Southeast King County Higher Education Needs Assessment and Operating Plan

DRAFT FINAL REPORT

Submitted to the Washington Student Achievement Council (WSAC)

by the

Western Interstate Commission for Higher Education (WICHE)

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WICHE
Western Interstate Commission for Higher Education

NCHEMS

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In Fiscal Year 2017, the Washington Student Achievement Council (WSAC), received funding from the Washington Legislature through a budget proviso to complete a higher education needs assessment for southeast King County, defined as defined as rural suburban cities such as Covington, Enumclaw, Maple Valley, Black Diamond, and urban and rural portions of unincorporated King County. The assessment was conducted by the Western Interstate Commission for Higher Education (WICHE) with support from their subcontractor, the National Center for Higher Education Management Systems (NCHEMS).

Key Findings

Data analysis from a variety of state and national sources, stakeholder interviews, and feedback from the project's Advisory Committee of local leaders revealed the following key findings.

Southeast King County

- The population is projected to grow and become increasingly diverse in the coming years.
- Among the working-age population, southeast King County has the highest proportion of adults with some college credit and no degree in King County (28 percent).
- Median income is relatively average compared to the rest of King County
- The the vast majority of area residents commute by car, with commuting times averaging over 30 minutes and public transit options are limited.

Educational Landscape

- Area high school students attend college at a rate similar to the state average, with the highest number of students attending Green River College.
- Central Washington attracts the largest number of transfer students from area two-year institutions, followed by the University of Washington-Tacoma.
- WGU – Washington currently enrolls over 300 undergraduate students residing in southeast King County and also enrolls transfers from Green River College, Highline College, and Renton Technical College.

Economic Landscape

- The county-wide economic landscape is important to consider given the high percentage of southeastern King County residents who commute for work. In King County current and projected occupational demands suggest key sectors for high-paying jobs are IT and Nursing.

- In southeast King County specifically, high-demand workforce areas are in Nursing (particularly for Registered Nurses), teaching, and the less-well paying retail and hospitality sector.

Suggested Features & Principles of a Local Postsecondary Option

Principles

- Demand is for provision of service, not a new institution.
- Local response needs to be driven by local demand, not institutional supply.
- Solution must be able to respond to changing workforce demands.
- Travel considerations make local access important.

Features

- Adult students are likely to be primary audience.
- Flexibility in program offerings.
- Distance/hybrid options should be considered.
- Solution should not be limited to one provider.

Suggested Approach

Based on the considerations described above, the project team suggests a small-scale, multiple provider center operating on a cohort-based model for a southeast King County postsecondary education solution. The operating costs for the proposed model are estimated to total approximately $650,000 per year.

However, recognizing the relatively small overall size of the population of southeast King County as well as capacity challenges of existing providers, the team strongly recommends pursing an incremental approach to implementation by confirming local demand in advance of full-scale investment. By completing each of the four suggested steps below in sequence, gradual investments could be made to confirm local demand and needs, which could lead to the creation of a center over time well-positioned to meet local needs and operate in a sustainable fashion.

1. Confirm lead partner **|** Estimated Cost: WSAC staff time
2. Obtain funding for a site manager & clerical support | Estimated Cost: $210,000 - $230,000
3. Run pilot cohort recruitment phase **|** Estimated Cost: Dependent on partner's contributions of space, staff time, and course provision.

   The following programs may be candidates for which to explore local interest:
   - RN to BSN program
   - Teacher preparation programs
   - IT Certifications
   - Behavioral Health Pathways
4. E**x**pand as demand dictates | Estimated Cost: $653,250/year

Introduction

In Fiscal Year 2017, the Washington Student Achievement Council (WSAC), a cabinet-level state agency charged with advancing educational opportunities and attainment in Washington, received funding from the Washington Legislature through a budget proviso to complete a higher education needs assessment for southeast King County and to prepare a program and operating plan to meet the higher education needs identified in the assessment. WSAC identified the Western Interstate Commission for Higher Education (WICHE) as the agency contractor with the skills and resources necessary to conduct the assessment in the timeframe provided in the budget proviso. WICHE is a regional, nonprofit organization whose membership includes the 15 western states and the U.S. Pacific Islands and Freely Associated States. WICHE and its 15 member states work to improve access to higher education and ensure student success.

WICHE subcontracted with the National Center for Higher Education Management Systems (NCHEMS) — a private nonprofit (501)(c)(3) organization whose mission is to improve strategic decision making in higher education for states and institutions in the United States and abroad — to conduct portions of the assessment and assist with the development of the operating plan. NCHEMS has considerable experience in conducting these types of assessments having done such studies in more than 20 states and regions across the country.

Objectives

In line with the budget proviso passed by the Washington Legislature in Fiscal Year 2017, the objectives of this work are to complete a higher education needs assessment for southeast King County, Washington (defined as rural suburban cities such as Covington, Enumclaw, Maple Valley, Black Diamond, and urban and rural portions of unincorporated King County), and to prepare a program and operating plan to meet the higher education needs identified in the assessment.

Background

Prior to the 2016 legislative session in which the Washington Legislature passed the budget proviso that charged WSAC with conducting a higher education needs assessment in southeast King County, several pertinent research studies and policy initiatives formed a foundation on which this work is being conducted.

For the past three years, there has been budding interest on the part of the City of Covington in exploring the possible development or enhancement of postsecondary educational opportunities in the area. The City has been exploring possible partnerships and researching options with industry and postsecondary collaborators. In response to this growing interest, WSAC produced a brief titled, "Covington, Washington: Characteristics Related to Postsecondary Needs (A Brief Overview)."[1] This brief provided

basic data about the City of Covington including population, economic, and education information. It was not designed to be a full higher education needs assessment and therefore did not analyze data about Covington and the surrounding areas or provide recommendations, but it provided useful baseline information about the City.

In 2010, the Washington State Department of Transportation produced a report that assessed the feasibility of commuter rail service between Maple Valley/Black Diamond and Auburn, via Covington on the BNSF Railway Stampede Pass line.[2] The Washington Legislature requested this analysis through a budget proviso in the transportation budget. This assessment analyzed service using self propelled diesel-multiple unit (DMU) rail cars and includes an estimate of the expected capital and operating costs, projections of ridership, and an analysis of institutional issues.[3] Legislation was subsequently amended to require an evaluation of the potential demand for service, the business model and capital needs for launching and running the line, as well as the need for improvements in switching, signaling, and tracking.[4] This information is useful in that it provides objective data about the future of commuter rail and the ability of local residents to access workplace and higher educational opportunities.

In November 2013, WSAC adopted the 2013 Roadmap report that set two aggressive educational attainment goals to be achieved by 2023:

- All adults in Washington, ages 25-44, will have a high school diploma or equivalent.
- At least 70 percent of Washington adults, ages 25-44, will have a postsecondary credential.[5]

To accomplish these goals, WSAC identified focused strategies around three primary objectives: ensuring access, ensuring learning, and preparing for future challenges.[6] In December 2015, WSAC adopted an update to the 2013 Roadmap, which is the first progress report since the initial adoption.[7] The 2015 update showed progress on three key measures: high school completion, postsecondary enrollment, and postsecondary completion.[8] In two years, there was modest progress toward goals, with improvements in the economy likely impacting the decline in postsecondary enrollment.[9] Although the state is only just beginning to monitor progress toward goals, since 2013, this Roadmap and the values that are contained within it has defined how the state views and advances its higher education agenda. As such, this study will consider state perspectives to the extent possible and appropriate.

Overview of Southeast King County

As of the 2010 Census, the total population of the state of Washington was 6,724,540.[10] As the most populous county in the state of Washington, King County's population was 1,931,249.[11] In other words, about 29 percent of the total population of the state of Washington lives in King County.

Moreover, the county is projected to continue this pattern of growth. Washington's Office of Financial Management produces a state population forecast by county, which shows that King County is projected to experience 20 percent population growth by 2040.

Broken down by age group, these projections indicate that King County's older population—aged 65 and above—will grow at the most dramatic rate. However, it is important to note that while this age group's percentage growth is high, the overall number of people in this category is relatively small compared to the working-age population (25-64) which is projected to reach over 1.2 million by 2040 compared to the 477,754 total of the 65 and above age group.

Table 1. King County Projected Population by Age Group.

Age Group	Projected Population					
	2015	2020	2025	2030	2035	2040
0-14	353,105	368,029	379,212	388,503	397,987	409,718
15-19	115,198	115,597	121,156	125,336	129,059	131,863
20-24	142,056	141,466	142,164	149,887	154,943	159,867
25-34	307,967	312,098	333,243	332,052	339,680	352,444
35-44	297,886	308,116	306,145	310,257	330,015	328,015
45-54	291,292	287,693	283,631	292,236	289,103	293,204
55-64	253,178	268,776	265,600	262,444	258,229	265,985
65+	252,100	307,039	365,051	416,445	451,560	477,754
25-64	1,150,323	1,176,683	1,188,619	1,196,989	1,217,027	1,239,648
Total	2,012,782	2,108,814	2,196,202	2,277,160	2,350,576	2,418,850

Table 2. King County Percent Change in Projected Population

Age Group	Percent Change				
	2015-20	2015-25	2015-30	2015-35	2015-40
0-14	4.2	7.4	10.0	12.7	16.0
15-19	0.3	5.2	8.8	12.0	14.5
20-24	-0.4	0.1	5.5	9.1	12.5
25-34	1.3	8.2	7.8	10.3	14.4
35-44	3.4	2.8	4.2	10.8	10.1
45-54	-1.2	-2.6	0.3	-0.8	0.7
55-64	6.2	4.9	3.7	2.0	5.1
65+	21.8	44.8	65.2	79.1	89.5
25-64	2.3	3.3	4.1	5.8	7.8
Total	4.8	9.1	13.1	16.8	20.2

Boundaries

The authorizing budget proviso for this assessment defines the study area as "southeast King County," which WSAC further clarified as "rural suburban cities such as Covington, Enumclaw, Maple Valley, Black Diamond, and urban and rural portions of unincorporated King County" in the Study Plan of Action.

Public Use Microdata Area (PUMA)

With this guidance, the project team selected Public Use Microdata Area (PUMA) 11615 defined by the U.S. Census Bureau for southeast King County as a guideline for the boundaries of their data analysis. This geographic area—highlighted in blue in Figure 1—is built upon Census tracts and defined by Washington's State Data Center to include Covington, Enumclaw, and Maple Valley. Black Diamond and adjacent areas of unincorporated King County are also included within PUMA 11615's boundaries, making PUMA 11615 an appropriate reflection of the study area.

Figure 1. King County Public Use Microdata Areas (PUMAs)

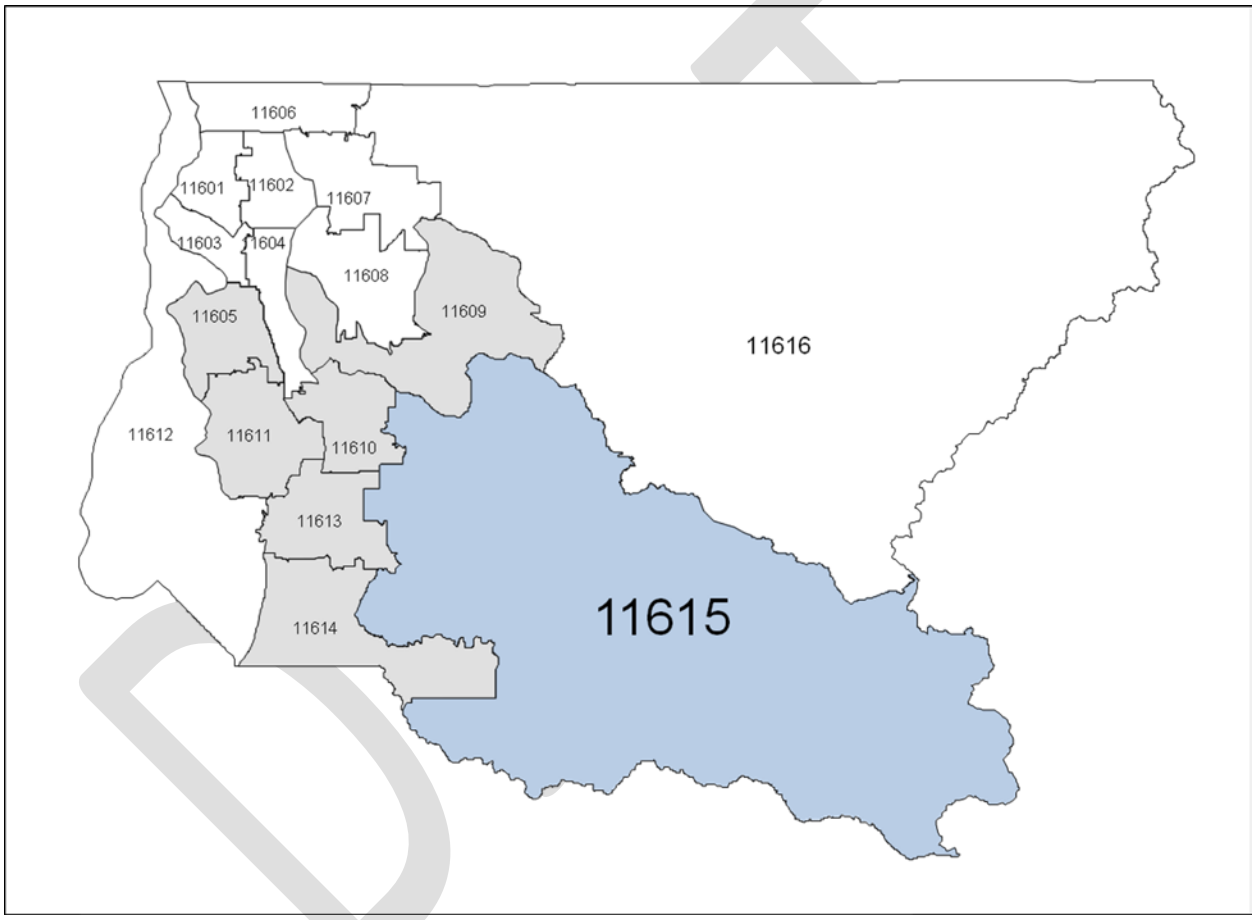


Table 3. King County Public Use Microdata Areas (PUMAs)

PUMA	Description
11601	Seattle City (Northwest)
11602	Seattle City (Northeast)
11603	Seattle City (Downtown)
11604	Seattle City (Southeast)
11605	Seattle City (West)--Duwamish & Beacon Hill
11606	King County (Northwest)--Shoreline, Kenmore & Bothell (South) Cities
11607	King County (Northwest)--Redmond, Kirkland Cities, Inglewood & Finn Hill
11608	King County (Northwest Central)--Greater Bellevue City
11609	King County (Central)--Sammamish, Issaquah, Mercer Island & Newcastle Cities
11610	King County (Central)--Renton City, Fairwood, Bryn Mawr & Skyway
11611	King County (West Central)--Burien, SeaTac, Tukwila Cities & White Center
11612	King County (Far Southwest)--Federal Way, Des Moines Cities & Vashon Island
11613	King County (Southwest Central)--Kent City
11614	King County (Southwest)--Auburn City & Lakeland
11615	King County (Southeast)--Maple Valley, Covington & Enumclaw Cities
11616	King County (Northeast)--Snoqualmie City, Cottage Lake, Union Hill & Novelty Hill

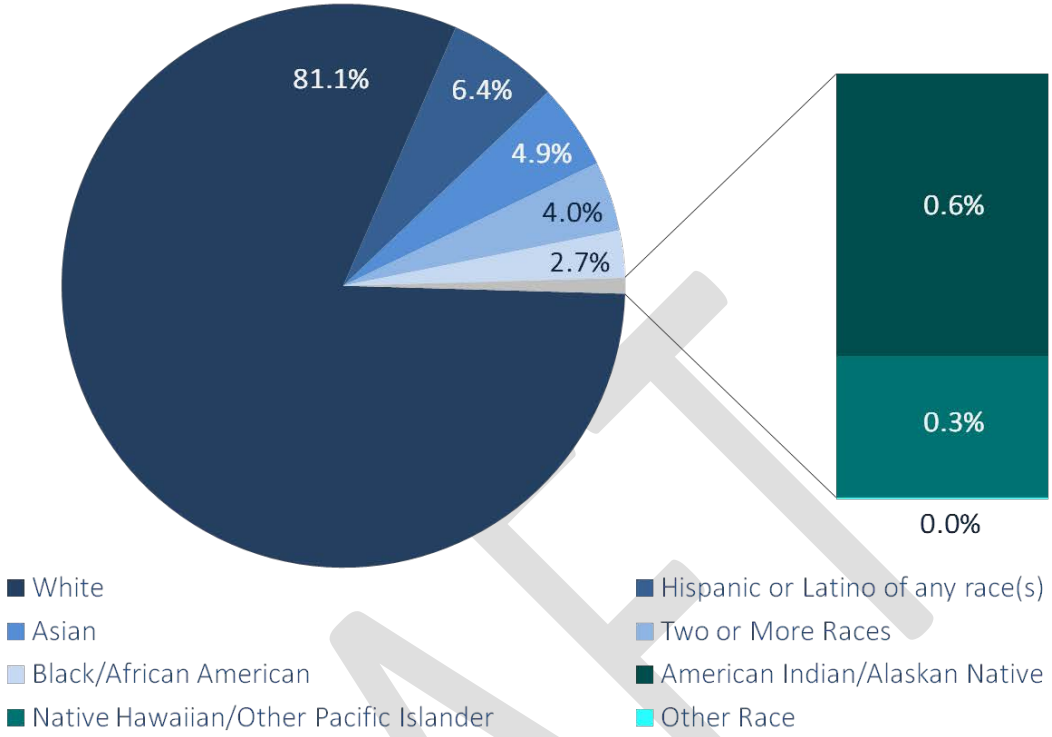
Feedback from local stakeholders, however, suggested that it would be valuable to incorporate data from the surrounding PUMAs, as the western edges of the southeast King County PUMA in particular do not correspond to widely observed geographic boundaries, such as county or city lines. Consequently, demographic data were collected for all PUMAs in King County—with particular attention paid to the adjacent PUMAs highlighted in grey in Figure 1—to provide additional context to the assessment.

