Southeast King County Higher Education Needs Assessment and Operating Plan

PRELIMINARY REPORT*

*Additional data will be added to the draft final report to be delivered to WSAC staff on December 1, 2016, based on feedback from the project's Advisory Committee on October 26, 2016.

Submitted to the Washington Student Achievement Council (WSAC) by the

Western Interstate Commission for Higher Education (WICHE)

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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 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)." 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,

Southeast King County Higher Education Needs Assessment and Operating Plan 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	Projected Population						
Group	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	Percent Change					
Group	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 Micro Data Area (PUMA)

With this guidance, the project team selected Public Use Micro Data 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.

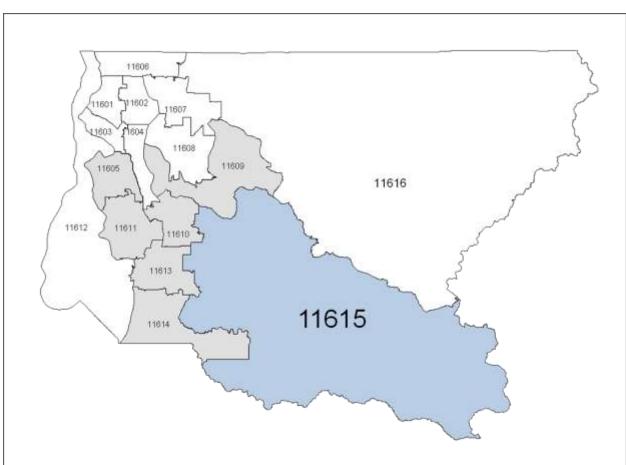


Figure 1. King County Public Use Micro Data Areas (PUMAs)

Table 3. King County Public Use Micro Data 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.¹²

Southeast King County Higher Education Needs Assessment and Operating Plan 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.

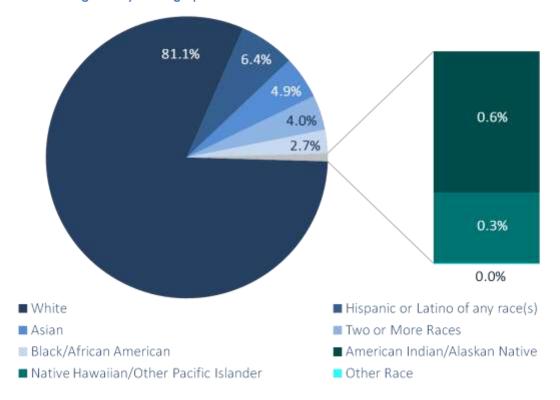
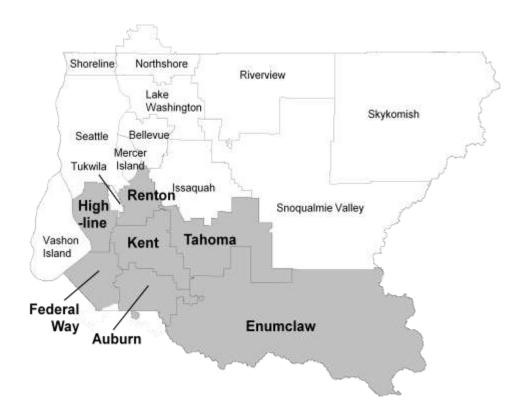


Figure 2. Southeast King County Demographics

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.¹³ 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.¹⁴

Table 4. Percent Change in Enrollment (2011-2016) 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 the county, state, or country – 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.

