	231	18	18	8%	600	A-1 R-2 B-2	X	X																				2 - 5 road miles	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Stafford East - Univ. of Mary Washington Foundation	Stafford County	2	3	227	227	77		34%		M-1, Light Industrial	X	X	X																			Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
The King Carter	Lancaster County	2	3	300	222	149	300	67%	3300	R2	X	X																				10 - 20 road miles	2	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Coleman Family Farm	Spotsylvania County	2	3	201	201	90	201	45%	6100	I-2	X	X	X																			Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
WHC Property	Caroline County	2	3	200	200	105	81	52%	4400	M-1	X	X	X																			Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Webster 200 Site	Spotsylvania County	2	3	200	200	139	200	70%	10600	A-1	X	X									X											Within 1 road mile	10	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Orrock Farm-Spotsylvania	Spotsylvania County	2	3	198	198	181	198	91%		A-2	X	X		X		X		X	X	X	X											1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

Airlee Industrial and Data Center Site	Caroline County	2	3	184	184	172	184	93%	9700	M-1	X	X	X	X				X	X	X	X											Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Renaissance Business Park (S971A)	Stafford County	2	3	162	162	127	162	78%	4475	M-2	X	X	X						X	X	X	X										Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Gray Property	Caroline County	2	3	157	144	114	114	79%	6000	M-1 & RP	X	X																				2 - 5 road miles	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2
Webster 140 Site	Spotsylvania County	2	3	139	139	121	57	87%	8000	A-2	X	X																				Within 1 road mile	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Gutierrez Site	Spotsylvania County	2	3	129	129	65	129	50%		A-2 (Agricultural)	X	X																				Within 1 road mile	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Tappahannock Industrial Site (old Airport)	Essex County	2	3	101	101	90	101	89%	8400	I-1	X	X	X																			1 - 2 road miles	8	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
George Washington Village	Stafford County	2	3	1078	95	90	50	95%		M-1	X	X	X																			1 - 2 road miles	8	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
5630 Morris Road	Spotsylvania County	2	3	95	95	35	95	37%	5800	A-2	X	X																				Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
King George Industrial Park	King George County	2	3	148	88	77	148	88%	9000	Industrial	X	X	X		X	X					X											1 - 2 road miles	8	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Ladysmith Industrial Park	Caroline County	2	3	87	87	83	40	95%	6000	Industrial & Commercial	X	X	X																			Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

Riverside - Honey Farm Parcel	Stafford County	2	3	86	86	7	86	8%		Light Industrial	X	X	X														Within 1 road mile	10	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
O Hollywood Farm Road (6075)	Stafford County	2	3	83	83	71	72	86%	4800	M-2	X	X	X														1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Thompson Industrial Parcels 82-17-A & 82-17-B	Caroline County	2	3	80	80	72	80	90%		PMUD	X	X	X														Within 1 road mile	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
West Point Industrial Park	King William County	2	4	66	66	62	66	94%	9500	M-1/unzoned	X	X	X							X	n/a			X	X		2 - 5 road miles	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Stafford Airport Industrial Park (3813 - 3833)	Stafford County	2	3	64	64	16	12	24%	2000	A-1	X	X															1 - 2 road miles	8	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Battlefield Industrial Park Tyler St/Belman Rd	Fredericksburg, City of	2	3	62	62	41	33	66%	5650	I2	X	X	X	X				X		X							2 - 5 road miles	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Groupe Site (38-14F)	Stafford County	2	3	61	61	27	23	44%	3700	M-1	X	X	X														1 - 2 road miles	8	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
515 Lansdowne Road	Spotsylvania County	2	3	60	60	36	60	61%	11600	I-1	X	X	X														1 - 2 road miles	8	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Back 40 Site	Spotsylvania County	2	3	51	51	31	51	62%	6360	I-2	X	X	X	X	X	X	X			X	X						2 - 5 road miles	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Canterbury Property	King and Queen County	2	3	50	50	41	50	81%	10800	Agricultural	X	X															Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

[illegible]

