

EDC

CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL

2023

ECONOMIC DEVELOPMENT IN CLALLAM COUNTY

When Prosperity Matters



This comprehensive report was compiled and developed from May 2021 - Dec 2022 by Dr. Daniel Underwood, Olympus Consulting and employees of Clallam County Economic Development Council.

All actions and steps were approved by the Clallam County Economic Development Council Board of Directors.

The surveying was a partnership between Clallam EDC and Peninsula College.



EXECUTIVE SUMMARY

ECONOMIC DEVELOPMENT IN CLALLAM COUNTY WHEN PROSPERITY MATTERS

This report details the prevailing economic conditions in Clallam County and makes specific concrete recommendations to improve our economically distressed county.

The report begins with results from the EDC Community Survey developed to assess the standard of living and challenges confronted by working residents. The top three challenges were:



HOUSING: finding suitable housing that is affordable to rent or own,



HEALTH CARE: access to quality health care,



EMPLOYMENT: finding a job that will allows one to meet their financial obligations.

The survey made it possible to analyze the relationship between standards of living and challenges based on people's work status:

- employed,
- self-employed,
- remote worker,
- unemployed, or
- not in the labor force.

It also made possible analyzing the relationship between identified challenges and the economic sector of employment. For instance, those working in Finance/Real Estate were six times more likely to own than rent, while those working in Hospitality were equally likely to own as rent. Similarly, those working in Personal Services were seven times more likely to be financially challenged.

The report next evaluates the financial needs of a hypothetical family with 2 adults, both working, with one child which we refer to as a "Target Wage". Those needs provide the basis to estimate the wage – a Target Wage – necessary for a family in Clallam County to thrive. The analysis included living expenses, the cost of home ownership, and saving for retirement, a more comprehensive approach than that used by other organizations to estimate a "living wage" which does not include any retirement or safety net savings. Estimates of a Target Wage are summarized in Table ES1. The combined before tax income needed to provide prosperity to the hypothetical family is \$115,882. If one adult earns an "average wage," the other will need to earn somewhere between \$54,150 and \$79,135 for the family to achieve prosperity. The wide range results from which value of "average" is used and whether the Private or Public sector is evaluated. If the median private sector wage is used for the first adult, then the Target Wage is \$79,135.

	Measures for Average Annual Wage 2021					
Income	All Sectors		Private Sector		Public Sector	
Measures	Mean	Median	Mean	Median	Mean	Median
One Adult Wage	\$47,836	\$50,390	\$40,430	\$36,747	\$61,732	\$59,928
Before Tax Income	\$115,882	\$115,882	\$115,882	\$115,882	\$115,882	\$115,882
Target Wage	\$68,046	\$65,492	\$75,452	\$79,135	\$54,150	\$55,954

Table ES1: Target Wage for prosperity as dependent upon sector of employment of the first adult.

The private sector economy of Clallam County was divided into 14 Clusters, groupings of similar businesses. Those Clusters are presented in Table ES2.

Agriculture and Fishing	Human Services	Retail
Construction	Hospitality and Tourism	Specialized Services
Finance, Real Estate, Insurance	Manufacturing and Maritime	Trades
Forest Products	Personal Services	Transportation
Health Care and Assistance		Wholesale

Table ES2: Businesses Clusters used for economic analysis.

Note: Even though the government sectors make up nearly one-third of employment in Clallam County, we elected not to analyze this sector as it does not clearly fall into our mission. However, due to the high wages paid in the Government Sector and the expected retirements in the next decade in the government sector, the workforce needs should be evaluated to inform our local high school and Peninsula College programs. Estimates for Value of Output, Employment by employees and proprietors, and Average Wages by Cluster were estimated and are presented in Table ES3. Each Cluster was further broken down into industries, subcategories within each Cluster, for more detailed analysis in Section 5. Those estimates can inform decision makers when targeting an industry, and can be compared with estimates for the Target Wage to assess the impact on the county's overall standard of living.

Cluster	Value of	Employment by Type			Average Wage (2021\$)	
	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
Agriculture and Fishing	\$20,022,758	141.4	458.4	599.8	\$32,873	\$7,859
Construction	\$343,610,055	1,667.7	643.7	2,311.4	\$49,243	\$70,421
Finance, Real Estate, Insurance	\$383,539,667	456.9	1,628.5	2,085.4	\$51,785	\$14,393
Forest Products	\$263,788,185	870.1	148.7	1,018.8	\$81,953	\$53,087
Health Care and Assistance	\$640,794,548	3,617.1	298.5	3,915.6	\$63,241	\$94,265
Hospitality and Tourism	\$348,210,662	3,091.1	550.4	3,641.5	\$30,305	\$58,554
Human Services	\$130,085,287	1,495.2	227.6	1,722.8	\$33,621	\$18,045
Manufacturing and Maritime	\$260,098,474	654.9	130.0	784.9	\$64,478	\$13,413
Personal Services	\$33,107,265	689.1	288.2	977.3	\$15,190	\$67,142
Retail	\$384,886,208	2,820.2	818.2	3,638.4	\$41,733	\$19,920
Specialized Services	\$506,641,650	1,324.0	2,931.0	4,255.0	\$63,439	\$15,856
Trades	\$99,110,216	556.9	136.8	693.7	\$56,860	\$115,670
Transportation	\$87,418,915	394.5	249.0	643.5	\$62,397	\$22,059
Wholesale	\$85,043,074	275.8	72.9	348.7	\$63,978	\$18,513

Table ES3: Value of output, employment by type and average wages by Cluster in 2019 (2021\$).

Note: When we list years as 2019 (2021\$) this means that the raw data was pulled from the most recent year available prior to the pandemic but increased based on inflation increases to reflect 2021 amounts.

New businesses, or expanding existing businesses, will not only increase employment and labor income, but will also have impacts on the supply chain (indirect) and in the general economy (induced). Their direct, indirect and induced impacts were estimated. Those indirect and induced impacts were further analyzed in three ways. First, multiplier effects driven by an increase of \$1,000,000 in value of *direct* output were estimated. The number of *direct* additional employees and proprietors were estimated along with the corresponding additional wages. Second, the *indirect* impacts in the supply chain were estimated for the Top 15 *indirect* employment impacts as driven by the industries in the Cluster. This analysis makes it possible to explore how a direct expansion in one industry within one Cluster will drive increased economic activity within another in the supply chain. Third, the Top 15 *induced* employment impacts were similarly estimated. Those *induced* estimates make it possible to assess how a direct change in one industry within one Cluster impacts different industries in the general economy in terms of employees, proprietors and associated labor income.

The last level of analysis made use of results from the EDC Employer Survey. For each Cluster, an assessment of the business climate is developed, including the likelihood of expansion in operations and the top challenges businesses confront. An assessment of opportunities in the supply chain is also made, beginning with how likely a business is to use local suppliers, their expenditure patterns within and outside the County, and the kinds of goods, materials and services they would like to see provided by a local supplier in Clallam County.

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INTRODUCTION

COLLEEN McALEER, EXECUTIVE DIRECTOR
CLALLAM COUNTY ECONOMIC DEVELOPMENT COUNCIL

The EDC was established in 1982 and is the state and county-designated economic agency for Clallam County. One primary responsibility set in our bylaws is to produce a five-year economic development plan (5-Year Plan). Hence the publication of this document.

EDC decision-making is data driven. So, as we discussed developing a 5-Year Plan, we decided to use a scientific approach and contacted Dan Underwood, Olympus Consulting, whom I've worked with on numerous projects to lead this effort. We sat down and discussed our goals and how the plan could be used. From this discussion we developed an over-arching research question, the entry point for our investigation.

"TOWARD WHAT SPECIFIC BUSINESSES AND GROUPINGS OF BUSINESSES SHOULD OUR COUNTY'S SCARCE TIME AND MONEY BE INVESTED TO PROMOTE AND SUSTAIN ECONOMIC PROSPERITY?"

This is called an over-arching question because it cannot be answered by looking at only one part of the local economy. Rather, we have to examine the economy in many ways, from the kinds of businesses that currently exist, the wages they pay, and what the labor force looks like. To do this many other questions are posed and then carefully answered. After we finish this process of inquiry, we can then answer the over-arching question.

We want to ensure a fair process and good outcomes so that the EDC can help our community thrive. Our discussion yielded five Principles to guide us. They are:

- (1) **Inclusive** – In seeking out information, we want to make sure participation from a wide array of people is possible.
- (2) **Good Wages** – Fundamental to human happiness is economic prosperity. Indeed, it is the foundation. Only businesses that pay good wages will be targeted.
- (3) **Resilience** – Businesses that can provide good wage jobs during economic upturns and downturns are preferred. One effective way to accomplish this is by developing a wide variety of businesses and not focus on only one kind of industry.
- (4) **Community Fit** – Targeted businesses need to be a good fit in our community. If a potential business requires things like infrastructure Clallam does not have, they will be a poor fit. Similarly, we need to know what residents would like to see in term of businesses, but the preferences must be realistic. We must possess the underlying workforce or infrastructure necessary.
- (5) **Synergies** – One way to drive economic development is to expand or recruit businesses that help provide the goods and services other existing local businesses need. This allows growth in one area to support growth in others. The result is more employment at good wages.

As we move forward in the development of the 5-Year Plan, we regularly review these Principles to make sure our activities, and what we learn, are reflective of the values driving the process of inquiry.

As I mentioned above, we want to use a scientific approach to answer the over-arching question. Central to this process is the use of data from reliable research organizations. The economic data comes from the Bureau of Economic Analysis, Bureau of Labor Statistics, CENSUS, and the Washington Employment Security Department. That data makes it possible for us to accurately identify businesses that on the average provide Target Wages. Economic impact analysis will make it possible to discover where the potential synergies may be. To learn from the residents of Clallam County a representative unbiased survey method was used. We used the same process to survey local businesses. Lastly, we – me and members of the EDC Strategic Team – participated in the Western Regional Development Council’s study of economic development options for Clallam County.

We hope you will read this report carefully and use it as a tool in future spending and policy decisions. You will learn much about the challenges confronting working residents of Clallam County. Likewise, you will learn about the challenges local businesses confront and the opportunities they see. You will learn about the businesses and industries in Clallam County, how many people they employ and what kinds of wages they pay. You will learn about the disconnects which currently exist between our institutions that we hope to shed light on and resolve. Lastly, you will learn what it takes for a family to economically thrive and some of the actions that can be taken to make that a reality.



EDC COMMUNITY SURVEY

TAKING THE SOCIOECONOMIC PULSE OF CLALLAM COUNTY

The Clallam County Economic Development Council (EDC) believes that goals, strategies and policies should be informed by a sound understanding of the conditions confronting the business environment in Clallam County.¹ One of those conditions is the economic prosperity of *working people*.² There are different ways to estimate this. One way is to use objective data to measure the standard of living. These measures include wages, household income, poverty status and reliance on public assistance. Another way to measure economic prosperity is to ask people about their circumstances. It is interesting to note that, when reading economic development studies, the absence of this approach. Not so for this 5-Year Plan. The EDC Strategic Team asked residents of Clallam County about their challenges and prosperity using a survey designed and implemented using a scientifically rigorous process.

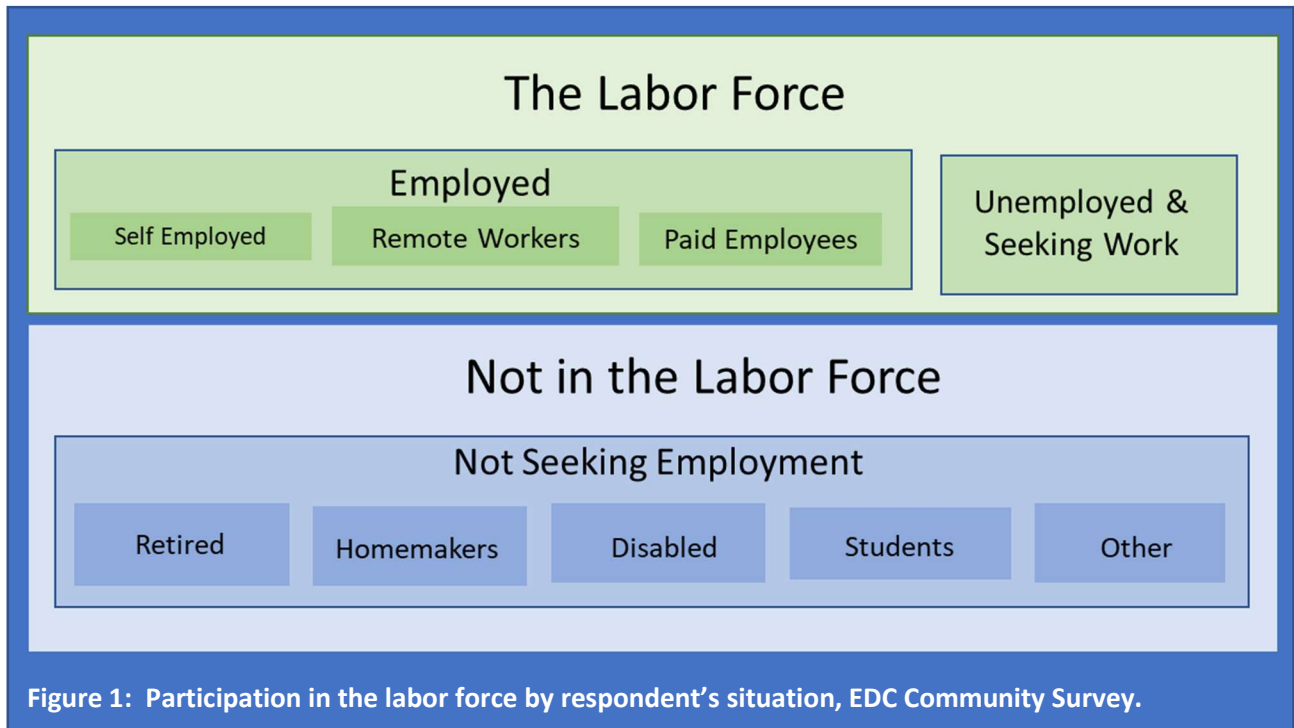
The EDC Community Survey – Putting It Together

The EDC Strategic Team discussed what they wanted to learn from residents about their economic circumstances. We wanted to know how well different groups in Clallam County are doing. For instance, not everyone is a member of the labor force, and some who are, are unemployed. Some people are retired or disabled. Others are self-employed. Some are not working nor seeking work. Of those working, where do they work? Are some working people doing better than others? Are some groups doing better than others? If so, what groups are doing well and what groups are not? The EDC Community Survey was constructed so that these questions could be answered.

The primary goal was to discover the social and economic factors that shape people's economic prosperity. Wages in different industries can be measured. But people's perceptions of their economic prosperity are measured in many different ways. After considerable discussion the EDC Strategic Team developed a set of measures expressed as questions. We wanted to know about people's job security, as job security is an important basis for perceptions of sustainable prosperity. We wanted to know if they owned or rented as, in general, people who own their home are more economically secure than those who don't. We asked how challenging it is to meet current financial obligations. Related, and next, was whether people believed their wages in their current job would increase. These are core attributes of economic prosperity: job security, home ownership, being able to meet financial obligations and rising wages. The EDC Community Survey allowed us to learn this from different groups of people, working or not and, if working, where they worked. Figure 1 illustrates where respondents would be grouped by work status.

¹ [About Us | Clallam EDC](#) (September 1, 2022).

² *American Heritage* defines prosperity as to advance and gain in things good and desirable.



However, we knew people confronted other challenges. What might those challenges be? The EDC Strategic Team constructed a list of 8 possibilities, with a 9th option that allowed respondents to tell us something we missed.

- (1) Access to quality health care;
- (2) Access to transportation (either private or public);
- (3) Reliable access to high-speed internet;
- (4) Finding a job that will allow me to meet my financial obligations;
- (5) Finding suitable housing that is affordable (rent or own);
- (6) Paying local and state taxes;
- (7) Finding affordable child care;
- (8) I do not face any significant challenges living and working in Clallam County; and
- (9) Other - Please tell us.

The EDC Community Survey asked people to rank their challenges. Because of the way the survey was constructed, we could discover not only what challenges are the most important, but how those challenges vary by different groups, working and not working, and where they worked.

The EDC Community Survey ended with a last question: "How confident are you that young people will have economic prosperity as good as, or better than, yours living and working in Clallam County?" People could select a confidence measure ranging from not confident at all to extremely confident. Before exploring the results from the survey, it's necessary to take a look at how it was implemented.

The EDC Community Survey – Implementation

Asking everyone a set of questions takes too long and is too expensive – there are over 76,000 people in Clallam County! Sampling is used in these circumstances. You ask some people, but not all. Critical is to use sampling theory to do this without biasing the results. Central to sampling theory is capturing a representative sample. There are several steps involved. First, the sample size has to be estimated. In theory, an equation is used where the necessary sample size depends on the statistical variance of the population and the specified accuracy required in the estimate. The method works fine for a company like Campbell Soup that routinely samples cans of soup for everything from fill volume to the proportion of diced carrots relative to chicken chunks. This has allowed them to learn what the population variance is. But the EDC Strategic Team does not know the statistical variance of working people's perception of their economic prosperity in Clallam County.³ In these circumstances, the sample size is generally set by how much time and money is available for the process. Colleen McAleer, the EDC Executive Director, made the decision: the sample size would be at least 500.⁴

The next task was to obtain a representative sample. Randomization is critical. A random sample is one where everyone in the population has the same probability of being asked to participate. How to do this for Clallam County? In the past, a phone book would be used, and phone numbers would be picked at random. But today's phone books contain only a small portion of the total phone numbers and residents. So, how to find a representative sample? *The survey needed to be conducted at a place where everyone goes.* That way, anyone could be asked. Where is that place? Grocery stores! Nearly everyone goes to a grocery store. Yes, different stores, different times, but they go to one. Managers of different stores were contacted, permission requested, suggestions for times when people shopped asked, etc. A narrative was developed, a greeting table with a banner and other information was assembled, and the survey tested. It was a challenge as this was done in the middle of the pandemic. People could use their cell phone, a provided tablet, or they could complete the survey at home with a QR code. The results were analyzed from two test runs for representation of known groups, like working people relative to those retired. The process was working – a representative sample was captured. The EDC Community Survey was fully implemented at grocery stores from October 14 thru December 7, 2021. 505 surveys were completed. Of those, 19 either lived or worked outside Clallam County and were not used.⁵



EDC COMMUNITY SURVEY

³ Nor does anyone else to the best of my knowledge.

⁴ Various statistical tests can be subsequently applied to assess how good the results from the sample are.

⁵ During all the survey and data sorting, 2 surveys were lost. Our final sample size for Clallam County is 484.



Emma Sackett, EDC Strategic Team, soliciting participation for the EDC Community Survey, Fall, 2021.

The EDC Community Survey – What We Learned About Economic Prosperity

The EDC Community Survey began with questions about the respondent, including working status, where they worked, and where they lived. They then were asked to rank their top concerns from a list of 9 (see above), with one option being to list something not on the list.⁶ The results are presented in Table 1. 400 people provided a number one challenge. Not listed in the table are the 84 respondents who do not face any significant challenges living and working in Clallam County.⁷ In this section of *Taking the socioeconomic pulse of Clallam County*, the research question “What is the number one challenge residents of Clallam County confront?” is answered.

All Respondents	Challenges	Percent
Ranked List of Number One Challenge	Ranked - #1	Ranked #1
Finding suitable housing that is affordable (rent or own)	117	29%
Access to quality health care	87	22%
Finding a job that will allow me to meet my financial obligations	50	13%
Paying local and state taxes	43	11%
Reliable access to high speed internet	37	9%
Access to public transportation	26	7%
Other -Please tell us	25	6%
Finding affordable child care	15	4%
Total Responses	400	100%

Table 1: The number one challenge for all groups, Clallam County, Fall 2021.

Finding suitable housing that is affordable was ranked the number one challenge by 29 percent of respondents. Access to quality health care was ranked number one by 22 percent. Finding a job that

⁶ We learned a good deal from the community in these open-ended responses. EDC Community Survey.

⁷ This group consists of 32 not employed (likely retired), 30 employed, 15 self-employed, 6 remote workers, 1 unemployed.

will allows me to meet my financial obligations was ranked number one by 13 percent. Paying local and state taxes was ranked number one by 11 percent. All other rankings of number one challenge were selected by less than 10 percent of respondents. This does not mean those responses are unimportant. It does mean they were not the number one challenge for 74 percent of respondents. Respondents could list and rank up to 5 challenges, which they did. Whatever their number one challenge, they had a second, a third, up to a fifth challenge.⁸

While these were the number one challenges for all respondents combined, what people ranked as the number one challenge varied by group. In the remainder of this section, results for those not in the labor market (primarily retired or disabled), those employed, those self-employed, those who are remote workers, and those unemployed but seeking work are analyzed. The number one challenge as ranked by these groups is presented in Table 2.

For those not in the labor force, access to quality health care was ranked number one by 39 percent of respondents. This was followed by finding suitable housing that is affordable by 19 percent, then paying local and state taxes by 17 percent.

For those employed in Clallam County, finding suitable housing that is affordable was ranked number one by 25 percent of respondents. This was followed by access to quality health care by 17 percent and finding a job that will allow me to meet my financial obligations by 17 percent.

For those self-employed in Clallam County, access to quality health care was ranked number one by 25 percent of respondents. This was followed by finding suitable housing that is affordable by 17 percent and paying local and state taxes by 15 percent.

For those who work remotely, the number one ranked challenge was access to quality health care by 24 percent of respondents. This was followed by finding suitable housing that is affordable, also by 24 percent, and finding a job that will allow me to meet my financial obligations by 12 percent.

For those unemployed but seeking work, the number one ranked challenge was finding suitable housing that is affordable by 29 percent. This was followed by finding a job that will allow me to meet my financial obligations by 26 percent, and reliable access to high-speed internet by 13 percent. These results indicate that each of these groups' ranked list, that finding suitable housing that is affordable is at the top of their number one ranking list, or second. For those working, finding a job that will allow me to meet my financial obligations was ranked second or third. Access to quality healthcare is seen as first, second or third for all groups except those who are unemployed. These are basic measures of economic prosperity that working residents say is a top challenge in Clallam County. While the number one challenges vary by groups, overall, results are similar to those presented in Table 1 for all respondents combined.

⁸ Those results can be found on the EDC Website.

Not In Labor Market	Challenges	Percent
Challenges to Choose From	Ranked - #1	Ranked #1
Access to quality health care	32	39%
Finding suitable housing that is affordable (rent or own)	16	19%
Paying local and state taxes	14	17%
Access to public transportation	8	10%
Reliable access to high speed internet	6	7%
Finding a job that will allow me to meet my financial obligations	3	4%
Other -Please tell us	3	4%
Finding affordable child care	1	1%
Total Responses	83	100%
Employed in Clallam	Challenges	Percent
Challenges to Choose From	Ranked - #1	Ranked #1
Finding suitable housing that is affordable (rent or own)	78	25%
Access to quality health care	34	17%
Finding a job that will allow me to meet my financial obligations	32	17%
Reliable access to high speed internet	17	15%
Paying local and state taxes	17	13%
Other -Please tell us	13	8%
Finding affordable child care	12	6%
Access to public transportation	10	0%
Total Responses	213	100%
Self Employed in Clallam	Challenges	Percent
Challenges to Choose From	Ranked - #1	Ranked #1
Access to quality health care	12	25%
Finding suitable housing that is affordable (rent or own)	8	17%
Paying local and state taxes	7	15%
Other -Please tell us	6	13%
Finding a job that will allow me to meet my financial obligations	4	8%
Access to public transportation	3	6%
Finding affordable child care	0	0%
Total Responses	48	100%
Working Remotely for Employers Outside of Clallam	Challenges	Percent
Question	Ranked - #1	Ranked #1
Access to quality health care	6	24%
Finding suitable housing that is affordable (rent or own)	6	24%
Finding a job that will allow me to meet my financial obligations	3	12%
Paying local and state taxes	3	12%
Access to public transportation	2	8%
Reliable access to high speed internet	2	8%
Other -Please tell us	2	8%
Finding affordable child care	1	4%
Total Responses	25	100%
Unemployed - Seeking Employment	Challenges	Percent
Challenges to Choose From	Ranked - #1	Ranked #1
Finding suitable housing that is affordable (rent or own)	9	29%
Finding a job that will allow me to meet my financial obligations	8	26%
Reliable access to high speed internet	4	13%
Access to public transportation	3	10%
Access to quality health care	3	10%
Paying local and state taxes	2	6%
Finding affordable child care	1	3%
Other -Please tell us	1	3%
Total Responses	31	100%

Table 2: The number one challenge as ranked by employment groups, Clallam County, Fall 2021.

The EDC Community Survey – Learning About Barriers to Economic Prosperity

In the previous section, the research question “What is the number one challenge residents of Clallam County confront,” was answered. While there are differences in the rankings of number the one challenge between groups, three challenges are shared by all groups. One is finding suitable housing that is affordable to rent or own. Two is access to quality health care. Three, for those working or seeking work, is finding a job that will allow them to meet their financial obligations. As one objective of the 5-Year Plan is to promote economic prosperity for working people, this section answers the research question, “What factors affect working people’s economic prosperity?”⁹

To begin this analysis, the EDC Community Survey asked people about their job security. The results are presented in Table 3 for those employed in Clallam County, remote workers, and those self-employed. The results tell us that each group has job security, ranging from a low of 67 percent for those self-employed to a high of 78 percent for those working for a Clallam County employer. Conversely, we can look at job insecurity. Remote workers have the highest degree of job insecurity at 23 percent of respondents, while those employed had the lowest at 14 percent.

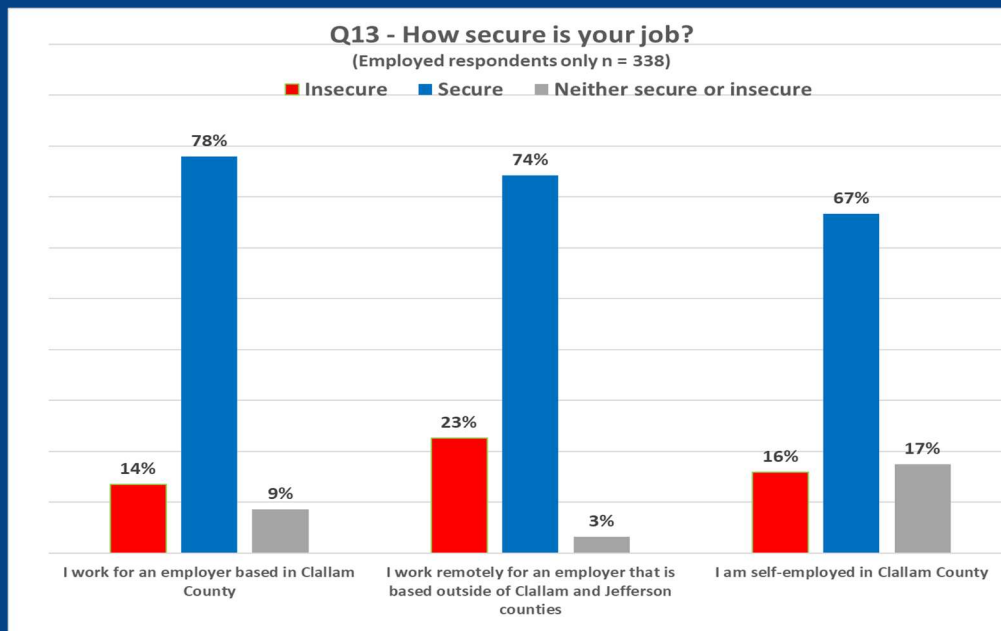


Table 3: Job security by employment groups, Clallam County, Fall 2021.

Question 15 of the EDC Community Survey asked respondents “Please tell us how challenging it is to meet your current financial obligations.” Recall that when people answer this question, we already know a good deal about their work status. This can be seen in Table 4 for the groups an employee working in Clallam County, people working remotely, those unemployed but seeking work, those not in the labor force, and those self-employed. The results tell us about the difficulties confronting people working and living in Clallam County. First, all groups are financially challenged, ranging from a low of 61

⁹ The primary goal is to support and promote conditions that allow businesses to thrive. When working people thrive because there thriving businesses that can hire them and provide good wages, those working people have the income to spend at local businesses so that they too thrive. This 5-year Plan identifies businesses that pay good wages and thus help drive that process.

percent for remote workers to a high of 91 percent for those unemployed and seeking work. 76 percent of those employed in Clallam County are financially challenged.¹⁰

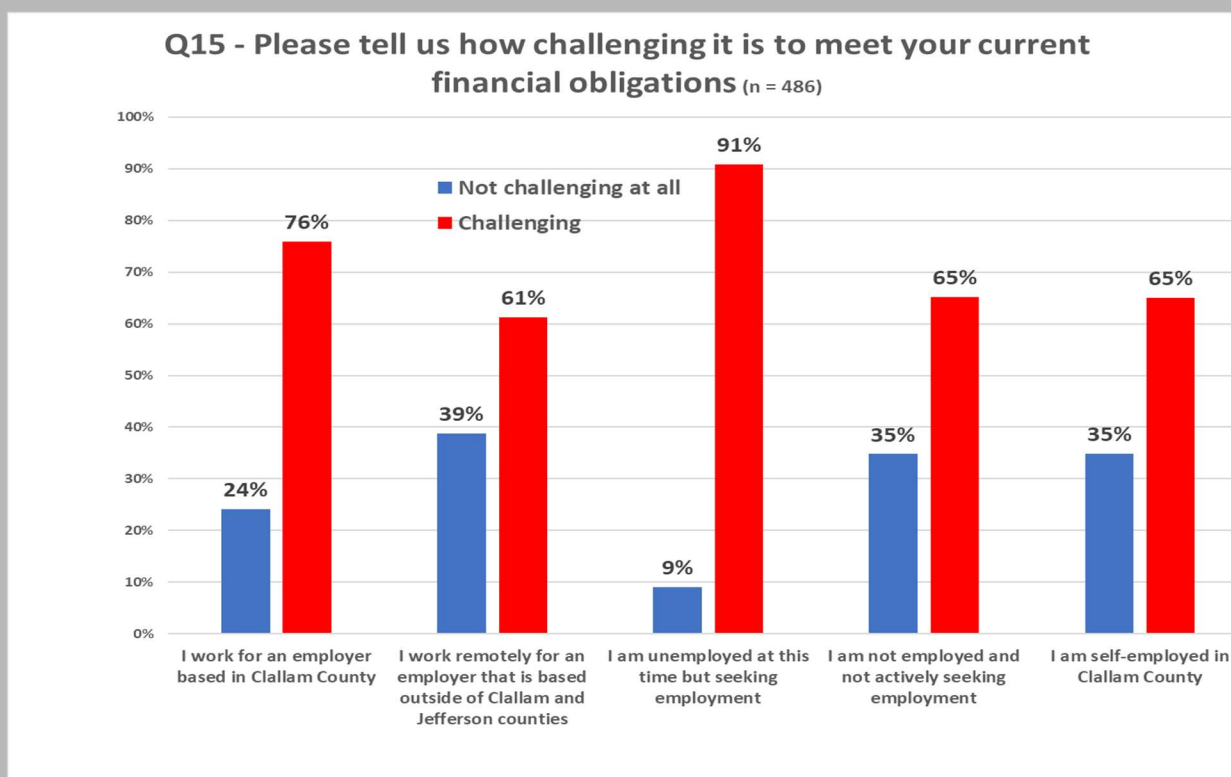


Table 4: How challenging is it to meet your current financial obligations, Clallam County, Fall 2021.

Table 3 told us that overall, most people working in Clallam County have job security. Table 4 told us that while they have job security, they are financially challenged. Will that situation improve? Question 16 of the EDC Community Survey asked “How likely is it that your earnings in this job will increase over time so that your standard of living improves?” The results are presented in Table 5. Upward wage mobility is an important measure of improved economic prosperity. Results from the EDC Community Survey tell us that 43 percent of those self-employed expect their income to increase. For those working remotely, 55 percent believe that to be the case. For those working for an employer in Clallam County, it is 49 percent. Conversely, we see that 34 percent of those employed in Clallam County think it unlikely their earnings will increase at their current job. It is 32 percent for those working remotely, and 30 percent for those self-employed. Given that remote workers accounted for less than 2 percent of working respondents, we can conclude that *the majority of working people in Clallam County do not believe their income and standard of living will increase.*

¹⁰ The reader is reminded that these summary tables do not include 84 respondents who do not face any challenges living and working in Clallam County, 83 of whom are not in the labor force.

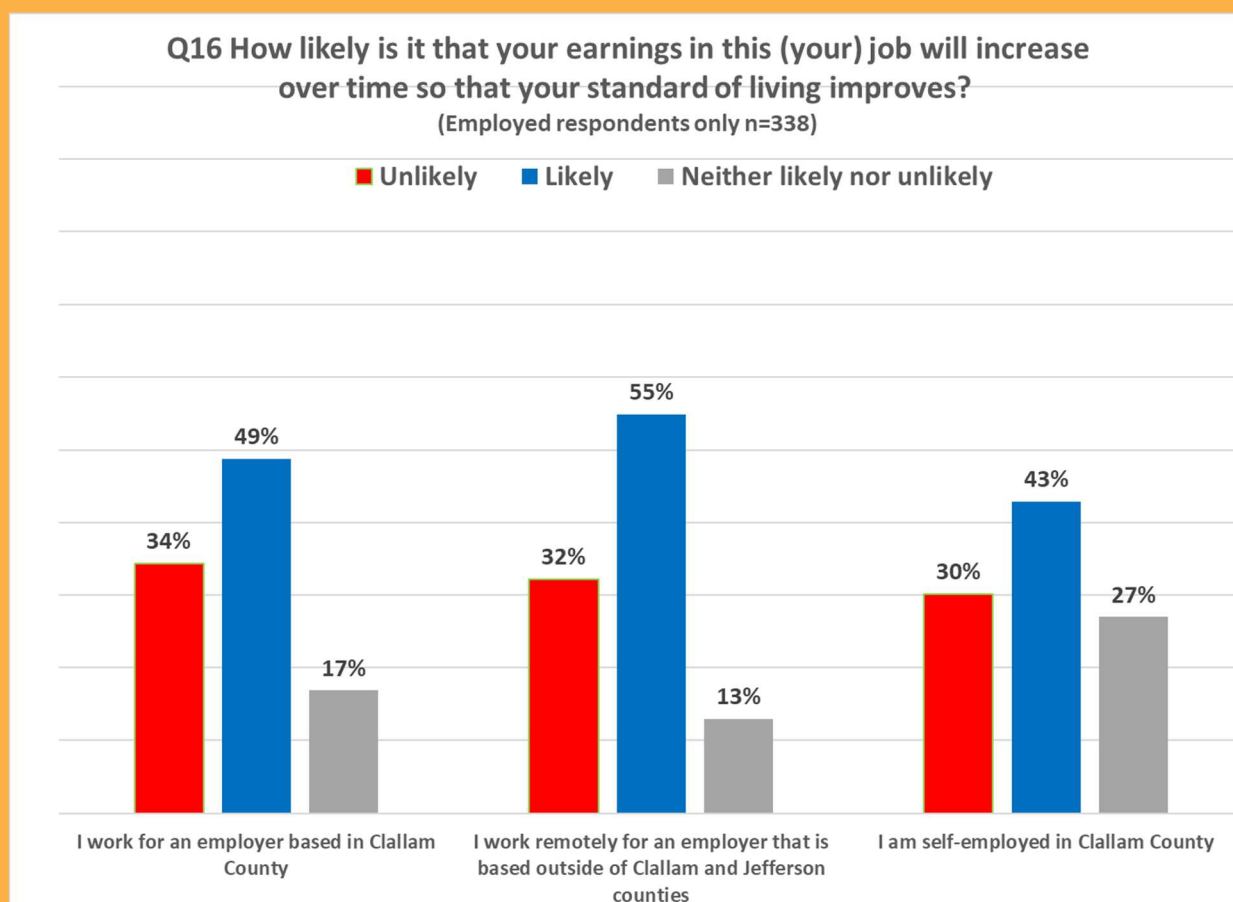


Table 5: The expectation of increased earnings under current employment, Clallam County, Fall 2021.

The EDC Community Survey – What We Learned About the Economy

The EDC Community Survey was constructed so that where a respondent worked was known. Respondents could select from 15 different economic sectors of employment. This made possible a comparative analysis by economic sector (Cluster). For instance, we can compare home ownership between people working in Personal Services and those working in Manufacturing/Marine; likewise, we can compare the ability to meet financial obligations between people who work for Government and people working in Retail. We can do this for all 15 Clusters and rank them. But we can do more with the survey data. For instance, of all the Government employees, we know how many own and how many rent. We know this for people working in all 15 Clusters, from Agriculture and Fishing to Transportation. In this section we answer the research question “Who working where is most likely to have economic prosperity?”

Explaining the Likelihood Ratio

To begin answering the question, a measure called a likelihood ratio (LR) is constructed. A likelihood ratio is a measure of relative odds. All are familiar with this idea, though perhaps not the term. Here is an example of what a likelihood ratio is and how it can be used. Imagine that every Friday after work you and Pat have dinner at a local pizzeria. For the past 10 weeks, Pat has ordered Pepperoni 8 times and a Vegetarian Deluxe 2 times. Notice that Pat is 4 times more likely to order Pepperoni than Vegetarian Deluxe. That is, Pat’s likelihood ratio, of Pepperoni for Vegetarian Deluxe, is $LR = 8/2 = 4$.

How might you use this likelihood ratio? This next Friday Terry joins you and Pat for pizza. Terry asks you, “What will Pat have?” If you had to make a prediction, what would it be? You know Pat’s likelihood ratio is 4: Pat is 4 times more likely to order Pepperoni than Vegetarian Deluxe. Unless Pat’s tastes and preferences have changed, you will be more likely to be correct by predicting Pepperoni.

Likelihood ratios for 4 measures of economic well-being were constructed: Housing Situation, Job Security, Ability to Meet Financial Obligations, and Wage Progression. This was done for all 15 Clusters, for those employed, remote workers, and self-employed in Clallam County. Table 6 presents likelihood ratios for housing situation by sector of employment. Overall, people are 1.3 times more likely to own than rent. However, the likelihood of owning versus renting varies by sector of employment. People working in Finance/Real Estate are 6.1 times more likely to own than rent; in Forest Products this ratio is 4.0; in Health Care 1.7, and 0.5 in Retail/Wholesale. The EDC Strategic Team can use this information to make data driven recommendations. For instance, if one primary goal of the 5-Year Plan is to support and increase employment that promotes home ownership, then only industries with a likelihood ratio greater than 1.0 meet that condition. The greater the likelihood ratio the more likely home ownership will be promoted. This data is useful when evaluating the expected economic impacts in terms of promoting home ownership.