An analysis of American Community Survey (ACS) data for the region reveals several key facts about the area – both in relation to the surrounding areas, King County, Washington State, and the nation.[1]

Southeast King County's population is 81 percent White – a significantly higher percentage than King County (71 percent), the state of Washington (64 percent), and the United States (63 percent). In fact, southeast King County is among the least diverse areas within King County; only the northeast portion of the county—encompassing Snoqualmie City, Cottage Lake, Union Hill and Novelty Hill—has a less diverse demographic makeup.

[1] ACS 5-year estimates were used—reflecting 60 months of collected data— which allows for the geographic precision needed for this analysis.

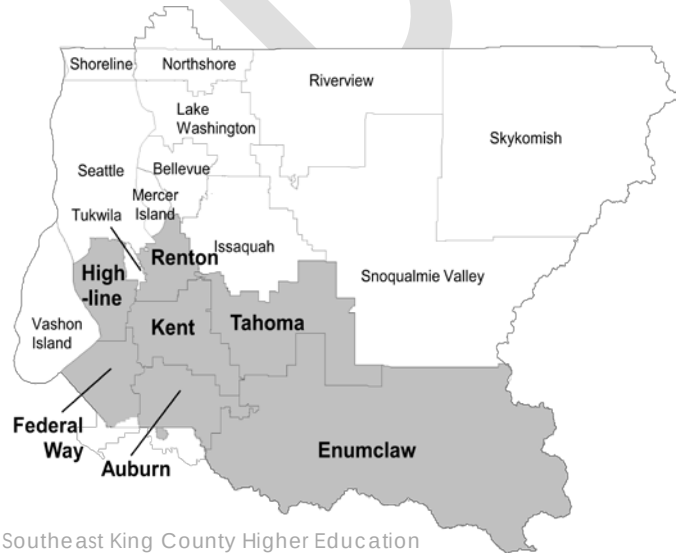
Figure 2. Southeast King County Demographics



School Districts

In order to identify K-12 school districts to be included in the analysis, school district maps were overlaid with the PUMA boundaries. Those districts that were inside—fully or partially—the PUMA boundaries, as well as those most closely surrounding the area were included. Highlighted in grey in Figure 3, these districts are: Auburn, Enumclaw Federal Way, Highline, Kent, Renton, and Tahoma.

Figure 3. King County School Districts



Regional and state trends suggest increasing diversification within school districts.[12] Data from the Office of the Superintendent of Public Instruction reveal that each of the area's school districts has enrolled an increasingly diverse student body over the past five years. Table 4 presents a brief overview of the dominant trends in enrollment in relation to race/ethnicity in the seven school districts in and around southeast King County.[13]

Table 4. Percent Change in Enrollment (2011-2015) by Race/Ethnicity

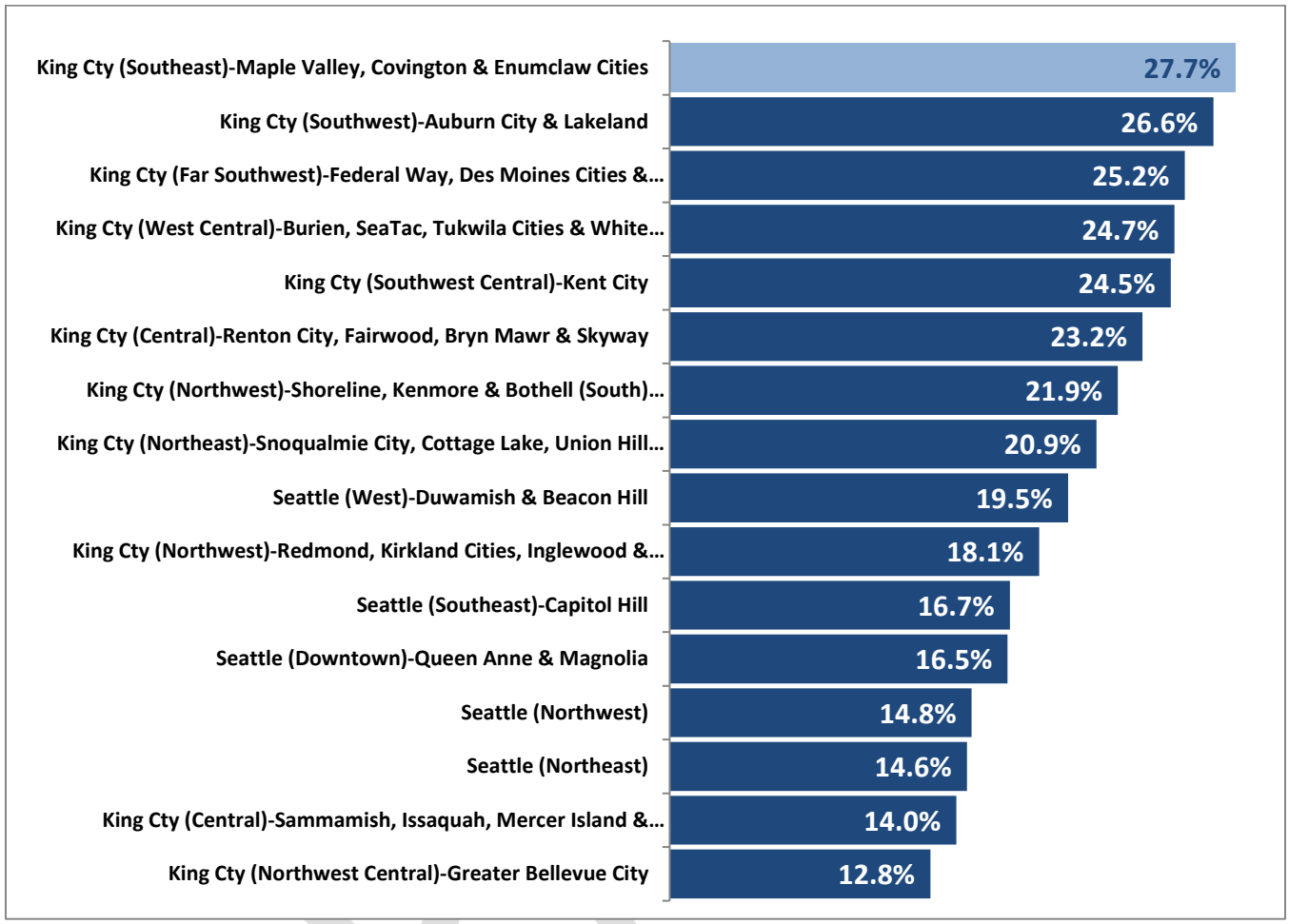
School District	White	Hispanic/Latino of any race(s)	Two or More Races
Auburn	-11.3%	7.8%	4.0%
Enumclaw	-5.3 %	4.1%	1.6%
Federal Way	-8.0%	5.6%	2.4%
Highline	-4.1%	4.4%	-2.0%
Kent	-7.7%	4.3%	2.6%
Renton	-5.7%	4.0%	5.0%
Tahoma	-6.0%	2.9%	3.3%

Educational Attainment

Southeast King County's working-age population (those aged 25-64) has educational attainment levels that break down somewhat differently than those of the county, state, and the country. The area has fewer adults with less than a high school degree—only 5 percent—than King County (7 percent), Washington (9 percent) and the U.S. (12 percent).

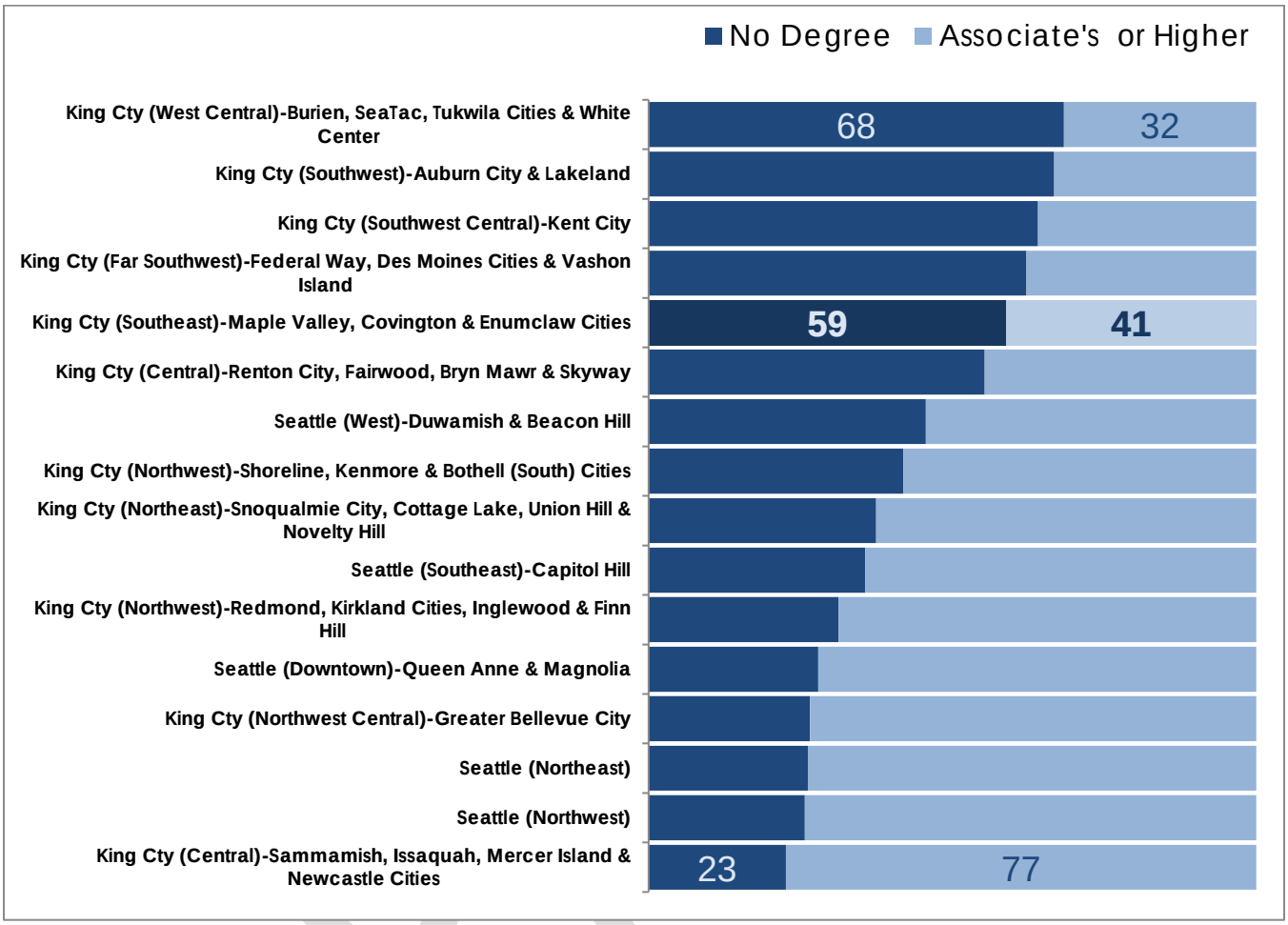
However, southeast King County has a higher proportion of adults with some college credit and no degree than any other area in King County – as depicted in Figure 4. Though southeast King County's overall population is relatively small in comparison to the county as a whole, 28 percent of the area's working-age population has some college credit, but no degree – which equates to more than 18,500 people. This suggests that the some, college no degree population should be a critical population segment of interest for any endeavor focused on providing additional higher education in the area.

Figure 4. Percent of Population with Some College, No Degree in King County PUMAs (Age 25-64)



Overall, 59 percent of southeast King County's working-age population—totaling nearly 39,400 working-age adults—does not hold a postsecondary degree; while county-wide the percentage of adults without a degree stands at only 43 percent. Further, compared to the surrounding areas in King County, southeast King County has the fifth-lowest percentage of degree-holders among their working-age population. This puts southeast King County 11 percentage points ahead of their neighbors in southwest King County in terms of degree attainment, but 36 percentage points behind northeast Seattle.

Figure 5. Percent of Population with a Degree in King County PUMAs (Age 25-64)



Income and Earnings

Washington state and King County in particular do relatively well compared to the rest of the nation in terms of median income – and southeast King County is no exception to this trend. Southeast King County has a higher median wage/salary income than King County as a whole.

Figure 6. Median Wage/Salary Income for Population (Age 25-64), 2012-2015

Geography	Median Wage/Salary	90% Margin of Error (+/-)*
United States	$36,865	$0
Washington	$40,961	$0
King County	$49,154	$1,080
Southeast King County	**$52,083**	**$1,567**

**Replicate Weights Methodology used to calculate 90% Margins of Error. In some cases, this method fails and yields an MOE of zero. In such cases, Design Factor Methodology should be used but error will be small when sample size is large.*

As a result of the area's high median income—and accompanying high cost of living—it is perhaps most useful to compare income data within the county. Here, southeast

King County ranks sixth out of the 16 surrounding areas within the county in terms of median wage/salary income for their working-age population.

Figure 7. Median Wage/Salary Income for Population (Age 25-64) for King County, 2012-2015

Geography	Median Wage/ Salary	90% MOE (+/-)
King County (Central)-Sammamish, Issaquah, Mercer Island & Newcastle Cities	$81,923	$4,186
King County (Northeast)-Snoqualmie City, Cottage Lake, Union Hill & Novelty Hill	$65,548	$4,676
King County (Northwest Central)-Greater Bellevue City	$65,538	$3,771
King County (Northwest)-Redmond, Kirkland Cities, Inglewood & Finn Hill	$61,442	$2,274
Seattle City (Downtown)-Queen Anne & Magnolia	$55,298	$4,317
King County (Southeast)-Maple Valley, Covington & Enumclaw Cities	**$52,083**	**$1,567**
Seattle City (Northeast)	$49,413	$3,790
Seattle City (Southeast)-Capitol Hill	$48,404	$4,720
Seattle City (Northwest)	$47,916	$3,198
King County (Northwest)-Shoreline, Kenmore & Bothell (South) Cities	$47,396	$3,319
Seattle City (West)-Duwamish & Beacon Hill	$43,541	$2,487
King County (Central)-Renton City, Fairwood, Bryn Mawr & Skyway	$41,666	$2,140
King County (Southwest)-Auburn City & Lakeland PUMA, Washington	$40,337	$1,734
King County (Far Southwest)-Federal Way, Des Moines Cities & Vashon Island	$37,500	$3,665
King County (Southwest Central)-Kent City	$36,707	$2,451
King County (West Central)-Burien, SeaTac, Tukwila Cities & White Center	$31,745	$2,427

However, it is possible that median family income may obscure the economic situation of those within the study area who do not have a college degree, referenced in the preceding section. As a result, the data were further parsed to examine the median salaries of the working-age population by educational attainment level. As Table 5 shows below, the median wage/salary income for the some, college no degree population is much lower than the southeast King County median ($52,083) at $37,500.

While this analysis provides a general idea of income-level by educational attainment for the area, an important caution is the relatively high margin of error associated with the data given the small sample size for this geographic area.

Table 5. Median Wage/Salary Income for Some College, No Degree Population (Age 25-64), 2012-2014

King County Public Use Microdata Areas	Median Wage/ Salary	90% MOE (+/-)
King County (Southwest)-Auburn City & Lakeland	$54,274	$9,776
Seattle City (Downtown)-Queen Anne & Magnolia	$50,421	$3,242
Seattle City (West)-Duwamish & Beacon Hill	$41,562	$2,677
Seattle City (Southeast)-Capitol Hill	$40,625	$1,440
King County (Central)-Sammamish, Issaquah, Mercer Island & Newcastle Cities	$38,320	$6,471
King County (Southeast)-Maple Valley, Covington & Enumclaw Cities	**$37,500**	**$4,080**
King County (Central)-Renton City, Fairwood, Bryn Mawr & Skyway	$37,500	$2,838
King County (Far Southwest)-Federal Way, Des Moines Cities & Vashon Island	$35,937	$1,923
King County (West Central)-Burien, SeaTac, Tukwila Cities & White Center	$35,636	$4,677
King County (Northwest Central)-Greater Bellevue City	$35,295	$5,176
Seattle City (Northwest)	$34,817	$4,348
King County (Southwest Central)-Kent City	$33,984	$4,973
King County (Northwest)-Redmond, Kirkland Cities, Inglewood & Finn Hill	$33,333	$4,059
Seattle City (Northeast)	$33,333	$3,021
King County (Northwest)-Shoreline, Kenmore & Bothell (South) Cities	$31,250	$4,279
King County (Northeast)-Snoqualmie City, Cottage Lake, Union Hill & Novelty Hill	$30,253	$3,889

Further breaking down these data by income group, it becomes evident that southeast King County's some college, no degree population may be struggling financially, with more than 40 percent earning less than $30,000 annually and more than 60 percent earning less than $48,000.