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

Venture Business Park	Stafford County	2	5	33	33	24	33	72%	4600	B-2	X	X	X							X	n/a		X	X		Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
5008 Mudd Tavern Road	Spotsylvania County	2	3	32	32	21	32	66%	7800	C-3	X	X	X													Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Westgate Center	Stafford County	2	3	30	30	30	30	100%	5300	B-2	X	X	X								n/a					Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Lagrange Industrial Park	Essex County	2	3	62	29	20	15	69%		M-1 / M-2	X	X	X													Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2
2705 Jefferson Davis Hwy - Austin Park Centre (28 acres)	Stafford County	2	3	29	29	7	7	24%	2000	B-2, Urban Commercial	X	X	X								n/a					Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
VA Gateway	Stafford County	2	5	26	26	26	26	100%	7900	M-1	X	X	X							X	n/a		X	X	X	Within 1 road mile	10	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
N Situs - Celebrate Virginia	Stafford County	2	3	21	21	21	21	100%		M2	X	X	X													1 - 2 road miles	8	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Gloucester Business Park	Gloucester County	2	3	70	17	17	7	100%		I-1	X	X	X			X	X				X	n/a	n/a	X		Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
9040 Jefferson Davis Hwy	Spotsylvania County	2	3	16	16	7	16	42%	7900	C-3/ R-U	X	X														Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
10813 Rollingwood Drive	Spotsylvania County	2	3	33	15	15	33	100%	4600	R-1	X	X														Within 1 road mile	10	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4	On-Site /Adjacent w/ No System Upgrades Anticipated	10

The following data is the prioritized list of sites across Region 6. Please refer to DAA report in 2022-2023 Growth and Diversification Plan for more details.

Locust Hill Site	Middlesex County	2	3	9	9	9	9	100%	8500	Low-Density Rural	X	X				X													Within 1 road mile	10	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Bohannon Business Park	King and Queen County	2	3	8	8	8	8	100%		GB	X	X	X									n/a							Within 1 road mile	10	No Public System Available / Well System Required	0	No Public System Available / Onsite Septic Required	0
Red Hill Site	Middlesex County	2	4	5	5	4	5	80%	12500	Village Community	X	X												X					2 - 5 road miles	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Bon Secours Site	Middlesex County	2	4	6	2	2	2	100%	17000	Village Community	X	X		X		X	X							X	X				2 - 5 road miles	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Potomac-Stafford/Widewater	Stafford County	1	2	2200	2200	1000	2200	45%		A-1	X																		2 - 5 road miles	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Orrock-Simms Property	Caroline County	1	2	590	590	474	590	80%	1000	Rural Preservation	X	X																	2 - 5 road miles	6	Extension of Main > 2500' w/ No System Upgrade Anticipated	8	Extension of Main > 2500' w/ No or Minor System Upgrades Anticipated	4
Roseman Mega Site	Caroline County	1	2	550	500	350	320	70%		RP, M1	X	X																	2 - 5 road miles	6	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Ladysmith Mega Site	Caroline County	1	2	470	400	260	400	65%		RP, M1	X	X																	2 - 5 road miles	6	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Taylor Property	King George County	1	2	368	368	266	300	72%	5400	A-1	X	?																	Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Simons Property	King William County	1	2	242	242	162	169	67%	7900	Residential	X																		Within 1 road mile	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
498 Caisson Rd	Stafford County	1	2	241	241	55	28	23%	1600	A-1	X																		1 - 2 road miles	8	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6

Amireh Site	Caroline County	1	2	200	200	126	97	63%		Rural Preservation	X	X																				2 - 5 road miles	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10	On-Site /Adjacent w/ No System Upgrades Anticipated	10
South Garden/ Broadus Farm	Spotsylvania County	1	2	180	180	180	180	100%		A-2 & RP	X																					1 - 2 road miles	8	On-Site /Adjacent w/ No System Upgrades Anticipated	10	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Ronald Smith I-95 Site	Caroline County	1	2	147	147	100	100	68%		Rural Preservation	X	X																				1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
EDA Data Center Site	Caroline County	1	2	125	114	85	114	75%		Rural Preservation	X																					1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Virginia Bazaar Property	Caroline County	1	2	97	97	80	80	82%		B-1	X	X	X																			1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Hylton Shannon	Fredericksburg, City of	1	2	90	90	75		83%		R-2	X	X	X																			1 - 2 road miles	8	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
6976 Courthouse Road	Spotsylvania County	1	2	69	69	31	69	44%	6100	A-3	X																					2 - 5 road miles	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6
Buckley Hall Road	Mathews County	1	2	69	69	65	69	94%	10200	Business-2 District Rural District	X																					5 - 10 road miles	4	Major System Upgrades Anticipated	2	Major System Upgrades Anticipated	2
Hamlet - 65-100 Acres at Ladysmith Road & Green Road	Caroline County	1	2	100	65	32	65	49%	6900	RP	X																					Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	On-Site /Adjacent w/ No System Upgrades Anticipated	10
Thornburg Miller Tract	Spotsylvania County	1	3	32	25	20	25	79%		I-1	X	X				X		X	X	X		n/a										1 - 2 road miles	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8	Extension of Main < 2500' w/ No System Upgrade Anticipated	8
Old Page Middle School	Gloucester County	1	4	15	15	14	15	89%		SC-1	X																					Within 1 road mile	10	On-Site / Adjacent w/ Minor System Upgrades Anticipated	6	Major System Upgrades Anticipated	2