2.2 Economics

The Economics Technical Report provides findings to help inform the update of the Economics Resource Area of the *2022 JBLM Growth Coordination Plan*. The Growth Coordination Plan originally was established in 2010 through a regional partnership to help the South Puget Sound region prepare for base growth and the merger of the U.S. Army Fort Lewis Base and the Air Force McChord Base to form JBLM. The growth expected after 2010 was a continuation of significant base growth beginning around 2001 in response to the Iraq and Afghanistan Wars. The plan helped improve regional coordination and collaboration between the impacted communities and JBLM. This period of growth eased after reaching a peak rate in 2013, and since then the total JBLM population has remained below 50,000 from 2014 to 2020. The main topics of this technical report are economic trends and economic development priorities emerging since 2010. These include changes in JBLM population growth, employment, industry sectors, businesses, economic development, and economic development strategies. The overall aim for this report is to provide a current snapshot of conditions useful for informing 2022 Growth Coordination Plan updates.

The SSMCP is leading the effort to update the Growth Coordination Plan. The SSMCP was established by community and joint base leadership in 2011 to improve and formalize the coordination between installation leadership and community executives. Since 2014 SSMCP's central focus has been on the intersection of issues affecting local governments and the military community. This South Puget Sound regional consortium is supported by 56 partners including various cities, counties, tribes, and private and non-profit organizations, and is guided by a mission to foster outcomes that are mutually beneficial to the South Sound. The work of SSMCP has yielded a variety of outcomes such as supporting research describing the economic impact of the base, delivering a Joint Land Use Study in 2015 and a housing needs study and strategy in 2020, coordinating various working groups including an economics workgroup to carry out partnership efforts, and advocating state legislative to financially support SSMCP initiatives (estimated at around $1.5 billion) such as the funding gained for the Nisqually Delta Interstate 5 Environmental Impact Study.

The 2022 Growth Coordination Plan Update is another project supported by the SSMCP. The overarching goals for this plan are to assess the continued relevance of the strategies and priorities of the 2010 plan to help identify needed plan modifications and updates, and corresponding changes to SSMCP work plan priorities. One of the six core 2010 plan recommendations called for promoting JBLM as a center of regional economic significance; consequently, understanding JBLM's economic characteristics and regional implications is crucial for recalibrating the 2022 GCP.

This analysis resulted in the following key findings:

- JBLM contributes to the regional economy by providing jobs and contracts to area businesses. JBLM is an anchor institution in the South Sound and the base has a significant impact on the community demographics, providing employment, a large skilled veteran workforce, investment in the region, and industry sector growth. JBLM contracts have significantly impacted local businesses in the study area and beyond. Pierce County businesses received the largest share at approximately 62 percent of all contractual dollars; by comparison, Thurston County businesses received five percent, neighboring counties received 22 percent, and the remaining Washington counties received 10 percent. Contractual awards allocated to all other counties in the state has generally declined since 2016. On an annual basis, four major employment sectors typically made up the largest share of contract dollars awarded across the state: (1) construction, (2) manufacturing, (3) professional, scientific, and technical services, and (4) administrative and waste management/remediation services.

- Both counties are expected to grow for the next two decades until 2040, with estimates of Pierce County by 132,545 households and Thurston County by 56,151 households.
- Although the two-county region economy is growing, the benefits of this growth has not been spread equitably. Communities of color remain on the margins of the rising economy with higher rates of poverty, income gaps, and unemployment and lower rates of educational attainment. The two-county region also has experienced increasing income inequality from 2010 to 2019. Unemployment rates tended to be highest for persons of color in both counties.
- The number of new jobs climbed upwards over the last decade, but wage growth has been somewhat sluggish. Employment growth accelerated in the study area with covered employment growing significantly by over 20 percent between 2010 and 2019.
- The top employment industries for Pierce County are military, government, health care, and education, while Thurston's main job sectors are government, health care, social assistance, and retail trade.
- The area is attracting new businesses and small employers. Nearly 14 percent of the state's total business applications were in the study area, increasing by about five percent over the last decade.
- Firm growth has been significant in both counties. Overall, firms within the healthcare and social assistance and professional and technical sectors have grown most rapidly over the past decade in Thurston County while firms within the healthcare and social assistance sector and information sector have grown rapidly in Pierce County.
- JBLM could be affecting several of the industry concentration and growth trends, particularly those associated with increased healthcare, social assistance, construction, accommodation, and food services sectors.
- Both counties rank highly for innovation. Pierce County ranks among the top 10 percent of all counties nationally in terms of its headline innovation index value and Thurston County ranks among the top 20 percent. Thurston County's innovation strengths are in the human capital and knowledge creation which complements Pierce County's strong business dynamics and employment/productivity innovations.
- Over the last decade, the veteran population has decreased in the state and both counties.
- Economic development organizations recognize the need to support workforce development, small businesses and entrepreneurs, partnerships, and emerging sectors and business innovation.

An overview of all current needs identified by resource, is provided in Table 2.1.

Table 2.1 – Overview of All Needs Identified Given Today's Conditions

Needs Identified
Overall
• Assess Economics and Business Working Group role associated with proposed economic strategies for the 2022 Growth Coordination Plan. • Coordinate regional economic assessments with the Puget Sound Regional Council to include JBLM. • Assess progress on status of 2010 Growth Coordination Plan Actions. • Monitor status of 2020 GCP plan actions.

Section 7. Regional Industry Specialization and JBLM Economic Impact

- Learn more about JBLM contracting processes, trends in contracting over the last 10 years, and about the existing support available for study area businesses to learn about government and JBLM contracting opportunities. The project team assessed trends associated with JBLM contracts and did find a general trend leaning towards more local contracting, particularly for Pierce County businesses.

Section 9. Regional Economic Development Priorities and Strategies

- Coordinate regional economic development strategies relevant to the Puget Sound Regional Council and the Thurston Regional Planning Council.
- The project team should examine the retention of Veterans to living and working in the region. Support should be provided to help Veterans better transition into the workforce in the region. The project team should collect information on trends associated with Veteran employment including information on where they are working. In addition, the plan should include research about workforce development opportunities to retain Veterans in the region. The project team should figure out the job clusters to leverage and then identify the resources needed to build up this talent. JBLM partners should work with SSMCP to address this need.
- The SSMCP has a critical role in coordinating different partners, agencies, and jurisdictions on regional level concerns, such as employment- and investment-related initiatives (such as local chambers of commerce, the Pacific Mountain Workforce Development Organization, Thurston Economic Alliance, and the Economic Development Board in Tacoma/Pierce County). These types of initiatives should be discussed, explored, and developed to provide regional coordination.
- Strengthening the workforce and providing more resources and education was a consistently recognized theme in economic development strategies. Several plans included strategies which provided career transition, pathway support, and job placement/entry level employment resources (e.g., apprenticeship programs, internships).
- Thurston County supports a Center for Business and Innovation program that provides resources to business owners/managers and entrepreneurs, such as counseling, workshops, and networking events. In the past, this center offered specialized services for transitioning military by offering Veterans support as they immerse into the local civilian workforce and seek opportunities, such as entrepreneurship ventures. However, this program has since been discontinued; the project team should find out more about why since this type of program can help support entrepreneurs and business innovation.

Section 10. Stakeholder Engagement Findings

- Reinvigorate the Economics and Business Working Group by including periodic check-ins on the Growth Coordination Plan and monitoring strategies and focused projects.
- Develop a communication strategy to support more effective communication on JBLM's economic contributions to the region.
- Need to gain more information on the number of vet startups, regional freight conditions, and information on the existing innovation strategy/incubation programs (higher education partners) in the region, JBLM's involvement with sustainability, and information on building an investment network.
- Find out more about existing workforce incentives and programs in the region that might support Veterans.

TECHNICAL MEMO

TO:	SSMCP Steering Committee	**DATE:**	November 12, 2021
FROM:	Bob Parker, Jennifer Cannon, Oscar Saucedo-Andrade, Ryan Knapp, ECONorthwest	**PROJECT NAME:**	JBLM Growth Coordination Plan
SUBJECT:	Regional Economic Trends Existing Conditions Report		

1. Introduction

This Economic Technical Report provides findings to help inform the update of the Economics Resource Area of the 2022 Joint Base Lewis-McChord (JBLM) Growth Coordination Plan. The Growth Coordination Plan originally was established in 2010 through a regional partnership to help the South Puget Sound region prepare for base growth and the merger of the U.S. Army Fort Lewis Base and the Air Force McChord Base to form JBLM. The growth expected after 2010 was a continuation of significant base growth beginning around 2001 in response to the Iraq and Afghanistan Wars. The plan helped improve regional coordination and collaboration between the impacted communities and JBLM. This period of growth eased after reaching a peak rate in 2013 and since then, the total JBLM population has remained consistently below 50,000 between 2014 to 2020. The main topics of this technical report are economic trends and economic development priorities emerging since 2010 including changes in JBLM population growth, employment, industry sectors, businesses, economic development, and economic development strategies. The overall aim for this report is to provide a current snapshot of conditions useful for informing 2022 Growth Coordination Plan updates.

The South Sound Military and Communities Partnership (SSMCP) is leading the effort to update the Growth Coordination Plan. The SSMCP was established by community and joint base leadership in 2011 to improve and formalize the collaboration and coordination between installation leadership and community executives. Since 2014 SSMCP's central focus has been on the intersection of issues affecting local governments and the military community. This South Puget Sound regional consortium is supported by 56 partners including various cities, counties, tribes, and private and non-profit organizations and is guided by a mission to foster outcomes that are mutually beneficial to the South Sound. The work of SSMCP has yielded a variety of outcomes, such as supporting research describing the economic impact of the base, delivering a Joint Land Use Study in 2015 and a housing needs study and strategy in 2020, coordinating various working groups including an economics workgroup to carry out partnership efforts, and advocating state legislative to financially support SSMCP initiatives (estimated at around $1.5 billion), such as the funding gained for the Nisqually Delta Interstate 5 Environmental Impact Study. The 2022 Growth Coordination Plan update is another project supported by the SSMCP. The overarching goals for this plan are to a) assess the continued relevance of the strategies and priorities of the 2010 plan to help identify needed plan modifications and updates, and b) corresponding changes to SSMCP work plan priorities. One of the six core 2010 plan recommendations called for promoting JBLM as a center of regional economic significance; consequently, understanding JBLM's economic characteristics and regional implications is crucial for recalibrating the 2022 GCP.

This report is organized into the following twelve sections:

- Section 1. Introduction to this Economics Technical Report
- Section 2. Key Findings
- Section 3. Assessment of the Regional Growth Coordination Plan Economic Strategies
- Section 4. Methodology
- Section 5. Regional Economic Context
- Section 6. Regional Employment Industry Trends
- Section 7. Regional Industry Specialization and JBLM Economic Impact
- Section 8. Regional Veteran and General Labor Force Characteristics
- Section 9. Regional Economic Development Priorities and Strategies
- Section 10. Stakeholder Engagement Findings
- Section 11. Summary of Findings and Conclusions
- Section 12. Economics Technical Report Appendix

2. Key Findings

This analysis resulted in the following key findings:

- JBLM contributes to the regional economy by providing jobs and contracts to area businesses. JBLM is an anchor institution in the South Sound and the base has a significant impact on the community demographics providing employment, a large skilled Veteran workforce, investment in the region, and industry sector growth. JBLM Contracts have significantly impacted local businesses in the study area and beyond. Pierce County businesses received the largest share at approximately 62 percent of all contractual dollars and by comparison, Thurston County businesses received five percent, neighboring counties received 22 percent, and the remaining Washington counties received 10 percent. Contractual awards allocated to all other counties in the state has generally declined since 2016. On an annual basis, four major employment sectors typically made up the largest share of contract dollars awarded across the state: (1) construction, (2) manufacturing, (3) professional, scientific, and technical services, and (4) administrative and waste management/remediation services.
- Both counties are expected to grow for the next two decades until 2040, with Pierce County forecasted to grow by about 132,545 households and Thurston County forecasted to add about 56,151 households.
- Although the two-county region economy is growing, the benefits of this growth has not been spread equitably since communities of color remain on the margins of the rising economy with higher rates of poverty, income gaps, and unemployment and lower rates of educational attainment. The two-county region also has experienced increasing income inequality from 2010 to 2019. Unemployment rates tended to be highest for persons of color in both counties.
- The number of new jobs climbed upwards over the last decade, but wage growth has been somewhat sluggish. Employment growth accelerated in the study area with covered employment growing significantly by over 20 percent between 2010 and 2019.
- The top employment industries for Pierce County are military, government, health care, and education while Thurston's main job sectors are government, health care and social assistance, and retail trade.
- The area is generating start-ups and attracting new businesses and small employers. Nearly 14 percent of the state's total business applications and business start-up applications were in the study area, increasing by about five percent over the last decade.
- Firm growth has been significant in both counties. Overall, firms within the healthcare and social assistance and professional and technical sectors have grown most rapidly over the past decade in Thurston County while firms within the healthcare and social assistance sector and information sector have grown rapidly in Pierce County.
- JBLM could be affecting several of the industry concentration and growth trends particularly the trends associated with increased healthcare, social assistance, construction and accommodation and food services sector growth.
- Both counties rank highly for innovation. Pierce County ranks among the top 10 percent of all counties nationally in terms of its headline innovation index value while Thurston County ranks slightly lower but among the top 20 percent. Thurston County's innovation strengths are in the human capital and knowledge creation which complements Pierce County's strong business dynamics and employment/productivity innovations.

- Over the last decade, the share of Veterans in the total adult population has slightly decreased in the state and both counties.[1]
- Economic development organizations recognize the need to support workforce development, small businesses and entrepreneurs, partnerships, and emerging sectors and business innovation.

An overview of all needs identified given current conditions is provided in Table 2.1.

Table 2.1: Overview of All Needs Identified Given Current Conditions

Needs Identified
Overall
• Assess Economics and Business Working Group role associated with proposed economic strategies for the 2022 Growth Coordination Plan. • Coordinate regional economic assessments with the Puget Sound Regional Council to include JBLM. • Assess progress on status of 2010 Growth Coordination Plan Actions. • Monitor status of 2020 GCP plan actions.
Section 7. Regional Industry Specialization and JBLM Economic Impact
• Learn more about JBLM contracting processes, trends in contracting over the last 10 years, and about the existing support available for study area businesses to learn about government and JBLM contracting opportunities. The project team assessed trends associated with JBLM contracts and did find a general trend leaning towards more local contracting, particularly for Pierce County businesses.
Section 9. Regional Economic Development Priorities and Strategies
• Coordinate regional economic development strategies relevant to the Puget Sound Regional Council and the Thurston Regional Planning Council. • The project team should examine the retention of Veterans to living and working in the region. Support should be provided to help Veterans better transition into the workforce in the region. The project team should collect information on trends associated with Veteran employment including information on where they are working. In addition, the plan should include research about workforce development opportunities to retain Veterans in the region. The project team should figure out the job clusters to leverage and then identify the resources needed to build up this talent. JBLM partners should work with SSMCP to address this need. • The SSMCP has a critical role in coordinating different partners, agencies, and jurisdictions on regional level concerns, such as employment- and investment-related initiatives (such as local chambers of commerce, the Pacific Mountain Workforce Development Organization, Thurston Economic Alliance, and the Economic Development Board in Tacoma/Pierce County). These types of initiatives should be discussed, explored, and developed to provide regional coordination. • Strengthening the workforce and providing more resources and education was a consistently recognized theme in economic development strategies. Several plans included strategies which provided career transition, pathway support, and job placement/entry level employment resources (e.g., apprenticeship programs, internships). • Thurston County supports a Center for Business and Innovation program that provides resources to business owners/managers and entrepreneurs, such as counseling, workshops, and networking events. In the past, this center offered specialized services for transitioning military by offering Veterans support as

[1] Statewide, the share of Veterans as a percent of the total adult population decreased by 2.7 percentage points between 2010 and 2019 (11.6% to 8.9%). The statewide trend is also seen in both Pierce and Thurston Counties. Veterans as a share of the total adult population in Pierce County and Thurston County decreased slightly by around two percentage points between 2010 to 2019 (Pierce: 14.9% to 12.9%, Thurston: 15.1% to 13.0%). Source: U.S. Census Bureau, American Community Survey (ACS) PUMS Estimates, 2010 and 2019 (1-Year).

they immerse into the local civilian workforce and seek opportunities, such as entrepreneurship ventures. However, this program has since been discontinued; the project team should find out more about why since this type of program can help support entrepreneurs and business innovation.

Section 10. Stakeholder Engagement Findings

- Reinvigorate the Economics and Business Working Group by including periodic check-ins on the Growth Coordination Plan and monitoring strategies and focused projects.
- Develop a communication strategy to support more effective communication on JBLM's economic contributions to the region.
- Need to gain more information on the number of vet startups, regional freight conditions, and information on the existing innovation strategy/incubation programs (higher education partners) in the region, JBLM's involvement with sustainability, and information on building an investment network.
- Find out more about existing workforce incentives and programs in the region that might support Veterans.

3. Assessment of the 2010 Growth Coordination Plan Economic Strategies

The 2010 Growth Coordination Plan (GCP) identified five specific strategies for Economic Development. The following tables provide an overarching report on the current status, as well as continued benefits and needs of those strategies as compared to 2010.

Table 3.1: Status of Strategy 1.04, Hold Regular Forum to Identify Local Contracting Opportunities

Need in 2010:	High	**Need Given Conditions Today:**	**Low:**. When the 2010 GCP was developed, SSMCP was not yet established and there was only limited government contracting procurement support. The Washington State Procurement Technical Assistance Center (PTAC) is a nonprofit organization currently helping local businesses procure government contracts at JBLM. They have helped to implement several steps of this economic strategy. SSMCP was formed in 2011 to provide a consolidated regional voice for issues and to support coordination between regional partners.
Status of Action Steps for Strategy 1.04			
• Step 1: The Regional Partnership arranges an introductory meeting between JBLM directorates responsible for contracting, local economic developers, and other key partners. • Complete			
• Step 2: Local economic developers identify major JBLM unclassified contracts for supplies, operations & maintenance, technology, equipment, etc. • Complete (This Economics Existing Conditions Report provides a summary of industry/employment sector procurement trends associated with JBLM contracts based on analyzing JBLM contracts data.)			
• Step 3: The Regional Partnership retains an economic consultant to research economic and supply chain linkages between major JBLM contractors and local industries. • Complete			
• Step 4: Consultant researches DoD procurement process to identify contracts eligible to local companies. • Complete (primarily completed by PTAC)			
• Step 5: Chambers of Commerce sponsor a series of procurement workshops to prepare local companies to compete for JBLM contracts. • Complete (primarily completed by PTAC)			
• Step 6: Consultant prepares a strategy to recruit businesses that could serve JBLM or capitalize federal contracting opportunities. • Complete (primarily completed by PTAC)			

Table 3.2: Status of Strategy 2.08, Study Retail Spending Changes Resulting from New Commercial Development on JBLM

Need in 2010:	High	**Need Given Conditions Today:**	**Low:** Most thought this was a low need and determined this to be a strategy that is no longer relevant or prioritized as an action to pursue.
Status of Action Steps for Strategy 2.08			
• Step 1: The Regional Partnership would retain a market consultant to study economic and spending impacts associated with the development of Freedom's Crossing. • No Longer Relevant			
• Step 2: The consultant conducts a survey or focus groups of military households to assess how spending patterns are likely to change once the Freedom's Crossing development is completed.			

• No Longer Relevant
• Step 3: The consultant meets with community and business leaders to discuss potential spending shifts inside and outside the JBLM gate. • No Longer Relevant
• Step 4: The consultant prepares a transition strategy to prepare local businesses outside the gate to adapt to the changing retail and service environment and spending patterns. • No Longer Relevant
• Step 5: The Chambers of Commerce host a series of presentations sharing the results of the market analysis and the local business repositioning strategy. • No Longer Relevant
• Step 6: The Regional Partnership meets with impacted local governments about effects on sales tax revenues. • No Longer Relevant

Table 3.3: Status of Strategy 4.05, Train Local Firms on Federal Procurement Procedures

Need in 2010:	High	**Need Given Conditions Today:**	**High to Medium:** Most thought this strategy (focused on training local firms on federal government contracting) is a high to medium need. This strategy should be updated to be more relevant to current conditions. PTAC's main role is to offer training and support to local firms seeking to procure government contracts at JBLM. They have helped to implement several steps of this economic strategy.
Status of Action Steps for Strategy 4.05			
• Step 1: PTAC coordinates with regional and local groups currently providing similar services. • Complete			
• Step 2: PTAC convenes a meeting with key partners to assess geographic and topic area coverage to plan contracting workshops and to ensure they are tailored to JBLM construction opportunities. • Complete			
• Step 3: Master Builders Associations market the workshops to contractors within the region. • Ongoing - outreach occurs to share PTAC training and workshop opportunities			
• Step 4: Chambers of Commerce sponsor the workshops, which are conducted by PTAC and other service providers currently engaged in similar efforts. • Ongoing - sponsorship, provided by various organizations, is needed for workshops			
• Step 5: If necessary, adjust existing training programs to be consistent with the new work-shops. All workshops will specifically address JBLM construction contract opportunities. • Ongoing - adjustments are made to workshops to help target JBLM contracting opportunities			
• Step 6: Seek OEA funding for continuation of workshops. • Ongoing			

Table 3.4: Status of Strategy 4.06, Recruit Local Subcontractors on JBLM Construction Projects

Need in 2010:	High	**Need Given Conditions Today:**	**High to Medium:** Most thought this strategy's need was high to medium but in need of an update to better reflect current conditions. PTAC's main role is to offer recruitment support to local firms seeking to procure government contracts, including construction contracts, offered by JBLM. The project team assessed trends associated with JBLM contracts and did find a general trend leaning towards more local contracting particularly for Pierce County businesses. This momentum should be further leveraged by finding more opportunities to help local businesses gain additional JBLM contracts, not solely focused on construction.
Status of Action Steps for Strategy 4.06			
• Step 1: The Regional Partnership would hire an ombudsman contract specialist to work directly with JBLM prime contractors to assist them in finding qualified local contractors. • Ongoing			
• Step 2: The ombudsman assembles lists of prequalified contractors by specialty trade. • In-progress			
• Step 3: The ombudsman attends the contractor workshops to present requirements for becoming a qualified federal subcontractor. • In-progress			
• Step 4: The ombudsman works with the prime contractors and assists in marketing and advertising contracting opportunities and meeting with prospective contractors. • In-progress			

Table 3.5: Status of Strategy 4.07, Support Workforce Development of Retired Military and Spouses and Analyze Emerging Industries

Need in 2010:	High	**Need Given Conditions Today:**	**Medium to High:** Most thought this strategy has a medium to high need but it needs to be substantially updated to reflect the current conditions, existing programs, and priorities. The Pacific Mountain Workforce Development Organization provides programs to help Veterans with job placement and more. The Lacey Veterans Services Hub also supports Veterans with job placement and related skills. Various economic impact studies have been completed (due to support from SSMCP) since 2010 to estimate JBLM's employment and contracts funding impact on the region.
Status of Action Steps for Strategy 4.07			
• Step 1: Apply for and obtain National Emergency Grant (NEG) from the U.S. Department of Labor. • Status Unknown			
• Step 2: Establish a Leadership Team to serve in an advisory capacity for the duration of the project. • Ongoing			
• Step 3: Conduct an Impact Study to identify existing skill gaps within the region's major industries and identify new and emerging industries that will benefit from an increased pool of skilled workers. • Complete			

4. Methodology

The ECONorthwest economics project team analyzed demographic, employment, business, and economic datasets; engaged regional stakeholders including economic development professionals; reviewed relevant plans; and evaluated the status and relevancy of the existing economic strategies in support of this plan update. The existing economic conditions (employment by industry, payroll, etc.) and economic impacts of military operations was compared with growth forecasts to help build a concrete understanding of the long-term trajectory for how the JBLM base could affect the local and regional economy over the next decade. This report also describes the relationship between JBLM and the surrounding communities to help illustrate the base's important economic contributions to the region.

This report has several objectives:

1. Describe the regional economy in detail;
2. Depict the economic impacts of JBLM on the regional economy;
3. Review the priorities and objectives that study area economic development organizations are pursuing; and
4. Identify opportunities to leverage JBLM to enhance economic prosperity and sustainability in the region.

JBLM is a regional economic driver (sometimes called an "anchor institution"). With an area encompassing more than 415,000 acres including the including Yakima Training Center in central Washington, JBLM is one of the largest bases in the U.S. While the economic footprint of JBLM is critical to Washington State, most of the economic impacts from the base are centered in Pierce County where the base is located, along with neighboring Thurston County that is located adjacent to the base.

This memorandum summarizes data for different geographies as described below:

- **Regional Economic Profile**: This looks at the greater Puget Sound region (encompassing King, Kitsap, Pierce, Snohomish, and Thurston counties).
- **JBLM Economic Study Area**: This report uses the Pierce and Thurston counties as the primary economic study area.[2]

The timeframe of the analysis, where possible, compares trends from 2000 to 2010 and from 2010 to 2019 (or 2020, depending on data availability). The 2010 to 2019 period best represents economic trends in the region since the original JBLM Growth Coordination Plan was developed. In 2020, The COVID-19 pandemic posed severe public health impacts which quickly interrupted and affected worldwide economies as policy makers took steps to prevent the spread of the virus. Economic impacts were felt unevenly across the economy with the hospitality and restaurant sectors being most impacted. With the widespread chain reaction on all aspects of life and economy that the COVID-19 virus affected, 2020 has been highlighted as a year with anomalies. The general consensus among economic experts is that the pandemic did not cause lasting economic damage and that the economy is well on the way to full recovery.

[2] We use Pierce and Thurston Counties for the economic study area. This is consistent with the study area used in the 2010 Growth Coordination Plan, in the JBLM economic impact analysis conducted by the University of Washington-Tacoma, and with the primary areas JBLM impacts economically.

5. Regional Economic Context

Military employment and the associated economic impact have a major role in the greater Puget Sound region. As of 2021, Washington state ranks seventh for the number of active military personnel and associated civilians in comparison with other states across the nation (California, Virginia, and Texas rank as the top three).[3] The greater Puget Sound Region, encompassing King, Kitsap, Pierce, Snohomish, and Thurston counties, includes several major bases including the Army and Air Force bases at JBLM (the largest), the Navy Base in Kitsap County, the Naval Station in Everett, as well as installations for the Washington National Guard and Coast Guard (PSRC Regional Economic Strategy: Military Cluster, 2010).

In addition to a large number of jobs, the bases generate Department of Defense contracts that support many private sector contractors and subcontractors in and outside of the region. These defense contracts have significant workforce impacts attracting skilled labor force, resulting in specialized training that can trickle down to other non-military industries and present opportunities for business incubation and entrepreneurship.

In terms of number of jobs, JBLM is considered the fourth-largest employer in Washington State and number one employer in Pierce County. A portion of the personnel stay in the region after their service ends. In fact, approximately 529,784 Veterans reside in Washington State (2015-2019 U.S. Census Bureau ACS Survey). Among this total, nearly 13 percent of all adults in Pierce and Thurston Counties served in the military.

JBLM's economic impact is considerable; JBLM has an estimated $9 billion in salary/wage earnings helping to produce almost $14 billion in gross output that translated into $2.25 billion in revenue for federal, state, and local governments. Among this total, Pierce and Thurston counties, generated an estimated $12.1 billion in total economic impact and over $2 billion in tax revenue.[4]

The Puget Sound Regional Council (PSRC) has recognized the important role military installations provide to the Puget Sound region's economy in different plans including the recently released VISION 2050 (adopted in 2020). In this plan, PSRC recognized military installations as an important regional geography. They also included the military employment contributions in regional modeling. A major military installation includes more than 5,000 active duty and civilian personnel. Although major military installations are important hubs for military and civilian employment and population, they are not required to plan under the Growth Management Act. Planning in and around bases is a priority for PSRC particularly associated with employment since employment leads to increased demand for transportation infrastructure, housing, school services, and other infrastructure.

PSRC's Regional Centers Framework expectations for major military installations include:

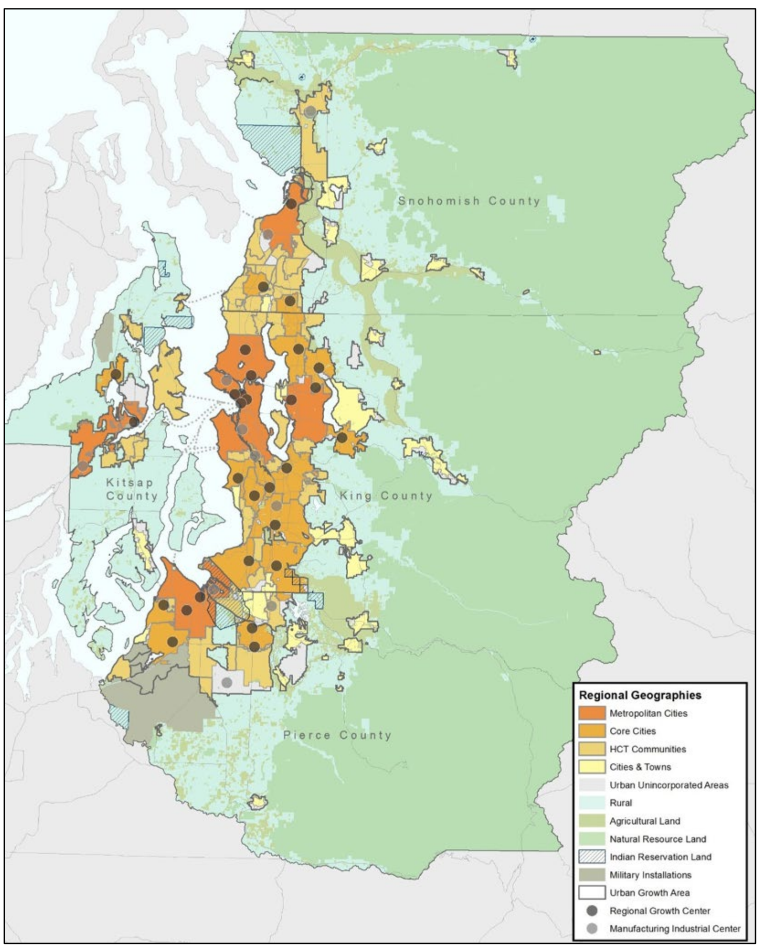
- Ongoing coordination between the military installation, countywide planning forum, and neighboring jurisdictions regarding planned growth, regional impacts, and implementation of multimodal transportation options.
- Support for multimodal commute planning and mode split goals for the installation.
- The completion of the Joint Land Use Study or similar coordinated planning effort.

[3] https://dwp.dmdc.osd.mil/dwp/app/dod-data-reports/workforce-reports
[4] Regional Economic Impact Analysis for SSMCP. University of Washington- Tacoma. 2020.

5.1. Greater Puget Sound and the Pierce/Thurston Study Area

The Puget Sound region has experienced significant growth over the last several decades and is forecasted to grow by 5.8 million people and 3.4 million jobs by 2050 (PSRC VISION 2050). PSRC has developed a Regional Growth Strategy to guide growth to designated urban growth areas and avoid environmental impacts while also supporting economic prosperity, social equity, mobility, affordable housing, and efficient use of new and existing infrastructure. JBLM is shown in the south edge of the Regional Geographies map (adjacent exhibit) and is recognized as a military installation adjacent and interconnected to various Metropolitan and Core cities and High-Capacity Transit (HCT) Communities. PSRC's Regional Growth Strategy aims to direct 36 percent of the regional population growth and 44 percent of regional employment growth to Metropolitan Cities, which includes the city of Tacoma, by 2050. Core Cities, including Lakewood and University Place also will accommodate 28 percent of the region's population growth and 35 percent of its employment growth by 2050, with emphasis on high-capacity transit stations and regional growth centers. Lastly, HCT communities will increasingly play a role in supporting regional population and employment growth as transit is developed by accommodating 24 percent of the region's population growth and 13 percent of its employment growth by 2050. PSRC has also designated places that have become regionally significant manufacturing and industrial centers. These are places with concentrated jobs and industrial employment, industrial zoning, and freight and distribution hubs. The Port of Tacoma is designated as a growing Manufacturing Industrial Center which has been prioritized for local planning, transportation improvements, and investment opportunity.

Figure5.1.1 – Regional Geographies, PSRC, VISION 2050



5.2. Population, Households, and Jobs in Pierce and Thurston Counties

5.2.1. Population

Over the last two decades, Thurston County's population has increased at a larger average annual rate than Pierce County and the state. As seen in Figure 5.2.1, during the 2000 to 2010 period, Thurston County's population increased by 1.98 percent per year on average compared to Pierce County's 1.27 percent and Washington's 1.33 percent. During 2010 to 2020, both counties grew at rates slower than the decade prior, but still maintained steady growth rates of 1.44 percent and 1.25 percent per year for Thurston and Pierce counties, respectively. They accounted for approximately 15.5 percent of the state's total population growth over the 2010 to 2020 period, slightly lower than the 16.8 percent share of growth contribution for the decade prior.

Geography	Population Count			Change (2000-2010)			Change (2010-2020)		
	2000	2010	2020	Difference	Percent Change	AAGR	Difference	Percent Change	AAGR
Washington	5,894,141	6,724,540	7,656,200	830,399	14%	1.33%	931,660	14%	1.31%
Pierce County	700,818	795,225	900,700	94,407	13%	1.27%	105,475	13%	1.25%
Thurston County	207,355	252,264	291,000	44,909	22%	1.98%	38,736	15%	1.44%
Pierce & Thurston County Total	908,173	1,047,489	1,191,700	139,316	15%	1.37%	144,211	14%	1.30%

Source: Washington Office of Financial Management, 2020.

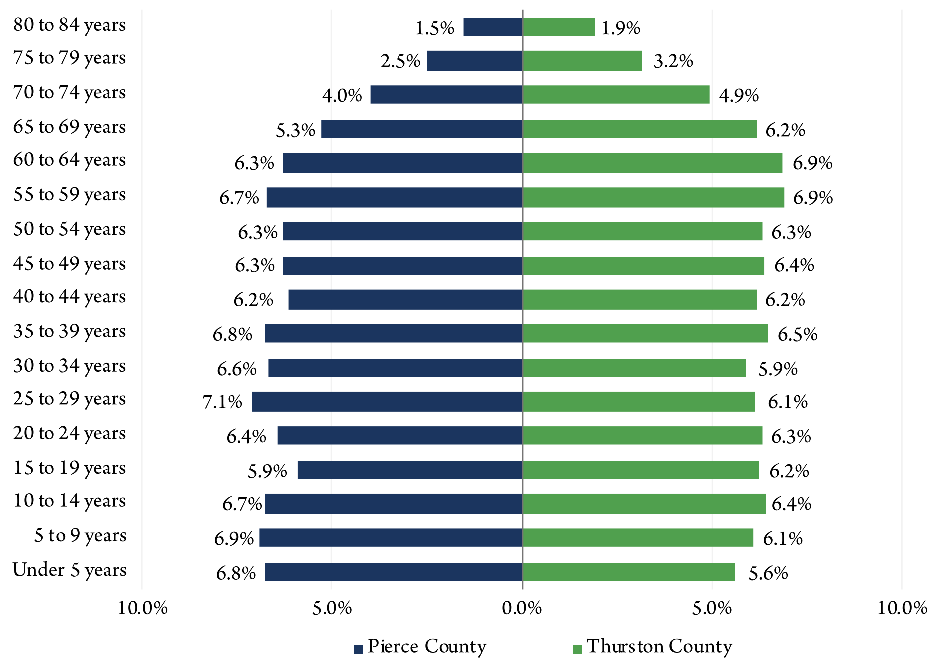
In general, Pierce County residents tend to be younger than Thurston County residents. Pierce County had a median age of 36.4 in 2019, while Thurston County's had a median age of 39.6 years.[5] Overall, both counties median age has slightly increased over the last decade.

When looking at generation groups, Thurston County stands out as having a higher share of population identified as the Silent, WWII and Baby Boomers. On the other hand, Pierce County is identified as having a higher share of those identified as Millennials, Generation Z, and Generation Alpha. Both counties have a comparable share of prime working age (25 to 64 years of age) adult populations. Generally, Pierce County tends to be more racially and ethnically diverse than Thurston County. In 2018, Pierce County had a higher share of people of color (34 percent), compared to Thurston County (26 percent).