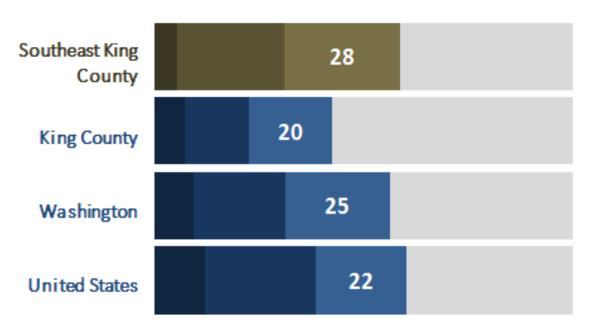
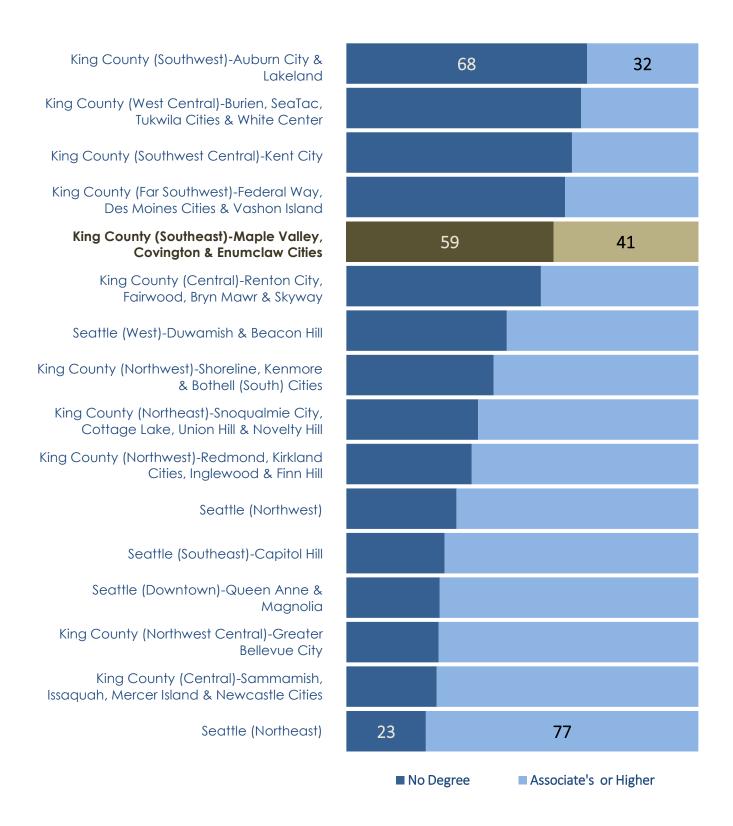


Figure 4. Percent of Working-age Population with Some College, No Degree

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, 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. Educational Attainment by Percent in King County PUMAs (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 – topping even in the county in terms of median wage/salary income.

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

Geography	Median Wage/Salary	90% MOE (+/-)*
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 nature of the 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% Margin of Error (+/-)*
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.

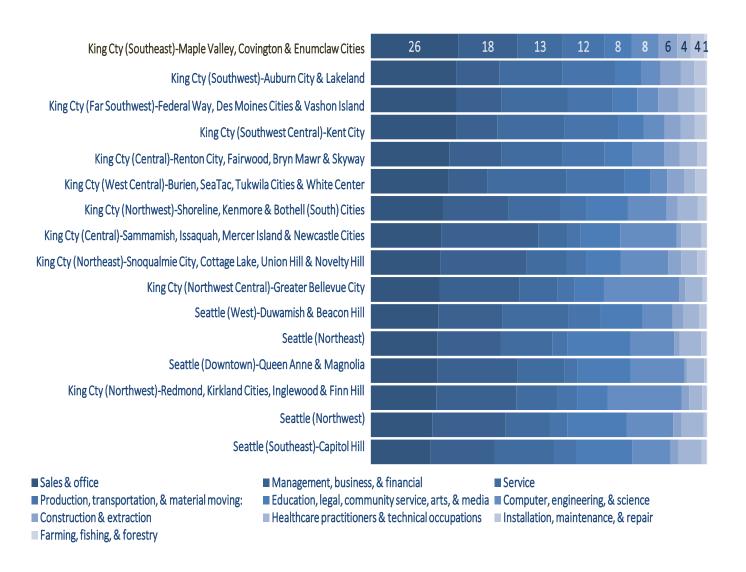
With these caveats in mind, the data show that a majority of southeast King County's workforce is employed in sales and office work (26 percent), followed by management, business and financial occupations (10 percent), and then service jobs (13 percent) and production, transportation, and material moving (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).