Table 6. Percent of Population (Age 25-64) with Some College, No Degree by IPEDS Income Group

	$0 - $30,000	$30,001 - $48,000	$48,001 - $75,000	$75,001 - $110,000	$110,001+
United States	58.4	19.6	14.0	5.7	2.4
Washington	56.5	18.5	15.2	6.9	2.9
King County, Washington	53.3	18.7	16.0	7.7	4.2
Southeast King County	40.6	20.9	20.5	10.6	7.4

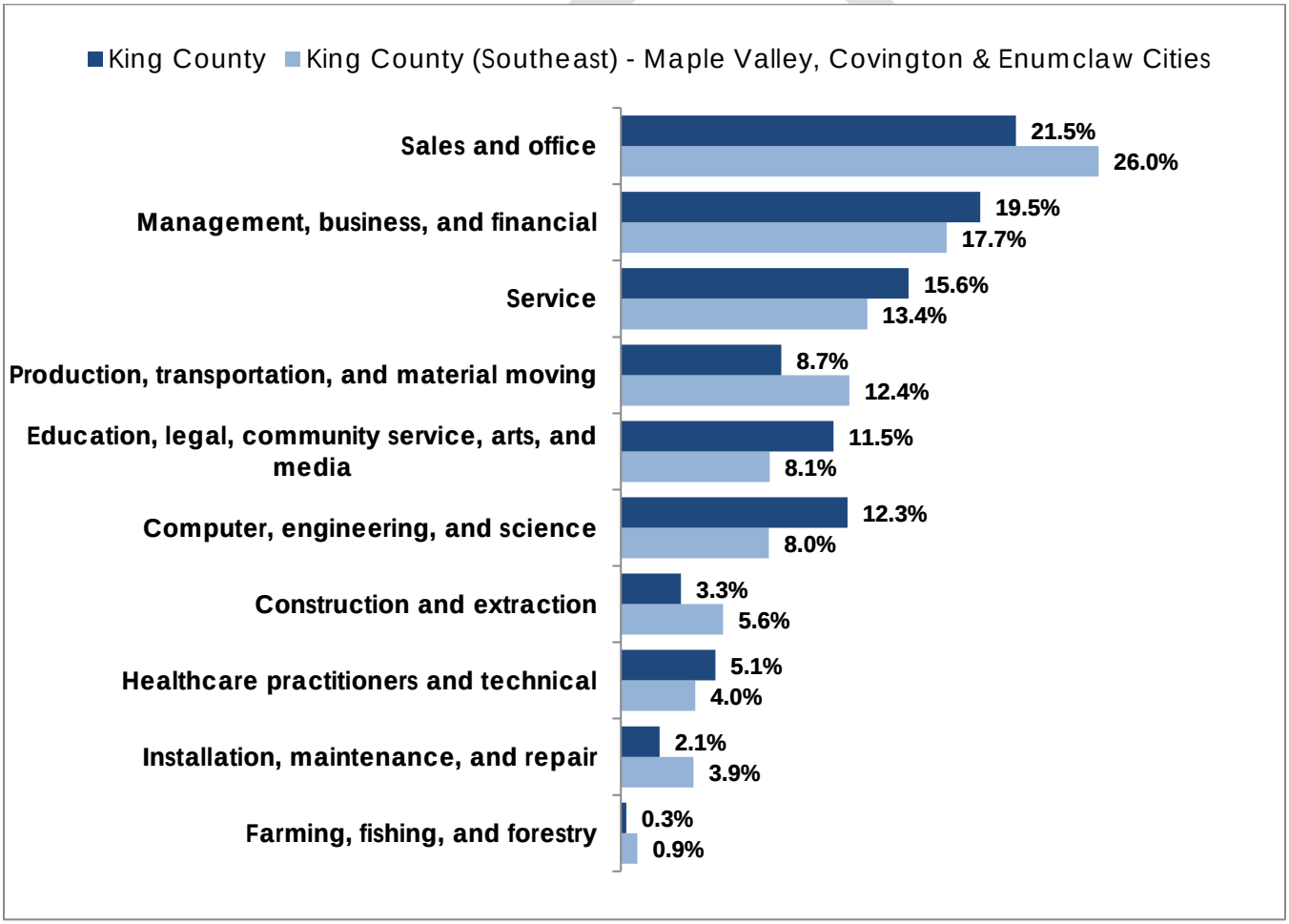
Occupational Employment

Census data provide a general sense of occupations within specific geographic areas, although Census occupational categories are broad in nature—for example "sales and office"—and do not present a particularly fine-grained picture of regional employment.

Perhaps most importantly, the data are designed to describe the kind of work people perform on the job, rather than their industry of employment.

With these caveats in mind, the data show that a majority of southeast King County's workforce is employed in sales and office work (26 percent), followed by management, business and financial occupations (10 percent), and then service jobs (13 percent) and production, transportation, and material moving (12 percent). This breakdown of occupational categories tracks fairly closely with county, state, and national figures, though King County as a whole has a higher percentage of residents employed in education, legal, community service, arts and media jobs than the southeastern portion of the county, as well as lower proportion of residents in the production, transportation, and manual moving occupational category (see Figure 8).In fact, the study area is home to the largest proportion of sales and office workers in the county.

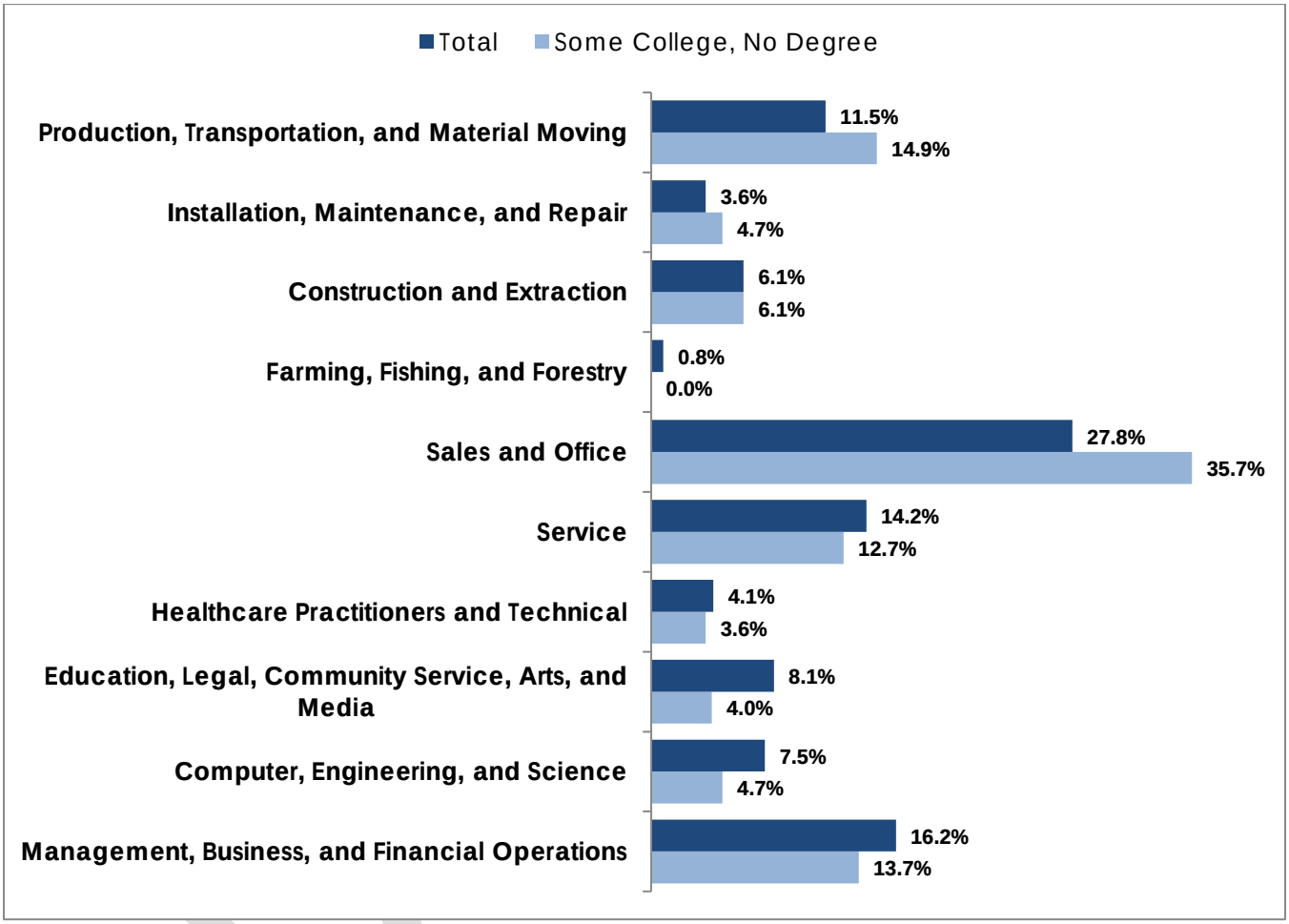
Figure 8. Occupational Employment (16 & Above) by Percent in King County & Southeast King County



When these data are further broken down to examine the some college, no degree segment of southeast King County's population, this trend is particularly pronounced. More than 35 percent of the area's some, college no degree population hold sales and office jobs, compared to 27.8 percent of the overall working age population (see Figure

10). Meanwhile, fewer in the some college no degree group holds management, business, and financial operations occupations – the area's next largest area of employment. Perhaps unsurprisingly, the some college, no degree also outstrips the general population in proportion employed in production transportation, and material moving occupations.

Figure 9. Occupational Employment (16 & Above) by Percent in Southeast King County by Education Level



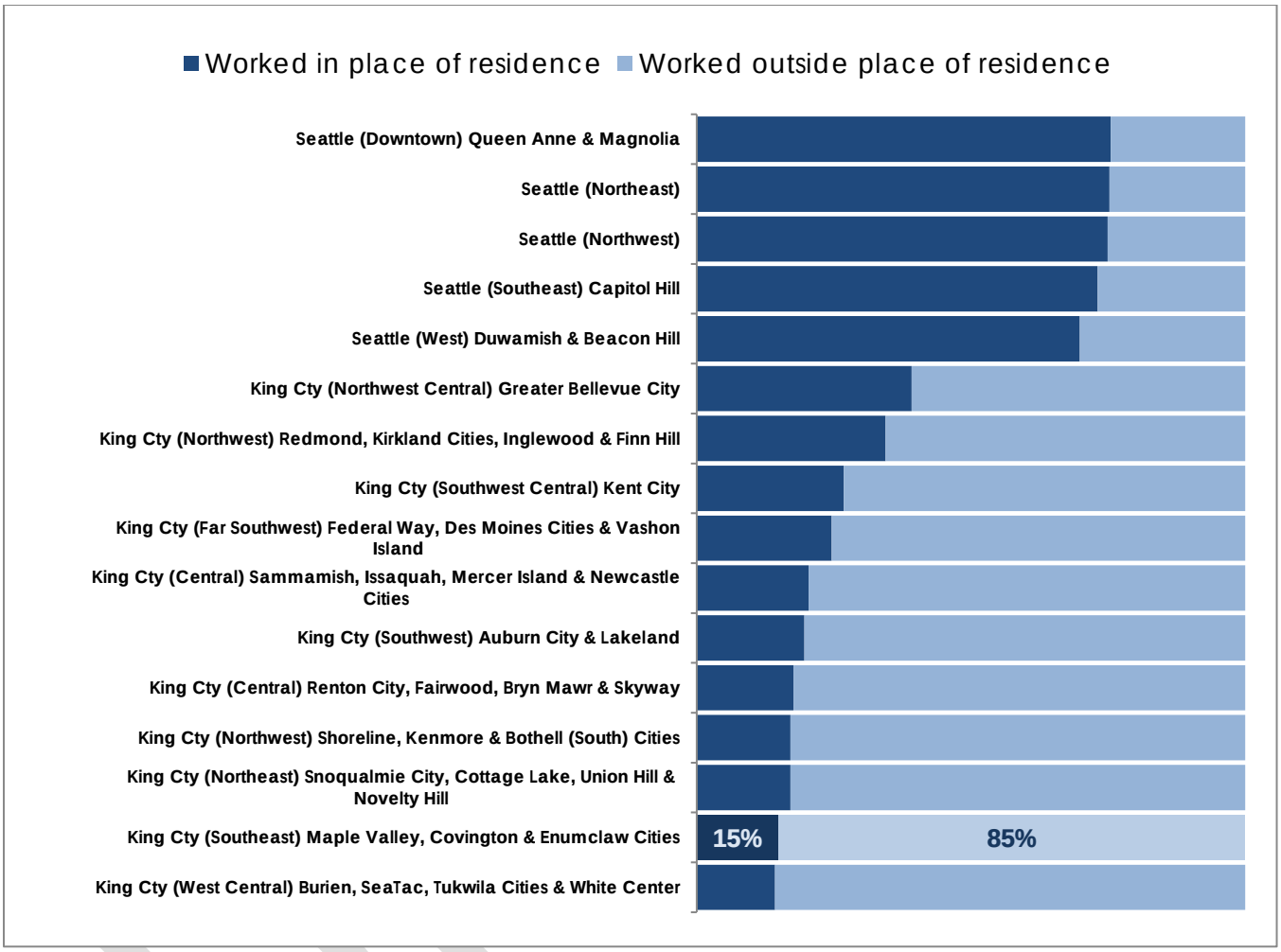
Commuting

While nearly all of southeast King County's residents work within the county, a very significant proportion—85 percent—work outside their place of residence (see Figure 11).[2] This suggests that southeast King County operates largely as a so-called "bedroom community" where people reside, but do not work. This is a trend which, unsurprisingly, is marked in areas of King County farther from Seattle's downtown core and dramatically

[2] The U.S. Census Bureau defines "place of residence" as incorporated locations such as cities, towns, villages, or boroughs, as well as statistical counterparts of incorporated places which are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located. A full definition is available at: http://www.census.gov/geo/reference/gtc/gtc_place.html.

decreases within the city itself. A notable exception is southeast King County's near neighbor Kent, where 27 percent of the area's residents work where they live.

Figure 10. Percent of Population Working Outside Place of Residence



Unfortunately, commuting patterns are not available at the sub-county level, which does not allow for an analysis of where exactly southeast King County residents are commuting for work. However, anecdotal evidence and larger traffic patterns suggest that many of these people commute to downtown Seattle.

This interpretation is further supported by the research of University of Washington Tacoma professor of Urban Studies Ali Modarres, who has analyzed commuting modes and times for the region. His research shows that in southeast King County, the dominant mode of commuting is personal vehicle – with nearly 94 percent of area residents commuting by car, truck, or van. In addition, the average commute time is over 31 minutes, confirming that area residents are largely traveling outside their local area for work.

Table 7. Commuting in Southeast King County PUMA

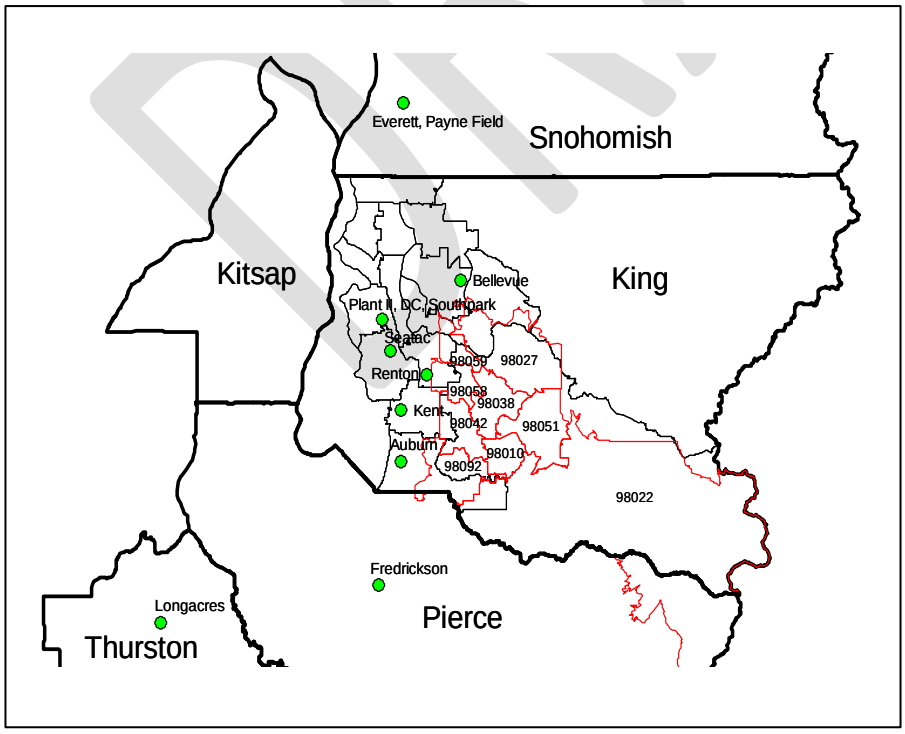
Means of transportation to work	Mean Travel Time to Work (Minutes)	Standard Deviation (Minutes)	Sample Size
Car, truck, or van	**31.54**	**19.87**	**52,854**
Bus or trolley bus	75.24	37.46	978
Subway or elevated	79.66	10.26	379
Railroad	76.62	13.90	817
Walked	7.55	3.34	489
Other methods	17.66	13.80	839
Total	**32.86**	**22.03**	**56,356**

In the absence of granular data on commuting patterns, the project team was able to obtain data on commuting patterns within specific occupational fields.

Boeing Employees

The Society of Professional Engineering Employees in Aerospace (SPEEA), IFPTE Local 2001, is a professional aerospace labor union representing more than 22,650 engineers, technical workers, pilots and other professionals in the aerospace industry. The union represents employees at The Boeing Company, and was able to share the commuting patterns of its members in southeast King County.

Figure 11. Boeing Facilities and Southeast King County Zip Codes



Of SPEEA members residing in zip codes that correspond to southeast King County (outlined in red on the map in Figure 12), more than 25 percent work at the Renton Boeing facility and another 15 percent in the Renton area. A significant proportion also commute to Marginal Way, with 13.8 percent commuting to the Development Center just south of Seattle,

and 12.6 percent to Plant II which sits just inside Seattle city limits. Meanwhile, 11.6 percent of southeast King County SPEEA members work in Kent and 8.2 percent in Auburn. The remaining 13 percent of SPEEA members who reside in southeast King County work at various other locations farther from their zip code of residence – for example just over 9 percent work in the Everett area (either in Everett or at Payne Field).