[5] U.S. Census Bureau, American Community Survey 2019 1-Year Estimates, *Table B01002: Median Age by Sex*.

As of 2019, Pierce County residents are generally younger than Thurston County residents; however, both have a similar share of prime working age adults (ages 25 to 64) at 53.5 percent and 53.0 percent for Pierce and Thurston Counties, respectively.

Figure 5.2.2 – Population Distribution by Age Group, Pierce and Thurston Counties, 2019



Source: Washington Employment Security Department.

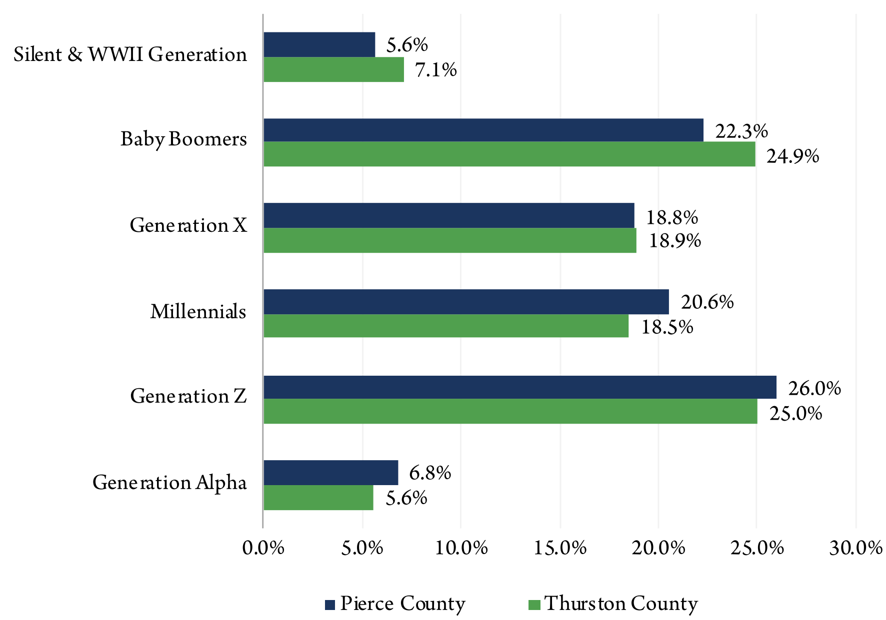
Thurston County had a higher share of Silent, WWII, and Baby Boomer residents relative to Pierce County in 2019.

Pierce County had a higher share of all other younger generations than Thurston County, but a comparable mix of Generation X residents.

Generation Years:

- WWII – 1901-1927
- Silent – 1928-1945
- Baby Boomers – 1946-1964
- Gen X – 1965-1980
- Millennials – 1981-1996
- Gen Z – 1997-2012
- Gen Alpha – 2013-Present

Figure 5.2.3 – Population Distribution by Generation, Pierce and Thurston Counties, 2019



Source: Washington Employment Security Department.

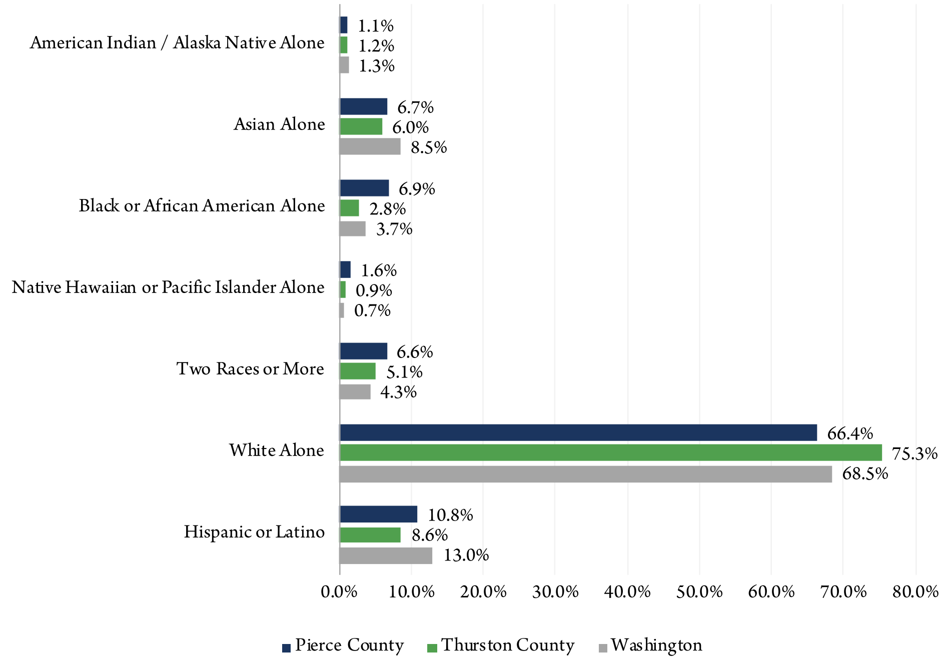
Pierce County tends to be more racially and ethnically diverse than Thurston County. For racial groups like Black or African American, Native Hawaiian or Pacific Islander, and multiracial individuals, Pierce County has a higher percent share relative to statewide averages.

While both counties have a comparable share of residents identifying as American Indian or Alaska Native, Pierce County has a larger share of Asian, Black or African American, Native Hawaiian or Pacific Islander, multiracial, and Hispanic or Latino individuals.

Although Pierce County's racial and ethnic composition is currently more diverse than Thurston County's, Thurston County's composition is changing at a faster rate than Pierce County's.

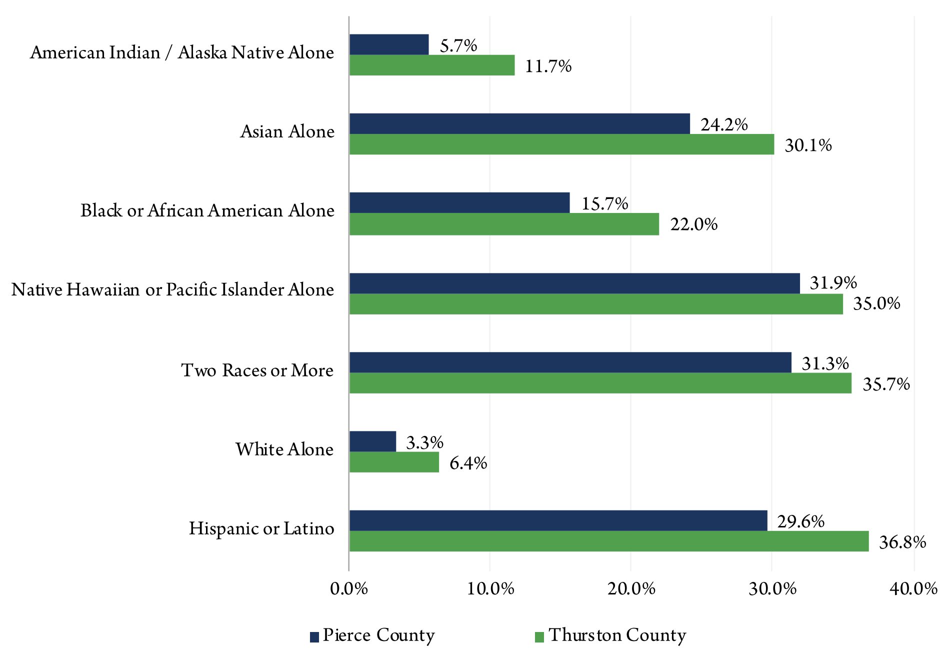
Over the 2010 to 2018 period, Thurston County's growth in all racial and ethnic groups grew faster than Pierce County's, the largest changes being those identifying as Hispanic or Latino, multiracial, Native Hawaiian or Pacific Islander, and Asian.

Figure 5.2.4 – Population by Race and Ethnicity, Pierce and Thurston Counties, 2018



Source: Washington Employment Security Department.

Figure 5.2.5 – Change in Race and Ethnicity, Pierce and Thurston Counties, 2010–2018

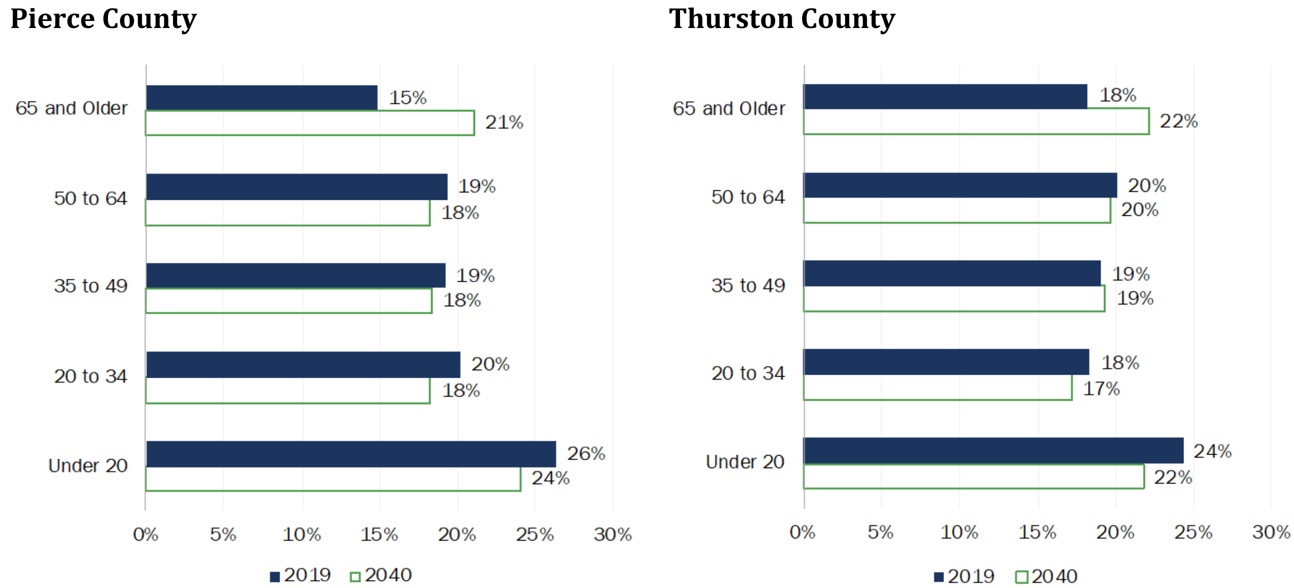


Source: Washington Employment Security Department.

According to the Washington Office of Financial Management's statewide and county population forecasts, residents aged 65 and older will make up a larger share of each county's total population in 2040 relative to their 2019 estimates. This age cohort makes up the largest forecasted increase, growing by about six percentage points in Pierce County, from 15 percent to 21 percent, and by four percentage points in Thurston County, from 18 percent to 22 percent. In Thurston County, the growth in the senior population (65+ years) by 2040 is expected to increase to have an equal share of the total population as the youngest cohort (under 20 years) for the first time ever. This trend is aligned with national trends forecasting that the number of seniors will continue to grow over the next few decades to an estimated share of around 22% over age 65 by 2050.[6]

Nearly all other age groups in both counties are forecasted to decrease as a share of their total population over the next twenty years, except for 50- to 64-year-olds in Thurston County. This is to say that the population in both counties are aging and that younger individuals will comprise a smaller share of each county's population in the decades ahead.

Figure 5.2.6 – Population Forecast by Age Group and County, 2020–2040



Source: Washington Office of Financial Management, 2017 GMA Projections.

5.2.2. Households

Over the 2000 to 2019 analysis period, Pierce County grew by approximately 72,900 households and Thurston County by about 31,300 households. Statewide, the number of households grew by 661,079 over the same period. Taken together, both Pierce and Thurston Counties contributed to approximately 15.7 percent of Washington's household growth during 2000 to 2019, a share comparable to the Counties' contribution to statewide population growth over the 2000 to 2020 analysis period (16.9 percent).

When comparing the two analysis periods of 2000 to 2010 and 2010 to 2019 separately, Thurston County had a larger increase in households relative to Pierce County and the state. However, both counties experienced larger household growth during the 2000 to 2010 period relative to the 2010 to 2019 period. In the former period, Thurston County households increased at an average annual rate of just over two percent per year, compared to Pierce County's 1.41 percent and the state's 1.39 percent, as seen in Figure 5.2.7.

---

[6] *Sources: AARP (2018) Making Room for a Changing America. 2014 and 2017 National Projections, U.S. Census Bureau | CHPC Making Room Household Model using the 2015 American Community Survey, U.S. Census Bureau*

According to PSRC's 2040 household forecast, both Pierce and Thurston Counties are forecasted to grow at a faster rate and add more households than what was experienced during 2000 to 2019.

Figure 5.2.7 – Change in Number of Households, by County, 2000–2019

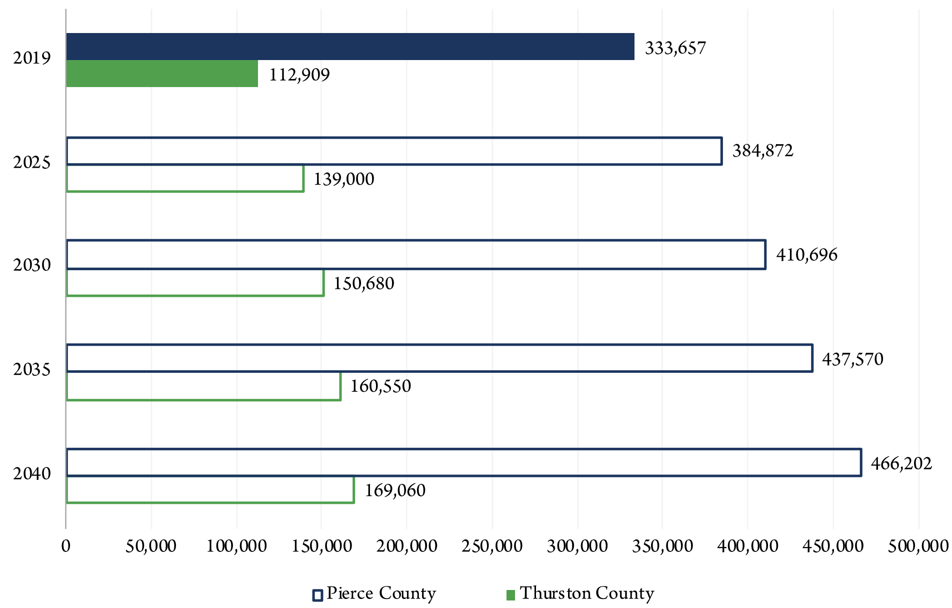
Geography	Number of Households			Change (2000-2010)			Change (2010-2019)		
	2000	2010	2019	Difference	Percent Change	AAGR	Difference	Percent Change	AAGR
Washington	2,271,398	2,606,863	2,932,477	335,465	15%	1.39%	325,614	12%	1.32%
Pierce County	260,800	299,876	333,657	39,076	15%	1.41%	33,781	11%	1.19%
Thurston County	81,625	99,869	112,909	18,244	22%	2.04%	13,040	13%	1.37%
Pierce & Thurston County Total	342,425	399,745	446,566	57,320	17%	1.56%	46,821	12%	1.24%

Source: U.S. Census Bureau, Decennial Census (2000; Table PHC-1-49); ACS 1-Year Estimates (2010 & 2019; Table DP02).

Over the 2019 to 2040 period, Pierce County is forecasted to grow by about 132,545 households and Thurston County is forecasted to add about 56,151 households.

On an annual average growth basis, Thurston County is forecasted to add households at a more rapid rate than Pierce County, growing at 1.9 percent per year compared to Pierce County's 1.6 percent. Although Thurston household growth is expected to grow more rapidly, Pierce County is expected to be home to almost three times more households by 2040 in comparison to Thurston County.

Figure 5.2.8 – Household Forecast, Pierce and Thurston Counties, 2019–2040



Source: Puget Sound Regional Council, Land Use Vision 2, 2017; Thurston County Regional Planning Council, June 2021.

5.2.3. Employment

On an average annual growth basis, total nonfarm employment in Thurston County has increased faster than both Pierce County and statewide trends during both analysis periods. Pierce County had an estimated 327,108 jobs in 2019, which is over double the number of Thurston County jobs (120,883 jobs).

During the 2000 to 2010 period, Pierce County added around 22,475 nonfarm jobs to its economy. Thurston County added about 12,642 jobs. Taken together, both counties contributed about 39 percent to the state's overall nonfarm employment growth for the 2000 to 2010 period. Over the 2010 to 2019 period, Pierce County more than doubled its growth in jobs relative to the 2000 to 2010 period (56,375 jobs compared to 22,475, or a 151 percent increase). While Thurston County did not increase by the same magnitude as Pierce, it added nearly 75 percent more jobs during the 2010 to 2019 period than during 2000 to 2010 (22,166 jobs compared to 12,642 jobs). When combining total nonfarm employment in the two counties, Pierce County has the larger share of employment at about 73 percent, compared to 27 percent in Thurston County. Overall, both counties accounted for around 13 percent of the state's total nonfarm employment in 2019.

Figure 5.2.9 – Change in Total Nonfarm Employment by County, 2000–2019

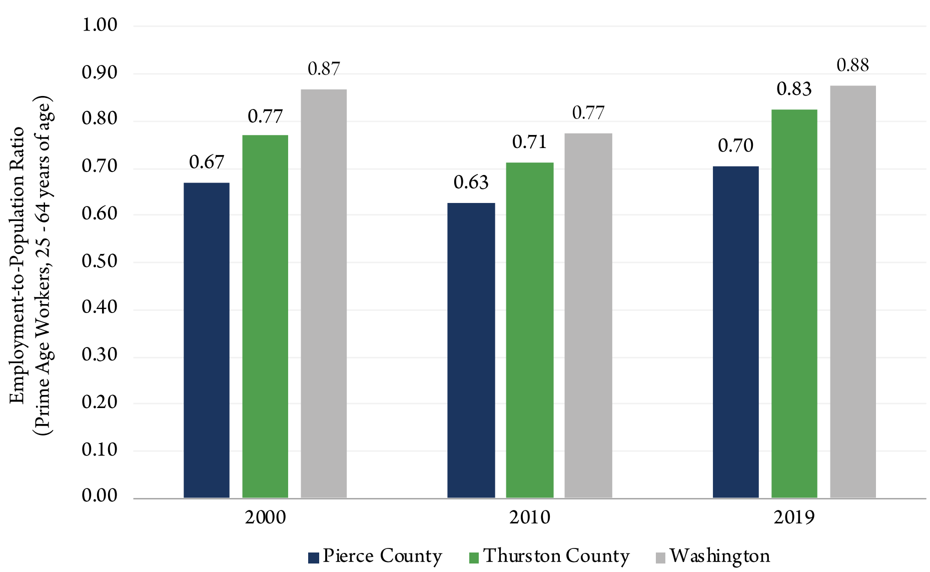
Geography	Total Nonfarm Employment			Change (2000-2010)			Change (2010-2019)		
	2000	2010	2019	Difference	Percent Change	AAGR	Difference	Percent Change	AAGR
Washington	2,746,008	2,836,133	3,468,300	90,125	3%	0.32%	632,167	22%	2.26%
Pierce County	248,258	270,733	327,108	22,475	9%	0.87%	56,375	21%	2.12%
Thurston County	86,075	98,717	120,883	12,642	15%	1.38%	22,166	22%	2.28%
Pierce & Thurston County Total	334,333	369,450	447,991	35,117	11%	1.00%	78,541	21%	2.16%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

Thurston County tends to have a higher ratio of prime age working adults-to-population than Pierce County, but a lower ratio than the state.

During 2010, the employment-to-population ratios for both counties and the state decreased relative to their 2000 values due to the Great Recession of 2008. However, as of 2019, the ratios for both counties and the state exceeded their 2010 and 2000 values.

Figure 5.2.10 – Employment-to-Population Ratio for Prime Age Working Adults (25 to 64 years of age), Pierce and Thurston Counties, 2000–2019

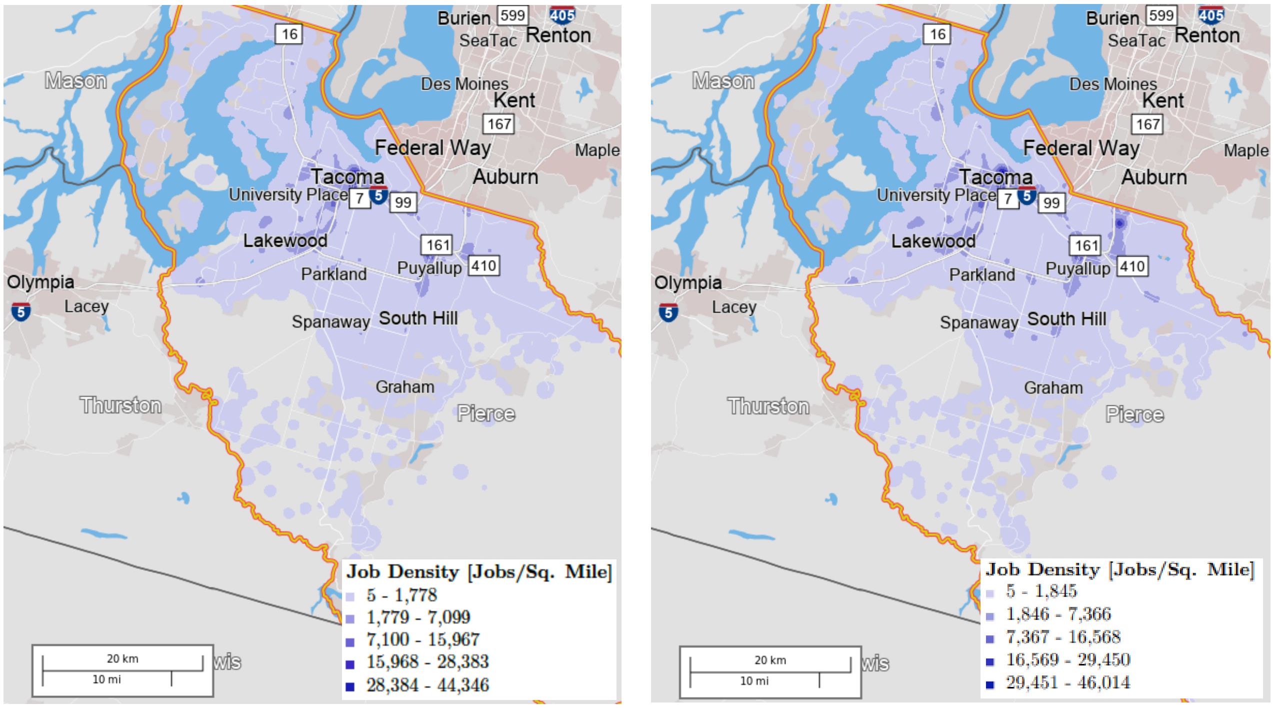


Source: Washington Employment Security Department.

Over the 2010 to 2018 period, employment concentration in Pierce County has become denser in urban areas (Tacoma, Lakewood, University Place, Puyallup, South Hill). At the same time, employment density has spread to outlying urban areas. The North Puyallup region, as well as Spanaway, Parkland, Gig Harbor, and the stretch between Fife and North Puyallup have experienced a heavier concentration of employment density over the past nine years.

Figure 5.2.11 – Change in Employment Density, Pierce County, 2010–2018

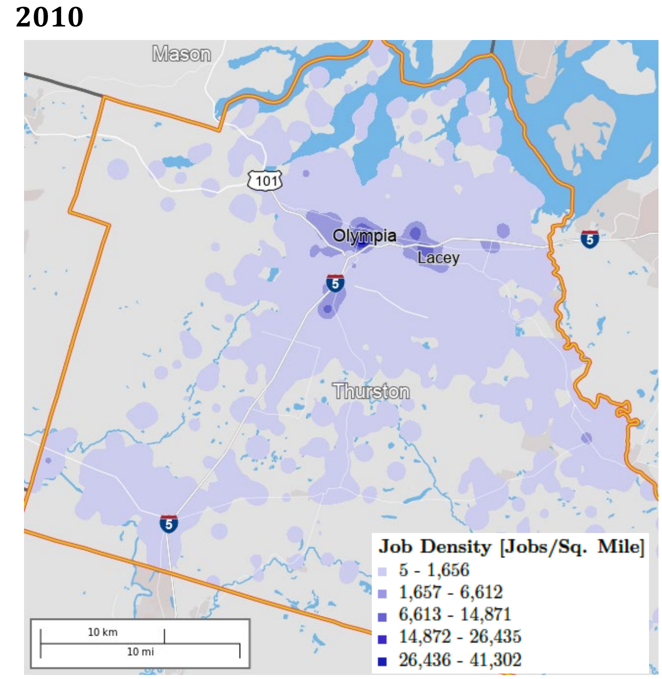
2010 **2018**

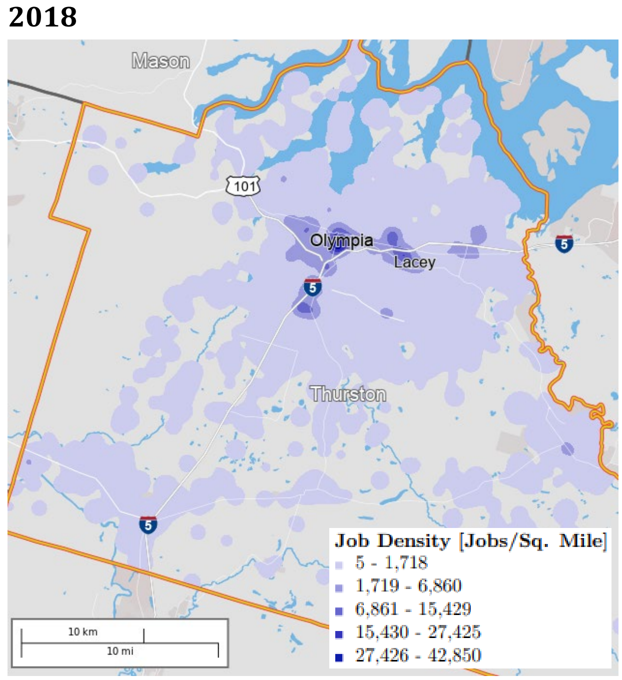


Source: U.S. Census Bureau, OnTheMap, LEHD Data, 2010 and 2018.

Like Pierce County, Thurston County's employment concentration has become denser over the 2010 to 2018 period. More jobs per square mile have been added to the Olympia and Lacey areas, in addition to areas such as Tumwater and Tanglewilde-Thompson Place.

Figure 5.2.12 – Change in Employment Density, Thurston County, 2010–2018





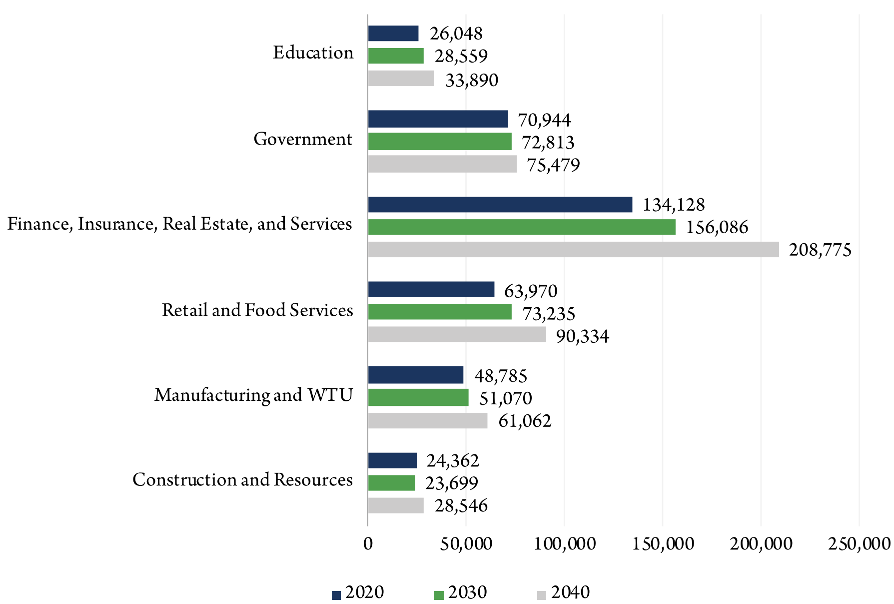
Source: U.S. Census Bureau, OnTheMap, LEHD Data, 2010 and 2018.

Over the next two decades, Pierce County is forecasted to add nearly 130,000 new jobs by 2040, an increase of 35 percent from its 2020 job count estimate.

The finance, insurance, real estate, and services sector is forecasted to have the largest growth over the 2020 to 2040 period, increasing by about 74,600 jobs, or 56 percent.

The government sector is forecasted to increase the least relative to all other sectors, growing by about 4,500 jobs, or six percent from its 2020 estimate.

Figure 5.2.13 – Pierce County Employment Forecast, 2020–2040



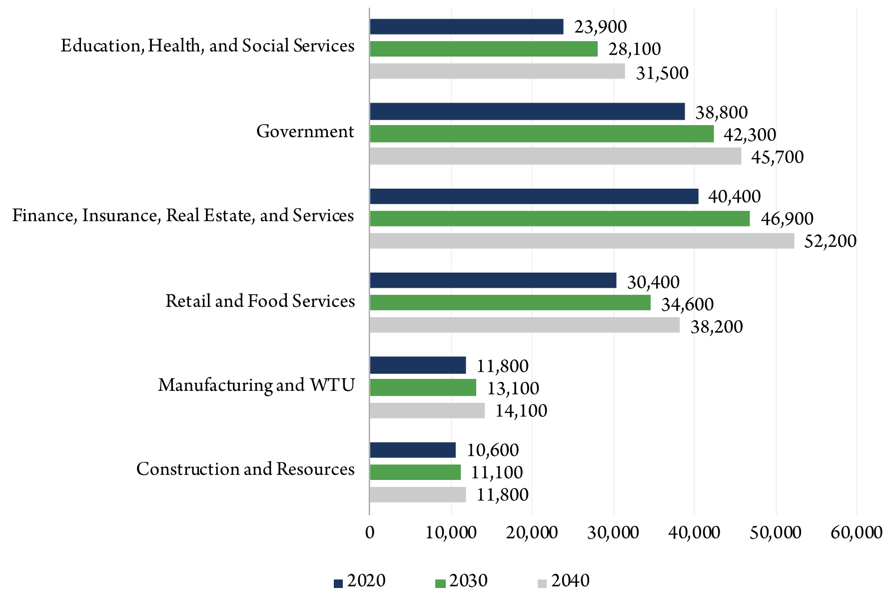
Source: Puget Sound Regional Council Employment Forecast, Land Use Vision, 2017.

Thurston County's employment is forecasted to grow by approximately 37,600 jobs over the 2020 to 2040 period, an increase of 24 percent.

Contrary to Pierce County, government jobs in Thurston County are forecasted to increase the most on a percent change basis over the next two decades, adding about 7,600 jobs, or an increase of 32 percent.

The construction and resources sector is forecasted to have the smallest growth, increasing by about 1,200 jobs, or 11 percent.

Figure 5.2.14 – Thurston County Employment Forecast, 2020–2040



Source: Thurston Regional Planning Council, Forecast Work Program, 2018.

5.3. Labor Force and Unemployment

5.3.1. Labor Force Characteristics

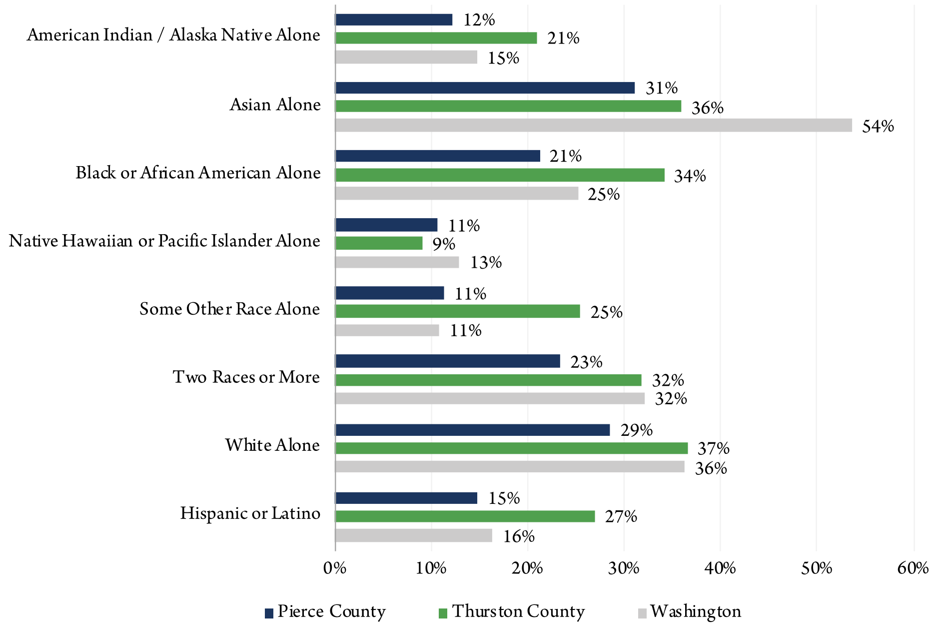
This section analyzes key labor force characteristics in Pierce and Thurston Counties and compares them to statewide trends. The data are disaggregated by race and ethnicity to illustrate the region's diverse population and economy.[7] Key findings from the labor force analysis are as follows:

- Pierce County's racial and ethnic composition is more diverse than Thurston County's composition for the 2015-2019 period; however, Thurston County's composition is changing more rapidly (see Figure 5.2.5).
- In terms of educational attainment, Thurston County has a greater overall share of college-educated residents over the age of 25 (35.7 percent) relative to Pierce County (27.2 percent) and a share similar to that of the state (36.0 percent). Overall, the South Puget Sound region is home to a broad array of universities, community colleges, and trade schools, such as the University of Puget Sound, University of Washington-Tacoma, Tacoma Community College in Pierce County, and Evergreen University and South Puget Sound Community College in Thurston County.
- Most racial and ethnic groups in Thurston County tend to hold bachelor and advanced degrees at a higher rate than their Pierce County counterparts, especially for persons identifying as American Indian or Alaska Native, Black or African American, multiracial, and Hispanic or Latino.
- Unemployment rates tend to be highest for persons identifying as American Indian or Alaska Native, Black or African American, or multiracial. Those identifying as White or Asian tend to have some of the lowest unemployment rates in Pierce and Thurston Counties and across the state.
- The median household income in Pierce County is generally higher than Thurston County for all racial and ethnic groups, except for those identifying as Asian, Black, or African American. Relative to the statewide median, all racial and ethnic groups in Pierce County, except for those identifying as White or Native Hawaiian or Pacific Islander, had median household incomes below the countywide median of $72,113. In Thurston County, all racial groups except for White alone or Black or African American alone had incomes below the countywide median of $72,003. Nearly all racial and ethnic groups in both Pierce and Thurston Counties had median household incomes below the statewide median of $73,775 for the 2015-2019 period.

[7] Note: American Community Survey data, available via data.census.gov, do not separate ethnicity (Hispanic or Latino) from racial groups, except for persons identifying as White alone (Non-Hispanic or Latino, White alone). For consistency, we report estimates for each individual racial group ("alone"), but these groupings contain persons of Hispanic or Latino ethnicity.

Most racial and ethnic groups in Thurston County tend to hold Bachelor and advanced degrees at a higher rate than their Pierce County counterparts. Asians have the highest educational attainment rates in Pierce County and the state while the White alone group has the highest rate in Thurston County. The groups with the lowest educational attainment are Native Hawaiian or Pacific Islander alone (NHPI), American Indian/ Alaska Native alone (AIAN), and Some Other Race alone and Hispanic/Latino for Pierce County. Black/African Americans in Pierce County had a lower share (21 percent) in comparison to Thurston County (34 percent).