Figure 8. Occupational Employment (16 & Above) by Percent



In fact, the study area is home to the largest proportion of sales and office workers in the county (see Figure 9).

Figure 9. Occupational Employment (16 & Above) by Percent in King County PUMAs



When these data are further broken to examine the some college, no degree segment of southeast King County's population, it becomes clear that 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 hold 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.

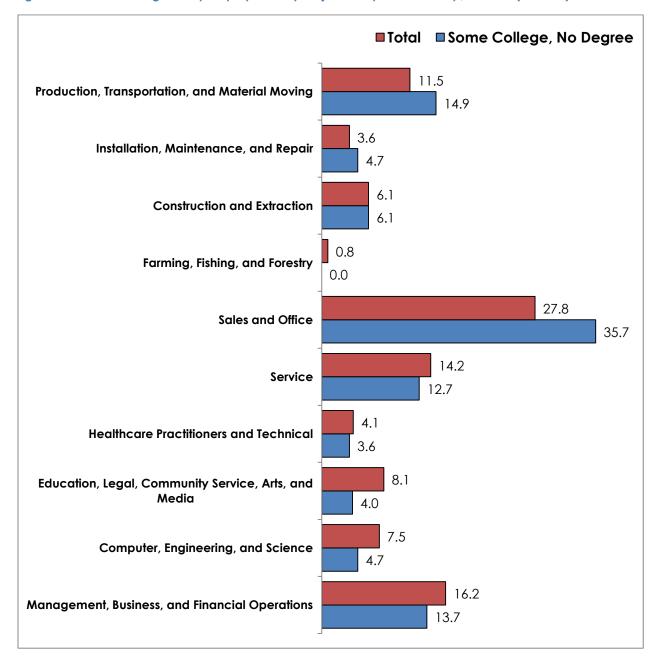
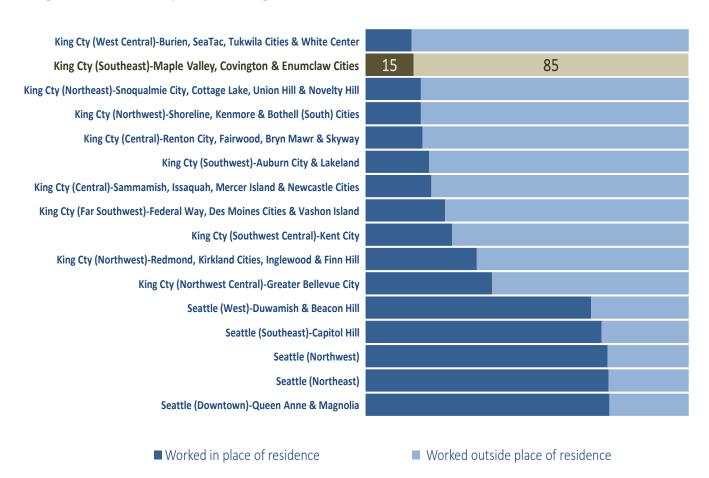


Figure 10. Southeast King County Employment by Major Occupational Group, 2012-14 (Percent)

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). 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 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 11. 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 Car, truck, or van	Mean Travel Time to Work (Minutes) 31.54	Standard Deviation (Minutes)	Sample Size 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.

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).