Table 8. Southeast King County Commuters to Boeing Facilities

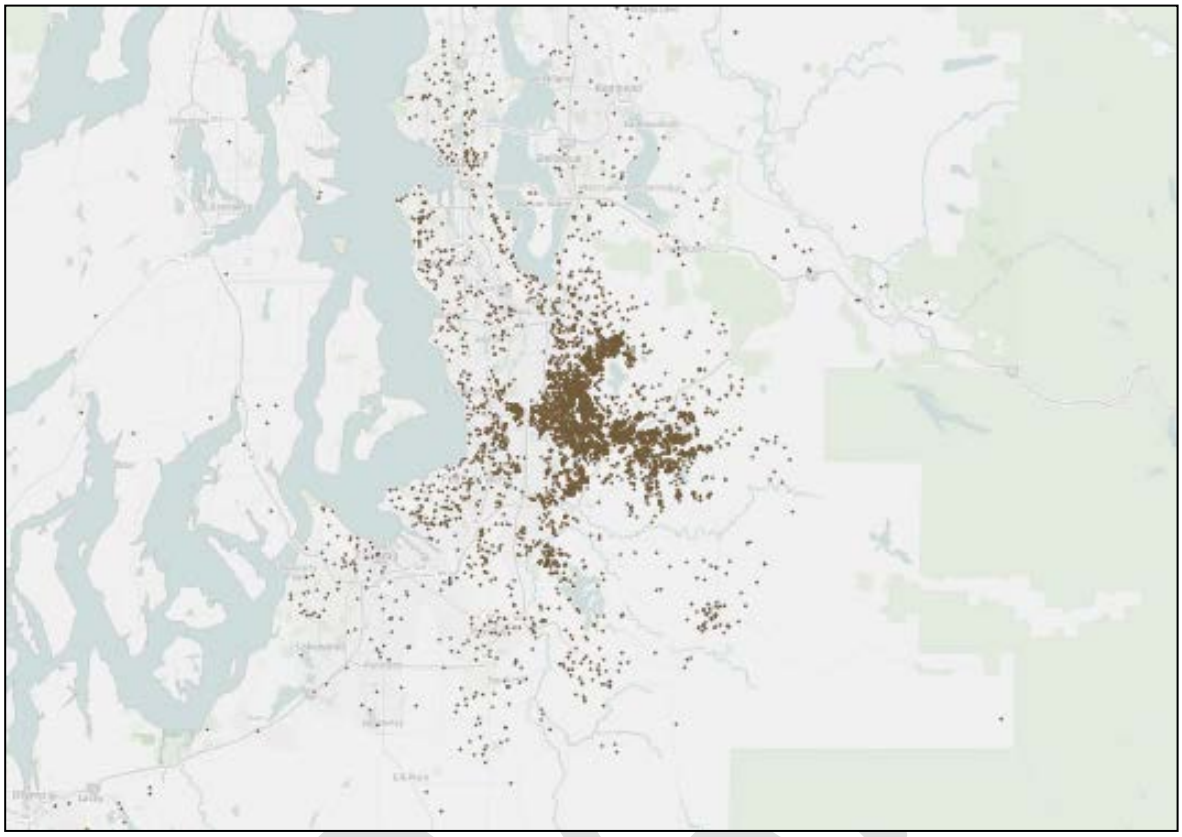
Boeing Location	ZIP 98010	ZIP 98022	ZIP 98027	ZIP 98038	ZIP 98042	ZIP 98051	ZIP 98058	ZIP 98059	ZIP 98092	SE King County Commuters	%	Cumulative %
Renton	14	27	34	95	102	9	143	114	49	587	26	26
Renton area	10	16	25	54	64	10	83	58	29	349	15	41
DC	6	10	21	56	69	6	66	49	34	317	14	55
Plant II	4	10	29	33	51	4	66	59	33	289	13	67
Kent	3	5	17	35	69	6	53	37	41	266	12	79
Auburn	2	24	7	27	35	3	13	9	68	188	8	87
Everett	3	1	16	16	18	2	23	56	6	141	6	93
Payne Field	1	1	15	3	10	0	21	10	10	71	3	96
South Park	0	0	2	5	4	0	4	3	4	22	1	97
Bellevue	0	0	4	5	3	2	3	2	2	21	1	98
Fredrickson	0	5	0	2	4	0	1	0	4	16	1	99
Longacres	1	0	1	5	2	0	1	2	2	14	1	100
Grand Total	44	99	171	338	434	42	477	400	284	2,289	100	

Kent School District Employees

The Kent School District has also conducted an internal analysis of their employees' commuting patterns. This analysis—in conjunction with employee feedback—revealed that commuting can play a critical role in retaining teachers in a competitive environment for high-quality teachers.

The majority of the Kent School District's teachers do live in the area, however, a significant number commute from farther away – including a contingent from southeast King County.

Figure 12. Commuting Distances for Kent School District Employees



Traffic

Qualitative interviews revealed that traffic was an issue of concern across the study area, rendering seemingly manageable commuting distances on paper a serious—and at times prohibitive—time commitment in reality. Several employers interviewed cited commuting times as a critical issue in retaining their workforce.

The most recent report on traffic in the area from the Puget Sound Regional Council (PSRC) comes from February 2011 and details the region's long-term vision for transportation through 2040. The report notes that southeast King County contained four areas identified as "bottlenecks" (places where the physical attributes of a roadway change in a manner that impacts the flow of traffic) or "chokepoints" (where congestion occurs because of traffic interference and/or the roadway configuration) by the Washington State Department of Transportation. Nonetheless, the southeast King County area was not identified as containing any "transit-congested corridors" or any "key arterials" and the area does not figure prominently in proposed long-term changes related to congestion management.[14]

Finally, the Washington Department of Transportation maintains a permanent traffic recorder in Covington, which recorded a 27.5 percent increase in annual average daily traffic volume over the past decade.[15] This further supports the narrative that traffic may act as a significant barrier in accessing higher education.

Public Transportation

Southeast King County is serviced by limited public transportation options, though the area does not fall within the Sound Transit district. Even the planned expansions to the Sound Transit system "ST3" approved in the November election, will only affect the western edges of the area in neighboring Kent and Auburn.[16] A 2010 Washington Department of Transportation explored the feasibility of implementing commuter rail service in southeast King County by connecting Maple Valley and Black Diamond to Auburn's Sounder Transit station via Covington. It concluded, however, that though the project was theoretically feasible none of the agencies authorized to provide such services were interested and the upfront capital costs were a significant barrier.[17] Ultimately, no such plan was put in motion.

Southeast King County is served by King County's Metro bus service, including rural local routes and rural intercity routes which connect Kent and Auburn with Black Diamond, Covington, Enumclaw, and Maple Valley. The 2011 PSRC study referenced above notes that the bus service was generally sufficient to meet area needs, not operating at overly high capacity with the exception of service between Black Diamond and Covington to Kent during peak hours.

However, interview subjects were in strong agreement that existing bus service does not enable easy access to the nearest postsecondary options in the region: Green River College and Renton Technical College, much less to four-year institutions such as the University of Washington and University of Washington - Tacoma. Those interviewed cited both a lack of coverage in bus service, as well as infrequent service. This impression is supported by the commuting pattern data in Table 5, which shows that the small number of area residents who do commute by bus or train face an average commute length of more than 77 minutes. Moreover, King County Metro's plans include only a modest increase in service to this region between 2016 and 2025.[18]

As it currently stands, public transportation is not a viable option for commuting to existing higher education providers for many residents of southeast King County.

Postsecondary Landscape

In general, students in southeast King County have a variety of options for where they may seek postsecondary education and training, including community and technical colleges, public and private colleges and universities, an online competency-based institution, and a tribal college. There are two local, public postsecondary institutions that include southeast King County in their service areas – Green River College and Renton Technical College. Highline College, a public community college, is also nearby geographically. All three also offer online options, with Green River enrolling 10 percent of its in-state students fully online, Highline 13 percent, and Renton nine percent.[19]

Table 9. Postsecondary Institutions Geographically Adjacent to the Study Area [20]

Type	Postsecondary Institution	2014-15 Undergraduate Enrollment
Public Two-Year	Green River College*	11,895
Public Two-Year	Renton Technical College*	6,635
Public Two-Year	Highline College	10,346

**Statutory service area includes southeast King County*

Washington's public and private four-year colleges and universities are also an option for students. Though none are physically located in southeast King County, some are relatively proximate in cities such as Seattle and Tacoma, while several also offer off-site locations in nearby areas such as Renton and Des Moines, as well as online courses. The region is also served by the Muckleshoot Tribal College and Western Governors University (WGU) – Washington a private, nonprofit university created in 2011 by the Washington Legislature in partnership with WGU, an online, competency-based university. Tables 10 and 11 show enrollment for the four-year institutions in the 2014-15 academic year.

Table 10. Four-year Public Postsecondary Institutions Serving Students in Washington State [21]

Postsecondary Institution	2014-15 Undergraduate Enrollment
Central Washington University	15,957
Eastern Washington University	15,907
The Evergreen State College	5,085
University of Washington - Bothell	6,043
University of Washington – Seattle	50,584
University of Washington – Tacoma	5,546
Washington State University	32,423
Western Washington University	16,807

Table 11. Four-year Private Postsecondary Institutions Serving Students in Washington State [22]

Postsecondary Institution	2014-15 Undergraduate Enrollment
Gonzaga University	7,691
Heritage University	1,128
Pacific Lutheran University	3,431
Saint Martin's University	1,771
Seattle Pacific University	4,270
Seattle University	7,422
University of Puget Sound	2,600
Walla Walla University	1,686
Western Governors University – Washington	10,000
Whitman College	1,541
Whitworth University	2,480

Community and Technical Colleges

Washington's community and technical colleges focus on three main areas: basic education for adults, workforce education, and academic transfer.[23] Though students may attend any institution which meets their needs, regardless of their area of

residence, the legislature has established defined "service areas" for each institution as described in RCW 28B.50.040. These service areas generally align with county and school district boundaries. Two two-year institutions in the area have service areas which include southeast King County, Green River College and Renton Technical College.

As currently defined in statute, Green River College's service area is the tenth district which includes "the boundaries of the common school districts of Auburn, Black Diamond, Renton, Enumclaw, Kent, Lester and Tahoma, King county, and the King county portion of Puyallup common school district No. 3." Renton Technical College serves the 27th district, which encompasses Renton, Kent, Auburn, Tahoma and Enumclaw School Districts and the central and south portions of the Seattle School District.

In addition, Highline College's numbers are also included in the analysis given its geographic proximity to the northwestern portions of southeast King County and because it enrolls a significant number of students from southeastern King County school districts (as enumerated in the following section on enrollment trends).

Four-Year Public Institutions

The four-year public institutions serving the area are: Central Washington University, Eastern Washington University, The Evergreen State College, University of Washington, Washington State University, and Western Washington University. These are not, as noted above, located in the study area though there are some programs offered in and around the service area as well as online.

For example, The Evergreen State College offers programs in partnership with the Muckleshoot Tribal College, which is located in southeast King County. Central Washington offers degrees at an off-site location in Des Moines (about 25 miles from southeast King County) through a partnership with Highline College, and Washington State University's Global Campus offers over 20 fully online undergraduate and graduate degree programs.

An overview of the public four-year institutions' online enrollment is also presented below. However, this data is drawn from the Integrated Postsecondary Education Data System (IPEDS) which can only identify a student's location at the state level. Therefore, it is unclear if any of these students are physically located in southeast King County. However, the table provides some context as to the extent of Washington's public four-year institutions' online offerings.

Table 12. Distance Education Enrollments at Public Four-year Institutions (2014)[24]

Postsecondary Institution	Undergraduate Enrollment, Fully Online Students (in Washington)	Percent of Total Enrollment
Central Washington University	1,455	12%
Eastern Washington University	291	2%
The Evergreen State College	0	0%
University of Washington - Bothell	7	0%
University of Washington – Seattle	535	1%
University of Washington – Tacoma	28	1%
Washington State University	2,067	7%
Western Washington University	143	1%

Other Institutions

WGU – Washington is legislatively endorsed and is a fully online, competency-based institution. Though fully online, WGU – Washington was able to provide data on the number of students enrolled who reside in southeast King County (based on analysis of zip codes which align with the area). The institution enrolled 306 undergraduates from the areas as well as 112 graduate students. The bulk of undergraduate students are in the Business College, while the Teachers College is most popular among southeast King County graduate students.

Table 13. WGU-Washington Enrollment of Students Residing in Southeast King County (October 2016)[25]

	Undergraduate	Graduate	Total
Business College	143	36	179
Health Professions College	45	10	55
Information Technology College	59	3	62
Teachers College	59	67	126
Total	**306**	**116**	**422**

Table 14. WGU-Washington Enrollment of Students by City of Residence (October 2016)[26]

	Undergraduate					Graduate					Total
	Business College	Health Professions College	Information Technology College	Teachers College	**Total**	Business College	Health Professions College	Information Technology College	Teachers College	**Total**	**Grand Total**
Black Diamond	3	1	4	0	8	0	0	0	3	3	**11**
Covington	13	4	4	7	28	5	0	1	5	11	**39**
Enumclaw	9	0	1	12	22	1	0	0	13	14	**36**
Maple Valley	25	8	10	6	49	6	2	1	7	16	**65**
Ravensdale	2	1	1	0	4	0	0	0	1	1	**5**
Total	52	14	20	25	111	12	2	2	29	45	**64**

While the Muckleshoot Tribal College is not currently accredited, it offers a number of programs through partnerships with other institutions as well as Occupational Skills Training and a GED testing center and GED program. The Tribal College utilizes a cohort-based model – identifying community needs and brining in partner institutions to provide relevant programming as needed while Tribal College staff provide on-site support to students. The Muckleshoot Tribal College enrolls more than 300 students across all its programs (credit, noncredit, and adult basic education).[27]

Data from the Washington Student Achievement Council show that currently there are no private institutions authorized by the state offering degree programs in the cities of Black Diamond, Covington, Enumclaw, and Maple Valley. However, in the nearby cities of Kent and Auburn, Antioch University—a private four-year institution based in Seattle—offers programs.[28] Antioch offer programs for Education, Special Education, Experienced Educators, and Teacher Preparation as well as Endorsements in Environment and Sustainability Education and Library Media. Meanwhile, Pima Medical Institute, a private, for-profit two-year institution, offers a Veterinary Technician program in Kent.

Private nonprofit Seattle University also offers programs to enhance current teacher credentials to include math endorsement, special education endorsement, in addition to a duel endorsement in ELL and Literacy through the Puget Sound Education Service District.[29]

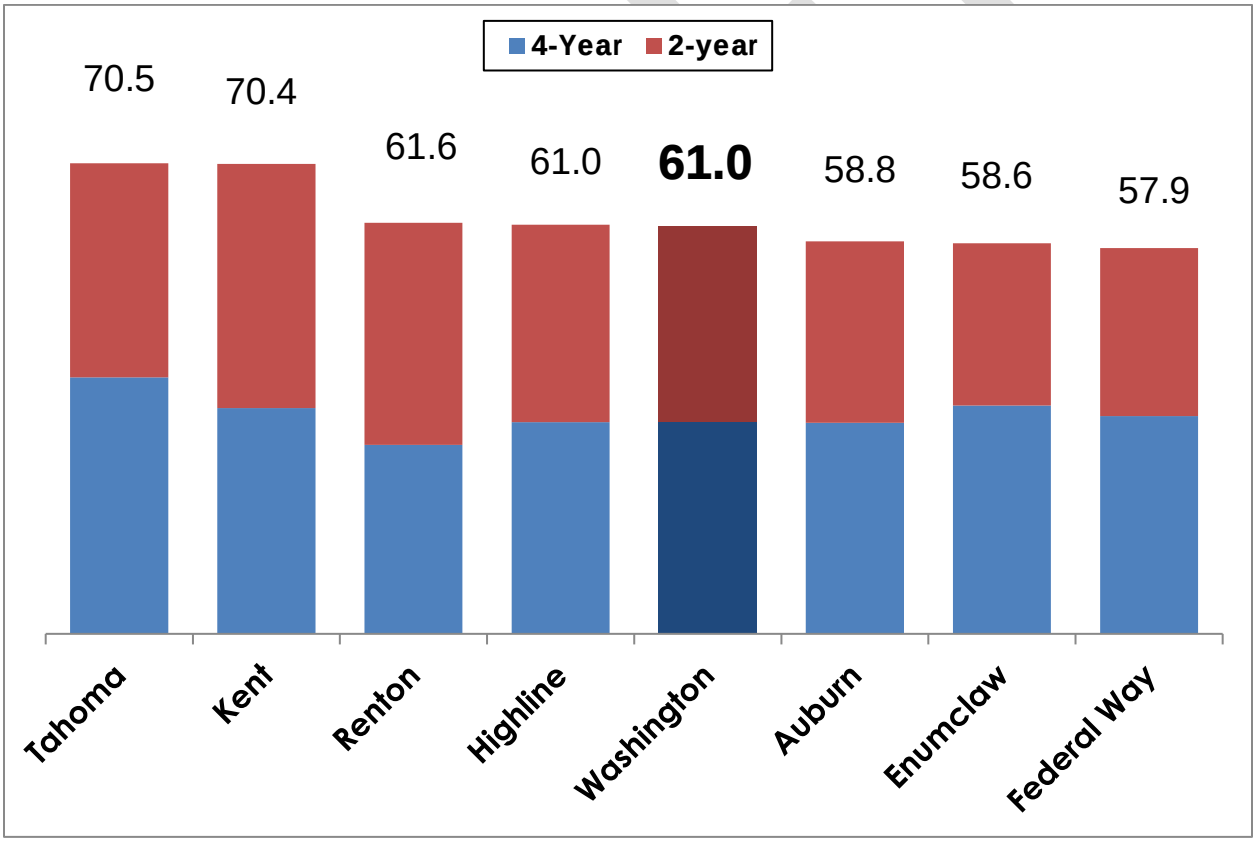
Postsecondary Enrollment Trends

An analysis of college participation rates of high school graduates in King County reveals that students in southeast King County attend college at rates similar to the rate observed statewide, 61 percent (see Figure 14).

Specifically, a higher percentage of students in the Tahoma and Kent School Districts attend postsecondary education, 70.5 and 70.4 percent respectively, at the same percentage as the state for Renton and Highline School Districts, and just below the statewide attendance rate in Enumclaw.

Though the breakdown between students attending two- versus four-year institutions is relatively consistent across the area, Renton School District sends a slightly lower proportion of its students to four-year institutions (28.3 percent) than either the state as a whole (31.7 percent) or the six surrounding districts (average four-year participation rate of 33.7 percent).