Figure 5.3.1 – Share of 25+ Year Old's Holding a Bachelor's Degree or Higher by Race/Ethnicity, Pierce County, Thurston County, and Washington, 2015-2019

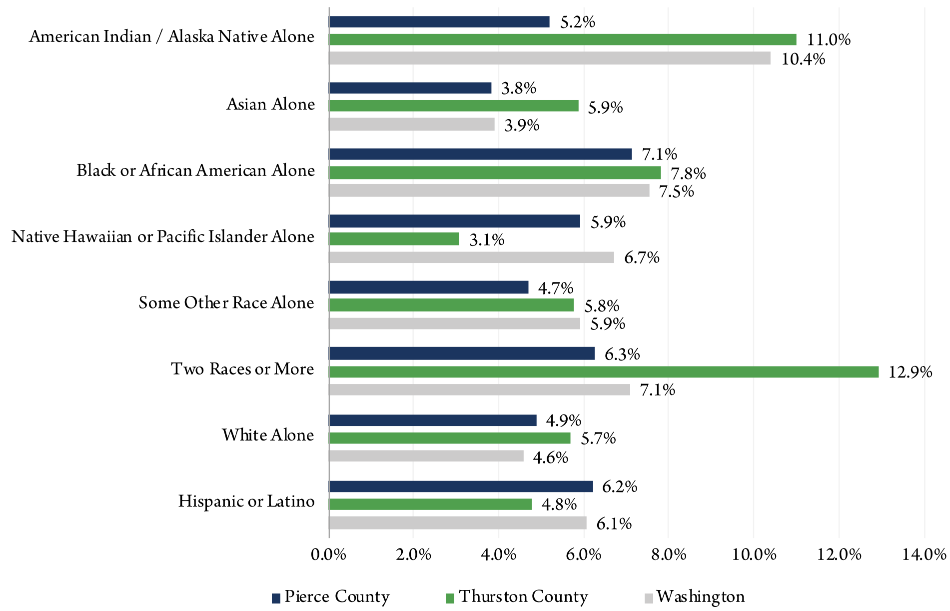


Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates, Tables B15002A-I.

Unemployment rates tended to be highest for individuals identifying as AIAN, Black or African American or multiracial (two or more races). Multiracial persons residing in Thurston had the highest unemployment rate, above Pierce County's and the state's rate.

Those identifying as either Asian alone or White alone had some of the lowest unemployment rates.

Figure 5.3.2 – Unemployment Rate by Race/Ethnicity, Pierce County, Thurston County, and Washington, 2015-2019



Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates, Tables C23002A-I.

5.3.2. Trends in the Unemployment Rate

Unemployment rates in Pierce and Thurston counties have tracked the state average over the 2000 to 2020 analysis period. Generally, Pierce County's unemployment rate typically exceeds the state average and Thurston County's falls below the state average.

In 2020, Pierce and Thurston counties reached an average unemployment rate of 9.6 percent and 8.3 percent, respectively. The state reached 8.4 percent in its unemployment rate in 2020 (see Exhibit 5.3.). At the height of the COVID-19 pandemic and the resulting statewide lockdown orders that went into effect in April of 2020, the unemployment rate spiked to 18.6 percent in Pierce County and 16.4 percent in Thurston County. In subsequent months, both counties' respective rates sharply declined (see Exhibit 5.3.).

In 2021 Q1, Pierce County's unemployment rate decreased to 7.0 percent, one percentage point higher than Thurston County's rate of 6.0 percent, and 0.5 percentage points higher than the statewide average of 6.5 percent. In the following quarter, unemployment rates decreased further. Pierce County reached 5.8 percent unemployment in 2021 Q2, 1.2 percentage points lower than its 2021 Q1 rate. Thurston County's unemployment rate fell to 4.9 percent, 1.1 percentage points lower than the previous quarter. Statewide, the unemployment rate decreased by 1.2 percentage points, down to 5.3 percent in 2021 Q2.

Unemployment rates in Pierce and Thurston counties have tracked the state average over the 2000 to 2020 analysis period. However, Pierce County's unemployment rate typically exceeds the state average.

Thurston County typically remains on par, or just below, the state average. In recent years (2013 to 2020), Thurston County's unemployment rate remained slightly above the state average.

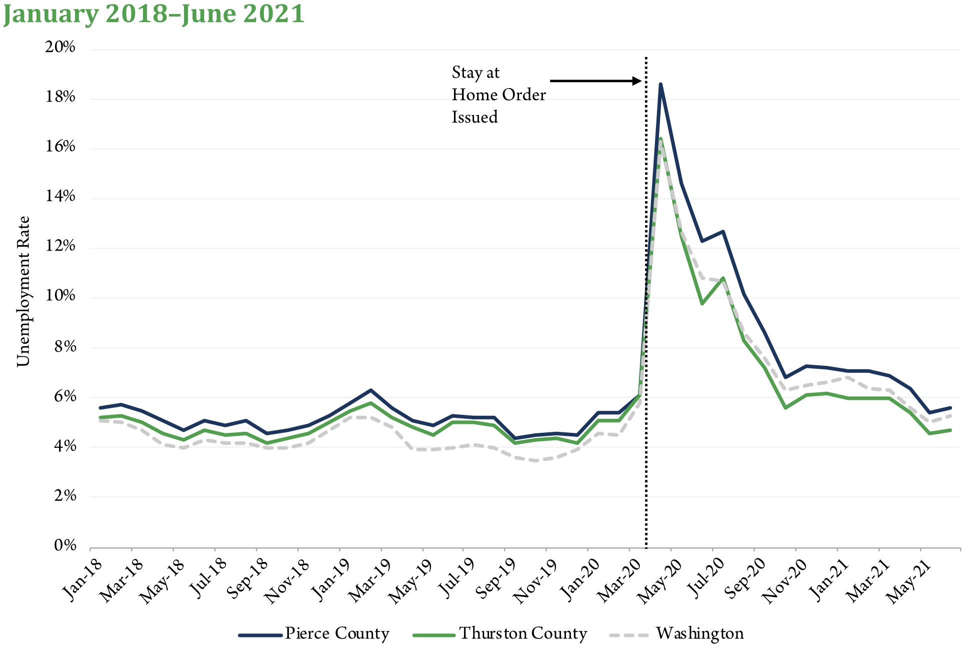
Exhibit 5.3.3 – Annual Change in Unemployment Rate by County, 2000–2020

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

Unemployment rates statewide and in Pierce and Thurston Counties spiked at the onset of the Covid-19 pandemic. In April of 2020, statewide stay at home orders went into effect. During that month, unemployment peaked at 18.6 percent in Pierce County, 16.4 percent in Thurston County, and 16.3 percent across Washington.

In subsequent months, unemployment fell. As of June 2021, unemployment rates reached 5.6 percent in Pierce County, 4.7 percent in Thurston County, and 5.3 percent statewide.

Exhibit 5.3.4 – Recent Monthly Change in Unemployment Rates by County, January 2018–June 2021



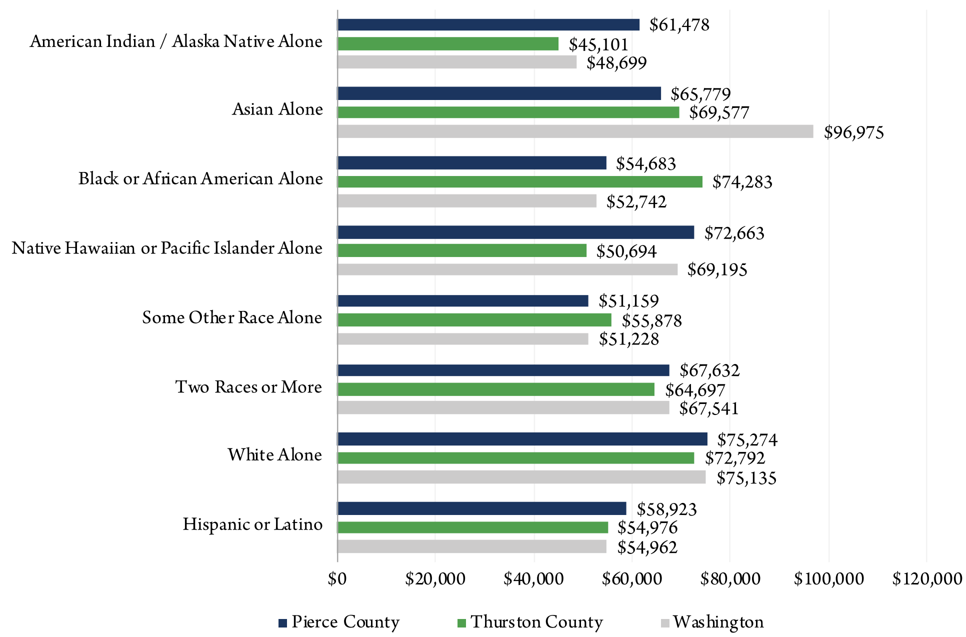
Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

5.3.3. Economic Equity Analysis

Situated at the southern edge of the Puget Sound region, Pierce and Thurston counties both have a growing economy, diverse residents and employment opportunities covering a broad range of industries. However, this wealth has not been spread equitably since communities of color remain on the margins of the rising economy with higher rates of poverty, income gaps, and unemployment. The two-county region has experienced increasing income inequality from 2010 to 2019. Unemployment rates tended to be highest for persons of color in both counties and the median household income for all racial and ethnic groups in Pierce County, except for those identifying as White alone or Native Hawaiian or Pacific Islander alone, had median household incomes below the county's median of $72,113.

In most cases, the median household income in Pierce County is generally higher than Thurston County for all racial and ethnic groups, except for Asian alone, Black or African American alone, or some other race alone households. Black or African Americans ($54,683) and some other race alone ($51,159) had the lowest median household incomes in Pierce County, a rate much lower than their white counterparts ($75,274). All racial and ethnic groups in Pierce County, except for those identifying as White alone or NHPI alone, had median household incomes below the county's median of $72,113.

Exhibit 5.3.5 – Median Household Income by Race and Ethnicity, Pierce County, Thurston County, and Washington, 2015-2019



Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates, Tables B19013A-I.

Geography	Median Household Income (All Households), 2015-2019
Pierce County	$72,113
Thurston County	$72,003
Washington	$73,775

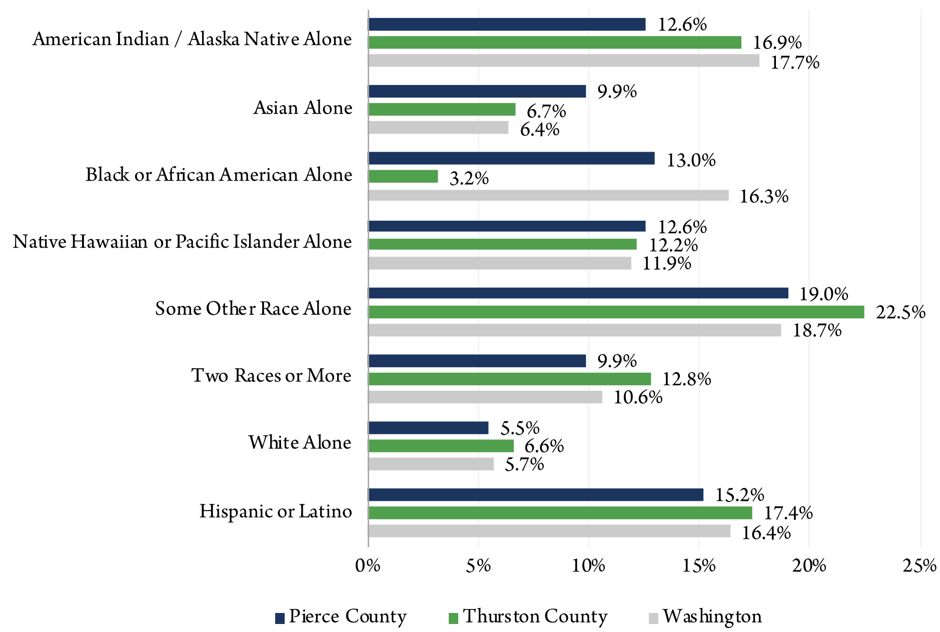
Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates, Table S1901.

In Thurston County, all racial groups except for White alone or Black or African American alone had incomes below the county's median of $72,003. AIAN, NHPI, and Hispanic/Latino households in Thurston County had the lowest median household income levels (all below $55,000).

Non-White families in Pierce and Thurston counties tend to be below the federal poverty line more often than White families.

While families in Pierce and Thurston counties generally follow the statewide average, Asian households in Pierce County tended to experience poverty at a rate higher than Asian families in Thurston County. Additionally, Black or African American households in Pierce County typically experienced a higher rate of poverty than their Thurston County counterparts.

Figure 5.3.3 – Poverty Status of Families by Race and Ethnicity, 2015-2019



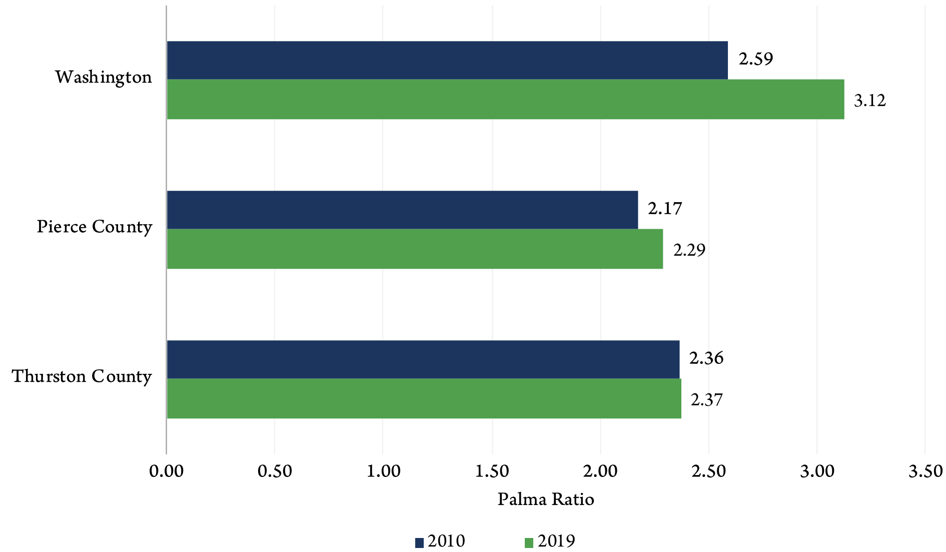
Source: U.S. Census Bureau, 2015-2019 ACS 5-year estimates, Table S1702.

The Palma Ratio is a measure of income inequality that is defined as the ratio of income at the top 10 percent of households relative to that of the bottom 40 percent.

The Palma Ratio for both Pierce and Thurston counties grew over the 2010 to 2019 period, with Pierce County (5.4 percent) increasing more than Thurston County (0.3 percent).

Statewide, the Palma Ratio grew by about 20.5 percent over the analysis period.

Figure 5.3.4 – Palma Ratio, 2010 and 2019



Source: U.S. Census Bureau, 2010 and 2019 ACS 1-year PUMS.

6. Employment Sector Trends in the Study Area

6.1. Industry and Sector Employment Trends

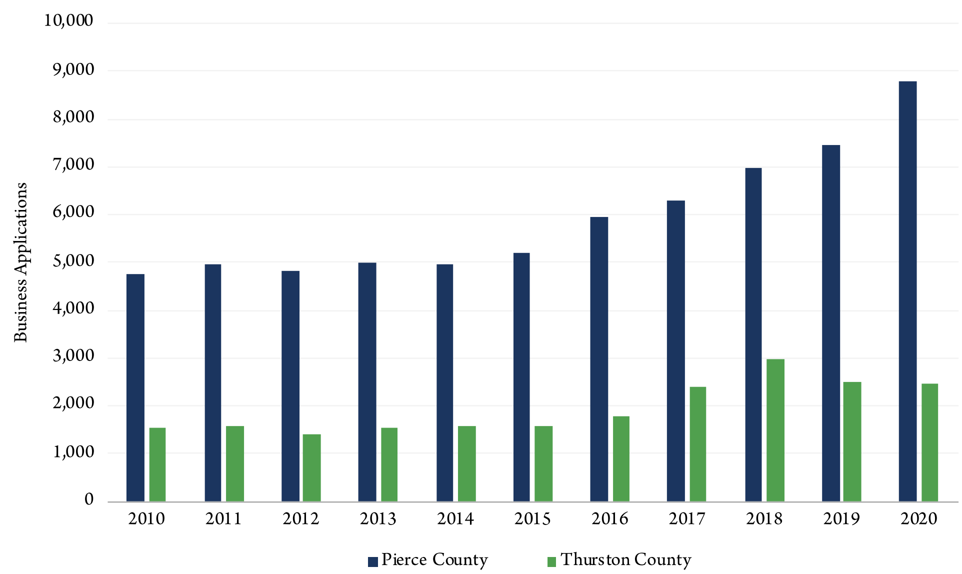
6.1.1. Change in Business Applications

Over the 2010 to 2020 period, approximately 65,205 business applications have been filed in Pierce County and 21,350 in Thurston County and taken together, they comprised almost 14 percent of the state's total business applications (around 629,902 business applications were filed statewide).[8] On an annual average basis, applications have increased by 6.3 percent and 4.8 percent in Pierce County and Thurston County, respectively. These findings indicate that both counties are attractive locations for new businesses and suited for new businesses growth.

Business applications in Pierce County have been steadily increasing over the 2014 to 2020 period. In 2020, approximately 8,795 applications were filed, the largest count during the 2010 to 2020 analysis period (an increase of 85 percent relative to 2010).

In 2020, about 2,451 business applications were filed in Thurston County, 60 percent higher than its 2010 application count. However, Thurston County's application count for 2020 is about 18 percent below its relative peak of 2,985 applications in 2018.

Figure 6.1.1 – Annual Business Applications by County, 2010–2020



Source: U.S. Census Bureau, Business Formation Statistics, 2020.

6.1.2. Change in Firms, Covered Employment, and Wages in Pierce County

Overall, firms within the healthcare and social assistance sector and information sector have grown most rapidly over the last decade in Pierce County and firm growth is strong, increasing by almost ten percent. Along with firm growth, covered employment grew significantly by 21.3 percent between 2010 and 2019 in Pierce County. Average wages have increased by about eight percent; however, wages are much lower in Pierce County than the state average since employees earned about 22 percent less than the statewide average in 2019. In Pierce County, the smallest employers (those with fewer than 20 employees) represent 89 percent of all employers and provide almost a quarter of the jobs in Pierce County while large employers (with over 250 employees) represent less than one percent of all employers and employ 35

[8] Business application data are published by the U.S. Census Bureau. Their Business Formation Statistics (BFS) dataset measures business formation by summarizing the quantity of Employer Identification Number (EIN) applications across the nation, which is subsequently disaggregated into smaller geographies.

percent of the County's labor force in 2020.[9] Additional trends in firms, covered employment, and wages are highlighted below.

Firms

- Pierce County's firm count increased by 9.8 percent from 2010 to 2019 (see Figure 6.1.2).
- Firms operating in the healthcare and social assistance sector increased the most, growing by about 349 percent between 2010 and 2019, or 5,242 firms countywide. In 2019, firms operating in this sector comprised approximately 31 percent of the county's total firms, followed by construction at about 13 percent.
- Information firms increased by 101 percent from 2010 to 2019; however, these firms made up only one percent of the county's total firm count (223 firms).

Figure 6.1.2 – Change in Firms in Pierce County, by Sector, 2010–2019

Employment Sector	Number of Firms		Sector Share as a Percent of Total Firms by Industry		Percent Change in Number of Firms
	2010	2019	2010	2019	2010 - 2019
Health Care & Social Assistance	1,504	6,746	7.6%	31.0%	348.5%
Construction	2,304	2,830	11.6%	13.0%	22.8%
Professional & Technical Services	1,249	1,800	6.3%	8.3%	44.1%
Other Services (Except Public Admin)	6,882	1,583	34.8%	7.3%	-77.0%
Retail Trade	1,503	1,476	7.6%	6.8%	-1.8%
Accommodation & Food Services	1,279	1,375	6.5%	6.3%	7.5%
Admin & Waste Services	913	1,198	4.6%	5.5%	31.2%
Wholesale Trade	1,049	1,155	5.3%	5.3%	10.1%
Real Estate, Rental & Leasing	649	694	3.3%	3.2%	6.9%
Manufacturing	598	614	3.0%	2.8%	2.6%
Finance & Insurance	513	552	2.6%	2.5%	7.5%
Transportation & Warehousing	428	543	2.2%	2.5%	26.8%
Arts, Entertainment, & Recreation	225	272	1.1%	1.3%	21.0%
Educational Services	199	260	1.0%	1.2%	30.8%
Information	111	223	0.6%	1.0%	101.1%
All Government	187	191	0.9%	0.9%	2.1%
Agriculture, Forestry, Fishing & Hunting	131	148	0.7%	0.7%	13.0%
Management of Companies & Enterprises	41	44	0.2%	0.2%	6.1%
Utilities	27	24	0.1%	0.1%	-11.1%
Mining	11	7	0.1%	0.0%	-36.4%
Total Covered Firms	19,799	21,732	100.0%	100.0%	9.8%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

[9] Data in this section—as well as the subsequent section for Thurston County—are sorted, from high to low, based on the percent share a sector comprises of the county-wide total over the 2010 to 2019 analysis period. For wages, we compared the average annual wage earned in each sector relative to the county-wide average for sorting. Sectors that grew more than 50 percent (in firm count, covered employment count, or wages) have been highlighted with green. Any sector that contracted has been highlighted with orange.

Covered Employment

- Countywide, covered employment grew by 21.3 percent between 2010 and 2019 in Pierce County (see Figure 6.1.3).
- The transportation and warehousing sector had the largest growth relative to all other sectors, increasing by about 77 percent from 2010 to 2019 in Pierce County.
- The administrative and support and waste management and remediation services sector grew by approximately 70 percent.[10]

Figure 6.1.3 – Change in Covered Employment in Pierce County, by Sector, 2010–2019

Employment Sector	Covered Employment by Sector		Employment Share of Total Employment by Sector		Percent Change in Industry Employment
	2010	2019	2010	2019	2010 - 2019
All Government	57,713	59,109	22.1%	18.7%	2.4%
Health Care & Social Assistance	37,259	50,205	14.3%	15.9%	34.7%
Retail Trade	30,579	35,532	11.7%	11.2%	16.2%
Accommodation & Food Services	21,076	28,715	8.1%	9.1%	36.2%
Construction	16,138	23,770	6.2%	7.5%	47.3%
Admin & Waste Services	13,270	21,960	5.1%	6.9%	65.5%
Manufacturing	16,067	17,475	6.2%	5.5%	8.8%
Transportation & Warehousing	9,660	17,117	3.7%	5.4%	77.2%
Wholesale Trade	10,785	13,233	4.1%	4.2%	22.7%
Other Services (Except Public Admin)	14,808	11,166	5.7%	3.5%	-24.6%
Professional & Technical Services	8,561	10,351	3.3%	3.3%	20.9%
Finance & Insurance	7,658	8,507	2.9%	2.7%	11.1%
Real Estate, Rental & Leasing	4,052	5,195	1.6%	1.6%	28.2%
Arts, Entertainment, & Recreation	3,982	4,747	1.5%	1.5%	19.2%
Educational Services	3,712	4,584	1.4%	1.4%	23.5%
Information	2,890	2,257	1.1%	0.7%	-21.9%
Agriculture, Forestry, Fishing, & Hunting	986	1,056	0.4%	0.3%	7.1%
Management of Companies & Enterprises	925	837	0.4%	0.3%	-9.5%
Utilities	658	635	0.3%	0.2%	-3.5%
Mining	177	181	0.1%	0.1%	2.3%
Total Covered Jobs	260,954	316,632	100.0%	100.0%	21.3%

Note: Covered employment is employment and wages in industries covered by unemployment insurance.

Source: Washington Employment Department; U.S. Bureau of Labor Statistics.

Mean Annual Wages

- When adjusted for inflation (to 2020 constant dollars), the county's mean annual wage increased by about eight percent from 2010 to 2019 (see Figure 6.1.4). Overall, employees in Pierce County earned about 22 percent less than the statewide average ($54,961 compared to $70,465) in 2019.

[10] The administrative and support and waste management and remediation services sector broadly encapsulates workers at establishments that provide essential activities to other businesses, such as cleaning, waste disposal services, office administration, employment placement services, among others.

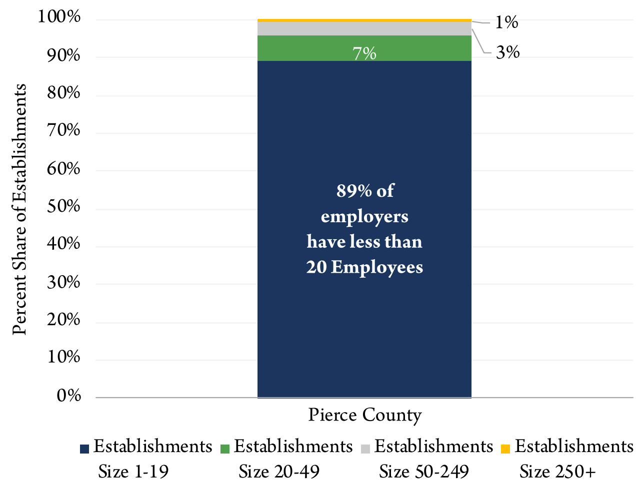
- The real estate, rental, and leasing sector had the largest wage increase at about 63 percent; however, its mean value only exceeded that of the county-wide average by 1.5 percent in 2019.
- Employees working in utilities tended to earn the most relative to all other sectors ($92,504, or nearly 68 percent higher than the county-wide average).
- The manufacturing and educational services sectors decreased in their average annual wages over the analysis period, contracting by 3.7 percent and 2.4 percent, respectively.

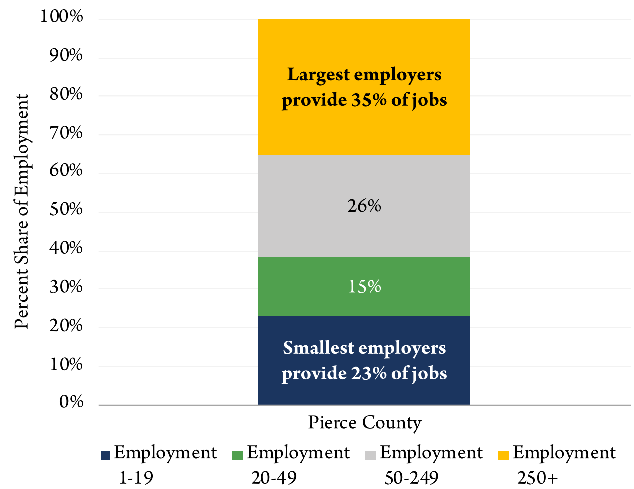
Employment Sector	Mean Annual Wage (2020 Inflation-Adjusted Dollars)		Mean Industry Wage Compared to Total Mean for All Sectors		Percent Change in Mean Wage
	2010	2019	2010	2019	2010 - 2019
Utilities	$85,252	$92,054	67.9%	67.5%	8.0%
Management of Companies & Enterprises	$74,277	$91,534	46.3%	66.5%	23.2%
Finance & Insurance	$80,733	$81,604	59.0%	48.5%	1.1%
Mining	$61,598	$71,214	21.3%	29.6%	15.6%
Professional & Technical Services	$70,686	$70,732	39.2%	28.7%	0.1%
Information	$62,424	$69,141	23.0%	25.8%	10.8%
All Government	$61,478	$68,801	21.1%	25.2%	11.9%
Wholesale Trade	$60,292	$68,472	18.8%	24.6%	13.6%
Manufacturing	$69,226	$66,659	36.4%	21.3%	-3.7%
Construction	$59,127	$66,645	16.5%	21.3%	12.7%
Health Care & Social Assistance	$55,457	$57,645	9.2%	4.9%	3.9%
Transportation & Warehousing	$56,308	$57,437	10.9%	4.5%	2.0%
Real Estate, Rental & Leasing	$34,133	$55,766	-32.8%	1.5%	63.4%
Admin & Waste Services	$44,283	$47,493	-12.8%	-13.6%	7.2%
Educational Services	$44,205	$43,125	-12.9%	-21.5%	-2.4%
Other Services (Except Public Admin)	$26,301	$37,103	-48.2%	-32.5%	41.1%
Retail Trade	$33,296	$36,844	-34.4%	-33.0%	10.7%
Agriculture, Forestry, Fishing & Hunting	$34,483	$35,751	-32.1%	-35.0%	3.7%
Arts, Entertainment, & Recreation	$24,596	$24,614	-51.5%	-55.2%	0.1%
Accommodation & Food Services	$19,122	$23,140	-62.3%	-57.9%	21.0%
All Sectors	$50,764	$54,961	0.0%	0.0%	8.3%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

Employer Size

- Large employers in the region, those with 250 or more employees, make up a little more than half of one percent of all employers. However, these large employers provided 35 percent of the jobs in Pierce County in 2020.
- The smallest employers, those with fewer than 20 employees, represent 89 percent of all employers and provide almost a quarter of the jobs in Pierce County.





Source: Washington State Employment Security Department/Labor Market and Economic Analysis (LMEA).

6.1.3. Change in Firms, Covered Employment, and Wages in Thurston County

Overall, firms within the healthcare and social assistance and professional and technical sectors have grown most rapidly over the past decade in Thurston County. Firm growth is stronger than Pierce (slightly over 20 percent increase). Also covered employment grew slightly more significantly than Pierce by 22.3 percent between 2010 and 2019. Mean wages are increasing in Thurston County by almost ten percent but they were also about 22 percent less than the statewide average in 2019. Same as Pierce, the smallest employers (those with fewer than 20 employees) represent 89 percent of all employers in Thurston County (one quarter of total jobs) and large employers (with over 250 employees) employ 36 percent of the County labor force.[11] Key findings for Thurston County's change in firms, covered employment, and wages data over the 2010 to 2019 period are summarized below.

Firms

- Thurston County's firm count increased by 20.6 percent from 2010 to 2019 (see Figure 6.1.6), which is 10.8 percentage points higher than Pierce County.
- The largest contributor to growth in firm count came from the health care and social assistance sector, which increased by 183.3 percent. Health care and social assistance firms made up about nine percent of the county's total firms in 2010; in 2019, they made up 21.1 percent, a 12.1 percentage point increase.
- The count of firms operating in the professional and technical services sector grew by nearly 87 percent. As of 2019, this sector made up 12.6 percent of the county's total firms, like construction.
- The other services sector had the largest firm count contraction in the county, shrinking by about 65.6 percent, or 1,236 firms. Real estate, rental, and leasing contracted by 4.6 percent, and management of companies and enterprises contracted by 2.9 percent.

[11] Data in this section are sorted, from high to low, based on the percent share a sector comprises of the county-wide total over the 2010 to 2019 analysis period. For wages, we compared the average annual wage earned in each sector relative to the county-wide average for sorting. Sectors that grew more than 50 percent (in firm count, covered employment count, or wages) have been highlighted with green. Any sector that contracted has been highlighted with orange.

Employment Sector	Number of Firms		Firm Share of Total Firms by Industry		Percent Change in Number of Firms
	2010	2019	2010	2019	2010 - 2019
Health Care & Social Assistance	619	1,754	9.0%	21.1%	183.3%
Construction	782	1,051	11.3%	12.6%	34.4%
Professional & Technical Services	561	1,049	8.1%	12.6%	86.9%
Other Services (Except Public Admin)	1,886	650	27.3%	7.8%	-65.6%
Retail Trade	610	648	8.8%	7.8%	6.2%
Admin & Waste Services	363	613	5.3%	7.4%	68.7%
Accommodation & Food Services	443	501	6.4%	6.0%	13.0%
Wholesale Trade	290	434	4.2%	5.2%	49.7%
Finance & Insurance	218	274	3.2%	3.3%	25.5%
Real Estate, Rental & Leasing	256	244	3.7%	2.9%	-4.6%
Manufacturing	181	192	2.6%	2.3%	5.8%
All Government	174	176	2.5%	2.1%	1.3%
Information	73	167	1.1%	2.0%	128.4%
Agriculture, Forestry, Fishing & Hunting	131	165	1.9%	2.0%	25.6%
Transportation & Warehousing	117	156	1.7%	1.9%	33.3%
Educational Services	89	120	1.3%	1.4%	34.3%
Arts, Entertainment, & Recreation	84	100	1.2%	1.2%	19.3%
Management of Companies & Enterprises	17	17	0.2%	0.2%	-2.9%
Utilities	8	10	0.1%	0.1%	25.0%
Mining	3	4	0.0%	0.0%	33.3%
Total Covered Firms	6,902	8,321	100.0%	100.0%	20.6%

Source: Washington Employment Department; U.S. Bureau of Labor Statistics.

Covered Employment

- In Thurston County, covered employment grew by 22.3 percent from 2010 to 2019 (see Figure 6.1.7), one percentage point higher than Pierce County's overall growth.
- Government jobs made up the largest share of Thurston County's overall covered employment at 32.7 percent, followed by health care and social assistance (13.2 percent), and retail trade (10.7 percent). Taken together, these three sectors comprised approximately 56.6 percent of the county's total covered employment base in 2019.
- Three sectors experienced employment contractions: agriculture, forestry, fishing, and hunting (65.6 percent), construction (4.6 percent), and real estate, rental, and leasing (2.9 percent).

Employment Sector	Covered Employment by Sector		Employment Share of Total Employment by Industry		Percent Change in Industry Employment
	2010	2019	2010	2019	2010 - 2019
All Government	35,867	38,703	37.1%	32.7%	7.9%
Health Care & Social Assistance	11,582	15,655	12.0%	13.2%	35.2%
Retail Trade	11,075	12,663	11.4%	10.7%	14.3%
Accommodation & Food Services	7,519	9,341	7.8%	7.9%	24.2%
Admin & Waste Services	3,316	6,288	3.4%	5.3%	89.6%
Construction	3,274	6,184	3.4%	5.2%	88.9%
Professional & Technical Services	3,241	4,829	3.4%	4.1%	49.0%
Other Services (Except Public Admin)	4,433	3,918	4.6%	3.3%	-11.6%
Wholesale Trade	2,689	3,068	2.8%	2.6%	14.1%
Manufacturing	2,986	3,014	3.1%	2.5%	0.9%
Transportation & Warehousing	1,642	2,631	1.7%	2.2%	60.2%
Finance & Insurance	2,158	2,504	2.2%	2.1%	16.0%
Agriculture, Forestry, Fishing & Hunting	1,369	2,024	1.4%	1.7%	47.8%
Educational Services	1,271	1,926	1.3%	1.6%	51.5%
Information	991	1,685	1.0%	1.4%	70.0%
Arts, Entertainment, & Recreation	1,189	1,581	1.2%	1.3%	33.0%
Real Estate, Rental & Leasing	1,272	1,170	1.3%	1.0%	-8.0%
Management of Companies & Enterprises	663	915	0.7%	0.8%	38.0%
Utilities	169	196	0.2%	0.2%	16.0%
Mining	35	9	0.0%	0.0%	-74.3%
Total Covered Jobs	96,740	118,304	100.0%	100.0%	22.3%

Note: Covered employment is employment and wages in industries covered by unemployment insurance.

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

Mean Annual Wages

- When adjusted for inflation (to 2020 constant dollars), Thurston County's mean annual wage increased by about 9.7 percent (see Figure 6.1.8). Overall, employees in the county earned about 22 percent less than the statewide average ($55,174 compared to $70,465) in 2019, similar to Pierce County.
- The information sector had the largest wage increase at about 71 percent. In 2010, this sector paid 9.4 percent above the county-wide average; however, in 2019, it paid 70.1 percent above the average, an increase of about 61 percentage points.
- The healthcare and social assistance sector in Thurston County in 2019 paid just 0.4 percent above the countywide average.

- The wholesale trade and educational services sectors had the largest average annual wage decreases over the analysis period, contracting by 25.1 percent and 32.0 percent, respectively.