Figure 12. Boeing Facilities and Southeast King County Zip Codes

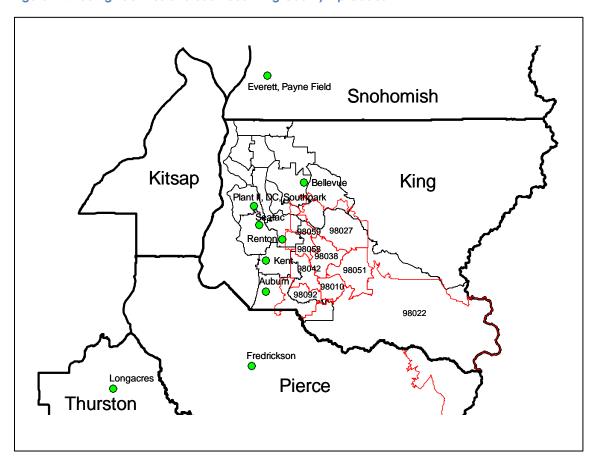


Table 8. Southeast King County Commuters to Boeing Facilities

Boeing Location	ZIP 98010	ZIP 98022	ZIP 98027	ZIP 98038	ZIP 98042	ZIP 98051	ZIP 98058	ZIP 98059	ZIP 98092	SE King County Comm- uters	Percent	Cumulative Percent
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 13. Commuting Distances for Kent School District Employees

Pending District Permission to Include

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.¹⁵

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. 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 proposed expansions to the Sound Transit system, "ST3," on the ballot in November will only affect the western edges of the area in neighboring Kent and Auburn. 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. ¹⁸ 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 2025.¹⁹

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, four-year institutions, and an online, competency-based institution.

There are eight local, public postsecondary institutions that serve southeast King County, three two-year institutions and five four-year institutions, as well as a tribal college. Western Governors University (WGU) - Washington was created in 2011 by the Washington Legislature in partnership with WGU, an online, competency-based university. Tables 7 and 8 show enrollment for the two- and four-year institutions, respectively in 2014-15.

Table 9. Two-Year Postsecondary Institutions²⁰

Postsecondary Institution	2014-15 Undergraduate Enrollment (Headcount)
Green River College	11,895
Renton Technical College	6,635
Highline College	10,346

Table 10. Four-Year Postsecondary Institutions²¹

Postsecondary Institution	2014-15 Statewide Undergraduate Enrollment (Headcount)
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
Western Governors University*	83,977

^{*}WGU Data indicates nationwide enrollment.

Community and Technical Colleges

Washington's community and technical colleges focus on three main areas: basic education for adults, workforce education, and academic transfer.²²

Four-Year Public Institutions

The University of Washington and Washington State University and their campuses are the state's research universities and Central Washington University, Eastern Washington University Western Washington University, and The Evergreen State College are the state's regional comprehensive universities. Finally, Western Governors University – Washington is legislatively endorsed and is an online, competency-based institution.

Other Institutions

A tribal college is also located on the Muckleshoot Reservation in southeast King County. While the Muckleshoot Tribal College is in the process of seeking accreditation, it currently offers a number of programs through partnerships with other institutions as well as Occupational Skills Training and a GED testing center and GED program.

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.²³ 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.

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, or 61 percent (see Figure 14).

Southeast King County Higher Education Needs Assessment and Operating Plan 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).

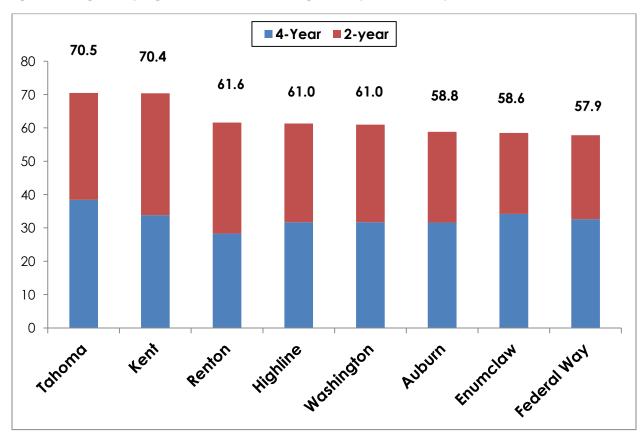


Figure 14. King County High School Graduate College Participation Rates by District & Sector, 2014²⁴