	Economic Sector	What is your housing situation?				
		Sample	Own	Rent	LR	Other
Table 6: Likelihood ratios for housing situation by sector of employment, Clallam County, Fall 2021.	Total	355	51%	40%	1.3	9%
	Government	59	61%	31%	2.0	8%
	Hospitality	26	42%	42%	1.0	15%
	Retail/Wholesale	45	29%	64%	0.5	7%
	Manufacture/Marine	9	56%	33%	1.7	11%
	Transportation	7	0%	100%	0.0	0%
	Construction	22	50%	41%	1.2	9%
	Agriculture/Fishing	12	33%	58%	0.6	8%
	Forest Products	5	80%	20%	4.0	0%
	Health Care	56	61%	36%	1.7	4%
	Human Services	22	59%	27%	2.2	14%
	Finance/Real Estate	14	86%	14%	6.1	0%
	Personal Services	8	25%	50%	0.5	25%
	Skilled Trades	15	33%	67%	0.5	0%
	Professional Services	22	77%	18%	4.3	5%
	Other category	33	45%	30%	1.5	24%

Table 7 presents likelihood ratios for job security by Cluster of employment. Clusters denoted with an * had no responses of job insecurity. As division by zero is not defined, the total number of respondents was used for LR. This was the case for Hospitality and Manufacture/Marine. The results indicate that overall, in Clallam County working people are 5.7 times more likely to have job security than insecurity. The likelihood of job security ranges from a high of 23 in Hospitality to a low of 1.5 in Forest Products. This data will be useful when evaluating the expected economic impacts in terms of job security.

		How secure is your job?			
Economic Sector		Sample	Secure	Insecure	LR
Total		355	85%	15%	5.7
Government		59	80%	12%	6.7
Hospitality		26	88%	0%	23*
Retail/Wholesale		45	64%	22%	2.9
Manufacture/Marine		9	100%	0%	9*
Transportation		7	71%	14%	5.0
Construction		22	86%	5%	19.0
Agriculture/Fishing		12	67%	17%	4.0
Forest Products		5	60%	40%	1.5
Health Care		56	82%	13%	6.6
Human Services		22	77%	14%	5.7
Finance/Real Estate		14	79%	14%	5.5
Personal Services		8	75%	13%	6.0
Skilled Trades		15	67%	20%	3.3
Professional Services		22	59%	36%	1.6
Other category		33	64%	21%	3.0

Table 7: Likelihood ratios for job security by sector of employment in Clallam County, Fall 2021.¹¹

Table 8 presents likelihood ratios for the question “How challenging are financial obligations?” For this question, a likelihood ratio greater than 1.0 indicates people are not challenged meeting financial obligations; values less than 1.0 indicate they are challenged to financial obligations. The range of results reveal people employed in Manufacturing/Marine are 2 times more likely to be able to meet financial obligations. Those working in Personal Services are the least likely to be able to meet financial obligations with a likelihood ratio of 0.14.¹¹ This data will be useful when evaluating the expected economic impacts in terms of the ability to meet financial obligations.

	How challenging are financial obligations?				Table 8: Likelihood ratios for the ability to meet financial obligations in Clallam County, Fall 2021.
Economic Sector	Sample	Not Challenging	Challenging	LR	
Total	355	27%	73%	0.37	
Government	59	58%	42%	1.36	
Hospitality	26	58%	42%	1.36	
Retail/Wholesale	45	47%	53%	0.87	
Manufacture/Marine	9	67%	33%	2.00	
Transportation	7	43%	57%	0.75	
Construction	22	45%	55%	0.83	
Agriculture/Fishing	12	33%	67%	0.50	
Forest Products	5	60%	40%	1.50	
Health Care	56	57%	43%	1.33	
Human Services	22	45%	55%	0.83	
Finance/Real Estate	14	64%	36%	1.80	
Personal Services	8	13%	88%	0.14	
Skilled Trades	15	33%	67%	0.50	
Professional Services	22	64%	36%	1.75	
Other category	33	55%	45%	1.20	

Table 8: Likelihood ratios for the ability to meet financial obligations in Clallam County, Fall 2021.

¹¹ To help with interpretation, an LR = 0.14 means that for every respondent who is not financially challenged, seven are, or $1/7 = 0.14$.

Table 9 presents likelihood ratios for wage progression in current employment. For this question, a likelihood ratio greater than 1.0 indicates people believe their wages will increase in their current job; less than 1.0 indicate they do not believe their wages will increase. The results indicate that those employed in Finance/Real Estate are 9.0 times more likely to believe their wages will increase; in Personal Services, a likelihood ratio of 0.2 means 1 in 5 people think their wages will increase. This data will be useful when evaluating the expected economic impacts in terms of wage progression.

Will your standard of living improve at this job?				
Economic Sector	Sample	Likely	Unlikely	LR
Total	355	49%	33%	1.48
Government	59	61%	29%	2.12
Hospitality	26	46%	31%	1.50
Retail/Wholesale	45	51%	36%	1.44
Manufacture/Marine	9	67%	22%	3.00
Transportation	7	43%	29%	1.50
Construction	22	77%	9%	8.49
Agriculture/Fishing	12	8%	83%	0.10
Forest Products	5	40%	20%	2.00
Health Care	56	45%	32%	1.39
Human Services	22	36%	32%	1.14
Finance/Real Estate	14	64%	7%	9.00
Personal Services	8	13%	63%	0.20
Skilled Trades	15	47%	40%	1.17
Professional Services	22	36%	50%	0.73
Other category	33	48%	30%	1.60

Table 9: Likelihood ratios for wage progression in current employment in Clallam County, Fall 2021.¹²

The EDC Community Survey – Thinking About the Next Generation

The EDC Community Survey told us a good deal about people's sense of economic prosperity. Their Top 3 challenges are access to affordable housing, access to quality health care, and the ability to meet financial obligations. We learned that the ranking of these challenges varied by group. For people who work for a living, access to affordable housing is the top challenge. We also learned that where people work affects their economic prosperity, and we were able to estimate who was most and least challenged by factors like access to affordable housing, job security, the ability to meet financial obligations, and wage progression. All of these estimates based on the EDC Community Survey pertained to adults. But what about the next generation, what about children? The EDC Strategic Team wanted to know how adults perceived the future. Accordingly, the last question was "How confident are you that young people will have economic prosperity as good as, or better than, yours living and working in Clallam County?"

Table 10 summarizes the results from the EDC Community Survey by economic sector with the corresponding likelihood ratio. "Confident" combines the range from Extremely Confident to Slightly Confident. For those working in Clallam County, 47 percent have some degree of confidence young people will have economic prosperity while 53 percent do not. This yields a likelihood ratio of 0.89. Perceptions of economic prosperity for the young ranges by economic sector. Those working in

¹² The choice neither likely nor unlikely is excluded. Therefore, percents do not sum to 100.

Transportation are 2.5 times more likely to believe the young will have economic prosperity; in Personal Services, the likelihood ratio is 0.6: 4 in 10 are confident the young will have economic prosperity.



In Clallam County, 47 percent have some degree of confidence young people will have economic prosperity while 53 percent do not.

How confident are you that young people will have economic prosperity as good as, or better than, yours living and working in Clallam County?				
Economic Sector	Sample	Confident	Not Confident	LR
Total	354	47%	53%	0.89
Government	59	44%	56%	0.79
Hospitality	26	46%	54%	0.86
Retail/Wholesale	45	58%	42%	1.37
Manufacture/Marine	9	56%	44%	1.25
Transportation	7	71%	29%	2.50
Construction	22	59%	41%	1.44
Agriculture/Fishing	12	33%	67%	0.50
Forest Products	4	50%	50%	1.00
Health Care	56	43%	57%	0.75
Human Services	22	36%	64%	0.57
Finance/Real Estate	14	36%	64%	0.56
Personal Services	8	38%	63%	0.60
Skilled Trades	15	40%	60%	0.67
Professional Services	22	32%	68%	0.47
Other category	33	61%	39%	1.54

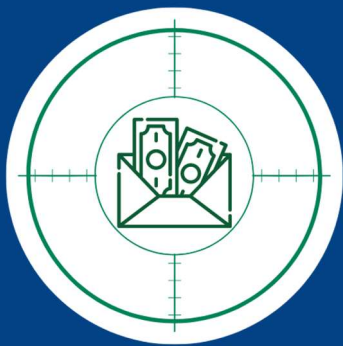
Table 10: Likelihood ratios for young people's economic future in Clallam County, Fall 2021.

What We Learned About Economic Prosperity From The EDC Community Survey

This section of the 5-Year Plan provided an introduction to the EDC Community Survey. The EDC Strategic Team's goals were identified. The process used to develop and distribute the EDC Community Survey in Clallam County was explained. Results were explored from several different vantage points. Those vantage points were measured in several different ways. The entry point created groupings of Working, Retired/Disabled, Remote Workers, Self-Employed, and Unemployed/Seeking Work. The Top 3 economic challenges each of these groups listed were access to affordable housing, access to quality health care, and the ability to meet financial obligations. While all of these groups shared access to

affordable housing in their top 3, all working groups listed being challenged meeting financial obligations in their top 3. A further examination of working groups revealed that while, in general, they have job security, most do not have a job that will provide increased earnings over time that will improve their standard of living. Lastly, it was discovered that most working people in Clallam County do not believe young people will have a standard of living equal to or better than their own.

What can we conclude from all of this? In general, and on average, people who work for a living in private industry in Clallam County confront economic challenges on a daily basis, from finding affordable housing and access to quality health care, to meeting their financial obligations, to finding a job with good prospects for increased earnings. This reveals that the basic needs of working people are not being met. The results also tell us that working people in private industry generally are not prospering. There is a need for more jobs that pay good wages. Until that becomes possible – fulfillment of the essential needs of working people and their families – it will be difficult to satisfy their higher aspirations.



DEFINING A TARGET WAGE

DEFINING A TARGET WAGE THAT BRINGS PROSPERITY TO WORKING PEOPLE IN CLALLAM COUNTY

Overview

A 5-Year Economic Development Plan needs goals, those things it aims to achieve. The goal of this section is to establish a Target Wage, one that improves the standard of living for working residents. We learned from the EDC Community Survey the top-rated challenges for working people in Clallam County. In the order ranked by respondents they were

- (1) Finding suitable housing that is affordable (rent or own);
- (2) Access to quality health care;
- (3) Finding a job that meets my financial obligations.

Finding housing, accessing quality health care, and meeting financial obligations are basic needs, and achieving them are the top ranked challenges for people employed in Clallam County. The EDC Community Survey also revealed that one half of employed people in Clallam County believe their wages will not increase in their current line of employment. The survey also made possible analysis of responses by Cluster of employment. For instance, those employed in Construction are 5.7 times more likely to believe their standard of living will improve relative to those employed in Hospitality, and 11.6 times more likely than those employed in Personal Services.^{13 14} Wages partly explain these results. In Clallam County, 2021, the average annual wage in Construction was \$49,148; in Hospitality (Accommodation and Food Services) it was \$23,207 and in Personal Services it was \$25,739.¹⁵ More jobs with good wages will help working people meet their basic needs – housing, health care, and financial obligations.

We also learned from the EDC Community Survey that people believe the next generation will not experience the same or higher levels of well-being living and working in Clallam County. Having access to, and securing jobs with good wages is one important way for the next generation of working people to better satisfy their basic needs. However, this plan has higher aspirations than helping working people meet their basic needs.¹⁶ This section explores what constitutes a wage that brings prosperity to a family, one that allows working people to advance and gain in things good and desirable.

To answer the question, “what is a prosperity wage,” one that will not only help working people satisfy their basic needs, but to experience an increasing standard of living, the EDC Strategic Team gathered to review data and methods others have used. The discussion below will explain how our work

¹³ Results, EDC Community Survey.

¹⁴ This survey was taken prior to interest rates increasing substantially, thus slowing the construction demand in Clallam County.

¹⁵ [gcew-annual-averages-2021-preliminary2.xlsx \(live.com\)](#) (August 30, 2022).

¹⁶ “We partner to make Clallam County a great place for businesses to thrive and people to live.” [About Us | Clallam EDC](#) (September 1, 2022).

progressed. It concludes with a Target Wage, one that will help working families in Clallam County achieve the things that are good and desirable. When working people thrive, so too do local businesses that provide everything from entertainment to high end retail services.

About Our Process

The process used to establish a Target Wage proceeded as follows. First, as decisions at EDC are data-driven,¹⁷ objective data obtained from a variety of sources was used. Second, defining a prosperity wage required use of subjective values. Thus, the final outcome – a Target Wage that brings prosperity to working families – will reflect those values. Third, no analysis – objective and subjective – can proceed without making assumptions. This section endeavors to point out what those assumptions are and how they shaped our conclusions.

Discussion

Promoting jobs that pay good wages is one of the Guiding Principles for development of the 5-Year Plan. Other organizations have a similar goal. For instance, the mission of OneTen is to help young African Americans find an employment path that leads to upward wage mobility to achieve prosperity without a four-year college degree.¹⁸ As an entry point for a target wage, they use with the MIT Living Wage Calculator (Living Wage Calculator).¹⁹ The EDC Strategic Team examined that calculator. They also examined the Economic Policy Institute’s Family Budget Calculator.²⁰ The Workforce Development Council of Seattle-King County has estimated a self-sufficiency wage.²¹ Each of these studies has some important aspects in common. First, for each, the cost of housing is one of the top 3 household expenditures. Second, those studies *underestimated* the cost of housing by about one-half. Housing costs – to own and rent – have been rising faster than the Consumer Price Index.²² Third, those studies measure a “subsistence wage,” one just sufficient to provide the basic needs of a household.²³ Results from the EDC Community Survey revealed that working people in Clallam County struggle to meet basic financial needs. Indeed, a front-page story in the August 17, 2022 *Peninsula Daily News* indicated that over half of households in Clallam County make use of the foodbank!²⁴ The EDC Strategic Team spent considerable time discussing these issues: the cost of housing, the idea of subsistence, and that working people are financially challenged. Getting by is okay, but prosperity allows people to pursue higher-order levels of well-being. This is one goal of the EDC 5-Year Plan. This subjective value is reflected in the analysis and conclusions that follow.

The Living Wage Calculator illustrates a “Living Wage” – subsistence wage – for households of differing compositions. It provides categories for various expenses when one adult works, or both work,

¹⁷ [About Us | Clallam EDC](#) (September 1, 2022).

¹⁸ [Creating 1 Million Jobs For Black Talent - OneTen.org](#) (August 30, 2022).

¹⁹ [Living Wage Calculator \(mit.edu\)](#) (August 30, 2022).

²⁰ [Economic Policy Institute | Family Budget Calculator \(epi.org\)](#) (August 30, 2022).

²¹ [Welcome To thecalculator](#) (August 30, 2022).

²² [Housing Prices and Inflation - The White House](#) (September 1, 2022).

²³ [Living Wage Calculator \(mit.edu\)](#) (August 30, 2022).

²⁴ [Port Angeles Food Bank services well-used | Peninsula Daily News](#) (September 1, 2022).

and also considers the number of children in the household. If an expenditure category is incorrect, the value can be changed for accuracy. The EDC Strategic Team does not have perfect information for the costs of all the things a household needs. Nor is that necessary to estimate a wage that promotes prosperity. Estimation of a prosperity wage focused on the cost of housing in Clallam County and the cost of child care and used the Living Wage Calculator for other costs.²⁵ From there, long-term financial prosperity was built in.

Design Principles and Analysis

The primary objective of establishing a target wage is to promote prosperity for working families to meet not only their basic needs, but they can advance and gain in things good and desirable. Those higher-order levels of well-being include the potential for homeownership, the accumulation of wealth, and for their children to remain in Clallam County and experience the same or higher levels of prosperity. We know from the EDC Community Survey nearly half of residents believe the next generation will not experience the level of prosperity they do, and that most working residents do not currently experience prosperity.

Our analysis began with the Living Wage Calculator. The first step was to decide household composition, assumed to be 2 adults (both working) and 1 child.²⁶ Second was dealing with inflation. The most recent iteration of the Living Wage Calculator does not adequately include the current rate of inflation (8.5 percent annually as of July 2022) in the cost of housing.²⁷ The Living Wage Calculator presents it as \$13,451 (\$1,121 monthly). This is low for Clallam County. As of September 2022, it costs about \$1,900 per month to rent a 40-year-old 2-bedroom, 2-bath house, or \$22,800 annually.

How to estimate housing costs? Home ownership is an important source of prosperity (the rental value goes to the owner allowing the accumulation of wealth). The cost of housing estimate was built around making it possible to buy a house.²⁸ It was assumed that for a first-time home a reasonable price would be 85 percent of the current median price (\$430,400), or a sales price of \$365,840.²⁹ After a 10 percent down payment of \$36,840, using a 30-year fixed rate mortgage of \$329,256 at an assumed 6.775 percent would have monthly payments of \$2,137 or \$25,644 annually.^{30 31} Annual property taxes

²⁵We focused on housing because, first, it was the top ranked challenge in the EDC Community Survey. We also focused on the cost of housing because the Living Wage Calculator underestimated that cost by over 50 percent, as will be demonstrated below. We also adjusted for child care because a family with 2 working adults with 1 child will require the service. While food prices too are rising faster than the inflation rate, we did not analyze them as our goal in establishing a prosperity wage is meant to be approximate. [Consumer Price Index Summary - 2022 M07 Results \(bls.gov\)](#)

²⁶ [Living Wage Calculator - Living Wage Calculation for Clallam County, Washington \(mit.edu\)](#) (August 30, 2022).

²⁷ [current inflation rate - Google Search](#) (August 30, 2022).

²⁸ Of course, not everyone will want to buy a house. Some may want to travel, or drive an expensive automobile, or do whatever. Our home ownership analysis makes possible pursuit of these alternatives as expressions of prosperity.

²⁹ [Housing Affordability Indices | \(uw.edu\)](#) (August 30, 2022).

³⁰ [mortgage payment calculator - Google Search](#) (September 1, 2022). While interest rates change on a daily basis, the general trend remains upward.

³¹ These are the assumptions used to construct the Affordable Housing Index. The reader needs to keep in mind that a lower down payment means a larger monthly payment, extra fees, and a higher mortgage rate, all of which makes the starter house at 85 percent of median less affordable.

are \$3,660, or \$305 monthly.³² Insurance is conservatively estimated at \$1,500 annually, or \$125 monthly. Total monthly housing cost would be \$2,567 monthly, or \$30,804 annually to make mortgage payments, and pay property taxes and house insurance. Thus, our target household would require \$30,804, or \$17,857 more than the cost of housing in the Living Wage Calculator. There is still the challenge to save for a down payment of \$36,840. To meet that goal in five years would require saving \$7,368 each year, or \$614 monthly. These results are summarized in Table 11.

Housing Expenditure Category	Amount
Median Price	\$430,400
85% Median Price	\$365,840
Mortgage (less 10% down payment)	\$329,256
Annual Payment	\$25,644
Annual Property Taxes	\$3,660
Annual House Insurance	\$1,500
Annual Subtotal	\$30,804
Annual Saving Down Payment	\$7,368
Total Annual Housing Expenses	\$38,172



Table 11: Estimating Annual Housing Cost



There is still the cost of child care to consider. The average cost for child care in Clallam County is \$836 monthly, or \$10,032 annually per child.³³ This is \$1,385 more than the cost of child care in the Living Wage Calculator.³⁴ MIT expenses and the additions estimated are presented in Table 12. The MIT expenses indicate it requires \$60,458 in after tax income (\$77,628 before taxes) to provide the basic subsistence needs of our hypothetical family. However, as discussed above, this will not provide prosperity. The column Additions includes additional child care costs (\$1,385), housing costs to buy a starter home (\$17,353), and saving for a down payment (\$7,368).

³² [Washington Property Tax Calculator – SmartAsset](#) (August 30, 2022).

³³ [Daycares in Clallam County WA - CareLuLu](#) (August 30, 2022).

³⁴ This annual estimated childcare cost is likely an underestimate. A detailed study recently completed by Clallam EDC indicates that the annual non-subsidized cost is \$990 monthly. Estimating annual childcare costs is complex and evolving due to state and federal subsidies such as the [Fair Start for Kids Act](#) and only supports families with current qualifying income. Subsidies for childcare stop at \$76,000 for a family of three.

Estimating Annual Prosperity Income For Two Working Adults, One Child

MIT Calculator	Annual	Additions	Totals
Food	\$9,124	\$0	\$9,124
Child Care	\$8,647	\$1,385	\$10,032
Medical	\$6,308	\$0	\$6,308
Housing	\$13,451	\$17,353	\$30,804
Transportation	\$11,391	\$0	\$11,391
Civic	\$5,120	\$0	\$5,120
Other	\$6,417	\$0	\$6,417
Down Payment	\$0	\$7,368	\$7,368
Retirement	\$0	\$11,644	\$11,644
After Tax Income	\$60,458		\$98,208
Before Tax Income	\$77,628		\$115,882

Table 12: Estimation of an annual prosperity income for two working adults, one child, Clallam County, 2021.

Our goal in identifying a Target Wage is to pursue economic development opportunities that help working families advance and gain in those things good and desirable. Homeownership is one important step in that direction. Our analysis above illustrates the financial challenge. Results from the EDC Community Survey make clear it is the number one challenge confronting working households. While homeownership is important for economic prosperity, another is the accumulation of financial assets to provide for retirement and meet unexpected emergencies. Having a job that makes possible meeting financial obligations was the number 3 challenge. We therefore added annual savings of 15 percent of annual gross income. Estimating annual before tax income required assumptions about federal tax rates and gross income. The AARP tax calculator was used to estimate a total annual federal tax bill of \$17,674, which includes Social Security and Medicare taxes.³⁵ Adding this value to the estimated after-tax prosperity income yields an annual gross income for our hypothetical family of \$115,882 which will cover child care, down payment, mortgage payments, and retirement savings.³⁶

Finding a Target Wage

What might a Target Wage look like for a household with 2 adults, both working, and one child, when the total necessary before tax income is \$115,882? The first step in answering this question was to decide what is the average wage in Clallam County. There are two averages that can be used: the mean and median. The mean wage is an arithmetic average where you add together all the wages of all the workers, then divide by the number of workers. The median wage is the middle, where half earn more and half earn less. The Bureau of Labor Statistics publishes the Quarterly Census of Employment

³⁵ AARP.org, 1040 Tax Calculator.

³⁶ There are many ways to take on this analysis. For instance, some down payment dollars could come from living in a small low-cost rental, or with family, which would promote saving. After purchase, down payment savings could end. Our analysis is intended to be approximate and illustrative on what it takes for working people to achieve prosperity.

and Wages (QCEW) that can be used to calculate those averages. They are presented in Table 13 for Clallam County for all sectors combined, private sector and public sector. The results illustrate there is no “best” answer for which average to use. For all sectors, the mean annual wage is \$47,836 while the median is \$50,390. This tells us that half of those employed earn more or less than \$50,390, \$2,554 more than the mean average. However, for more detail in those averages can be found by breaking down sectors into Private and Public. Thus, Table 13 shows that those working in the private sector are paid less than those in the public sector: in the private sector the mean wage is \$40,430 while the median wage is \$36,747. Thus, half of those employed in the private sector earn less than the mean in the public sector, where the mean is \$61,732 and the median \$59,928.

While the mean is greater than the median for all sectors, there are differences between sectors. The mean private sector wage is \$40,430 while that in the public sector is \$61,732; the median private sector wage is \$36,747 while that in the public sector is \$59,928. Public sector employees earn a mean average of \$21,302 more than their counterparts in the private sector. On a median basis, this difference is \$23,181. This tells us that half or more of public sector employees earn \$23,181 more than half or less of private sector workers. Thus, it is a greater challenge for those employed in the private sector to achieve prosperity than those in the public sector.

Measures for Average Annual Wage 2021						
Income	All Sectors		Private Sector		Public Sector	
Measures	Mean	Median	Mean	Median	Mean	Median
One Adult Wage	\$47,836	\$50,390	\$40,430	\$36,747	\$61,732	\$59,928
Before Tax Income	\$115,882	\$115,882	\$115,882	\$115,882	\$115,882	\$115,882
Target Wage	\$68,046	\$65,492	\$75,452	\$79,135	\$54,150	\$55,954

Table 13: Mean and median wages by sector and a Target Wage for prosperity, Clallam County, 2021.³⁷

Table 13 also presents the annual after-tax income to provide prosperity for two working adults with one child. The EDC Strategic Team had to make a decision about what average wage to use for one working adult. The other adult would earn the Target Wage, a wage that provides the additional income necessary to achieve financial security in the near-term and long-term. The row Target Wage is the difference between the total before tax prosperity income and the average wage measures. In the private sector, the source of about two-thirds of all employment in Clallam County, the mean Target Wage is \$75,452; the median is \$79,135. In the public sector, the mean Target Wage is \$54,150 and the median \$55,954. Because public sector employees, on average, are paid about \$21,000 more than private sector employees, the second income can be less to achieve prosperity. For all sectors, private and public, the mean Target Wage is \$68,046 while the median is \$65,492.

³⁷ [qcew-annual-averages-2021-preliminary2.xlsx \(live.com\)](#) (August 30, 2022). NEC is not classified elsewhere.

Concluding Thoughts

In 1992 Clallam County was more prosperous for working people than it is today. The mean average wage was 85 percent of the statewide average. The businesses in downtown Port Angeles Sequim and Forks generally thrived. The Port Angeles High School parking lots overflowed with cars. Horizon Airlines offered 7 flights daily, including international flights from Vancouver. Today the average wage is 65 percent of the statewide average.³⁸ There are movements to “revitalize” our county’s communities, as they no longer thrive. It only takes one parking lot to accommodate Port Angeles high school students. In 1992 both parking lots overflowed! As for commercial airlines flights, well, maybe in the future we will see them again. Because so many struggle financially, they are not able to frequent retail stores, restaurants, and buy the amenity services at levels they used to. The goal of the EDC 5-year Plan is to help retain and recruit employment in industries that will promote improved standards of living. People who earn more spend more. One outcome is thriving businesses.

People employed in Clallam County are challenged by economic circumstances. Their top three challenges are finding suitable housing that is affordable (rent or own); access to quality health care; and finding a job that will allow them to meet their financial obligations. We also learned from the EDC Community Survey that 76 percent of those employed in Clallam County are financially challenged. If their basic needs are not being met, then they are not achieving prosperity – securing and gaining in those things good and desirable. The goal of this section was to determine what a Target Wage is.

In the process of estimating a Target Wage, the EDC Strategic Team used a process that was data driven, made their objective and subjective values explicit, and explained how their assumptions shaped conclusions. Accordingly, this section began by critically assessing what constitutes a “living wage.” There were two important conclusions. First, a living wage meets basic needs; it does not support prosperity. Second, measures for a living wage underestimated the cost of housing and child care. Higher standards of living were outside that analysis. Analysis of the EDC Strategic Team was driven by the subjective value that working people should have more employment opportunities to earn prosperity. Thus, it was necessary to take wage analysis several steps further. The costs of home ownership, from assumptions to analysis and conclusions, were clearly presented. The reader may be surprised to know that a starter home, at 85 percent of the median price home of \$430,400, with a 10 percent down payment and current mortgage rates would need \$25,644 for annual payments. An additional \$3,600 for property taxes and \$1,500 for house insurance would also be necessary. Total annual home ownership costs would be \$30,804. And this does not include saving up for that down payment! When down payment savings (\$7,368) and savings for retirement (\$11,644) are included – another \$19,012 are needed in before-tax income. When you build in federal income and social security taxes, a household with two working adults and one child would require an annual before-tax income of \$115,882. *This is the EDC 5-year Plan prosperity income target – combined income of \$115,882.*

What then is the EDC target wage for prosperity? The answer is nuanced for at least three reasons. The first reason emerged in the previous section when examining six different measures for an average wage. What the first adult earned – an average job at an average wage – depended upon what sector and whether the mean or median was used. There is no “best answer” for using the mean or

³⁸ Daniel A. Underwood, *Where Green Meets Blue – The Port of Port Angeles’ Intermodal Handling & Transfer Facility, A Preliminary Investigation*. Published by Port of Port Angeles, September 2022.

median. Each represents a different summary measure that tells us different things about the distribution of wages. There are also large differences between mean and median wages between the private and public sectors – about \$21,000. This leads to the second reason – should the wage of the first adult be in the private or public sector? And then there is the third reason. Our wage analysis is based on estimates of what it takes for prosperity, and not accounting methods. We have choices between means and medians, private and public sector employment, and living costs that are estimates. These choices have tradeoffs, and there is no objective way to resolve the dilemma. What we can reasonably conclude, however, is that it will take a combined gross income in the general range of \$115,882 to provide prosperity for two working adults with one child. Likewise, we also believe that one new job in Clallam County that pays a resident \$79,135 is preferable to a job that pays \$54,150. Getting that job prospect, however, is the challenge for economic development policy.

Target Wage for 2022-2023

\$75,000

A wage of \$75,000 will increase the average wage in Clallam County, and was discussed and formally approved by the Clallam EDC Board of Directors as the 2022-2023 Target Wage.



ECONOMIC IMPACTS

DATA, METHODOLOGY AND SUMMARY TABLES

Formation of Economic Clusters

An economic cluster (Cluster) is a grouping of businesses based upon similar characteristics. Similarities can include customers and sales market, knowledge and skills of the labor force, interdependencies between businesses, technologies, and more.

In economic development, formation of Clusters are used to model trade flows, employment, and wages within and between Clusters. Members of the EDC Strategic Team identified 14 private sector Clusters using the North American Industrial Classification System (NAICS) at the 3-digit level. The clusters we selected are not grouped according to the North American Industry Classification System (NAICS). These standard groupings do not reflect our business sectors effectively. For example, the maritime industry is an important sector for Clallam County based on our existing infrastructure and proximity to water. However, all maritime businesses in Clallam County are located in many different NAICS subsets, such as, Transportation, Manufacturing, Retail and Wholesale and thus cannot be completely identified due to proprietary data being obscured when there is a small sample size, as is described below. Those Clusters are presented below. Each will be analyzed in detail in subsequent sections.

- Agriculture and Fishing
- Construction
- Finance, Real Estate and Insurance
- Forest Products
- Health Care and Assistance
- Hospitality and Tourism
- Human Services
- Manufacturing and Maritime
- Personal Services
- Retail
- Specialized Services
- Trades
- Transportation
- Wholesale

Data by Source

Four sources of data were used to estimate employment and wages by Cluster, and to assess the general business climate of each. The first source was the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages ([QCEW](#)). All businesses are required to report their payroll and employment to their state's unemployment insurance department. The data is published quarterly by

the BLS.³⁹ While this data is transparent and objective, it has limitations. First, the number of employees is published, not the hours worked. Thus, no distinction is made between full-time, part-time and seasonal employment.⁴⁰ Second, to protect the proprietary nature of the data, employment and wages are not reported when there are fewer than three employers in an industry. For those sectors an “*” appears. As there are employers, their presence is noted. Jobs and wages not recorded by NAICS are compiled into Not Classified Elsewhere. Third, QCEW does not include proprietors. Proprietors are a significant part of the local economy and, on average, earn higher levels of income. Fourth, businesses are required to file these reports in the County their main office is located, even though they may have operations in other locations.

The second data source used is IMPLAN.⁴¹ IMPLAN builds a dataset using BLS QCEW, CENSUS, and Bureau of Economic Analysis (BEA) data that can be used to estimate economic impacts. IMPLAN employee compensation (wages) include estimated benefits, social security taxes, and unemployment insurance. IMPLAN also estimates proprietors and proprietor income, filling an important gap in the QCEW dataset. Proprietors consist of self-employed individuals, partnerships and tax-exempt entities.⁴² IMPLAN too reports total jobs, and not hours worked. While IMPLAN is a powerful analytical tool, its data are estimates built on counts from different statistical agencies. Counts contain omissions. All estimates contain errors. The estimates are built around averages and do not apply to specific individuals in an industry. Thus, quantitative comparisons have limitations. For this report, when comparing average wages between Clusters, while there may be errors in wage estimates, in general, high wage Clusters will, in fact, have higher wages on average than low wage Clusters. The reader should keep in this mind when interpreting and assessing estimates.

The third data source was obtained by contacting local employers about their wages and employment. Both Forks Hospital and Olympic Medical Center provided this data. As a result, the analysis in the Health Care Cluster is more accurate than could be obtained using QCEW or IMPLAN. Similarly, the actual employment and wages for Black Ball Ferry Lines was included in Waterborne Sightseeing and Transportation.^{43 44} Lastly, McKinley Paper likewise provided wage and employment data.

The fourth data source was derived from results of the EDC Employer Survey. The objective of the EDC Employer Survey was to learn about circumstances and factors shaping the local business environment. The EDC Strategic Team constructed 19 questions that consisted of multiple choice, rank-order and open-ended text response. Respondents were also invited to provide additional feedback regarding EDC’s role in helping local businesses succeed. Sample sizes by Cluster were proportionate to

³⁹ Note the names of the Clusters changed – evolved – as work moved from the EDC Community Survey to economic impact analysis. In addition, as private sector economic development is the policy target, the Government Cluster is not analyzed further.

⁴⁰ Seasonality can be captured using quarterly QCEW data.

⁴¹ ImpactPLANing, MIG Corporation. <https://implan.com/>

⁴² Income estimates are constructed using the follow equation. Value of Output = {Intermediate Inputs + Value Added}; Value Added = [Labor Income + Taxes on Production and Imports + Other Property Income]; Labor Income = (Employee Compensation + Proprietor Income.

⁴³ Daniel A. Underwood, *The Economic Impacts of Black Ball Ferry Line – A Destination Hub In The Tourism Industry of Clallam County*, November 15, 2019.

⁴⁴ Olympus Consulting has similar data from a number of employers in Clallam County. However, for the level of analysis employed in this study it was not used, though considered when making assessment.

that Cluster's employment relative to the County total. Businesses were randomly selected from each Cluster until its relative proportionate employment threshold was reached. The EDC Employer Survey was distributed to 342 businesses from December 2021 to July 2022. A total of 144 (42%) completed a portion or the entire survey.⁴⁵ A breakdown of respondents by Cluster is presented in Table 14. Survey results were analyzed using Qualtrics XM Survey Platform.⁴⁶

The following is offered to further clarify the type of businesses that are grouped into Clusters:

- Hospitality and Tourism: Restaurants and Hotels
- Human Services: Licensed Massage Therapists, Nail Salons, Hair Salons...
- Personal Services: Janitorial Services, House Cleaning, Yard Maintenance, Pet Sitting
- Professional Services (Specialized): Lawyers, Engineering Firms, Surveyors, Marketing Firms,
- Professional Services (Trades): Auto Repair Shops, Waste Services (non-construction trades)

Cluster	Number of Employers Responding	Percent of Total Respondents
Health Care	26	18.1%
Hospitality & Tourism	24	16.7%
Construction	20	13.9%
Human Services	12	8.3%
Manufacturing & Maritime	10	6.9%
Retail	10	6.9%
Finance, Real Estate & Insurance	9	6.3%
Professional Services (Specialized)	9	6.3%
Agriculture and Fishing & Fishing	7	4.9%
Personal Services	7	4.9%
Forest Products (includes transportation)	3	2.1%
Professional Services (Trades)	3	2.1%
Wholesale	3	2.1%
Transportation*	1	0.7%

Table 14: EDC Employer Survey response counts and rates by Cluster, Clallam County, 2021-2.

Using the Economic Impact Analysis

In the analysis that follows, the 3-digit NAICS codes used to create Clusters are presented, along with the corresponding IMPLAN Industry Bridge Codes (Code). Industry descriptions are provided. QCEW, IMPLAN and interview data was used to estimate total output by industry, covered employment (employees), proprietors, and average annual income (Wage). The base year used for IMPLAN modeling

⁴⁵ 95 percent of respondents completed the survey.

⁴⁶ Peninsula College allowed the EDC Strategic Team to utilize its site license so that the project could move forward expeditiously until EDC was able to obtain its own license agreement.

was 2019, the most recent “non-pandemic” data year available. IMPLAN values for 2019 were then adjusted for inflation and are presented as 2021 dollars (2021\$).⁴⁷ IMPLAN 6.5 was used to build employment and wage data for covered employees and proprietors. Additional missing values are explained where appropriate. IMPLAN was then used to estimate indirect impacts and induced impacts. Indirect impacts result from expenditures made in the supply chain to support direct operations of firms in a Cluster. For instance, a local residential contractor makes expenditures for electricians and plumbers in the construction process. Similarly, the contractor purchases materials from local suppliers and rents machinery. Some of those workers are employees and some are proprietors. Each makes an economic contribution in the supply chain. Those jobs and wages are dependent on the Direct impact – construction of the residential home. Those directly and indirectly employed spend some of the wages in the local economy, everywhere from restaurants to nursing care facilities. Those are Induced impacts.⁴⁸ Direct, Indirect and Induced impacts are presented.

Those involved in economic development are often interested in how a new or expanded Direct impact affects other parts of the local economy. This analysis is often referred to as multiplier analysis. Multipliers are coefficients that capture the quantitative relationship between two changes. These relations are correlations. They can be accurately treated as causation – one change causes another change – if the driver of the impact causes changes in expenditures elsewhere in the economy. Thus, construction of a new home will necessarily cause the changes in the number of electricians employed, building materials purchased from local retailers, and the production and sale of concrete – total employment and wages will increase. Similarly, those employed because of the newly constructed home will spend income in the local economy everywhere from restaurants to bowling. However, working the other direction, opening a new restaurant may not cause the construction of a new residence. Indeed, the opening of a new restaurant may decrease sales at other restaurants unless people spend more than before dining out because that new restaurant opened, or because people outside the region come to visit that new restaurant, or more local people decide to dine out. Thus, one must be cautious in estimating and using multipliers.