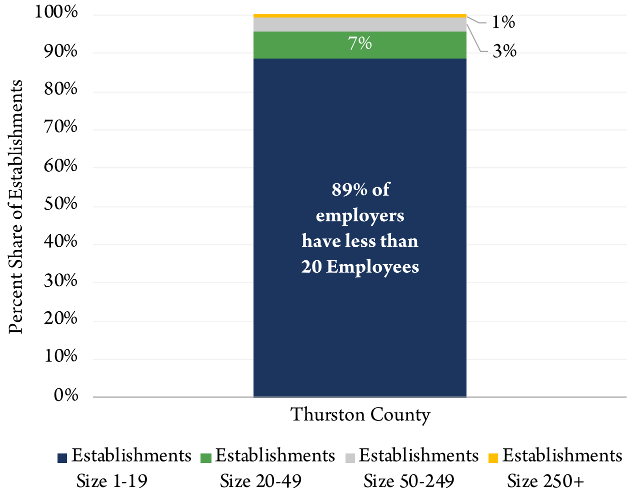
Employment Sector	Mean Annual Wage (2020 Inflation-Adjusted Dollars)		Mean Industry Wage Compared to Total Mean for All Sectors		Percent Change in Mean Wage
	2010	2019	2010	2019	2010 - 2019
Utilities	$89,534	$111,930	78.0%	102.9%	25.0%
Information	$55,047	$93,843	9.4%	70.1%	70.5%
Management of Companies & Enterprises	$70,638	$77,508	40.4%	40.5%	9.7%
Finance & Insurance	$64,056	$76,883	27.3%	39.3%	20.0%
Professional & Technical Services	$65,043	$76,566	29.3%	38.8%	17.7%
Wholesale Trade	$99,572	$74,552	97.9%	35.1%	-25.1%
All Government	$62,983	$67,029	25.2%	21.5%	6.4%
Construction	$49,683	$65,112	-1.3%	18.0%	31.1%
Manufacturing	$52,493	$59,171	4.3%	7.2%	12.7%
Mining	$48,905	$56,799	-2.8%	2.9%	16.1%
Health Care & Social Assistance	$50,101	$55,381	-0.4%	0.4%	10.5%
Other Services (Except Public Admin)	$30,589	$46,583	-39.2%	-15.6%	52.3%
Transportation & Warehousing	$41,661	$46,489	-17.2%	-15.7%	11.6%
Real Estate, Rental & Leasing	$34,217	$43,528	-32.0%	-21.1%	27.2%
Admin & Waste Services	$30,213	$41,761	-40.0%	-24.3%	38.2%
Agriculture, Forestry, Fishing & Hunting	$38,578	$40,314	-23.3%	-26.9%	4.5%
Retail Trade	$31,236	$34,417	-37.9%	-37.6%	10.2%
Educational Services	$50,252	$34,180	-0.1%	-38.1%	-32.0%
Accommodation & Food Services	$18,582	$22,261	-63.1%	-59.7%	19.8%
Arts, Entertainment, & Recreation	$19,865	$20,927	-60.5%	-62.1%	5.3%
All Sectors	$50,314	$55,174	0.0%	0.0%	9.7%

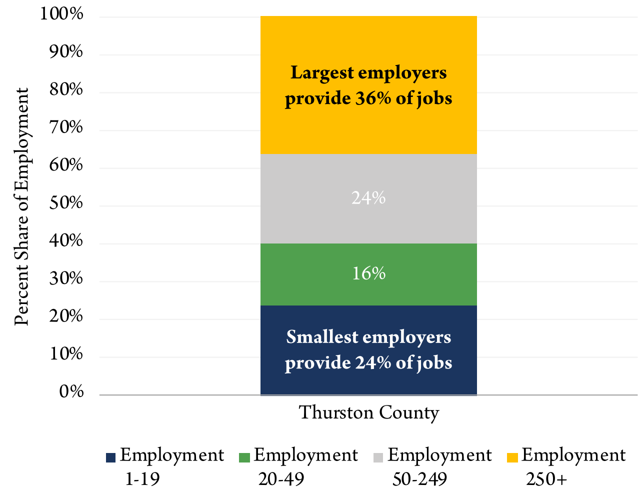
Source: Washington State Employment Security Department; U.S. Bureau of Labor Statistics.

Employer Size

- Large employers in the region, those with 250 or more employees, make up a little more than half of one percent of all employers. However, these large employers provide 36 percent of the total jobs in Thurston County.
- The smallest employers, those with fewer than 20 employees, represent 89 percent of all employers and provide approximately a quarter of the jobs in Thurston County.

Figure 6.1.9 – Employers and Jobs by Employment Size in Thurston County, 2020





Source: Washington State Employment Security Department/Labor Market and Economic Analysis (LMEA).

7. Regional Industry Specialization and JBLM Economic Impact

7.1. Regional Industries and Employment Clusters

7.1.1. Location Quotients

The following section details the location quotient, by major employment sector, for Pierce County and Thurston County. The location quotient (y-axis) is a value that describes how specialized a sector is in a county relative to the state. A value of 1.0 for a sector means the county is on par with statewide trends (i.e., not specialized). Values exceeding 1.0 suggest industry concentration in the area. The higher the location quotient, the more concentrated the sector in the analysis areas. Employment sectors with bigger location quotients typically indicate a competitive advantage and, in turn, a higher likelihood of attracting new firms in that sector to the region. The average annual percent change in employment over the 2010 to 2019 period is denoted on the x-axis.

Each major employment sector is denoted by a bubble. The size of the bubble indicates the number of covered jobs in each sector. Sector names are detailed for each bubble, along with its location quotient (left-side) and total covered employment in 2019 (right-side). Additionally, quadrants are labeled in clockwise order as Star, Emerging, Transforming, and Mature. *Star* employment sectors are concentrated in the region; they are strong clusters (in terms of concentration and growth) that help the county stand out from others. *Emerging* sectors are under-represented in the county (usually little to no concentration) but are growing on an average annual basis. *Transforming* sectors are also under-represented in the county and are simultaneously losing jobs. *Mature* sectors are concentrated in the county, like Star sectors, however, jobs are declining.

Pierce County Findings:

- The transportation and warehousing sector had the highest location quotient at 1.77, and the highest average annual growth rate at 6.6 percent. In 2019, transportation and warehousing comprised about 5.4 percent of the county's total covered employment. This is largely a result of the Port of Tacoma. Collectively the Port of Tacoma and Port of Seattle (the Northwest Seaport Alliance) is the fourth largest container gateway in the U.S.[12] The transportation technical report for the GCP examined vehicle and freight volume data from WSDOT along Interstate 5 (I-5) near JBLM as part of their existing conditions analysis. Before the pandemic, freight volumes along I-5 had increased at a slightly faster rate than total volumes since 2010. Freight volumes were about 12 percent of the total traffic on I-5 (approximately 15,000 trucks per weekday) in 2010 which had increased to about 17,500 trucks per weekday (approximately 13 percent of the total traffic in 2019). In 2020, the overall volumes along I-5 decreased about 14 percent while freight volumes increased by about two percent (up to almost 18,000 trucks per weekday). The general trend is that freight volumes are continuing to grow despite overall traffic decreases since the pandemic. Growth in the freight industry is a trend to consider for regional planning purposes. Consequently, a strategy associated with addressing freight industry economic growth and the associated infrastructure needs should considered.
- The healthcare and social assistance and construction sectors are also large employers with similar location quotients estimated at around 1.26 and 1.25, respectively, which indicates increasing industry concentration above statewide trends.
- Government (federal, state, and local) was the county's largest employment sector in 2019 at about 59,109 employees, or 19 percent of the county's total covered employment. Although the location

[12] https://www.portoftacoma.com/business/shipping

quotient for this large sector was 1.13, there was very little annual growth over the 2010 to 2019 period. JBLM includes a large portion of employees fitting within the government sector.

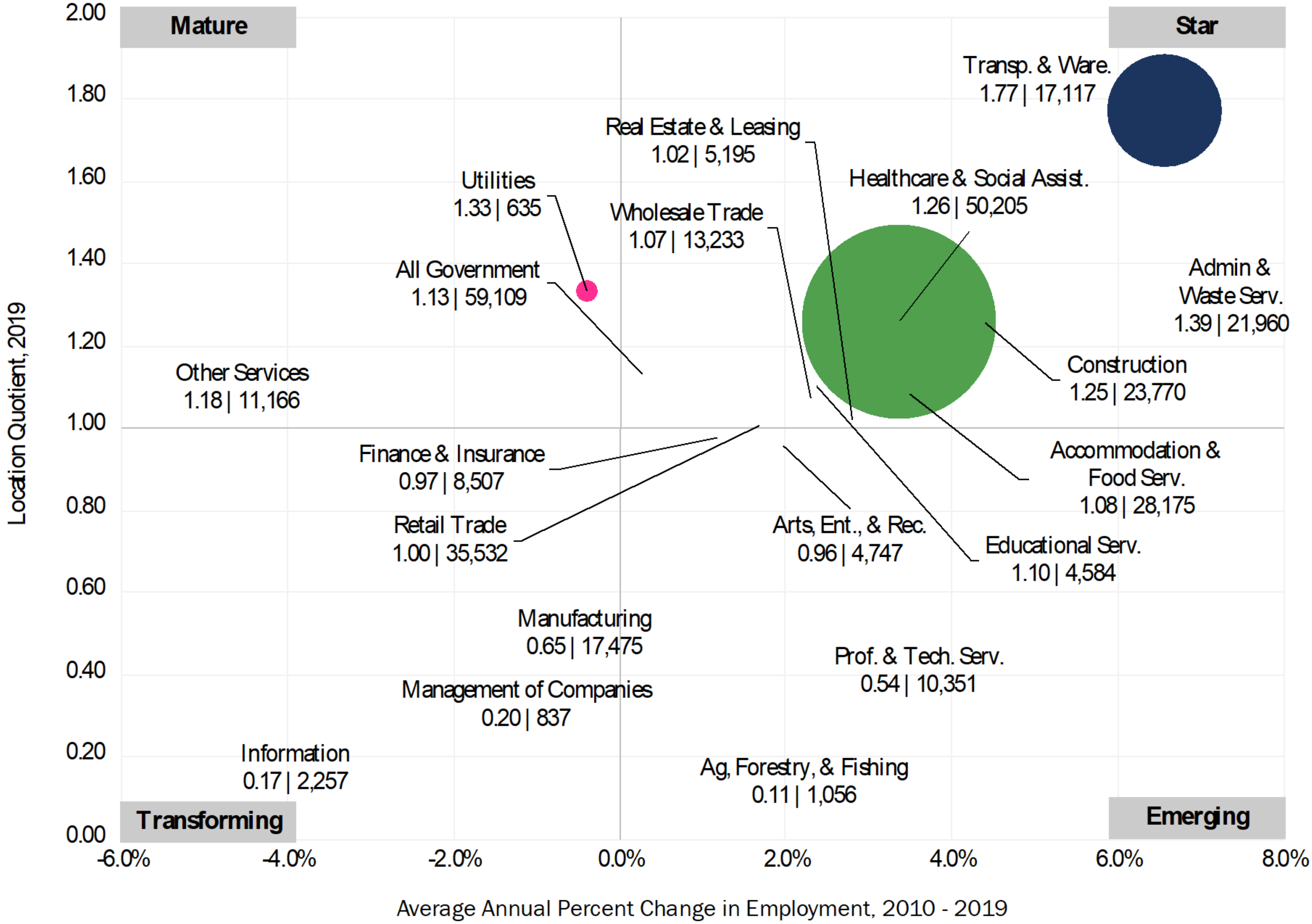
- The accommodation and food services sector's location quotient of 1.08 and large covered employment base with over 28,000 employees is showing signs of greater concentration in the county. Other emerging sectors with at least 10,000 employees experiencing growth include the retail trade, manufacturing, and professional and technical services sectors.
- Information, management of companies, and agriculture, forestry, and fishing sectors had some of the lowest location quotients countywide. While each of these sectors are relatively small in terms of employment, the agriculture, forestry and fishing sector has opportunities for growth since it fits within the emerging sector and is experiencing continued annual growth.
- While the manufacturing sector makes up approximately 5.5 percent of the county's covered employment base, its location quotient of 0.65 indicates weaker concentration than the state overall. Its average annual employment has increased approximately 0.9 percent per year on average; however, this growth is weak relative to many other sectors across the county.

Thurston County Findings:

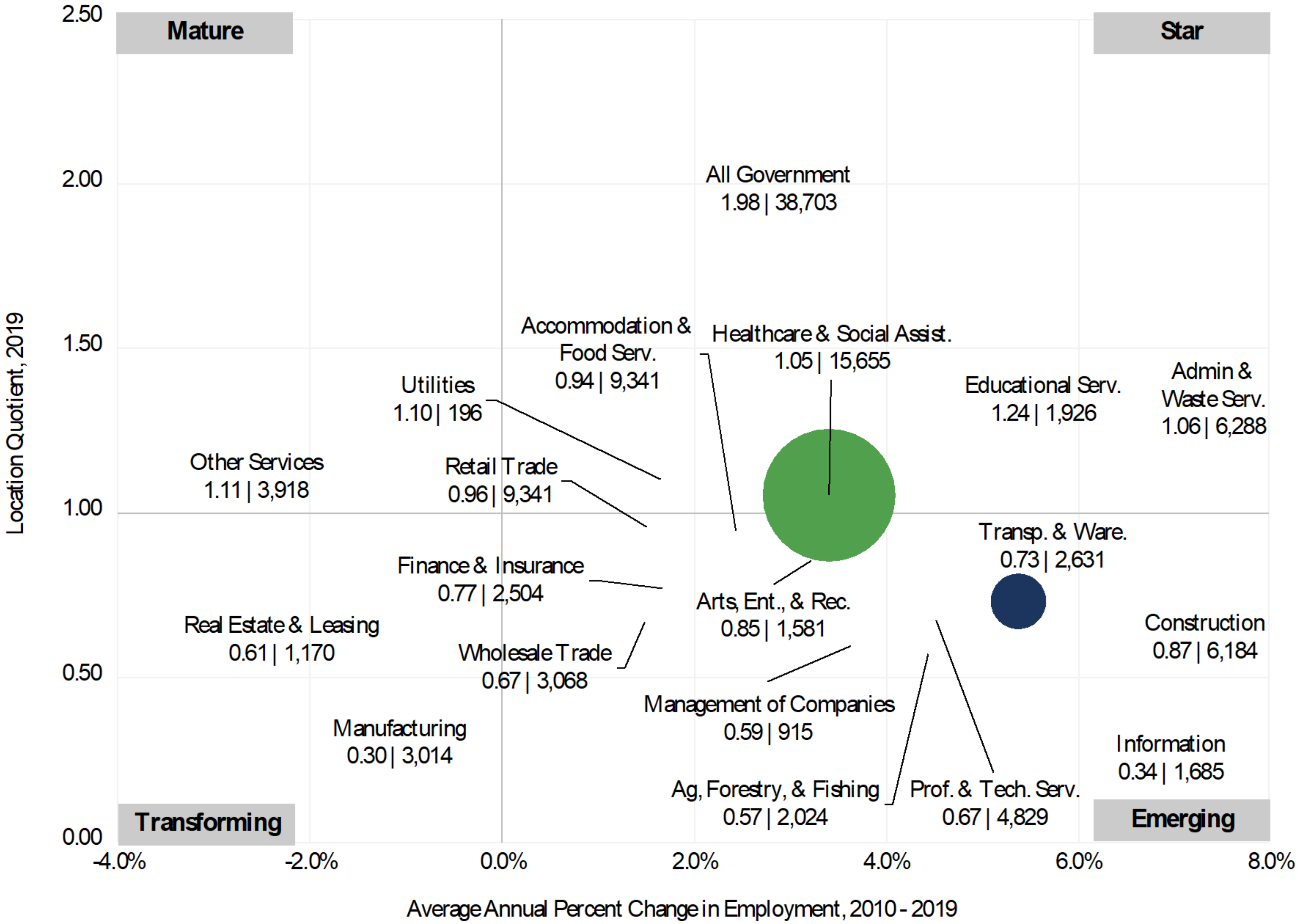
- Compared to Pierce County, many employment sectors in Thurston County are not as concentrated relative to the state (indicated by many sectors having location quotients just above or below 1.0). However, the administrative and waste services sector had the largest average annual employment growth at approximately 7.4 percent, just 0.1 percentage points above construction, the second sector with the next highest growth rate. Like Pierce County, the healthcare and social assistance sector is a large employer (15,655 employees) with a location quotient (1.05) trending towards industry concentration above statewide trends.
- Government is a highly concentrated sector in Thurston County (due to Olympia, the state capital). Additionally, government comprised nearly one-third of the county's total covered employment in 2019.
- The accommodation and food services and retail trade sectors' location quotients were each just below 1.0 but they support a large, covered employment base with over 9,000 employees and are emerging industries showing signs of growth.
- Thurston County had fewer sectors that contracted over the 2010 to 2019 period compared to Pierce County; however, sectors such as manufacturing or real estate, rental, and leasing in Thurston were less concentrated.
- Like Pierce County, the manufacturing sector in Thurston County is growing, albeit at a slow pace of 0.1 percent per year, on average. Its location quotient of 0.3 indicates it is much less concentrated than the statewide average, as well as Pierce County's manufacturing sector (location quotient of 0.65).

Overall, JBLM could be affecting several of the industry concentration and growth trends, particularly the trends associated with increased healthcare and social assistance and construction sector growth. It may also affect specialization in both counties and growth in accommodation and food services in both counties.

Figure 7.1.1 – Pierce County Location Quotient, 2010–2019



Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.



Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

7.1.2. Shift-Share Analysis

One of the common models to measure economic growth is shift-share analysis. Figure 7.1.3 below shows the results of a shift-share analysis for Pierce and Thurston Counties over the 2010 to 2019 period. A shift-share analysis is a standard model for regional analysis that attempts to determine how much of a region's growth can be attributed to national economic growth trends and how much can be attributed to unique regional growth factors.

Pierce County Findings

- Pierce County's employment grew by 21.3 percent over the 2010 to 2019 analysis period, or by 55,678 jobs. About 74.4 percent of the county's employment growth is attributable to national growth trends.
- The 30.1 percent employment growth (16,762 jobs) is attributable to the county's competitive mix. This indicates comparative advantages and competitiveness in the county and has created a larger share of growth than other areas in the nation. Some of the top local employment industries that outperformed national trends include administrative and support services, warehousing and storage, specialty trade contractors, social assistance, food services and drinking establishments, insurance carriers, hospitals, merchant wholesalers of durable goods, and general merchandise stores.
- The county's negative change in industrial mix implies that, independent of national influences, local sectors, on balance, grew slower than the national average and subsequently reduced local employment growth. A few industries that contributed to this contraction include state, local, and federal government; credit intermediation and related activities; electronic markets, agents, and brokers; manufacturing; and several service-based industries.

Thurston County Findings

- Thurston County's employment grew by 22.3 percent over the 2010 to 2019 period, or by 21,564 jobs. About 71.2 percent of the county's employment growth is attributable to national growth trends.
- The 45.4 percent employment growth (9,799 jobs) attributable to the county's competitive mix exceeds Pierce County's on a percent change basis by about 15.3 percentage points. Some of the top local employment industries that outperformed national trends includes state and local government, construction of buildings, specialty trade contractors, professional and technical services, crop production, and miscellaneous retail stores.
- The county's negative change in its industrial mix is attributed to employment sectors like wholesale trade, retail trade, and government.

County	National Growth	Industrial Mix	Regional Competitive Growth	Total Employment Growth, 2010 - 2019
Pierce County	74.4% (41,412 jobs)	-4.5% (-2,497 jobs)	30.1% (16,762 jobs)	21.3% (55,678 jobs)
Thurston County	71.2% (15,352 jobs)	-16.6% (-3,587 jobs)	45.4% (9,799 jobs)	22.3% (21,564 jobs)

Source: Washington Employment Security Department; Bureau of Labor Statistics, QCEW data.

7.1.3. Key Export Industries

The Seattle-Bellevue-Tacoma Metropolitan Statistical Area (MSA) was the 14th largest exporter of goods of all MSAs in the United States in 2020.[13] Valued at approximately $23.8 billion, it comprised approximately 58 percent of Washington's total exports of $41.1 billion for the year.[14] Transportation equipment made up the largest share of the Seattle MSA's exports at $8.7 billion (37 percent), most of which (about 94 percent) came from the aerospace product and parts manufacturing industry. However, due to the COVID-19 pandemic and its resulting impact on worldwide trade, the estimated $8.7 billion is far below the MSA's 2015 export value of $52.7 billion for the transportation equipment industry. The pandemic's effect on trade is evident across many of the MSA's top export industries.

Other top export industries in the Seattle MSA include computer and electronic parts valued at $3.5 billion for 2020. The largest sub-industry contributing to this export value is navigational, electromedical, and control instruments ($2 billion, or 58 percent). Agricultural products made up the next largest export value at just over $2.9 billion. Oilseed and grain farming contributed about $2.6 billion to the agricultural products industry, or 91 percent of the industry's total export value in 2020.

The Olympia-Lacey-Tumwater MSA was the 267th largest exporter of good in the United States in 2020. Valued at about $252.7 million, it made up approximately 0.6 percent of Washington's total exports for the year. Its largest export industry was forestry products valued at $95.0 million, followed by plastics and rubber products ($30.9 million), then chemicals ($29.6 million). In contrast to the Seattle MSA, exports for the Olympia MSA increased when comparing 2015 and 2020 estimates; however, relative to 2010 exports, the Olympia MSA's total export value decreased.

Top Export Industries	Exports (in millions)										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Seattle-Bellevue-Tacoma MSA	$35,409.6	$41,117.5	$50,301.7	$56,686.4	$61,938.4	$67,226.2	$61,881.0	$59,007.0	$59,742.9	$41,249.0	$23,850.9
Agricultural Products	--	--	--	--	$1,542.2	$1,682.2	$2,779.9	$2,974.1	$2,393.6	$2,199.2	$2,907.1
Fish & Other Marine Products	$2,101.1	$2,695.9	$2,611.0	$2,708.2	$2,747.8	$2,655.1	$2,606.5	$2,915.8	$2,833.4	$2,721.2	$2,236.6
Processed Foods	--	$1,077.3	$1,126.1	--	--	--	--	--	--	--	$1,187.3
Machinery	$1,096.4	$1,593.3	$1,269.9	$1,448.9	$1,420.5	$1,288.0	$1,044.0	$1,113.7	$1,304.5	$1,353.8	--
Miscellaneous Manufacturers	$1,099.7	--	--	$1,013.7	--	--	--	--	--	--	--
Computer & Electronic Products	$2,886.3	$3,355.0	$3,274.4	$3,301.8	$3,337.5	$3,163.8	$3,302.0	$3,679.9	$3,961.2	$3,656.4	$3,503.0
Transportation Equipment	D	$26,565.1	$36,104.3	D	D	$52,731.5	$46,804.0	D	$42,936.1	$25,074.6	$8,706.5
All Other Sectors (Not in Top 5 Trade Sectors)	D	$5,830.8	$5,916.0	D	D	$5,705.6	$5,344.7	D	$6,314.1	$6,243.8	$5,310.4
Olympia-Lacey-Tumwater MSA	$362.9	$439.8	$317.9	$248.1	$282.5	$219.7	$334.4	$253.6	$282.4	$287.4	$252.7
Agriculture, Forestry, Fishing, & Hunting	--	--	D	D	--	$80.6	--	--	--	--	--
Fabricated Metal Products	--	--	D	--	--	--	--	--	--	--	--
Manufacturing	$61.7	$68.3	--	--	--	--	--	--	--	--	--
Agricultural Products	$21.0	$21.4	--	--	--	--	$32.4	$32.7	$67.2	$42.7	$21.4
Forestry Products	D	D	--	--	$95.6	--	D	D	D	$80.2	$95.0
Chemicals	--	--	--	--	--	--	D	$17.4	$23.0	D	$29.6
Plastics & Rubber Products	$23.9	$18.2	D	D	$26.1	$28.2	$24.6	D	$24.2	$26.0	$30.9
Nonmetallic Mineral Products	D	D	$19.3	$27.0	$23.1	$22.3	$23.1	$25.1	$24.6	--	$20.2
Machinery	--	--	$60.8	$37.6	$59.2	$31.4	--	--	--	$46.5	--
Miscellaneous Manufacturers	--	--	--	$13.7	--	--	--	--	--	--	--
Computer & Electronic Products	--	--	--	--	$17.9	$12.1	--	--	--	--	--
All Other Sectors (Not in Top 5 Trade Sectors)	$41.7	$51.3	$79.4	$64.4	$60.6	$45.2	$65.6	$63.6	D	D	$55.6

Note: Export values assigned 'D' indicate data are suppressed, but the export industry is among the top export industries for the MSA.
Source: U.S. Department of Commerce, International Trade Administration, 2020.

7.2. Cluster Specialization with Trade Opportunities in the Region

Traded employment clusters are regional concentrations of related industries. While several definitions of industry clusters exist, they are generally a geographic concentration of interconnected firms, suppliers,

[13] Total good export data were available for 389 out of 392 MSAs for 2020.
[14] U.S. Department of Commerce, International Trade Administration. State Economy and Trade Factsheets, 2020.

and institutions in a particular field. It has the potential to affect competition by increasing the productivity of the companies in the clusters, driving innovation, and stimulating new businesses in the specific field. These differ from location quotients which more narrowly measure the concentration of employment in specific industries.

Since this data is only offered at the Metropolitan Statistical Area (MSA) level, results are described for the Seattle-Tacoma-Bellevue MSA and Olympia-Lacey-Tumwater MSA in the following sections which helps to highlight major trade opportunities within the broader region. They serve regions outside of their local area or nations overseas, usually via exports of goods and services. Clusters are crucial to the local area they conduct their business in as they create, sustain, and strengthen competitive advantages for their local economy (e.g., aerospace manufacturing). Strong trade clusters can attract new businesses to the region, give rise to businesses that support those businesses operating in the specialized clusters, and can help attract private investment.

The top fifteen traded employment clusters for the Seattle-Tacoma-Bellevue MSA, determined by 2018 employment estimates, are provided in Figure 7.2.1. Business services comprised nearly 27 percent of the MSA's total employment, the largest share of all traded cluster employment in 2018. While the aerospace vehicles and defense cluster only grew by about 1.2 percent over the 2010 to 2018 period, its national rank remained unchanged. The information technology and analytical instruments cluster also remained unchanged in its national rank; however, its employment base grew by 35.8 percent, and simultaneously increased its share of the MSA's total cluster employment to 11.7 percent in 2018 (up from 10.3 percent in 2010). The water transportation cluster contracted by about 11.2 percent over the analysis period (1,319 jobs lost), the largest decrease of the MSA's top fifteen clusters. However, its national rank remains unchanged at seven.

Figure 7.2.1 – Change in Employment by Traded Cluster, Seattle-Tacoma-Bellevue MSA, 2010–2018

Top 15 Traded Employment Clusters	Employment		Share of Total Regionwide Employment		National Rank		Change, 2010 - 2018	
	2010	2018	2010	2018	2010	2018	Rank	Employment
Business Services	148,408	193,760	24.6%	27.0%	13	14	-1	30.6%
Distribution and Electronic Commerce	66,344	87,785	11.0%	12.2%	14	12	2	32.3%
Information Technology and Analytical Instruments	61,941	84,118	10.3%	11.7%	2	2	0	35.8%
Aerospace Vehicles and Defense	66,689	67,474	11.0%	9.4%	1	1	0	1.2%
Hospitality and Tourism	44,138	48,200	7.3%	6.7%	12	12	0	9.2%
Education and Knowledge Creation	32,481	32,176	5.4%	4.5%	19	21	-2	-0.9%
Transportation and Logistics	23,416	28,952	3.9%	4.0%	12	11	1	23.6%
Marketing, Design, and Publishing	18,934	26,615	3.1%	3.7%	15	13	2	40.6%
Financial Services	21,375	24,783	3.5%	3.5%	20	17	3	15.9%
Insurance Services	16,784	17,418	2.8%	2.4%	25	27	-2	3.8%
Communications Equipment and Services	11,262	10,930	1.9%	1.5%	8	8	0	-2.9%
Water Transportation	11,729	10,410	1.9%	1.5%	7	7	0	-11.2%
Food Processing and Manufacturing	7,983	9,759	1.3%	1.4%	16	14	2	22.2%
Construction Products and Services	6,373	9,323	1.1%	1.3%	23	14	9	46.3%
Metalworking Technology	4,458	6,082	0.7%	0.8%	18	17	1	36.4%
Seattle-Tacoma-Bellevue MSA Region Total	603,915	717,007	100.0%	100.0%	--	--	--	18.7%

Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

Employment by traded cluster decreased overall in the Olympia-Lacey-Tumwater MSA during the 2010 to 2018 analysis period. However, several clusters added to their employment. Hospitality and tourism, offering 23 percent of total jobs in 2018, gained six places in its national rank due to employment increases. Information technology and analytical instruments had the largest cluster employment growth among the MSA's top fifteen traded clusters at 50.3 percent (gaining 149 places in its national rank), but its share of MSA-wide employment is less than two percent. Business services has the highest total share of employment in the MSA with 27 percent of total jobs and is followed by hospitality and tourism (23 percent), distribution and electronic commerce (almost 15 percent), and education and knowledge creation (almost 11 percent).

Figure 7.2.2 – Change in Employment by Traded Cluster, Olympia-Lacey-Tumwater MSA, 2010–2018

Top 15 Traded Employment Clusters	Employment		Share of Total Regionwide Employment		National Rank		Change, 2010 - 2018	
	2010	2018	2010	2018	2010	2018	Rank	Employment
Business Services	4,164	3,603	23.9%	27.4%	195	197	-2	-13.5%
Hospitality and Tourism	2,973	3,077	17.1%	23.4%	144	138	6	3.5%
Distribution and Electronic Commerce	2,472	1,935	14.2%	14.7%	236	240	-4	-21.7%
Education and Knowledge Creation	1,684	1,417	9.7%	10.8%	211	157	54	-15.9%
Financial Services	726	773	4.2%	5.9%	206	160	46	6.5%
Transportation and Logistics	373	433	2.1%	3.3%	390	315	75	16.1%
Forestry	311	372	1.8%	2.8%	37	24	13	19.6%
Marketing, Design, and Publishing	371	362	2.1%	2.8%	236	175	61	-2.4%
Food Processing and Manufacturing	355	232	2.0%	1.8%	403	215	188	-34.6%
Information Technology and Analytical Instruments	151	227	0.9%	1.7%	297	148	149	50.3%
Communications Equipment and Services	495	226	2.8%	1.7%	136	174	-38	-54.3%
Printing Services	187	123	1.1%	0.9%	307	272	35	-34.2%
Construction Products and Services	278	121	1.6%	0.9%	334	304	30	-56.5%
Insurance Services	130	80	0.7%	0.6%	345	263	82	-38.5%
Performing Arts	309	49	1.8%	0.4%	139	222	-83	-84.1%
Olympia-Tumwater MSA Region Total	17,436	13,153	100.0%	100.0%	--	--	--	-24.6%

Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

The U.S. Cluster Mapping Project estimates expected employment growth for each traded employment sector based on national growth trends.[15] These national growth calculations are then compared against a region's actual employment change by traded sector. The top five and bottom five traded employment clusters, in terms of employment change over the 2010 to 2018 period, for the Seattle-Tacoma-Bellevue MSA are detailed in Figure 7.2.3.

In the Seattle-Tacoma-Bellevue MSA, four of its top five traded clusters exceeded their expected employment growth based on national trends (this includes information technology, distribution of electronic commerce, marketing, and transportation/logistics). For its bottom five traded clusters, their respective employment change fared several hundred to a couple thousand employees below national expectations (including furniture, upstream metal manufacturing, and water transportation). Although the business services cluster is the largest employment cluster in the MSA, its growth fell around 1,000 employees shy of national growth trends. Among the remaining top four traded clusters, their excess growth above national trends indicate that they are employment strengths for the region.

In the Olympia-Lacey-Tumwater MSA, three of their top five traded clusters including information technology, forestry, and financial services exceeded expectations based on national trends, while the two top five traded clusters including hospitality/tourism and transportation/logistics fell short. The traded clusters of furniture, upstream metal manufacturing, paper/packaging, printing services, and water transportation were expected to grow; however, their employment declined over the 2010 to 2018 period.

[15] U.S. Cluster Mapping Project, www.clustermapping.us.

Traded Employment Clusters	Employment		Employment Change	Expected Employment Change (Given National Growth)	Actual Employment Change Compared to Expected Employment Change
	2010	2018	2010 - 2018	2010 - 2018	2010 - 2018
Top Five Clusters by Employment					
Business Services	148,408	193,760	45,352	46,331	-979
Information Technology and Analytical Instruments	61,941	84,118	22,177	16,656	5,521
Distribution and Electronic Commerce	66,344	87,785	21,441	11,649	9,792
Marketing, Design, and Publishing	18,934	26,615	7,681	4,477	3,204
Transportation and Logistics	23,416	28,952	5,536	4,801	735
Bottom Five Clusters by Emploment					
Furniture	3,169	2,561	-608	154	-762
Upstream Metal Manufacturing	1,438	731	-707	73	-780
Paper and Packaging	3,101	2,314	-787	-175	-612
Printing Services	5,158	4,319	-839	-602	-237
Water Transportation	11,729	10,410	-1,319	671	-1,990
Total Cluster Employment	603,915	717,007			

Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

Figure 7.2.4 – Job Creation by Traded Cluster, Olympia-Lacey-Tumwater MSA, 2010–2018

Traded Employment Clusters	Employment		Employment Change	Expected Employment Change (Given National Growth)	Actual Employment Change Compared to Expected Employment Change
	2010	2018	2010 - 2018	2010 - 2018	2010 - 2018
Top Five Clusters by Employment					
Hospitality and Tourism	2,973	3,077	104	473	-369
Information Technology and Analytical Instruments	151	227	76	41	35
Forestry	311	372	61	16	45
Transportation and Logistics	373	433	60	76	-16
Financial Services	726	773	47	40	7
Bottom Five Clusters by Emploment					
Performing Arts	309	49	-260	87	-347
Education and Knowledge Creation	1,684	1,417	-267	183	-450
Communications Equipment and Services	495	226	-269	58	-327
Distribution and Electronic Commerce	2,472	1,935	-537	434	-971
Business Services	4,164	3,603	-561	1,300	-1,861
Regionwide Cluster Employment	17,436	13,153			

Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

7.3. Innovation Measures

The Innovation 2.0 project[16] details the innovation capacity and innovative output of a region by collating over fifty different innovation measures (e.g., university-based knowledge spillovers, patent technology diffusion, high-tech venture capital). There are five major index categories that roll up into a single "headline" innovation index. Three of these five major categories are innovation inputs (human capital and knowledge creation, business dynamics, and business profile), and the remaining two are innovation outputs (employment and productivity, and economic well-being).

Human Capital and Knowledge Creation: Thurston County ranks higher than Pierce County in the human capital and knowledge creation index, which contains statistical measurements like educational attainment, STEM education and occupations, and technology diffusion (e.g., patent technology diffusion). It ranks at the 6th percentile of all counties nationwide, and Pierce County ranks at the 13th percentile.

Business Dynamics: The business dynamics index measures accounts for measurements like establishment formation, establishment dynamics (e.g., establishment births divided by establishment

[16] Innovation 2.0 is hosted on StatsAmerica (www.statsamerica.org) and managed by the Indiana Business Research Center at Indiana University's Kelley School of Business and funded partially by the U.S. Dept of Commerce Economic Development Administration.

deaths), venture capital dollar measures, and venture capital count measures (e.g., initial public offerings, average annual venture capital deals). Thurston County fares just below the national median (51st percentile) for business dynamics, whereas Pierce County ranks at the 6th percentile nationally.

Business Profile: Business profile includes measurements such as foreign direct investment (FDI) attractiveness (e.g., foreign and national employment indices), connectivity (e.g., residential high-speed connection density, farm operators with internet access), dynamic industry profiles (e.g., high-tech, early-in-life-cycle establishment ratio), and proprietorship (e.g., availability of capital from all banks, proprietor income to total wages and salaries). Both Pierce and Thurston Counties are similarly ranked, with Thurston County ranking at the 26th percentile of counties and Pierce County ranking at the 28th percentile.

Economic Well-being: Economic well-being assesses a county's standard of living and related economic outcomes. These include, but are not limited to, the average poverty rate, unemployment rate, net migration, and income inequality. Pierce County ranks lower than Thurston County for this index, but both are above the national median. Thurston County ranks at the 40th percentile of all counties and Pierce County ranks at the 43rd percentile.