Tables 11 through 17 show where students attend college immediately out of high school by district for the most recent year available, 2014. 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. ²⁵

Table 11. 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

Table 12. 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

Table 13. 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

Table 14. 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

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

Institution	College-Going	Percent	Cumulative

	Count		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

Table 16. 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

Table 17. 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

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 three 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 (PLN), 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 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 landscape – despite the fact that this is one of the most in-demand degree areas in the regional economy.

Postsecondary Transfer Patterns

Based on the data from the State Board for Community and Technical Colleges (SBCTC), it is clear that Central Washington enrolls the bulk of students transferring out of area colleges – in this case looking at Green River College (25 percent of transfers enroll), Highline College (27 percent of transfers enroll), and Renton Technical College (20 percent of transfers enroll). The University of Washington – Tacoma is a close second, enrolling 22 percent of Green River's transfer students, 26 percent of Highline's, and 20 percent of Renton's. The University of Washington – Seattle also enrolls a significant percentage of Green River and Highline's transfer students, at 21 and 20 percent respectively (see Figures 15 through 17).

An important note that is Renton Technical College, according to its mission, primarily offers terminal degree and certificate 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.

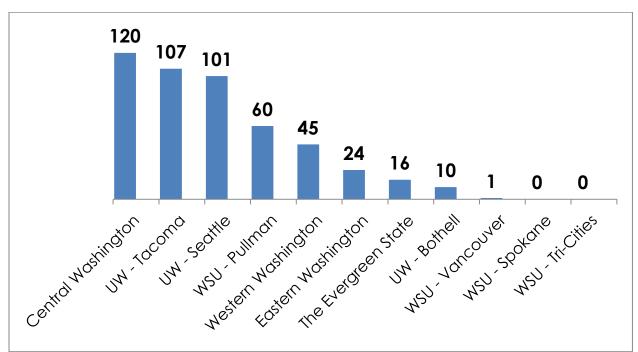


Figure 15. Transfer Patterns - From Green River College (2014)

Figure 16. Transfer Patterns - From Highline College (2014)

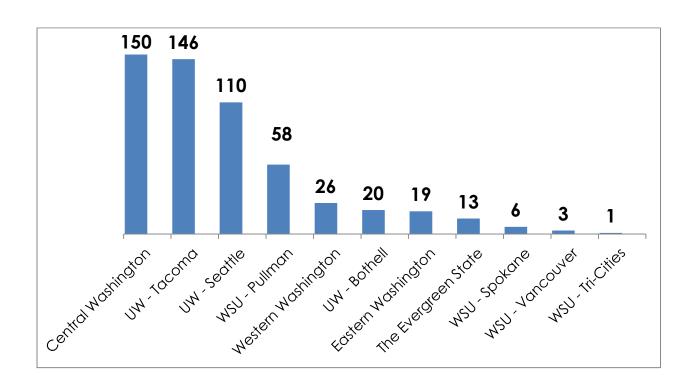
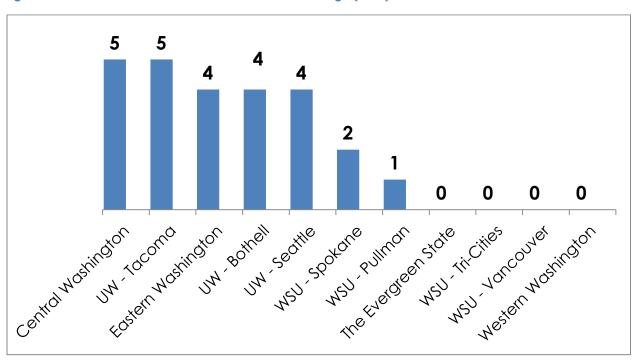


Figure 17. Transfer Patterns - From Renton Technical College (2014)



Economic Demand and Workforce Needs

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.