Figure 13. King County High School Graduate College Participation Rates by District & Sector, 2014



Additional data from Washington's Education Research and Data Center demonstrates that the majority of public high school graduates from these seven districts attended in-state, public institutions, ranging from 65-73% of Enumclaw college-goers attending public institutions of some kind to 87% of Renton's college-goers.[30]

Tables 15 through 21 show where students attend college immediately out of high school by school district for the most recent year available, 2014. These tables describe where approximately 80 percent of the college-going high school graduates matriculated. The remaining 20 percent of students attended a wide variety of institutions, so the list of institutions up to the cumulative 80 percent figure captures which institutions are most commonly attended by area students.

Green River College is the primary destination of students from Auburn (41.7 percent), Kent (28.9 percent), Enumclaw (41.5 percent), and Tahoma School Districts (37.3 percent). Of the students who participate in postsecondary education in the Federal Way and Highline School Districts, the largest percentage 36.8 and 32.1 percent, respectively, attend Highline College. Meanwhile, just over 32 percent of students from Renton School District attend Bellevue Community College. These results for the most part mirror national research findings that students tend to choose postsecondary options based on geographic proximity, with students typically opting to attend nearby institutions. [31]

Table 15. Auburn School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Green River College	**188**	**41.7**	**41.7**
University of Washington	**79**	**17.5**	**59.2**
Washington State University	**34**	**7.5**	**66.7**
Central Washington University	**30**	**6.7**	**73.4**
Highline College	**30**	**6.7**	**80.0**
Other Institutions	90	20.0	100.0

Table 16. Enumclaw School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Green River College	**51**	**41.5**	**41.5**
Central Washington University	**17**	**13.8**	**55.3**
University of Washington	**16**	**13.0**	**68.3**
Washington State University	**11**	**8.9**	**77.2**
Western Washington University	**8**	**6.5**	**83.7**
Other Institutions	20	16.3	100.0

Table 17. Federal Way School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Highline College	**248**	**36.8**	**36.8**
University of Washington	**187**	**27.8**	**64.6**
Washington State University	**71**	**10.5**	**75.2**
Green River College	**38**	**5.6**	**80.8**
Other Institutions	129	19.2	100.0

Table 18. Highline School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Highline College	**175**	**32.1**	**32.1**
University of Washington	**128**	**23.4**	**55.5**
South Seattle Community College	**80**	**14.7**	**70.1**
Washington State University	**44**	**8.1**	**78.2**
Western Washington University	**27**	**4.9**	**83.2**
Other Institutions	92	16.8	100.0

Table 19. Kent School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Green River College	**271**	**28.9**	**28.9**
University of Washington	**167**	**17.8**	**46.7**
Highline College	**133**	**14.2**	**60.9**
Bellevue Community College	**99**	**10.6**	**71.4**
Washington State University	**80**	**8.5**	**80.0**
Other Institutions	188	20.0	100.0

Table 20. Renton School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Bellevue Community College	**160**	**32.6**	**32.6**
University of Washington	**110**	**22.4**	**55.0**
Renton Technical College	**79**	**16.1**	**71.1**
Washington State University	**32**	**6.5**	**77.6**
Western Washington University	**18**	**3.7**	**81.3**
Other Institutions	92	18.7	100.0

Table 21. Tahoma School District - High School Graduate College-Going Counts by Institution, 2014

Institution	College-Going Count	Percent	Cumulative Percent
Green River College	**103**	**37.3**	**37.3**
Bellevue Community College	**38**	**13.8**	**51.1**
University of Washington	**36**	**13.0**	**64.1**
Washington State University	**34**	**12.3**	**76.4**
Western Washington University	**21**	**7.6**	**84.1**
Other Institutions	44	15.9	100.0

Existing Postsecondary Programs

Data from the preceding section demonstrate that, on the whole, students in southeast King County who wish to enter a postsecondary program have reasonable options available to them given that they enroll in postsecondary programs at a rate equal to or higher than the state average.

Overall, these institutions offer area students a relatively robust set of postsecondary opportunities. Appendix F describes the available local offerings—defined for the purposes of this report as those offered by Renton Technical College and Green River College, as well as WGU-Washington's online offerings—for the 2015-2016 academic year, including available degrees and programs.

However, analysis of the available degrees and programs does show breaks in pathways offered locally for the nursing profession – which is particularly significant given the high demand for the profession outlined in the subsequent section on workforce needs. Green River College offers a program in Licensed Practical Nursing (LPN), and Renton Technical College offers a Nursing Assistant certificate and an associate degree of applied science transfer degree in nursing that leads to registered nursing licensure. Yet the only bachelor's degree in nursing available in the immediate area is through WGU-Washington, which is offered online only. Therefore, a brick and mortar pathway to a bachelor's in nursing is not available in the current postsecondary education in the immediate study-area landscape – despite the fact that this is one of the most in-demand degrees in the regional economy.

However, there are programs relatively close to the study area. Highline College currently has an RN to BSN agreement with the University of Washington-Tacoma, assuring an RN to BSN pathway for Highline RN graduates. If the cohort from Highline is big enough, the program will be taught on the Highline campus. However, this location is further away and may pose difficulties for accessibility, particularly for working adults. Bellevue College in Bellevue, Washington—about 30 miles north of southeast King County—also offers an RN to BSN program yet would be a significant commute for southeast King County residents.[32]

Postsecondary Transfer Patterns

The State Board for Community and Technical Colleges (SBCTC) provided data on transfer patterns from the local public two-year institutions, this includes public and nonprofit and for-profit private institutions, however does not include WGU-Washington (described in a separate table). Among this group, Central Washington enrolls the most students transferring out of Green River College and Highline College, while Renton students' primary destination is the private for-profit University of Phoenix. The University of Washington – Tacoma is a close second in transfer numbers for Green River and Highline and enrolls the highest number of Renton students among public four-year institutions.

An important note is that Renton Technical College, according to its mission, primarily offers workforce oriented degree and certificate programs that do not generally transfer to traditional baccalaureate programs and therefore has a significantly smaller overall number of transfer students than community colleges such as Green River and Highline which are designed to serve students seeking to transfer to four-year institutions.

Figure 14. Number of Students Transferring From Green River College (Academic Year 2014-2015)

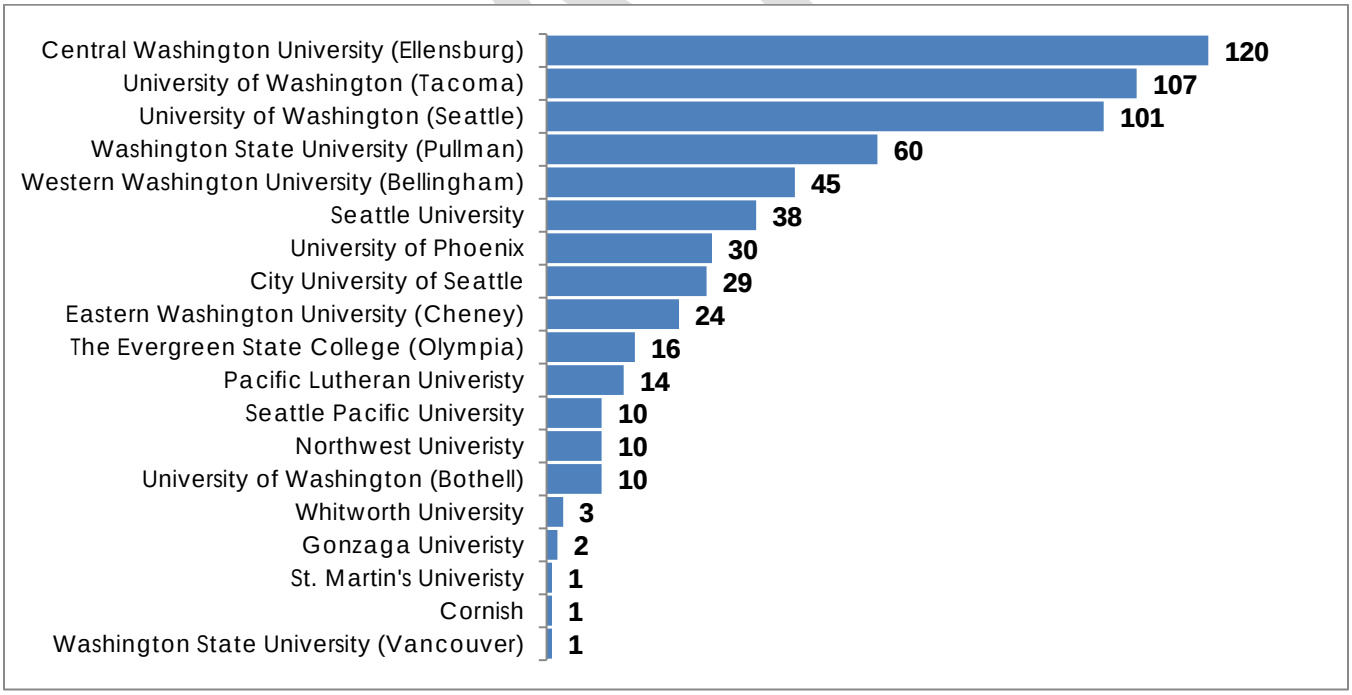


Figure 15. Number of Students Transferring From Highline College (Academic Year 2014-2015)

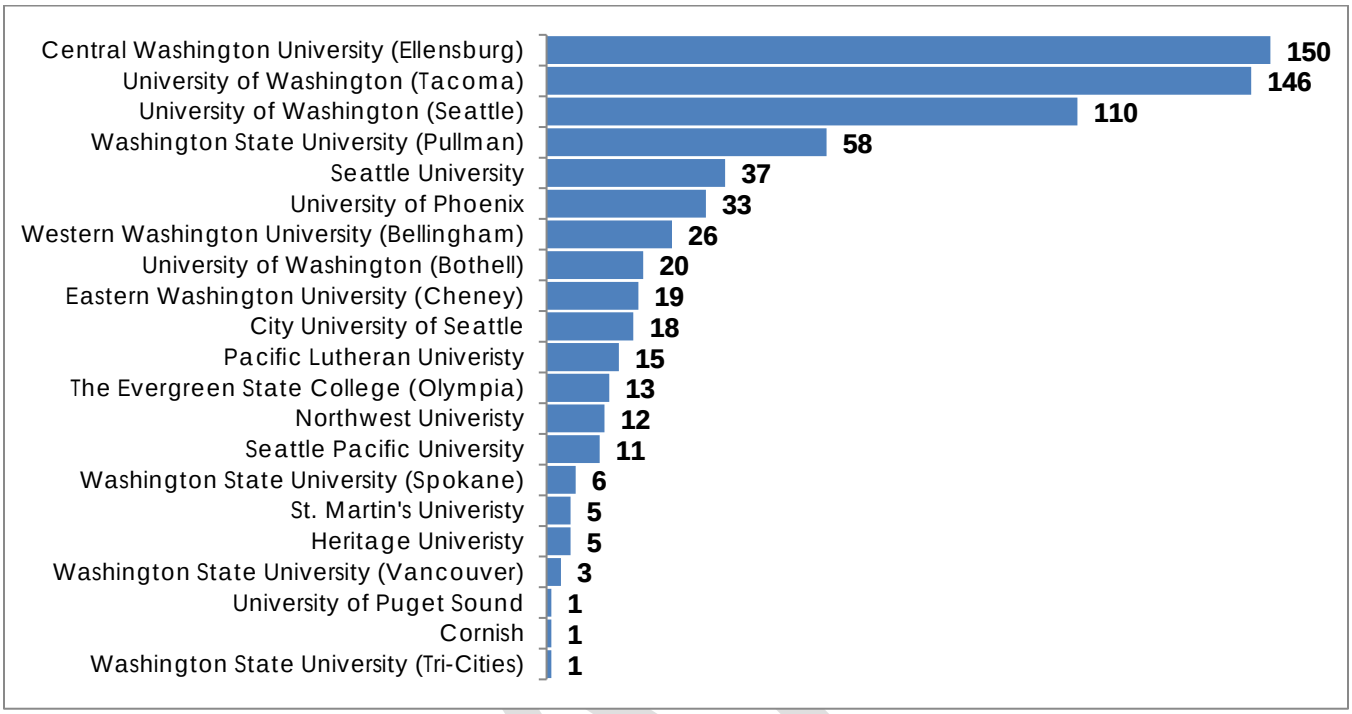
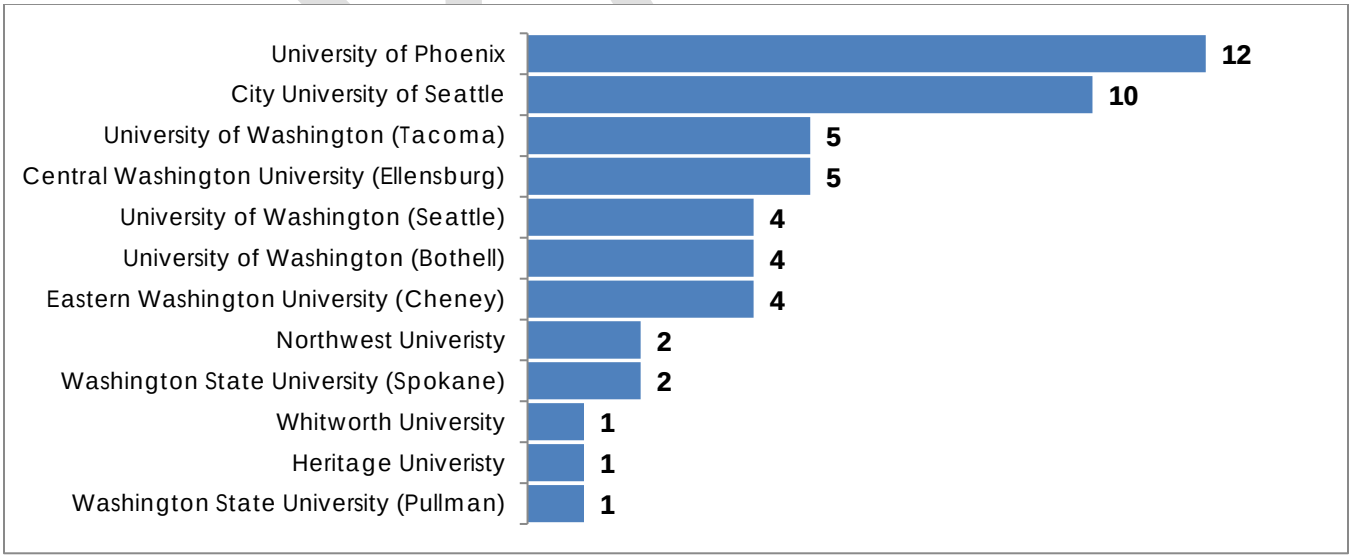


Figure 16. Number of Students Transferring From Renton Technical College (Academic Year 2014-2015)



WGU-Washington also enrolls a number of area transfer students – however their data were from August 2016 – therefore not directly comparable to the SBCTC data from academic year 2014-2015. Nonetheless, it is evident that WGU functions as major

transfer destination for local students – particularly from Green River College. Moreover, the cumulative graduate numbers indicate that they offer a viable completion option for area community and technical college students.

Table 22. WGU – Washington Student Transfer Institutions, August 2016

Institution Transferred From	Active WGU Students	New Students Over Previous 12 Months	Cumulative Graduates
Green River College	143	36	179
Highline College	45	10	55
Renton Technical College	59	3	62
Total	**382**	**183**	**128**

Economic Demand and Workforce Needs

King County

Because many area residents commute to work, workforce demands and projections for King County as a whole were considered in addition to area-specific data. Washington's Employment Security Department collects data on employer demand and also produces employment projections by county. A review of King County's data revels that currently, IT-focused jobs top the list of high-demand jobs – and come with a robust median annual wage. Registered nurses are the fourth highest profession in demand, and they too command a healthy wage. Interestingly, the top six in-demand jobs are rounded out by retail salespeople at five and customer service representatives at six, which both come with significantly lower median annual wages. For example, the median annual wage for a software developer is more than $85,000 higher than that of a retail salesperson.

Table 23. Top Occupations Advertised Online for King County, October 2016[33]

Rank	Job Title	Median Annual Wages
1	Software Developers, Applications	$113,555
2	Computer Occupations, All Other	$87,752
3	Marketing Managers	$144,009
4	Registered Nurses	$88,717
5	Retail Salespersons	$27,672
6	Customer Service Representatives	$36,475
7	Web Developers	$110,560
8	First-Line Supervisors of Office and Administrative Support Workers	$57,278
9	Network and Computer Systems Administrators	$91,984
10	Computer Systems Analysts	$93,572

Looking forward, the Employment Security Department's projections for King County indicate that present trends are likely to continue – with job growth dominated by high-skill professions such as professional services, information, health services, and education. Meanwhile, hospitality and retail jobs are also projected to grow over the coming years. At the other end of the spectrum, manufacturing and natural resources jobs are projected to decline or remain stagnant respectively. Ultimately, this suggests that southeast King County's residents will be increasingly likely to need postsecondary credentials.

Table 24. King County Long-Term Industry Projections[34]

Industry	2014-2019	2019-2024
PROFESSIONAL and BUSINESS SERVICES	3.1%	2.5%
INFORMATION	2.8%	2.4%
EDUCATION and HEALTH SERVICES	2.1%	2.0%
LEISURE and HOSPITALITY	2.0%	1.6%
RETAIL TRADE	2.3%	1.2%
OTHER SERVICES	1.6%	1.2%
GOVERNMENT	1.3%	0.9%
WHOLESALE TRADE	2.0%	0.8%
CONSTRUCTION	3.0%	0.5%
TRANSPORTATION, WAREHOUSING AND UTILITIES	2.1%	0.4%
FINANCIAL ACTIVITIES	0.7%	0.3%
NATURAL RESOURCES and MINING	0.0%	0.0%
MANUFACTURING	-0.4%	0.0%

Southeast King County

Despite the significant proportion of southeast King County's workforce that commutes outside the region for employment, many area stakeholders hope to shift this balance over time by generating economic demand and ensuring the region has a high-skill workforce in place to meet this demand.