Summary: Index values are computed for 3,110 counties in the United States and then subsequently ranked for ease of nationwide comparison. Pierce County ranks among the top 10 percent of all counties nationally in terms of its headline innovation index value while Thurston County ranks slightly lower but among the top 20 percent (see Figure 7.3.1). Both counties have innovation input and output strengths that could be tapped further and augmented with economic development strategies and partnerships. Thurston County's innovation strengths are in the human capital and knowledge creation which complements Pierce County's strong business dynamics and employment/productivity innovations.

Figure 7.3.1 – Innovation Index Measurements, Pierce and Thurston Counties, 2016

Innovation Indices	Pierce County		Thurston County		National Median Index Value
	Index Value	Rank (out of 3,110 counties)	Index Value	Rank (out of 3,110 counties)	
Headline Innovation Index (All Index Categories)	107.0	240	98.3	487	84.3
Human Capital and Knowledge Creation	125.1	415	139.2	194	90.1
Business Dynamics	96.5	169	50.5	1,572	50.7
Business Profile	83.7	860	84.4	820	73.9
Employment and Productivity	114.7	450	106.0	953	98.4
Economic Well-Being	115.3	1,305	117.1	1,211	109.7

Source: Indiana Business Research Center, "Driving Regional Innovation: The Innovation Index 2.0." August 2016.

7.4. Economic Impact of JBLM and Associated Contracts

7.4.1. Changes in JBLM Personnel and JBLM Population

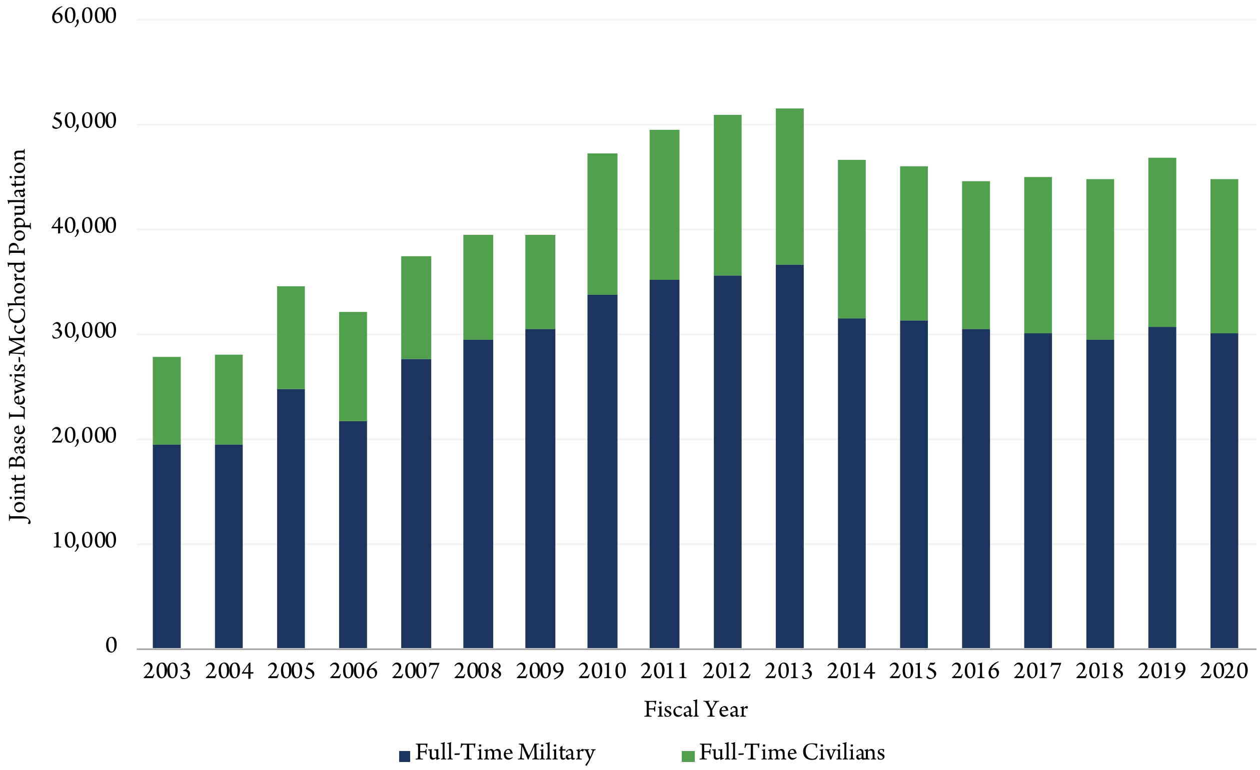
Over the analysis period of fiscal years 2003 to 2020, JBLM added approximately 10,596 full-time military personnel which represents a 54 percent expansion (see Figure 7.4.1). At the same time, the count of full-time civilians increased by about 6,304 individuals (76 percent). Since 2003, the overall JBLM Population increased over time; however, significant expansions halted after reaching a peak in 2013 and since this peak, the total population has remained below 50,000 between 2014 to 2020, resting at around 45,000 in recent years (2017 to 2020). In fact, the overall JBLM population has slightly shrank since 2010. Over the fiscal year 2003 to 2010 period, JBLM added about 14,287 full-time personnel, or an increase of 73.4 percent. Comparatively, the base's full-time personnel count decreased by 3,691 personnel over the 2010 to 2020 period (a contraction of 10.9 percent).

In fiscal year 2017, JBLM began tracking the number of military family members, which is not detailed in Figure 7.4.1. During the four-year period for which data is available, the count of military family members and personnel fluctuated from a high of about 46,431 persons in fiscal years 2019 to 44,686 persons in fiscal year 2017. As of 2020, there were approximately 45,709 military family members and personnel residing at JBLM.

Population fluctuations due to active military personnel deployments returning from war beginning in 2010 continued past 2010 until about 2014. Their return had a variety of impacts on resources including social services, health and medical services, transportation services, housing needs, etc. Concerning the likelihood of future deployments, JBLM personnel could not estimate or confirm the size and timing.

In fiscal year 2019, approximately 83 percent of all JBLM personnel were in the paygrade range of E-1 (Private) to E9 (Master Gunnery Sergeant). About 15 percent were between the grades of O-1 (Second Lieutenant) and O-9 (Lieutenant General), 0.4 percent were Warrant Officers (W-1), and the remaining 2 percent were Chief Warrant Officers. Historical data of personnel by paygrade and rank were not available for prior years, hence the inclusion of only fiscal year 2019 data.

Figure 7.4.1 – Change in JBLM Personnel by Full-Time Military and Full-Time Civilians, Fiscal Years 2003–2020



Source: Plans, Analysis, and Integrations Office at Joint Base Lewis-McChord, 2021.

Over the period of fiscal year 2021 to 2026, JBLM forecasts its military personnel to increase by 2,323 individuals and its civilian population by 214 individuals (or 2,537 persons in total). This roughly translates to 465 military personnel added to the base per year, and 43 civilians per year.

JBLM provided more detailed information on the population associated with the JBLM base for Fiscal Year 2019. Below is a summary of this information.

- Approximately 31,221 active-duty military members
- Approximately 7,088 reserve military (Reserve Component, National Guard)
- Approximately 11,746 civilian employees
- Approximately 4,300 contractors
- Within 40 miles, there were an estimated total of 46,518 family members for all services
- Within 40 miles, there were an estimated total of 39,608 retirees and 138,406 retirees' family members

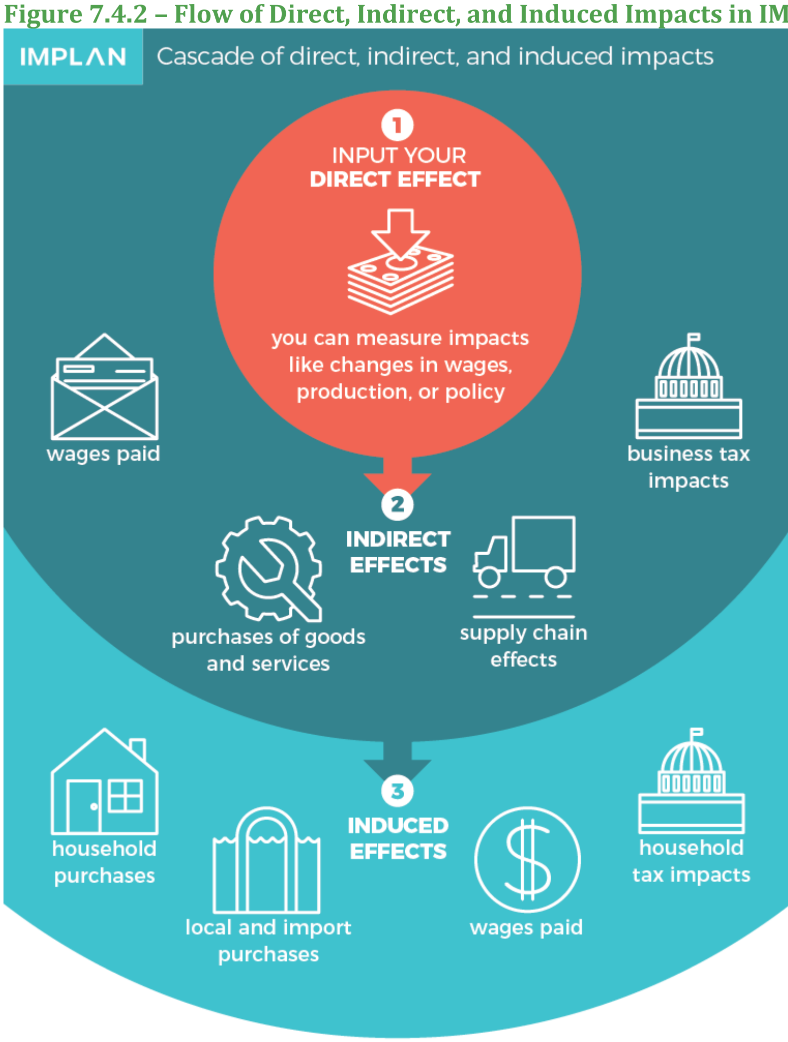
7.4.2. JBLM Economic Impacts

JBLM has a regionally significant economic impact on the entire study area. SSMCP in partnership with UW-Tacoma Center for Business Analytics surveyed businesses in 2019 and 2020 (560 surveys complete) and found that 82 percent of surveyed businesses in Pierce County and 77 percent of the surveyed businesses in Thurston County were attributed to the presence of JBLM. Also, nearly 70 percent of the surveyed businesses in both counties employed Veterans and family members.

In June 2020, the South Sound Military & Communities Partnership (SSMCP), in partnership with the University of Washington-Tacoma, published an updated Regional Economic Impact Analysis (REI) to estimate JBLM's economic contributions to the state of Washington and the South Sound region (Pierce and Thurston counties). Where their previous 2018 REI report concentrated on JBLM's military and its civilian workforce and their impact on the South Sound region, this new report accounts for military retirees, working military spouses, and education-related funding from Impact Aid, Tuition Assistance, and GI Bill funding sources.[17]

Their analysis used IMPLAN, an input-output modeling software that estimated the economic contributions JBLM made to Washington's economy. IMPLAN typically disaggregates impacts into three distinct categories: direct impacts, indirect impacts, and induced impacts. Direct impacts measure the dollars spent by JBLM personnel that they receive through the base's payroll and operating budgets. Indirect impacts measure the increase in economic activity resulting from the dollars spent by JBLM personnel that sustain and supply the goods and services JBLM needs to continue operating. Induced impacts measure the subsequent expenditure of earnings by JBLM personnel and firms contracted by the base (e.g., purchasing groceries, buying a home, healthcare). The graphic in Figure 7.4.2 shows how direct monetary impacts trickle through the economy, as modeled by IMPLAN.[18]

Figure 7.4.2 – Flow of Direct, Indirect, and Induced Impacts in IMPLAN



Source: IMPLAN, August 2018.

[17] South Sound Military & Communities Partnership and University of Washington Tacoma, Center for Business Analytics. (June 30, 2020). *Regional Economic Impact Analysis.*
[18] Tim French. (August 13, 2018). *What is IMPLAN?* Information retrieved from: *https://blog.implan.com/what-is-implan*

A summary of SSMCP's findings is provided in Figure 7.4.3. Key findings from their analysis are as follows:

- The 58,050 direct jobs at JBLM translates to $6.9 billion of labor income. For the "spin-off" jobs, JBLM's economic activity translates to roughly $1.4 billion of labor income.
- About $1.74 billion in federal taxes is generated by JBLM. Another $0.39 billion is generated in state and local taxes. These dollars support government function and initiatives.

Figure 7.4.3 – JBLM Regional Economic Impact Summary, Fiscal Year 2020

Economic Impact Measure	Pierce and Thurston Counties				Washington			
	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Employment (FTE)	58,050	2,730	22,807	83,587	58,050	4,310	29,768	92,128
Labor Income (in billions)	$6.90	$0.14	$1.23	$8.27	$6.90	$0.28	$1.70	$8.88
Gross Impact (in billions)	$7.94	$0.41	$3.76	$12.11	$7.94	$0.82	$5.17	$13.93
Tax Revenue (in billions)	--	--	--	$2.12	--	--	--	$2.36
State & Local Taxes	--	--	--	$0.39	--	--	--	$0.49
Federal Taxes	--	--	--	$1.74	--	--	--	$1.87

Source: South Sound Military & Communities Partnership and University of Washington Tacoma, June 2020.

7.4.3. Top Employment Industries and Occupations

In October 2021, the Puget Sound Business Journal published the top fifty employers in Washington by employee count. Joint Base Lewis-McChord ranks fourth in the state at approximately 54,000 employees, just behind Boeing at 56,908 employees, which ranks third. Amazon and Microsoft employ the most people at about 80,000 and 57,666 employees, respectively. The top ten employers in Washington are detailed in Exhibit 7.4.4.

Figure 7.4.4 – Largest Employers in Washington, October 2021

Rank	Business Name	Washington Employment
1	Amazon.com Inc.	80,000
2	Microsoft Corp.	57,666
3	The Boeing Co.	56,908
4	Joint Base Lewis-McChord	54,000
5	University of Washington Seattle	49,526
6	Providence	43,496
7	Walmart Inc.	22,103
8	Costco Wholesale Corp.	20,183
9	Albertsons Cos. dba Safeway, Haggen, Albertsons	20,000
10	MultiCare Health System	18,288
Total Estimated Employment, Top 10 Washington Employers		422,170

Source: Puget Sound Business Journal, Employers List, October 8, 2021.

Every year, the Economic Development Board for Tacoma-Pierce County (EDB) publishes its major employers list for Pierce County.[19] A major employer is one that reports 100 or more FTEs. In 2020, the Joint Base Lewis-McChord had the largest employment in Pierce County. A Pierce County estimated the total employment at approximately 54,000 full-time employees which is higher than JBLM estimates but lower than the economic impact modeling estimates (see Figure 7.4.9). MultiCare Health System employed roughly 8,254 FTEs in 2020, Pierce County's second largest employer, or roughly 15 percent the size of JBLM's FTE employment.

MultiCare Health System is a non-profit health care organization founded in Tacoma. Their network of care includes eleven hospitals, several of which are in Pierce County cities (Tacoma and Puyallup). Other locations include cities in King County (Auburn, Covington, and West Seattle), Spokane County (Spokane and Spokane Valley), and Thurston County (Olympia).[20] Additionally, MultiCare Health System operates many primary care and urgent care clinics across the state of Washington.

Other major employers in Pierce County include the State of Washington with nearly 7,860 employees (4.7 percent of all major employers), Chi Franciscan Health with approximately 5,680 employees (3.4 percent of all major employers), and Tacoma Public Schools with about 3,650 employees (2.2 percent of all major employers). Using Pierce County's total covered employment estimate of 316,632 for 2019, the major employers in Pierce County make up approximately 53 percent of the county's total employment base.

---

[19] Economic Development Board, Tacoma-Pierce County, *Pierce County Major Employers List, Annual Report 2020*. Information retrieved from: https://www.edbtacomapierce.org/wp-content/uploads/2020/12/Economic-Development-Board-for-Tacoma-Pierce-Co.-uncategorized-772.pdf

[20] Information retrieved from MultiCare's website, multicare.org.

Figure 7.4.5 – Largest Employers in Pierce County, 2020

Organization Name	Industry	2020 FTE Count	Employment Share of All Major Employers (100+ FTEs)
Joint Base Lewis-McChord	Military	54,000	32.2%
MultiCare Health System	Health Care	8,264	4.9%
State of Washington	Government	7,859	4.7%
Chi Franciscan Health	Health Care	5,682	3.4%
Tacoma Public Schools	Education	3,649	2.2%
City of Tacoma & Tacoma Public Utilities	Government	3,623	2.2%
Pierce County Government	Government	3,304	2.0%
Puyallup School District	Education	2,711	1.6%
Bethel School District	Education	2,689	1.6%
Safeway & Albertsons	Retail	2,153	1.3%
Emerald Queen Casino	Gaming	2,146	1.3%
Fred Meyer Retail & Distribution Center	Retail & Distribution	1,802	1.1%
Amazon Distribution Centers	Distribution	1,800	1.1%
Clover Park School District	Education	1,782	1.1%
Boeing	Manufacturing Aerospace	1,550	0.9%
U.S. Postal Service	Government	1,336	0.8%
Costco	Retail	1,318	0.8%
Peninsula School District	Education	1,284	0.8%
Puyallup Tribe	Government	1,274	0.8%
Sumner School District	Education	1,270	0.8%
State Farm Insurance Companies	Insurance	1,219	0.7%
Franklin Pierce School District	Education	1,161	0.7%
Pacific Maritime Association	Nonprofit Trade/Union	1,028	0.6%
Total Major Employers	All industries	167,959	100.0%

Note: Data in the table above have been filtered to only show employers with FTEs in excess of 1,000 employees.
Source: The Economic Development Board of Tacoma-Pierce County, Largest Employers Area Profile. This county estimate gives a higher number of full-time employees at JBLM than what was provided to the project team by JBLM.

The top employment industries for Pierce County's major employers are military (32.7 percent), government (11.8 percent), health care (11.6 percent), and education (10.7 percent). Other industries that comprise a sizable share of major firm employment include retail (5.7 percent), manufacturing (3.4 percent), higher education (2.4 percent), and distribution (2.3 percent). Listed below are some of the major employers contained within each major employment industry:

- Safeway and Albertsons (Retail) – 2,153 FTEs
- Costco (Retail) – 1,318 FTEs
- Milgard Manufacturing (Manufacturing) – 818 FTEs
- Westrock (Manufacturing) – 394 FTEs
- Pierce College (Higher Education) – 822 FTEs
- University of Washington Tacoma (Higher Education) – 703 FTEs
- Amazon Distribution Centers (Distribution) – 1,800 FTEs

Figure 7.4.6 – Largest Employers in Pierce County by Industry, 2020

Industry	FTE of Major Employers	Percent Share of All Majors Employers	Industry	FTE of Major Employers	Percent Share of All Majors Employers
Military	54,940	32.7%	Transportation	1,033	0.6%
Government	19,783	11.8%	Nonprofit Trade/Union	1,028	0.6%
Health Care	19,420	11.6%	Transit	858	0.5%
Education	18,013	10.7%	Services Security	852	0.5%
Retail	9,528	5.7%	Communications	829	0.5%
Manufacturing	5,667	3.4%	Services	769	0.5%
Higher Education	4,038	2.4%	Hospitality	695	0.4%
Distribution	3,896	2.3%	Waste Management	578	0.3%
Retail & Distribution	3,127	1.9%	Government & Recreation	536	0.3%
Retail Food Service	3,037	1.8%	Corrections	350	0.2%
Gaming	2,742	1.6%	Recreation	300	0.2%
Manufacturing Aerospace	2,597	1.5%	Research Services	275	0.2%
Banking	2,551	1.5%	Mining	250	0.1%
Insurance	2,200	1.3%	Utility Services	248	0.1%
Senior Services	1,882	1.1%	Technology	220	0.1%
Nonprofit Philanthropic	1,476	0.9%	Nonprofit Religious	201	0.1%
Construction	1,308	0.8%	Recycling	125	0.1%
Manufacturing Food	1,134	0.7%	Real Estate	125	0.1%
Logistics	1,090	0.6%	Professional Services	258	0.2%
			Total Major Employer FTE	167,959	100.0%

Note: Employment numbers in this table only pertain to FTEs reported for all top employers (100+ FTEs) in Pierce County.
Source: The Economic Development Board of Tacoma-Pierce County, Largest Employers Area Profile.

The Thurston County Regional Planning Council provides a list of major private employers in Thurston County for 2018. Among the list of the sixteen employers, Providence St. Peter Hospital employs the most individuals at 2,849 employees, nearly 2.8 times higher than the county's second and third largest employers (see Figure 7.4.7). Safeway and Walmart, across three locations apiece, have the next largest employment counts at 1,024 and 1,002 employees, respectively.

When summarized by industry, approximately 33 percent of Thurston County's top private employers operate in healthcare. Retail is the next largest at about 26 percent, followed by gaming (12 percent), banking (5.7 percent), business services (5.6 percent), and hospitality (4.5 percent). Using Thurston County's total covered employment estimate of 118,304 for 2019, the major employers in Pierce County make up approximately 10 percent of the county's total employment base.

Figure 7.4.7 – Largest Private Employers in Thurston County, 2018

Organization Name	Industry	Employees (2018)
Providence St. Peter Hospital	Health Care	2,849
Safeway (3 locations)	Retail	1,024
Walmart (3 locations)	Retail	1,002
Nisqually Red Wind Casino	Gaming	760
Lucky Eagle Casino	Gaming	688
Fred Meyer (2 locations)	Retail	665
Washington State Employees Credit Union	Banking	662
Capital Medical Center	Health Care	650
Conduent (formerly Xerox)	Business Services	650
Great Wolf Lodge	Hospitality	529
YMCA	Nonprofit Philanthropic	430
Panorama	Nursing & Personal Care Facilities	400
St. Martin's University	Education	383
Kaiser Permanente	Health Care	347
Cabela's	Retail	300
Ostrom Mushroom Farms	Manufacturing Food	300
Total		11,639

Source: Thurston Regional Planning Council, 2018.

7.4.4. JBLM Awarded Contracts

Overall JBLM has a significant economic impact for businesses. Over the 2010 to 2020 period, Washington businesses received a total of approximately $2.55 billion across an estimated 19,144 JBLM contracts. Nationally, JBLM awarded nearly 26,540 total contracts valued at a total of $5.77 billion during 2010 to 2020. This translates to about 44.2 percent of all JBLM contract dollars being awarded to Washington businesses, which comprises about 72.1 percent of all national contracts for the analysis period.

This analysis of contract data focused on contract work completed for the JBLM base area and excluded contract data for the Yakima Training Center which is located outside of the study area. Contracts can be single- or multi-year. For ease of analysis, the awarded action date of a contract is assumed to be the first year. Multi-year contract awards are not spread out over their contractual obligation period; instead, they are totaled by the year of their awarded action date. Furthermore, the information describing the location of the businesses receiving contracts has been geographically disaggregated into four distinct geographic groups. The first two geographic groups are Pierce and Thurston Counties. The third geographic group consists of contracts allocated to businesses located in neighboring counties, or those adjacent to the borders of Pierce and/or Thurston Counties including King County, Kitsap County, Mason County, Grays Harbor County, Lewis County, and Yakima County. The last group is made up of all other Washington counties that are not included in the other three groups.

As seen in Figure 7.4.8, the share of JBLM contracts that are multi-year fluctuate over the analysis period but averaged to be about 2.6 percent of all contracts over 2010 to 2020. However, as Figure 7.4.9 shows, multi-year contracts can make up a sizable, albeit fluctuating, share of contract dollars awarded each year.

Figure 7.4.8 – Count of JBLM Contracts Awarded to Washington Businesses by Contract Type and Year, 2010–2020

Year	Count of Non-Multi-Year Contracts					Count of Multi-Year Contracts				
	Pierce County	Thurston County	Neighboring Counties	All Other Counties	% Share of All Awarded Contracts	Pierce County	Thurston County	Neighboring Counties	All Other Counties	% Share of All Awarded Contracts
2010	855	116	113	88	95.2%	20	3	30	6	4.8%
2011	801	77	89	50	95.0%	32	2	14	5	5.0%
2012	674	55	118	99	93.0%	42	1	22	6	7.0%
2013	845	35	176	19	97.6%	14	0	10	2	2.4%
2014	1,086	20	168	17	97.1%	27	3	8	1	2.9%
2015	2,134	12	201	14	98.3%	27	5	9	1	1.7%
2016	2,060	30	295	12	98.7%	22	1	7	2	1.3%
2017	1,994	48	371	15	98.7%	23	5	3	2	1.3%
2018	1,979	22	409	11	99.2%	12	2	4	1	0.8%
2019	1,751	9	286	11	99.4%	10	2	0	0	0.6%
2020	1,434	15	129	6	99.4%	6	1	2	0	0.6%

Source: JBLM, 2021.

Over the 2010 to 2020 period, Pierce County businesses received approximately 62 percent of all contractual dollars awarded for JBLM contracts (about $1.595 billion). By comparison, Thurston County businesses received five percent ($132.3 million), neighboring counties received 22 percent ($557.6 million), and the remaining Washington counties received 10 percent ($267.9 million).

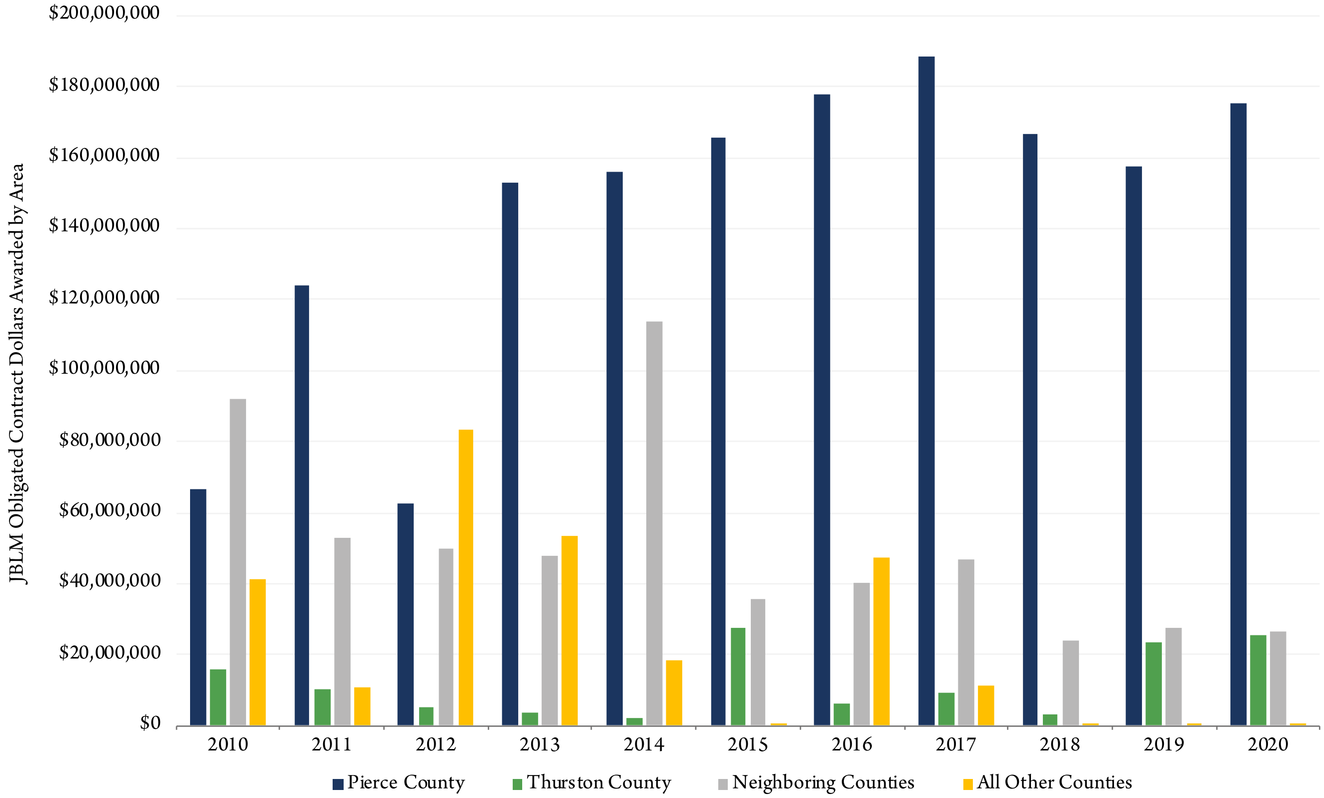
Figure 7.4.9 – JBLM Contract Dollars Awarded to Washington Businesses by Contract Type and Year, 2010–2020

Year	Pierce County	Thurston County	Neighboring Counties	All Other Counties	State Total
Non-Multi-Year Contract Dollars Awarded					
2010	$46,373,144	$13,932,295	$43,767,796	$27,898,006	$131,971,240
2011	$115,405,448	$10,206,221	$38,452,525	$6,531,387	$170,595,582
2012	$26,707,257	$5,167,372	$32,174,923	$51,022,281	$115,071,833
2013	$111,178,432	$3,760,277	$14,477,325	$1,682,493	$131,098,527
2014	$140,960,380	$1,985,675	$20,738,296	$17,938,461	$181,622,811
2015	$121,033,133	$633,090	$19,614,992	$654,262	$141,935,477
2016	$99,185,670	$4,939,957	$24,598,786	$1,494,725	$130,219,138
2017	$155,703,661	$6,750,396	$28,560,130	$3,852,575	$194,866,762
2018	$156,785,449	$3,083,668	$23,526,959	$446,886	$183,842,961
2019	$146,637,047	$287,955	$27,574,447	$458,940	$174,958,388
2020	$129,470,950	$1,043,941	$26,590,125	$123,167	$157,228,184
Sub-total	$1,249,440,570	$51,790,847	$300,076,303	$112,103,181	$1,713,410,902
Multi-Year Contract Dollars Awarded					
2010	$20,213,990	$2,000,171	$48,320,885	$13,504,547	$84,039,592
2011	$8,622,637	$33,844	$14,687,261	$4,350,690	$27,694,431
2012	$36,119,697	$161,738	$17,542,050	$32,468,019	$86,291,504
2013	$41,908,167	$0	$33,412,759	$51,645,824	$126,966,750
2014	$15,305,350	$140,148	$93,257,086	$528,090	$109,230,674
2015	$44,801,862	$26,844,192	$15,960,358	$0	$87,606,413
2016	$78,760,555	$1,137,495	$15,812,856	$45,695,196	$141,406,102
2017	$32,869,209	$2,421,879	$18,150,814	$7,505,778	$60,947,680
2018	$9,782,819	$61,143	$318,458	$90,492	$10,252,911
2019	$11,045,690	$23,396,913	$0	$0	$34,442,603
2020	$45,924,113	$24,330,000	$97,969	$0	$70,352,082
Sub-total	$345,354,088	$80,527,523	$257,560,496	$155,788,636	$839,230,742
Grand Total	**$1,594,794,658**	**$132,318,370**	**$557,636,798**	**$267,891,817**	**$2,552,641,644**

Source: JBLM, 2021.

For nearly every year over the analysis period, except for 2010 and 2012, Pierce County businesses received the largest sum of JBLM contract dollars relative to all other comparison geographies (as shown in Figure 7.4.10). At the same time, Thurston County businesses tended to be awarded the fewest dollars relative to comparison geographies. However, the years with Thurston County's largest contractual awards (2015, 2019, and 2020) came from multi-year contracts. Figure 7.4.10 shows that contractual awards allocated to "All Other Counties" in the state has generally declined since 2016.

Figure 7.4.10 – JBLM Contract Dollars Awarded by Region and Year, 2010–2020



Source: JBLM, 2021.

Over the 2010 to 2020 analysis period, the majority share of total JBLM contract dollars awarded each year, except for 2016, came from contracts that are not multi-year. The geographic distribution of these funds varies widely year-over-year, but aside from 2012, Pierce County often received the largest share of non-multi-year contractual awards. For multi-year contracts, Pierce County tended to receive smaller award shares relative to annual contracts and the other comparison geographies. However, in 2015, 2019, and 2020, Thurston County received its largest shares of multi-year contractual awards. Compared to all geographical areas of analysis, Thurston County businesses, on average, received smaller shares of contractual awards relative to other comparison areas, especially Pierce County.

Figure 7.4.11 – JBLM Contract Dollars Awarded as a Share of Washington Counties, 2010–2020

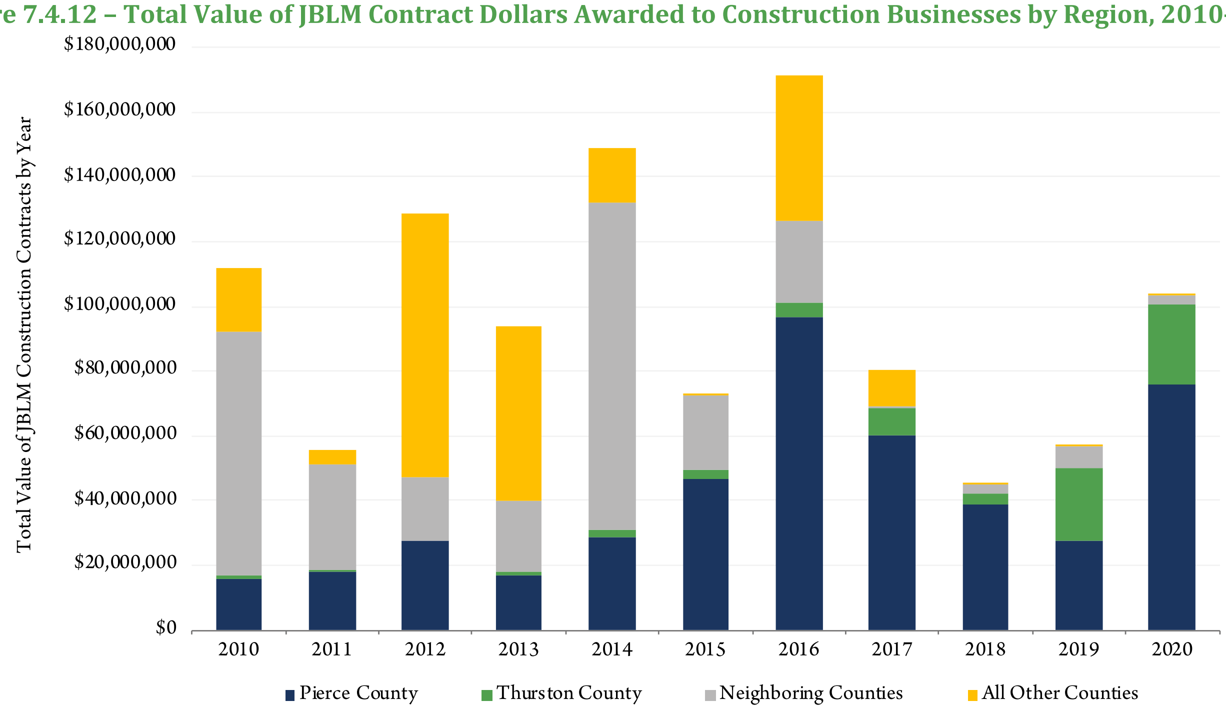
Year	% Share of Non-Multi-Year Contract Dollars					% Share of Multi-Year Contract Dollars					Grand Total
	Pierce County	Thurston County	Neighboring Counties	All Other Counties	State Total	Pierce County	Thurston County	Neighboring Counties	All Other Counties	State Total	
2010	21.5%	6.4%	20.3%	12.9%	61.1%	9.4%	0.9%	22.4%	6.3%	38.9%	100.0%
2011	58.2%	5.1%	19.4%	3.3%	86.0%	4.3%	0.0%	7.4%	2.2%	14.0%	100.0%
2012	13.3%	2.6%	16.0%	25.3%	57.1%	17.9%	0.1%	8.7%	16.1%	42.9%	100.0%
2013	43.1%	1.5%	5.6%	0.7%	50.8%	16.2%	0.0%	12.9%	20.0%	49.2%	100.0%
2014	48.5%	0.7%	7.1%	6.2%	62.4%	5.3%	0.0%	32.1%	0.2%	37.6%	100.0%
2015	52.7%	0.3%	8.5%	0.3%	61.8%	19.5%	11.7%	7.0%	0.0%	38.2%	100.0%
2016	36.5%	1.8%	9.1%	0.6%	47.9%	29.0%	0.4%	5.8%	16.8%	52.1%	100.0%
2017	60.9%	2.6%	11.2%	1.5%	76.2%	12.8%	0.9%	7.1%	2.9%	23.8%	100.0%
2018	80.8%	1.6%	12.1%	0.2%	94.7%	5.0%	0.0%	0.2%	0.0%	5.3%	100.0%
2019	70.0%	0.1%	13.2%	0.2%	83.6%	5.3%	11.2%	0.0%	0.0%	16.4%	100.0%
2020	56.9%	0.5%	11.7%	0.1%	69.1%	20.2%	10.7%	0.0%	0.0%	30.9%	100.0%

Source: JBLM, 2021.