With these cautionary notes in mind, Olympus analyzed employment and wage impacts using \$1,000,000 (2021\$) Value of Output. Value of Output covers wages, material, service costs, and taxes. The remainder in excess of these costs of doing business become other property income, which include profits. The multipliers presented are the additional employees and proprietors, along with additional average annual wages, that result if Value of Output – sales – change by \$1,000,000. They are presented in two different ways. The first is for a \$1,000,000 change in Value of Output for each individual industry in the Cluster expressed in terms of additional employees, proprietors, and the additional income going to those employed as a result. Second, the multiplier estimates are presented for the overall Cluster also driven by a \$1,000,000 change in Value of Output. Those multipliers too are expressed in terms of additional employees, proprietors, and additional income for both in terms of Direct, Indirect, and Induced impacts. The second form of analysis is useful to assess overall multiplier effect of a Cluster. The first is useful to assess individual industries within that Cluster.

⁴⁷ Olympus tested the inflation estimates in IMPLAN and found they underestimated the impacts of inflation. Hence, 2019\$ are transformed into 2021\$ using the BLS Inflation Calculator at a factor of 1.0849.

⁴⁸ IMPLAN models make it possible to analyze indirect and induced impacts in detail by industry.

The multiplier tables can be used to assess how many new employees and proprietors are expected to be supported by that increase in sales volume (Value of Output), and the total new wages that will be earned. Those new jobs and wages will then have Indirect and Induced impacts. These summary measures can be useful to decision makers in the first stage of assessing expected economic impacts for expansion or recruitment of businesses. Application of those multipliers must be made cautiously, as explained above.

In addition, Indirect and Induced economic impacts are presented by the total employment (sum of covered employees and proprietors) for the Top-15 industries in each Cluster. The value to decision-makers of these estimates are three-fold. First, they illustrate what industries are “most affected” by the impact, both in the supply chain (Indirect impact) and the general economy (Induced impact). Second, the estimates also contain the proportion (percent) of the impacts on the Top-15 relative to all of the Indirect or Induced impacts. For instance, if the percent in Value of Output is 50 or more, that means half or more of all supply chain affects are concentrated those 15 industries. A percent of 25 means one-quarter of all supply chain impacts are concentrated in those 15 industries. All other impacts are distributed outside those Top-15 industries. Percent impacts on employment should be interpreted in the same way. Third, the Top-15 impacts can also be analyzed on the basis of what Sub-Cluster made the expenditures creating the Indirect and Induced impacts. Each Sub-Cluster contains the specific industries assigned to each. Fourth, the reader should interpret employment and average annual wages with caution. Both the employment and wage values are estimates of how much the Direct impact affects each Indirect and Induced industry. The wages presented are those driven by the Direct impact, which may comprise only a part of the total annual wage earned in the Indirect and Induced industries. For this reason, the average annual wage for Indirect and Induced employees and proprietors may be less than the overall annual average for that industry.

The analysis of each Cluster concludes with summary results from the EDC Employer Survey. Those results begin with respondents evaluating how favorable the business climate of Clallam County is and the likelihood they will expand operations. Respondents also shared the top challenges confronted. They also expressed their interest in increasing the proportion of their operational expenditures in the local economy. Those results, combined with the Indirect economic impact analysis of the supply chain can give decision makers an idea of how many jobs, where, at what wages, can be expected as the local supply chain is further developed. All of the analytical tools described above can be used by decision makers to identify Clusters and industries within those Clusters that can help Clallam County thrive.

ECONOMIC IMPACTS BY CLUSTER

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY

When Prosperity Matters
2023

A large fishing boat is shown on the water, with a large net being hoisted by a crane. Several people are visible on the deck. The background shows a forested shoreline under a cloudy sky.

AGRICULTURE AND FISHING

EDC

CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL

ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY

When Prosperity Matters
2023



AGRICULTURE AND FISHING

The Agriculture and Fishing Cluster was defined using NAICS at the 3-digit level, illustrated in Table 15. The NAICS subsectors are Crop production (111), Animal production (112), and Fishing, hunting and trapping (114). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 32 Agriculture and Fishing firms with 228 employees paid an average annual wage of \$28,826. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Animal Production, Crop Production and Fishing. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 16.

Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
1 thru 10	111	Crop production	25	196	\$5,671,960	\$28,939
11 thru 14	112	Animal production	7	32	\$900,459	\$28,139
17, 18	114	Fishing, hunting and trapping	*	*		
Totals			32	228	\$6,572,419	\$28,826

Table 15: Defining the Agriculture and Fishing Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Crop Production	2	Grain farming
Crop Production	3	Vegetable and melon farming
Crop Production	4	Fruit farming
Crop Production	5	Tree nut farming
Crop Production	6	Greenhouse, nursery, and floriculture production
Crop Production	10	All other crop farming
Animal Production	11	Beef cattle ranching and farming, including feedlots
Animal Production	12	Dairy cattle and milk production
Animal Production	13	Poultry and egg production
Fishing	17	Commercial fishing

Table 16: Sub-Clusters and associated industries in Agriculture and Fishing.

Economic Impacts

Table 17 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 10 listed IMPLAN industries that comprise the Agriculture and Fishing Cluster. The value of output ranged from a low of \$142,878 in Poultry and egg production to a high of \$6,709,950 in Commercial fishing. The total Direct value of output for the Agriculture and Fishing Cluster was estimated at \$20,022,758; the Indirect value of output was estimate at \$3,111,626; the Induced value of output was estimated at \$4,167,067. The grand total value of output associated with the Agriculture and Fishing Cluster was estimated at \$27,301,451.

AGRICULTURE AND FISHING CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
2	Grain farming	\$562,707	3.0	4.3	7.3	\$44,905	(\$7,470)
3	Vegetable and melon farming	\$2,118,743	43.4	32.6	76.0	\$29,975	(\$5,867)
4	Fruit farming	\$1,012,875	23.8	29.3	53.0	\$24,907	(\$3,884)
5	Tree nut farming	\$108,475	2.1	1.6	3.6	\$32,691	(\$9,279)
6	Greenhouse, nursery, and floriculture production	\$929,221	20.1	2.4	22.5	\$33,283	(\$22,787)
10	All other crop farming	\$1,222,004	30.1	228.0	258.1	\$34,517	(\$293)
11	Beef cattle ranching and farming, including feedlots	\$2,796,393	3.1	61.9	65.0	\$37,688	(\$1,605)
12	Dairy cattle and milk production	\$4,419,512	14.5	12.0	26.5	\$30,912	(\$10,066)
13	Poultry and egg production	\$142,878	0.4	0.1	0.5	\$56,089	(\$15,430)
17	Commercial fishing	\$6,709,950	1.0	86.2	87.2	\$254,803	\$49,885
Totals: Direct Impacts		\$20,022,758	141.4	458.4	599.8	\$32,873	\$7,859
Totals: Indirect Impacts		\$3,111,626	11.8	25.8	37.6	\$54,666	\$11,446
Totals: Induced Impacts		\$4,167,067	20.5	7.9	28.4	\$42,712	\$26,070
Grand Totals: All Impacts		\$27,301,451	173.6	492.2	665.8	\$35,513	\$8,341

Table 17: Economic impacts of Agriculture and Fishing in 2019 (2021\$).

Estimated covered employment ranged from a low of 0.4 in Poultry and egg production at an average annual wage of \$56,089 to a high of 30.1 in All other crop farming at an average annual wage of \$34,517. For proprietors, employment ranges from a low of 0.1 in Poultry and egg production at an average annual wage of (\$15,430) to a high of 86.2 in Commercial fishing at an average annual wage of \$49,885. Total Direct covered employment was estimated at 141.4 at an annual average wage of \$32,873; total Direct proprietors was estimated at 458.4 at an annual average wage of \$7,859. Total Indirect covered employment was estimated at 11.8 at an average annual wage of \$54,666; for proprietors it was estimated at 25.8 at an average annual wage of \$11,446. Total Induced covered employment was estimated at 20.5 at an annual average wage of \$42,712; for proprietors it was estimated at 7.9 at an annual average wage of \$26,070. The grand total covered employment was estimated at 173.6 at an annual average wage of \$35,513; for proprietors it was 492.2 at an annual average wage of \$8,341.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 18 for each IMPLAN industry that comprises the Agriculture and Fishing Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Commercial fishing will provide 0.2 additional jobs; at the high end, All other crop farming would provide an additional 24.6 employees. For proprietors, the low end of expected impacts would be 1.0 in Poultry and egg production; at the high-end All other crop farming would provide an additional 186.6 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$38,852 in Commercial fishing; the high end would be \$850,121 in All other crop farming. For proprietors, the low end would be (\$134,285) in Tree nut farming; at the high end \$640,601 in Commercial fishing.

MULTIPLIERS AGRICULTURE AND FISHING CLUSTER		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
2	Grain farming	5.3	7.6	\$238,444	(\$56,979)
3	Vegetable and melon farming	20.5	15.4	\$613,772	(\$90,323)
4	Fruit farming	23.5	28.9	\$585,159	(\$112,165)
5	Tree nut farming	19.0	14.5	\$620,866	(\$134,285)
6	Greenhouse, nursery, and floriculture production	21.6	2.6	\$719,400	(\$58,987)
10	All other crop farming	24.6	186.6	\$850,121	(\$54,588)
11	Beef cattle ranching and farming, including feedlots	1.1	22.2	\$41,178	(\$35,560)
12	Dairy cattle and milk production	3.3	2.7	\$101,384	(\$27,364)
13	Poultry and egg production	2.6	1.0	\$146,702	(\$14,719)
17	Commercial fishing	0.2	12.8	\$38,852	\$640,601
Totals: Direct Multiplier Impacts		7.1	22.9	\$232,078	\$179,935
Totals: Indirect Multiplier Impacts		0.6	1.3	\$32,205	\$14,737
Totals: Induced Multiplier Impacts		1.0	0.4	\$43,632	\$10,341
Grand Totals: All Multiplier Impacts		8.7	24.6	\$307,915	\$205,013

Table 18: Economic multipliers of Agriculture and Fishing in 2019 (2021\$).

For the Agriculture and Fishing Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 7.1; for proprietors it would be 22.9. The corresponding change in wages would be \$232,078 and \$179,935 respectively. The Indirect and Induced multiplier affects for the Agriculture and Fishing Cluster were also estimated. A \$1,000,000 change in Direct value of output would change Indirect employees and proprietors by 0.6 and 1.3 respectively with corresponding changes in total annual wages of \$43,632 and \$10,341. For Induced multipliers, the changes would be 1.0 employees and 0.4 proprietors at total annual wages of \$43,632 and \$10,341 respectively. In total, a change in \$1,000,000 in Agriculture and Fishing value added will change total covered employment by 8.7 and annual wages by \$307,915; for proprietors the changes will be 24.6 and \$205,013 respectively.

Indirect Economic Impacts

Table 19 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Beef cattle ranching and farming, with 0.6 covered employees and 11.8 proprietors at annual average wages of \$37,688 and **(\$1,605)** respectively, driven by supply chain expenditures in Animal Production. Overall, the top 15 Indirect economic impacts are \$2,307,543 in value of output, or 74 percent of the total value of output in the Agriculture and Fishing Cluster supply chain. For covered employment, it's 8.8 supply chain jobs at an annual average wage of \$55,064, or 75 percent of the total Indirect covered employment. For proprietors, it's 23.9 jobs at an annual average wage of \$10,514, or 93 percent of the total Indirect proprietors.

AGRICULTURE AND FISHING CLUSTER			Value of	Employment by Type		Average Wage (2021\$)		
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
11	Beef cattle ranching and farming, feedlots	Animal Production	\$533,462	0.6	11.8	12.4	\$37,688	(\$1,605)
19	Support activities for agriculture	Crop Production	\$413,872	3.6	3.6	7.2	\$62,281	\$38,627
19	Support activities for agriculture	Animal Production	\$182,009	1.6	1.6	3.2	\$62,281	\$38,627
447	Other real estate	Animal Production	\$448,474	0.4	2.2	2.6	\$35,851	\$16,990
10	All other crop farming	Animal Production	\$8,927	0.2	1.7	1.9	\$34,517	(\$293)
447	Other real estate	Crop Production	\$300,029	0.2	1.5	1.7	\$35,851	\$16,990
2	Grain farming	Animal Production	\$67,139	0.4	0.5	0.9	\$44,905	(\$7,470)
3	Vegetable and melon farming	Crop Production	\$19,470	0.4	0.3	0.7	\$29,975	(\$5,867)
417	Truck transportation	Animal Production	\$113,833	0.6	0.1	0.7	\$65,827	\$94,914
10	All other crop farming	Crop Production	\$1,609	0.0	0.3	0.3	\$34,517	(\$293)
456	Accounting, tax preparation, bookkeeping	Animal Production	\$22,224	0.1	0.2	0.3	\$40,996	\$14,497
534	Other local government enterprises	Animal Production	\$82,786	0.3	0.0	0.3	\$65,915	\$0
534	Other local government enterprises	Crop Production	\$80,585	0.3	0.0	0.3	\$65,915	\$0
509	Full-service restaurants	Animal Production	\$19,582	0.2	0.0	0.3	\$28,370	\$31,668
14	Animal production, except cattle , poultry	Animal Production	\$13,542	0.1	0.1	0.2	\$42,914	(\$12,428)
Totals for the Top 15 Indirect Economic Impacts			\$2,307,543	8.8	23.9	32.8	\$55,064	\$10,514
Percent of Total Indirect Economic Impacts			74%	75%	93%	87%		

Table 19: Top 15 Indirect economic impacts by employment for the Agriculture and Fishing Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 20 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 1.0 covered employees and 0.05 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Fishing. Overall, the top 15 Induced economic impacts are \$747,360 in value of output, or 18 percent of the total Induced contributions of the Agriculture and Fishing Cluster. For covered employment, it's 7.6 jobs at an annual average wage of \$42,712, or 36 percent of the total

Induced covered employment. For proprietors, it's 1,2 jobs at an annual average wage of \$26,070, or 15 percent of the total Induced proprietors.

AGRICULTURE AND FISHING CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants (fishing)	Fishing	\$79,807	1.0	0.0	1.0	\$28,370	\$31,668
493	Individual and family services	Fishing	\$31,045	0.7	0.1	0.8	\$28,967	\$16,551
509	Full-service restaurants (crops)	Crop Production	\$58,692	0.7	0.0	0.8	\$28,370	\$31,668
510	Limited-service restaurants	Fishing	\$64,675	0.7	0.0	0.7	\$25,585	\$34,463
406	Retail - Food and beverage stores	Fishing	\$51,381	0.6	0.0	0.6	\$41,766	\$13,043
525	Private households	Fishing	\$5,778	0.6	0.0	0.6	\$10,129	\$0
493	Individual and family services	Crop Production	\$21,796	0.5	0.1	0.6	\$28,967	\$16,551
447	Other real estate	Fishing	\$94,562	0.1	0.5	0.5	\$35,851	\$16,990
510	Limited-service restaurants	Crop Production	\$49,847	0.5	0.0	0.5	\$25,585	\$34,463
411	Retail - General merchandise stores	Fishing	\$55,316	0.5	0.0	0.5	\$46,073	\$10,392
491	Nursing and community care facilities	Fishing	\$44,137	0.5	0.0	0.5	\$47,213	\$689
406	Retail - Food and beverage stores	Crop Production	\$39,042	0.4	0.0	0.4	\$41,766	\$13,043
491	Nursing and community care facilities	Crop Production	\$38,718	0.4	0.0	0.4	\$47,213	\$689
447	Other real estate	Crop Production	\$70,557	0.1	0.3	0.4	\$35,851	\$16,990
411	Retail - General merchandise stores	Crop Production	\$42,008	0.4	0.0	0.4	\$46,073	\$10,392
Totals for the Top 15 Induced Economic Impacts			\$747,360	7.6	1.2	8.8	\$42,712	\$26,070
Percent of Total Induced Economic Impacts			18%	37%	15%	31%		

Table 20: Top 15 Induced economic impacts by employment for the Agriculture and Fishing Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 21. The results indicate 29 percent of respondents in the Agriculture and Fishing Cluster believe Clallam County is favorable for doing business. 43 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, increased cost of materials and employee retention. Regulation was also listed as a concern.

In the supply chain, 72 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 57 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 29 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, consumables and supplies, and bulk or prepared food as goods and materials they would like to buy locally. For services, respondents expressed an interest in repair and maintenance, marketing, and shipping and delivery.

Business Climate For Agriculture and Fishing Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
29% Favorable	43% Likely	Lack of Qualified Workers - 25% Increased Cost of Materials - 21% Employee Retention - 13%	Over- regulation of a raw milk dairy farms
Supply Chain Possibilities for Agriculture and Fishing in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials go to businesses outside of Clallam	What percent of your expenditures for services go to businesses located outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
72% Yes 14% Maybe 14% No	0 to 20% of Expenditures - 14% 30% to 50% of Expenditures - 29% 60% to 80% of Expenditures - 57%	0 to 20% of Expenditures - 29% 30% to 50% of Expenditures - 43% 60% to 100% of Expenditures = 29%	Equipment and durable goods Consumables and supplies Bulk or prepared food
			Repair and Maintenance Marketing Shipping & Delivery

Table 21: Summary results for Agriculture and Fishing from the EDC Employer Survey, 2021-2.



CONSTRUCTION

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

**ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY**

**When Prosperity Matters
2023**



CONSTRUCTION

The Construction Cluster was defined using NAICS at the 3-digit level, illustrated in Table 22. The NAICS subsectors are Construction of buildings (236), Heavy and civil engineering construction (237), Specialty trade contractors (238), Building material and garden supply stores (444), Machinery and equipment rental (532), and Mining (212). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 384 construction firms with 1,633 employees paid an average annual wage of \$45,950. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries.⁴⁹ IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Sand Gravel Stone, Heavy Construction, Home Construction, Building Materials and Rentals. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Construction Cluster was further subdivided into The Sub-Clusters and corresponding industries are presented in Table 23.



Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
55, 56, 57, 58, 59, 60, 61	236	Construction of buildings	131	294	\$12,053,995	\$41,000
50, 51, 53, 54,	237	Heavy and civil engineering construction	13	140	\$11,020,759	\$78,720
55 - 63	238	Specialty trade contractors	208	781	\$36,689,254	\$46,977
405	444	Building material and garden supply stores	29	413	\$14,970,130	\$36,247
453	532	Machinery and equipment rental				
29	212	Mining, except oil and gas (QCEW 2017)	3	5	\$302,656	\$60,531
Totals			384	1,633	\$75,036,794	\$45,950

Table 22: Defining the Construction Cluster using NAICS and IMPLAN bridge codes.

⁴⁹ IMPLAN uses CENSUS data and organizational codes for Construction, not NAICS and BLS QCEW.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Sand Gravel Stone	28	Stone mining and quarrying
Sand Gravel Stone	29	Sand and gravel mining
Sand Gravel Stone	211	Cut stone and stone product manufacturing
Heavy Construction	50	Construction of new health care structures
Heavy Construction	51	Construction of new manufacturing structures
Heavy Construction	53	Construction of new educational and vocational structures
Heavy Construction	54	Construction of new highways and streets
Home Construction	55	Construction of new commercial structures, including farm structures
Home Construction	56	Construction of other new nonresidential structures
Home Construction	57	Construction of new single-family residential structures
Home Construction	58	Construction of new multifamily residential structures
Home Construction	59	Construction of other new residential structures
Home Construction	60	Maintenance and repair construction of nonresidential structures
Home Construction	61	Maintenance and repair construction of residential structures
Concrete	204	Ready-mix concrete manufacturing
Building Materials	405	Retail - Building material and garden equipment and supplies stores
Rentals	453	Commercial and industrial machinery and equipment rental and leasing

Table 23: Sub-Clusters and associated industries in Construction.

Economic Impacts

Table 24 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 17 listed IMPLAN industries that comprise the Construction Cluster. The value of output ranged from a low of \$1,595,699 in Cut stone and stone product manufacturing to a high of \$47,855,395 in Construction of other new residential. The total Direct value of output for the Construction Cluster was estimated at \$343,610,055; the Indirect value of output was estimated at \$74,909,314; the Induced value of output was estimated at \$66,057,137. The grand total value of output in the Construction Cluster was estimated at \$484,576,506.

Estimated covered employment ranged from a low of 6.0 in Sand and gravel mining at an average annual wage of \$75,625 to a high of 346.1 in Retail – Building material and equipment stores at an annual average wage of \$42,728. For proprietors, covered employment ranges from a low of 1.7 in Cut stone and stone product manufacturing at an average annual wage of \$29,477 to a high of 140.8 in Construction of new single-family residential at an average annual wage of \$72,796. Total Direct covered employment was estimated at 1,667.7 at an annual average wage of \$49,243; total Direct proprietors was estimated at 643.7 at an annual average wage of \$70,421. Total Indirect covered employment was estimated at 473.5 at an average annual wage of \$53,217; for proprietors it was estimated at 179.1 at an average annual wage of \$22,967. Total Induced covered employment was estimated at 450.0 at an annual average wage of \$42,745; for proprietors it was estimated at 125.8 at an annual average wage of \$26,098. The grand total covered employment was estimated at 2,286.4 at an annual average wage of \$48,833; for proprietors it was 948.6 at an annual average wage of \$55,585.

CONSTRUCTION CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
405	Retail - Building material and garden equipment	\$46,619,485	346.1	10.6	356.7	\$42,728	\$114,164
204	Ready-mix concrete manufacturing	\$6,123,694	11.2	3.1	14.3	\$93,950	\$25,096
50	Construction of new health care structures	\$7,540,689	43.4	21.4	64.8	\$47,136	\$73,408
51	Construction of new manufacturing structures	\$13,055,676	76.2	34.0	110.2	\$48,586	\$72,533
53	Construction of new educational structures	\$19,515,857	111.5	41.1	152.6	\$55,026	\$73,201
54	Construction of new highways and streets	\$25,756,711	116.3	47.6	163.9	\$55,337	\$73,876
55	Construction of new commercial structures	\$27,456,089	167.7	79.3	247.0	\$46,967	\$72,710
56	Construction of other new nonresidential	\$28,581,489	125.0	50.2	175.2	\$56,643	\$72,686
57	Construction of new single-family residential	\$47,356,608	274.0	140.8	414.8	\$47,437	\$72,796
59	Construction of other new residential structures	\$47,855,395	129.4	62.9	192.3	\$48,581	\$73,671
60	Maintenance of nonresidential structures	\$31,417,345	96.6	48.8	145.4	\$47,590	\$73,648
61	Maintenance of residential structures	\$16,111,953	54.4	26.3	80.7	\$46,067	\$65,637
58	Construction of new multifamily residential	\$10,189,543	83.0	42.3	125.3	\$47,471	\$73,367
453	Commercial and industrial equipment rental	\$6,490,101	9.4	11.9	21.3	\$92,122	\$52,966
28	Stone mining and quarrying	\$5,383,279	10.0	13.9	23.9	\$75,984	\$3,182
29	Sand and gravel mining	\$2,560,442	6.0	7.8	13.8	\$75,625	\$4,827
211	Cut stone and stone product manufacturing	\$1,595,699	7.5	1.7	9.2	\$80,025	\$29,477
Totals: Direct Impacts		\$343,610,055	1,667.7	643.7	2,311.4	\$49,243	\$70,421
Totals: Indirect Impacts		\$74,909,314	473.5	179.1	652.6	\$53,217	\$22,967
Totals: Induced Impacts		\$66,057,137	450.0	125.8	575.8	\$42,745	\$26,098
Grand Totals: All Impacts		\$484,576,506	2,286.4	948.6	3,235.0	\$48,833	\$55,585

Table 24: Economic impacts of Construction in 2019 (2021\$).

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 25 for each IMPLAN industry that comprises the Construction Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Commercial and industrial rental and leasing will provide 1.4 additional jobs; at the high end, Construction of new multifamily residential structures would provide an additional 8.1 employees. For proprietors, the low end of expected impacts would be 0.2 in Retail – Building material and equipment stores; at the high end, Construction of new multifamily residential structures would provide an additional 4.1 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$131,393 in Construction of other new residential structures for covered employment; the high end would be \$386,786, in Construction of new multifamily residential structures. For proprietors, the low end would be \$8,237 in Stone mining and quarrying; at the high end \$304,412 in Construction of new multifamily residential structures.

For the Construction Cluster as a whole a \$1,000,000 change in value of Direct output would change covered employment jobs by 4.9; for proprietors it would be 1.9. The corresponding change in wages would be \$238,994 and \$131,929 respectively. The Indirect and Induced multiplier affects for the

Construction Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 1.4 and 0.5 respectively with corresponding changes in total annual wages of \$73,338 and \$11,969. For Induced multipliers, the changes would be 1.3 employees and 0.4 proprietors with corresponding changes in total annual wages of \$55,986 and \$9,554. In total, a change in \$1,000,000 in value added will change total covered employment by 7.5 and annual wages by \$368,262; for proprietors the changes will be 2.8 and \$153,452 respectively.

MULTIPLIERS CONSTRUCTION CLUSTER		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
405	Retail - Building material and garden equipment	7.4	0.2	\$317,241	\$25,866
204	Ready-mix concrete manufacturing	1.8	0.5	\$172,114	\$12,629
50	Construction of new health care structures	5.8	2.8	\$271,278	\$208,339
51	Construction of new manufacturing structures	5.8	2.6	\$283,392	\$189,168
53	Construction of new educational structures	5.7	2.1	\$314,264	\$154,311
54	Construction of new highways and streets	4.5	1.8	\$249,963	\$136,394
55	Construction of new commercial structures	6.1	2.9	\$286,885	\$209,985
56	Construction of other new nonresidential	4.4	1.8	\$247,727	\$127,664
57	Construction of new single-family residential	5.8	3.0	\$274,464	\$216,437
59	Construction of other new residential structures	2.7	1.3	\$131,393	\$96,785
60	Maintenance of nonresidential structures	3.1	1.6	\$146,320	\$114,408
61	Maintenance of residential structures	3.4	1.6	\$155,398	\$107,340
58	Construction of new multifamily residential	8.1	4.1	\$386,786	\$304,412
453	Commercial and industrial equipment rental	1.4	1.8	\$133,150	\$97,276
28	Stone mining and quarrying	1.9	2.6	\$140,618	\$8,237
29	Sand and gravel mining	2.3	3.1	\$176,199	\$14,770
211	Cut stone and stone product manufacturing	4.7	1.0	\$378,179	\$30,648
Totals: Direct Multiplier Impacts		4.9	1.9	\$238,994	\$131,929
Totals: Indirect Multiplier Impacts		1.4	0.5	\$73,338	\$11,969
Totals: Induced Multiplier Impacts		1.3	0.4	\$55,986	\$9,554
Grand Totals: All Multiplier Impacts		7.5	2.8	\$368,262	\$153,452

Table 25: Employment and wage multipliers in Construction from a \$1,000,000 change in value of output in 2019 (2021\$).

Indirect Economic Impacts

Table 26 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Retail – Building material and garden equipment, with 105.8 covered employees and 3.2 proprietors at annual average wages of \$41,462 and \$3,484 respectively, driven by supply chain expenditures in Home Construction. Overall, the top 15 Indirect economic impacts are \$35,713,005 in value of output, or 48 percent of the total value of output in the Construction Cluster supply chain. For covered employment, it's 152.7 supply chain jobs at an

annual average wage of \$30,519, or 32 percent of the total Indirect covered employment. For proprietors, it's 85.9 jobs at an annual average wage of \$11,252, or 48 percent of the total Indirect proprietors.

CONSTRUCTION CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
405	Retail - Building material and garden equipment	Home Construction	\$14,250,875	105.8	3.2	109.0	\$41,462	\$3,484
447	Other real estate	Home Construction	\$4,182,523	3.3	20.6	23.9	\$4,910	\$107,049
447	Other real estate	Building Materials	\$2,831,320	2.2	14.0	16.2	\$4,910	\$107,049
417	Truck transportation	Home Construction	\$2,151,459	10.5	2.1	12.6	\$54,699	\$19,310
457	Architectural, engineering, and related services	Home Construction	\$1,058,035	2.8	7.6	10.4	\$13,166	\$37,778
28	Stone mining and quarrying	Home Construction	\$1,994,909	3.7	5.2	8.9	\$31,673	\$4,451
477	Landscape and horticultural services	Home Construction	\$698,113	5.3	3.4	8.8	\$19,995	\$18,521
396	Wholesale - Other durable goods merchant	Home Construction	\$2,110,459	6.7	1.8	8.5	\$55,207	\$4,963
455	Legal services	Home Construction	\$1,008,962	1.5	5.3	6.8	\$12,424	\$41,490
204	Ready-mix concrete manufacturing	Home Construction	\$2,851,115	5.2	1.4	6.7	\$73,704	\$6,894
456	Accounting, tax preparation, bookkeeping	Home Construction	\$507,547	2.0	4.0	6.0	\$13,688	\$28,922
10	All other crop farming	Home Construction	\$25,494	0.6	4.8	5.4	\$4,024	(\$2,216)
465	Advertising, public relations, related services	Building Materials	\$585,226	1.1	4.1	5.2	\$10,037	\$33,567
447	Other real estate	Heavy Construction	\$896,326	0.7	4.4	5.1	\$4,910	\$107,049
465	Advertising, public relations, and related services	Home Construction	\$560,645	1.1	3.9	5.0	\$10,037	\$33,567
Totals for the Top 15 Indirect Economic Impacts			\$35,713,005	152.7	85.9	238.5	\$30,519	\$11,252
Percent of Total Indirect Economic Impacts			48%	32%	48%	37%		

Table 26: Top 15 Indirect economic impacts by employment for the Construction Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 27 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occur in Full-service restaurants, with 16.7 covered employees and 0.8 proprietors at annual average wages of \$27,073 and \$1,517 respectively, driven by expenditures in Home Construction. Overall, the top 15 Induced economic impacts are \$12,829,075 in value of output, or 19 percent of the total Induced contributions of the Construction Cluster. For covered employment, it's 110.8 jobs at an annual average wage of \$30,260, or 25 percent of the total Induced covered employment. For proprietors, it's 23.2 jobs at an annual average wage of \$56352, or 18 percent of the total Induced proprietors.

CONSTRUCTION CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Home Construction	\$1,364,880	16.7	0.8	17.5	\$27,073	\$1,517
493	Individual and family services	Home Construction	\$518,473	12.1	1.3	13.4	\$26,231	\$1,727
510	Limited-service restaurants	Home Construction	\$1,133,588	11.5	0.6	12.1	\$24,300	\$1,824
406	Retail - Food and beverage stores	Home Construction	\$893,855	9.7	0.4	10.1	\$40,190	\$512
491	Nursing and community care facilities	Home Construction	\$830,216	9.2	0.3	9.5	\$45,692	\$23
447	Other real estate	Home Construction	\$1,629,428	1.3	8.0	9.3	\$4,910	\$107,049
411	Retail - General merchandise stores	Home Construction	\$962,012	9.1	0.1	9.2	\$45,670	\$92
525	Private households	Home Construction	\$93,175	9.2	0.0	9.2	\$10,129	\$0
511	All other food and drinking places	Home Construction	\$513,139	6.5	0.3	6.9	\$30,793	\$1,474
509	Full-service restaurants	Heavy Construction	\$509,481	6.2	0.3	6.5	\$27,073	\$1,517
412	Retail - Miscellaneous store retailers	Home Construction	\$397,427	4.0	2.4	6.4	\$20,144	\$16,337
413	Retail - Nonstore retailers	Home Construction	\$787,596	0.3	6.1	6.4	\$1,992	\$143,938
512	Automotive repair and maintenance	Home Construction	\$600,176	5.0	1.0	6.0	\$41,316	\$24,250
483	Offices of physicians	Home Construction	\$830,276	4.2	1.7	5.8	\$66,773	\$30,671
534	Other local government enterprises	Home Construction	\$1,765,354	5.6	0.0	5.6	\$65,915	\$0
Totals for the Top 15 Induced Economic Impacts			\$12,829,075	110.8	23.2	133.9	\$30,260	\$5,352
Percent of Total Indirect Economic Impacts			19%	25%	18%	23%		

Table 27: Top 15 Induced economic impacts by employment for the Construction Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 28. The results indicate 48 percent of respondents in the Construction Cluster believe Clallam County is favorable for doing business. 58 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers and increased cost of materials. Excessive government regulation and proximity to vendors was also listed as a concern.

In the supply chain, 55 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 40 percent of respondents indicated that 40 to 80 percent of expenditures for goods and materials are made outside the County; for services, 13 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, consumables and supplies, and specialty-niche products as goods and materials they would like to buy locally. For services, its engineering, repair and maintenance, and architectural services.

Business Climate For Construction Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
48% Favorable	58% Likely	Lack of Qualified Workers - 29% Increase Cost of Materials -25%	Excessive government regulation; Proximity to vendors
Supply Chain Possibilities for Construction in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials go to businesses outside of Clallam	What percent of your expenditures for services go to businesses located outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
55% Yes 20% Maybe 20% No	0 to 20% of Expenditures - 40% 30% to 50% of Expenditures - 20% 40% to 80% of Expenditures - 40%	0 to 20% of Expenditures - 67% 30% to 50% of Expenditures - 20% 60% to 100% of Expenditures - 13%	Equipment/durable goods Consumables and Supplies Specialty-niche products
			Engineering Repair and Maintenance Architectural

Table 28: Summary results for Construction from the EDC Employer Survey, 2021-2.



FINANCE, REAL ESTATE AND INSURANCE

EDC

CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL

ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY

When Prosperity Matters
2023



FINANCE, REAL ESTATE AND INSURANCE

The Finance, Real Estate and Insurance Cluster was defined using NAICS at the 3-digit level, and is illustrated in Table 29. The NAICS subsectors are Credit intermediation and related activities (522), Securities and commodity contracts intermediation (523), Insurance carriers, except direct life (524), Real estate (531), Rental and leasing services (5342), and Financial services and insurance (533). The BLS reported a total of 132 finance, real estate and insurance firms with 568 employees paid an average annual wage of \$60,331. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Finance, Legal and Real Estate. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 30.

FINANCE, REAL ESTATE AND INSURANCE CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
440	522	Credit intermediation and related activities	21	244	\$17,575,986	\$72,033
443	523	Securities, commodity contracts, investments	15	60	\$7,188,933	\$119,816
444, 445, 446	524	Insurance carriers and related activities	19	85	\$3,732,433	\$43,911
448	531	Real estate	77	179	\$5,770,657	\$32,238
447, 448, 449	532	Rental and leasing services	*			
455	533	Financial services and insurance	*			
Totals			132	568	\$34,268,009	\$60,331

Table 29: Defining the Finance, Real Estate and Insurance Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Finance	440	Securities and commodity contracts intermediation and brokerage
Finance	444	Insurance carriers, except direct life
Finance	445	Insurance agencies, brokerages, and related activities
Finance	446	Funds, trusts, and other financial vehicles
Legal	455	Legal services
Real Estate	447	Other real estate
Real Estate	448	Tenant-occupied housing

Table 30: Sub-Clusters and associated industries in Finance, Real Estate and Insurance.

Economic Impacts

Table 31 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 7 listed IMPLAN industries that comprise the Finance, Real Estate and Insurance Cluster. The value of output ranged from a low of \$8,770,465 in Securities and commodity contracts to a high of \$211,068,208 in Other real estate. The total Direct value of output for the Finance, Real Estate and Insurance Cluster was estimated at \$383,539,667; the Indirect value of output was estimate at \$216,377,520; the Induced value of output was estimated at \$40,315,269. The grand total value of output in the Finance, Real Estate and Insurance Cluster was estimated at \$640,232,457.

FINANCE, REAL ESTATE AND INSURANCE CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
440	Securities and commodity contracts intermediation...	\$8,770,465	5.1	106.5	111.6	\$109,017	\$2,259
444	Insurance carriers, except direct life	\$16,332,973	22.0	13.4	35.4	\$55,653	\$4,825
445	Insurance agencies, brokerages, and related activities	\$27,855,311	80.8	38.7	119.5	\$51,078	\$3,640
446	Funds, trusts, and other financial vehicles	\$36,284,252	75.2	32.6	107.8	\$86,123	\$2,606
455	Legal services	\$57,317,515	84.2	302.6	386.8	\$57,085	\$11,542
447	Other real estate	\$211,068,208	165.1	1,040.3	1,205.4	\$35,851	\$16,990
448	Tenant-occupied housing	\$25,910,942	24.7	94.2	118.9	\$22,840	\$18,470
Totals: Direct Impacts		\$383,539,667	456.9	1,628.5	2,085.4	\$51,785	\$14,393
Totals: Indirect Impacts		\$216,377,520	639.0	677.0	1,316.1	\$48,084	\$16,893
Totals: Induced Impacts		\$40,315,269	197.9	76.8	274.7	\$42,724	\$26,080
Grand Totals: All Impacts		\$640,232,457	1,293.8	2,382.3	3,676.2	\$48,571	\$15,481

Table 31: Economic impacts of Finance, Real Estate and Insurance in 2019 (2021\$).

Estimated covered employment ranged from a low of 5.1 in Securities and commodity contracts at an average annual wage of \$109,017 to a high of 165.1 in Other real estate at an annual average wage of \$35,851. For proprietors, employment ranges from a low of 13.4 in Insurance carriers at an average annual wage of \$4,825 to a high of 1,040.3 in Other real estate at an average annual wage of \$16,990. Total Direct covered employment was estimated at 456.9 at an annual average wage of \$51,785; total Direct proprietors was estimated at 1,628.5 at an annual average wage of \$16,893. Total Indirect covered employment was estimated at 639.0 at an average annual wage of \$48,084; for proprietors it was estimated at 677.0 at an average annual wage of \$16,893. Total Induced covered employment was estimated at 197.9 at an annual average wage of \$42,724; for proprietors it was estimated at 76.8 at an annual average wage of \$26,080. The grand total covered employment was estimated at 1,293.8 at an annual average wage of \$48,571; for proprietors it was 2,382.3 at an annual average wage of \$15,481.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per

\$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 32 for each IMPLAN industry that comprises the Finance, Real Estate and Insurance Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Securities and commodity contracts will provide 0.6 additional jobs; at the high end, Insurance agencies and brokerages would provide an additional 2.9 employees. For proprietors, the low end of expected impacts would be 0.8 in Insurance carriers; at the high end, Securities and commodity contracts would provide an additional 12.1 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$21,746 in Tenant-occupied housing for covered employment; the high end would be \$178,420, in Funds, trusts, and other financial vehicles. For proprietors, the low end would be \$2,343 in Funds, trusts, and other financial vehicles; at the high end \$83,737 in Other real estate.