In meeting with stakeholders across southeast King County, it became clear that—despite the specificity of the geographic area—there is still significant variation across the region in terms of economic trends and employer needs. For example, Enumclaw's major industries include dairy farming, manufacturing, and insurance.[35] Meanwhile, Covington's primary industries are healthcare, hospitality, and retail. The Muckleshoot Tribe is also a leading are employer, with a workforce of over 2,400.[36]

High-Need Occupations

To assess high-need occupations in southeast King County, supply and demand data were developed using Burning Glass demand data and comparing the number of job postings for various occupations with the number of degrees produced in fields that prepare students for those occupations. The analysis was further informed by stakeholder interviews. Overall, many interview subjects felt that there was a sense of unmet need locally in the fields of nursing, teaching, and IT – which tracks well with the data from King County as a whole.

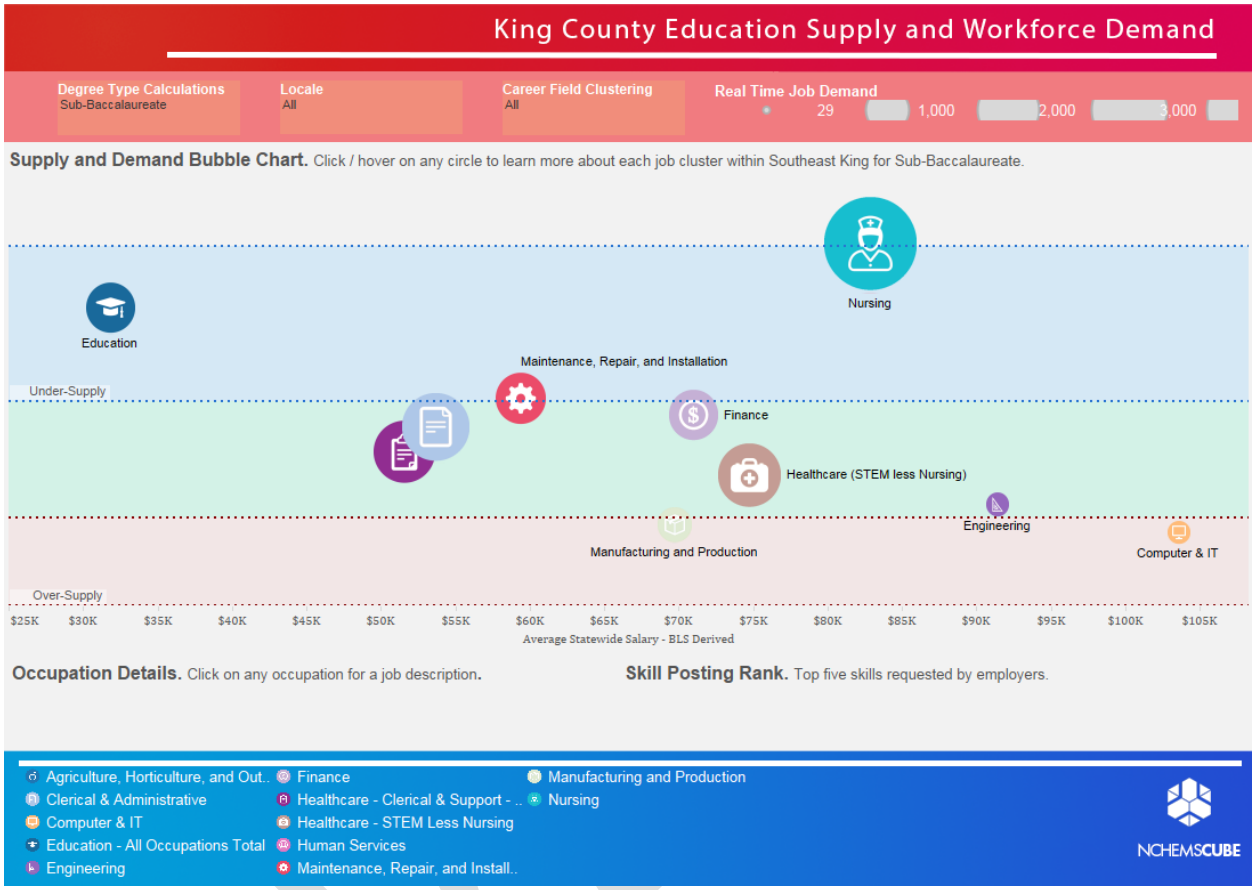
The demand for registered nurses specifically is born out across all forms of data – both current employer demand at the county and local level, as well as through projections from the Washington State Registered Nurse Supply And Demand Projections from the Center for Health Workforce Studies and stakeholder interviews.[37]

In terms of teaching demand, this is further supported by stakeholder interviews, as well as statewide data such as the Office of Superintendent of Public Instruction's 2015 survey of teacher shortages which revealed that 29 percent of respondents had unfilled classroom teacher positions and that 44 percent were unable to fill their open positions with fully certified teacher who met job qualifications.[38] However, teaching positions are not typically posted on public online job sites, therefore the Burning Glass data were not able to identify demand here.

Finally, while there is clearly demand in IT fields in the county as whole – likely clustered in Seattle - an analysis of the Burning Glass data did not reveal a localized demand for IT professionals though these often high-paying positions are likely of interest to area residents open to commuting.

The Burning Glass analysis is presented in the following figures – separated into employer demand for jobs with sub-baccalaureate credential requirements and those with baccalaureate requirements.

Figure 17. Southeast King County Supply and Demand: Sub-baccalaureate



As shown in the figure above, there is a marked undersupply of people with sub-baccalaureate credentials in nursing – which could be both LPNs as well as RNs with Associate's Degrees in Nursing. Education professions at the sub-baccalaureate level also show up as having more demand than supply – however these jobs, for example teacher's aides and paraprofessionals, are relatively low-paying. Although healthcare services make up one of southeast King County's key industries, supply and demand appear to be well-matched for non-nursing health professions at the sub-baccalaureate level.

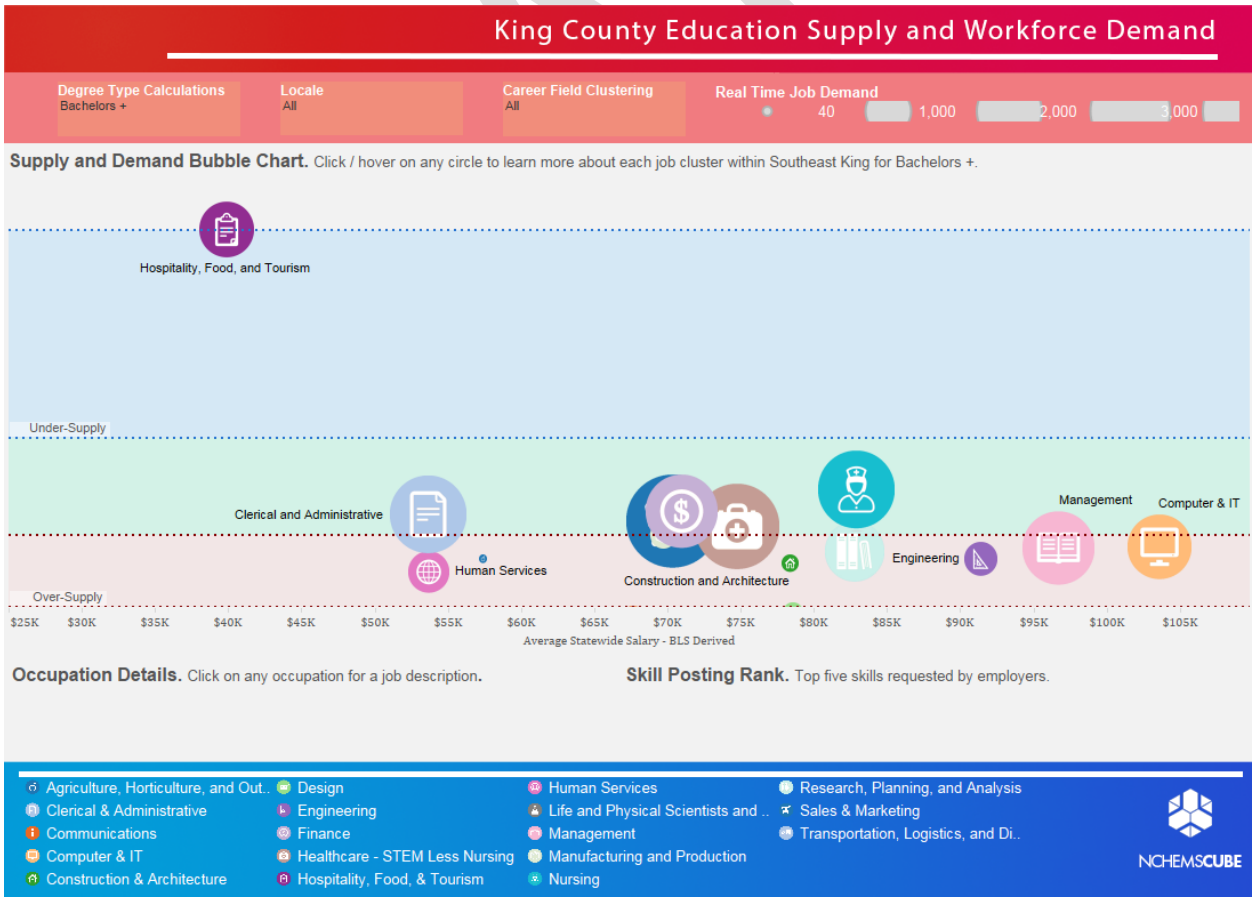
At the baccalaureate level, described in the figure below, the job cluster that is in shortest supply compared to the demand is Hospitality, Food, and Tourism – the area's other main industry. As shown, this job cluster is low-paying, even at the bachelor's level. While the data do not reveal a current undersupply of baccalaureate-level nurses, this could reflect the fact that job postings may describe the minimum credentials required for a Registered Nurse (a licensed nurse with an ADN) though employers might prefer applicants with a bachelor's degree.

Stakeholder interviews suggest that RNs as a group are in demand, but those with BSNs

are preferred and that there is an increasing shift towards hiring RNs with this qualification as well as supporting current employees to pursue an RN to BSN pathway. Moreover, additional factors that may lead to an increase in future demand for baccalaureate-level nurses are projected retirement waves linked to workforce cohorts aging out, the continuing impact of the Affordable Care Act, and evolving nursing preparation requirements.[39]

Local considerations also suggest that in the future demand may be on the rise in this area. Specifically, MultiCare Health System, a "not-for-profit health care organization with more than 10,000 employees and a comprehensive network of services throughout Pierce, South King, Thurston and Kitsap counties," is building a new 58-bed hospital in Covington.[40] This new facility and the surrounding medical services that are expected to emerge in the coming years will likely increase the demand for baccalaureate-level and registered nurses as well as other medical professionals. Interviews revealed a competitive environment when hiring qualified nurses and other medical professionals, and the expectation is that this trend will continue in the near future.

Figure 18. King County Supply and Demand: Baccalaureate



Assessment of Need

In sum, demographics are shifting in southeast King County. The area has been steadily growing in population, and this trend is projected to continue. Simultaneously, southeast King County is growing more diverse as shown by data trends in the area's school districts.

While income levels for residents of southeast King County are comparable to those of residents in surrounding areas, levels of degree attainment are below their neighbors. While historically this may not have been a challenge for the area, moving forward, it is something that local and state leaders must consider as living-wage jobs increasingly require a postsecondary credential.

Both quantitative and qualitative data show that traditional-age students are being served relatively well by local postsecondary education options. On the other hand, the large number of people with some college, but no degree in southeast King County suggests that this is a gap that needs to be addressed. Further, postsecondary recruitment, retention, and completion for working-age adults is an area identified as a need for further progress in WSAC's 2015 Roadmap Update.[41]

Healthcare and specifically nursing are areas that emerged as current and growing needs in southeast King County. Covington, in particular, already serves as a hub for medical services, but with the new hospital under construction, it is reasonable to expect that more registered nurses and those with BSN degrees will be desired even more than they are now, yet local access to BSN programs is limited. Teaching also appears to be a field with high levels of demand, as well as IT jobs for those willing to travel outside southeast King County for work. Though WGU-Washington offers programs in each of these areas and Green River and Renton offer some relevant pathways, there is still no brick and mortar structure in southeast King County that can support the area's older students in completing credentials.

Options for Consideration

On the basis of the analysis of quantitative and qualitative data, several key principles and features emerged as important in guiding the recommendations for a postsecondary education solution. These features and principles inform the analysis of potential higher education solutions for the area.

Principles

The following are the four key guiding principles that arose from the needs assessment.

- **Demand is for provision of service, not a new institution.** Data analysis suggests that there is not sufficient need for a new postsecondary institution in southeast

King County. There is an argument to be made, however, for provision of service, particularly around healthcare professions and nursing.

- **Local response needs to be driven by local demand, not institutional supply.** It is clear that for any model to be successful in this area, the solution must be driven by local demand. The solution should not hinge on what postsecondary institutions would like to offer without regard to what programs are needed in the area.
- **Solution must be able to respond to changing workforce demands.** The workforce is changing in southeast King County. The community has historically been a community of workers that commutes, but there is significant interest in changing that dynamic. As such, any realistic solution must be able to respond as the workforce demands evolve and shift.
- **Travel considerations make local access important.** Traffic is a community-wide concern, and it impacts travel times in negative ways. Given the expected demand for postsecondary options is among adults, traffic and commuting must be considered as adults will tend to access postsecondary institutions in the evenings when traffic is at its worst making local access vital to success.

Features

The following feature will promote alignment of a local postsecondary solution with the area's needs and help to ensure sustainablity over the long term.

- **Adult students are likely to be primary audience.** Both quantitative and qualitative data suggest that the need for postsecondary education options is greatest among working-age adults. Therefore, the solution needs to be built around what works best to serve them.
- **Flexible solution.** The solution must be flexible to be successful. Southeast King County must be able to identify its residents' needs, find providers, and facilitate the offering of educational options. Moreover, they must be prepared to do this repeatedly over time as some needs are filled and new ones emerge.
- **Distance/hybrid options should be considered.** Given the traffic challenges and the recommended target audience of working-age adults, distance/hybrid (combination of online and face-to-face instruction) options should be considered.
- **Solution should not be limited to one provider, but there should be one provider per program at the facility.** There should be one provider per program at the facility, as more than one creates unnecessary complexity and confusion for students as well as potential conflicts of interest for student services providers/advisors.
- **Provision of appropriate support services will be key to success.** Particularly when working-age adults are the primary audience, the provision of appropriate support services will be integral to a successful solution. Simply offering classes

near their place of residence or work without access to registrar, bursar, and other services, will be a set up for failure.

Delivery Models

The project team was asked to consider higher education options that included: a branch campus, a university center, a private university, and an online learning center. Both the data on existing needs for postsecondary options in the study area and extensive consultation with the Advisory Committee and WSAC staff narrowed down this initial list. The relatively modest nature of the demonstrated need—together with its pronounced slant towards older students—and the associated costs and administrative burden of building a branch campus led all those consulted to suggest that this option not be seriously considered for the southeast King County project.

In a similar vein, the option of bringing in a private provider to offer a postsecondary option was also discarded early on. Given the strong network of existing public providers within reasonable proximity, it was not clear that a private provider would be required to achieve the desired outcomes. Further, the public institutions in the surrounding area have expressed potential willingness to collaborate on offerings in the area and to date no private providers have approached the community.

As a result, the project team focused primarily on the idea of a university center—in different configurations—as well as an online learning center as a potential solution. Ultimately, these two forms of higher education delivery were deemed most responsive and cost-effective in terms of meeting the area's needs. After a scan of university center models in Washington and across the country and in consultation with the Advisory Committee, the following three options were selected as the most promising.

- **One Facility, Multiple Institutions**
  This model could function in a variety of ways, outlined below. Best practice suggests, however, that that each program offered should have only one provider – discouraging intra-center competition for students and promoting cohesion among providers.

    - A "2+2 model" as is common in Washington, whereby a local community college partners with a four-year institution to offer students the opportunity to complete a four-year degree at the location of the center. A nearby example of this would be Highline College's partnership with Central Washington University's center at Highline College "Central Washington University - Des Moines," which offers several bachelor's degree programs in fields including teaching and business administration, as well as three master's programs.

- A single facility which houses multiple providers, such as the Everett University Center in Everett, Washington. This configuration relies on a host institution—in this case currently Washington State University—with multiple providers offering a greater diversity of programming than a single provider would have the capacity to provide. The Everett center is housed on the campus of Everett Community College and offers classes from Washington State University, Western Washington University, Hope International University, University of Washington – Bothell, Eastern Washington University, The Evergreen State College, and Central Washington University. Course offerings are provided through a variety of modalities – including face-to-face instruction, hybrid courses, and online-only courses.[42]

- **One Facility, One Institution**
  A single facility could host a single institution offering a select set of programs and/or classes at a location more convenient to area students. Green River College offers two local examples of this, with their Kent Station and Enumclaw campuses. The Kent Station location in particular could serve as a potential model for a local entity – given that it operates in a downtown commercial/retail space and offers a number of classes and student support services on site.

- **Online Learning Center**
  The idea of a physical presence to support fully online programming was also suggested as an option. This structure is far less common, although there are some interesting models. For example, Illinois' University Center of Lake County offers fully online degree completion programs targeted at adult students. The center supports online programs by providing: a facility with computers that students may use to do their coursework, a preadmission advisor well-versed in the online programs offerings, and by providing proctoring services.[43]

  An even less costly model involving distance education might be to pursue a marketing and recruitment partnership with a fully online provider, such as WGU-Washington, providing minimal space only for enrollment and administrative functions.

In planning for the future, a path from one option to another other might be workable. For example, start with an online learning center and, over time, expand it into one of the other two options.

Evaluation of Options

The principles and features identified in the preceding section provide a set of criteria by which to evaluate the different delivery models outlined above. While the matrix presented in Table 25 is only a rough evaluation of potential options – it provides a quick visual reference for examining how each of the three most promising delivery models respond to the key needs of the area.

However, an important limitation of this preliminary analysis is that it does not weight different factors. For example, whether or not a program has robust student support services might not make a difference if it is not financially sustainable, therefore project planners may want to consider weighting certain criteria more heavily as they move farther along in the process.