On an annual basis, four major employment sectors typically made up the largest share of contract dollars awarded across the state: (1) construction, (2) manufacturing, (3) professional, scientific, and technical services, and (4) administrative and waste management/remediation services. While the contractual awards fluctuated heavily for these sectors year over year, the following summary statistical trends were estimated for the 2010 to 2020 period:

- **Construction sector**. About $1.069 billion in JBLM contracts were awarded statewide during the entire analysis period. The sector's total contract value made up about 42 percent of all Washington JBLM contracts. Approximately 42 percent of construction contracts were awarded to Pierce County businesses and seven percent were awarded to Thurston County businesses. About 30 percent were awarded to neighboring counties and the remaining 21 percent were awarded to other counties across the state. Taken together, about 79 percent of JBLM construction contracts were awarded to businesses in Pierce, Thurston, or neighboring counties.
- Across all counties in Washington, the industry of commercial and institutional building construction (NAICS 236220) made up 71 percent of all JBLM construction-related contract funding ($762.077 million) over the 2010 to 2020 period. The water and sewer line (and related structures) construction industry comprised the second largest share of construction contract funding at about nine percent ($99.409 million), followed closely by the highway, street, and bridge construction industry at nine percent ($95.788 million). Taken together, these three construction industries made up 89 percent of all construction related JBLM contract funding.

Figure 7.4.12 – Total Value of JBLM Contract Dollars Awarded to Construction Businesses by Region, 2010–2020

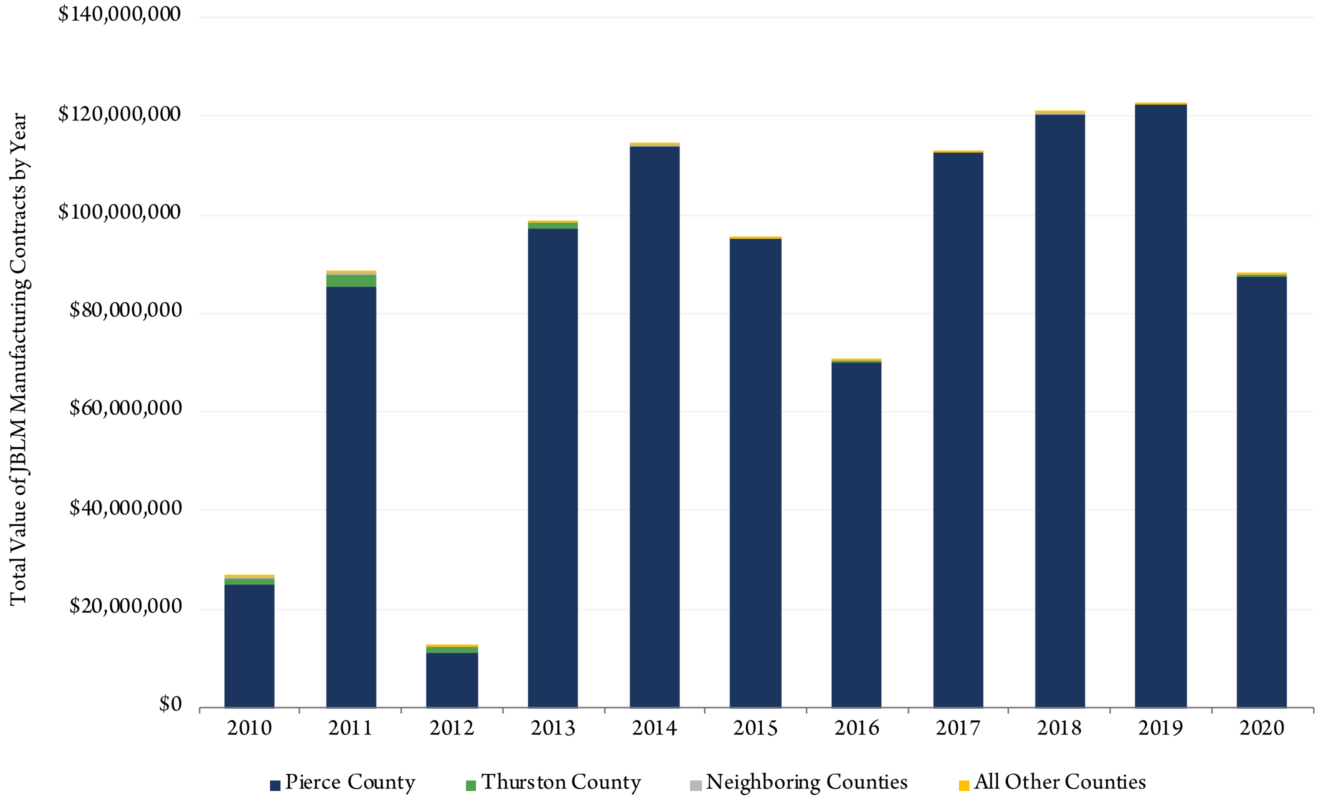


Source: JBLM, 2021.

- **Manufacturing sector**. In contrast to the construction, professional services, and waste/remediation services sectors, most contractual dollars awarded to manufacturing businesses in Washington are located in Pierce County (see Figure 7.4.13). Over the 2010 to 2020 period, approximately $940.24 million in manufacturing sector contracts were awarded to Pierce County businesses (98.9 percent of all Washington counties), with 2019 having the highest value of all comparison years at $122.18 million. Thurston County received 0.7 percent of statewide manufacturing dollars, whereas neighboring counties and the remaining Washington counties received 0.2 percent apiece.

- Nearly 88 percent ($832.445 million) of contractually obligated dollars awarded to counties across Washington in the manufacturing sector operated in the petroleum refinery industry. All other manufacturing industries received a tiny share at around one percentage point or less of the manufacturing sector's total awarded value over the analysis period. The three largest industries following petroleum refining include carbon and graphite product manufacturing ($7.768 million, or one percent of total), other aircraft parts and auxiliary equipment manufacturing ($6.514 million, or one percent), and aircraft engine and engine parts manufacturing ($6.209 million, or one percent).

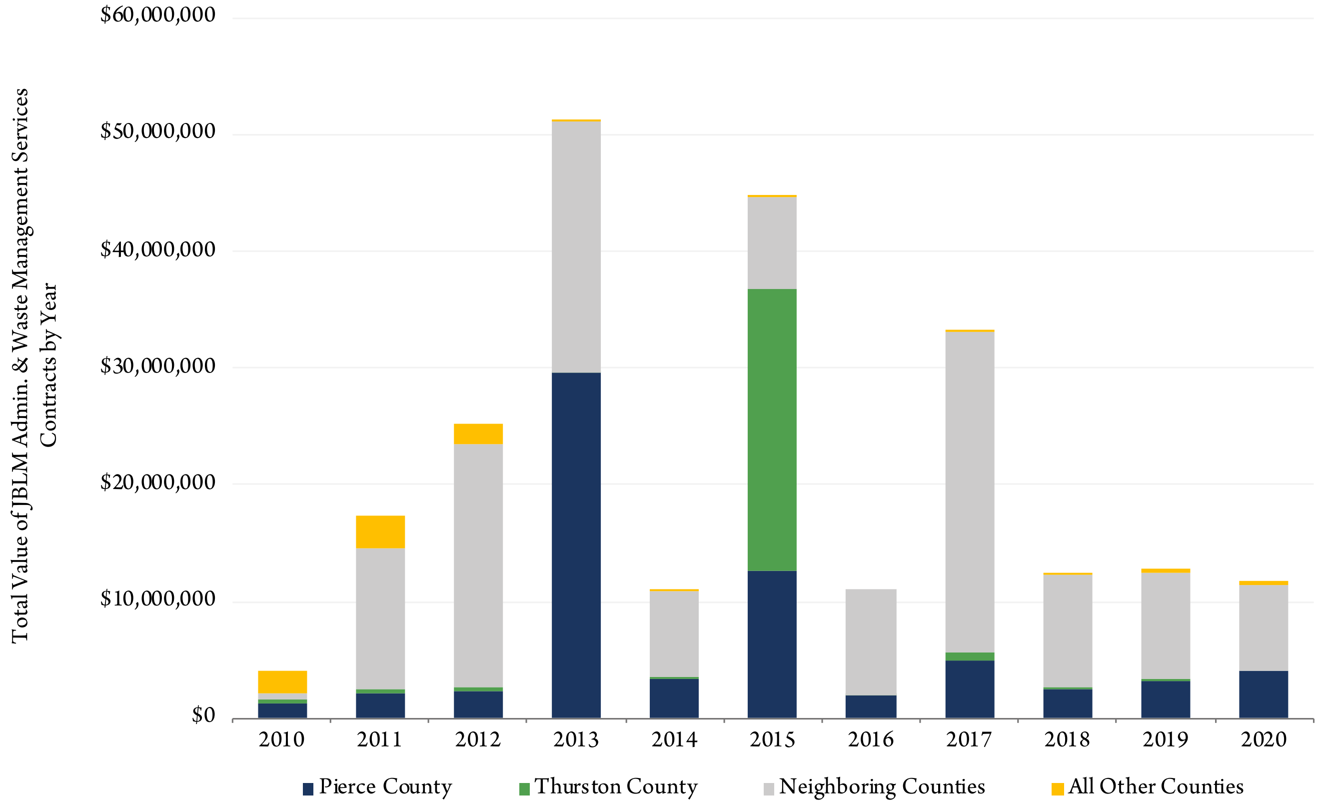
Figure 7.4.13 – Total Value of JBLM Contract Dollars Awarded to Manufacturing Businesses by Region, 2010–2020



Source: JBLM, 2021.

- **Administrative and Support and Waste Management and Remediation Services sector**. About $234.857 million in JBLM contracts were awarded to this sector over the 2010 to 2020 period. Compared to the four largest employment sectors by total value of contracts awarded, counties neighboring Pierce and Thurston Counties received over half (57 percent) of the funds in this sector. Of the neighboring counties, Kitsap County businesses received the largest share of contract funds at about 93 percent, followed by King County at about seven percent. Pierce County businesses received approximately 29 percent of JBLM contract funding in this sector ($68.143 million), and Thurston County businesses received approximately 11 percent ($26.306 million).
- About 38 percent ($88.244 million) of contractually obligated dollars awarded to counties across Washington in the administrative and waste management/remediation sector operated in the facilities support services industry. These include businesses that provide services such as janitorial, maintenance, guard and security, reception, etc. The next largest industry is janitorial services ($58.215 million, or 25 percent), followed by security systems services ($28.014 million, or 12 percent) and then solid waste collection ($27.335 million, or 25 percent).

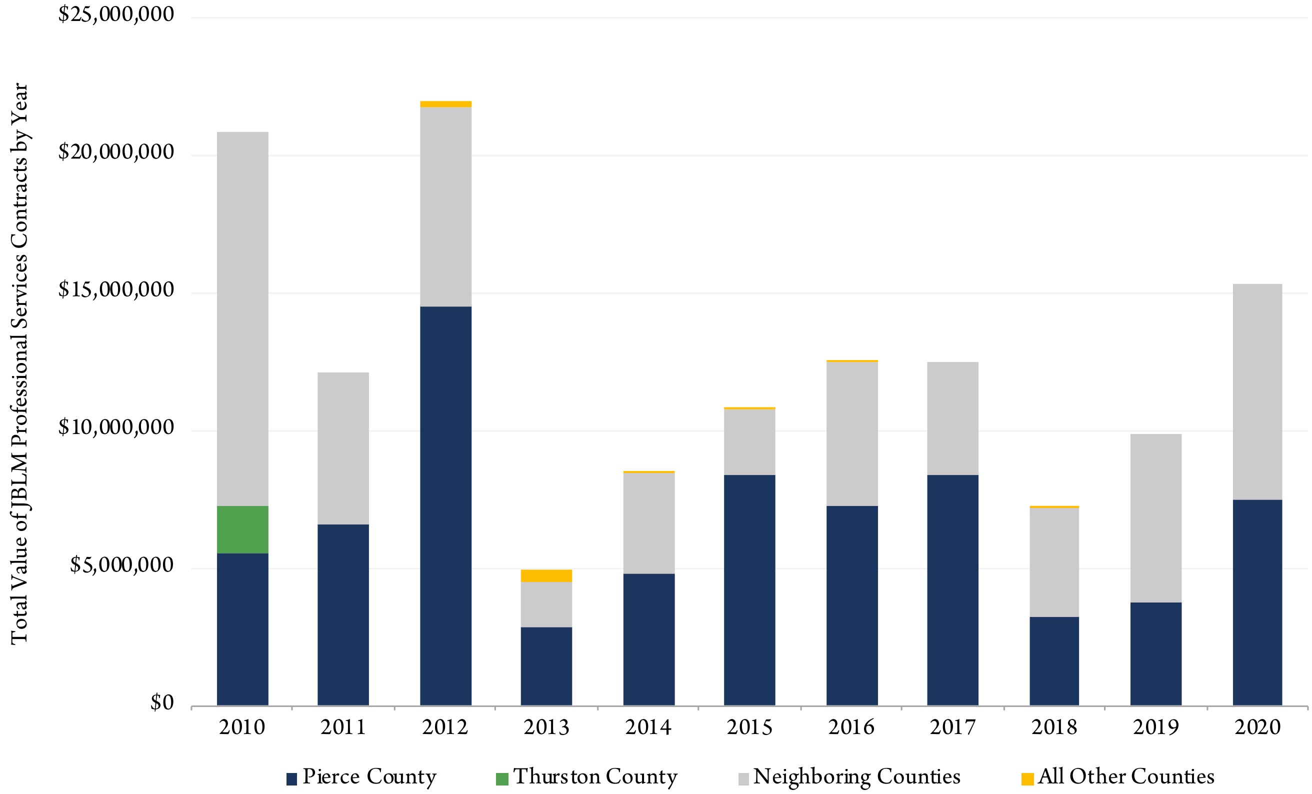
Figure 7.4.14 – Total Value of JBLM Contracts Awarded to Administrative and Support and Waste Management/Remediation Services Businesses by Region, 2010–2020



Source: JBLM, 2021.

- **Professional, Scientific, and Technical Services sector**. Of the four employment sectors with the largest sum of contract dollars awarded for JBLM-related projects, the professional, scientific, and technical services sector brought in the least at about $136.482 million over the last decade. Most of these dollars were awarded to Pierce County businesses ($72.872 million, or 54 percent of total) and neighboring county businesses ($61.095 million, or 45 percent of total). Among the neighboring county businesses, professional, scientific, and technical services businesses located in King County were awarded the majority of contract funds. Thurston County and all remaining Washington counties made up the remaining two percent at one percent share apiece.
- About 40 percent ($54.648 million) of contractually obligated dollars awarded to counties across Washington in the professional, scientific, and technical services sector operated in the engineering services industry. These can include businesses that provide services such as civil engineering, mechanical engineering, and environmental engineering, among others. Businesses providing architectural services received the next largest share of contract dollars ($23.561 million, or 17 percent), followed by research and development in the physical, engineering, and life sciences ($14.848 million, 11 percent) and then computer facilities management services ($10.226 million, or seven percent).

Figure 7.4.15 – Total Value of JBLM Contract Dollars Awarded to Professional, Scientific, and Technical Services Businesses by Region, 2010–2020



Source: JBLM, 2021.

8. Veteran Employment in the Study Area

8.1. Veteran Labor Force Characteristics

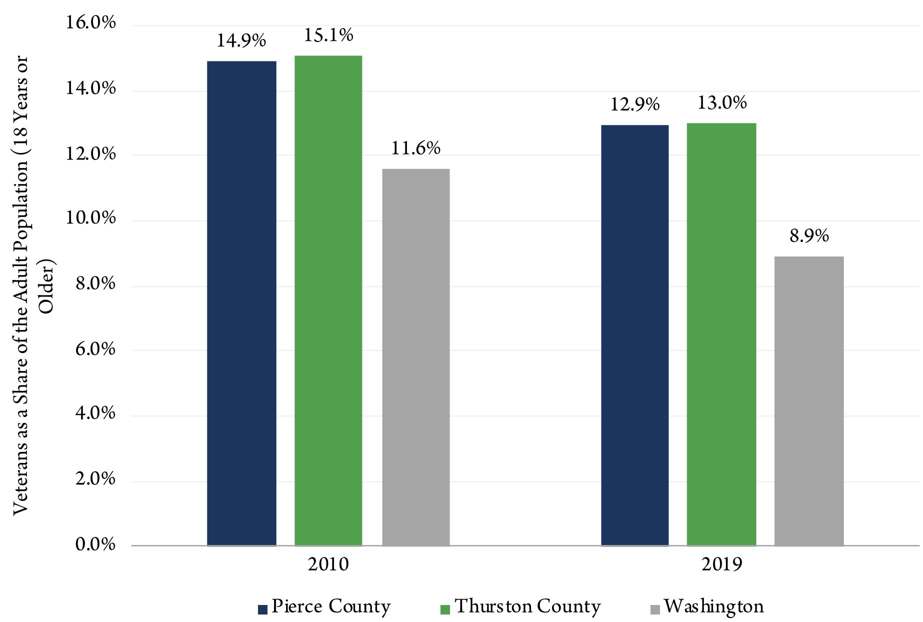
This section assesses changes in the Veteran labor force in the study area to explore whether the Veteran population is finding secure employment in the region and at what rate and where. SSMCP, in partnership with UW-Tacoma Center for Business Analytics, surveyed businesses in 2019 and 2020 (560 surveys completed) and found that 77 percent of the surveyed businesses were attributed to the presence of JBLM. This section describes general Veteran labor force characteristics in the study area including age distribution, educational attainment, and unemployment rates. Provided below are a few key findings from the analysis:

- Veterans residing in Pierce and Thurston Counties tend to be younger than statewide distributions. About 27 percent of Pierce County Veterans are between the ages of 20 to 34, nearly 11 percentage points higher than both Thurston County and the state. Statewide, about 42 percent of Veterans are 65 or older, compared to 30 percent for Pierce County and 36 percent for Thurston County.
- Thurston County Veterans tend to hold Bachelor's or advanced degrees at a higher rate than both Pierce County and the state. In the 2015-2019 period, approximately 36 percent of Thurston County Veterans held at least a Bachelor's degree or better, compared to 31 percent for Washington and 29 percent for Pierce County.

Statewide, the share of Veterans as a percent of the total adult population decreased by 2.7 percentage points between 2010 and 2019 (11.6% to 8.9%).

The statewide trend is also seen in both Pierce and Thurston Counties. Veterans as a share of the total adult population in Pierce County and Thurston County decreased slightly by around two percentage points between 2010 to 2019 (Pierce: 14.9% to 12.9%, Thurston: 15.1% to 13.0%).

Figure 8.1.1 –Veteran Share of Total Adult Population (18 Years and Older), Pierce County, Thurston County, and Washington, 2010–2019



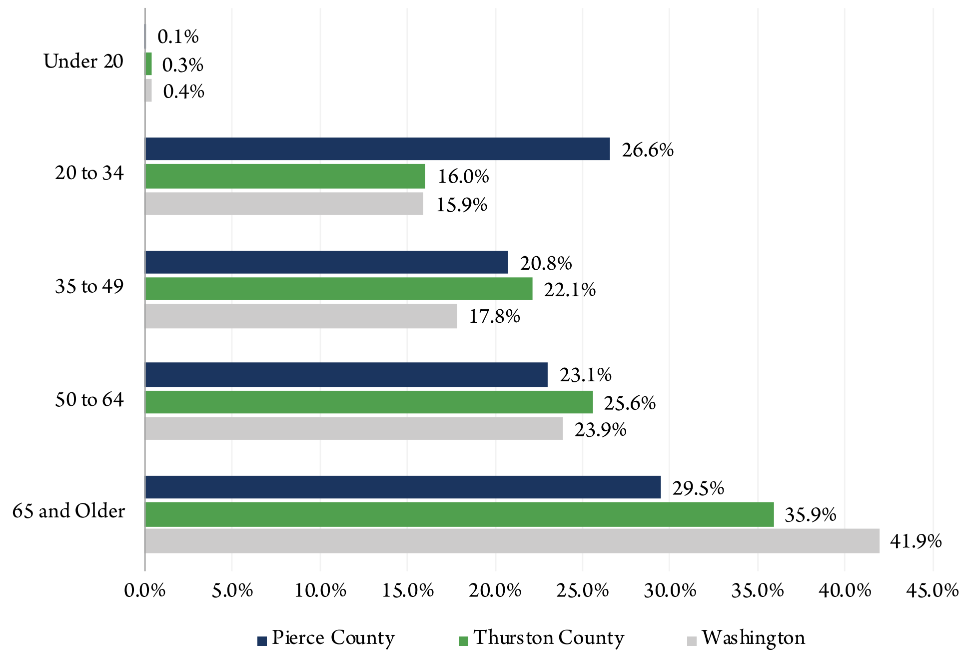
Source: U.S. Census Bureau, American Community Survey (ACS) PUMS Estimates, 2010 and 2019 (1-Year).

About 27 percent of Pierce County Veterans were between the ages of 20 to 34 in 2019, nearly 11 percentage points above both Thurston County and the state.

Veterans 65 and older made up the largest share of each area's respective age distribution; however, the state had a markedly higher share than both Pierce and Thurston Counties.

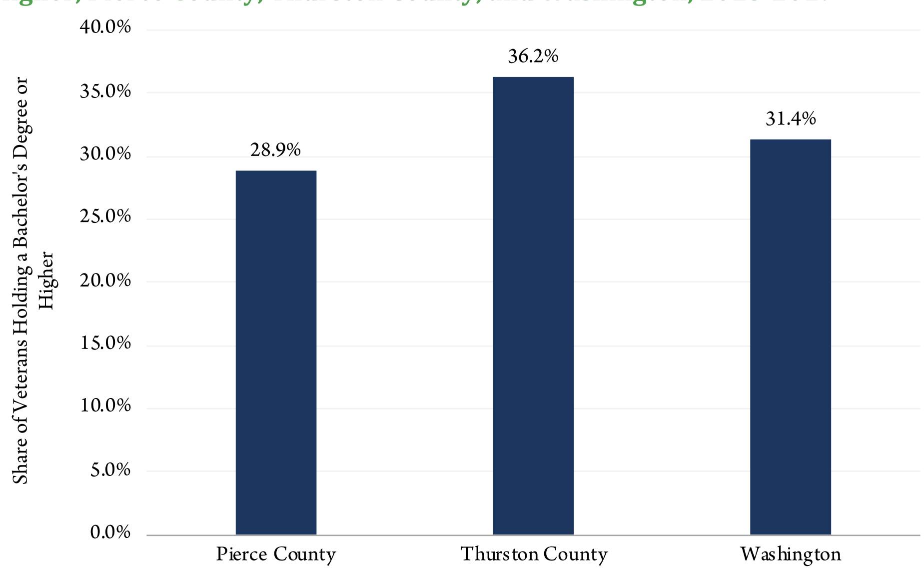
During the 2015-2019 period, Thurston County Veterans tended to hold a Bachelor's Degree or more advanced degrees at a higher rate than Pierce County and the state.

Figure 8.1.2 – Age Distribution of Veterans, Pierce County, Thurston County, and Washington, 2019



Source: U.S. Census Bureau, 2019 PUMS data (1-year estimates).

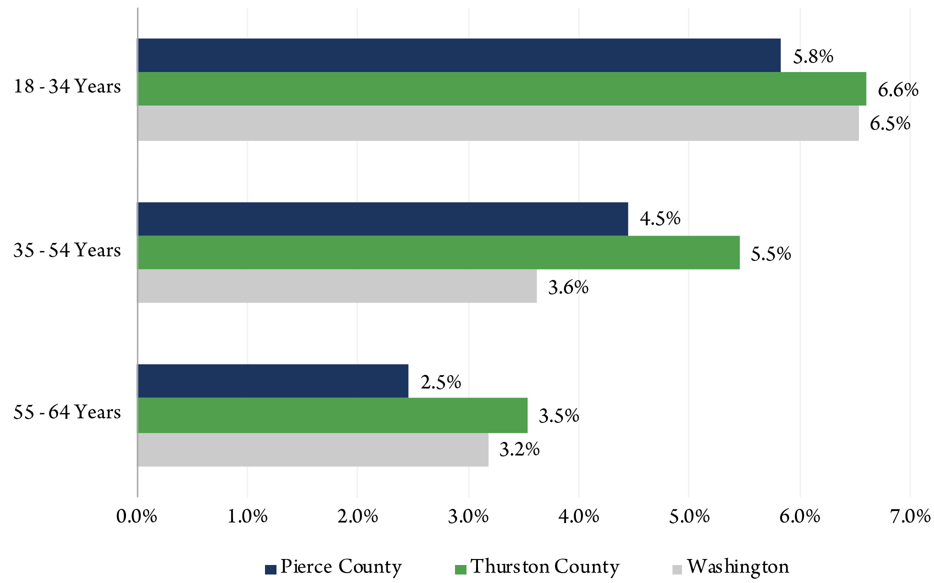
Figure 8.1.3 – Share of 25+ Year Old Veterans Holding a Bachelor's Degree or Higher, Pierce County, Thurston County, and Washington, 2015-2019



Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates, Table B21003.

The unemployment rate for Veterans in Pierce County tended to be lower than the rate for Thurston County Veterans.

Figure 8.1.4 – Unemployment Rate of Veterans by Age Group, Pierce County, Thurston County, and Washington, 2015-2019



Source: U.S. Census Bureau, 2015-2019 ACS 5-Year Estimates, Table B21005.

8.2. Veteran Employment

This section describes trends associated with Veteran employment in the study area including information on major sectors where Veterans are employed and their level of education and economic prosperity.[21]

Overall, Veteran employment in Pierce County barely increased (less than one percent) and Veteran employment in Thurston County increased by approximately 4.1 percent between 2010 and 2019. Top growth was seen in the military, administration support and waste management services, and accommodation/food services. Data in this section have been sorted, from high to low, based on the percent share a sector comprises of the county-wide total over the 2010 to 2019 analysis period. Sectors that grew more than 50 percent (in employment count) are highlighted in green. Any sector that contracted is highlighted with orange.

8.2.1. Change in Veteran Employment by Major Employment Sector

Below are key findings located when analyzing Veteran employment data for Pierce and Thurston counties over the 2010 to 2019 period.

Pierce County Veteran Employment Trends from 2010 to 2019

- Veteran employment in Pierce County increased by approximately 0.8 percent, or by 604 jobs between 2010 to 2019.
- Accommodation/food services (over 500 percent), other services (135 percent), and agriculture, forestry, fishing, and hunting (56 percent) sectors had the largest Veteran employment growth changes over the last decade. However, several had an overall minor

[21] The U.S. Census defines Veterans as people who have served but are not currently serving, on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard, or who served in the U.S. Merchant Marine during World War II. People who served in the National Guard or Reserves are classified as Veterans only if they were ever called or ordered to active duty, not counting the 4-6 months for initial training or yearly summer camps. All other civilians are classified as nonVeterans. While it is possible for 17-year-olds to be Veterans of the Armed Forces, ACS data products are restricted to the population 18 years and older.

number of jobs. Among these high-growth sectors, "other services" offered the highest overall number of jobs in 2019 (almost five percent of the total) and rapid growth.

Figure 8.2.1 – Change in Veteran Employment in Pierce County, by Sector, 2010–2019

NAICS Sector	Annual Employment		Sector Employment as Share of Total Employment		Change, 2010 - 2019		
	2010	2019	2010	2019	Difference	Percent Change	AAGR
Military	18,599	18,815	23.6%	23.7%	216	1.2%	0.13%
Public Administration (Government)	11,249	11,062	14.3%	13.9%	-187	-1.7%	-0.19%
Manufacturing	8,542	8,426	10.8%	10.6%	-116	-1.4%	-0.15%
Health Care & Social Assistance	6,578	6,236	8.4%	7.9%	-342	-5.2%	-0.59%
Construction	4,922	5,739	6.3%	7.2%	817	16.6%	1.72%
Transportation & Warehousing	6,156	5,034	7.8%	6.3%	-1,122	-18.2%	-2.21%
Admin & Support & Waste Management Services	3,605	3,685	4.6%	4.6%	80	2.2%	0.24%
Other Services (Except Public Admin)	1,514	3,560	1.9%	4.5%	2,046	135.1%	9.97%
Professional & Technical Services	3,140	3,513	4.0%	4.4%	373	11.9%	1.26%
Retail Trade	4,536	3,075	5.8%	3.9%	-1,461	-32.2%	-4.23%
Educational Services	2,712	2,385	3.4%	3.0%	-327	-12.1%	-1.42%
Accommodation & Food Services	271	1,728	0.3%	2.2%	1,457	537.6%	22.86%
Wholesale Trade	1,702	1,362	2.2%	1.7%	-340	-20.0%	-2.45%
Arts, Entertainment, & Recreation	1,405	1,163	1.8%	1.5%	-242	-17.2%	-2.08%
Real Estate, Rental, & Leasing	1,321	1,093	1.7%	1.4%	-228	-17.3%	-2.08%
Finance & Insurance	1,003	1,034	1.3%	1.3%	31	3.1%	0.34%
Information	1,113	949	1.4%	1.2%	-164	-14.7%	-1.76%
Utilities	202	205	0.3%	0.3%	3	1.5%	0.16%
Agriculture, Forestry, Fishing, & Hunting	91	159	0.1%	0.2%	68	74.7%	6.40%
Mining & Extraction	75	117	0.1%	0.1%	42	56.0%	5.07%
Management of Companies & Enterprises	--	--	--	--	--	--	--
Total Veteran Employment	78,736	79,340	100.0%	100.0%	604	0.8%	0.08%

Source: U.S. Census Bureau, American Community Survey (ACS) PUMS Estimates, 2019 (1-Year).

Thurston County Veteran Employment Trends from 2010 to 2019

- Overall, Veteran employment in Thurston County increased by approximately 4.1 percent, or by 913 jobs between 2010 and 2019. Top growth was seen in the military, administration support and waste management services, and accommodation/food services.
- Sectors such as transportation and warehousing, wholesale trade, and retail trade had the largest employment contractions for Veterans, shrinking by 18 percent, 20 percent, and 32 percent, respectively. Other sectors, such as manufacturing, public administration, and health care and social assistance, similarly declined in terms of Veteran employment, but these contractions were much smaller than the aforementioned sectors. Although there were job losses in the public administration or government (total share of almost 19 percent in 2019), health care/social assistance (7 percent of the total), manufacturing (5.6 percent), and retail trade (5.4 percent) sectors, their share of total employment was over five percent.

Figure 8.2.2 – Change in Veteran Employment in Thurston County, by Sector, 2010–2019

NAICS Sector	Annual Employment		Sector Employment as Share of Total Employment		Change, 2010 - 2019		
	2010	2019	2010	2019	Difference	Percent Change	AAGR
Military	4,431	6,553	19.7%	28.0%	2,122	47.9%	4.44%
Public Administration (Government)	5,669	4,406	25.2%	18.8%	-1,263	-22.3%	-2.76%
Transportation & Warehousing	1,325	1,854	5.9%	7.9%	529	39.9%	3.80%
Health Care & Social Assistance	1,734	1,630	7.7%	7.0%	-104	-6.0%	-0.68%
Construction	1,355	1,481	6.0%	6.3%	126	9.3%	0.99%
Manufacturing	1,369	1,321	6.1%	5.6%	-48	-3.5%	-0.40%
Retail Trade	941	1,258	4.2%	5.4%	317	33.7%	3.28%
Admin & Support & Waste Management Services	488	828	2.2%	3.5%	340	69.7%	6.05%
Professional & Technical Services	2,133	792	9.5%	3.4%	-1,341	-62.9%	-10.42%
Educational Services	564	610	2.5%	2.6%	46	8.2%	0.87%
Wholesale Trade	500	566	2.2%	2.4%	66	13.2%	1.39%
Other Services (Except Public Admin)	459	514	2.0%	2.2%	55	12.0%	1.27%
Accommodation & Food Services	213	420	0.9%	1.8%	207	97.2%	7.84%
Information	514	221	2.3%	0.9%	-293	-57.0%	-8.95%
Arts, Entertainment, & Recreation	139	200	0.6%	0.9%	61	43.9%	4.13%
Real Estate, Rental, & Leasing	269	187	1.2%	0.8%	-82	-30.5%	-3.96%
Agriculture, Forestry, Fishing, & Hunting	--	182	--	0.8%	--	--	--
Finance & Insurance	350	149	1.6%	0.6%	-201	-57.4%	-9.05%
Utilities	--	147	--	0.6%	--	--	--
Mining & Extraction	35	82	0.2%	0.4%	47	134.3%	9.92%
Management of Companies & Enterprises	--	--	--	--	--	--	--
Total Veteran Employment	22,488	23,401	100.0%	100.0%	913	4.1%	0.44%

Source: U.S. Census Bureau, American Community Survey (ACS) PUMS Estimates, 2010 and 2019 (1-Year).

8.2.2. Change in Occupational Employment for Veterans

Some key takeaways from occupational employment, by county:

- **Transportation and material moving occupations**. These occupations consist of roles such as motor vehicle operators, material moving workers, and rail transportation workers.

  Nearly 12 percent of Veterans (9,454 Veterans) living in Pierce County work in this occupation class. Approximately 20.3 percent reported that they work as laborers and material movers in freight and stock. Another 19.7 percent work truck driving or driver/sales worker occupations, and 9.5 percent work stocker and order filler occupations.

  Nearly 13 percent of Veterans living in Thurston County work in this occupation class. Like Pierce County, many Veterans work truck driver or driver/sales worker occupations (29.8 percent) and laborer or material movers in freight and stock occupations (27.9 percent). Another 16.1 percent of Thurston County Veterans work aircraft pilot and flight engineer occupations.

- **Military occupations**. This occupation category only provides detail on three roles, plus an additional "rank not specified" role. For both Pierce and Thurston counties, the majority of the military occupation group data are categorized as "rank not specified" at 45 percent and 52 percent, respectively.

  Of the remaining military occupational roles, 24 percent of Pierce County Veterans (17 percent in Thurston County) worked in enlisted tactical operations, or as air/weapons specialists or crew members. Another 21 percent of Veterans in Pierce County (24 percent in Thurston County) worked as military officer special and tactical operations leaders, and the remaining 10 percent in Pierce County (seven percent in Thurston) worked as first-line enlisted military supervisors.

- **Office and administrative support occupations**. These occupations consist of roles ranging from tellers and dispatchers to postal service clerks and cargo and freight agents.

In 2019, approximately 9.1 percent of Pierce County Veterans (7,258 Veterans) worked occupations of the office and administrative support type. The roles with the highest levels of employment include customer service representatives (12 percent), secretaries and administrative assistants except legal, medical, and executive (11 percent), and first-line supervisors of office and administrative support workers (11 percent).

Office and administrative support occupations comprise a smaller share of Veteran employment in Thurston County (5.1 percent) than Pierce County but have a different mix of occupational roles. Almost one-quarter (24 percent) of employed Thurston County Veterans work as other information and records clerks. Another 12 percent work as eligibility interviewers for government programs, and nine percent work as postal service clerks.