Current Landscape

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.²⁶ Meanwhile, Covington's primary industries are healthcare, hospitality, and retail.

High-Need Occupations

Many interview subjects felt that there was a sense of unmet need locally in the fields of nursing, teaching, and IT. This general sentiment was supported in the area of Nursing by an analysis of Burning Glass data, which compiles real-time electronic job postings for the region. In particular as shown in Figure 18, there is an undersupply of people with sub-baccalaureate credentials in nursing, including primarily Licensed Practical Nurses (LPNs). Conversely, this analysis did not reveal a current need for IT professionals at the sub-baccalaureate level.

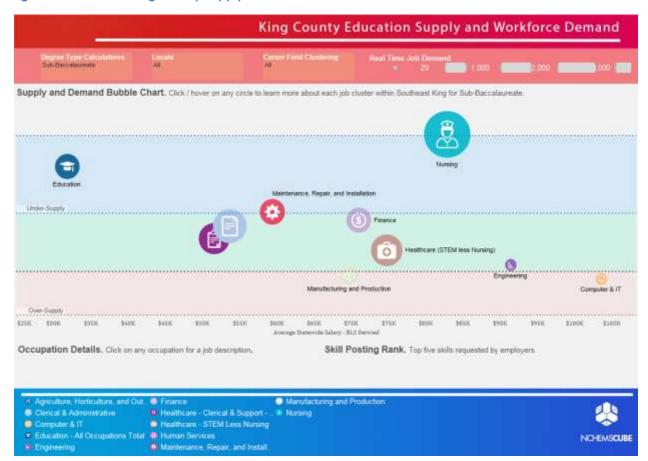


Figure 18. Southeast King County Supply and Demand: Sub-baccalaureate

At the baccalaureate level, the job cluster that is in shortest supply compared to the demand in the area is Hospitality, Food, and Tourism (see Figure 19). As shown, this job cluster is also rather low-paying particularly for those with bachelor's degrees. The data do not reveal an undersupply of baccalaureate-level nurses, such as those with a bachelor's of science in nursing (or BSN), but local considerations revealed in the stakeholder interviews and discussions at the Advisory Committee meetings suggest that in the future, demand may be on the rise.

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.²⁷ 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 rise in the near future.

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Figure 19. 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 the trend is projected to continue. Simultaneously, southeast King County is growing more diverse as shown by data trends in the area's school districts and shifting demographics in nearby areas.

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 may want to consider.

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. Strengthening this position is that 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.²⁸

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 bachelor's of science degrees in nursing will be desired even more than they are now, yet local access to BSN programs is limited.

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 will ultimately inform the analysis of potential higher education solutions for the area.

Principles

The following principles are the four key guiding factors 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 and what gaps must be addressed.
- 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, and the driver is around healthcare. 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 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 features are the elements that will be required to align a local postsecondary solution with the area's needs and sustainable 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. As such, the solution needs to be built
 around what works best to serve them.
- **Flexible solution.** The solution must be flexible to be successful. The challenges that southeast King County is facing are evolving as certain areas of the community are growing and finding or striving to maintain their identities.
- **Distance/hybrid options should be considered.** Given the traffic challenges and the recommended target audience of working-age adults, distance/hybrid options should be considered as a viable option.
- Solution should not be limited to one provider, but there should be one provider
 per program. While several options are under consideration, one driving principle
 must remain in terms of providers and that is that there should be one provider
 per program. More than one creates unnecessary complexity and confusion for
 all those involved.
- **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 expressed interest in a potential project.

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.
- O A single institution 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.²⁹

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, Austin Community College's Highland campus, where the college purchased an old shopping mall and partially turned it into a center where technology-mediated instruction could be delivered via a large computer lab and support staff are located on site.³⁰

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.