MULTIPLIERS FINANCE, REAL ESTATE AND INSURANCE		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
440	Securities and commodity contracts intermediation...	0.6	12.1	\$62,949	\$27,442
444	Insurance carriers, except direct life	1.3	0.8	\$74,843	\$3,969
445	Insurance agencies, brokerages, and related activities	2.9	1.4	\$148,076	\$5,063
446	Funds, trusts, and other financial vehicles	2.1	0.9	\$178,420	\$2,343
455	Legal services	1.5	5.3	\$83,845	\$60,939
447	Other real estate	0.8	4.9	\$28,044	\$83,737
448	Tenant-occupied housing	1.0	3.6	\$21,746	\$67,169
Totals: Direct Multiplier Impacts		1.2	4.2	\$61,692	\$61,113
Totals: Indirect Multiplier Impacts		1.7	1.8	\$80,114	\$29,821
Totals: Induced Multiplier Impacts		0.5	0.2	\$22,044	\$5,223
Grand Totals: All Multiplier Impacts		3.4	6.2	\$163,850	\$96,157

Table 32: Economic multipliers of Finance, Real Estate and Insurance in 2019 (2021\$).

For the Finance, Real Estate and Insurance Cluster as a whole a \$1,000,000 change in value of Direct output would change covered employment jobs by 1.2; for proprietors it would be 4.2. The corresponding change in wages would be \$61,692 and \$61,113 respectively. The Indirect and Induced multiplier affects for the Finance, Real Estate and Insurance Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 1.7 and 1.8 respectively with corresponding changes in total annual wages of \$80,114 and \$29,821. For Induced multipliers, the changes would be 0.5 employees and 0.2 proprietors with corresponding changes in total annual wages of \$163,850 and \$96,157. In total, a change in \$1,000,000 in value added will change total covered employment by 3.4 and annual wages by \$163,850; for proprietors the changes will be 6.2 and \$96,157 respectively.

Indirect Economic Impacts

Table 33 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 30.6 covered employees and 192.7 proprietors at annual average wages of \$35,851 and \$3,640 respectively, driven by supply chain expenditures in Real Estate. Overall, the top 15 Indirect economic impacts are

\$154,847,532 in value of output, or 72 percent of the total value of output in the Finance, Real Estate and Insurance Cluster supply chain. For covered employment, it's 418.8 supply chain jobs at an annual average wage of \$43,517, or 65 percent of the total Indirect covered employment. For proprietors, it's 500.4 jobs at an annual average wage of \$14,843, or 74 percent of the total Indirect proprietors.

FINANCE, REAL ESTATE AND INSURANCE CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Real Estate	\$39,096,673	30.6	192.7	223.3	\$35,851	\$16,990
445	Insurance agencies, brokerages and related	Finance	\$51,183,450	148.4	71.2	219.6	\$51,078	\$3,640
476	Services to buildings	Real Estate	\$5,112,548	47.5	23.5	71.0	\$21,193	\$29,085
477	Landscape and horticultural services	Real Estate	\$4,856,906	37.2	23.9	61.1	\$32,835	\$28,841
509	Full-service restaurants	Real Estate	\$4,750,808	58.3	2.8	61.1	\$28,370	\$31,668
442	Other financial investment activities	Finance	\$6,771,964	2.4	42.8	45.2	\$80,111	\$2,272
447	Other real estate	Legal	\$5,960,691	4.7	29.4	34.0	\$35,851	\$16,990
60	Maintenance of nonresidential structures	Real Estate	\$7,049,954	21.7	11.0	32.6	\$47,590	\$73,648
440	Securities and commodity contracts, brokerage	Finance	\$2,474,883	1.4	30.1	31.5	\$109,017	\$2,259
455	Legal services	Real Estate	\$4,339,549	6.4	22.9	29.3	\$57,085	\$11,542
534	Other local government enterprises	Real Estate	\$7,211,093	22.8	0.0	22.8	\$65,915	#DIV/0!
441	Monetary authorities and depository credit	Real Estate	\$7,970,278	20.9	1.5	22.4	\$72,479	\$20,186
447	Other real estate	Finance	\$3,904,314	3.1	19.2	22.3	\$35,851	\$16,990
457	Architectural, engineering, and related services	Real Estate	\$1,997,801	5.3	14.3	19.7	\$48,718	\$13,991
465	Advertising, public relations, related services	Real Estate	\$2,166,619	4.2	15.2	19.4	\$46,239	\$9,307
Totals for the Top 15 Indirect Economic Impacts			\$154,847,532	414.8	500.4	915.2	\$43,517	\$14,843
Percent of Total Indirect Economic Impacts			72%	65%	74%	70%		

Table 33: Top 15 Indirect economic impacts by employment for the Finance, Real Estate and Insurance Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 34 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 10.4 covered employees and 0.5 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Real estate. Overall, the top 15 Induced economic impacts are \$6,939,079 in value of output, or 17 percent of the total Induced contributions of the Finance, Real Estate and Insurance Cluster. For covered employment, it's 71.0 jobs at an annual average wage of \$31,960, or 36 percent of the total Induced covered employment. For proprietors, it's 14.0 jobs at an annual average wage of \$21,691, or 18 percent of the total Induced proprietors.

FINANCE, REAL ESTATE AND INSURANCE CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Real Estate	\$851,334	10.4	0.5	10.9	\$28,370	\$31,668
493	Individual and family services	Real Estate	\$325,797	7.6	0.8	8.4	\$28,967	\$16,551
510	Limited-service restaurants	Real Estate	\$701,766	7.1	0.4	7.5	\$25,585	\$34,463
406	Retail - Food and beverage stores	Real Estate	\$554,621	6.0	0.2	6.3	\$41,766	\$13,043
525	Private households	Real Estate	\$59,205	5.8	0.0	5.8	\$10,129	#DIV/0!
447	Other real estate	Real Estate	\$1,013,991	0.8	5.0	5.8	\$35,851	\$16,990
491	Nursing and community care facilities	Real Estate	\$503,307	5.6	0.2	5.7	\$47,213	\$689
411	Retail - General merchandise stores	Real Estate	\$596,966	5.7	0.1	5.7	\$46,073	\$10,392
509	Full-service restaurants	Finance	\$407,299	5.0	0.2	5.2	\$28,370	\$31,668
511	All other food and drinking places	Real Estate	\$320,423	4.1	0.2	4.3	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Real Estate	\$246,616	2.5	1.5	4.0	\$32,109	\$27,505
413	Retail - Nonstore retailers	Real Estate	\$488,803	0.2	3.8	4.0	\$37,112	\$8,162
493	Individual and family services	Finance	\$152,520	3.6	0.4	3.9	\$28,967	\$16,551
512	Automotive repair and maintenance	Real Estate	\$373,300	3.1	0.6	3.7	\$49,475	\$122,800
510	Limited-service restaurants	Finance	\$343,131	3.5	0.2	3.7	\$25,585	\$34,463
Totals for the Top 15 Induced Economic Impacts			\$6,939,079	71.0	14.0	85.0	\$31,960	\$21,691
Percent of Total Induced Economic Impacts			17%	36%	18%	31%		

Table 34: Top 15 Induced economic impacts by employment for the Finance, Real Estate and Insurance Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 35. The results indicate 55 percent of respondents in the Finance, Real Estate and Insurance Cluster believe Clallam County is favorable for doing business. 55 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers and increased cost of materials, and excessive government regulation.

In the supply chain, 33 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 26 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 50 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in consumables and supplies as goods and materials they would like to buy locally. For services, repair and maintenance, shipping delivery and financial.

Business Climate For Finance, Real Estate and Insurance Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
55% Favorable	55% Likely	Lack of Qualified Workers - 35% Increased Cost of Materials - 17% Excessive Govt. Regulation- 13%	None
Supply Chain Possibilities for Finance, Real Estate and Insurance in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
33% Yes 11% Maybe 56% No	0 to 20% of Expenditures - 24% 30% to 50% of Expenditures - 50% 60% to 80% of Expenditures - 26%	0 to 20% of Expenditures - 50% 30% to 50% of Expenditures - 0 60% to 100% of Expenditures - 50%	Consumables and supplies
			Repair and Maintenance Shipping Delivery, Financial
Table 35: Summary results for Finance, Real Estate and Insurance from the EDC Employer Survey, 2021-2.			



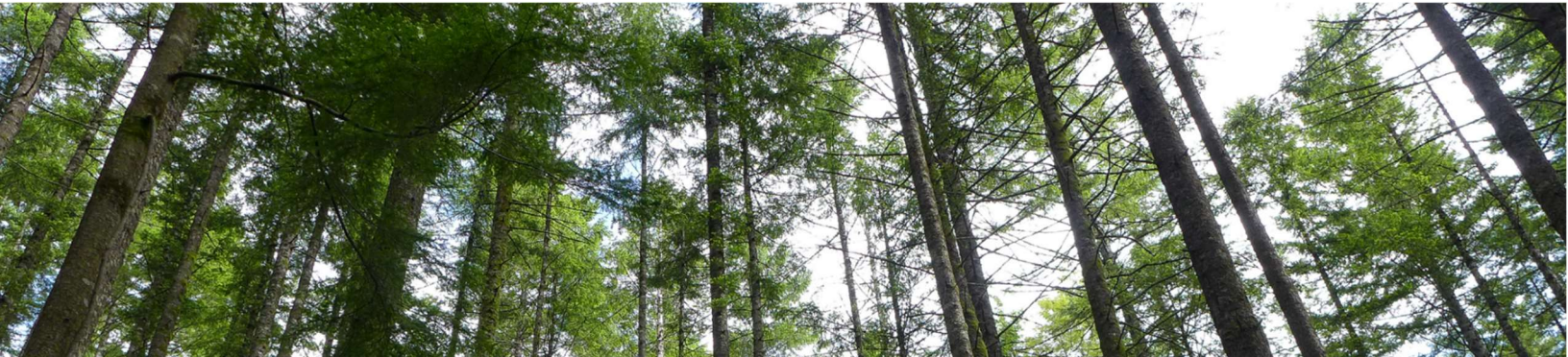
FOREST PRODUCTS

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

**ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY**

**When Prosperity Matters
2023**



FOREST PRODUCTS

The Forest Products Cluster was defined using NAICS at the 3-digit level, illustrated in Table 36. The NAICS subsectors are Forestry and logging (113), Agriculture and Forestry support activities (115), Wood product manufacturing (321), Paper manufacturing (322),⁵⁰ and Furniture and related product manufacturing (337). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 61 Forest Products firms with 890 employees paid an average annual wage of \$69,186. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Forestry, Logging, Wood Manufacturing, and Wood Products. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 37.



FOREST PRODUCTS CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
15, 16	113	Forestry and logging	36	401	\$25,645,638	\$63,954
19	115	Agriculture and forestry support activities (QCEW 2017)	10	23	\$1,114,452	\$48,454
132 - 143	321	Wood product manufacturing	8	240	\$19,115,679	\$79,649
144 - 151	322	Paper manufacturing (2021)	1	200	\$14,659,600	\$73,298
365 - 375	337	Furniture and related product manufacturing	6	26	\$1,040,447	\$40,017
Totals			61	890	\$61,575,816	\$69,186

Table 36: Defining the Forest Products Cluster using NAICS and IMPLAN bridge codes.

⁵⁰ While BLS QCEW lists Paper manufacturing as proprietary, McKinley Paper generously provided employment and wage data for 2021, deflated to 2019\$).

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Forestry	15	Forestry, forest products, and timber tract production
Forestry	19	Support activities for agriculture and forestry
Logging	16	Commercial logging
Wood Manufacturing	132	Sawmills
Wood Manufacturing	143	All other miscellaneous wood product manufacturing
Wood Manufacturing	145	Paper mills
Wood Products	365	Wood kitchen cabinet and countertop manufacturing
Wood Products	367	Nonupholstered wood household furniture manufacturing
Wood Products	373	Showcase, partition, shelving, and locker manufacturing

Table 37: Sub-Clusters and associated industries in Forest Products.

Economic Impacts

Table 38 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 9 listed IMPLAN industries that comprise the Forest Products Cluster. The value of output ranged from a low of \$139,775 in Nonupholstered wood house furniture manufacturing to a high of \$108,440,254 in Paper manufacturing. The total Direct value of output for Forest Products Cluster was estimated at \$263,788,185; the Indirect value of output was estimate at \$71,869,984; the Induced value of output was estimated at \$49,552,689. The grand total value of output in the Forest Products Cluster was estimated at \$385,210,858.

FOREST PRODUCTS CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
15	Forestry, forest products, and timber tract prep	\$4,514,857	36.7	2.3	39.0	\$89,228	\$260,829
19	Support activities for agriculture and forestry	\$6,392,091	55.3	56.2	111.5	\$62,281	\$38,627
16	Commercial logging	\$38,148,618	329.1	16.5	345.6	\$75,876	\$294,474
132	Sawmills	\$98,744,378	211.5	67.8	279.3	\$98,381	\$2,833
143	All other miscellaneous wood product manuf	\$2,618,249	9.3	1.9	11.2	\$65,302	\$3,133
145	Paper mills	\$108,440,254	200.0	0.0	200.0	\$84,205	\$0
365	Wood kitchen cabinet and countertop manu	\$4,202,543	24.8	3.7	28.5	\$47,812	\$17,789
367	Nonupholstered wood household furniture manuf	\$139,775	0.9	0.0	0.9	\$46,257	\$0
373	Showcase, partition, shelving, and locker manuf	\$587,420	2.4	0.4	2.8	\$53,262	\$11,263
Totals: Direct Impacts		\$263,788,185	870.1	148.7	1,018.8	\$81,953	\$53,087
Totals: Indirect Impacts		\$71,869,984	385.5	155.4	540.9	\$70,594	\$43,861
Totals: Induced Impacts		\$49,552,689	243.3	94.1	337.4	\$42,827	\$26,169
Grand Totals: All Impacts		\$385,210,858	1,498.8	398.3	1,897.1	\$72,681	\$43,125

Table 38: Economic impacts of Forest Products in 2019 (2021\$).

Estimated covered employment ranged from a low of 0.9 in Nonupholstered wood household furniture manufacturing at an average annual wage of \$46,257 to a high of 329.1 in Commercial logging at an annual average wage of \$75,876. For proprietors, employment ranges from a low of 0.4 in Showcase, partition, shelving manufacturing at an average annual wage of \$11,263 to a high of 67.8 in Sawmills at an average annual wage of \$2,833. Total Direct covered employment was estimated at 870.1 at an annual average wage of \$81,953; total Direct proprietors was estimated at 148.7 at an annual average wage of \$53,087. Total Indirect covered employment was estimated at 385.5 at an average annual wage of \$70,594; for proprietors it was estimated at 155.4 at an average annual wage of \$43,8614. Total Induced covered employment was estimated at 243.3 at an annual average wage of \$42,827; for proprietors it was estimated at 94.1 at an annual average wage of \$26,169. The grand total covered employment was estimated at 1,498.8 at an annual average wage of \$72,681; for proprietors it was 398.3 at an annual average wage of \$43,125.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 39 for each IMPLAN industry that comprises the Forest Products Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Paper mills will provide 1.8 additional jobs; at the high end, Support activities would provide an additional 8.7 employees. For proprietors, the low end of expected impacts would be 0.4 in Commercial logging; at the high end, Support activities would provide an additional 8.8 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$155,303 in Paper mills for covered employment; the high end would be \$725,035 in Forestry and timber tract prep. For proprietors, the low end would be \$1,945 in Saw mills; at the high end \$339,339 in Forestry and timber tract preparation.

MULTIPLIERS FOREST PRODUCTS		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
15	Forestry, forest products, and timber tract prep	8.1	0.5	\$725,035	\$133,668
19	Support activities for agriculture and forestry	8.7	8.8	\$539,255	\$339,339
16	Commercial logging	8.6	0.4	\$654,588	\$127,272
132	Sawmills	2.1	0.7	\$210,734	\$1,945
143	All other miscellaneous wood product manuf	3.6	0.7	\$231,998	\$2,272
145	Paper mills	1.8	0.0	\$155,303	\$0
365	Wood kitchen cabinet and countertop manuf	5.9	0.9	\$282,700	\$15,457
367	Nonupholstered wood household furniture manuf	6.4	0.0	\$297,841	\$0
373	Showcase, partition, shelving, and locker manuf	4.0	0.7	\$214,219	\$8,387
Totals: Direct Multiplier Impacts		3.3	0.6	\$270,311	\$29,932
Totals: Indirect Multiplier Impacts		1.5	0.6	\$103,155	\$25,838
Totals: Induced Multiplier Impacts		0.9	0.4	\$39,496	\$9,338
Grand Totals: All Multiplier Impacts		5.7	1.5	\$412,962	\$65,108

Table 39: Economic multipliers of Forest Products in 2019 (2021\$).

For the Forest Products Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 3.3; for proprietors it would be 0.6. The corresponding change in wages would be \$270,311 and \$29,932 respectively. The Indirect and Induced multiplier affects for the Forest Products Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 1.5 and 0.6 respectively with corresponding changes in total annual wages of \$103,155 and \$25,838. For Induced multipliers, the changes would be 0.9 employees and 0.4 proprietors with corresponding changes in total annual wages of \$39,496 and \$9,338. In total, a change in \$1,000,000 in value added will change total covered employment by 5.7 and annual wages by \$412,962; for proprietors the changes will be 1.5 and \$65,108 respectively.

Indirect Economic Impacts

Table 40 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Commercial logging, with 164.5 covered employees and 8.2 proprietors at annual average wages of \$75,876 and \$294,474 respectively, driven by supply chain expenditures in Wood Manufacturing. Overall, the top 15 Indirect economic impacts are \$50,349,390 in value of output, or 70 percent of the total value of output in the Forest Products Cluster supply chain. For covered employment, it's 312.9 supply chain jobs at an annual average wage of \$72,601, or 81 percent of the total Indirect covered employment. For proprietors, it's 107.5 jobs at an annual average wage of \$52,434, or 69 percent of the total Indirect proprietors.

FOREST PRODUCTS CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
16	Commercial logging	Wood Manufacturing	\$19,062,784	164.5	8.2	172.7	\$75,876	\$294,474
19	Support activities for agriculture and forestry	Logging	\$3,668,820	31.8	32.2	64.0	\$62,281	\$38,627
396	Wholesale - Other durable goods merchant	Wood Manufacturing	\$8,397,598	26.8	7.1	33.9	\$69,815	\$18,756
19	Support activities for agriculture and forestry	Wood Manufacturing	\$1,834,060	15.9	16.1	32.0	\$62,281	\$38,627
417	Truck transportation	Wood Manufacturing	\$3,746,658	18.3	3.7	22.0	\$65,827	\$94,914
132	Sawmills	Wood Manufacturing	\$5,900,129	12.6	4.1	16.7	\$98,381	\$2,833
15	Forestry, forest products, and timber tract	Logging	\$1,728,044	14.0	0.9	14.9	\$89,228	\$260,829
469	Management of companies and enterprises	Wood Manufacturing	\$1,463,445	4.8	5.2	10.0	\$86,294	-\$167
10	All other crop farming	Logging	\$43,239	1.1	8.1	9.1	\$34,517	-\$293
447	Other real estate	Wood Manufacturing	\$1,570,171	1.2	7.7	9.0	\$35,851	\$16,990
19	Support activities for agriculture and forestry	Forestry	\$490,936	4.3	4.3	8.6	\$62,281	\$38,627
15	Forestry, forest products, and timber tract	Wood Manufacturing	\$863,782	7.0	0.4	7.5	\$89,228	\$260,830
456	Accounting, tax preparation, bookkeeping	Wood Manufacturing	\$597,771	2.4	4.7	7.1	\$40,996	\$14,497
476	Services to buildings	Wood Manufacturing	\$498,836	4.6	2.3	6.9	\$21,193	\$29,086
477	Landscape and horticultural services	Wood Manufacturing	\$483,116	3.7	2.4	6.1	\$32,835	\$28,841
Totals for the Top 15 Indirect Economic Impacts			\$50,349,390	312.9	107.5	420.4	\$72,601	\$52,434
Percent of Total Indirect Economic Impacts			70%	81%	69%	78%		

Table 40: Top 15 Indirect economic impacts by employment for the Forest Products Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 41 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 12.7 covered employees and 0.6 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Wood Manufacturing. Overall, the top 15 Induced economic impacts are \$8,699,227 in value of output, or 18 percent of the total Induced contributions of the Forest Products Cluster. For covered employment, it's 88.9 jobs at an annual average wage of \$32,097, or 37 percent of the total Induced covered employment. For proprietors, it's 17.3 jobs at an annual average wage of \$21,683, or 18 percent of the total Induced proprietors.

FOREST PRODUCTS CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Wood Manufacturing	\$1,037,568	12.7	0.6	13.3	\$28,370	\$31,668
493	Individual and family services	Wood Manufacturing	\$388,402	9.1	0.9	10.0	\$28,967	\$16,550
510	Limited-service restaurants	Wood Manufacturing	\$874,415	8.9	0.5	9.3	\$25,585	\$34,463
406	Retail - Food and beverage stores	Wood Manufacturing	\$686,473	7.5	0.3	7.8	\$41,766	\$13,045
491	Nursing and community care facilities	Wood Manufacturing	\$665,945	7.3	0.2	7.6	\$47,213	\$688
509	Full-service restaurants	Logging	\$558,738	6.9	0.3	7.2	\$28,369	\$31,669
447	Other real estate	Wood Manufacturing	\$1,244,317	1.0	6.1	7.1	\$35,850	\$16,990
411	Retail - General merchandise stores	Wood Manufacturing	\$738,686	7.0	0.1	7.1	\$46,073	\$10,384
525	Private households	Wood Manufacturing	\$68,238	6.7	0.0	6.7	\$10,129	\$0
493	Individual and family services	Logging	\$210,272	4.9	0.5	5.4	\$28,967	\$16,550
511	All other food and drinking places	Wood Manufacturing	\$389,233	5.0	0.2	5.2	\$32,281	\$30,515
510	Limited-service restaurants	Logging	\$468,409	4.8	0.3	5.0	\$25,585	\$34,465
412	Retail - Miscellaneous store retailers	Wood Manufacturing	\$305,175	3.1	1.8	4.9	\$32,109	\$27,505
413	Retail - Nonstore retailers	Wood Manufacturing	\$604,593	0.3	4.6	4.9	\$37,110	\$8,162
512	Automotive repair and maintenance	Wood Manufacturing	\$458,764	3.8	0.8	4.6	\$49,475	\$122,800
Totals for the Top 15 Induced Economic Impacts			\$8,699,227	88.9	17.3	106.2	\$32,097	\$21,683
Percent of Total Induced Economic Impacts			18%	37%	18%	31%		

Table 41: Top 15 Induced economic impacts by employment for the Forest Products Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 42. The results indicate 33 percent of respondents in the Forest Products Cluster believe Clallam County is favorable for doing business. 76 percent of respondents expect to expand operations in the next three years. The top challenges are increased cost of materials, lack of qualified workers, and excessive government regulation. Transportation was also listed as a concern.

In the supply chain, 33 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 67 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 67 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, specialty-niche products, and raw materials as goods and materials they would like to buy locally. For services, respondents expressed an interest in repair and maintenance, engineering, information technology, and marketing.

Business Climate For Forest Products Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
33% Favorable	76% Likely	Increased Cost of Materials - 26% Lack of Qualified Workers - 13% Excessive Govt. Regulation - 13%	Transportation infrastructure (3)
Supply Chain Possibilities for Forest Products in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
33% Yes 67% Maybe 0% No	0 to 20% of Expenditures - 0 30% to 50% of Expenditures - 33% 60% to 80% of Expenditures - 67%	0 to 20% of Expenditures - 0 30% to 50% of Expenditures - 33% 60% to 100% of Expenditures - 67%	Equipment and durable goods Specialty-niche products Raw Materials
			Repair and Maintenance Engineering, Marketing Information Technology

Table 42: Summary results for Forest Products from the EDC Employer Survey, 2021-2.

A photograph of four healthcare professionals in blue scrubs walking through a hospital hallway. A man in the center is looking at a tablet and talking to two women. A fourth person is partially visible on the right. A wheelchair is in the background.

HEALTH CARE AND ASSISTANCE

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HEALTH CARE AND ASSISTANCE

The Health Care and Assistance Cluster was defined using NAICS at the 3-digit level, illustrated in Table 43. The NAICS subsectors are Ambulatory health care services (621), Hospitals (622),⁵¹ Nursing and residential care facilities (623), and Other industries. Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 550 Health Care and Assistance firms with 4,777 employees paid an average annual wage of \$51,409. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Services, Hospitals and Assistance. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 44.

HEALTH CARE AND ASSISTANCE CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
489	621	Ambulatory health care services	112	954	\$54,063,741	\$56,671
490	622	Hospitals (OMC, Forks Hospital, 2021)	2	1,968	\$132,473,245	\$67,314
491	623	Nursing and residential care facilities	23	741	\$30,349,029	\$40,957
489		Other industries	413	1,114	\$28,694,832	\$25,758
Totals			550	4,777	\$245,580,847	\$51,409

Table 43: Defining the Health Care and Assistance Cluster using NAICS and IMPLAN bridge codes.



⁵¹ QCEW reports Hospitals as proprietary. IMPLAN estimates total employment at 200. Inclusion of employment and wage data provided by Forks Hospital and Olympic Medical Center was used for analysis.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Services	483	Offices of physicians
Services	484	Offices of dentists
Services	485	Offices of other health practitioners
Services	486	Outpatient care centers
Services	487	Medical and diagnostic laboratories
Services	488	Home health care services
Hospitals	489	Other ambulatory health care services
Hospitals	490	Hospitals
Assistance	491	Nursing and community care facilities
Assistance	492	Residential mental health, retardation, substance abuse...

Table 44: Sub-Clusters and associated industries in Health Care and Assistance.

Economic Impacts

Table 45 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 10 listed IMPLAN industries that comprise the Health Care and Assistance Cluster. The value of output ranged from a low of \$737,001 in Residential mental health services to a high of \$432,288,393 in Hospitals. The total Direct value of output for the Health Care and Assistance Cluster was estimated at \$640,794,548; the Indirect value of output was estimated at \$195,513,962; the Induced value of output was estimated at \$135,840,655. The grand total value of output in the Health Care and Assistance Cluster was estimated at \$972,149,165.

HEALTH CARE AND ASSISTANCE CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
483	Offices of physicians	\$45,995,804	230.8	92.0	322.8	\$93,373	\$76,991
484	Offices of dentists	\$31,847,629	220.4	50.0	270.4	\$59,099	\$87,722
485	Offices of other health practitioners	\$18,204,703	169.2	24.8	194.0	\$38,932	\$83,252
486	Outpatient care centers	\$30,760,245	198.3	58.3	256.6	\$71,845	\$79,470
487	Medical and diagnostic laboratories	\$3,313,952	14.9	5.4	20.3	\$77,859	\$77,413
488	Home health care services	\$5,015,947	55.4	13.0	68.4	\$57,872	\$77,633
489	Other ambulatory health care services	\$7,760,672	49.2	13.1	62.3	\$67,594	\$85,287
490	Hospitals	\$432,288,393	1,949.9	18.1	1,968.0	\$67,450	\$408,901
491	Nursing and community care facilities	\$64,870,201	715.6	23.8	739.4	\$47,213	\$689
492	Residential mental health, retardation, substance	\$737,001	13.4	0.0	13.4	\$25,360	\$0
Totals: Direct Impacts		\$640,794,548	3,617.1	298.5	3,915.6	\$63,241	\$94,265
Totals: Indirect Impacts		\$195,513,962	719.9	779.5	1,499.4	\$49,641	\$22,160
Totals: Induced Impacts		\$135,840,655	666.9	258.1	925.0	\$42,820	\$26,163
Grand Totals: All Impacts		\$972,149,165	5,003.9	1,336.1	6,340.0	\$58,563	\$39,041

Table 45: Economic impacts of Health Care and Assistance in 2019 (2021\$).

Estimated covered employment ranged from a low of 13.4 in Residential mental health services at an average annual wage of \$25,360 to a high of 1,949.9 in Hospitals at an annual average wage of \$67,450. For proprietors, employment ranges from a low of 5.4 in Medical and diagnostic laboratories at an average annual wage of \$77,859 to a high of 92.0 in Offices of physicians at an average annual wage of \$76,991. Total Direct covered employment was estimated at 3,617.1 at an annual average wage of \$63,241; total Direct proprietors was estimated at 298.5 at an annual average wage of \$94,265. Total Indirect covered employment was estimated at 719.9 at an average annual wage of \$49,641; for proprietors it was estimated at 779.5 at an average annual wage of \$21,160. Total Induced covered employment was estimated at 666.9 at an annual average wage of \$42,820; for proprietors it was estimated at 258.1 at an annual average wage of \$26,163. The grand total covered employment was estimated at 5,003.9 at an annual average wage of \$58,563; for proprietors it was 1,336.1 at an annual average wage of \$39,041.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 46 for each IMPLAN industry that comprises the Health Care and Assistance Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Medical and diagnostic laboratories and Hospitals will provide 4.5 additional jobs; at the high end, Residential mental health, retardation and substance abuse services would provide an additional 18.2 employees. For proprietors, the low end of expected impacts would be 0.4 in Nursing and community care facilities; at the high end Home health care services would provide an additional 2.6 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$304,238 in Hospitals for covered employment; the high end would be \$639,301 in Home health care services. For proprietors, the low end would be \$253 in Nursing and community care facilities; at the high end \$201,047 in Home health care services.



MULTIPLIERS HEALTH CARE AND ASSISTANCE		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
483	Offices of physicians	5.0	2.0	\$468,614	\$153,928
484	Offices of dentists	6.9	1.6	\$409,051	\$137,638
485	Offices of other health practitioners	9.3	1.4	\$361,893	\$113,303
486	Outpatient care centers	6.4	1.9	\$463,084	\$150,701
487	Medical and diagnostic laboratories	4.5	1.6	\$350,037	\$126,172
488	Home health care services	11.0	2.6	\$639,301	\$201,047
489	Other ambulatory health care services	6.3	1.7	\$428,533	\$143,956
490	Hospitals	4.5	0.0	\$304,238	\$17,150
491	Nursing and community care facilities	11.0	0.4	\$520,807	\$253
492	Residential mental health, retardation, substance	18.2	0.0	\$461,098	\$0
Totals: Direct Multiplier Impacts		5.6	0.5	\$356,978	\$43,908
Totals: Indirect Multiplier Impacts		1.1	1.2	\$55,769	\$26,956
Totals: Induced Multiplier Impacts		1.0	0.1	\$44,563	\$2,879
Grand Totals: All Multiplier Impacts		7.8	1.8	\$457,310	\$69,973

Table 46: Economic multipliers of Health Care and Assistance in 2019 (2021\$).

For the Health Care and Assistance Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 5.6; for proprietors it would be 0.5. The corresponding change in wages would be \$356,978 and \$43,908 respectively. The Indirect and Induced multiplier affects for the Health Care and Assistance Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 1.1 and 1.2 respectively with corresponding changes in total annual wages of \$55,769 and \$26,956. For Induced multipliers, the changes would be 1.0 employees and 0.1 proprietors at total annual wages of \$44,563 and \$2,879 respectively. In total, a change in \$1,000,000 in Health Care and Assistance value added will change total covered employment by 7.8 and annual wages by \$457,310; for proprietors the changes will be 1.8 and \$69,973 respectively.

Indirect Economic Impacts

Table 47 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 23.7 covered employees and 149.1 proprietors at annual average wages of \$35,851 and \$16,990 respectively, driven by supply chain expenditures in Hospitals. Overall, the top 15 Indirect economic impacts are \$98,163,263 in Value of Output, or 50 percent of the total value of output in the Health Care and Assistance Cluster for covered employment, it's 336.1 jobs at an annual average wage of \$43,167, or 47 percent of the total Indirect covered employment. For proprietors, it's 517.8 jobs at an annual average wage of \$21,013, or 66 percent of the total Indirect proprietors.

HEALTH CARE AND ASSISTANCE CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Hospitals	\$30,247,897	23.7	149.1	172.7	\$35,851	\$16,990
509	Full-service restaurants	Hospitals	\$6,938,603	85.1	4.1	89.2	\$28,370	\$31,668
455	Legal services	Hospitals	\$10,119,085	14.9	53.4	68.3	\$57,085	\$11,542
472	Employment services	Hospitals	\$4,773,925	25.6	37.9	63.5	\$46,746	\$25,167
470	Office administrative services	Hospitals	\$4,316,551	23.8	39.5	63.3	\$64,264	\$28,834
489	Other ambulatory health care services	Hospitals	\$7,267,257	46.1	12.3	58.3	\$67,594	\$85,287
447	Other real estate	Services	\$9,471,582	7.4	46.7	54.1	\$35,851	\$16,990
456	Accounting, tax preparation, bookkeeping	Hospitals	\$4,356,884	17.2	34.2	51.4	\$40,996	\$14,497
447	Other real estate	Assistance	\$7,799,913	6.1	38.4	44.5	\$35,851	\$16,990
519	Dry-cleaning and laundry services	Hospitals	\$1,701,985	11.4	22.8	34.2	\$27,638	\$66,256
462	Management consulting services	Hospitals	\$2,671,144	5.6	27.5	33.1	\$64,393	\$10,659
463	Environmental, other technical consulting	Hospitals	\$2,487,142	7.3	25.4	32.7	\$67,022	\$14,212
511	All other food and drinking places	Assistance	\$2,436,756	31.1	1.5	32.6	\$32,281	\$30,514
511	All other food and drinking places	Services	\$2,126,008	27.1	1.3	28.4	\$32,281	\$30,514
460	Computer systems design services	Hospitals	\$1,448,531	3.9	23.7	27.6	\$83,733	\$11,393
Totals for the Top 15 Indirect Economic Impacts			\$98,163,263	336.1	517.8	853.9	\$43,167	\$21,013
Percent of Total Indirect Economic Impacts			50%	47%	66%	57%		

Table 47: Top 15 Indirect economic impacts by employment for the Health Care and Assistance Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 48 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 35.5 covered employees and 1.7 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Hospitals.

Overall, the top 15 Induced economic impacts are \$24,482,493 in Value of Output, or 18 percent of the total value of output in the general economy supported by the Health Care and Assistance Cluster. For covered employment, it's 240.0 jobs at an annual average wage of \$34,755, or 36 percent of the total Induced covered employment. For proprietors, it's 50.9 jobs at an annual average wage of \$25,347, or 20 percent of the total Induced proprietors.

HEALTH CARE AND ASSISTANCE CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Hospitals	\$2,897,326	35.5	1.7	37.2	\$28,370	\$31,668
493	Individual and family services	Hospitals	\$1,086,899	25.4	2.7	28.1	\$28,967	\$16,551
510	Limited-service restaurants	Hospitals	\$2,436,564	24.7	1.3	26.0	\$25,585	\$34,463
406	Retail - Food and beverage stores	Hospitals	\$1,914,063	20.8	0.8	21.7	\$41,766	\$13,043
491	Nursing and community care facilities	Hospitals	\$1,845,214	20.4	0.7	21.0	\$47,213	\$689
447	Other real estate	Hospitals	\$3,472,313	2.7	17.1	19.8	\$35,851	\$16,990
411	Retail - General merchandise stores	Hospitals	\$2,059,698	19.6	0.2	19.7	\$46,073	\$10,392
525	Private households	Hospitals	\$191,591	18.9	0.0	18.9	\$10,129	\$0
509	Full-service restaurants	Services	\$1,383,344	17.0	0.8	17.8	\$28,370	\$31,668
511	All other food and drinking places	Hospitals	\$1,087,244	13.9	0.7	14.5	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Hospitals	\$850,923	8.6	5.1	13.8	\$32,109	\$27,505
413	Retail - Nonstore retailers	Hospitals	\$1,685,876	0.7	13.0	13.7	\$37,112	\$8,162
493	Individual and family services	Services	\$522,302	12.2	1.3	13.5	\$28,967	\$16,551
512	Automotive repair and maintenance	Hospitals	\$1,280,050	10.6	2.1	12.7	\$49,475	\$122,800
483	Offices of physicians	Hospitals	\$1,769,084	8.9	3.5	12.4	\$93,373	\$76,991
Totals for the Top 15 Induced Economic Impacts			\$24,482,493	240.0	50.9	290.9	\$34,755	\$25,347
Percent of Total Induced Economic Impacts			18%	36%	20%	31%		

Table 48: Top 15 Induced economic impacts by employment for the Health Care and Assistance Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 49. The results indicate 46 percent of respondents in the Health Care and Assistance Cluster believe Clallam County is favorable for doing business. 44 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, and increased cost of materials. Affordable housing, government mandates, taxes and opportunities for young people to find living wage, fulfilling jobs were listed as concerns.

In the supply chain, 54 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 65 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 25 percent of respondents indicated 60 to 80 percent of expenditures are made outside the County. Respondents expressed an interest in consumables and supplies and specialty-niche products. For services, repair and maintenance, information technologies, and shipping and delivery.

Business Climate For Health Care and Assistance Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
46% Favorable	44% Likely	Lack of Qualified Workers - 23% Increased Cost of Materials - 23%	Affordable Housing (2), Government mandates (2), Taxes (2), Stigma against mental health, the cost of services, Opportunities for young people to find living wage, fulfilling jobs
Supply Chain Possibilities for Health Care and Assistance in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials go to businesses outside of Clallam County?	What percent of your expenditures for services go to businesses located outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
54% Yes 23% Maybe 23% No	0 to 20% of Expenditures - 5% 30% to 50% of Expenditures - 30% 60% to 80% of Expenditures - 65%	0 to 20% of Expenditures - 40% 20% to 50% of Expenditures - 35% 60% to 80% of Expenditures - 25%	Consumables and Supplies Specialty-niche products
			Repair and Maintenance Information Technologies Shipping and Delivery

Table 49: Summary results for Health Care and Assistance from the EDC Employer Survey, 2021-2.



HOSPITALITY AND TOURISM

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HOSPITALITY AND TOURISM

The Hospitality and Tourism Cluster was defined using NAICS at the 3-digit level, illustrated in Table 50. The NAICS subsectors are Scenic and sightseeing transportation (487),⁵² Auto equipment rental and leasing (532), Performing arts and spectator sports (711), Museums, historical sites, zoos and parks (712), Amusements, gambling and recreation (713), Accommodation (721), and Food services and drinking places (722). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 264 Hospitality and Tourism firms with 2,518 employees paid an average annual wage of \$23,117. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries.

IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Transportation, Entertainment, Accommodation, and Food and Beverage. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 51.