Table 25. Options Matrix

	One Facility, Multiple Institutions	One Facility, One Institution	Online Learning Center
Locally Accessible	If located in a southeast King County hub – this would provide increased access to the community.	If located in a southeast King County hub – this would provide increased access to the community.	If located in a southeast King County hub – this would provide increased access to the community.
Flexible Program Offerings	Would offer maximum flexibility in program offerings.	Would be restricted to what the provider has available.	Theoretically flexible, would depend on offering institution(s). However, minimal infrastructure needed would enhance flexibility.
Adequate Student Support services	If there was a single provider of student support services, this consistency could support students through to degree completion.	Would allow for clear responsibility in provision of services (though likely would be less robust than on home campus).	Could provide student support services for online learners such as guidance through the collegiate process and proctoring. However, unclear who would function as provider.
Designed for Adult Learners	Flexibility in offerings would be a positive for adult learners, would also allow for completion programs in a variety of fields.	Would likely not meet the needs fully of local some college, no degree population.	Depending on programs could be a good option – however, adult learners would benefit from on-the-ground support to succeed.
Financially Sustainable	Could be a challenge to attract and retain a number of providers willing to offer programs, as well as to supply students for a range of programs on a consistent basis.	Could be relatively low cost to operate, however, would need to ensure that offerings were in appropriate demand locally.	Should be the lowest cost option to implement given minimal infrastructure needs.

Financial Models

Of course, whichever delivery model is selected is highly dependent on its long-term sustainability. Indeed the fundamental question for moving this endeavor forward will be how a higher education solution would be funded. Furthermore, this is a critical question at several junctures – including startup infrastructure costs, ongoing maintenance, and covering ongoing operating costs. The following list outlines the anticipated costs that would need to be addressed.

- **Physical space** – this could be in the form of buying or renting a space or having a space donated. To date, there has not been an offer of reduced cost space from any area entities. While the City of Covington envisions contracting with a developer to construct a downtown civic space which might offer a location – the current plan is for the city's developer to lease space to tenants at market rate.
- **Parking** – given the propensity of local residents to use their own vehicles to commute to work, a space with adequate parking will be required. To be good neighbors, since a student may spend multiple hours at the center, care will be needed not to impinge on the parking expectations of other local businesses.
- **Equipment/Technology Provider** – the location would need to be outfitted with appropriate technology for course offerings, as well as the necessary technological support to ensure that these function properly over time.
- **Site Management** - a space would need management of some kind – coordinating participating entities and building services.
- **Teaching** – how and by whom faculty teaching coursework would be compensated will be a critical component, and may differ based on the location and the mode of instruction (online versus hybrid or face-to-face). This question will be especially critical if a nursing program of some kind is implemented – as there are already significant shortages in nursing faculty in the area.
- **Student Services** – what entity or entities provides students services, and what portion of these are offered on-site versus remotely from a host campus, will also be important to account for in thinking about overall costs. For example, certain services may be easy to provide on-site, such as bill payment or course scheduling (as is the case at the Green River Kent Campus) but others are more likely to be delivered remotely (such as disability services).
- **Recruitment (Building Cohorts)** – perhaps most importantly for long-term sustainability, a local entity must be responsible for building cohorts to fill programs offered at the higher education location. Only with a steady stream of students will any option be able to operate over time. A promising model for this approach is offered by the Muckleshoot Tribal College. Their staff actively survey community need and then identify and bring in programs to meet this need on

an as-needed basis. For example, as the Muckleshoot Tribe was working on building out its K-12 school, the tribal college partnered with Antioch College to offer teacher preparation programs. Currently, they offer programs in early childhood education in partnership with Green River College and in tribal management with Northwest Indian College to meet the Tribe's workforce needs.

Several Advisory Committee members noted that typically university centers are required to charge higher tuition than their on-campus counterparts in order to cover the operating costs of the center, which does not benefit from the economies of scale achieved on full campuses. Therefore an option that might be more geographically convenient might not be as desirable from an affordability perspective.

There are exceptions to this trend, such as the Everett University Center, which enjoys additional state funding that covers the gap between regular tuition costs and operating costs at the center. However, this is a unique arrangement in the state of Washington and not one which could be guaranteed for a center in southeast King County.

Potential funding models to pursue include:

- **Primarily Locally-Funded** – It is possible that a municipality – such as a local city – could take the financial lead on a higher education project. However, this would be an unusual model and no models of university centers that are primarily city-funded were located by the project team. It is important to note that a number of local jurisdictions throughout Washington have pursued the idea of bringing a physical higher education presence to their state. In fact, the neighboring city of Federal Way is concurrently pursuing their own higher education needs assessment and is in talks with University of Washington - Tacoma to provide such a presence. However, none have opted to take the lead in terms of funding a higher education presence, even those such as Federal Way considering a higher education entity as an economic development driver.
- **Primarily State-Funded** – Another approach would be to seek state funding for a project – as at the Everett University Center. While this would certainly contribute to long-term sustainability, it is unclear whether this would be a viable political option at this time.
- **Hybrid Model of Local and State Support** – an approach more grounded in risk sharing would be to pursue a joint model of local and state funding. As an example, the University Center of Southern Oklahoma in Ardmore, Oklahoma was launched by state statute in the 1970s and administered by the state's office of higher education. The center offers associates, bachelors, and, master's programs through three public higher education institution partners. Yet when the center outgrew its location in a local high school, the community was able to

secure a maintenance endowment from a foundation and matching community gifts to fund the construction of a new building on property owned by the school district (which acts as the landlord).[44] The center also created a foundation in 2006 in order to administer local scholarship programs and to manage capital campaigns for building improvements.

Program and Operating Plan

Based on the considerations described above, weighting both need and feasibility, the project team suggests a small-scale, multiple provider center operating on a cohort-based model for a southeast King County postsecondary education solution. However, recognizing the relatively small overall size of the population of southeast King County as well as capacity challenges of existing providers, the team strongly recommends pursing an incremental approach to implementation by confirming local demand in advance of full-scale investment. An outline of this strategy is presented in the proposed operating plan.

Proposed Program Model

The proposed model is a modest center-style facility, featuring up to four classrooms fully equipped to deliver online or hybrid course offerings and three offices, with storage space. The center would be staffed by 3 FTEs, a full-time site manager, a student support staff person, and a clerical support staff person. The site would also pursue contract services – likely for IT support and potentially for other services such as marketing. The location should be in an area that functions as a transportation hub with adequate parking facilities and public bus options if possible.

The center should be managed by a "lead provider" – ideally a two-year institution that could manage student services throughout their students' lifecycle and avoid conflicts of interest in the situation where programs from different institutions are offered at the center. Perhaps most critically, the site manager would be responsible for assessing community need and identifying and matching cohorts and programs (similar to the Muckleshoot Tribal College model). Program offerings could be face-to-face, hybrid, or online. In addition, the center would be equipped to offer a range of programs as needed – for example shifting program offerings once a particular local need was filled. Based on this structure, the costs are estimated in Table 26.

Table 26. Cost Estimates for Suggested Model

Cost Drivers	Cost/Unit	Assumptions	Total Cost/Year
Space	$30/ft^2	4 Classrooms (600 ft^2) 3 Offices (120 ft^2) Storage (240 ft^2) Non-assignable Space (35% of total space)	$138,450
Equipment & Technology	$200,000/ classroom/5 years of use	4 Fully Equipped Classrooms Equipment for site Staff	$160,000
Personnel (Salary + benefits)	$150,000 $60,000 $100,000	Site Manager Clerical Staff Person Student Support Professional	$310,000
Contract Services	$44,800	IT Support, Marketing Costs,[3] etc.	$40,000 (IT) +$120/student (Marketing)
TOTAL ONGOING ANNUAL COSTS			**$653,250**

Proposed Operating Plan

Ultimately the center model outlined in the program plan is straightforward and the key considerations will arise with implementation. Implementation will require: identifying local demand for specific programs, identifying a lead provider, and identifying the responsible entities for each of the major functions and their accompanying costs.

Table 27. Operating Plan for Suggested Model

Role	Key Functions	Potential Responsible Entities
Landlord	Owns property, Maintains property	• City • Lead Provider
Technology Provider	Owns equipment, Maintains equipment	• Lead Provider
Site Management	Promotes site, Builds cohorts, Enlists providers, Schedules Facilities	• Lead Provider • State
Student Services	Enrollment, Bursar, Advising Financial Aid	• Lead Provider – ideally a two-year institution to mitigate conflicts of interest in advising if there are multiple four-year participants
Content Provider	Teaches courses	• Lead Provider • Multiple Additional Providers

[3] A 2015 Ruffalo Noel Levitz report on the cost of recruiting (https://www.ruffalonl.com/papers-research-higher-education-fundraising/2016/cost-of-recruiting-an-undergraduate-report) identifies the median cost of undergraduate recruiting in 2015 as $578 for four-year publics and $118 for two-year public institutions. Therefore, an estimate of $120/student is proposed for this model, with an estimate of 200 students over five years – though this figure could be adjusted.

As described in the section introduction, it is not recommended that an immediate investment be made in center facility. Instead, the suggested approach is incremental in nature. By completing each of the four suggested steps below in sequence, gradual investments could be made to confirm local demand and needs, which could lead to the creation of a center over time well-positioned to meet local needs and operate in a sustainable fashion.

Recommended Interim Steps

1) **Confirm lead partner**– Identify and confirm a provider willing to act as lead provider. In the local context, the clear candidate is Green River College, however, due to their leadership transition any such designation would not be recommended till the institution has a permanent leader on board.
Estimated Cost: WSAC staff time

2) **Obtain funding for a site manager** – Secure funding to provisionally hire a site manager to conduct community outreach and identify potential cohorts and their programs of interest. Also explore employer partnerships. A part-time clerical staff person may also be needed, as well as a small operational budget.
Estimated Cost: $210,000 - $230,000

3) **Run pilot cohort recruitment phase –** Identify potential students for program(s). Run initial programs – could be on-site at partner institution. Based on supply and demand data, stakeholder interviews, and Advisory Committee feedback the following programs may be candidates for which to explore local interest.

- RN to BSN program – exploring partnerships with MultiCare and Valley Medical Center.
- Teacher preparation programs – a model to pursue might be a Master of Arts in Teaching (MAT), in which those with subject-matter specific degrees pursue teaching credentials in their fields, rather than a full two-year teacher education program. For example, programs like WGU-Washington's Master of Arts in Teaching Mathematics.
- IT Certifications – programs that award high-value certifications could be a valuable asset for local adults looking to obtain higher paying jobs outside the study area without completing a full degree program. For example, the Employment Security Data shows that the most in-demand skills in King County are dominated by IT-related competencies such as Java, SQL, C/C++, Linux, and Python.
- Behavioral Health – An Advisory Committee member suggested that the recommendations of the 2015 Adult Behavioral Health System Task Force established by the legislature indicate that programs focused on

stackable credentials and bachelor's degrees in this sphere might be of increasing interest to the state in coming years as they address a shortage of behavioral health professionals.[45]

Estimated Cost: Dependent on partner's contributions of space, staff time, and course provision.

4) **Expand as demand dictates** If demand is clearly demonstrated, pursue investments from multiple sources to implement the center model.
Estimated Cost: $653,250

Appendix A. Methodology

The higher education assessment began in July 2016 and culminated in November 2016. The Western Interstate Commission for Higher Education (WICHE) managed all aspects of the higher education needs assessment and the development of the operating plan in collaboration with staff from the Washington Student Achievement Council (WSAC). The study was conducted in consultation with an Advisory Committee organized and convened by WSAC (see Appendix C for a list of members).

WICHE subcontracted with the National Center for Higher Education Management Systems (NCHEMS) — a private nonprofit (501)(c)(3) organization whose mission is to improve strategic decision making in higher education for states and institutions in the United States and abroad — to conduct portions of the assessment and assist with the development of the operating plan. NCHEMS has considerable experience in conducting these types of assessments having done such studies in more than 20 states and regions across the country.

WICHE also obtained assistance from Russell Poulin, Director, Policy and Analysis, of the WICHE Cooperative for Educational Technologies (WCET). Poulin helped analyze and assess the existing distance education landscape in southeast King County, as well as review emerging trends in distance education that may affect the region. WCET is the leader in the practice, policy, and advocacy of technology-enhanced learning in higher education. Biographies of all key personnel are included in Appendix B.

Key Activities

In order to conduct the higher education needs assessment and develop the operating plan to meet the higher education needs identified in the assessment, WICHE engaged in seven key activities as described below.

Coordinated and Convened the Advisory Committee

WSAC identified civic, business, and education leaders from southeast King County to serve on the Advisory Committee to guide the work of the assessment, ensure the integrity of the process, and provide stakeholder input to WSAC and WICHE staff. WICHE worked with WSAC to coordinate and convene the Advisory Committee at key points during the project period as well as consult with members on an as-needed basis. Advisory Committee meetings were held on the following days at corresponding locations located in or near Southeast King County (meeting goals for each meeting are listed):

- **July 22, 2016 (City of Covington Offices, Covington)**
  Meeting Goals
  - *Introduce staff to Advisory Committee*

    - *Present and solicit feedback on study plan of action*
    - *Discuss role of Advisory Committee*
    - *Identify key regional stakeholders for interviews*
    - *Confirm upcoming dates*
- ***August 31, 2016 (City of Covington Offices, Covington)***
  Meeting Goals
    - *Provide project status update*
    - *Conduct focus group with Advisory Committee*
    - *Confirm upcoming dates and locations*
- **October 6, 2016 (MultiCare Covington Medical Center, Covington)**
  Meeting Goals
    - *Provide project status update*
    - *Present preliminary quantitative data*
    - *Present qualitative data on the stakeholder interviews*
    - *Present features/principles that will guide the final recommendations*
    - *Confirm upcoming dates and locations*
- **October 26, 2016 (Muckleshoot Tribal College, Auburn)**
- **November 18, 2016 (City of Covington Offices, Covington)**

Hold Biweekly Meetings

To keep WSAC staff informed of progress toward goals, WICHE met with WSAC staff every other week throughout the duration of the project via conference call (except when schedules did not permit). WICHE staff provided WSAC staff with an agenda prior to the meeting, and whenever possible, meetings occurred every other Thursday at 10:00 am PDT/11:00 am MDT and included the following staff members:

WICHE	WSAC
Joe Garcia, J.D. President	Randy Spaulding, Ph.D. Director of Academic Affairs and Policy
Demarée K. Michelau, Ph.D. Vice President, Policy Analysis and Research	Ellen Matheny, M.S., M.A. Assistant Director of Operations
Christina Sedney, M.P.P. Policy Analyst	Daryl Monear, Ph.D. Associate Director, Academic Affairs and Policy

Collect and Analyze Relevant Data

WICHE worked closely with NCHEMS to collect relevant data to inform the report. These data included:

- Factors outlined in RCW 28B.77.080
- Postsecondary enrollment trends

- College participation rates
- Postsecondary transfer patterns
- Existing postsecondary programs
- Needed postsecondary programs
- Strategies for promoting program participation
- Economic demand and workforce needs
- Demographic data
- Population changes
- Commute patterns for area residents to existing higher education options
- Commute patterns for area residents to employment

Specifically, WICHE and NCHEMS requested and received state-level data from the Washington Education Research and Data Center (ERDC), which was created by the Washington Legislature to, among other things, coordinate with other state agencies to compile and analyze education data. WICHE and NCHEMS also relied on other publicly available data, including the American Community Survey of the US Census Bureau.

To assess economic demand and workforce needs, WICHE and NCHEMS considered data from the Workforce Training and Education Coordinating Board and the State Board for Community and Technical Colleges on the supply and demand for workforce education, certificates, and associate degrees. WICHE and NCHEMS also worked with Burning Glass to acquire real-time job market information for the region to further inform the analysis.

In addition, WICHE and NCHEMS conducted interviews with school district and postsecondary representatives, local employers, community development professionals, union leaders, and other relevant stakeholders to assess regional employers' needs (see Appendix D for a list of interview subjects). Topics covered included projected needs by program type, degree level, and current barriers to fulfilling area staffing needs (see Appendix E for interview protocols).

Finally, WICHE collect information from WSAC postsecondary institutions (e.g., Green River Community College, Renton Technical College, Western Governors University-Washington) serving the study region about existing programs to compare against data indicating perceived and projected need (see Appendix F for postsecondary institutional program profiles).

Appendix B. Biographies of Key Personnel

WICHE/WCET

Joe Garcia was appointed President of WICHE in June 2016. He served as the Lieutenant Governor of Colorado and as the Executive Director of the Colorado Department of Higher Education, beginning in 2011. He had previously served on the WICHE Commission for nine years, including serving as its chair in 2011. During his time as Lt. Governor and as the SHEEO for Colorado, Garcia focused on increasing equity in outcomes for all students, particularly those from low income backgrounds and communities of color. Prior to being elected Lt. Governor, Garcia served as President of Colorado State University-Pueblo, which was named the Outstanding Member Institution by the Hispanic Association of Colleges and Universities during his tenure. He also served as President of Colorado's second largest community college, Pikes Peak Community College, where he was twice named President of the Year by the State Student Advisory Council. His previous public service positions included serving as a member of the Cabinet of Gov. Roy Romer and as a White House appointee under President Bill Clinton at the Department of Housing and Urban Development. He also was employed in the private practice of law for 10 years at the law firm of Holme Roberts & Owen, where he became the first Hispanic partner in the 100 year history of the firm. Garcia earned his B.S. in Business at the University of Colorado-Boulder and his J.D. from Harvard Law School.

Demarée K. Michelau is the vice president for policy analysis and research at the Western Interstate Commission for Higher Education (WICHE). In this role, she manages the WICHE's Policy Analysis and Research unit and oversees externally-funded projects related to adult learners, projections of high school graduates, college access and success, and the development of a multistate longitudinal data exchange. The author of numerous reports and policy briefs, she also has experience in a variety of higher education policy issues, including articulation and transfer, equity and attainment, accelerated learning options, college affordability, common academic standards, and K-16 reform. Previously, she worked for the National Conference of State Legislatures as a policy specialist. Michelau received her bachelor's degree in public law from Northern Illinois University and her master's degree and Ph.D. in political science from the University of Colorado at Boulder.