- **Installation, maintenance, and repair occupations**. Occupational roles in this group include HVAC mechanics, millwrights, aircraft mechanics and service technicians, and mobile home installers, among many others.

  Nearly nine percent of all Veteran employment (7,008 Veterans) in Pierce County in 2019 is in this occupational group. The roles with the highest shares of employment include aircraft mechanics and service technicians (19 percent), general maintenance and repair workers (17 percent), and heating, air conditioning, and refrigeration mechanics and installers (16 percent).

  A comparable share of Thurston County Veterans worked in this occupational group during 2019. However, similar to office and administrative support occupations, Thurston County has a different mix of occupational roles. Bus and truck mechanics and diesel engine specialists made up the largest employment of all occupational roles in the group (21 percent), followed by explosives workers, ordnance handling experts, and blasters (15 percent), and then computer, automated teller, and office machine repairers (14 percent).

Occupation Category	Annual Employment		Sector Employment as Share of Total Employment		Change, 2010 - 2019		
	2010	2019	2010	2019	Difference	Percent Change	AAGR
Transportation and Material Moving	6,634	9,454	8.4%	11.9%	2,820	42.5%	4.01%
Military	9,333	7,882	11.9%	9.9%	-1,451	-15.5%	-1.86%
Office and Administrative Support	8,008	7,258	10.2%	9.1%	-750	-9.4%	-1.09%
Installation, Maintenance, and Repair	7,327	7,008	9.3%	8.8%	-319	-4.4%	-0.49%
Management	7,649	6,871	9.7%	8.7%	-778	-10.2%	-1.18%
Healthcare Practitioners and Technicians	5,387	5,500	6.8%	6.9%	113	2.1%	0.23%
Protective Service	4,157	4,744	5.3%	6.0%	587	14.1%	1.48%
Construction and Extraction	4,754	4,709	6.0%	5.9%	-45	-0.9%	-0.11%
Business and Financial Operations	2,718	4,088	3.5%	5.2%	1,370	50.4%	4.64%
Production	4,614	3,695	5.9%	4.7%	-919	-19.9%	-2.44%
Sales and Related	3,979	3,097	5.1%	3.9%	-882	-22.2%	-2.75%
Food Preparation and Serving	585	2,441	0.7%	3.1%	1,856	317.3%	17.20%
Computer and Math	2,395	2,322	3.0%	2.9%	-73	-3.0%	-0.34%
Healthcare Support	1,011	1,884	1.3%	2.4%	873	86.4%	7.16%
Architecture and Engineering	1,828	1,757	2.3%	2.2%	-71	-3.9%	-0.44%
Building & Grounds Cleaning & Maintenance	2,391	1,755	3.0%	2.2%	-636	-26.6%	-3.38%
Education, Training, and Library	1,550	1,316	2.0%	1.7%	-234	-15.1%	-1.80%
Community and Social Services	1,384	1,083	1.8%	1.4%	-301	-21.7%	-2.69%
Personal Care and Service	738	875	0.9%	1.1%	137	18.6%	1.91%
Legal Occupations	782	578	1.0%	0.7%	-204	-26.1%	-3.30%
Life, Physical, and Social Sciences	361	576	0.5%	0.7%	215	59.6%	5.33%
Arts, Design, Entertainment, Sports, & Media	1,129	273	1.4%	0.3%	-856	-75.8%	-14.59%
Farming, Fishing, and Forestry	22	174	0.0%	0.2%	152	690.9%	25.83%
Total Occupational Employment	78,736	79,340	100.0%	100.0%	604	0.8%	0.08%

Source: U.S. Census Bureau, American Community Survey (ACS) PUMS Estimates, 2010 and 2019 (1-Year).

Occupation Category	Annual Employment		Sector Employment as Share of Total Employment		Change, 2010 - 2019		
	2010	2019	2010	2019	Difference	Percent Change	AAGR
Military	2,694	5,083	12.0%	21.8%	2,389	88.7%	7.31%
Transportation and Material Moving	1,856	2,910	8.3%	12.5%	1,054	56.8%	5.12%
Installation, Maintenance, and Repair	2,067	2,136	9.2%	9.1%	69	3.3%	0.37%
Management	1,699	1,706	7.6%	7.3%	7	0.4%	0.05%
Protective Service	1,660	1,473	7.4%	6.3%	-187	-11.3%	-1.32%
Office and Administrative Support	2,786	1,196	12.4%	5.1%	-1,590	-57.1%	-8.97%
Computer and Math	1,276	1,096	5.7%	4.7%	-180	-14.1%	-1.68%
Production	992	1,006	4.4%	4.3%	14	1.4%	0.16%
Sales and Related	815	935	3.6%	4.0%	120	14.7%	1.54%
Healthcare Practitioners and Technicians	745	907	3.3%	3.9%	162	21.7%	2.21%
Education, Training, and Library	715	776	3.2%	3.3%	61	8.5%	0.91%
Construction and Extraction	951	762	4.2%	3.3%	-189	-19.9%	-2.43%
Business and Financial Operations	1,155	744	5.1%	3.2%	-411	-35.6%	-4.77%
Life, Physical, and Social Sciences	263	572	1.2%	2.4%	309	117.5%	9.02%
Building & Grounds Cleaning & Maintenance	402	502	1.8%	2.1%	100	24.9%	2.50%
Community and Social Services	404	369	1.8%	1.6%	-35	-8.7%	-1.00%
Legal Occupations	551	322	2.5%	1.4%	-229	-41.6%	-5.79%
Architecture and Engineering	663	315	2.9%	1.3%	-348	-52.5%	-7.94%
Food Preparation and Serving	179	196	0.8%	0.8%	17	9.5%	1.01%
Healthcare Support	42	180	0.2%	0.8%	138	328.6%	17.55%
Arts, Design, Entertainment, Sports, & Media	167	100	0.7%	0.4%	-67	-40.1%	-5.54%
Personal Care and Service	406	67	1.8%	0.3%	-339	-83.5%	-18.14%
Farming, Fishing, and Forestry	--	48	--	0.2%	--	--	--
Total Occupational Employment	22,488	23,353	100.0%	100.0%	865	3.8%	0.42%

Source: U.S. Census Bureau, American Community Survey (ACS) PUMS Estimates, 2010 and 2019 (1-Year).

8.3. Veteran Income and Other Measures of Economic Prosperity

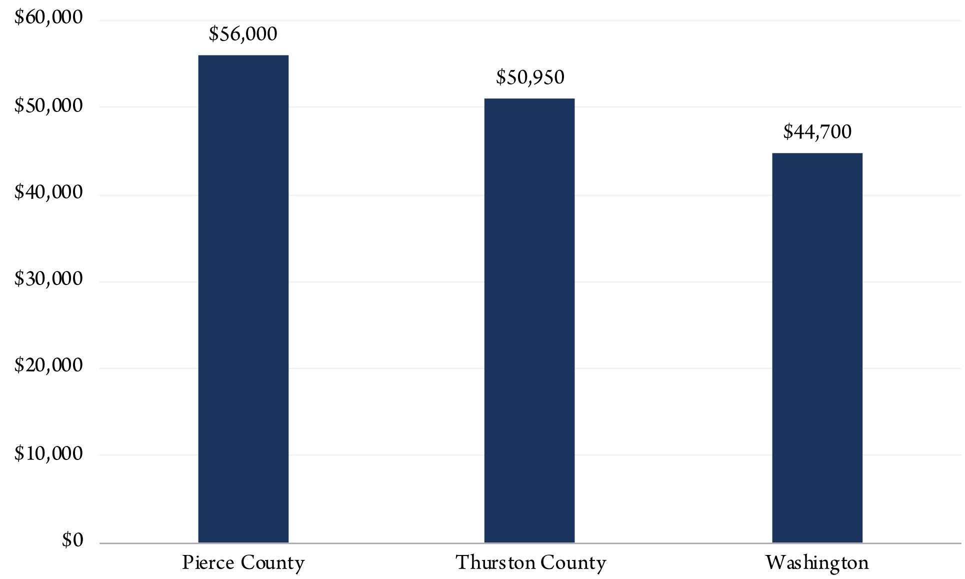
This section describes trends associated with Veteran economic prosperity in the study area. Provided below are a few key findings from the analysis:

- Veteran households in Pierce County tend to earn higher levels of income than Veteran households in both Thurston County and across the state. Pierce County Veteran households earned about 10 percent more income than Thurston County Veteran households, and 25 percent more than the statewide median. Thurston County Veteran households earned approximately 14 percent more income than the statewide median.
- Veterans residing in Pierce County tend to rent their homes more often than own. In contrast, Veterans in Thurston County and across the state tend to own their homes more often than rent. In 2019, approximately 48 percent of Pierce County Veterans owned their homes, compared to 55 percent for both Thurston County and the state.

Veteran households in both Pierce and Thurston counties had a higher median income than all Veterans statewide in 2019.

Pierce County Veteran households earned approximately $5,050 (or 10 percent) more than Thurston County Veteran households. Thurston County Veteran households earned $6,250 (14 percent) more than the statewide median, and Pierce County Veteran households earned $11,300 (25 percent) more than the statewide median.

Figure 8.3.1 – Median Household Income of Veterans, Pierce County, Thurston County, and Washington, 2019

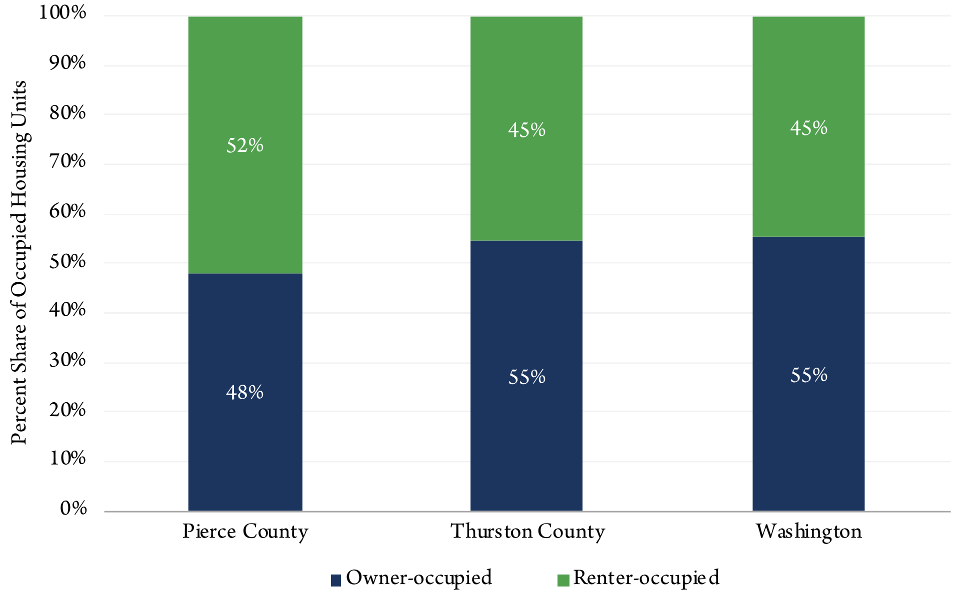


Source: U.S. Census Bureau, 2019 ACS 1-Year Estimates, PUMS.

Veterans residing in Pierce County tended to rent more often than own their homes in 2019. In contrast, Thurston County Veterans tended to own their homes more often than rent, which is consistent with the statewide average.

This is not surprising since many enlisted personnel do not know how long they will be deployed in the region.

Figure 8.3.2 – Veteran Housing Tenure, Pierce County, Thurston County, and Washington, 2019



Source: U.S. Census Bureau, 2019 ACS 1-Year Estimates, PUMS.

9. Regional Economic Development Priorities and Strategies

9.1. Regional Economic Development Priorities Summary

This section includes a high-level summary of the common themes that emerged based on the research of local and regional economic development strategies. The review focused on strategies that could be relevant for the Growth Coordination Plan. Plans and strategies were reviewed from the Puget Sound Regional Planning Council, Thurston Regional Planning Council, Economic Development Board in Tacoma/Pierce County, Pierce County, City of Tacoma (Downtown), and the Port of Tacoma. Based on the review, the following four themes emerged as priority areas for economic strategies.

1. Workforce Development: Strengthening the workforce and providing more resources and education was a commonly recognized theme in economic development strategies. Several plans included strategies that provide career transition and pathway support and job placement / entry level employment resources (apprenticeship programs, internships). For example, the Thurston Economic Alliance cited a New Market Skills Center.
2. Small Business and Entrepreneurial Resources. This area focuses on augmenting the region's entrepreneurial support system and business innovation. They map the existing resources and activities and pursue opportunities to fill in the gaps within the system, such as by collecting information on business finance resources and tax incentives. Thurston County supports a Center for Business and Innovation program that provides resources to business owners/managers and entrepreneurs, such as counseling, workshops, and networking events. In the past, this center offered specialized services for transitioning military by offering Veterans support as they immerse into the local civilian workforce and seek opportunities, such as entrepreneurship ventures.
3. Partnerships. Several plans emphasized how the region's future success is intertwined with the ability of regional leaders to mobilize and take actions to proactively prepare for the economy of the future.
4. Target Industry Growth and Innovation. This strategy focuses on identifying target industry clusters and supporting partners' work to recruit businesses. This could also involve advocating for ways to better provide needed services in the region. Growth in the healthcare and social assistance sector and in the freight industry is a trend to consider for regional planning purposes.

The following section provides a description of the major economic development visions and plans for the study area region. A variety of regional and local economic focused plans were summarized. The Puget Sound Regional Council (PSRC) and Thurston Regional Planning Council (TRPC) are the primary regional planning agencies that the study area intersects. PSRC's reach goes beyond the study area since the region encompasses Pierce, King, Kitsap, and Snohomish counties while in contrast, the TRPC's region is defined as only including local jurisdictions and organizations in Thurston County. Both agencies carry out regionally focused planning addressing transportation, growth management, economic vibrancy, and environmental quality and they provide education, data, and funding to communities within their jurisdiction. Both agencies are recognized as Metropolitan Planning Organizations, consequently they play an important role in distributing federal funds, such as those released from the Surface Transportation Program and the Congestion Mitigation and Air Quality Improvement Program. Since the TRPC includes the same area as Thurston County, the economic vision is provided by the Thurston County Economic Alliance. Summaries of the PSRC economic strategies and strategies associated with Pierce and Thurston Counties are provided below.

9.2. Economic Strategies in the Region

The PSRC's Regional Economic Strategy (updated in 2017) serves as the Puget Sound region's Comprehensive Economic Development Strategy (CEDS) for how the region will sustain and grow economic prosperity.[22] Updates to this strategy are currently being developed and should be completed by late 2021. Emerging topics could be added to this strategy, such as business recovery and future industry resiliency due to COVID-19 impacts.[23]

A companion report for this strategy, referred to as the Economic Analysis of the Central Puget Sound region, includes data analysis findings providing a platform of valuable information regarding regional employment, industry specialization, and the region's resident characteristics. Overall, this report highlights the region's swift economic recovery after the Great Recession and the region's immersion into an economic boom with job growth above the national average, exceeding two million with a forecast of three million total jobs by 2040.[24] New migration to the region has been driving population growth over the last decade and this growth has outpaced the growth in the housing supply. By 2015, most of the Puget Sound region's job growth has concentrated with regional centers. The services sector had the largest job growth, however the construction sector was the fastest growing sector. The analysis findings provided in this report helped to make the regional strategy more driven by data and evidence.

The core of the Puget Sound region's economic strategy is described in the Amazing Places: Growing Jobs and Opportunity in the Central Puget Sound Region Plan, which was adopted in 2017. This strategy focuses on regional collaboration to address ways for the region to sustain and grow economic prosperity. This plan focuses on articulating strategies to expand economic opportunity, promote a high quality of life for residents, and maintain global competitiveness. Promoting equitable access to opportunity throughout the region is emphasized in the plan. Another key point is that the region's future success is intertwined with the ability of regional leaders to mobilize and take actions to proactively prepare for the economy of the future. Key themes recognized by the current PSRC Economic Strategy (2017) are outlined below.

The three core and mutually supportive goals and associated strategies for the Amazing Places plan are shown in the following exhibit. These goals are supported by 22 strategies and these strategies are further supported by corresponding initiatives. This plan expanded efforts to better free up access to opportunity within all areas of the region including rural and urban areas (beyond only focusing on technology hubs) and it encouraged job cluster growth close to housing and strategies to enhance the housing supply and address housing costs.

[22] PSRC's strategy qualifies as a CEDS pursuant to guidelines of the U.S. Economic Development Administration: https://www.eda.gov/ceds/

[23] PSRC website for the Economic Development Strategy update: https://engage.psrc.org/start-here. Accessed in 2021.

[24] Economic Analysis of the Central Puget Sound region. 2017.

Figure 9.2.1 – Amazing Places Goals and Strategies

GOAL: OPEN ECONOMIC OPPORTUNITIES TO EVERYONE

- Provide adequate support for basic education for all
- Coordinate programs in education and training to address workforce gaps and advance economic opportunity
- Encourage economic growth across all parts of the region
- Advance economic development within rural communities
- Support women and minority-owned, disadvantaged businesses

GOAL: COMPETE GLOBALLY

- Increase higher education capacity to expand high demand programs and foster world class research
- Sustain and grow commercial air travel connections domestically and globally
- Preserve, protect, and support industrial centers, military facilities, and maritime sites
- Build up and sustain ports and other infrastructure to support trade and logistics
- Support and promote international trade
- Strengthen, coordinate, and grow retention, expansion, and recruitment efforts
- Continuously improve the business climate
- Maintain and grow incentives for industry competitiveness
- Sustain and evolve the conditions necessary for innovation

GOAL: SUSTAIN A HIGH QUALITY OF LIFE

- Improve the region's transportation system
- Ensure a diversity of housing stock that is affordable and connected to jobs
- Focus new growth in urban areas, regional centers, and cities
- Invest in pre-K through 12 education systems that produce, attract, and inspire world class talent
- Embrace, celebrate, and promote the diversity of the region's people
- Ensure an outstanding and healthy natural environment
- Preserve, enhance, and improve access to open space
- Grow access to arts, culture, entertainment, and sports

Source: PSRC, Amazing Places: Growing Jobs and Opportunity in the Central Puget Sound Region Plan, 2017

9.3. Pierce County Economic Strategies

The Economic Development Board (EDB) in Tacoma/Pierce County is the leading agency carrying out economic strategies in the area and they recognized an array of initiatives but do not offer a comprehensive strategy. A few of the main initiatives are summarized below.

- The EDB is coordinating industry cluster teams with local leaders from respective industries, including aerospace, technology, health care services, and logistics. These teams work collaboratively to identify ways to enhance, support, and expand the reach of all members of a sector, making each part of a stronger ecosystem.[25]
- Business support and recruitment is another focus area of the EDB. They provide various services ranging from connections to resources, tax incentives, and financing options to workforce hiring and training and government contracting support.[26]
- EDB also supports economic development by providing an interactive map showing commercial/retail business and property site listings and by providing demographic data and regional profile information.[27]

Local jurisdiction plans in Pierce County can help provide insights on the economic goals and aspirations for the region.

- The Pierce County Comprehensive Plan Economic Development Element (updated in 2015, originally adopted in 1994) emphasizes the need to strengthen existing businesses and industries and support new businesses to help diversify economic opportunity and employment (ECD Objective 1). The county also aims to recruit various commercial enterprises (ECD Objective 2), encourage growth in employment centers by also providing adequate infrastructure (ECD Objectives 3 and 5), create vibrant centers/neighborhood districts (ECD Objective 4), actively train/educate the workforce (ECD Objective 6), augment cultural resources (ECD Objective 7), maintain a high environmental quality of life (ECD Objective 8), develop fair and consistent regulations (ECD Objective 9), and coordinate with other partners on economic development efforts (ECD Objective 10).
- Another important local plan, the Downtown Tacoma Economic Development Strategy (2008) offers guidance on the economic development goals for Downtown Tacoma. The plan recognizes Tacoma's assets, such as assets associated with lower business operating costs, a growing UW-Tacoma campus, access to public transit, a growing cluster of arts and cultural institutions, and a high national ranking for entrepreneurs, among others. A few of the challenges are lower wages, tight labor supply, and limited capital. The Downtown vision focuses on economic diversification, its growth as an employment center, its emergence as a place people want to live, work, play, and shop, and the need to create a sustainable economy strengthened by talented people, innovative companies, and supporting institutions.
- The Port of Tacoma also has developed economic-focused strategies for its 2021 to 2026 Strategic Plan. They recognize 4 main Economic Vitality Strategies centered around strategic acquisitions to support marine trade, investment to support living-wage job creation, support of land use and infrastructure policies to protect the cargo supply chain, and partnerships to facilitate career development and business growth.

[25] https://www.edbtacomapierce.org/industries/
[26] https://www.edbtacomapierce.org/edb-services/
[27] https://www.edbtacomapierce.org/

9.4. Thurston County Economic Strategies

In Thurston County, the Thurston Economic Alliance (TEA) is the main entity offering economic strategies for Thurston County. TEA is an economic development partnership, created to leverage broad-based public and private partnerships including over 100 partners and achieve key aspirations including the selection of goals to attract investment, coordination of county economic development activities, and crafting of a long-range strategy to boost and diversify the regional economy.[28] A Thurston-wide economic strategy was first developed in 2016 as a way to coordinate economic development efforts more actively and align community resources, align roles and actions, and clarify goals for the area. The Thurston County Economic Development Agency is the state-designated economic development agency coordinating the efforts and charged with tracking and annual reporting, facilitating implementation, and collaborating with an array of different community partners and leveraging municipal-level relationships. The TEA vision aspires to: Help our community compete and prosper in an evolving and increasingly competitive global marketplace. It will strive to extend economic opportunity to all population segments, facilitate strategic initiatives that produce regional benefits, and create a structure and mechanism for aligning individual member and practitioner roles and responsibilities.

The TEA progress towards achieving goals is measured through a set of indicators, as summarized below.

- **AREA 1. Career Pathways and Workforce Readiness**. The main strategies in this area center on providing a pipeline of internships focused on college student employment and apprenticeship programs, furthering Chamber programs connecting youth to employees and providing business services, increasing support for labor/employment entities including the South Sound Advisory, Regional CTE Directors and New Market Skills Center, developing STEM focused connections to schools, and enhancing career pathway materials.
- **AREA 2. Target Industry Growth and Innovation**. The main efforts for this area are to identify focus areas and unique attributes of the area, physical and non-physical assets, and create targeted requirement plans. This area is supported by four main initiatives associated with identifying supply chain gaps and opportunities within target industry clusters, developing marketing and outreach strategies, and coordinating action to attract new investment. One key investment area attracted to the region partially due to EDC support was the Tart Cider company joining a craft-minded warehouse district in Tumwater.
- **AREA 3. Small Business and Entrepreneurial Resources**. This area focuses on augmenting the region’s entrepreneurial support system by mapping the existing resources and activities and pursuing opportunities to fill in the gaps within the system. Five main initiatives associated with broadening awareness, identifying emerging sectors, documenting business finance resources, and providing BIPOC business assistance all help to carry out Area 3 goals.
- **AREA 4. Infrastructure Policy and Funding Coordination**. Three development projects are associated with this area, including the development of the Tenino Agricultural Business and Innovation Park, the TransAlta Tono Solar Project, and the Downtown Olympia’s Views on Fifth Project.
- **AREA 5. Brand Development, Partnerships and Communication**. The last area of focus includes efforts to establish a brand for economic development, develop a communications plan, and take action on signature place-making projects, such as the Lacey Hub and Woodland Square District, the Tumwater Craft Brewing and Distilling Center, and the Olympia Avalon Co-Working Space.

[28] Thurston Economic Alliance. https://thurstonedc.com/tea/ . This alliance builds upon prior work including the Sustainable Economy White Paper, a regional Target Industry Cluster Analysis and the Pac Mountain Workforce Development Strategic Plan.

In support of Area 1, the Pacific Mountain Workforce Development Organization provides programs to help Veterans with job placement, gain certifications useful for aviation industry employment, and more. In addition, the Lacey Veterans Services Hub also supports Veterans with job placement and related skills.

Thurston County also supports a Center for Business and Innovation program that provides resources to business owners/managers and entrepreneurs, such as counseling, workshops, and networking events. In the past, this center offered specialized services for transitioning military by offering Veterans support as they immerse into the local civilian workforce and seek opportunities such as entrepreneurship ventures. Their website notes that the Lacey Veterans Microenterprise Program will be ending as of June 30, 2019.[29] Lastly, the Washington State Procurement Technical Assistance Center (PTAC) is a nonprofit helping small businesses and entrepreneurs by supporting their needs with a variety of services and providing information to firms on government contract procurement opportunities in Washington State.

9.5. Ongoing Economic Recovery from the COVID-19 Pandemic

PSRC has been collecting data to track business and industry impacts due to COVID-19 since the first stay at home order for Washington emerged on March 23, 2020. The impacts from COVID-19 varied in magnitude for businesses and some industries were hit harder with impacts, such as job losses, than others, such as tourism, leisure/hospitality, and arts/culture businesses.[30] Consequently, strategies are undergoing development by partner entities, such as PSRC, to address these concerns.

Economic development has been impacted by COVID-19, but long run impacts are uncertain. Recovery is underway across the region, as evidenced by declining unemployment levels from 2020 to 2021. Real estate is highly dependent on broader societal trends, so COVID-related social dynamics, including intermittent shutdowns and regular social distancing, have influenced the value of locations in the short run. In general, the pandemic may accelerate several previously identified trends, such as increased telework, digitization/mechanization of tasks, digital commerce including direct to consumer and cross-border brands, rapid fulfillment ecommerce and delivery intermediaries, and predictive analytics to target locations, users, and customers.

American Rescue Plan funding released in 2021 is being allocated to regional and local governments and most likely will be directed towards business assistance, workforce development, and families (housing stability).

[29] Veteran Services for Transitioning Military, Thurston EDC Center for Business Innovation. https://thurstonedc.com/Veterans/

[30] PSRC Article on COVID-19 data collection to support business/industry recovery: https://www.psrc.org/whats-happening/blog/helping-industries-recovery-impact-covid-19

10. Stakeholder Engagement Findings

10.1. Interview and Working Group Summary of Input

The project team engaged stakeholders as a part of the strategy update planning process. The engagement focused on gaining input on potential existing economic conditions and opportunities in Pierce and Thurston counties. The project team interviewed a set of JBLM stakeholders and other regional economic experts in mid-2021. Participants were asked about JBLM's economic impact (employment, business growth, workforce) and regional trends (economic development strategy opportunities, goals, and partnerships) and their preferences associated with Growth Coordination Plan updates. In total, we gained input from 18 people and from two discussions with the Business and Economic Development Working Group members (coordinated by SSMCP).

Below is a high-level summary of themes we gained from this targeted stakeholder engagement.

- Rapid Growth: Since 2010, the area has grown rapidly. Currently there is limited housing, greater transportation congestion (particularly on I-5 and the north-south corridors), and concerns about the increasing freight traffic pointing to a need for a coordinated regional strategy involving diverse partners.
- Veteran Workforce: The plan should examine the retention of Veterans to live and work in the region and strategies should be developed to help support Veterans build up their unique skillsets (such as business entrepreneurship and problem-solving) and education. Support should be provided to help Veterans better transition into the workforce in the region. The project team should collect information on trends associated with Veteran employment including information on where they are working. In addition, the plan should include research about workforce development opportunities to retain Veterans in the region. There is a lot of talent in the skillsets needed for JBLM's workforce that could be built upon in the workforce (such as with cyber security jobs). The project team should figure out the job clusters to leverage and then identify the resources needed to build up this talent. Also, there is synergy in the critical mass to retain in the region rather than sending Veterans elsewhere. JBLM partners should work with SSMCP to address this need.[31]
- Local Business Procurement: The project team should assess trends associated with JBLM contracts and they should examine whether they are increasingly using local, or regional, or state, or non-local vendors. In addition, action could be taken to explore ways to expand contracting to include the recruitment of Black, Indigenous, and People of Color (BIPOC) business owners. A liaison from SSMCP could help coordinate this effort and could explore ways to garner partner support.[32]

---

[31] The Lacey Veterans Services Hub provides Veterans with employment, training, and job readiness assistance--including sharpening their resumes and interview skills. The Hub also partners with several organizations to provide services – JBLM unlimited, Worksource, Working for Washington, USAJOBS, and The Thurston Economic Development Council. The Pacific Mountain Workforce Development Organization provides programs to help Veterans with job placement, gain certifications useful for aviation industry employment, and more. The work of organizations like PTAC should be consistently supported to ensure they provide stable, broad support to local businesses in the region. This organization could use help from a partner, like SSMCP, to pursue funding opportunities, pull partners together, and to expand the services they offer to transitioning service members.

[32] The Washington State Procurement Technical Assistance Center (PTAC) is a nonprofit helping small businesses and entrepreneurs by supporting their needs with a variety of services and providing information to firms on government contract procurement opportunities in Washington State. PTAC needs additional support from partners to host events, training, and gain referrals and they would benefit from the establishment of a business procurement liaison at SSMCP. Currently, there is a shortage in the workforce, particularly associated in the construction industry, that is impacting government procurement.

- Industry clusters: The project team should identify industrial sector employment clusters (such as healthcare) and potential clusters (such as housing construction or light aviation) that could be supported and grown in the region.
- Economic Importance of JBLM: The plan should aim to increase education and awareness of JBLM's positive economic impact, the stabilizing effect of the base, and role as an important regional employment center. JBLM's positive economic impact is an important message to spread, including its impact to the overall economy and the skillsets for growing industry clusters.
- Role of SSMCP: The SSMCP has a critical role in coordinating different partners, agencies, and jurisdictions on regional level concerns, such as employment and investment related initiatives. SSMCP was instrumental in recruiting the Veteran's clinic in Lakewood. There are opportunities in working with Madigan on businesses that can support PTSD and traumatic brain injuries and other services in health care. In addition, there is an increased need for more behavioral healthcare services. SSMCP has been involved with higher level regional matters such as issues with the Port of Tacoma and gaining updates on a JLUS (Joint Land Use Study).
- JBLM's Role as an Employment Center: There had been previous discussions about getting JBLM recognized as an employment center to help it become more competitive for transportation funding.
- COVID-19: The recent COVID-19 pandemic has impacted the region in a variety of ways that could have short-term repercussions and long-term consequences. The respondents discussed the limited availability of childcare services and its impact on people being able to work. In addition, the increasing trend integrating remote work or telework practices should be recognized.
- Growth Coordination Plan: The project team should expand the study area to include both Pierce and Thurston Counties since this represents the broader community associated with the base. King County should not be included since this area is not close enough to the base and it is too disconnected from the base. The team should avoid being overly focused on Pierce County and instead should examine the conditions of both Thurston and Pierce Counties.
- Gain more information: Number of Veteran startups, regional freight conditions, the percent of employers with small businesses, information on the existing innovation strategy/incubation programs (higher education partners) in the region, JBLM's involvement with sustainability, and information on building an investment network.
- Strategy Ideas: Military friendly housing with property manager support helping to rent housing when personnel are not around, enhance workforce training particularly to help Veterans start at a higher level of employment, and expand education at universities and trade schools (electricians, plumbers, etc.).

10.2. Survey Findings

There were eight responses to the Economics portion of a JBLM Growth Coordination Plan update survey. These results will provide another set of data points, qualitative in nature, to supplement the review of plans/strategies, interviews, and other data analysis findings. The objectives of the survey were to learn about business and economics issues, identify what is still relevant in the 2010 Growth Coordination Plan, and identify what should be prioritized as a strategy or action in the new plan. Additional detail on the survey findings is provided in Appendix section 9.3.

10.2.1. Overall Highlights from Survey

- Workforce Development: Respondents agreed that discharged or retired military personal and spouses have limited employment opportunities and need support with career advancement. In support of workforce development supporting Veterans and their partners, most recognized a need for a transition Veteran mentorship program, career counseling, training opportunities, and support for Veteran employment incentive programs. The types of job training or education deemed most helpful by respondents were advanced manufacturing, business/finance, entrepreneurial, management, healthcare, and trade (such as carpentry or plumbing).
- Contracting: Respondents felt that subcontractors have benefited from JBLM but more locally based contractors could be recruited by JBLM.
- JBLM Awareness: Respondents found that JBLM has a significant positive impact on the regional economy and local tax revenues and there is awareness about this somewhat, but JBLM could be better leveraged to achieve regional economic development goals generally and at an organizational level.
- Partnerships: Respondents felt that JBLM should expand partnerships to support regional economic vibrancy and economic goals recognized in the Growth Coordination Plan.
- Other Priorities: There was some support for JBLM to support business entrepreneurship initiatives and initiatives to address inequality.

11. Summary of Findings and Conclusions

This section summarizes the key takeaways of the economic analysis. The focus is on big-picture conclusions that will help inform policy decisions and actions in the JBLM Growth Coordination Plan.

JBLM's regional economic impact provides economic stability to the region and has influenced jobs, sectors, and community trends

JBLM is an anchor institution in the South Sound and the base has a significant impact on the community demographics, providing employment, a large skilled Veteran workforce, investment in the region, and industry sector growth. In terms of number of jobs, with more than 58,000 jobs directly attributed to the base and another 25,000 related to base expenditures, JBLM is considered the fourth-largest employer in Washington State and the largest employer in Pierce County. The 58,050 direct jobs at JBLM translate to $6.9 billion of labor income. For the "spin-off" jobs, JBLM's economic activity translates to roughly $1.4 billion of labor income. Moreover, about $1.74 billion in federal taxes is generated by JBLM. Another $0.39 billion is generated in state and local taxes. These dollars support government function and initiatives. JBLM Contracts has also significantly impacted businesses in the region.

An analysis of contracts executed between 2010 to 2020 showed Washington businesses receiving approximately $2.55 billion in total and 44.2 percent of all contract dollars (the remaining went to businesses located outside of Washington State). Pierce County businesses received the largest share at approximately 62 percent of all contractual dollars (about $1.595 billion). By comparison, Thurston County businesses received five percent ($132.3 million), neighboring counties received 22 percent ($557.6 million), and the remaining Washington counties received 10 percent ($267.9 million). Contractual awards allocated to all other counties in the state has generally declined since 2016. On an annual basis, four major employment sectors typically made up the largest share of contract dollars awarded across the state: (1) construction, (2) manufacturing, (3) professional, scientific, and technical services, and (4) administrative and waste management/remediation services.

Pierce County is younger and more diverse than Thurston and both are growing and becoming more diverse

Pierce County residents are generally younger than Thurston County residents; however, both have a similar share of prime working age adults (ages 25 to 64) slightly over 50 percent. Pierce County tends to be more racially and ethnically diverse than Thurston and the state, particularly for Black, Native Hawaiian or Pacific Islander, and multiracial individuals. However, Thurston County's composition is changing at a faster rate than Pierce County's.

Both counties are expected to grow for the next two decades until 2040, with Pierce County forecasted to grow by about 132,545 households and Thurston County forecasted to add about 56,151 households. On an annual average growth basis, Thurston County is forecasted to add households at a more rapid rate than Pierce County, growing at 1.9 percent per year compared to Pierce County's 1.6 percent.

Median household incomes statewide and in Pierce and Thurston Counties have increased over the 2010 to 2019 period. When adjusted for inflation, household incomes statewide grew by about 20.6 percent. Comparatively, Pierce County households had a similar growth to that of the state at 19.6 percent; however, median household income in Thurston County only grew by 9.8 percent.

The number of new jobs climbed upwards over the last decade, but wage growth has been somewhat sluggish

Employment growth has accelerated in the study area with covered employment growing significantly by over 20 percent between 2010 and 2019 in both counties. On an average annual growth basis, employment in Thurston County has increased faster than in Pierce County but Pierce County had over double the number of jobs. The top employment industries for Pierce County are military (32.7 percent), government (11.8 percent), health care (11.6 percent), and education (10.7 percent) while Thurston's job sectors mainly comprises: government (32.7 percent), followed by health care and social assistance (13.2 percent), and retail trade (10.7 percent). Thurston County tends to have a higher ratio of prime age working adults-to-population than Pierce County. Average wages in both counties crept up by about eight percent but the increase was much lower (a little over 20 percent less) than the state average in 2019. Like the rest of the U.S., wage growth increased in 2020 and 2021.