HOSPITALITY AND TOURISM CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
420	487	Scenic and sightseeing transportation	*			
450	532	Auto equipment rental and leasing				
496 - 500	711	Performing arts and spectator sports	6	13	\$374,518	\$28,809
501	712	Museums, historical sites, zoos, and parks	7	54	\$1,636,366	\$30,303
503, 504, 505, 506	713	Amusements, gambling, and recreation	26	135	\$2,449,995	\$18,148
507, 508	721	Accommodation	66	514	\$11,068,867	\$21,535
509, 510, 511	722	Food services and drinking places	159	1,802	\$42,678,283	\$23,684
Totals			264	2,518	\$58,208,029	\$23,117

Table 50: Defining the Hospitality and Tourism Cluster using NAICS and IMPLAN bridge codes.

⁵²Below, Olympus added the employment and wages for Black Ball Ferry Lines into IMPLAN using data from a previous study. Daniel A. Underwood, *The Economic Impacts of Black Ball Ferry Line – A Destination Hub In The Tourism Industry of Clallam County*, November 2019.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Transportation	420	Scenic and sightseeing transportation and support activities
Transportation BBFL	420	Scenic and sightseeing transportation and support activities
Transportation	450	Automotive equipment rental and leasing
Entertainment	496	Performing arts companies
Entertainment	497	Commercial Sports Except Racing
Entertainment	498	Racing and Track Operation
Entertainment	500	Promoters of performing arts and sports and agents
Entertainment	501	Museums, historical sites, zoos, and parks
Entertainment	503	Gambling industries (except casino hotels)
Entertainment	504	Other amusement and recreation industries
Entertainment	505	Fitness and recreational sports centers
Entertainment	506	Bowling centers
Accommodation	507	Hotels and motels, including casino hotels
Accommodation	508	Other accommodations
Food and Beverage	509	Full-service restaurants
Food and Beverage	510	Limited-service restaurants
Food and Beverage	511	All other food and drinking places

Table 51: Sub-Clusters and associated industries in Hospitality and Tourism.

Economic Impacts

Table 52 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 17 listed IMPLAN industries that comprise the Hospitality and Tourism Cluster. The value of output ranged from a low of \$57,134 in Commercial sports except racing to a high of \$82,720,544 in Full-service restaurants. The total Direct value of output for the Hospitality and Tourism Cluster was estimated at \$348,210,662; the Indirect value of output was estimate at \$87,077,284; the Induced value of output was estimated at \$65,984,035. The grand total value of output in the Hospitality and Tourism Cluster was estimated at \$501,271,981.

Estimated covered employment ranged from a low of 0.7 in both Commercial sports and Racing track operations at an average annual wage of \$28,659 and \$28,658 respectively to a high of 1,014.5 in Full-service restaurants at an annual average wage of \$28,370. For proprietors, employment ranges from a low of 0.6 in both Commercial sports and Racing track operations at an average annual wage of \$17,193 and \$17,172 respectively to a high of 214.0 in Performing arts companies at an average annual wage of \$6,523. Total Direct covered employment was estimated at 3,091.1 at an annual average wage of \$30,305; total Direct proprietors was estimated at 550.4 at an annual average wage of \$58,554. Total Indirect covered employment was estimated at 285.1 at an average annual wage of \$52,882; for proprietors it was estimated at 307.5 at an average annual wage of \$23,866. Total Induced covered employment was estimated at 323.9 at an annual average wage of \$42,772; for proprietors it was estimated at 125.5 at an annual average wage of \$26,122. The grand total covered employment was

estimated at 3,700.1 at an annual average wage of \$33,136; for proprietors it was 983.4 at an annual average wage of \$43,567.

HOSPITALITY AND TOURISM CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
420	Scenic and sightseeing transportation	\$14,692,168	57.2	14.8	72.0	\$44,695	\$399,778
420	Scenic and sightseeing transportation (BBFL)	\$42,502,563	91.0	18.7	109.7	\$81,327	\$915,038
450	Automotive equipment rental and leasing	\$3,999,179	7.3	7.4	14.7	\$60,903	\$51,104
496	Performing arts companies	\$9,667,837	13.3	214.0	227.3	\$26,915	\$6,523
497	Commercial Sports Except Racing	\$57,134	0.7	0.6	1.3	\$28,659	\$17,193
498	Racing and Track Operation	\$122,174	0.7	0.6	1.3	\$28,658	\$17,172
500	Promoters of performing arts and sports	\$5,942,064	4.6	87.6	92.2	\$32,394	\$7,478
501	Museums, historical sites, zoos, and parks	\$3,913,467	40.5	0.8	41.3	\$35,329	\$135,747
503	Gambling industries (except casino hotels)	\$13,014,889	79.4	5.2	84.6	\$25,892	\$79,842
504	Other amusement and recreation industries	\$6,415,151	80.8	33.9	114.7	\$24,691	\$7,023
505	Fitness and recreational sports centers	\$2,156,630	38.7	7.7	46.4	\$12,986	\$8,438
506	Bowling centers	\$1,532,068	16.0	5.9	21.9	\$27,183	\$11,705
507	Hotels and motels, including casino hotels	\$39,475,118	288.4	28.0	316.4	\$29,448	\$57,550
508	Other accommodations	\$11,302,675	134.1	14.1	148.2	\$32,887	\$49,378
509	Full-service restaurants	\$82,720,544	1,014.5	48.6	1,063.1	\$28,370	\$31,668
510	Limited-service restaurants	\$71,941,721	729.9	38.6	768.5	\$25,585	\$34,463
511	All other food and drinking places	\$38,755,280	494.0	23.9	517.9	\$32,281	\$30,514
Totals: Direct Impacts		\$348,210,662	3,091.1	550.4	3,641.5	\$30,305	\$58,554
Totals: Indirect Impacts		\$87,077,284	285.1	307.5	592.6	\$52,882	\$23,866
Totals: Induced Impacts		\$65,984,035	323.9	125.5	449.5	\$42,772	\$26,122
Grand Totals: All Impacts		\$501,271,981	3,700.1	983.4	4,683.5	\$33,136	\$43,567

Table 52: Economic impacts of Hospitality and Tourism in 2019 (2021\$).

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 53 for each IMPLAN industry that comprises the Hospitality and Tourism Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Promoters of performing arts and sports will provide 0.8 additional jobs; at the high end, Fitness and recreational sports centers would provide an additional 17.9 employees. For proprietors, the low end of expected impacts would be 0.2 in Museums, historical sites, zoos, and parks; at the high end, Performing arts companies would provide an additional 22.1 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$37,146 in Performing arts companies for covered employment; the high end would be \$411,502 in All other food

and drinking places. For proprietors, the low end would be \$18,500 in Limited-service restaurants; at the high end \$401,676 in Scenic and sightseeing transportation.

For the Hospitality and Tourism Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 8.9; for proprietors it would be 1.6. The corresponding change in wages would be \$269,018 and \$92,546 respectively. The Indirect and Induced multiplier affects for the Hospitality and Tourism Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 0.8 and 0.9 respectively with corresponding changes in total annual wages of \$43,298 and \$21,075. For Induced multipliers, the changes would be 0.9 employees and 0.4 proprietors with corresponding changes in total annual wages of \$39,788 and \$9,418. In total, a change in \$1,000,000 in value added will change total covered employment by 10.6 and annual wages by \$352,104; for proprietors the changes will be 2.8 and \$123,039 respectively.

MULTIPLIERS HOSPITALITY AND TOURISM		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
420	Scenic and sightseeing transportation	3.9	1.0	\$174,125	\$401,676
420	Scenic and sightseeing transportation (BBFL)	2.1	0.4	\$174,125	\$401,676
450	Automotive equipment rental and leasing	1.8	1.9	\$111,120	\$94,606
496	Performing arts companies	1.4	22.1	\$37,146	\$144,359
497	Commercial Sports Except Racing	12.3	10.4	\$353,759	\$178,974
498	Racing and Track Operation	5.8	4.9	\$165,339	\$83,648
500	Promoters of performing arts and sports	0.8	14.7	\$24,894	\$110,293
501	Museums, historical sites, zoos, and parks	10.4	0.2	\$365,794	\$27,060
503	Gambling industries (except casino hotels)	6.1	0.4	\$157,919	\$32,022
504	Other amusement and recreation industries	12.6	5.3	\$310,994	\$37,112
505	Fitness and recreational sports centers	17.9	3.6	\$232,790	\$30,281
506	Bowling centers	10.4	3.9	\$283,573	\$45,210
507	Hotels and motels, including casino hotels	7.3	0.7	\$215,123	\$40,854
508	Other accommodations	11.9	1.2	\$390,219	\$61,550
509	Full-service restaurants	12.3	0.6	\$347,930	\$18,605
510	Limited-service restaurants	10.1	0.5	\$259,574	\$18,500
511	All other food and drinking places	12.7	0.6	\$411,502	\$18,791
Totals: Direct Multiplier Impacts		8.9	1.6	\$269,018	\$92,546
Totals: Indirect Multiplier Impacts		0.8	0.9	\$43,298	\$21,075
Totals: Induced Multiplier Impacts		0.9	0.4	\$39,788	\$9,418
Grand Totals: All Multiplier Impacts		10.6	2.8	\$352,104	\$123,039

Table 53: Economic multipliers of Hospitality and Tourism in 2019 (2021\$).

Indirect Economic Impacts

Table 54 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 10.6 covered employees and 67.0 proprietors at annual average wages of \$35,851 and \$16,990 respectively, driven by supply chain expenditures in Food and Beverage. Overall, the top 15 Indirect economic impacts are \$41,048,923 in Value of Output, or 47 percent of the total value of output in the Hospitality and Tourism

Cluster. For Indirect covered employment sums to 108.9 at an annual wage of \$51,543, or 38 percent of total Indirect employment. For proprietors, it's 163.4 jobs at an annual average wage of \$18,018, or 53 percent of the total Indirect proprietors.

HOSPITALITY AND TOURISM CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Food and Beverage	\$13,584,404	10.6	67.0	77.6	\$35,851	\$16,990
469	Management of companies and enterprises	Food and Beverage	\$4,598,301	15.0	16.4	31.4	\$86,294	-\$167
447	Other real estate	Entertainment	\$5,011,282	3.9	24.7	28.6	\$35,851	\$16,990
511	All other food and drinking places	Accommodation	\$1,458,996	18.6	0.9	19.5	\$32,281	\$30,514
465	Advertising, public relations, related services	Food and Beverage	\$1,948,994	3.8	13.7	17.5	\$46,239	\$9,307
456	Accounting, tax preparation, bookkeeping	Food and Beverage	\$1,308,660	5.2	10.3	15.4	\$40,996	\$14,497
500	Promoters of performing arts and sports	Entertainment	\$909,227	0.7	13.4	14.1	\$32,394	\$7,478
534	Other local government enterprises	Transportation BBFL	\$3,394,676	10.7	0.0	10.7	\$65,915	\$0
420	Scenic and sightseeing transportation	Transportation BBFL	\$1,880,940	7.3	1.9	9.2	\$44,695	\$399,778
509	Full-service restaurants	Food and Beverage	\$688,179	8.4	0.4	8.8	\$28,370	\$31,668
534	Other local government enterprises	Food and Beverage	\$2,697,628	8.5	0.0	8.5	\$65,915	\$0
455	Legal services	Entertainment	\$1,231,568	1.8	6.5	8.3	\$57,085	\$11,542
476	Services to buildings	Food and Beverage	\$575,073	5.3	2.6	8.0	\$21,193	\$29,085
526	Postal service	Food and Beverage	\$691,768	7.3	0.0	7.3	\$87,849	\$0
455	Legal services	Food and Beverage	\$1,069,227	1.6	5.6	7.2	\$57,085	\$11,542
Totals for the Top 15 Indirect Economic Impacts			\$41,048,923	108.9	163.4	272.2	\$51,543	\$18,018
Percent of Total Indirect Economic Impacts			47%	38%	53%	46%		

Table 54: Top 15 Indirect impacts by employment for the Hospitality and Tourism Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 55 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 14.9 covered employees and 0.7 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Food and Beverage. Overall, the top 15 Induced economic impacts are \$11,566,100 in value of output, or 18 percent of the total value of output in the general economy supported by the Hospitality and Tourism Cluster. For covered employment, it's 99.4 jobs at an annual average wage of \$36,739, or 31 percent of the total Induced covered employment. For proprietors, it's 20.8 jobs at an annual average wage of \$25,552, or 17 percent of the total Induced proprietors.

HOSPITALITY AND TOURISM CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Food and Beverage	\$1,216,520	14.9	0.7	15.6	\$28,370	\$31,668
493	Individual and family services	Food and Beverage	\$455,648	10.7	1.1	11.8	\$28,967	\$16,551
510	Limited-service restaurants	Food and Beverage	\$1,024,634	10.4	0.6	10.9	\$25,585	\$34,463
406	Retail - Food and beverage stores	Food and Beverage	\$804,538	8.8	0.3	9.1	\$41,766	\$13,043
491	Nursing and community care facilities	Food and Beverage	\$779,088	8.6	0.3	8.9	\$47,213	\$689
447	Other real estate	Food and Beverage	\$1,458,643	1.1	7.2	8.3	\$35,851	\$16,990
411	Retail - General merchandise stores	Food and Beverage	\$865,736	8.2	0.1	8.3	\$46,073	\$10,392
525	Private households	Food and Beverage	\$80,121	7.9	0.0	7.9	\$10,129	\$0
509	Full-service restaurants	Transportation BBFL	\$475,318	5.8	0.3	6.1	\$28,370	\$31,668
511	All other food and drinking places	Food and Beverage	\$456,402	5.8	0.3	6.1	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Food and Beverage	\$357,663	3.6	2.2	5.8	\$32,109	\$27,505
413	Retail - Nonstore retailers	Food and Beverage	\$708,590	0.3	5.4	5.8	\$37,112	\$8,162
512	Automotive repair and maintenance	Food and Beverage	\$537,777	4.5	0.9	5.3	\$49,475	\$122,800
483	Offices of physicians	Food and Beverage	\$743,142	3.7	1.5	5.2	\$93,373	\$76,991
534	Other local government enterprises	Food and Beverage	\$1,602,280	5.1	0.0	5.1	\$65,915	\$0
Totals for the Top 15 Induced Economic Impacts			\$11,566,100	99.4	20.8	120.2	\$36,739	\$25,552
Percent of Total Induced Economic Impacts			18%	31%	17%	27%		

Table 55: Top 15 Induced impacts by employment for the Hospitality and Tourism Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 56. The results indicate 67 percent of respondents in the Hospitality and Tourism Cluster believe Clallam County is favorable for doing business. 62 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, and increased cost of materials. Covid regulations, competition from illegally operating Airbnb's and VRBO's, and lack of comprehensive tourism were listed as concerns.

In the supply chain, 67 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 62 percent of respondents indicated that 40 to 80 percent of expenditures for goods and materials are made outside the County; for services, 24 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in consumables and supplies, fresh meats, seafood, produce, and equipment and durable goods. For services, repair and maintenance, information technologies, and shipping and delivery.

Business Climate For Hospitality and Tourism Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
67% Favorable	62% Likely	Lack of Qualified Workers - 19% Increased Cost of Materials - 17%	Covid Regulations (2), Competition from illegally operating Airbnb's and VRBO's, Lack of comprehensive tourism
Supply Chain Possibilities for Hospitality and Tourism in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
67% Yes 21% Maybe 13% No	0 to 20% of Expenditures - 5% 20% to 40% of Expenditures - 33% 40% to 80% of Expenditures - 62%	0 to 20% of Expenditures - 43% 20% to 50% of Expenditures - 33% 60% to 100% of Expenditures - 24%	Consumables and Supplies Fresh meats, seafood, produce Equipment and durable goods
			Repair and Maintenance Information Technologies Shipping and Delivery

Table 56: Summary results for Hospitality and Tourism from the EDC Employer Survey, 2021-2.



HUMAN SERVICES

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

**ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY**

**When Prosperity Matters
2023**



HUMAN SERVICES

The Hospitality and Tourism Cluster was defined using NAICS at the 3-digit level, illustrated in Table 50. The NAICS subsectors within the Human Services Cluster were defined using NAICS at the 3-digit level, illustrated in Table 57. The NAICS subsectors are Educational services (611), Social assistance (624),⁵³ and Membership associations and organization (813). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 444 Human Services firms with 1,369 employees paid an average annual wage of \$25,089. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create Sub-Clusters. Sub-Clusters make it possible to combine similar industries that can later be used to analysis the source of economic impacts in greater detail. The Human Services Cluster was further subdivided into Educational Services, Social Assistance, and Social Organization. The Sub-Clusters and corresponding industries are presented in Table 58.

HUMAN SERVICES CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
482	611	Educational services	28	73	\$1,642,101	\$22,495
493, 494, 495	624	Social assistance (QCEW 2019)	366	1,047	\$25,548,062	\$24,401
521, 522, 523, 524	813	Membership associations and organization	50	249	\$7,087,801	\$28,465
Totals			444	1,369	\$34,277,964	\$25,039

Table 57: Defining the Human Services Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Educational Services	482	Other educational services
Social Assistance	493	Individual and family services
Social Assistance	494	Child day care services
Social Assistance	495	Community food, housing, and other relief services, including rehabilitation services
Social Organization	521	Religious organizations
Social Organization	522	Grantmaking, giving, and social advocacy organizations
Social Organization	523	Business and professional associations
Social Organization	524	Labor and civic organizations

Table 58: Sub-Clusters and associated industries in Human Services.

⁵³ To capture the missing values for Social assistance, QCEW 2019 values were used, adjusted into 2021\$.

Economic Impacts

Table 59 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 8 listed IMPLAN industries that comprise the Human Services Cluster. The value of output ranged from a low of \$2,813,513 in Religious organizations to a high of \$37,096,517 in Individual and family services. The total Direct value of output for the Human Services Cluster was estimated at \$130,085,287; the Indirect value of output was estimate at \$173,374,763; the Induced value of output was estimated at \$178,090,179. The grand total value of output in the Human Services Cluster was estimated at \$481,550,229.

HUMAN SERVICES CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
482	Other educational services	\$11,103,739	56.2	74.2	130.4	\$62,366	\$18,188
493	Individual and family services	\$37,096,517	867.7	90.5	958.2	\$28,967	\$16,551
494	Child day care services	\$7,730,703	109.5	8.7	118.2	\$32,042	\$16,894
495	Community food, housing, and other relief	\$9,793,838	96.3	15.3	111.6	\$47,177	\$17,018
521	Religious organizations	\$2,813,513	19.2	8.9	28.1	\$166,628	\$24,324
522	Grantmaking, giving, and social advocacy	\$31,026,378	116.8	17.8	134.6	\$46,434	\$22,201
523	Business and professional associations	\$3,730,183	18.7	1.8	20.5	\$41,817	\$21,504
524	Labor and civic organizations	\$26,790,414	210.7	10.5	221.2	\$19,765	\$19,419
Totals: Direct Impacts		\$130,085,287	1,495.2	227.6	1,722.8	\$33,621	\$18,045
Totals: Indirect Impacts		\$35,435,598	108.6	140.0	248.6	\$52,391	\$18,965
Totals: Induced Impacts		\$27,361,266	134.2	51.9	186.0	\$42,886	\$26,224
Grand Totals: All Impacts		\$192,882,151	1,737.9	419.5	2,157.4	\$35,509	\$19,363

Table 59: Economic impacts of Human Services in 2019 (2021\$).

Estimated covered employment ranged from a low of 19.2 in Religious organizations at an average annual wage of \$166,628 to a high of 867.7 in Individual and family services at an annual average wage of \$28,967. For proprietors, employment ranges from a low of 1.8 in Business and professional associations at an average annual wage of \$21,504 to a high of 90.5 in Individual and family services at an average annual wage of \$16,894. Total Direct covered employment was estimated at 1,495.2 at an annual average wage of \$33,621; total Direct proprietors was estimated at 227.6 at an annual average wage of \$18,045. Total Indirect covered employment was estimated at 1,640.5 at an average annual wage of \$34,404; for proprietors it was estimated at 329.4 at an average annual wage of \$19,298. Total Induced covered employment was estimated at 1,672.0 at an annual average wage of \$34,498; for proprietors it was estimated at 331.8 at an annual average wage of \$19,104. The grand total covered employment was estimated at 4,807.7 at an annual average wage of \$34,193; for proprietors it was 888.8 at an annual average wage of \$19,104.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per

\$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 60 for each IMPLAN industry that comprises the Human Services Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Grant making, giving and social advocacy will provide 3.8 additional jobs; at the high end, Individual and family services would provide an additional 23.4 employees. For proprietors, the low end of expected impacts would be 0.4 in Labor and civic organizations; at the high end Other educational services would provide an additional 6.7 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$174,773 in Grant making, giving and social advocacy for covered employment; the high end would be \$1,138,880 in Religious organizations. For proprietors, the low end would be \$7,625 in Labor and civic organizations; at the high end \$121,492 in Other educational services.

For the Human Services Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 11.5; for proprietors it would be 1.7. The corresponding change in wages would be \$386,427 and \$31,577 respectively. The Indirect and Induced multiplier affects for the Human Services Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 0.8 and 1.1 respectively with corresponding changes in total annual wages of \$43,742 and \$20,408. For Induced multipliers, the changes would be 1.0 employees and 0.4 proprietors at total annual wages of \$44,233 and \$10,456 respectively. In total, a change in \$1,000,000 in Human Services value added will change total covered employment by 13.4 and annual wages by \$474,402; for proprietors the changes will be 3.2 and \$62,441 respectively.

MULTIPLIERS HUMAN SERVICES		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
482	Other educational services	5.1	6.7	\$315,824	\$121,492
493	Individual and family services	23.4	2.4	\$677,533	\$40,390
494	Child day care services	14.2	1.1	\$453,896	\$18,991
495	Community food, housing, and other relief	9.8	1.6	\$464,024	\$26,533
521	Religious organizations	6.8	3.2	\$1,138,880	\$76,685
522	Grantmaking, giving, and social advocacy	3.8	0.6	\$174,773	\$12,751
523	Business and professional associations	5.0	0.5	\$209,971	\$10,204
524	Labor and civic organizations	7.9	0.4	\$155,429	\$7,625
Totals: Direct Multiplier Impacts		11.5	1.7	\$386,427	\$31,577
Totals: Indirect Multiplier Impacts		0.8	1.1	\$43,742	\$20,408
Totals: Induced Multiplier Impacts		1.0	0.4	\$44,233	\$10,456
Grand Totals: All Multiplier Impacts		13.4	3.2	\$474,402	\$62,441

Table 60: Economic multipliers of Human Services in 2019 (2021\$).

Indirect Economic Impacts

Table 61 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 3.5 covered employees and 22.0 proprietors at annual average wages of \$35,881 and \$16,990 respectively, driven by

supply chain expenditures in Social Assistance. Overall, the top 15 Indirect economic impacts are \$17,079,179 in Value of Output, or 48 percent of the Indirect total value of output in the Human Services Cluster. Indirect covered employment sums to 42.3 at an annual wage of \$43,265, or 39 percent of total Indirect employment. For proprietors, it's 83.8 jobs at an annual average wage of \$16,732, or 60 percent of the total Indirect proprietors.

HUMAN SERVICES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Social Assistance	\$4,465,327	3.5	22.0	25.5	\$35,881	\$16,988
447	Other real estate	Social Organization	\$4,150,636	3.3	20.5	23.7	\$35,815	\$16,987
482	Other educational services	Social Organization	\$979,143	5.0	6.5	11.5	\$62,346	\$18,189
447	Other real estate	Educational Services	\$1,261,511	1.0	6.2	7.2	\$35,735	\$16,983
465	Advertising, public relations, related	Social Organization	\$733,116	1.4	5.2	6.6	\$46,127	\$9,298
509	Full-service restaurants	Social Assistance	\$484,617	5.9	0.3	6.2	\$28,386	\$32,202
463	Environmental, other technical consulting	Social Organization	\$431,375	1.3	4.4	5.7	\$67,136	\$14,218
462	Management consulting services	Social Organization	\$453,318	1.0	4.7	5.6	\$64,627	\$10,665
509	Full-service restaurants	Social Organization	\$423,851	5.2	0.3	5.5	\$28,360	\$31,545
455	Legal services	Social Organization	\$775,852	1.1	4.1	5.2	\$57,063	\$11,532
470	Office administrative services	Social Organization	\$354,798	2.0	3.2	5.2	\$64,188	\$28,870
456	Accounting, tax preparation, bookkeeping	Social Organization	\$435,045	1.7	3.4	5.1	\$41,093	\$14,495
534	Other local government enterprises	Social Assistance	\$1,490,885	4.7	0.0	4.7	\$65,918	\$0
477	Landscape and horticultural services	Social Organization	\$365,317	2.8	1.8	4.6	\$32,823	\$28,800
476	Services to buildings	Social Organization	\$274,389	2.6	1.3	3.8	\$21,197	\$29,068
Totals for the Top 15 Indirect Economic Impacts			\$17,079,179	42.3	83.8	126.1	\$43,265	\$16,732
Percent of Total Indirect Economic Impacts			48%	39%	60%	51%		

Table 61: Top 15 Indirect impacts by employment for the Human Services Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 62 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 7.39 covered employees and 0.4 proprietors at annual average wages of \$28,378 and \$31,434 respectively, driven by expenditures in the Social Assistance Cluster. Overall, the top 15 Induced economic impacts are \$4,923,079 in value of output, or 18 percent of the total value of output in the general economy supported by the Human Services Cluster. For covered employment, it's 99.4 jobs at an annual average wage of \$32,133, or 74 percent of the total Induced covered employment. For proprietors, it's 20.8 jobs at an annual average wage of \$21,594, or 40 percent of the total Induced proprietors.

HUMAN SERVICES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Social Assistance	\$591,326	7.3	0.4	7.6	\$28,378	\$31,434
493	Individual and family services	Social Assistance	\$221,311	5.2	0.5	5.7	\$28,947	\$16,553
510	Limited-service restaurants	Social Assistance	\$498,430	5.1	0.3	5.3	\$25,569	\$34,154
406	Retail - Food and beverage stores	Social Assistance	\$391,277	4.3	0.2	4.4	\$41,765	\$12,821
491	Nursing and community care facilities	Social Assistance	\$379,731	4.2	0.1	4.3	\$47,200	\$690
447	Other real estate	Social Assistance	\$709,184	0.6	3.5	4.1	\$36,161	\$16,967
411	Retail - General merchandise stores	Social Assistance	\$421,036	4.0	0.0	4.0	\$46,068	\$9,167
509	Full-service restaurants	Social Organization	\$302,375	3.7	0.2	3.9	\$28,357	\$31,251
525	Private households	Social Assistance	\$38,868	3.8	0.0	3.8	\$10,122	#DIV/0!
511	All other food and drinking places	Social Assistance	\$221,823	2.8	0.1	3.0	\$32,254	\$29,773
493	Individual and family services	Social Organization	\$113,456	2.7	0.3	2.9	\$29,007	\$16,366
412	Retail - Miscellaneous store retailers	Social Assistance	\$173,943	1.8	1.1	2.8	\$32,026	\$27,469
413	Retail - Nonstore retailers	Social Assistance	\$344,605	0.2	2.7	2.8	\$37,140	\$8,154
510	Limited-service restaurants	Social Organization	\$254,238	2.6	0.1	2.7	\$25,579	\$33,593
512	Automotive repair and maintenance	Social Assistance	\$261,477	2.2	0.4	2.6	\$49,485	\$122,404
Totals for the Top 15 Induced Economic Impacts			\$4,923,079	99.4	20.8	120.2	\$32,133	\$21,594
Percent of Total Induced Economic Impacts			18%	74%	40%	65%		

Table 62: Top 15 Induced impacts by employment for the Human Services Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 63. The results indicate 42 percent of respondents in the Human Services Cluster believe Clallam County is favorable for doing business. 50 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, employee retention, and increased cost of materials. Affordable housing was listed as a concern.

In the supply chain, 75 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 45 percent of respondents indicated that 40 to 80 percent of expenditures for goods and materials are made outside the County; for services, 18 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in supplies, equipment and durable goods, and bulk or prepared foods. For services, repair and maintenance, financial.

Business Climate For Human Services Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
42% Favorable	50% Likely	Lack of Qualified Workers - 25% Employee Retention -18% Increased Cost of Materials - 18%	Affordable housing (2)
Supply Chain Possibilities for Human Services in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
75% Yes 17% Maybe 8% No	0 to 20% of Expenditures - 10% 30% to 50% of Expenditures - 45% 40% to 80% of Expenditures - 45%	0 to 20% of Expenditures - 55% 30% to 50% of Expenditures - 27% 60% to 100% of Expenditures - 18%	Supplies Equipment and durable goods Bulk or prepared food
			Repair and Maintenance Financial

Table 63: Summary results for Human Services from the EDC Employer Survey, 2021-2.



MANUFACTURING AND MARITIME

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

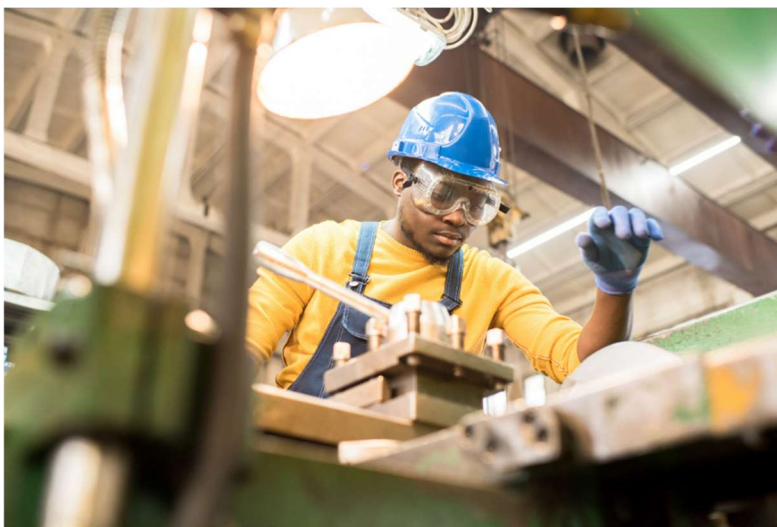
**ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY**

**When Prosperity Matters
2023**



MANUFACTURING AND MARITIME

The Manufacturing and Maritime Cluster was defined using NAICS at the 3-digit level, illustrated in Table 64. The NAICS subsectors are Beverage and tobacco product manufacturing (312), Textile product mills (314), Chemical manufacturing (325), Plastics and rubber products manufacturing (326), Nonmetallic mineral product manufacturing (327),⁵⁴ Primary metal manufacturing (331), Fabricated metal product manufacturing (332), Machinery manufacturing (333), Computer and electronic and appliance manufacturing (334), Electrical equipment and appliance manufacturing (335), Transportation equipment manufacturing (336), Miscellaneous manufacturing (339) and Other Industries.⁵⁵ Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 26 Manufacturing and Maritime firms with 657 employees paid an average annual wage of \$58,738. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create Sub-Clusters. Sub-Clusters make it possible to combine similar industries that can later be used to analysis the source of economic impacts in greater detail. The Manufacturing Cluster was further subdivided into Beverage & Tobacco, Textile Products, Chemical Manu, Plastics & Rubber, Primary Metal Manu, Fabricated Metal, Machinery Manu, Electrical Equipment, Transportation Equipment, and Misc. Manu. The Sub-Clusters and corresponding industries are presented in Table 65.



⁵⁴ Olympus used QCEW 2017 to fill in values for firms, jobs and wages, wages then expressed as 2021\$.

⁵⁵ IMPLAN provided estimates for some bridge industries in NAICS sectors with "0" values.

MANUFACTURING AND MARITIME CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
104 - 109	312	Beverage and tobacco product manufacturing	6	30	\$911,855	\$30,395
110 - 131	314	Textile product mills	*			
154 - 185	325	Chemical manufacturing	3	6	\$317,433	\$52,906
186 - 196	326	Plastics and rubber products manufacturing	*			
197 - 214	327	Nonmetallic mineral product manufacturing (QCEW 2017)	4	19	\$905,008	\$47,632
215 - 228	331	Primary metal manufacturing	0			
229 - 259	332	Fabricated metal product manufacturing	8	24	\$966,276	\$40,262
260 - 297	333	Machinery manufacturing	*			
298 - 321	334	Computer and electronic product manufacturing	0			
322 - 339	335	Electrical equipment and appliance mfg.	*			
340 - 364	336	Transportation equipment manufacturing	8	182	\$10,261,416	\$56,381
376 - 390	339	Miscellaneous manufacturing	9	226	\$9,932,703	\$43,950
391		Other industries	9	249	\$18,396,441	\$73,881
Totals			26	657	\$38,590,560	\$58,738

Table 64: Defining the Manufacturing and Maritime Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Fabricated Metal	239	Sheet metal work manufacturing
Fabricated Metal	247	Machine shops
Fabricated Metal	259	Other fabricated metal manufacturing
Machinery Manu	269	All other industrial machinery manufacturing
Machinery Manu	297	Scales, balances, and miscellaneous general purpose machinery manufacturing
Electrical Equipment	311	Electromedical and electrotherapeutic apparatus manufacturing
Electrical Equipment	339	All other miscellaneous electrical equipment and component manufacturing
Transportation Equipment	350	Motor vehicle seating and interior trim manufacturing
Transportation Equipment	356	Other aircraft parts and auxiliary equipment manufacturing
Transportation Equipment	360	Ship building and repairing
Transportation Equipment	361	Boat building
Misc Manu	376	Surgical and medical instrument manufacturing
Misc Manu	380	Dental laboratories
Misc Manu	381	Jewelry and silverware manufacturing
Misc Manu	382	Sporting and athletic goods manufacturing
Misc Manu	385	Sign manufacturing
Misc Manu	391	All other miscellaneous manufacturing

Table 65: Sub-Clusters and associated industries in Manufacturing and Maritime.

Economic Impacts

Table 66 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 38 listed IMPLAN industries that comprise the Manufacturing and Maritime Cluster. The value of output ranged from a low of \$20,192 in Hosiery and sock mills to a high of \$66,376,862 in Other aircraft parts manufacturing. The total Direct value of output for Manufacturing and Maritime was estimated at \$260,098,474; the Indirect value of output was estimate at \$36,523,627; the Induced value of output was estimated at \$56,922,760. The grand total value of output in the Manufacturing and Maritime Cluster was estimated at \$353,544,860.

Estimated covered employment ranged from a low of 0 in Broadwoven fabric mills, Other leather and allied products, Petroleum refineries, Alumina refining and primary aluminum, and Electromedical and electrotherapeutic apparatus to a high of 187.9 in Other aircraft parts manufacturing at an average annual wage of \$88,382. For proprietors, employment ranges from a low of 0.3 in Soap and other detergent manufacturing at an average annual wage of \$7,261 to a high of 24 in All other miscellaneous at an average annual wage of \$5,788.

Total Direct covered employment was estimated at 654.9 at an annual average wage of \$64,478, while total Direct proprietors was estimated at 130.0 at an annual average wage of \$13,413. Total Indirect covered employment was estimated at 125.2 at an average annual wage of \$58,722; for proprietors it was estimated at 107.6 at an average annual wage of \$19,337. Total Induced covered employment was estimated at 184.6 at an annual average wage of \$42,949; for proprietors it was estimated at 68.3 at an annual average wage of \$20,207. The grand total covered employment was estimated at 964.7 at an annual average wage of \$59,612; for proprietors it was 305.9 at an annual average wage of \$17,014.