Russell Poulin organizes WCET's national policy and research activities, edits WCET's *Frontiers* blog, coordinates WCET's research efforts, and works on e-learning consortia issues. He represented the distance education community in the U.S. Department of Education's 2014 Program Integrity Negotiated Rulemaking process. Previously, he coordinated distance education activities for the North Dakota University System.

Christina Sedney is a policy analyst at WICHE, where she works on a variety of projects, ranging from state-level contracts to legislative tracking. She also manages WICHE's Adult College Completion Network, working to identify and share policy and practice solutions which help adults with prior college credit complete high-value credentials. Prior to WICHE, Christina directed Written Communications for international nonprofit Teach For All's Growth Strategy and Development team and completed a fellowship focused on early childhood education with the Kenneth Rainin Foundation. Previously she served in multiple roles with the AmeriCorps program City Year, including as a classroom-based corps member and project manager in City Year's Public Policy department. She holds a B.A. from the University of Virginia and a Masters in Public Policy from the University of California, Berkeley.

NCHEMS

Dennis Jones is the President Emeritus of the National Center for Higher Education Management Systems (NCHEMS). Jones has more than 40 years of experience in research, development, technical assistance, and administration in the field of higher education management and policy-making. A member of the NCHEMS staff since 1969, he assumed increasing levels of responsibility within that organization, becoming president in 1986. Under his leadership, and in collaboration with an extraordinarily talented staff, NCHEMS has achieved a position of preeminence as a leader in the development and promulgation of information-based approaches to policy-making in higher education.

Mr. Jones is widely recognized for his work in such areas as:

- Developing "public agendas" to guide state higher education policy-making.
- Financing, budgeting, and resource allocation methodologies for use at both state and institutional levels.
- Linking higher education with states' workforce and economic development needs.
- Developing and using information to inform policy-making.

Mr. Jones has written many monographs and articles on these topics, has presented his work at many regional, national, and international conferences, and has consulted with hundreds of institutions and state higher education agencies on management issues of all kinds. Mr. Jones is a graduate of Rensselaer Polytechnic Institute and served as an administrator (in business and institutional planning) there for eight years prior to his joining the NCHEMS staff. He has served as an advisor to the U.S. Secretary of Education, the Lumina Foundation for Education, the National Center for Public Policy and Higher Education and to numerous other associations, policy organizations, and state agencies.

Appendix C. Advisory Committee

Bill Allison
Council Member
City of Maple Valley

Regan Bolli
City Manager
City of Covington

Catherine Calvert
Director of Curriculum and Instruction
Muckleshoot Tribal College

Deb Casey
Vice President of Student Affairs
Green River College

Cody Eccles
Associate Director
Council of Presidents

Rick Fehrenbacher
Director, Center for Digital Learning & Innovation
Seattle University School of New & Continuing Studies

Jean Floten
Chancellor
Western Governors University

Earl Gibbons
Vice Provost for Extended Education
Western Washington University

Darby Kaikkonen
Director of Policy Research
State Board for Community & Technical Colleges

Mark Lanza
Council Member
City of Covington

Joshua Lyons
Owner
Pinnacle Medical Wellness

Joseph Martin
Assistant Tribal Operations Manager
Muckleshoot Indian Tribe

Brenda Martinez
Human Resources Manager, City Clerk
City of Black Diamond

Briahna Murray
Vice President
Gordon Thomas Honeywell Governmental Affairs

Jenée Myers Twitchell
Special Advisor, Postsecondary Success & Advancement
University of Washington College of Education

Paul Pitre
Dean
Washington State University North Puget Sound at Everett

Joe Potts
Principal
Kentlake High School

Angel Reyna
Vice President of Instruction
Renton Technical College

Antonio Sanchez
Assistant Director of Government Relations
Central Washington University

Jim Schmidt
Senior Forecast Coordinator
Washington State Office of Financial Management Education Research & Data Center

Michael Wark
Director of External Relations
University of Washington Tacoma

Appendix D. Interview Subjects

WICHE and NCHEMS interviewed the following individuals to inform the higher education assessment:

Government

Senator Joe Fain
47th Legislative District

Representative Pat Sullivan
47th Legislative District

Education

Byron Ford
Director for Instructional Support and Operations
Green River College – Kent Campus

Leslie Moore
Dean for Branch Campuses and Continuing Studies
Green River Community College – Kent Campus

Deb Casey
Vice President of Student Affairs
Green River College

Angel Reyna
Vice President of Instruction
Renton Technical College

Jenée Myers Twitchell
Special Advisor, Postsecondary Success & Advancement
University of Washington College of Education

Employer/Workforce

Kevin Dull
Chief Human Potential Officer and Senior Vice President
MultiCare

Moriah Martin
Chief Human Resources Officer
Kent School District

Chelsea Orvella
Legislative Director
Society for Professional Engineering Employees in Aerospace (SPEEA), International Federation of Professional & Technical Engineers (IFPTE) Local 2001

Stan Sorscher
Labor Representative
Society for Professional Engineering Employees in Aerospace (SPEEA), International Federation of Professional & Technical Engineers (IFPTE) Local 2001

Sheryl Ward
Manager of Inpatient Medical Care, Oncology
MultiCare

Community Development

Dan Catron
Associate Planner
City of Enumclaw

Richard Hart
Community Development Director
City of Covington

External Resource Experts

Jon Enriquez
Director, Research and Policy Analysis
Maryland Higher Education Commission

Paul Turman
System Vice President for Academic Affairs
South Dakota Board of Regents

Hilary Ward Schnadt, PhD
Associate Dean for Academic Services & Programs
University Center of Lake County

Appendix E. Interview Protocols

Education Subjects Interview Protocol

Introduction

In Fiscal Year 2017, the Washington Student Achievement Council (WSAC) received funding from the Washington Legislature to complete a higher education needs assessment for southeast King County and to prepare a program and operating plan to meet the higher education needs identified in the assessment. WSAC identified the Western Interstate Commission for Higher Education (WICHE) as the agency contractor with the skills and resources necessary to conduct the assessment in the timeframe provided in the budget proviso, and we are working with the National Center for Higher Education Management Systems to conduct the data collection and analysis. A key component of the assessment is to conduct interviews with key stakeholders in the education and business communities. We expect this interview to take about 45 minutes, and we appreciate you taking the time to speak with us today.

General

1. Currently, how well are the postsecondary education needs of the area being met?
2. Are the programs currently offered adequate for the area?
    - Why or why not?
    - Can you provide specific examples?
3. **[Postsecondary]** What is the demand for the programs you currently offer?
    - Who are the major employers of your students? Where do they go?
    - **[Community Colleges]**Who are the transfer partners?
    - **[K-12]** Are you satisfied with the postsecondary programs offered to your students? How accessible are these programs to students?
    - Where do most of your graduates go to college (e.g., privates, publics, community college, four-year institutions)?
    - **[As employers]**
    - What type of employees are you having trouble hiring?
    - Are there appropriate continuing education opportunities available for your employees? Where do they go for that? Who is the provider?
4. What do you think happens to the students who aren't able to access their programs of choice?
5. What industry sectors are most important to southeast King County today and what sectors do you think will be important in the future?
6. If you had a magic wand, what higher education options–if any –would you like to see offered in the area?

- How would these options be delivered?

7. What are the barriers—if any—to achieving this ideal scenario?

Community

1. Tell me about commuting barriers to current postsecondary education providers.
2. If your community is lacking a particular educational resource, how easy is it to get to another community that has it?
3. What do you think southeast King County will be like in 10 years? How would you like to see the area evolve over this timeframe?

Final Thoughts

1. What didn't we ask that we should have?

Business/Industry Subjects Interview Protocol

Introduction

In Fiscal Year 2017, the Washington Student Achievement Council (WSAC) received funding from the Washington Legislature to complete a higher education needs assessment for southeast King County and to prepare a program and operating plan to meet the higher education needs identified in the assessment. WSAC identified the Western Interstate Commission for Higher Education (WICHE) as the agency contractor with the skills and resources necessary to conduct the assessment in the timeframe provided in the budget proviso, and we are working with the National Center for Higher Education Management Systems to conduct the data collection and analysis. A key component of the assessment is to conduct interviews with key stakeholders in the education and business communities. We expect this interview to take about 45 minutes, and we appreciate you taking the time to speak with us today.

General

1. Currently, how well are the workforce needs of the area being met? How well are the workforce needs of your company being met?
2. Can you hire the kinds of workers that you need? What kinds are the most difficult to hire? How many do you typically hire in a year?
3. How is the higher education sector in the state contributing—or not—to meeting workforce needs?
    - Which postsecondary institutions do you rely on to provide your educated workers?
4. What are the weaknesses and strengths of the college graduates that you do hire?
5. Do you always hire recent graduates or do you generally hire those with experience?
6. Do the programs currently offered locally produce graduates adequate for your employment needs or do you need to import talent?
    - Can you provide specific examples?
7. Do your employees need additional academic opportunities for advancement within your organization?
    - Are you satisfied with the postsecondary programs offered to your employees who need those opportunities?
    - How accessible are these programs to your employees?
    - What's missing?
8. What happens to the employees who aren't able to access the programs that they need?
9. What industry sectors are most important to southeast King County today and what sectors do you think will be important in the future?

10. What types of postsecondary qualifications—both program type and credential level—do you anticipate your employees will need over the next 10 years?
11. If you had a magic wand, what higher education options–if any –would you like to see offered in the area?
    - How would these options be delivered?
12. What are the barriers—if any—to achieving this ideal scenario?

Economic Development

1. Have you been unable to attract/keep employees because of a lack of educational opportunities?

Community

1. Tell me about commuting barriers to current employment opportunities.
2. Tell me about commuting barriers to current postsecondary education providers.
3. If your community is lacking a particular educational resource, how easy is it to get to another community that has it?
4. What do you think southeast King County will be like in 10 years? How would you like to see the area evolve over this timeframe?

Final Thoughts

1. What didn't we ask that we should have?

Community Development Subjects Interview Protocol

Introduction

In Fiscal Year 2017, the Washington Student Achievement Council (WSAC) received funding from the Washington Legislature to complete a higher education needs assessment for southeast King County and to prepare a program and operating plan to meet the higher education needs identified in the assessment. WSAC identified the Western Interstate Commission for Higher Education (WICHE) as the agency contractor with the skills and resources necessary to conduct the assessment in the timeframe provided in the budget proviso, and we are working with the National Center for Higher Education Management Systems to conduct the data collection and analysis. A key component of the assessment is to conduct interviews with key stakeholders in the education and business communities. We expect this interview to take about 45 minutes, and we appreciate you taking the time to speak with us today.

General

1. Currently, how well are the workforce needs of the area being met?
2. Can companies in your community hire the kinds of workers that they need? What kinds are the most difficult to hire? Can they keep them?
3. How is the higher education sector in the state contributing—or not—to meeting workforce needs?
    - Which postsecondary institutions do companies in your community rely on to provide your educated workers?
4. What are the weaknesses and strengths of the college graduates that your companies hire?
5. Do the programs currently offered locally produce graduates adequate for your area's employment needs or do you need to import talent?
    - Can you provide specific examples?
6. What happens to the employees who aren't able to access the programs that they need?
7. What industry sectors are most important to southeast King County today and what sectors do you think will be important in the future?
8. What types of postsecondary qualifications—both program type and credential level—do you anticipate the area's employees will need over the next 10 years?

9. If you had a magic wand, what higher education options–if any –would you like to see offered in the area?
    - How would these options be delivered?
10. What are the barriers—if any—to achieving this ideal scenario?

Economic Development

1. Has your community been unable to attract/keep employers because of lack of educational opportunities?

Community

1. Tell me about commuting barriers to current employment opportunities.
2. Tell me about commuting barriers to current postsecondary education providers.
3. If your community is lacking a particular educational resource, how easy is it to get to another community that has it?
4. What do you think southeast King County will be like in 10 years? How would you like to see the area evolve over this timeframe?

Final Thoughts

1. What didn't we ask that we should have?

Appendix F. Postsecondary Institutional Degree and Program Profiles

The following is a list of degrees and programs offered at the local postsecondary institutional providers.

Green River College

Bachelors of Applied Science
Information Technology: Software Development
Information Technology: Network Administration and Security
Marketing and Entrepreneurship
Aeronautical Science
Natural Resources in Forest Resource Management

Renton Technical College

Associate Degree of Applied Science Transfer (AAST)
Accounting Specialist
Anesthesia Technologist
Computer Science (Year Two of Computer Science Program)
Culinary Arts
Dental Assistant
Early Childhood Careers
Massage Therapy Practitioner
Medical Assistant
Ophthalmic Assistant
Pharmacy Technician
Registered Nurse, Associate Degree
Surgical Technologist

Associate of Applied Science (AAS)
Accounting Paraprofessional
Administrative Office Management
Automotive Technology/ITEC
Band Instrument Repair Technology
Band Instrument Repair with Guitar Technology
Commercial Building Engineering
Computer Applications
Computer Network Technology
Computer Science (Year Two of Computer Science Program)
Construction Management
Culinary Arts
Dental Assistant
Early Childhood Careers

Engineering Design Technology
Entrepreneurship and Small Business Management
Executive Assistant
Ford ASSET
Industrial Engineering
Kitchen Major Appliance Repair Technology
Land Surveying Technician/Geospatial Science
Laundry Major Appliance Technology
Legal Assistant
Major Appliance and Refrigeration Technology
Massage Therapy Practitioner
Medical Assistant
Medical Coding Specialist
Ophthalmic Assistant
Pharmacy Technician
Precision Machining Technologies
Surgical Technologist
Welding

Bachelor of Applied Science (BAS)
Application Development

Certificate of Completion
Accounting Clerk
Accounting Paraprofessional
Applications Developer (Year One of Computer Science Program)
Autobody Repair and Refinishing
Automotive Maintenance and Light Repair
Automotive Technology
Band Instrument Repair Technology
Band Instrument Repair with Guitar Technology
Basic Computer Applications
Basic Machining
Central Service Technician
Child Development Associate
Commercial Building Engineering
Computer Applications
Computer Applications – Accelerated
Computer Applications – Advanced
Computer Network Technology
Computer Numerical Control
Computer Science (Year Two of Computer Science Program)
Computer-Aided Drafting
Construction Management
Construction Trades Prep
Culinary Arts
Dental Assistant

Early Childhood Careers
Electrical Plant Maintenance
Engineering Design Technology
Entrepreneurship and Small Business Management
Field Surveying Technician
Guitar Repair Technology
Health Care Navigator
Industrial Engineering
Kitchen Major Appliance Repair Technology
Land Surveying Technician/Geospatial Science
Laundry Major Appliance Technology
Leadership in the Trades
Legal Assistant
Licensed Practical Nurse (LPN)
MA – Phlebotomy Technician
Major Appliance and Refrigeration Technology
Massage Therapy Practitioner
Medical Assistant
Medical Coding Specialist
Nursing Assistant – Certified
Office Assistant/Receptionist
Office Support Specialist
Pharmacy Technician
Precision Machining Technologies
Preventative Manufacturing Maintenance
Professional Baking
Property Maintenance for Multi-Family Residences
Refrigeration Technology, Domestic/Commercial
Revenue Management Specialist
Surgical Technologist
Veterinary Assistant
Welding

Western Governors University – Washington

Baccalaureate Degrees
B.S. Business Management
B.S. Business – Healthcare Management
B.S. Business – Human Resource Management
B.S. Business – Information Technology Management
B.S Marketing Management
B.S. Accounting
B.S. Data Management/Data Analytics
B.S. Health Information Management
B.S. Information Technology
B.S. Information Technology—Network Administration
B.S. Information Technology—Security
B.S. Nursing (RN to BSN)
B.S. Software Development

B.A. Interdisciplinary Studies (K-8)
B.A. Special Education (K-12)
B.A. Mathematics (5-9 or 5-12)
B.A. Science (5-9)B.A. Science (Chemistry, 5-12)
B.A. Science (Physics, 5-12)
B.A. Science (Biological Science, 5-12)
B.A. Science (Geosciences, 5-12)

Graduate-Level Degrees and Education Endorsements
Post-Baccalaureate Teacher Preparation Program, Elementary Education (K-8)
Post-Baccalaureate Teacher Preparation Program, Mathematics (5-9 or 5-12)
Post-Baccalaureate Teacher Preparation Program, Science (5-9 or 5-12)
Post-Baccalaureate Teacher Preparation Program, Social Science (5-12)
M.A. Teaching, Elementary Education (K-8)
M.A. Teaching, English (5-12)
M.A. Teaching, Mathematics (5-9 or 5-12)
M.A. Teaching, Science (5-9 or 5-12)
M.A. Teaching, Social Science (5-12)
M.S. Curriculum and Instruction
M.S. Special Education (K-12)
M.S. Educational Leadership
M.A. English Language Learning (ELL) (PreK-12)
M.Ed. Instructional Design
M.Ed. Learning and Technology
M.A. Mathematics Education (K-6, 5-9, or 5-12)
M.A. Science Education (5-9)
M.A. Science Education (Chemistry, 5-12)
M.A. Science Education (Physics, 5-12)
M.A. Science Education (Biological Science, 5-12)
M.A. Science Education (Geosciences, 5-12)
Master of Business Administration (MBA)
MBA Information Technology Management
MBA Healthcare Management
M.S. Integrated Healthcare Management
M.S. Management and Leadership
M.S. Accounting
M.S. Cybersecurity and Information Assurance
M.S. Data Analytics
M.S. Information Technology Management
MBA Information Technology Management
M.S. Nursing—Education
M.S. Nursing—Leadership and Management
M.S. Nursing—Education (RN to MSN Option)
M.S. Nursing—Leadership and Management (RN to MSN Option)
M.S. Integrated Healthcare Management
MBA Healthcare Management
Endorsement Preparation Program in English Language Learning (ELL) (PreK-12)
Endorsement Preparation Program in Educational Leadership

Muckleshoot Tribal College

In partnership with The Evergreen State College,
B.A. Reservation-Based, Community Determined Program

In partnership with Northwest Indian College
A.T.S. Chemical Dependency Studies
A.A.S. General Direct Transfer
B.A. Community Advocates and Responsive Education in Human Services
B.A. Tribal Governance and Business Management

Endnotes

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