The area is generating start-ups and attracting new businesses and small employers

In both Pierce and Thurston Counties, nearly 14 percent of the state's total new business applications and business start-up applications increased by about five percent over the last decade. These findings indicate that both counties are attractive locations for new businesses as evidenced by the steadily increasing growth in new businesses.

Firm growth has been significant in both counties. In both counties, the smallest employers (those with fewer than 20 employees) represent 89 percent of all employers and provide almost a quarter of the jobs. Large employers (with over 250 employees) employ 35 percent of the Pierce County labor force and 36 percent of the Thurston County labor force. Overall, firms within the healthcare and social assistance and professional and technical sectors have grown most rapidly over the past decade in Thurston County while firms within the healthcare and social assistance sector and information sector have grown most rapidly over the last decade in Pierce County.

Pierce County has significant concentrations of transportation and healthcare industries

In the broader Seattle-Tacoma-Bellevue region, the four industry clusters deemed strongly competitive on a national scale from 2010-2018 were: aerospace vehicles and defense (ranked one), information technology and analytical instruments (ranked two nationally), marketing, design, and publishing (ranked thirteen), and music and sound recording (ranked seven). In the Olympia-Lacey-Tumwater Metropolitan Statistical Area (MSA): hospitality and tourism gained six places in its national rank due to employment increases, information technology and analytical instruments had the largest cluster employment growth among the MSA's top fifteen traded clusters, and business services provided the largest share of jobs (27 percent of total jobs).

Pierce County had more sectors than Thurston showing signs of industry sector strength and concentration above statewide trends. In Pierce County, the transportation and warehousing sector had the highest location quotient at 1.77, and the highest average annual growth rate (almost seven percent), which is largely a result of the Port of Tacoma activity. The healthcare and social assistance sector is a large employer in Pierce and Thurston counties with a location quotient indicating substantial industry concentration. The accommodation/food services sector's location quotient of 1.08 and large covered employment base (trickling over 28,000 employees) is showing signs of greater concentration in Pierce County. Compared to Pierce County, many employment sectors in Thurston County are not as concentrated relative to the state; however, the administrative/waste services sector had the largest average annual job growth.

Government is a highly concentrated sector in Thurston County, which is not surprising considering that the state capital of Olympia is located here and government employment comprises nearly one-third of the county's total covered employment in 2019. The government sector, where JBLM landed, was Pierce County's largest employment sector, encompassing 19 percent of the county's total covered employment, but this sector has not grown.

Overall, JBLM could be affecting several of the industry concentration and growth trends, particularly the trends associated with increased healthcare and social assistance, construction sector growth and specialization, and growth in accommodation and food services, in both counties.

Both counties rank highly for innovation

Pierce County ranks among the top 10 percent of all counties nationally for headline innovation index value while Thurston County ranks slightly lower but among the top 20 percent. Both counties have innovation input and output strengths that could be tapped further and augmented with economic development strategies and partnerships. Thurston County's innovation strengths are in the human capital and knowledge creation which complements Pierce County's strong business dynamics and employment/productivity innovations.

Over the last decade, the Veteran population has decreased in the state and both counties and Veteran employment held steady

The share of Veterans as a percent of the total adult population decreased by over two percentage points between 2010 and 2019 in the state and both counties. Overall, Veteran employment in Pierce County barely increased (less than one percent) and in Thurston County, employment increased by approximately 4.1 percent between 2010 and 2019.

Among the Veterans who stay in the area, Pierce County Veteran households tend to earn higher levels of income than Veteran households in both Thurston County and across the state. However, Thurston County Veteran households earned approximately 14 percent more income than the statewide median. Veterans residing in Pierce County tend to rent their homes more often than own, while in contrast, Veterans in Thurston County and across the state tend to own their homes more often than rent.

Stakeholders identified opportunities to leverage JBLM to support economic development

Participants were asked about JBLM's economic impact (employment, business growth, workforce) and regional trends; economic development strategy opportunities, goals, and partnerships; and their preferences associated with Growth Coordination Plan (GCP) updates. These results will provide another set of data points, qualitative in nature, to supplement the review of plans/strategies, interviews, and other data analysis findings. In general, the respondents were concerned about the repercussions from rapid growth in the area, including an insufficient supply of housing, and greater transportation congestion (particularly on I-5 and the north-south corridors). The following themes emerged from our research that can inform updates to the 2022 GCP.

JBLM Awareness: Stakeholders were in favor of increasing education and awareness of JBLM's positive economic impact, the stabilizing effect of the base, and JBLM's role as an important regional employment center. JBLM's positive economic impact is an important message to spread, including its impact to the overall economy and the skillsets for growing industry clusters. Participants recognized a positive impact on local tax revenues.

Workforce: We heard about a need to develop strategies to retain Veterans to live and work in the region by for example, supporting programs to augment unique skillsets (such as business entrepreneurship and problem-solving) and by assisting Veterans and family members during career transitions. Respondents agreed that discharged or retired military personal and spouses have limited employment opportunities and need support with career advancement. In support of workforce development supporting Veterans and their partners, most recognized a need for a transition Veteran mentorship program, career counseling, training opportunities, and support for Veteran employment incentive programs. The types of job training or education deemed most helpful by respondents were advanced manufacturing, business/finance, entrepreneurial, management, healthcare, and trade (such as carpentry or plumbing).

JBLM Contracting to Local Businesses: Stakeholders would like to understand trends associated with local business procurement and JBLM contracts. Employment cluster (such as healthcare) and potential clusters (such as housing construction or light aviation) could be supported and grown in the region. Participants felt that subcontractors have benefited from JBLM but more locally based contractors could be recruited by JBLM.

Partnership: The critical role SSMCP has in coordinating different partners, agencies, and jurisdictions on regional level concerns such as employment and investment related initiatives was highlighted. Respondents felt that JBLM should expand partnerships to support regional economic vibrancy and economic goals recognized in the Growth Coordination Plan.

Other Initiatives: There was some support for JBLM to support business entrepreneurship initiatives and initiatives to address inequality.

Economic development organizations recognize the need to support workforce development, small businesses and entrepreneurs, partnerships, and emerging sectors and business innovation

Based on a review of local and regional plans providing priorities on economic strategies to support in the region, the following common themes emerged.

Workforce Development. Strengthening the workforce and providing more resources and education was a commonly recognized theme consistently in economic development strategies. Several plans included strategies that provided career transition and pathway support and job placement/entry level employment resources (apprenticeship programs, internships). For example, the Thurston Economic Alliance cited a New Market Skills Center.

Small Business and Entrepreneurial Resources. This area focuses on augmenting the region's entrepreneurial support system and business innovation by mapping the existing resources and activities and pursuing opportunities to fill in the gaps within the system, such as by collecting information on business finance resources and tax incentives. Thurston County supports a Center for Business and Innovation program that provides resources to business owners/managers and entrepreneurs, such as counseling, workshops, and networking events. In the past, this center offered specialized services for transitioning military by offering Veterans support as they immerse into the local civilian workforce and seek opportunities, such as entrepreneurship ventures.

Partnerships. Several plans emphasized how the region's future success is intertwined with the ability of regional leaders to mobilize and take actions to proactively prepare for the economy of the future.

Target Sector Growth and Innovation. This strategy focuses on identifying target industry clusters and supporting partners' work to recruit businesses. This could also involve advocating for ways to better provide needed services in the region.

12. Economics Technical Report Appendix

12.1. Methodology

The economics project team analyzed demographic, employment, business, and economic datasets, engaged regional stakeholders (including economic development professionals), reviewed relevant plans, and evaluated the status and relevancy of the existing economic strategies in support of this plan update. The existing economic conditions (employment by industry, payroll, etc.) and economic impacts of military operations were compared with growth forecasts to help build a concrete understanding of the long-term trajectory for how the JBLM base could affect the local and regional economy over the next decade.

The timeframe of the analysis, where possible, compares trends from 2000 to 2010 and from 2010 to 2019 (or 2020, depending on data availability). The 2010 to 2019 period best represents economic trends in the region since the original JBLM Growth Coordination Plan was developed. In 2020, The COVID-19 pandemic poses severe public health impacts that quickly interrupted and affected worldwide economies as policymakers took steps to prevent the spread of the virus. Due to the widespread chain reaction of COVID-19 on all aspects of life and economy, 2020 has been highlighted as a year with anomalies.

As a part of this effort, the Economics Resource Area project team engaged stakeholders at various intervals throughout the project. The engagement focused on gaining input on potential existing economic conditions and opportunities in Pierce and Thurston counties. The project team interviewed a set of JBLM stakeholders and other regional economic experts in mid-2021 and they also gained input through online surveys and a virtual open house.

Additional detail on the data used for the Economics Technical Report analysis is described in the next section.

12.2. Economic Data Used in this Analysis

Throughout this analysis, we used data from multiple well-recognized and reliable data sources. The main sources for our analysis are described below.

- The **Washington Employment Security Department (ESD)** supplies and analyzes data for a variety of economic metrics, such as the state's employment conditions, job market, workforce characteristics, and population. These data are summarized at various geographic levels. For our analysis, we focused on economic metrics for Pierce and Thurston counties, making comparisons to their respective cities or the state where necessary. Each county in Washington has a dedicated data table workbook that details current, and often historical, data for approximately 70 economic metrics. However, not all data the ESD reports is directly produced by the agency; rather, in some instances, the ESD aggregate data from several reliable sources (e.g., the U.S. Bureau of Economic Analysis for personal income data). The metrics we summarized in this report come from the ESD and the agencies they cooperate with to produce the data:
    - *Nonfarm employment*:
    - *Occupational employment*:
    - *Unemployment*:
    - *Covered Employment and Payroll*:

- The **Washington Office of Financial Management (OFM)** provides fiscal services and policy support that the state Governor, Legislature, and state agencies need to serve the commonwealth of Washington.[33] They are charged with producing state and local population estimates, as well as the

[33] Washington Office of Financial Management, July 2019. Information retrieved from: https://ofm.wa.gov/about/what-we-do

state- and county-level forecasts for Washington per the Growth Management Act. These population projections are required to be produced once every five years. At the time of this analysis, population projections for 2017 were the latest estimates available.

- The **Decennial Census,** completed every ten years, is a survey of all households in the United States. The Decennial Census is considered the best available data for information such as demographics (e.g., number of people, age distribution, or ethnic or racial composition), household characteristics (e.g., household size and composition), and housing occupancy characteristics. As of 2010, the Decennial Census does not collect more detailed household information, such as income, housing costs, housing characteristics, and other important household information. At the time of the analysis, Decennial Census data was available for 2000 and 2010. The 2020 Decennial Census data was recently released after the data analysis was completed for this assessment.
- The **American Community Survey (ACS)** is an ongoing nationwide survey completed every year by the U.S. Census Bureau, which includes a sample of households in the United States. In 2019, the ACS sampled about 2.06 million households, or about 1.7% of households in the nation. The ACS collects detailed information about households, including demographics (e.g., number of people, age distribution, ethnic or racial composition, country of origin, language spoken at home, and educational attainment), household characteristics (e.g., household size and composition), housing characteristics (e.g., type of housing unit, year unit built, or number of bedrooms), housing costs (e.g., rent, mortgage, utility, and insurance), housing value, income, and other characteristics.

Figure 12.2.1 – Change in Population by Region City, 2000–2020

County / City	Population Count			Change (2000-2010)			Change (2010-2020)		
	2000	2010	2020	Difference	Percent Change	AAGR	Difference	Percent Change	AAGR
Pierce County	700,818	795,225	900,700	94,407	13%	1.27%	105,475	13%	1.25%
Auburn city (part)	146	7,419	9,980	7,273	4982%	48.12%	2,561	35%	3.01%
DuPont city	2,452	8,199	9,525	5,747	234%	12.83%	1,326	16%	1.51%
Roy city	260	793	820	533	205%	11.80%	27	3%	0.34%
Bonney Lake city	9,687	17,374	21,390	7,687	79%	6.02%	4,016	23%	2.10%
Orting city	3,931	6,746	8,635	2,815	72%	5.55%	1,889	28%	2.50%
Fife city	4,784	9,173	10,200	4,389	92%	6.73%	1,027	11%	1.07%
Gig Harbor city	6,465	7,126	11,240	661	10%	0.98%	4,114	58%	4.66%
Eatonville town	2,012	2,758	3,010	746	37%	3.20%	252	9%	0.88%
Ruston town	738	749	1,040	11	1%	0.15%	291	39%	3.34%
Milton city (part)	4,981	6,137	6,805	1,156	23%	2.11%	668	11%	1.04%
Uninc. Pierce Area	315,359	366,738	426,200	51,379	16%	1.52%	59,462	16%	1.51%
Edgewood city	9,089	9,387	12,070	298	3%	0.32%	2,683	29%	2.55%
South Prairie town	382	434	500	52	14%	1.28%	66	15%	1.43%
Puyallup city	33,014	37,022	42,700	4,008	12%	1.15%	5,678	15%	1.44%
Wilkeson town	395	477	495	82	21%	1.90%	18	4%	0.37%
Buckley city	4,145	4,354	5,080	209	5%	0.49%	726	17%	1.55%
Sumner city	8,504	9,451	10,360	947	11%	1.06%	909	10%	0.92%
Fircrest city	5,868	6,497	6,790	629	11%	1.02%	293	5%	0.44%
University Place city	29,933	31,144	33,310	1,211	4%	0.40%	2,166	7%	0.67%
Carbonado town	621	610	685	-11	-2%	-0.18%	75	12%	1.17%
Tacoma city	193,556	198,397	213,300	4,841	3%	0.25%	14,903	8%	0.73%
Steilacoom town	6,049	5,985	6,505	-64	-1%	-0.11%	520	9%	0.84%
Lakewood city	58,293	58,163	60,030	-130	0%	-0.02%	1,867	3%	0.32%
Pacific city (part)	154	92	30	-62	-40%	-5.02%	-62	-67%	-10.60%
Thurston County	207,355	252,264	291,000	44,909	22%	1.98%	38,736	15%	1.44%
Yelm city	3,289	6,848	9,400	3,559	108%	7.61%	2,552	37%	3.22%
Tumwater city	12,698	17,371	24,600	4,673	37%	3.18%	7,229	42%	3.54%
Lacey city	31,226	42,393	52,910	11,167	36%	3.10%	10,517	25%	2.24%
Rainier city	1,492	1,794	2,210	302	20%	1.86%	416	23%	2.11%
Tenino city	1,447	1,695	1,850	248	17%	1.59%	155	9%	0.88%
Uninc. Thurston Area	114,061	135,123	145,300	21,062	18%	1.71%	10,177	8%	0.73%
Olympia city	42,514	46,478	54,150	3,964	9%	0.90%	7,672	17%	1.54%
Bucoda town	628	562	580	-66	-11%	-1.10%	18	3%	0.32%

Source: Washington Office of Financial Management, 2020.

12.2.1. Change in Occupational Employment and Wages

Occupational Employment Statistics (OES), published by the Bureau of Labor Statistics, are available at the geographic levels of the Metropolitan Statistical Area (MSA), state, and nation. For this reason, our analysis of Pierce County is approximated by the larger Seattle-Bellevue-Tacoma MSA. Thurston County comprises the entirety of the Olympia-Tumwater MSA.

- In the Seattle MSA, occupations in computer and mathematics, healthcare support, and business and financial operations, grew by more than 50 percent over the 2010 to 2020 analysis period. During the same time frame, architecture and engineering, office and administrative support, personal care and service, and farming, fishing, and forestry occupations contracted.

- At the same time, the average annual wage in the Seattle MSA's largest occupational growth categories also increased, albeit at varying rates. When adjusted for inflation, computer and mathematics occupations wages grew by about 22 percent, or nearly 2 percent per year. Healthcare support occupation wages grew by about 8 percent, and business and financial operation wages grew by 6.5 percent. Protective services were the only occupation in the Seattle MSA to contract, decreasing by about 3.1 percent over the analysis period.

Figure 12.2.2 – Change in Occupational Employment in the Seattle-Bellevue-Tacoma MSA, by Major Occupation Category, 2010–2020

Occupation Title	Occupational Employment		Change, 2010 - 2020		
	2010	2020	Difference	Percent Change	AAGR
Computer and Math	89,660	174,740	85,080	94.9%	6.90%
Healthcare Support	40,070	73,760	33,690	84.1%	6.29%
Business and Financial Operations	99,230	174,210	74,980	75.6%	5.79%
Construction and Extraction	66,540	91,730	25,190	37.9%	3.26%
Transportation and Material Moving	106,050	143,010	36,960	34.9%	3.04%
Healthcare Practitioners and Technicians	78,360	100,880	22,520	28.7%	2.56%
Arts, Design, Entertainment, Sports, & Media	27,910	35,100	7,190	25.8%	2.32%
Community and Social Services	24,310	30,480	6,170	25.4%	2.29%
Protective Service	29,310	36,130	6,820	23.3%	2.11%
Installation, Maintenance, and Repair	59,790	70,830	11,040	18.5%	1.71%
Legal Occupations	14,200	16,530	2,330	16.4%	1.53%
Production	84,980	98,010	13,030	15.3%	1.44%
Life, Physical, and Social Sciences	20,150	22,740	2,590	12.9%	1.22%
Education, Training, and Library	84,680	93,530	8,850	10.5%	1.00%
Food Preparation and Serving	133,000	144,820	11,820	8.9%	0.86%
Building & Grounds Cleaning & Maintenance	42,000	44,500	2,500	6.0%	0.58%
Sales and Related	171,510	175,150	3,640	2.1%	0.21%
Architecture and Engineering	51,970	50,900	-1,070	-2.1%	-0.21%
Office and Administrative Support	244,630	218,260	-26,370	-10.8%	-1.13%
Personal Care and Service	48,270	38,870	-9,400	-19.5%	-2.14%
Farming, Fishing, and Forestry	2,250	1,690	-560	-24.9%	-2.82%
Management	82,120	*	--	--	--
Seattle-Bellevue-Tacoma MSA Total	1,601,010	1,955,810	354,800	22.2%	2.02%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

Figure 12.2.3 – Change in Average Annual Occupational Wages in the Seattle-Bellevue-Tacoma MSA (2020 Inflation-Adjusted Dollars), by Major Occupation Category, 2010–2020

Occupation Title	Average Annual Occupational Wage (2020 Inflation-Adjusted Dollars)		Change, 2010 - 2020		
	2010	2020	Difference	Percent Change	AAGR
Personal Care and Service	$34,076	$43,670	$9,594	28.2%	2.51%
Food Preparation and Serving	$29,981	$37,860	$7,879	26.3%	2.36%
Computer and Math	$104,993	$127,760	$22,767	21.7%	1.98%
Building & Grounds Cleaning & Maintenance	$35,239	$42,560	$7,321	20.8%	1.91%
Transportation and Material Moving	$46,301	$52,390	$6,089	13.2%	1.24%
Sales and Related	$50,633	$56,470	$5,837	11.5%	1.10%
Office and Administrative Support	$45,150	$50,350	$5,200	11.5%	1.10%
Architecture and Engineering	$96,554	$106,030	$9,476	9.8%	0.94%
Construction and Extraction	$65,529	$71,840	$6,311	9.6%	0.92%
Installation, Maintenance, and Repair	$58,847	$64,030	$5,183	8.8%	0.85%
Arts, Design, Entertainment, Sports, & Media	$65,837	$71,380	$5,543	8.4%	0.81%
Community and Social Services	$52,366	$56,570	$4,204	8.0%	0.78%
Healthcare Practitioners and Technicians	$95,296	$102,540	$7,244	7.6%	0.74%
Production	$49,173	$52,600	$3,427	7.0%	0.68%
Business and Financial Operations	$85,991	$91,570	$5,579	6.5%	0.63%
Life, Physical, and Social Sciences	$80,543	$85,430	$4,887	6.1%	0.59%
Management	$141,621	$149,120	$7,499	5.3%	0.52%
Farming, Fishing, and Forestry	$39,856	$41,820	$1,964	4.9%	0.48%
Education, Training, and Library	$63,333	$65,840	$2,507	4.0%	0.39%
Legal Occupations	$109,777	$113,920	$4,143	3.8%	0.37%
Healthcare Support	$39,073	$40,190	$1,117	2.9%	0.28%
Protective Service	$65,066	$63,080	-$1,986	-3.1%	-0.31%
Seattle-Bellevue-Tacoma MSA Total	$63,119	$74,330	$11,211	17.8%	1.65%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

Figure 12.2.4 – Change in Occupational Employment in the Olympia-Tumwater MSA (Thurston County), by Major Occupation Category, 2010–2020

Occupation Title	Occupational Employment		Change, 2010 - 2020		
	2010	2020	Difference	Percent Change	AAGR
Healthcare Support	2,300	4,850	2,550	110.9%	7.75%
Transportation and Material Moving	4,400	7,180	2,780	63.2%	5.02%
Arts, Design, Entertainment, Sports, & Media	1,300	1,980	680	52.3%	4.30%
Farming, Fishing, and Forestry	320	460	140	43.8%	3.70%
Business and Financial Operations	6,650	9,450	2,800	42.1%	3.58%
Construction and Extraction	3,060	4,270	1,210	39.5%	3.39%
Management	5,680	7,630	1,950	34.3%	3.00%
Protective Service	1,730	2,280	550	31.8%	2.80%
Installation, Maintenance, and Repair	2,830	3,610	780	27.6%	2.46%
Building & Grounds Cleaning & Maintenance	2,390	3,030	640	26.8%	2.40%
Community and Social Services	2,280	2,880	600	26.3%	2.36%
Healthcare Practitioners and Technicians	4,540	5,730	1,190	26.2%	2.36%
Computer and Math	4,280	5,400	1,120	26.2%	2.35%
Sales and Related	9,330	10,200	870	9.3%	0.90%
Education, Training, and Library	6,240	6,560	320	5.1%	0.50%
Food Preparation and Serving	8,380	8,690	310	3.7%	0.36%
Legal Occupations	1,220	1,190	-30	-2.5%	-0.25%
Architecture and Engineering	1,650	1,600	-50	-3.0%	-0.31%
Production	2,660	2,540	-120	-4.5%	-0.46%
Personal Care and Service	2,890	2,670	-220	-7.6%	-0.79%
Life, Physical, and Social Sciences	2,700	2,440	-260	-9.6%	-1.01%
Office and Administrative Support	17,080	14,350	-2,730	-16.0%	-1.73%
Olympia-Tumwater MSA (Thurston County)	93,910	109,000	15,090	16.1%	1.50%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

Figure 12.2.5 – Change in Average Annual Occupational Wages in the Olympia-Tumwater MSA (2020 Inflation-Adjusted Dollars), by Major Occupation Category, 2010–2020

Occupation Title	Average Annual Occupational Wage (2020 Inflation-Adjusted Dollars)		Change, 2010 - 2020		
	2010	2020	Difference	Percent Change	AAGR
Personal Care and Service	$31,868	$39,290	$7,422	23.3%	2.12%
Sales and Related	$38,491	$46,290	$7,799	20.3%	1.86%
Food Preparation and Serving	$28,545	$34,040	$5,495	19.3%	1.78%
Construction and Extraction	$57,850	$63,950	$6,100	10.5%	1.01%
Healthcare Practitioners and Technicians	$87,035	$94,720	$7,685	8.8%	0.85%
Installation, Maintenance, and Repair	$53,612	$58,240	$4,628	8.6%	0.83%
Building & Grounds Cleaning & Maintenance	$33,898	$36,650	$2,752	8.1%	0.78%
Education, Training, and Library	$56,105	$60,540	$4,435	7.9%	0.76%
Arts, Design, Entertainment, Sports, & Media	$56,354	$60,630	$4,276	7.6%	0.73%
Office and Administrative Support	$42,325	$45,520	$3,195	7.5%	0.73%
Computer and Math	$86,181	$92,510	$6,329	7.3%	0.71%
Transportation and Material Moving	$39,322	$42,130	$2,808	7.1%	0.69%
Legal Occupations	$81,220	$86,190	$4,970	6.1%	0.60%
Business and Financial Operations	$67,653	$71,220	$3,567	5.3%	0.52%
Production	$42,337	$44,480	$2,143	5.1%	0.50%
Life, Physical, and Social Sciences	$73,896	$75,750	$1,854	2.5%	0.25%
Community and Social Services	$56,473	$57,620	$1,147	2.0%	0.20%
Architecture and Engineering	$81,659	$83,090	$1,431	1.8%	0.17%
Management	$108,329	$109,960	$1,631	1.5%	0.15%
Healthcare Support	$39,749	$37,780	-$1,969	-5.0%	-0.51%
Protective Service	$68,294	$64,550	-$3,744	-5.5%	-0.56%
Farming, Fishing, and Forestry	$49,779	$41,130	-$8,649	-17.4%	-1.89%
Olympia-Tumwater MSA (Thurston County)	$54,776	$60,090	$5,314	9.7%	0.93%

Source: Washington Employment Security Department; U.S. Bureau of Labor Statistics.

12.3. Stakeholder Engagement Findings

12.3.1. Survey Findings

Question 1. Rate your agreement with the following statements.

a. *Many discharged or retired military personal and spouses have limited employment opportunities and need support with career advancement.*
    i. Question 1a Response Summary: 75 percent agreed or strongly agreed while 25 percent disagreed.

b. *JBLM personal has substantially increased private market retail spending in the region.*
    i. Question 1b Response Summary: 75 percent agreed or strongly agreed while 25 percent disagreed.

c. *Local subcontractors have substantially benefited from JBLM construction projects in the past decade (2010 to 2020).*
    i. Question 1c Response Summary: 75 percent agreed or strongly agreed while 13 percent disagreed, and 13 percent did not have a rating.

d. *More local subcontractors could be recruited to serve JBLM needs.*
    i. Question 1d Response Summary: 75 percent agreed or strongly agreed while 25 percent did not have a rating.

e. *JBLM has a significant positive impact on the regional economy and local tax revenues.*
    i. Question 1e Response Summary: 100 percent of respondents strongly agreed with this statement.

f. *JBLM should prioritize and more actively support local business growth in the region.*
    i. Question 1f Response Summary: 37.5 percent agreed or strongly agreed while 50 percent disagreed, and 12.5 percent did not have a rating.

g. *JBLM should support initiatives aiming to diversify the living wage business base and bring in more diverse job opportunities.*
    i. Question 1g Response Summary: 50 percent agreed or strongly agreed while 37.5 percent disagreed or strongly disagreed, and 12.5 percent did not have a rating.

h. *JBLM should expand partnerships to support regional economic vibrancy and economic goals recognized in the Growth Coordination Plan.*
    i. Question 1h Response Summary: 88 percent agreed or strongly agreed while 13 percent disagreed.

i. *JBLM should more actively support entrepreneurship initiatives in the region.*
   i. Question 1i Response Summary: 50 percent agreed or strongly agreed while 25 percent disagreed and 25 percent did not have a rating.

j. *JBLM should help address economic inequality in the region.*
   i. Question 1j Response Summary: 50 percent agreed or strongly agreed while 25 percent disagreed and 25 percent did not have a rating.

k. *The economic impacts of JBLM are widely recognized in the region.*
   i. Question 1k Response Summary: 75 percent agreed or strongly agreed (or 6 out of 8 respondents) while 25 percent disagreed.

l. *JBLM can be better leveraged to achieve regional economic development goals.*
   i. Question 1l Response Summary: 75 percent agreed or strongly agreed while 25 percent did not have a rating.

m. *JBLM can be better leveraged to achieve the economic development goals of my organization.*
   i. Question 1m Response Summary: 87.5 percent (or 7 out of 8 respondents) agreed or strongly agreed while 12.5 percent (or 1 respondent) did not have a rating.

Question 2. Rate the current need for the following economic strategies identified in the 2010 Growth Coordination Plan.

a. *1.04: Hold Regular Forum to Identify Local Contracting Opportunities*
   i. Question 2a Response Summary: 50 percent choose high need, 25 percent choose medium need, and 25 percent were not familiar with this strategy.

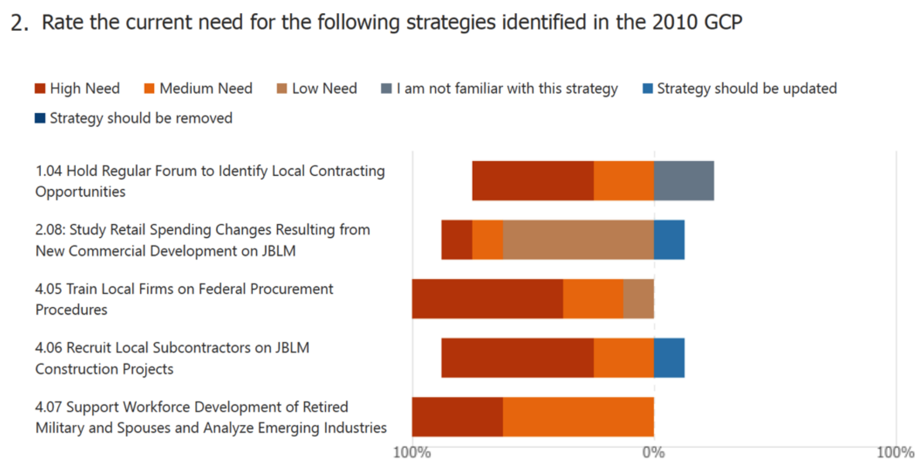
b. *2.08: Study Retail Spending Changes Resulting from New Commercial Development on JBLM*
   i. Question 2b Response Summary: 62.5 percent choose low need, 12.5 percent choose high need, 12.5 percent choose medium need, and 12.5 percent choose the strategy should be updated category.

c. *4.05: Train Local Firms on Federal Procurement Procedures*
   i. Question 2c Response Summary: 62.5 percent choose high need, 25 percent choose medium need, and 12.5 percent choose low need.

d. *4.06: Recruit Local Subcontractors on JBLM Construction Projects*
   i. Question 2d Response Summary: 62.5 percent choose high need, 25 percent choose medium need, and 12.5 percent (or 1 person) choose the strategy should be updated.

e. *4.07: Support Workforce Development of Retired Military and Spouses and Analyze Emerging Industries*

   i. Question 2e Response Summary: 37.5 percent choose high need and 62.5 percent choose medium need.



<u>*Question 3. Rate the effectiveness of the following strategies in their ability to address regional economic needs.*</u>

a. *1.04: Hold Regular Forum to Identify Local Contracting Opportunities*

   a. Question 3a Response Summary: 50 percent choose unstarted or unknown, 37.5 percent choose incomplete/looks effective, and 12.5 percent choose complete/effective.

b. *2.08: Study Retail Spending Changes Resulting from New Commercial Development on JBLM*

   a. Question 3b Response Summary: 75 percent choose unstarted or unknown, 12.5 percent choose incomplete/looks effective, and 12.5 percent did not respond.

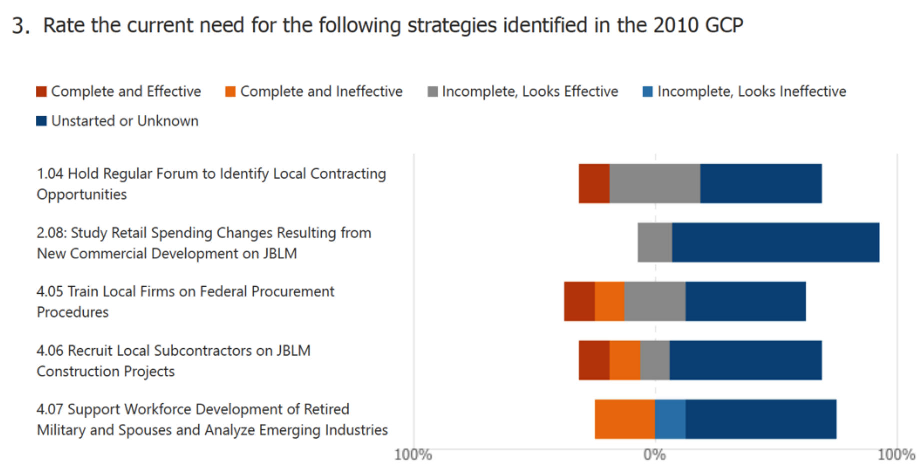
c. *4.05: Train Local Firms on Federal Procurement Procedures*

   a. Question 3c Response Summary: 50 percent choose unstarted or unknown, 25 percent choose incomplete/looks effective, 12.5 percent choose complete/ineffective, and 12.5 percent choose complete/effective.

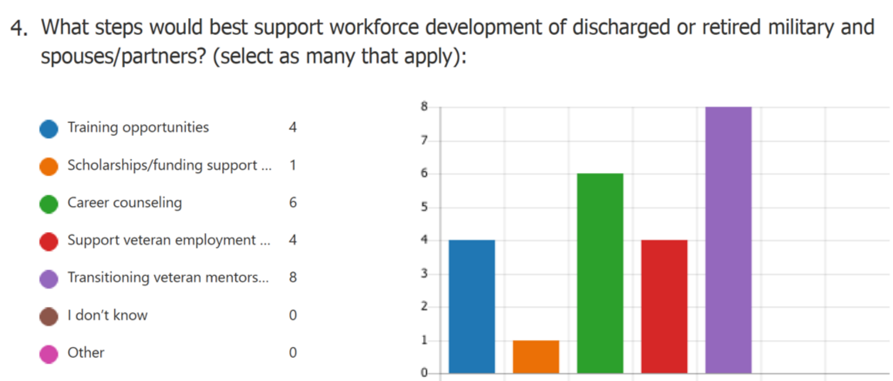
d. *4.06: Recruit Local Subcontractors on JBLM Construction Projects*

   a. Question 3d Response Summary: 62.5 percent choose unstarted or unknown, 12.5 percent choose incomplete/looks effective, 12.5 percent choose complete/ineffective, and 12.5 percent choose complete/effective.

e. 4.07: Support Workforce Development of Retired Military and Spouses and Analyze Emerging Industries

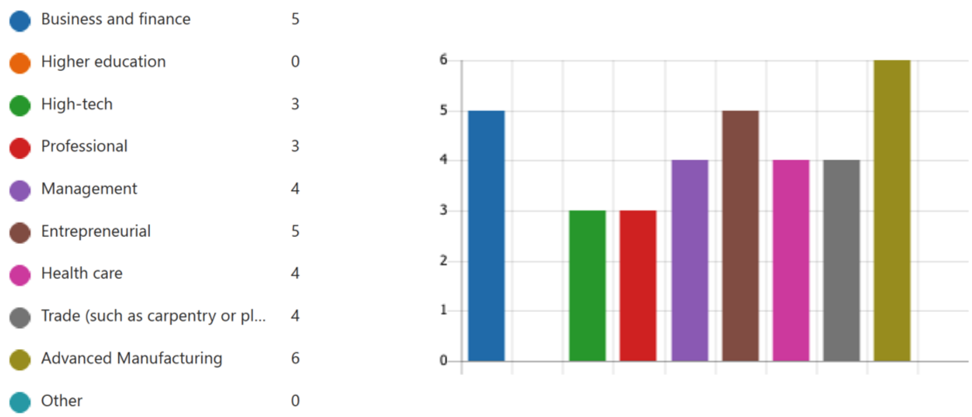


Question 4. What steps would best support workforce development of discharged or retired military and spouses/partners? (select as many that apply):



Question 5. What types of job training or education would be most helpful for military personal and spouses/partners? (Please check all that apply.)

5. What types of job training or education would be most helpful for military personal and spouses/partners? (check all that apply):



Question 6. Describe the top three economic goals that JBLM should focus on over the next 10 years in the updated Growth Coordination Plan.

Responses:

- Prevent encroachment of city/ county development near installation boundaries.
- JBLM's mission is national defense and security - it should not focus on economic goals. It can, however, support local efforts to pursue economic goals by providing input into what firms/industries would be most beneficial to the base's mission set that are not here already; how local contractors can be more competitive for MILCON contracts; and what retail/services are missing or needed in the region.
- Ensure/ require local police to increase patrolling on roads around the installation to prevent criminal behavior, garbage dumping on federal land/ easements.
- Increase the number and success rates for Veteran owned businesses.
- Increase the number of discharged or retired military and spouses/partners in the workforce.
- Affordable housing, entrepreneurial opportunities for Veterans, mobility.