MANUFACTURING AND MARITIME CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
104	Bottled and canned soft drinks & water	\$21,882,664	29.6	9.6	39.2	\$46,510	\$1,707
106	Breweries	\$1,306,543	3.9	0.0	3.9	\$22,638	\$0
107	Wineries	\$5,926,021	18.0	2.9	20.9	\$30,899	\$580
111	Broadwoven fabric mills	\$366,384	0.0	1.7	1.7	\$0	\$1,173
118	Curtain and linen mills	\$701,715	3.5	0.0	3.5	\$50,065	\$0
120	Rope, cordage, twine, tire cord and tire fabric mills	\$4,528,658	10.6	8.7	19.3	\$77,154	\$49
122	Hosiery and sock mills	\$20,192	0.2	0.0	0.2	\$24,580	\$0
123	Other apparel knitting mills	\$20,272	0.2	0.0	0.2	\$24,579	\$0
124	Cut and sew apparel contractors	\$557,018	0.2	12.0	12.2	\$24,672	\$283
125	Men's and boys' cut and sew apparel manufacturing	\$18,841	0.2	0.0	0.2	\$24,673	\$0
126	Women's and girls' cut and sew apparel manufacturing	\$31,952	0.2	0.0	0.2	\$24,667	\$0
127	Other cut and sew apparel manufacturing	\$25,176	0.2	0.0	0.2	\$24,641	\$0
131	Other leather and allied product manufacturing	\$151,494	0.0	2.1	2.1	\$0	\$302
154	Petroleum refineries	\$16,729,680	0.0	2.8	2.8	\$0	\$5,171
163	Other basic organic chemical manufacturing	\$6,560,469	3.0	1.1	4.1	\$82,877	\$12,787
177	Soap and other detergent manufacturing	\$2,580,092	1.9	0.3	2.2	\$47,740	\$7,261
178	Polish and other sanitation good manufacturing	\$1,748,627	3.7	0.5	4.2	\$50,808	\$35,781
188	Plastics pipe and pipe fitting manufacturing	\$10,178,976	17.1	0.0	17.1	\$78,567	\$0
193	Other plastics product manufacturing	\$3,379,847	11.1	0.0	11.1	\$74,577	\$0
219	Alumina refining and primary aluminum production	\$1,105,294	0.0	1.7	1.7	\$0	\$0
237	Plate work manufacturing	\$1,779,641	6.2	0.8	7.0	\$50,851	\$294,445
239	Sheet metal work manufacturing	\$727,532	2.5	0.5	3.0	\$56,074	\$89,743
247	Machine shops	\$1,338,669	7.0	1.0	8.0	\$46,700	\$155,404
259	Other fabricated metal manufacturing	\$887,246	3.3	0.6	3.9	\$44,064	\$76,608
269	All other industrial machinery manufacturing	\$3,066,022	8.0	2.7	10.7	\$98,853	\$21,927
297	Scales, balances, and miscellaneous general purpose machinery	\$4,153,587	10.4	4.2	14.6	\$101,692	\$13,677
311	Electromedical and electrotherapeutic apparatus manufacturing	\$2,699,145	0.0	9.8	9.8	\$0	-\$25,522
339	All other miscellaneous electrical equipment and components	\$3,624,887	8.3	2.4	10.7	\$126,701	-\$3,248
350	Motor vehicle seating and interior trim manufacturing	\$8,379,218	18.2	0.0	18.2	\$49,345	\$0
356	Other aircraft parts and auxiliary equipment manufacturing	\$66,376,862	187.9	3.6	191.5	\$88,382	\$178,674
360	Ship building and repairing	\$9,380,585	35.2	0.4	35.6	\$65,643	\$369,451
361	Boat building	\$40,480,975	140.1	0.6	140.7	\$42,302	\$209,330
376	Surgical and medical instrument manufacturing	\$8,660,519	15.0	17.8	32.8	\$97,307	\$7,379
380	Dental laboratories	\$343,707	3.3	1.0	4.3	\$36,565	\$8,617
381	Jewelry and silverware manufacturing	\$1,995,864	8.2	2.0	10.2	\$36,197	\$11,269
382	Sporting and athletic goods manufacturing	\$19,768,948	57.8	24.0	81.8	\$53,267	\$5,788
385	Sign manufacturing	\$3,936,428	23.3	7.7	31.0	\$47,635	\$8,181
391	All other miscellaneous manufacturing	\$4,678,725	16.6	7.5	24.1	\$50,756	\$5,784
Totals: Direct Impacts		\$260,098,474	654.9	130.0	784.9	\$64,478	\$13,413
Totals: Indirect Impacts		\$36,523,627	125.2	107.6	232.8	\$58,722	\$19,337
Totals: Induced Impacts		\$56,922,760	184.6	68.3	252.9	\$42,949	\$20,207
Grand Totals: All Impacts		\$353,544,860	964.7	305.9	1,270.6	\$59,612	\$17,014

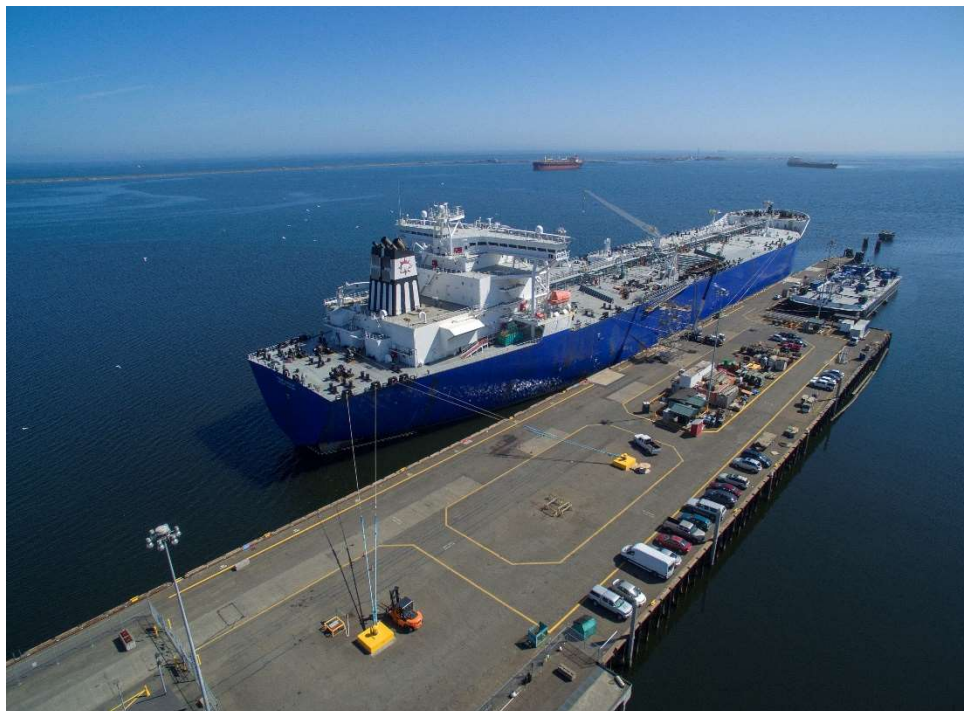
Table 66: Economic impacts of Manufacturing and Maritime in 2019 (2021\$).⁵⁶

⁵⁶ IMPLAN underestimates employment in Shipbuilding and repair. For instance, in 2015 Platypus Marine had 75 full-time employees. Daniel A. Underwood, *Economic Impacts of the Platypus Marine Expansion – A Summary Report*, March 11, 2015. This footnote illustrates the limitation of using estimates.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 67 for each IMPLAN industry that comprises the Manufacturing and Maritime Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Other basic organic chemical manufacturing will provide 0.4 additional jobs; at the high end, Men's and boy's cut and sew apparel would provide an additional 10.6 employees. For proprietors, the low end of expected impacts would be 0.1 in Soap and other detergent; at the high end, Cut and sew apparel contractors would provide an additional 21.5 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$9,939 in Cut and sew apparel contractors for covered employment; the high end would be \$355,523 in Dental laboratories. For proprietors, the low end would be \$94 in Rope, cordage, twine, tire cord and tire fabric; at the high end \$132,815 in Plate work.

For the Manufacturing and Maritime Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 2.5; for proprietors it would be 0.5. The corresponding change in wages would be \$162,349 and \$6,704 respectively. The Indirect and Induced multiplier affects for the Manufacturing and Maritime Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 0.5 and 0.4 respectively with corresponding changes in total annual wages of \$28,269 and \$7,997. For Induced multipliers, the changes would be 0.7 employees and 0.3 proprietors at total annual wages of \$30,475 and \$5,309 respectively. In total, a change in \$1,000,000 in Manufacturing and Maritime value added will change total covered employment by 3.7 and annual wages by \$221,092; for proprietors the changes will be 1.2 and \$20,009 respectively.



MULTIPLIERS MANUFACTURING AND MARITIME		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
104	Bottled and canned soft drinks & water	1.4	0.4	\$62,898	\$750
106	Breweries	3.0	0.0	\$67,574	\$0
107	Wineries	3.0	0.5	\$93,939	\$282
111	Broadwoven fabric mills	0.0	4.6	\$0	\$5,444
118	Curtain and linen mills	5.0	0.0	\$249,713	\$0
120	Rope, cordage, twine, tire cord and tire fabric mills	2.3	1.9	\$180,267	\$94
122	Hosiery and sock mills	9.9	0.0	\$243,469	\$0
123	Other apparel knitting mills	9.9	0.0	\$242,492	\$0
124	Cut and sew apparel contractors	0.4	21.5	\$9,939	\$6,077
125	Men's and boys' cut and sew apparel manufacturing	10.6	0.0	\$261,914	\$0
126	Women's and girls' cut and sew apparel manufacturing	6.3	0.0	\$154,400	\$0
127	Other cut and sew apparel manufacturing	7.9	0.0	\$195,754	\$0
131	Other leather and allied product manufacturing	0.0	13.9	\$0	\$4,180
154	Petroleum refineries	0.0	0.2	\$0	\$865
163	Other basic organic chemical manufacturing	0.4	0.2	\$37,279	\$2,240
177	Soap and other detergent manufacturing	0.7	0.1	\$34,423	\$956
178	Polish and other sanitation good manufacturing	2.1	0.3	\$107,349	\$10,342
188	Plastics pipe and pipe fitting manufacturing	1.7	0.0	\$131,988	\$0
193	Other plastics product manufacturing	3.3	0.0	\$244,923	\$0
219	Alumina refining and primary aluminum production	0.0	1.5	\$0	\$0
237	Plate work manufacturing	3.5	0.5	\$177,081	\$132,815
239	Sheet metal work manufacturing	3.4	0.7	\$190,174	\$65,696
247	Machine shops	5.2	0.7	\$244,896	\$113,769
259	Other fabricated metal manufacturing	3.7	0.7	\$163,013	\$53,332
269	All other industrial machinery manufacturing	2.6	0.9	\$259,400	\$18,983
297	Scales, balances, and misc general purpose machinery	2.5	1.0	\$255,419	\$13,723
311	Electromedical and electrotherapeutic apparatus	0.0	3.6	\$0	-\$92,663
339	All other misc electrical equipment and components	2.3	0.6	\$291,711	-\$2,109
350	Motor vehicle seating and interior trim manufacturing	2.2	0.0	\$107,178	\$0
356	Other aircraft parts and auxiliary equipment	2.8	0.1	\$250,207	\$9,661
360	Ship building and repairing	3.8	0.0	\$246,299	\$15,872
361	Boat building	3.5	0.0	\$146,381	\$3,206
376	Surgical and medical instrument manufacturing	1.7	2.1	\$168,837	\$15,143
380	Dental laboratories	9.7	2.8	\$355,523	\$24,021
381	Jewelry and silverware manufacturing	4.1	1.0	\$148,452	\$11,375
382	Sporting and athletic goods manufacturing	2.9	1.2	\$155,671	\$7,034
385	Sign manufacturing	5.9	2.0	\$281,733	\$16,042
391	All other miscellaneous manufacturing	3.5	1.6	\$180,010	\$9,280
Totals: Direct Multiplier Impacts		2.5	0.5	\$162,349	\$6,704
Totals: Indirect Multiplier Impacts		0.5	0.4	\$28,269	\$7,997
Totals: Induced Multiplier Impacts		0.7	0.3	\$30,475	\$5,309
Grand Totals: All Multiplier Impacts		3.7	1.2	\$221,092	\$20,009

Table 67: Economic multipliers of Manufacturing and Maritime in 2019 (2021\$).

Indirect Economic Impacts

Table 68 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Management of companies, with 3.8 covered employees and 4.1 proprietors at annual average wages of \$86,294 and (\$167), respectively, driven by supply chain expenditures in Transportation Equipment. Overall, the top 15 Indirect economic impacts are \$9,226,234 in value of output, or 25 percent of the total value of output in the Manufacturing and Maritime Cluster supply chain. For covered employment, it's 31.5 supply chain jobs at an annual average wage of \$62,412, or 25 percent of the total Indirect covered employment. For proprietors, it's 35.4 jobs at an annual average wage of \$12,772, or 33 percent of the total Indirect proprietors.

MANUFACTURING AND MARITIME CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
469	Management of companies and enterprises	Transportation Equipment	\$1,160,436	3.8	4.1	7.9	\$86,294	(\$167)
402	Retail - Motor vehicle and parts dealers	Transportation Equipment	\$932,149	5.9	0.4	6.3	\$52,234	\$60,716
447	Other real estate	Transportation Equipment	\$1,066,018	0.8	5.3	6.1	\$35,851	\$16,990
460	Computer systems design services	Transportation Equipment	\$276,187	0.7	4.5	5.3	\$83,733	\$11,393
4	Fruit farming	Beverage & Tobacco	\$92,848	2.2	2.7	4.9	\$24,907	(\$3,884)
465	Advertising, public relations, and related services	Misc Manu	\$514,644	1.0	3.6	4.6	\$46,239	\$9,307
417	Truck transportation	Transportation Equipment	\$747,797	3.6	0.7	4.4	\$65,827	\$94,914
447	Other real estate	Misc Manu	\$687,849	0.5	3.4	3.9	\$35,851	\$16,990
459	Custom computer programming services	Transportation Equipment	\$330,277	1.0	2.8	3.9	\$97,805	\$10,947
396	Wholesale - Other durable goods merchants	Transportation Equipment	\$952,727	3.0	0.8	3.9	\$69,815	\$18,756
396	Wholesale - Other durable goods merchants	Misc Manu	\$887,926	2.8	0.8	3.6	\$69,815	\$18,756
469	Management of companies and enterprises	Misc Manu	\$481,236	1.6	1.7	3.3	\$86,294	(\$167)
398	Wholesale - Grocery and related products	Beverage & Tobacco	\$558,546	2.6	0.6	3.2	\$57,262	\$18,537
465	Advertising, public relations, and related services	Transportation Equipment	\$325,654	0.6	2.3	2.9	\$46,239	\$9,307
472	Employment services	Transportation Equipment	\$211,940	1.1	1.7	2.8	\$46,746	\$25,167
Totals for the Top 15 Indirect Economic Impacts			\$9,226,234	31.5	35.4	66.9	\$62,412	\$12,772
Percent of Total Indirect Economic Impacts			25%	25%	33%	29%		

Table 68: Top 15 Indirect economic impacts by employment for the Manufacturing and Maritime Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 69 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 5.8 covered employees and 0.3 proprietors at annual average wages of \$28,370 and \$31,668 respectively,

driven by expenditures in Transportation Equipment. Overall, the top 15 Induced economic impacts are \$4,473,139 in value of output, or 8 percent of the total Induced contributions of the Manufacturing and Maritime Cluster. For covered employment, it's 38.3 jobs at an annual average wage of \$36,854, or 21 percent of the total Induced covered employment. For proprietors, it's 46.4 jobs at an annual average wage of \$25,533, or 18 percent of the total Induced proprietors.

MANUFACTURING AND MARITIME CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Transportation Equipment	\$473,706	5.8	0.3	6.1	\$28,370	\$31,668
493	Individual and family services	Transportation Equipment	\$177,141	4.1	0.4	4.6	\$28,967	\$16,551
510	Limited-service restaurants	Transportation Equipment	\$399,617	4.1	0.2	4.3	\$25,585	\$34,463
406	Retail - Food and beverage stores	Transportation Equipment	\$313,629	3.4	0.1	3.5	\$41,766	\$13,043
491	Nursing and community care facilities	Transportation Equipment	\$305,099	3.4	0.1	3.5	\$47,213	\$689
447	Other real estate	Transportation Equipment	\$568,267	0.4	2.8	3.2	\$35,851	\$16,990
411	Retail - General merchandise stores	Transportation Equipment	\$337,479	3.2	0.0	3.2	\$46,073	\$10,392
525	Private households	Transportation Equipment	\$31,070	3.1	0.0	3.1	\$10,129	\$0
511	All other food and drinking places	Transportation Equipment	\$177,678	2.3	0.1	2.4	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Transportation Equipment	\$139,424	1.4	0.8	2.3	\$32,109	\$27,505
413	Retail - Nonstore retailers	Transportation Equipment	\$276,213	0.1	2.1	2.2	\$37,112	\$8,162
512	Automotive repair and maintenance	Transportation Equipment	\$209,533	1.7	0.3	2.1	\$49,475	\$122,800
483	Offices of physicians	Transportation Equipment	\$289,513	1.5	0.6	2.0	\$93,373	\$76,991
534	Other local government enterprises	Transportation Equipment	\$625,191	2.0	0.0	2.0	\$65,915	\$0
509	Full-service restaurants	Misc Manu	\$149,580	1.8	0.1	1.9	\$28,370	\$31,668
Totals for the Top 15 Induced Economic Impacts			\$4,473,139	38.3	8.1	46.4	\$36,854	\$25,533
Percent of Total Induced Economic Impacts			8%	21%	12%	18%		

Table 69: Top 15 Induced economic impacts by employment for the Manufacturing and Maritime Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 70. The results indicate 20 percent of respondents in the Manufacturing and Maritime Cluster believe Clallam County is favorable for doing business. 66 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, employee retention, and increased cost of materials.

In the supply chain, 60 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 71 percent of respondents indicated that 40 to 80 percent of expenditures for goods and materials are made outside the County; for services, 29 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in consumables and supplies, raw materials, and equipment and durable goods,

and bulk or prepared foods. For services, respondents expressed an interest in repair and maintenance, engineering, and marketing.

Business Climate For Manufacturing and Maritime Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
20% Favorable	66% Likely	Lack of Qualified Workers - 23% Employee Retention - 20% Increased Cost of Materials - 20%	None
Supply Chain Possibilities for Manufacturing and Maritime in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
60% Yes 20% Maybe 20% No	0 to 20% of Expenditures - 0 20% to 50% of Expenditures - 29% 40% to 80% of Expenditures - 71%	0 to 20% of Expenditures - 14% 30% to 50% of Expenditures - 57 % 60% to 100% of Expenditures - 29%	Consumables and Supplies Raw Materials Equipment and durable goods
			Repair and Maintenance Engineering Marketing

Table 70: Summary results for Manufacturing and Maritime from the EDC Employer Survey, 2021-2.

A photograph of a brown and white dog, possibly a Weimaraner, standing on grass and looking to the right with its mouth open. It is wearing a light blue patterned bandana. In the background, the lower legs and white sneakers of a person are visible.

PERSONAL SERVICES

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PERSONAL SERVICES

The Personal Services Cluster was defined using NAICS at the 3-digit level, is illustrated in Table 71. The NAICS subsectors are Personal and laundry services (812), and Private households (814). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 66 Personal Services firms with 166 employees paid an average annual wage of \$26,213. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Personal and Private.⁵⁷ Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Personal Services Cluster was further subdivided into The Sub-Clusters and corresponding industries are presented in Table 72.

PERSONAL SERVICES CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
517 - 520	812	Personal and laundry services	42	131	\$3,371,782	\$25,739
525	814	Private households	24	35	\$979,493	\$27,986
Totals			66	166	\$4,351,275	\$26,213

Table 71: Defining the Personal Services Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Personal	517	Personal care services
Personal	518	Death care services
Personal	519	Dry-cleaning and laundry services
Personal	520	Other personal services
Private	525	Private households

Table 72: Sub-Clusters and associated industries in Personal Services.

⁵⁷ Employment in Private Households consists of the myriad of things households pay others to do, ranging from assistance with shopping to pet care.

Economic Impacts

Table 73 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 5 listed IMPLAN industries that comprise the Personal Services Cluster. The value of output ranged from a low of \$3,478,414 in Death care services to a high of \$12,104,128 in Personal care services. The total Direct value of output for the Personal Services Cluster was estimated at \$33,107,265; the Indirect value of output was estimate at \$3,030,916; the Induced value of output was estimated at \$14,236,610. The grand total value of output in the Personal Services Cluster was estimated at \$50,374,792.

PERSONAL SERVICES CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
517	Personal care services	\$12,104,128	70.5	125.9	196.4	\$27,060	\$69,798
518	Death care services	\$3,478,414	18.1	45.1	63.2	\$44,232	\$66,623
519	Dry-cleaning and laundry services	\$5,320,102	35.6	71.3	106.9	\$27,638	\$66,256
520	Other personal services	\$6,918,302	43.0	45.9	88.9	\$34,648	\$61,747
525	Private households	\$5,286,319	521.9	0.0	521.9	\$10,129	\$0
Totals: Direct Impacts		\$33,107,265	689.1	288.2	977.3	\$15,190	\$67,142
Totals: Indirect Impacts		\$3,030,916	8.8	12.2	21.0	\$49,416	\$27,397
Totals: Induced Impacts		\$14,236,610	69.9	27.2	97.1	\$42,631	\$26,001
Grand Totals: All Impacts		\$50,374,792	767.7	327.6	1,095.4	\$18,080	\$62,247

Table 73: Economic impacts of Personal Services in 2019 (2021\$).

Estimated covered employment ranged from a low of 18.1 in Death care services at an annual average wage of \$44,232 to a high of 521.9 in Private households at an annual average wage of \$10,129. For proprietors, employment ranges from a low of 45.1 in Death care services at an average annual wage of \$66,623 to a high of 125.9 in Personal care services at an average annual wage of \$69,798. Total Direct covered employment was estimated at 689.1 at an annual average wage of \$15,190; total Direct proprietors was estimated at 288.2 at an annual average wage of \$67,142. Total Indirect covered employment was estimated at 8.8 at an average annual wage of \$49,416; for proprietors it was estimated at 12.2 at an average annual wage of \$27,397. Total Induced covered employment was estimated at 69.9 at an annual average wage of \$42,631; for proprietors it was estimated at 27.2 at an annual average wage of \$26,001. The grand total covered employment was estimated at 767.7 at an annual average wage of \$18,080; for proprietors it was 327.6 at an annual average wage of \$62,247.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 74 for each IMPLAN industry that comprises the Personal Services Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Death care services will provide 5.2 additional jobs; at the high

end, Private households would provide an additional 98.7 employees. For proprietors, the low end of expected impacts would be 6.6 in Other personal services; at the high-end Dry-cleaning and laundry services would provide an additional 13.4 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$157,636 in Personal care services for covered employment; the high end would be \$1,000,000 in Private households. For proprietors, the low end would be \$409,743 in Other personal services; at the high end \$888,294 in Dry-cleaning and laundry services.

For the Personal Services Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 20.8; for proprietors it would be 8.7. The corresponding change in wages would be \$316,149 and \$584,561 respectively. The Indirect and Induced multiplier affects for the Personal Services Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 0.3 and 0.4 respectively with corresponding changes in total annual wages of \$13,158 and \$10,093. For Induced multipliers, the changes would be 2.1 employees and 0.8 proprietors at total annual wages of \$89,973 and \$21,362 respectively. In total, a change in \$1,000,000 in Personal Services value added will change total covered employment by 23.2 and annual wages by \$419,280; for proprietors the changes will be 9.9 and \$616,016 respectively.

MULTIPLIERS PERSONAL SERVICES		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
517	Personal care services	5.8	10.4	\$157,636	\$725,924
518	Death care services	5.2	13.0	\$229,913	\$864,190
519	Dry-cleaning and laundry services	6.7	13.4	\$184,803	\$888,294
520	Other personal services	6.2	6.6	\$215,306	\$409,743
525	Private households	98.7	0.0	\$1,000,000	\$0
Totals: Direct Multiplier Impacts		20.8	8.7	\$316,149	\$584,561
Totals: Indirect Multiplier Impacts		0.3	0.4	\$13,158	\$10,093
Totals: Induced Multiplier Impacts		2.1	0.8	\$89,973	\$21,362
Grand Totals: All Multiplier Impacts		23.2	9.9	\$419,280	\$616,016

Table 74: Economic multipliers of Personal Services in 2019 (2021\$).

Indirect Economic Impacts

Table 75 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 0.9 covered employees and 5.4 proprietors at annual average wages of \$35,851 and \$16,990 respectively, driven by supply chain expenditures in Personal Services. Overall, the top 15 Indirect economic impacts are \$2,109,012 in value of output, or 70 percent of the total value of output in the Personal Services Cluster supply chain. For covered employment, it's 6.0 supply chain jobs at an annual average wage of \$43,269, or 68 percent of the total Indirect covered employment. For proprietors, it's 10.3 jobs at an annual average wage of \$25,092, or 84 percent of the total Indirect proprietors.

PERSONAL SERVICES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Personal	\$1,099,378	0.9	5.4	6.3	\$35,851	\$16,990
519	Dry-cleaning and laundry services	Personal	\$131,448	0.9	1.8	2.6	\$27,638	\$66,256
456	Accounting, tax preparation, bookkeeping	Personal	\$79,127	0.3	0.6	0.9	\$40,996	\$14,497
465	Advertising, public relations, related services	Personal	\$95,771	0.2	0.7	0.9	\$46,239	\$9,307
469	Management of companies and enterprises	Personal	\$110,208	0.4	0.4	0.8	\$86,294	(\$167)
534	Other local government enterprises	Personal	\$214,671	0.7	0.0	0.7	\$65,915	\$0
509	Full-service restaurants	Personal	\$47,316	0.6	0.0	0.6	\$28,370	\$31,668
511	All other food and drinking places	Personal	\$42,679	0.5	0.0	0.6	\$32,281	\$30,514
476	Services to buildings	Personal	\$39,322	0.4	0.2	0.5	\$21,193	\$29,085
477	Landscape and horticultural services	Personal	\$38,007	0.3	0.2	0.5	\$32,835	\$28,841
455	Legal services	Personal	\$68,492	0.1	0.4	0.5	\$57,085	\$11,542
472	Employment services	Personal	\$28,864	0.2	0.2	0.4	\$46,746	\$25,167
421	Couriers and messengers	Personal	\$36,632	0.3	0.1	0.4	\$61,511	\$1,341
470	Office administrative services	Personal	\$22,082	0.1	0.2	0.3	\$64,264	\$28,834
417	Truck transportation	Personal	\$55,016	0.3	0.1	0.3	\$65,827	\$94,914
Totals for the Top 15 Indirect Economic Impacts			\$2,109,012	6.0	10.3	16.2	\$43,269	\$25,092
Percent of Total Indirect Economic Impacts			70%	68%	84%	77%		

Table 75: Top 15 Indirect economic impacts by employment for the Personal Services Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 76 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 5.3 covered employees and 0.3 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Personal. Overall, the top 15 Induced economic impacts are \$4,039,043 in value of output, or 28 percent of the total Induced contributions of the Personal Services Cluster. For covered employment, it's 34.2 jobs at an annual average wage of \$37,651, or 49 percent of the total Induced covered employment. For proprietors, it's 7.5 jobs at an annual average wage of \$27,810, or 28 percent of the total Induced proprietors.

PERSONAL SERVICES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Personal	\$433,482	5.3	0.3	5.6	\$28,370	\$31,668
493	Individual and family services	Personal	\$167,525	3.9	0.4	4.3	\$28,967	\$16,551
510	Limited-service restaurants	Personal	\$353,717	3.6	0.2	3.8	\$25,585	\$34,463
406	Retail - Food and beverage stores	Personal	\$280,418	3.1	0.1	3.2	\$41,766	\$13,043
525	Private households	Personal	\$30,886	3.0	0.0	3.0	\$10,129	\$0
447	Other real estate	Personal	\$514,702	0.4	2.5	2.9	\$35,851	\$16,990
411	Retail - General merchandise stores	Personal	\$301,865	2.9	0.0	2.9	\$46,073	\$10,392
491	Nursing and community care facilities	Personal	\$246,381	2.7	0.1	2.8	\$47,213	\$689
511	All other food and drinking places	Personal	\$163,395	2.1	0.1	2.2	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Personal	\$124,703	1.3	0.8	2.0	\$32,109	\$27,505
413	Retail - Nonstore retailers	Personal	\$247,218	0.1	1.9	2.0	\$37,112	\$8,162
512	Automotive repair and maintenance	Personal	\$189,359	1.6	0.3	1.9	\$49,475	\$122,800
483	Offices of physicians	Personal	\$262,316	1.3	0.5	1.8	\$93,373	\$76,991
534	Other local government enterprises	Personal	\$547,930	1.7	0.0	1.7	\$65,915	\$0
484	Offices of dentists	Personal	\$175,146	1.2	0.3	1.5	\$59,099	\$87,722
Totals for the Top 15 Induced Economic Impacts			\$4,039,043	34.2	7.5	41.7	\$37,651	\$27,810
Percent of Total Induced Economic Impacts			28%	49%	28%	43%		

Table 76: Top 15 Induced economic impacts by employment for Personal Services Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 70. The results indicate 52 percent of respondents in the Personal Services Cluster believe Clallam County is favorable for doing business. 57 percent of respondents expect to expand operations in the next three years. The top challenges are increased cost of materials, lack of qualified workers, and excessive government regulation. Also listed was minimum wage, customers making it a priority to shop locally, current port issues, and the supply chain.

In the supply chain, 72 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 67 percent of respondents indicated that 40 to 80 percent of expenditures for goods and materials are made outside the County; for services, 17 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in consumables and supplies, equipment and durable goods, and specialty-niche products. For services, respondents expressed an interest in repair and maintenance, information technologies, legal, and marketing.

Business Climate For Personal Services Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
52% Favorable	57% Likely	Increased Cost of Materials - 26% Lack of Qualified Workers - 16% Excessive Govt. Regulation - 11%	Minimum wage, Customers making it a priority to shop local, Current port issues, supply chain.
Supply Chain Possibilities for Personal Services in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
72% Yes 14% Maybe 14% No	0 to 20% of Expenditures - 0 30% to 50% of Expenditures - 33% 60% to 80% of Expenditures - 67%	9 to 20% of Expenditures - 50% 30% to 50% of Expenditures - 33% 60% to 100% of Expenditures - 17%	Consumables and supplies Equipment and durable goods Specialty-Niche Products
			Repair and Maintenance Information Technologies Legal, Marketing

Table 77: Summary results for Personal Services from the EDC Employer Survey, 2021-2.



RETAIL

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RETAIL

The Retail Cluster was defined using NAICS at the 3-digit level, illustrated in Table 78. The NAICS subsectors ranged from Food manufacturing (311) to Nonstore retailers (454). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 212 Retail firms with 3,104 employees paid an average annual wage of \$35,305. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code were used to create the Sub-Clusters Food Manufacturing, Printing Activities, Motor Vehicles & Parts, Furniture, Electronics & Appliances, Food & Beverage, Health & Personal Care, Gasoline Stations, Clothing & Accessories, Sporting Goods, Hobbies, Books, General Merchandise, Misc. Stores, Nonstore Retailers, General Consumer Rentals and Video Rentals. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 79.

RETAIL CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
63-102	311	Food manufacturing	8	45	\$1,083,885	\$24,086
152	323	Printing and related support activities	3	11	\$342,399	\$31,127
402	441	Motor vehicle and parts dealers	29	385	\$18,980,414	\$49,300
403	442	Furniture and home furnishings stores	12	128	\$4,265,610	\$33,325
404	443	Electronics and appliance stores	7	22	\$673,174	\$30,599
406	445	Food and beverage stores	27	870	\$27,023,443	\$31,061
407	446	Health and personal care stores	12	154	\$7,760,062	\$50,390
408	447	Gasoline stations	18	106	\$3,261,826	\$30,772
409	448	Clothing and clothing accessory stores	18	65	\$1,286,508	\$19,792
410	451	Sporting goods, hobby, book and music stores	21	85	\$1,538,038	\$18,095
411	452	General merchandise stores	9	980	\$36,011,844	\$36,747
412	453	Miscellaneous store retailers	41	237	\$6,766,980	\$28,553
451	532	General and consumer goods rentals				
452	532	Video tape and disc rental				
413	454	Nonstore retailers	7	16	\$591,042	\$36,940
Totals			212	3,104	\$109,585,225	\$35,305

Table 78: Defining the Retail Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Food Manu	64	Other animal food manufacturing
Food Manu	89	Animal, except poultry, slaughtering
Food Manu	90	Meat processed from carcasses
Food Manu	91	Rendering and meat byproduct processing
Food Manu	92	Seafood product preparation and packaging
Food Manu	93	Bread and bakery product, except frozen, manufacturing
Food Manu	97	Roasted nuts and peanut butter manufacturing
Food Manu	98	Other snack food manufacturing
Food Manu	99	Coffee and tea manufacturing
Food manu	102	Spice and extract manufacturing
Printing Activities	152	Printing
Motor Vehicles & Parts	402	Retail - Motor vehicle and parts dealers
Furniture	403	Retail - Furniture and home furnishings stores
Electronics & Appliances	404	Retail - Electronics and appliance stores
Food & Beverage	406	Retail - Food and beverage stores
Health & Personal Care	407	Retail - Health and personal care stores
Gasoline Stations	408	Retail - Gasoline stores
Clothing & Accessorites	409	Retail - Clothing and clothing accessories stores
Sporting Goods, Hobbies, Books	410	Retail - Sporting goods, hobby, musical instrument and books
General Merchandise	411	Retail - General merchandise stores
Misc Stores	412	Retail - Miscellaneous store retailers
Nonstore Retailers	413	Retail - Nonstore retailers
General Consumer Rentals	451	General and consumer goods rental except video tapes
Video Rentals	452	Video tape and disc rental

Table 79: Sub-Clusters and associated industries in Retail.

Economic Impacts

Table 80 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 24 listed IMPLAN industries that comprise the Retail Cluster. The value of output ranged from a low of \$102,178 in Other animal food to a high of \$86,213,971 in General merchandise stores. The total Direct value of output for the Retail Cluster was estimated at \$384,886,208; the Indirect value of output was estimated at \$96,904,610; the Induced value of output was estimated at \$69,371,605. The grand total value of output in the Retail Cluster was estimated at \$551,162,423.

Estimated covered employment ranged from a low of 0.1 in Other animal food an annual average wage of \$24,586 to a high of 819 in General merchandise stores at an annual average wage of \$46,073. For proprietors, employment ranges from a low of 0.1 in several food manufacturing stores at average annual wages ranging between \$18,712 to \$18,747, to a high of 358.6 in Nonstore retailers at an average annual wage of \$8,162. Total Direct covered employment was estimated at 2,820.2 at an annual average wage of \$41,733; total Direct proprietors was estimated at 818.2 at an annual average wage of \$19,920. Total Indirect covered employment was estimated at 307.3 at an average annual wage of \$53,862; for proprietors it was estimated at 499.8 at an average annual wage of \$15,251. Total Induced covered employment was estimated at 340.6 at an annual average wage of \$42,818; for

proprietors it was estimated at 131.8 at an annual average wage of \$26,161. The grand total covered employment was estimated at 3,468.1 at an annual average wage of \$42,914; for proprietors it was 1,449.8 at an annual average wage of \$18,878.

RETAIL CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
64	Other animal food manufacturing	\$102,178	0.1	0.0	0.1	\$24,586	\$0
89	Animal, except poultry, slaughtering	\$449,215	0.6	0.1	0.7	\$57,492	\$18,712
90	Meat processed from carcasses	\$343,204	0.6	0.1	0.7	\$57,492	\$18,747
91	Rendering and meat byproduct processing	\$289,671	0.6	0.1	0.7	\$57,472	\$18,746
92	Seafood product preparation and packaging	\$6,900,441	15.1	1.5	16.6	\$36,268	\$28,406
93	Bread and bakery product, except frozen, manuf	\$6,953,240	45.3	1.5	46.8	\$40,734	\$13,849
97	Roasted nuts and peanut butter manu	\$2,357,419	4.2	0.0	4.2	\$86,478	\$0
98	Other snack food manufacturing	\$2,395,069	4.3	0.0	4.3	\$87,441	\$0
99	Coffee and tea manufacturing	\$9,969,532	15.7	0.7	16.4	\$25,856	\$14,987
102	Spice and extract manufacturing	\$7,321,447	12.0	1.0	13.0	\$34,250	\$22,184
152	Printing	\$3,015,838	14.9	6.2	21.1	\$40,027	\$9,490
402	Retail - Motor vehicle and parts dealers	\$27,742,758	174.8	13.3	188.1	\$52,234	\$60,716
403	Retail - Furniture and home furnishings stores	\$17,150,419	136.1	28.5	164.6	\$41,200	\$30,503
404	Retail - Electronics and appliance stores	\$5,781,064	40.4	22.4	62.8	\$36,609	\$56,314
406	Retail - Food and beverage stores	\$62,196,780	677.1	26.6	703.7	\$41,766	\$13,043
407	Retail - Health and personal care stores	\$18,935,215	156.6	35.4	192.0	\$58,904	\$15,746
408	Retail - Gasoline stores	\$14,978,327	97.8	4.2	102.0	\$32,578	\$570,423
409	Retail - Clothing and clothing accessories stores	\$13,755,235	105.2	42.5	147.7	\$24,775	\$1,313
410	Retail - Sporting goods, hobby, musical, books	\$10,840,417	115.3	61.3	176.6	\$24,319	\$12,475
411	Retail - General merchandise stores	\$86,213,971	819.0	7.2	826.2	\$46,073	\$10,392
412	Retail - Miscellaneous store retailers	\$31,604,608	320.8	190.5	511.3	\$32,109	\$27,505
413	Retail - Nonstore retailers	\$46,676,704	20.3	358.6	378.9	\$37,112	\$8,162
451	General and consumer goods rental except video	\$6,540,562	28.4	14.1	42.5	\$47,881	\$51,954
452	Video tape and disc rental	\$2,372,893	15.2	2.2	17.4	\$38,579	\$38,056
Totals: Direct Impacts		\$384,886,208	2,820.2	818.2	3,638.4	\$41,733	\$19,920
Totals: Indirect Impacts		\$96,904,610	307.3	499.8	807.0	\$53,862	\$15,251
Totals: Induced Impacts		\$69,371,605	340.6	131.8	472.4	\$42,818	\$26,161
Grand Totals: All Impacts		\$551,162,423	3,468.1	1,449.8	4,917.8	\$42,914	\$18,878

Table 80: Economic impacts of Retail in 2019 (2021\$).

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 81 for each IMPLAN industry that comprises the Retail Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Nonstore retail will provide 0.4 additional jobs; at the high end, Food and

beverage stores would provide an additional 10.9 employees. For proprietors, the low end of expected impacts would be 0.1 in Coffee and tea, Spice and extract, and General merchandise stores; at the high end Nonstore retailers would provide an additional 7.7 proprietors. The resulting change in total annual wages was also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$24,062 in Other animal food; the high end would be \$487,087 in Health and personal care stores. For proprietors, the low end would be \$87,274 in General merchandise stores; at the high end \$217,729 in Electronics and appliance stores.

For the Retail Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 7.3; for proprietors it would be 2.1. The corresponding change in wages would be \$305,795 and \$42,346 respectively. The Indirect and Induced multiplier affects for the Retail Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 0.8 and 1.3 respectively with corresponding changes in total annual wages of \$42,998 and \$19,803. For Induced multipliers, the changes would be 0.9 employees and 0.3 proprietors at total annual wages of \$37,888 and \$8,960 respectively. In total, a change in \$1,000,000 in Retail value added will change total covered employment by 9.0 and annual wages by \$386,681; for proprietors the changes will be 3.8 and \$71,109 respectively.



MULTIPLIERS RETAIL		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
64	Other animal food manufacturing	1.0	0.0	\$24,062	\$0
89	Animal, except poultry, slaughtering	1.3	0.3	\$74,044	\$5,059
90	Meat processed from carcasses	1.7	0.4	\$96,864	\$6,651
91	Rendering and meat byproduct processing	2.0	0.4	\$114,125	\$8,076
92	Seafood product preparation and packaging	2.2	0.2	\$79,568	\$6,016
93	Bread and bakery product, except frozen, manu	6.5	0.2	\$265,507	\$2,945
97	Roasted nuts and peanut butter manu	1.8	0.0	\$154,070	\$0
98	Other snack food manufacturing	1.8	0.0	\$156,987	\$0
99	Coffee and tea manufacturing	1.6	0.1	\$40,777	\$1,017
102	Spice and extract manufacturing	1.6	0.1	\$56,007	\$3,114
152	Printing	4.9	2.1	\$197,511	\$19,567
402	Retail - Motor vehicle and parts dealers	6.3	0.5	\$329,106	\$29,118
403	Retail - Furniture and home furnishings stores	7.9	1.7	\$326,876	\$50,743
404	Retail - Electronics and appliance stores	7.0	3.9	\$256,146	\$217,729
406	Retail - Food and beverage stores	10.9	0.4	\$454,712	\$5,570
407	Retail - Health and personal care stores	8.3	1.9	\$487,087	\$29,456
408	Retail - Gasoline stores	6.5	0.3	\$212,638	\$161,329
409	Retail - Clothing and clothing accessories stores	7.6	3.1	\$189,397	\$4,060
410	Retail - Sporting goods, hobby, musical, books	10.6	5.7	\$258,565	\$70,591
411	Retail - General merchandise stores	9.5	0.1	\$437,663	\$872
412	Retail - Miscellaneous store retailers	10.1	6.0	\$325,890	\$165,815
413	Retail - Nonstore retailers	0.4	7.7	\$16,167	\$62,702
451	General and consumer goods rental except video	4.3	2.2	\$208,088	\$111,803
452	Video tape and disc rental	6.4	0.9	\$246,409	\$35,988
Totals: Direct Multiplier Impacts		7.3	2.1	\$305,795	\$42,346
Totals: Indirect Multiplier Impacts		0.8	1.3	\$42,998	\$19,803
Totals: Induced Multiplier Impacts		0.9	0.3	\$37,888	\$8,960
Grand Totals: All Multiplier Impacts		9.0	3.8	\$386,681	\$71,109

Table 81: Economic multipliers of Retail in 2019 (2021\$).