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 18 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 18. 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.	Could in theory be flexible, but would depend on offering institution. However, minimal infrastructure needed would enhance flexibility.

Adequate Student Support services	There could be drop-off in services if students switch between providers (i.e. between completing associates with a community college partner and a bachelor's).	Would allow for clear responsibility in provision of services (though likely would be less robust than on home campus)	Could provide robust services for online learners – but could be tricky to staff with relevant expertise in subject matter areas and online learning.
Designed for Adult Learners	Flexibility in offerings would be a positive for adult learners, would also allow more of a possibility for completion programs (such a s a general studies degree).	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 likely need significant on-the-ground support to complete.
Financially Sustainable	Could be a challenged 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.
- **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. An interesting model of this approach is offered by the Muckleshoot Tribal College which actively surveys community need and then identifies and brings 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 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).³¹ The center also created a foundation in 2006 in order to administer local scholarship programs and to manage capital campaigns for building improvements.

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
 - o Present and solicit feedback on study plan of action
 - Discuss role of Advisory Committee

- o Identify key regional stakeholders for interviews
- Confirm upcoming dates
- August 31, 2016 (City of Covington Offices, Covington)

Meeting Goals

- o Provide project status update
- o 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
- o Present preliminary quantitative data
- o Present qualitative data on the stakeholder interviews
- o 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

Southeast King County Higher Education Needs Assessment and Operating Plan

- 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 in the Policy Analysis and Research unit at the Western Interstate Commission for Higher Education (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 Teach For All's Growth Strategy and Development team and completed a fellowship with the Kenneth Rainin Foundation. Previously she served in multiple roles at City Year, including as a 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

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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 Powell

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

Southeast King County Higher Education Needs Assessment and Operating Plan **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

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

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?
 - o Why or why not?
 - o Can you provide specific examples?
- 3. [Postsecondary] What is the demand for the programs you currently offer?
 - o Who are the major employers of your students? Where do they go?
 - Community Colleges Who are the transfer partners?
 - o [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)?
 - o [As employers]
 - o 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?
 - o 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?
 - o 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?
 - o How accessible are these programs to your employees?
 - o 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?
 - o 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?
 - o 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?
 - o 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

Southeast King County Higher Education

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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 Refinishina

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

Southeast King County Higher Education

Needs Assessment and Operating Plan

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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¹² ACS 5-year estimates were used—reflecting 60 months of collected data— which allows for the geographic precision needed for this analysis.

http://www.erdc.wa.gov/student-and-school-data/transition-beyond-high-school/high-school-feedback-reports.

- ²⁵ Nicholas Hillman and Taylor Weichman, *Education Deserts: The Continued Significance of* "*Place*" *in the Twenty-First Century*, (Viewpoints: Voices from the Field. Washington, DC: American Council on Education, 2016) accessed October 31 2016 at http://www.acenet.edu/news-room/Pages/CPRS-Viewpoints-Education-Deserts.aspx.
- ²⁶ Interview with Dan Catron, Associate Planner, City of Enumclaw
- ²⁷ "MultiCare Website" accessed on 23 October 2016 at https://www.multicare.org/; "Multicare Covington Medical Center Expansion Project," accessed on 23 October 2016 at https://www.multicare.org/covington-expansion/.
- ²⁸ Washington Student Achievement Council, "2015 Roadmap Update."
- ²⁹ Everett University Center "About Us," accessed 28 October 2016 at https://everettuc.org/about-us/
- ³⁰ Austin Community College District, "Accelerator: An Innovative Way to Teach," accessed 21 October 2016 at http://www.austincc.edu/highland-campus/accelerator.
- ³¹ University Center of Southern Oklahoma, "About Us; History" accessed 31 October 2016 at http://www.ucso.osrhe.edu/about-us/history/.