Indirect Economic Impacts

Table 82 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in All other crop farming, with 10.2 covered employees and 76.9 proprietors at annual average wages of \$34,517 and (\$293) respectively, driven by supply chain expenditures in Food manufacturing. Overall, the top 15 Indirect economic impacts are \$30,869,932 in value of output, or 32 percent of the total value of output in the Retail Cluster supply chain. For covered employment, it's 64.6 supply chain jobs at an annual average wage of \$45,037, or 21 percent of the total Indirect covered employment. For proprietors, it's 289.6 jobs at an annual average wage of \$8,460, or 58 percent of the total Indirect proprietors.

RETAIL CLUSTER			Value of	Employment by Type		Average Wage (2021\$)		
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
10	All other crop farming	Food manu	\$412,277	10.2	76.9	87.1	\$34,517	(\$293)
10	All other crop farming	Food Manu	\$274,505	6.8	51.2	58.0	\$34,517	(\$293)
447	Other real estate	Food & Beverage	\$4,789,761	3.7	23.6	27.4	\$35,851	\$16,990
465	Advertising, public relations, related services	Nonstore Retailers	\$2,315,008	4.5	16.2	20.8	\$46,239	\$9,307
447	Other real estate	General Merchandise	\$3,521,319	2.8	17.4	20.1	\$35,851	\$16,990
447	Other real estate	Misc Stores	\$3,484,512	2.7	17.2	19.9	\$35,851	\$16,990
447	Other real estate	Nonstore Retailers	\$3,292,208	2.6	16.2	18.8	\$35,851	\$16,990
4	Fruit farming	Food Manu	\$327,597	7.7	9.5	17.2	\$24,907	(\$3,884)
469	Management of companies and enterprises	General Merchandise	\$2,330,597	7.6	8.3	15.9	\$86,294	(\$167)
421	Couriers and messengers	Nonstore Retailers	\$1,385,525	9.7	4.7	14.4	\$61,511	\$1,341
447	Other real estate	Clothing & Accessorites	\$2,416,467	1.9	11.9	13.8	\$35,851	\$16,990
447	Other real estate	Health & Personal Care	\$2,234,726	1.7	11.0	12.8	\$35,851	\$16,990
447	Other real estate	Furniture	\$2,014,228	1.6	9.9	11.5	\$35,851	\$16,990
17	Commercial fishing	Food Manu	\$670,187	0.1	8.6	8.7	\$254,803	\$49,885
447	Other real estate	Sporting Goods, Hobbies, Books	\$1,401,016	1.1	6.9	8.0	\$35,851	\$16,990
Totals for the Top 15 Indirect Economic Impacts			\$30,869,932	64.6	289.6	354.2	\$45,037	\$8,460
Percent of Total Indirect Economic Impacts			32%	21%	58%	44%		

Table 82: Top 15 Indirect economic impacts by employment for the Retail Cluster in 2019 (2021\$).



Induced Economic Impacts

Table 83 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 7.8 covered employees and 0.4 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in General Merchandise. Overall, the top 15 Induced economic impacts are \$6,146,401 in value of output, or 9 percent of the total Induced contributions of the Retail Cluster. For covered employment, it's 62.8 jobs at an annual average wage of \$32,358, or 18 percent of the total Induced covered employment. For proprietors, it's 9.7 jobs at an annual average wage of \$18,516, or 7 percent of the total Induced proprietors.

RETAIL CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	General Merchandise	\$639,764	7.8	0.4	8.2	\$28,370	\$31,668
509	Full-service restaurants	Food & Beverage	\$495,518	6.1	0.3	6.4	\$28,370	\$31,668
493	Individual and family services	General Merchandise	\$238,858	5.6	0.6	6.2	\$28,967	\$16,551
510	Limited-service restaurants	General Merchandise	\$540,542	5.5	0.3	5.8	\$25,585	\$34,463
406	Retail - Food and beverage stores	General Merchandise	\$424,033	4.6	0.2	4.8	\$41,766	\$13,043
493	Individual and family services	Food & Beverage	\$185,190	4.3	0.5	4.8	\$28,967	\$16,551
491	Nursing and community care facilities	General Merchandise	\$414,353	4.6	0.2	4.7	\$47,213	\$689
510	Limited-service restaurants	Food & Beverage	\$418,256	4.2	0.2	4.5	\$25,585	\$34,463
447	Other real estate	General Merchandise	\$767,847	0.6	3.8	4.4	\$35,851	\$16,990
411	Retail - General merchandise stores	General Merchandise	\$456,271	4.3	0.0	4.4	\$46,073	\$10,392
525	Private households	General Merchandise	\$41,789	4.1	0.0	4.1	\$10,129	#DIV/0!
406	Retail - Food and beverage stores	Food & Beverage	\$328,201	3.6	0.1	3.7	\$41,766	\$13,043
491	Nursing and community care facilities	Food & Beverage	\$319,803	3.5	0.1	3.6	\$47,213	\$689
509	Full-service restaurants	Misc Stores	\$281,437	3.5	0.2	3.6	\$28,370	\$31,668
447	Other real estate	Food & Beverage	\$594,539	0.5	2.9	3.4	\$35,851	\$16,990
Totals for the Top 15 Induced Economic Impacts			\$6,146,401	62.8	9.7	72.6	\$32,358	\$18,516
Percent of Total Induced Economic Impacts			9%	18%	7%	15%		

Table 83: Top 15 Induced economic impacts by employment for the Retail Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 84. The results indicate 60 percent of respondents in the Retail Cluster believe Clallam County is favorable for doing business. 60 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, increased cost of materials, and employee retention. Also listed as challenges were County and City don't work with businesses, City doesn't work with businesses, and taxes on taxes.

In the supply chain, 50 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 83 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 33 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in specialty-niche products, consumables and supplies, and equipment and durable goods. For services, information technologies, repair and maintenance, and marketing were indicated.

Business Climate For Retail Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
60% Favorable	60% Likely	Lack of Qualified Workers - 24% Increased Cost of Materials-18% Employee Retention - 16%	County and City doesn't work with businesses, City doesn't work with businesses, Taxes on taxes
Supply Chain Possibilities for Retail in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
50% Yes 40% Maybe 10% No	0 to 20% of Expenditures - 0% 20% to 50% of Expenditures - 17% 60% to 80% of Expenditures - 83%	0 to 20% of Expenditures - 50% 30% to 50% of Expenditures - 17% 60% to 100% of Expenditures - 33%	Specialty-niche products Consumables and Supplies Equipment and durable goods
			Information Technologies Repair and Maintenance Marketing

Table 84: Summary results for Retail from the EDC Employer Survey, 2021-2.



SPECIALIZED SERVICES

EDC

CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL

ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY

When Prosperity Matters
2023



SPECIALIZED SERVICES

The Specialized Services Cluster was defined using NAICS at the 3-digit level, illustrated in Table 85. The NAICS subsectors are Publishing industries (511), Motion picture and sound recording industries (512), Broadcasting except internet (515), Telecommunications (517), ISPs, search portals, and data processing (518), Other information services (519), Professional and technical services (541), Management of companies and enterprises (551)⁵⁸ and Administrative and support services (561). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 362 Specialized Services firms with 1,381 employees paid an average annual wage of \$49,576. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code were used to create the Sub-Clusters Publishing, Motion Pictures, Telecommunications, ISP, Other Information Services, Professional Services and Administrative Services. Sub-Clusters make it possible to combine similar industries that can later be used to analysis the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 86.

SPECIALIZED SERVICES CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
423 - 428	511	Publishing industries, except Internet	15	67	\$3,963,624	\$59,159
429, 430	512	Motion picture and sound recording industries	*			
431, 432	515	Broadcasting, except Internet	*			
433, 435	517	Telecommunications	6	33	\$1,586,552	\$48,077
436	518	ISPs, search portals, and data processing	*			
437, 438	519	Other information services	*			
		Other industries	6	25	\$858,353	\$34,334
455 - 468	541	Professional and technical services	193	601	\$32,549,293	\$54,159
469	551	Management of companies and enterprises (QCEW 2017)	5	85	\$7,882,795	\$92,739
470 - 478	561	Administrative and support services	137	570	\$21,624,111	\$37,937
Totals			362	1,381	\$68,464,728	\$49,576

Table 85: Defining the Specialized Services Cluster using NAICS and IMPLAN bridge codes.

⁵⁸ To capture the missing values for Management of companies, QCEW 2017 values were used, adjusted into 2021\$.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Publishing	423	Newspaper publishers
Publishing	424	Periodical publishers
Publishing	428	Software publishers
Motion Picture	429	Motion picture and video industries
Motion Pictures	430	Sound recording industries
Telecommunications	431	Radio and television broadcasting
Telecommunications	433	Wired telecommunications carriers
Telecommunications	435	Satellite, telecommunications resellers, other telecommunications
ISP	436	Data processing, hosting, and related services
Other information services	437	News syndicates, libraries, archives and all other information services
Other information services	438	Internet publishing and broadcasting and web search portals
Professional services	455	Legal services
Professional services	456	Accounting, tax preparation, bookkeeping, and payroll services
Professional services	457	Architectural, engineering, and related services
Professional services	458	Specialized design services
Professional services	459	Custom computer programming services
Professional services	460	Computer systems design services
Professional services	461	Other computer related services, including facilities management
Professional services	462	Management consulting services
Professional services	463	Environmental and other technical consulting services
Professional services	464	Scientific research and development services
Professional services	465	Advertising, public relations, and related services
Professional services	466	Photographic services
Professional services	467	Veterinary services
Professional services	468	Marketing research and all other miscellaneous professional, scientific, and technical services
Administrative services	469	Management of companies and enterprises
Administrative services	470	Office administrative services
Administrative services	472	Employment services
Administrative services	473	Business support services
Administrative services	474	Travel arrangement and reservation services
Administrative services	475	Investigation and security services

Table 86: Sub-Clusters and associated industries in Specialized Services.

Economic Impact

Table 87 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 31 listed IMPLAN industries that comprise the Specialized Services Cluster. The value of output ranged from a low of \$43,616 in News syndicates to a high of \$153,596,653 in Scientific research and development services. The total Direct value of output for the Specialized Services Cluster was estimated at \$506,641,650; the Indirect value of output was estimate at

\$207,954,098; the Induced value of output was estimated at \$80,171,807. The grand total value of output in the Specialized Services Cluster was estimated at \$794,767,555.

Estimated covered employment ranged from a low of 0.2 in News syndicates, libraries, archives and other info at an average wage of \$56,444 to a high of 255.3 in Scientific research and development services at an annual average wage of \$81,594. For proprietors, employment ranges from a low of 0.2 in Periodical publishers at an average annual wage of \$71,481 to a high of 675.7 in Scientific research and development services at an average annual wage of \$11,222. Total Direct covered employment was estimated at 1,324.0 at an annual average wage of \$63,439; total Direct proprietors was estimated at 2,931.0 at an annual average wage of \$15,856. Total Indirect covered employment was estimated at 578.0 at an average annual wage of \$53,998; for proprietors it was estimated at 898.4 at an average annual wage of \$18,510. Total Induced covered employment was estimated at 393.5 at an annual average wage of \$42,738; for proprietors it was estimated at 152.7 at an annual average wage of \$26,093. The grand total covered employment was estimated at 2,295.5 at an annual average wage of \$57,513; for proprietors it was 3,982.1 at an annual average wage of \$16,847.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 88 for each IMPLAN industry that comprises the Specialized Services Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Internet publishing and Other computer related services will provide 0.7 additional jobs; at the high end, Investigation and security services would provide an additional 10.1 employees. For proprietors, the low end of expected impacts would be 0.1 in Newspaper publishers; at the high-end Computer systems design services would provide an additional 16.4 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$37,702 in Radio and television broadcasting; the high end would be \$398,677 in Newspaper publishers. For proprietors, the low end would be (\$168,970) in Satellite telecommunications; at the high end \$260,384 in Investigation and security services.

For the Specialized Services Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 2.6; for proprietors it would be 5.8. The corresponding change in wages would be \$165,785 and \$91,727 respectively. The Indirect and Induced multiplier affects for the Specialized Services Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 1.1 and 1.8 respectively with corresponding changes in total annual wages of \$61,598 and \$32,824. For Induced multipliers, the changes would be 0.8 employees and 0.3 proprietors at total annual wages of \$33,198 and \$7,864 respectively. In total, a change in \$1,000,000 in Specialized Services value added will change total covered employment by 4.5 and annual wages by \$260,581; for proprietors the changes will be 7.9 and \$132,415 respectively.

SPECIALIZED SERVICES CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
423	Newspaper publishers	\$2,664,655	25.8	0.3	26.1	\$41,175	\$42,623
424	Periodical publishers	\$923,317	4.6	0.2	4.8	\$71,481	\$34,278
428	Software publishers	\$8,119,567	39.9	15.4	55.3	\$51,485	\$35,055
429	Motion picture and video industries	\$3,907,363	11.9	9.3	21.2	\$28,283	\$18,594
430	Sound recording industries	\$434,501	0.0	1.2	1.2	\$0	\$8,105
431	Radio and television broadcasting	\$12,527,627	13.9	3.9	17.8	\$34,003	\$1,818,847
433	Wired telecommunications carriers	\$8,025,693	21.2	3.8	25.0	\$70,948	-\$298,012
435	Satellite, telecommunications resellers, other tele	\$4,598,741	9.3	3.4	12.7	\$132,503	-\$226,828
436	Data processing, hosting, and related services	\$9,524,588	4.8	20.4	25.2	\$89,511	\$8,504
437	News syndicates, libraries, archives, other info services	\$43,616	0.2	0.0	0.2	\$56,444	\$0
438	Internet publishing and broadcasting and web search portals	\$8,716,228	6.5	2.3	8.8	\$99,297	\$6,682
455	Legal services	\$57,317,515	84.2	302.6	386.8	\$57,085	\$11,542
456	Accounting, tax prep, bookkeeping, and payroll services	\$22,118,262	87.1	173.9	261.0	\$40,996	\$14,497
457	Architectural, engineering, and related services	\$18,618,675	49.5	133.7	183.2	\$48,718	\$13,991
458	Specialized design services	\$3,501,707	7.6	26.2	33.8	\$47,342	\$10,977
459	Custom computer programming services	\$19,407,183	60.1	167.3	227.4	\$97,805	\$10,947
460	Computer systems design services	\$18,592,417	50.3	304.1	354.4	\$83,733	\$11,393
461	Other computer related services, including mgt	\$5,835,910	4.0	32.0	36.0	\$121,983	\$12,509
462	Management consulting services	\$9,524,992	20.0	98.0	118.0	\$64,393	\$10,659
463	Environmental and other technical consulting services	\$9,807,542	28.7	100.3	129.0	\$67,022	\$14,212
464	Scientific research and development services	\$153,596,653	255.3	675.7	931.0	\$81,594	\$11,222
465	Advertising, public relations, and related services	\$22,914,126	44.6	160.8	205.4	\$46,239	\$9,307
466	Photographic services	\$698,005	2.4	0.5	2.9	\$41,412	\$15,854
467	Veterinary services	\$12,979,491	78.7	94.3	173.0	\$37,145	\$20,026
468	Marketing research, and misc professional technical services	\$11,708,106	9.6	56.5	66.1	\$98,154	\$12,878
469	Management of companies and enterprises	\$26,895,049	87.6	95.8	183.4	\$86,294	-\$167
470	Office administrative services	\$26,293,924	145.1	240.4	385.5	\$64,264	\$28,834
472	Employment services	\$11,101,681	59.5	88.1	147.6	\$46,746	\$25,167
473	Business support services	\$2,310,884	20.1	14.5	34.6	\$48,659	\$24,814
474	Travel arrangement and reservation services	\$5,968,719	11.2	30.2	41.4	\$68,125	\$24,338
475	Investigation and security services	\$7,964,913	80.3	75.9	156.2	\$33,806	\$27,329
Totals: Direct Impacts		\$506,641,650	1,324.0	2,931.0	4,255.0	\$63,439	\$15,856
Totals: Indirect Impacts		\$207,954,098	578.0	898.4	1,476.4	\$53,998	\$18,510
Totals: Induced Impacts		\$80,171,807	393.5	152.7	546.2	\$42,738	\$26,093
Grand Totals: All Impacts		\$794,767,555	2,295.5	3,982.1	6,277.6	\$57,513	\$16,847

Table 87: Economic impacts of Specialized Services in 2019 (2021\$).

MULTIPLIERS SPECIALIZED SERVICES		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
423	Newspaper publishers	9.7	0.1	\$398,677	\$4,790
424	Periodical publishers	5.0	0.2	\$359,319	\$5,892
428	Software publishers	4.9	1.9	\$252,868	\$66,577
429	Motion picture and video industries	3.0	2.4	\$86,079	\$44,293
430	Sound recording industries	0.0	2.8	\$0	\$22,385
431	Radio and television broadcasting	1.1	0.3	\$37,702	\$567,605
433	Wired telecommunications carriers	2.6	0.5	\$187,363	(\$141,298)
435	Satellite, telecommunications resellers, other tele	2.0	0.7	\$267,219	(\$168,970)
436	Data processing, hosting, and related services	0.5	2.1	\$45,091	\$18,215
437	News syndicates, libraries, archives, other info services	4.6	0.0	\$258,824	\$0
438	Internet publishing and broadcasting and web search portals	0.7	0.3	\$73,773	\$1,782
455	Legal services	1.5	5.3	\$83,845	\$60,939
456	Accounting, tax prep, bookkeeping, and payroll services	3.9	7.9	\$161,521	\$113,948
457	Architectural, engineering, and related services	2.7	7.2	\$129,550	\$100,459
458	Specialized design services	2.2	7.5	\$102,163	\$82,266
459	Custom computer programming services	3.1	8.6	\$302,926	\$94,365
460	Computer systems design services	2.7	16.4	\$226,553	\$186,345
461	Other computer related services, including mgt	0.7	5.5	\$83,605	\$68,592
462	Management consulting services	2.1	10.3	\$135,437	\$109,631
463	Environmental and other technical consulting services	2.9	10.2	\$196,095	\$145,353
464	Scientific research and development services	1.7	4.4	\$135,620	\$49,370
465	Advertising, public relations, and related services	1.9	7.0	\$89,975	\$65,317
466	Photographic services	3.5	0.7	\$143,117	\$11,078
467	Veterinary services	6.1	7.3	\$225,128	\$145,548
468	Marketing research, and misc professional technical services	0.8	4.8	\$80,668	\$62,122
469	Management of companies and enterprises	3.3	3.6	\$281,037	(\$596)
470	Office administrative services	5.5	9.1	\$354,593	\$263,638
472	Employment services	5.4	7.9	\$250,578	\$199,700
473	Business support services	8.7	6.3	\$424,116	\$155,248
474	Travel arrangement and reservation services	1.9	5.1	\$127,819	\$123,150
475	Investigation and security services	10.1	9.5	\$340,880	\$260,384
Totals: Direct Multiplier Impacts		2.6	5.8	\$165,785	\$91,727
Totals: Indirect Multiplier Impacts		1.1	1.8	\$61,598	\$32,824
Totals: Induced Multiplier Impacts		0.8	0.3	\$33,198	\$7,864
Grand Totals: All Multiplier Impacts		4.5	7.9	\$260,581	\$132,415

Table 88: Economic multipliers of Specialized Services in 2019 (2021\$).

Indirect Economic Impacts

Table 89 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 32.1 covered employees and 202.4 proprietors at annual average wages of \$35,851 and \$126,990 respectively, driven

by supply chain expenditures in Professional services. Overall, the top 15 Indirect economic impacts are \$124,724,793 in value of output, or 60 percent of the total value of output in the Specialized Services supply chain. For covered employment, it's 279.4 supply chain jobs at an annual average wage of \$53,698, or 48 percent of the total Indirect covered employment. For proprietors, it's 600.7 jobs at an annual average wage of \$14,926, or 67 percent of the total Indirect proprietors.

SPECIALIZED SERVICES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Professional services	\$41,064,729	32.1	202.4	234.5	\$35,851	\$16,990
464	Scientific research and development services	Professional services	\$23,749,787	39.5	104.5	144.0	\$81,594	\$11,222
455	Legal services	Professional services	\$11,438,598	16.8	60.4	77.2	\$57,085	\$11,542
472	Employment services	Professional services	\$4,384,951	23.5	34.8	58.3	\$46,746	\$25,167
509	Full-service restaurants	Professional services	\$3,387,425	41.5	2.0	43.5	\$28,370	\$31,668
470	Office administrative services	Professional services	\$2,942,653	16.2	26.9	43.1	\$64,264	\$28,834
469	Management of companies and enterprises	Professional services	\$5,989,690	19.5	21.3	40.8	\$86,294	-\$167
456	Accounting, tax preparation, bookkeeping	Professional services	\$3,125,390	12.3	24.6	36.9	\$40,996	\$14,497
462	Management consulting services	Professional services	\$2,923,713	6.1	30.1	36.2	\$64,393	\$10,659
465	Advertising, public relations, and related services	Professional services	\$3,396,094	6.6	23.8	30.4	\$46,239	\$9,307
468	Marketing research, all other technical services	Professional services	\$5,300,090	4.4	25.6	29.9	\$98,154	\$12,878
447	Other real estate	Administrative services	\$4,985,262	3.9	24.6	28.5	\$35,851	\$16,990
511	All other food and drinking places	Professional services	\$2,009,019	25.6	1.2	26.8	\$32,281	\$30,514
534	Other local government enterprises	Professional services	\$8,208,325	25.9	0.0	25.9	\$65,915	\$0
463	Environmental and other consulting services	Professional services	\$1,819,066	5.3	18.6	23.9	\$67,022	\$14,212
Totals for the Top 15 Indirect Economic Impacts			\$124,724,793	279.4	600.7	880.1	\$53,698	\$14,926
Percent of Total Indirect Economic Impacts			60%	48%	67%	60%		

Table 89: Top 15 Indirect economic impacts by employment for the Specialized Services Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 90 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 22.9 covered employees and 1.1 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Professional services. Overall, the top 15 Induced economic impacts are \$17,551,299 in value of output, or 22 percent of the total Induced contributions of the Specialized Services Cluster. For covered employment, it's 151.5 jobs at an annual average wage of \$36,605, or 38 percent of the total Induced covered employment. For proprietors, it's 31.7 jobs at an annual average wage of \$25,573, or 21 percent of the total Induced proprietors.

SPECIALIZED SERVICES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Professional services	\$1,864,266	22.9	1.1	24.0	\$28,370	\$31,668
493	Individual and family services	Professional services	\$707,076	16.5	1.7	18.3	\$28,967	\$16,551
510	Limited-service restaurants	Professional services	\$1,550,768	15.7	0.8	16.6	\$25,585	\$34,463
406	Retail - Food and beverage stores	Professional services	\$1,222,231	13.3	0.5	13.8	\$41,766	\$13,043
491	Nursing and community care facilities	Professional services	\$1,140,613	12.6	0.4	13.0	\$47,213	\$689
447	Other real estate	Professional services	\$2,226,683	1.7	11.0	12.7	\$35,851	\$16,990
411	Retail - General merchandise stores	Professional services	\$1,315,403	12.5	0.1	12.6	\$46,073	\$10,392
525	Private households	Professional services	\$126,770	12.5	0.0	12.5	\$10,129	\$0
511	All other food and drinking places	Professional services	\$700,725	8.9	0.4	9.4	\$32,281	\$30,514
509	Full-service restaurants	Administrative services	\$705,463	8.7	0.4	9.1	\$28,370	\$31,668
412	Retail - Miscellaneous store retailers	Professional services	\$543,422	5.5	3.3	8.8	\$32,109	\$27,505
413	Retail - Nonstore retailers	Professional services	\$1,076,884	0.5	8.3	8.7	\$37,112	\$8,162
512	Automotive repair and maintenance	Professional services	\$820,251	6.8	1.3	8.2	\$49,475	\$122,800
483	Offices of physicians	Professional services	\$1,134,588	5.7	2.3	8.0	\$93,373	\$76,991
534	Other local government enterprises	Professional services	\$2,416,155	7.6	0.0	7.6	\$65,915	\$0
Totals for the Top 15 Induced Economic Impacts			\$17,551,299	151.5	31.7	183.2	\$36,605	\$25,573
Percent of Total Induced Economic Impacts			22%	38%	21%	34%		

Table 90: Top 15 Induced economic impacts by employment for the Specialized Services Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 91. The results indicate 77 percent of respondents in the Specialized Services Cluster believe Clallam County is favorable for doing business. 26 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, increased cost of materials, and excessive government regulation. Also listed were lack of heavy industrially zoned property, and convenience of travel.

In the supply chain, 22 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 57 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 42 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, consumables and supplies, and specialty-niche products. For services, engineering, repair and maintenance, and architectural.

Business Climate For Specialized Services Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
77% Favorable	26% Likely	Lack of Qualified Workers - 26% Increased Cost of Materials - 16% Excessive Govt. Regulation - 11%	Lack of Heavy Industrially zoned Property, Convenience of Travel
Supply Chain Possibilities for Specialized Services in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
22% Yes 56% Maybe 22% No	0 to 20% of Expenditures - 29% 30% to 50% of Expenditures - 14% 60% to 80% of Expenditures - 57%	0 to 20% of Expenditures - 29% 30% to 50% of Expenditures - 29% 60% to 100% of Expenditures - 42%	Equipment and durable goods, Consumables and supplies Specialty-niche products
			Engineering Repair and Maintenance Architectural

Table 91: Summary results for Specialized Services from the EDC Employer Survey, 2021-2.



TRADES

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

**ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY**

**When Prosperity Matters
2023**



TRADES

The Trades Cluster was defined using NAICS at the 3-digit level, illustrated in Table 92. The NAICS subsectors are Waste management and remediation service (562) and Repair and maintenance (562). Trades like electrician and plumber are included under Construction.⁵⁹ Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 57 Trades firms with 380 employees paid an average annual wage of \$48,628. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code (Code) were used to create the Sub-Clusters Waste Management, and Repair & Maintenance. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 93.

TRADES CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
479	562	Waste management and remediation service	7	94	\$5,985,660	\$63,677
512 - 516	811	Repair and maintenance	50	286	\$12,492,929	\$43,682
Totals			57	380	\$18,478,589	\$48,628

Table 92: Defining the Trades Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Waste Mgt	479	Waste management and remediation services
Repair & Maintenance	512	Automotive repair and maintenance, except car washes
Repair & Maintenance	514	Electronic and precision equipment repair and maintenance
Repair & Maintenance	515	Commercial and industrial machinery, equipment repair
Repair & Maintenance	516	Personal and household goods repair and maintenance

Table 93: Sub-Clusters and associated industries in Trades.

⁵⁹ This is a necessary consequence given how IMPLAN bridge codes are constructed and their reliance on CENSUS for the Construction Cluster.

Economic Impacts

Table 94 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 5 listed IMPLAN industries that comprise the Trades Cluster. The value of output ranged from a low of \$4,655,911 in Electronic and precision equipment repair to a high of \$36,197,539 in Automotive repair and maintenance. The total Direct value of output for the Trades Cluster was estimated at \$99,110,216; the Indirect value of output was estimate at \$13,147,514; the Induced value of output was estimated at \$22,837,022. The grand total value of output in the Trades Cluster was estimated at \$135,094,753.

Estimated covered employment ranged from a low of 20.7 in Electronic and precision equipment repair at an average annual wage of \$51,115 to a high of 300.5 in Automotive repair and maintenance at an annual average wage of \$49,475. For proprietors, employment ranges from a low of 3.8 in Waste management and remediation services at an average annual wage of \$228,049 to a high of 59.3 in Automotive repair and maintenance at an average annual wage of \$122,800. Total Direct covered employment was estimated at 556.9 at an annual average wage of \$56,860; total Direct proprietors was estimated at 136.8 at an annual average wage of \$115,670. Total Indirect covered employment was estimated at 47.0 at an average annual wage of \$54,263; for proprietors it was estimated at 38.5 at an average annual wage of \$23,537. Total Induced covered employment was estimated at 112.1 at an annual average wage of \$42,748; for proprietors it was estimated at 43.5 at an annual average wage of \$26,101. The grand total covered employment was estimated at 715.9 at an annual average wage of \$54,480; for proprietors it was 218.8 at an annual average wage of \$81,656.

TRADES CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
479	Waste management and remediation services	\$26,125,537	92.8	3.8	96.6	\$76,517	\$228,049
512	Automotive repair and maintenance	\$36,197,539	300.5	59.3	359.8	\$49,475	\$122,800
514	Electronic and precision equipment repair	\$4,655,911	20.7	15.1	35.8	\$51,115	\$42,069
515	Commercial and industrial machinery repair	\$5,384,914	30.7	12.3	43.0	\$59,475	\$132,160
516	Personal and household goods repair	\$26,746,316	112.2	46.3	158.5	\$60,732	\$116,814
Totals: Direct Impacts		\$99,110,216	556.9	136.8	693.7	\$56,860	\$115,670
Totals: Indirect Impacts		\$13,147,514	47.0	38.5	85.5	\$54,263	\$23,537
Totals: Induced Impacts		\$22,837,022	112.1	43.5	155.6	\$42,748	\$26,101
Grand Totals: All Impacts		\$135,094,753	715.9	218.8	934.8	\$54,480	\$81,656

Table 94: Economic impacts of Trades in 2019 (2021\$).

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 95 for each

IMPLAN industry that comprises the Trades Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Waste management and remediation will provide 3.6 additional jobs; at the high end, Automotive repair and maintenance would provide an additional 8.3 employees. For proprietors, the low end of expected impacts would be 0.1 in Waste management and remediation; at the high-end Electronic and precision equipment repair would provide an additional 3.2 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$227,324 in Electronic and precision equipment repair; the high end would be \$410,680 in Automotive repair and maintenance. For proprietors, the low end would be \$33,571 in Waste management and remediation services; at the high end \$202,060 in Personal and household goods repair.

MULTIPLIERS TRADES		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
479	Waste management and remediation services	3.6	0.1	\$271,659	\$33,571
512	Automotive repair and maintenance	8.3	1.6	\$410,680	\$201,293
514	Electronic and precision equipment repair	4.4	3.2	\$227,324	\$136,381
515	Commercial and industrial machinery repair	5.7	2.3	\$339,092	\$301,829
516	Personal and household goods repair	4.2	1.7	\$254,849	\$202,060
	Totals: Direct Multiplier Impacts	5.6	1.4	\$319,477	\$159,701
	Totals: Indirect Multiplier Impacts	0.5	0.4	\$25,720	\$9,148
	Totals: Induced Multiplier Impacts	1.1	0.4	\$48,352	\$11,451
	Grand Totals: All Multiplier Impacts	7.2	2.2	\$393,550	\$180,300

Table 95: Economic multipliers of Trades in 2019 (2021\$).

For the Trades Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 5.6; for proprietors it would be 1.4. The corresponding change in wages would be \$319,477 and \$159,701 respectively. The Indirect and Induced multiplier affects for the Trades Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 0.5 and 0.4 respectively with corresponding changes in total annual wages of \$25,720 and \$9,148. For Induced multipliers, the changes would be 1.1 employees and 0.4 proprietors at total annual wages of \$48,352 and \$11,451 respectively. In total, a change in \$1,000,000 in Trades value added will change total covered employment by 7.2 and annual wages by \$393,550; for proprietors the changes will be 2.2 and \$180,300 respectively.

Indirect Economic Impacts

Table 96 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 1.8 covered employees and 11.6 proprietors at annual average wages of \$35,851 and \$16,990 respectively, driven by supply chain expenditures in Repair & Maintenance. Overall, the top 15 Indirect economic impacts are

\$7,633,669 in value of output, or 58 percent of the total value of output in the Trades supply chain. For covered employment, it's 26.1 supply chain jobs at an annual average wage of \$52,982, or 55 percent of the total Indirect covered employment. For proprietors, it's 21.9 jobs at an annual average wage of \$18,041, or 57 percent of the total Indirect proprietors.

TRADES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Repair & Maintenance	\$2,360,357	1.8	11.6	13.5	\$35,851	\$16,990
405	Retail - Building material and garden equipment	Repair & Maintenance	\$648,543	4.8	0.1	5.0	\$42,728	\$114,164
479	Waste management and remediation services	Waste Mgt	\$1,190,781	4.2	0.2	4.4	\$76,517	\$228,049
402	Retail - Motor vehicle and parts dealers	Repair & Maintenance	\$617,961	3.9	0.3	4.2	\$52,234	\$60,716
447	Other real estate	Waste Mgt	\$617,611	0.5	3.0	3.5	\$35,851	\$16,990
469	Management of companies and enterprises	Repair & Maintenance	\$422,212	1.4	1.5	2.9	\$86,294	-\$167
456	Accounting, tax preparation, bookkeeping	Repair & Maintenance	\$206,210	0.8	1.6	2.4	\$40,996	\$14,497
465	Advertising, public relations, related services	Repair & Maintenance	\$216,533	0.4	1.5	1.9	\$46,239	\$9,307
469	Management of companies and enterprises	Waste Mgt	\$243,172	0.8	0.9	1.7	\$86,294	-\$167
509	Full-service restaurants	Waste Mgt	\$122,423	1.5	0.1	1.6	\$28,370	\$31,668
513	Car washes	Waste Mgt	\$200,418	1.3	0.1	1.4	\$50,441	\$79,861
472	Employment services	Repair & Maintenance	\$103,843	0.6	0.8	1.4	\$46,746	\$25,167
534	Other local government enterprises	Repair & Maintenance	\$436,192	1.4	0.0	1.4	\$65,915	\$0
411	Retail - General merchandise stores	Repair & Maintenance	\$142,818	1.4	0.0	1.4	\$46,073	\$10,392
509	Full-service restaurants	Repair & Maintenance	\$104,596	1.3	0.1	1.3	\$28,370	\$31,668
Totals for the Top 15 Indirect Economic Impacts			\$7,633,669	26.1	21.9	47.9	\$52,982	\$18,041
Percent of Total Indirect Economic Impacts			58%	55%	57%	56%		

Table 97: Top 15 Indirect economic impacts by employment for the Trades Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 98 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 8.3 covered employees and 0.4 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Repair & Maintenance. Overall, the top 15 Induced economic impacts are \$6,384,091 in value of output, or 28 percent of the total Induced contributions of the Trades Cluster. For covered employment, it's 53.7 jobs at an annual average wage of \$37,874, or 48 percent of the total Induced covered employment. For proprietors, it's 11.8 jobs at an annual average wage of \$27,791, or 27 percent of the total Induced proprietors.

TRADES CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Repair & Maintenance	\$676,421	8.3	0.4	8.7	\$28,370	\$31,668
493	Individual and family services	Repair & Maintenance	\$256,858	6.0	0.6	6.6	\$28,967	\$16,551
510	Limited-service restaurants	Repair & Maintenance	\$561,998	5.7	0.3	6.0	\$25,585	\$34,463
406	Retail - Food and beverage stores	Repair & Maintenance	\$443,097	4.8	0.2	5.0	\$41,766	\$13,043
491	Nursing and community care facilities	Repair & Maintenance	\$412,004	4.5	0.2	4.7	\$47,213	\$689
447	Other real estate	Repair & Maintenance	\$807,619	0.6	4.0	4.6	\$35,851	\$16,990
411	Retail - General merchandise stores	Repair & Maintenance	\$476,882	4.5	0.0	4.6	\$46,073	\$10,392
525	Private households	Repair & Maintenance	\$46,135	4.6	0.0	4.6	\$10,129	\$0
511	All other food and drinking places	Repair & Maintenance	\$254,293	3.2	0.2	3.4	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Repair & Maintenance	\$197,010	2.0	1.2	3.2	\$32,109	\$27,505
413	Retail - Nonstore retailers	Repair & Maintenance	\$390,419	0.2	3.0	3.2	\$37,112	\$8,162
512	Automotive repair and maintenance	Repair & Maintenance	\$297,482	2.5	0.5	3.0	\$49,475	\$122,800
483	Offices of physicians	Repair & Maintenance	\$411,521	2.1	0.8	2.9	\$93,373	\$76,991
534	Other local government enterprises	Repair & Maintenance	\$875,303	2.8	0.0	2.8	\$65,915	\$0
484	Offices of dentists	Repair & Maintenance	\$277,049	1.9	0.4	2.4	\$59,099	\$87,722
Totals for the Top 15 Induced Economic Impacts			\$6,384,091	53.7	11.8	65.5	\$37,874	\$27,791

Table 98: Top 15 Induced economic impacts by employment for the Trades Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 99. The results indicate 0 percent of respondents in the Trades. Cluster believe Clallam County is favorable for doing business. 57 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, employee retention, and increased cost of materials.

In the supply chain, 67 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 33 percent of respondents indicated that 30 to 50 percent of expenditures for goods and materials are made outside the County; for services, 33 percent of respondents indicated 30 to 50 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, specialty-niche products, raw materials and supplies. For services, information technologies, architectural and engineering.

Business Climate For Trades Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
0%	67%	Lack of Qualified Workers - 29% Employee Retention - 29% Increased Cost of Materials - 14%	None
Supply Chain Possibilities for Trades in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
67% Yes 33% Maybe 0% No	0 to 20% of Expenditures - 67% 30% to 50% of Expenditures - 33% 60% to 80% of Expenditures - 0	0 to 20% of Expenditures - 67% 30% to 50% of Expenditures - 33% 60% to 100% of Expenditures - 0	Equipment and durable goods Specialty-niche products Raw Materials & Supplies
			Information Technologies Architectural Engineering

Table 99: Summary results for Trades from the EDC Employer Survey, 2021-2.



TRANSPORTATION

EDC

**CLALLAM
ECONOMIC
DEVELOPMENT
COUNCIL**

**ECONOMIC
DEVELOPMENT IN
CLALLAM COUNTY**

**When Prosperity Matters
2023**



TRANSPORTATION

The Transportation Cluster was defined using NAICS at the 3-digit level, illustrated in Table 100. The NAICS subsectors are Air transportation (481), Water transportation (483), Truck transportation (484), Transit and ground transportation (485),⁶⁰ Support activities for transportation (488), and Couriers and messengers (492). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 44 Transportation firms with 449 employees paid an average annual wage of \$44,759. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code were used to create the Sub-Clusters Air, Water, Rail, Truck, Transit, Delivery and Warehousing. Sub-Clusters make it possible to combine similar industries that can later be used to analysis the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 101.

TRANSPORTATION CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridge Codes	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
414	481	Air transportation	*			
416	483	Water transportation	*			
417	484	Truck transportation	26	206	\$10,600,837	\$51,460
418	485	Transit and ground transportation (QCEW 2017)	3	46	\$1,061,896	\$23,085
	488	Support activities for transportation	8	23	\$934,589	\$40,634
421	492	Couriers and messengers	7	174	\$7,499,286	\$43,099
Totals			44	449	\$20,096,608	\$44,759

Table 100: Defining the Transportation Cluster using NAICS and IMPLAN bridge codes.



⁶⁰ To capture Transit and ground transportation QCEW 2017 data was used and adjusted to 2021\$.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Air	414	Air transportation
Water	415	Rail transportation
Rail	416	Water transportation
Truck	417	Truck transportation
Transit	418	Transit and ground passenger transportation
Delivery	421	Couriers and messengers
Warehousing	422	Warehousing and storage

Table 101: Sub-Clusters and associated industries in Transportation.

Economic Impacts

Table 102 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 7 listed IMPLAN industries that comprise the Transportation Cluster. The value of output ranged from a low of \$1,794,148 in Warehousing and storage to a high of \$38,989,996 in Truck transportation. The total Direct value of output for the Transportation Cluster was estimated at \$87,418,915; the Indirect value of output was estimate at \$22,544,757; the Induced value of output was estimated at \$16,410,309. The grand total value of output in the Transportation Cluster was estimated at \$126,373,980.

TRANSPORTATION CLUSTER		Value of	Employment by Type			Average Wage (2021\$)	
Code	Industry Description	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
414	Air transportation	\$17,442,414	47.3	4.1	51.4	\$50,887	\$2,919
415	Rail transportation	\$1,845,595	3.8	0.0	3.8	\$135,109	\$0
416	Water transportation	\$5,143,491	7.0	0.8	7.8	\$49,359	\$21,262
417	Truck transportation	\$38,989,996	190.2	38.7	228.9	\$65,827	\$94,914
418	Transit and ground transportation	\$4,678,987	17.4	126.1	143.5	\$58,130	\$12,051
421	Couriers and messengers	\$17,524,286	122.3	59.5	181.8	\$61,511	\$1,341
422	Warehousing and storage	\$1,794,148	6.4	19.9	26.3	\$45,269	\$9,685
Totals: Direct Impacts		\$87,418,915	394.5	249.0	643.5	\$62,397	\$22,059
Totals: Indirect Impacts		\$22,544,757	94.0	47.4	141.4	\$54,332	\$41,650
Totals: Induced Impacts		\$16,410,309	80.6	31.2	111.8	\$42,798	\$26,144
Grand Totals: All Impacts		\$126,373,980	569.0	327.6	896.6	\$58,290	\$25,281

Table 102: Economic impacts of Transportation in 2019 (2021\$).

Estimated covered employment ranged from a low of 3.8 in Rail transportation at an average annual wage of \$135,109 to a high of 190.2 in Truck transportation.⁶¹ For proprietors, employment ranges from

⁶¹ While Clallam County does not have a railroad, it is still possible that there are local transportation jobs connected to Rails, that IMPLAN is able to estimate.

a low of 0.8 in Water transportation at an average annual wage of \$21,262 to a high of 126.1 in Transit and ground passenger transportation at an average annual wage of \$12,051. Total Direct covered employment was estimated at 394.5 at an annual average wage of \$62,397; total Direct proprietors was estimated at 249.0 at an annual average wage of \$22,059. Total Indirect covered employment was estimated at 94.0 at an average annual wage of \$54,332; for proprietors it was estimated at 47.4 at an average annual wage of \$41,650. Total Induced covered employment was estimated at 80.6 at an annual average wage of \$42,798; for proprietors it was estimated at 31.2 at an annual average wage of \$26,144. The grand total covered employment was estimated at 569.0 at an annual average wage of \$58,290; for proprietors it was 327.6 at an annual average wage of \$25,281.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per \$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 103 for each IMPLAN industry that comprises the Transportation Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Water transportation will provide 1.4 additional jobs; at the high end, Couriers and messengers would provide an additional 7.0 employees. For proprietors, the low end of expected impacts would be 0.2 in Air transportation; at the high-end Transit and ground transportation would provide an additional 26.9 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$67,014 in Water transportation; the high end would be \$429,173 in Couriers and messengers. For proprietors, the low end would be \$680 in Air transportation; at the high end \$324,685 in Transit and ground transportation.

MULTIPLIERS TRANSPORTATION		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
414	Air transportation	2.7	0.2	\$138,107	\$680
415	Rail transportation	2.1	0.0	\$278,185	\$0
416	Water transportation	1.4	0.2	\$67,014	\$3,376
417	Truck transportation	4.9	1.0	\$321,123	\$94,199
418	Transit and ground transportation	3.7	26.9	\$216,652	\$324,685
421	Couriers and messengers	7.0	3.4	\$429,173	\$4,556
422	Warehousing and storage	3.6	11.1	\$162,141	\$107,284
Totals: Direct Multiplier Impacts		4.5	2.8	\$281,554	\$62,842
Totals: Indirect Multiplier Impacts		1.1	0.6	\$58,412	\$26,066
Totals: Induced Multiplier Impacts		0.9	0.4	\$39,441	\$9,331
Grand Totals: All Multiplier Impacts		6.5	3.8	\$379,407	\$96,866

Table 103: Economic multipliers of Transportation in 2019 (2021\$).

For the Transportation Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 5.6; for proprietors it would be 1.4. The corresponding change in

wages would be \$319,477 and \$159,701 respectively. The Indirect and Induced multiplier affects for the Transportation Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 6.0 and 3.7 respectively with corresponding changes in total annual wages of \$351,216 and \$89,689. For Induced multipliers, the changes would be 5.7 employees and 3.6 proprietors at total annual wages of \$48,352 and \$11,451 respectively. In total, a change in \$1,000,000 in Transportation value added will change total covered employment by 16.2 and annual wages by \$973,538; for proprietors the changes will be 10.2 and \$247,925 respectively.

Indirect Economic Impacts

Table 104 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Couriers and messengers, with 7.7 covered employees and 3.8 proprietors at annual average wages of \$61,511 and \$1,341 respectively, driven by expenditures in Truck. Overall, the top 15 Indirect economic impacts are \$10,310,559 in value of output, or 46 percent of the total value of output in the Transportation supply chain. For covered employment, it's 54.5 supply chain jobs at an annual average wage of \$52,572, or 58 percent of the total Indirect covered employment. For proprietors, it's 14.8 jobs at an annual average wage of \$68,122, or 31 percent of the total Indirect proprietors.

TRANSPORTATION CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
421	Couriers and messengers	Truck	\$1,109,144	7.7	3.8	11.5	\$61,511	\$1,341
511	All other food and drinking places	Air	\$723,354	9.2	0.4	9.7	\$32,281	\$30,514
512	Automotive repair and maintenance	Truck	\$809,565	6.7	1.3	8.0	\$49,475	\$122,800
408	Retail - Gasoline stores	Truck	\$699,956	4.6	0.2	4.8	\$32,578	\$570,423
534	Other local government enterprises	Truck	\$1,352,867	4.3	0.0	4.3	\$65,915	\$0
447	Other real estate	Truck	\$708,568	0.6	3.5	4.0	\$35,851	\$16,990
534	Other local government enterprises	Air	\$1,209,769	3.8	0.0	3.8	\$65,915	\$0
472	Employment services	Truck	\$269,872	1.4	2.1	3.6	\$46,746	\$25,167
420	Scenic and sightseeing transportation	Truck	\$704,165	2.7	0.7	3.5	\$44,695	\$399,778
420	Scenic and sightseeing transportation	Air	\$685,358	2.7	0.7	3.4	\$44,695	\$399,778
534	Other local government enterprises	Delivery	\$897,965	2.8	0.0	2.8	\$65,915	\$0
417	Truck transportation	Truck	\$433,481	2.1	0.4	2.5	\$65,827	\$94,914
421	Couriers and messengers	Rail	\$243,980	1.7	0.8	2.5	\$61,511	\$1,341
526	Postal service	Truck	\$231,997	2.5	0.0	2.5	\$87,849	\$0
421	Couriers and messengers	Delivery	\$230,518	1.6	0.8	2.4	\$61,511	\$1,341
Totals for the Top 15 Indirect Economic Impacts			\$10,310,559	54.5	14.8	69.3	\$52,572	\$68,122
Percent of Total Indirect Economic Impacts			46%	58%	31%	49%		

Table 104: Top 15 Indirect economic impacts by employment for the Transportation Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 105 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 3.8 covered employees and 0.2 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Truck. Overall, the top 15 Induced economic impacts are \$2,600,393 in value of output, or 16 percent of the total Induced contributions of the Transportation Cluster. For covered employment, it's 25.4 jobs at an annual average wage of \$37,766, or 32 percent of the total Induced covered employment. For proprietors, it's 5.4 jobs at an annual average wage of \$25,370, or 17 percent of the total Induced proprietors.

TRANSPORTATION CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Truck	\$310,939	3.8	0.2	4.0	\$28,370	\$31,668
493	Individual and family services	Truck	\$117,306	2.7	0.3	3.0	\$28,967	\$16,551
510	Limited-service restaurants	Truck	\$260,034	2.6	0.1	2.8	\$25,585	\$34,463
406	Retail - Food and beverage stores	Truck	\$204,615	2.2	0.1	2.3	\$41,766	\$13,043
491	Nursing and community care facilities	Truck	\$194,034	2.1	0.1	2.2	\$47,213	\$689
447	Other real estate	Truck	\$372,000	0.3	1.8	2.1	\$35,851	\$16,990
411	Retail - General merchandise stores	Truck	\$220,199	2.1	0.0	2.1	\$46,073	\$10,392
525	Private households	Truck	\$20,860	2.1	0.0	2.1	\$10,129	#DIV/0!
509	Full-service restaurants	Delivery	\$135,235	1.7	0.1	1.7	\$28,370	\$31,668
511	All other food and drinking places	Truck	\$116,780	1.5	0.1	1.6	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Truck	\$90,970	0.9	0.5	1.5	\$32,109	\$27,505
413	Retail - Nonstore retailers	Truck	\$180,253	0.1	1.4	1.5	\$37,112	\$8,162
512	Automotive repair and maintenance	Truck	\$137,084	1.1	0.2	1.4	\$49,475	\$122,800
483	Offices of physicians	Truck	\$189,539	1.0	0.4	1.3	\$93,373	\$76,991
493	Individual and family services	Delivery	\$50,543	1.2	0.1	1.3	\$28,967	\$16,551
Totals for the Top 15 Induced Economic Impacts			\$2,600,393	25.4	5.4	30.9	\$34,766	\$25,370
Percent of Total Induced Economic Impacts			16%	32%	17%	28%		

Table 105: Top 15 Induced economic impacts by employment for the Transportation Cluster in 2019 (2021\$)

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 106. The results indicate 100 percent of respondents in the Transportation Cluster believe Clallam County is favorable for doing business. 100 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, increased cost of materials, and excessive government regulation.

In the supply chain, 100 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 100 percent of respondents indicated that 60 to 100 percent of expenditures for goods and materials are made outside the County; for services, 42 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, and consumables and supplies. For services, repair and maintenance, and shipping and delivery.

Business Climate For Transportation Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
100%	100%	Lack of Qualified Workers (33%) Employee Retention (33%) Increased Cost of Materials (33%)	None
Supply Chain Possibilities for Transportation in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
100% Yes	0 to 20% of Expenditures - 40% 30% to 50% of Expenditures - 35% 60% to 80% of Expenditures -	0 to 20% of Expenditures - 0 30% to 50% of Expenditures - 0 60% to 100% of Expenditures - 100%	Equipment and durable goods Consumables and supplies
			Repair and Maintenance Shipping and Delivery

Table 106: Summary results for Transportation from the EDC Employer Survey, 2021-2.



WHOLESALE

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WHOLESALE

The Wholesale Cluster was defined using NAICS at the 3-digit level, illustrated in Table 107. The NAICS subsectors are Merchant wholesalers, durable goods (423), Merchant wholesalers, nondurable goods (424) and Electronic markets and agents and brokers (425). Firms, jobs and wages are the reported BLS QCEW values for 2021. The BLS reported a total of 60 Wholesale firms with 264 employees paid an average annual wage of \$52,923. To capture missing values in BLS QCEW data, those subsectors were further disaggregated into IMPLAN industries. IMPLAN made possible estimation of employment and wages not found in QCEW data, including proprietors. Those industries along with the Bridge Code were used to create the Sub-Clusters Durables, Electronic and Nondurables. Sub-Clusters make it possible to combine similar industries that can later be used to analyze the source of economic impacts in greater detail. The Sub-Clusters and corresponding industries are presented in Table 108.

WHOLESALE CLUSTER			BLS QCEW 2021 - Reported Values			
Implan Bridges	NAICS	NAICS Descriptions	Firms	Jobs	Total	Average
392 - 396	423	Merchant wholesalers, durable goods	28	122	\$7,060,288	\$57,871
397 - 400	424	Merchant wholesalers, nondurable goods	24	130	\$5,605,982	\$43,123
401	425	Electronic markets and agents and broker	8	12	\$1,305,278	\$108,773
Totals			60	264	\$13,971,548	\$52,923

Table 107: Defining the Wholesale Cluster using NAICS and IMPLAN bridge codes.

IMPLAN Sub-Cluster	Code	IMPLAN Industry Description
Durables	392	Wholesale - Motor vehicle and motor vehicle parts and supplies
Durables	393	Wholesale - Professional and commercial equipment and supplies
Durables	394	Wholesale - Household appliances and electrical and electronic goods
Durables	395	Wholesale - Machinery, equipment, and supplies
Durables	396	Wholesale - Other durable goods merchant wholesalers
Electronic	401	Wholesale - Wholesale electronic markets and agents and brokers
Nondurables	397	Wholesale - Drugs and druggists'sundries
Nondurables	398	Wholesale - Grocery and related product wholesalers
Nondurables	400	Wholesale - Other nondurable goods merchant wholesalers

Table 108: Sub-Clusters and associated industries in Wholesale.

Economic Impacts

Table 109 summarizes the 2019 Value of Output (2021\$), employees, proprietors, and average annual wage for each of the 9 listed IMPLAN industries that comprise the Wholesale Cluster. The value of output ranged from a low of \$1,717,861 in Electronic markets and agents to a high of \$27,385,386 in Other durable goods merchant wholesalers. The total Direct value of output for the Wholesale Cluster was estimated at \$85,043,074; the Indirect value of output was estimate at \$28,515,738; the Induced value of output was estimated at \$11,943,230. The grand total value of output in the Wholesale Cluster was estimated at \$125,502,043.

WHOLESALE CLUSTER		Value of	Employment by Type			Mean Annual Income (2021\$)	
Code	Industry Description	Output 2021	Employees	Proprietors	Total	Employees	Proprietors
392	Motor vehicle and motor vehicle parts	\$2,041,248	4.1	1.3	5.4	\$78,846	\$17,858
393	Professional and commercial equipment	\$12,948,537	36.4	16.2	52.6	\$67,469	\$18,213
394	Household appliances and electrical goods	\$6,600,586	10.4	3.9	14.3	\$92,553	\$18,690
395	Machinery, equipment, and supplies	\$3,984,161	12.0	2.5	14.5	\$75,652	\$16,708
396	Other durable goods merchant wholesalers	\$27,385,386	87.5	23.2	110.7	\$69,815	\$18,756
401	Electronic markets and agents	\$1,717,861	8.3	4.5	12.8	\$154,793	\$23,689
397	Drugs and druggist sundries	\$7,552,961	16.1	0.9	17.0	\$15,527	\$19,106
398	Grocery and related product wholesalers	\$18,411,969	86.9	18.2	105.1	\$57,262	\$18,537
400	Other nondurable goods merchants	\$4,400,365	14.1	2.2	16.3	\$26,505	\$9,330
Totals: Direct Impacts		\$85,043,074	275.8	72.9	348.7	\$63,978	\$18,513
Totals: Indirect Impacts		\$28,515,738	102.8	103.4	206.2	\$60,078	\$20,690
Totals: Induced Impacts		\$11,943,230	58.6	22.7	81.3	\$42,827	\$26,169
Grand Totals: All Impacts		\$125,502,043	437.2	199.1	636.3	\$60,225	\$20,517

Table 109: Economic impacts of the Wholesale Cluster in 2019 (2021\$).

Estimated covered employment ranged from a low of 4.1 in Motor vehicles and motor vehicle parts at an average annual wage of \$78,846 to a high of 87.5 in Other durable goods merchant wholesalers. For proprietors, employment ranges from a low of 0.9 in Drug and druggist sundries at an average annual wage of \$19,106 to a high of 23.3 in Other durable goods merchant wholesalers at an average annual wage of \$18,756. Total Direct covered employment was estimated at 275.8 at an annual average wage of \$63,978; total Direct proprietors was estimated at 72.9 at an annual average wage of \$18,513. Total Indirect covered employment was estimated at 102.8 at an average annual wage of \$60,078; for proprietors it was estimated at 103.4 at an average annual wage of \$20,690. Total Induced covered employment was estimated at 58.6 at an annual average wage of \$42,827; for proprietors it was estimated at 22.7 at an annual average wage of \$26,169. The grand total covered employment was estimated at 437.2 at an annual average wage of \$60,225; for proprietors it was 199.1 at an annual average wage of \$20,517.

Economic Multipliers

Changes in the value of output will change both covered employment and proprietors. To capture this relationship, employment multipliers (covered employment and proprietors) per

\$1,000,000 in value of output (2021\$) were estimated. The results are presented in Table 110 for each IMPLAN industry that comprises the Wholesale Cluster. At the low end of expected impacts, for a \$1,000,000 increase in value of output, Motor vehicle and motor vehicle parts will provide 2.0 additional jobs; at the high end, Electronic markets and agents would provide an additional 4.8 employees. For proprietors, the low end of expected impacts would be 0.5 in Other nondurable goods merchants; at the high-end Electronic markets and agents would provide an additional 2.6 proprietors. The resulting change in total annual wages were also estimated. At the low end of expected total annual wage impacts for a \$1,000,000 change in value added would be \$33,077 in Drugs and druggist sundries; the high end would be \$746,891 in Electronic markets and agents. For proprietors, the low end would be \$4,742 in Other nondurable goods merchants; at the high end \$62,208 Electronic markets and agents.

MULTIPLIERS WHOLESale		Employment		Total Added Wages (2021\$)	
Code	Industry Description	Employees	Proprietors	Employees	Proprietors
392	Motor vehicle and motor vehicle parts	2.0	0.6	\$159,175	\$11,190
393	Professional and commercial equipment	2.8	1.3	\$189,407	\$22,857
394	Household appliances and electrical goods	1.6	0.6	\$145,975	\$11,014
395	Machinery, equipment, and supplies	3.0	0.6	\$228,574	\$10,326
396	Other durable goods merchant wholesalers	3.2	0.8	\$223,165	\$15,863
401	Electronic markets and agents	4.8	2.6	\$746,891	\$62,208
397	Drugs and druggists' sundries	2.1	0.1	\$33,077	\$2,303
398	Grocery and related product wholesalers	4.7	1.0	\$270,114	\$18,372
400	Other nondurable goods merchants	3.2	0.5	\$84,711	\$4,742
Totals: Direct Multiplier Impacts		3.2	0.9	\$207,449	\$15,880
Totals: Indirect Multiplier Impacts		1.2	1.2	\$72,637	\$25,163
Totals: Induced Multiplier Impacts		0.7	0.3	\$29,528	\$6,981
Grand Totals: All Multiplier Impacts		5.1	2.3	\$309,613	\$48,024

Table 110: Economic multipliers of Wholesale in 2019 (2021\$).

For the Wholesale Cluster as a whole, a \$1,000,000 change in value of Direct output would change covered employment jobs by 3.2; for proprietors it would be 0.9. The corresponding change in wages would be \$207,449 and \$15,880 respectively. The Indirect and Induced multiplier affects for the Wholesale Cluster were also estimated. A \$1,000,000 change in Direct Value of Output would change Indirect employees and proprietors by 1.2 and 1.2 respectively with corresponding changes in total annual wages of \$72,637 and \$25,163. For Induced multipliers, the changes would be 0.7 employees and 0.3 proprietors at total annual wages of \$29,528 and \$6,981 respectively. In total, a change in \$1,000,000 in Wholesale value added will change total covered employment by 5.1 and annual wages by \$309,613; for proprietors the changes will be 2.3 and \$48,024 respectively.

Indirect Economic Impacts

Table 111 presents the top 15 Indirect economic impacts by employment. The table illustrates that the largest employment impact in the supply chain occurs in Other real estate, with 2.7 covered

employees and 16.7 proprietors at annual average wages of \$35,851 and \$16,990 respectively, driven by supply chain expenditures in Durables. Overall, the top 15 Indirect economic impacts are \$15,219,666 in value of output, or 53 percent of the total value of output in the Wholesale supply chain. For covered employment, it's 52.0 supply chain jobs at an annual average wage of \$67,259, or 51 percent of the total Indirect covered employment. For proprietors, it's 63.9 jobs at an annual average wage of \$67,259, or 62 percent of the total Indirect proprietors.

WHOLESALE CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Indirect Industry Description	Source of Indirect Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
447	Other real estate	Durables	\$3,393,311	2.7	16.7	19.4	\$35,851	\$16,990
421	Couriers and messengers	Durables	\$1,338,161	9.3	4.5	13.9	\$61,511	\$1,341
421	Couriers and messengers	Nondurables	\$1,029,672	7.2	3.5	10.7	\$61,511	\$1,341
447	Other real estate	Nondurables	\$1,862,635	1.5	9.2	10.6	\$35,851	\$16,990
465	Advertising, public relations, related services	Durables	\$934,645	1.8	6.6	8.4	\$46,239	\$9,307
469	Management of companies and enterprises	Durables	\$1,140,737	3.7	4.1	7.8	\$86,294	(\$167)
469	Management of companies and enterprises	Nondurables	\$1,050,338	3.4	3.7	7.2	\$86,294	(\$167)
526	Postal service	Durables	\$587,593	6.2	0.0	6.2	\$87,849	\$0
456	Accounting, tax preparation, bookkeeping	Durables	\$498,116	2.0	3.9	5.9	\$40,996	\$14,497
526	Postal service	Nondurables	\$553,062	5.9	0.0	5.9	\$87,849	\$0
455	Legal services	Durables	\$772,159	1.1	4.1	5.2	\$57,085	\$11,542
472	Employment services	Durables	\$307,232	1.6	2.4	4.1	\$46,746	\$25,167
465	Advertising, public relations, related services	Nondurables	\$425,719	0.8	3.0	3.8	\$46,239	\$9,307
470	Office administrative services	Durables	\$239,796	1.3	2.2	3.5	\$64,264	\$28,834
534	Other local government enterprises	Durables	\$1,086,487	3.4	0.0	3.4	\$65,915	\$0
Totals for the Top 15 Indirect Economic Impacts			\$15,219,666	52.0	63.9	115.9	\$67,259	\$11,996
Percent of Total Indirect Economic Impacts			53%	51%	62%	56%		

Table 111: Top 15 Indirect economic impacts by employment for the Wholesale Cluster in 2019 (2021\$).

Induced Economic Impacts

Table 112 presents the top 15 Induced economic impacts by employment. The table illustrates that the largest employment impact in the general economy occurs in Full-service restaurants, with 3.2 covered employees and 0.2 proprietors at annual average wages of \$28,370 and \$31,668 respectively, driven by expenditures in Durables. Overall, the top 15 Induced economic impacts are \$2,194,104 in value of output, or 18 percent of the total Induced contributions of the Wholesale Cluster. For covered employment, it's 22.5 jobs at an annual average wage of \$32,027, or 38 percent of the total Induced covered employment. For proprietors, it's 4.4 jobs at an annual average wage of \$21,700, or 19 percent of the total Induced proprietors.

WHOLESALE CLUSTER			Value of	Employment by Type			Average Wage (2021\$)	
Code	Induced Industry Description	Source of Induced Impact	Output (2021\$)	Employees	Proprietors	Total	Employees	Proprietors
509	Full-service restaurants	Durables	\$260,178	3.2	0.2	3.3	\$28,370	\$31,668
493	Individual and family services	Durables	\$97,672	2.3	0.2	2.5	\$28,967	\$16,551
510	Limited-service restaurants	Durables	\$218,648	2.2	0.1	2.3	\$25,585	\$34,463
406	Retail - Food and beverage stores	Durables	\$171,797	1.9	0.1	1.9	\$41,766	\$13,043
509	Full-service restaurants	Nondurables	\$147,302	1.8	0.1	1.9	\$28,370	\$31,668
491	Nursing and community care facilities	Durables	\$165,278	1.8	0.1	1.9	\$47,213	\$689
447	Other real estate	Durables	\$311,743	0.2	1.5	1.8	\$35,851	\$16,990
411	Retail - General merchandise stores	Durables	\$184,870	1.8	0.0	1.8	\$46,073	\$10,392
525	Private households	Durables	\$17,236	1.7	0.0	1.7	\$10,129	#DIV/0!
493	Individual and family services	Nondurables	\$55,270	1.3	0.1	1.4	\$28,967	\$16,551
510	Limited-service restaurants	Nondurables	\$123,852	1.3	0.1	1.3	\$25,585	\$34,463
511	All other food and drinking places	Durables	\$97,644	1.2	0.1	1.3	\$32,281	\$30,514
412	Retail - Miscellaneous store retailers	Durables	\$76,375	0.8	0.5	1.2	\$32,109	\$27,505
413	Retail - Nonstore retailers	Durables	\$151,320	0.1	1.2	1.2	\$37,112	\$8,162
512	Automotive repair and maintenance	Durables	\$114,917	1.0	0.2	1.1	\$49,475	\$122,800
Totals for the Top 15 Induced Economic Impacts			\$2,194,104	22.5	4.4	26.8	\$32,027	\$21,700
Percent of Total Induced Economic Impacts			18%	38%	19%	33%		

Table 112: Top 15 Induced economic impacts by employment for the Wholesale Cluster in 2019 (2021\$).

Results from the EDC Employer Survey

Select results from the EDC Employer Survey are presented in Table 113. The results indicate 100 percent of respondents in the Wholesale Cluster believe Clallam County is favorable for doing business. 100 percent of respondents expect to expand operations in the next three years. The top challenges are lack of qualified workers, employee retention, and increased cost of materials.

In the supply chain, 100 percent of respondents indicated a willingness to buy locally if a supplier was available. For expenditure patterns, 25 percent of respondents indicated that 60 to 80 percent of expenditures for goods and materials are made outside the County; for services, 100 percent of respondents indicated 60 to 100 percent of expenditures are made outside the County. Respondents expressed an interest in equipment and durable goods, consumables, and supplies. For services, repair and maintenance, and shipping and delivery.



Business Climate For Wholesale Cluster in Clallam County			
How favorable is Clallam County for doing business?	How likely is it that your business will expand in the next 3 years?	Identify the top 3 challenges you face doing business.	Other Challenges Confronted
Percent Responding "Favorable"	Percent Responding "Likely"	Listed by Frequency of Response	Text Response
100%	100%	Lack of Qualified Workers (33%) Employee Retention (33%) Increased Cost of Materials (33%)	None
Supply Chain Possibilities for Wholesale in Clallam County			
Would you prefer to purchase from a local supplier if one were available?	What percent of your expenditures for goods and materials are outside of Clallam County?	What percent of your expenditures for services are outside of Clallam County?	What goods, materials and services would you purchase from local businesses?
100% Yes	0 to 20% of Expenditures - 40% 30% to 50% of Expenditures - 35% 60% to 80% of Expenditures - 25%	0 to 20% of Expenditures - 0 30% to 50% of Expenditures - 0 60% to 100% of Expenditures - 100%	Equipment and durable goods Consumables and supplies Repair and Maintenance Shipping and Delivery

Table 113: Summary results for Wholesale from the EDC Employer Survey, 2021-2.

TARGETS FOR PROSPERITY

Overview

It is useful at this time to reconsider the over-arching research question that shaped the investigation for this 5-Year Plan:

“TOWARD WHAT SPECIFIC BUSINESSES AND GROUPINGS OF BUSINESSES SHOULD OUR COUNTY’S SCARCE TIME AND MONEY BE INVESTED TO PROMOTE AND SUSTAIN ECONOMIC PROSPERITY?”

The question emphasizes a fundamental economic concept. Resources, money and otherwise, are limited. When used for one thing they can’t be used for another. Thus, when choices are made, other choices are precluded. Choices made over time shape the future. We have seen that for Clallam County, when it comes to economic development, those choices have left us further and further behind the state when it comes to the average level of prosperity.

The over-arching research question shaping this investigation established the overall objective for the 5-Year Plan – how to best promote and sustain economic prosperity. Investments that create more prosperity are preferred to those creating less. Accordingly, this study began by identifying those economic sectors that provide the most prosperity for working residents, for when working residents prosper so too will those businesses where they spend their income. Central to this process of discovery was to ask residents about their challenges, their employment status, and where they worked. We learned what the top three challenges confronting residents were

- Access to affordable housing;
- Access to quality health care;
- Meeting financial obligations.⁶²

Through careful survey design, it was possible to analyze the relationship between challenges and the industry of employment. Where people work partly explains the extent to which they are challenged. Results indicated that people working in some industries experience higher levels of prosperity than people working in others. A similar process was used to ask businesses about the challenges they confront and the opportunities they see. These two lines of analysis made it possible to partly answer the over-arching research question. First, it was possible to identify industries where working people prosper and those where they do not. Second, the kinds of changes that could help businesses in those industries thrive were then identified.

⁶² The fourth was paying local and state taxes.

The analysis went further. A process was defined to identify the annual before tax wage that would be necessary to provide prosperity for a working family. The criteria used to estimate that prosperity wage included basic household expenditures for things ranging to food through transportation, child care, saving for a down payment on a home, paying for that home, and saving for retirement. This was done for a family consisting of two adults, both working, with one child. That family would need a combined annual before tax income of about \$115,000. Thus, a second part of the answer to the overarching research question is that one of those adults would need to earn an income of about \$75,000 to \$79,000 if the other earned an average wage in the private sector.⁶³

The fourth line of analysis developed in this 5-Year Plan was to analyze the economy of Clallam County by dividing private sector businesses into fourteen Clusters. Each of those Clusters was analyzed, first, in terms of average covered employment and the number of proprietors. Second, their annual average wages, employment and wage multiplier effects driven by changes in a business's annual value of output were estimated. This analysis was followed third by economic impacts in the supply chain and in the overall economy. Finally, fourth, select results from the EDC Employer Survey were used to assess the business climate in each Cluster and possibilities for expansion in the local supply chain.

In this section of the 5-Year Plan results from each of the areas of investigation are used to develop three criteria that can be used to assess the extent to which each Cluster promotes prosperity in Clallam County. Clusters that satisfy all three criteria are the targets for economic development.

Criteria for Prosperity

The methods, data and models presented in this 5-Year Plan can be used to assess the extent to which expansion and/or recruitment of businesses from any of the fourteen Clusters will impact economic prosperity. Both qualitative and quantitative data are used in those assessments. Qualitative data was derived from the EDC Community Survey and take the form of Likelihood Ratios (LR). LRs are presented for the four primary measures for prosperity: home ownership, job security, the ability to meet financial obligations, and wage progression in the current industry of employment. Quantitative data and analysis takes the form of estimated average annual wages for covered employees and proprietors. To make possible a quick assessment if a wage will increase or decrease the average (mean) county wage, a wage premium was estimated. The wage premium is the difference between the average wage in a Cluster and the County average. If the premium is positive – the wage in a Cluster is greater than the County average, another job in that Cluster will pull the County average upward; if the wage premium is negative in a Cluster, that job will pull the average wage downward. The reader can also compare estimated average wages by Cluster to the discussion of the range of wages needed to satisfy the criteria of a prosperity wage.

Table 114 summarizes the likelihood ratios for home ownership, job security, being able to meet financial obligations,⁶⁴ and the expectation of wage progression for an increased standard of living. The

⁶³ The mean private sector wage in 2021 was \$40,430; the median was \$36,474.

⁶⁴ The numerators and denominators were reversed so that the Likelihood Ratio could be interpreted as a positive – being able to meet financial obligations – rather than a negative, not being able to meet financial obligations, which was how the question was originally phrased in the EDC Community Survey.

color red was used to identify Clusters that do not provide prosperity for that qualitative measure. Thus, for instance, we see that in Agriculture and Fishing, Hospitality and Tourism, Personal Services, Retail, Trades, Transportation and Wholesale,⁶⁵ people employed in those Clusters are not more likely to own a home, i.e., a LR <= 1.00. Those working in Construction, Finance, Real Estate and Insurance, Forest Products, Health Care and Assistance, Human Services, Manufacturing and Maritime, and Specialized Services are more likely than not to own a home.⁶⁶ Their LR > 1.00.

Cluster	Average Annual Wages 2019 (2021\$)				Likelihood Ratios by Cluster			
	Employees		Proprietors		Own	Job	Financial	Wage
	Wage	Premium	Wage	Premium	Home	Security	Obligations	Progression
Agriculture and Fishing	\$32,873	(\$16,019)	\$7,859	(\$21,420)	0.60	4.00	0.50	0.10
Construction	\$49,243	\$351	\$70,421	\$41,142	1.20	19.0	0.83	8.49
Finance, Real Estate, Insurance	\$51,785	\$2,893	\$14,393	(\$14,886)	6.10	5.50	1.79	9.00
Forest Products	\$81,953	\$33,061	\$53,087	\$23,808	4.00	1.50	1.49	2.00
Health Care and Assistance	\$63,241	\$14,349	\$94,265	\$64,986	1.70	6.60	1.33	1.39
Hospitality and Tourism	\$30,305	(\$18,587)	\$58,554	\$29,275	1.00	23.0	1.37	1.50
Human Services	\$33,621	(\$15,271)	\$18,045	(\$11,234)	2.20	5.70	0.83	1.14
Manufacturing and Maritime	\$64,478	\$15,586	\$13,413	(\$15,866)	1.70	9.00	2.00	3.00
Personal Services	\$15,190	(\$33,702)	\$67,142	\$37,863	0.50	6.00	0.14	0.20
Retail	\$41,733	(\$7,159)	\$19,920	(\$9,359)	0.50	2.90	0.88	1.44
Specialized Services	\$63,439	\$14,547	\$15,856	(\$13,423)	4.30	1.60	1.75	0.73
Trades	\$56,860	\$7,968	\$115,670	\$86,391	0.50	3.30	0.50	1.17
Transportation	\$62,397	\$13,505	\$22,059	(\$7,220)	0.00	5.00	0.75	1.50
Wholesale	\$63,978	\$15,086	\$18,513	(\$10,766)	0.50	2.90	0.88	1.44
Total Weighted Average	\$48,892		\$29,279					

Table 114: Annual average wages, wage premiums, and likelihood ratios by Cluster.

One criterion that can be used to decide if a Cluster promotes prosperity would be if, on average, employment makes it more likely to own a home, provide job security, pay wages that make it possible to meet financial obligations, and offers wage progression. The table reveals that Finance, Real Estate and Insurance, Forest Products, Health Care and Assistance, and Manufacturing and Maritime meet all of those conditions – home ownership, job security, the ability to meet financial obligations and wage progression, and are colored blue. The other nine Clusters do not meet all of them, but do meet some. Those that do meet a LR criterion are colored in black. This then is our first test for prosperity.

⁶⁵ In the EDC Community Survey, Retail and Wholesale were combined. In the subsequent economic analysis, they were separated because Wholesale pays higher wages and, as part of the supply chain, offers some unique opportunities to increase the number of higher paying jobs.

⁶⁶ It can be reasonably be argued that those employed in Hospitality and Tourism are as likely to own as to rent. However, given a below average wage and a negative wage premium of \$10,125, home ownership is probably not supported by a single job in Hospitality and Tourism. Rather, that job is the source of a second income that helps support home ownership. This nuanced observation reveals that clear demarcations are not always possible.

A second criteria is that wages in a Cluster increase the average wage in Clallam County. A useful and direct way to measure that is the wage premium.⁶⁷ As discussed above, the wage premium is the difference between the average wage in an industry (Cluster in this case) and the average wage in the County. Wages for both employees and proprietors were estimated by IMPLAN for each Cluster. The weighted average wage for all Clusters was calculated for both employees (\$48,892) and proprietors (\$29,279), and then used to calculate wage premiums. This criterion requires that a targeted Cluster pay a positive wage premium. The values indicate that for employees, Construction, Finance, Real Estate and Insurance, Forest Products, Health Care and Assistance, Manufacturing and Maritime, Specialized Services, Trades, Transportation and Wholesale provide employment that will increase the County-wide average wage. For proprietors, Construction, Forest Products, Health Care and Assistance, Hospitality and Tourism, Personal Services and Trades meet the criterion.

The values in Table 115 combined with the two criteria established above make it possible to determine which Clusters will promote prosperity and increase average wages in Clallam County. Those Clusters satisfying both criteria for employees are:

- Finance, Real Estate and Insurance;
- Forest Products;
- Health Care and Assistance;
- Manufacturing and Maritime;

For proprietors, they are:

- Forest Products;
- Health Care and Assistance;

It is important to keep in mind that an industry within a Cluster might meet these criteria even though the Cluster does not. Similarly, a given business in an industry might meet these criteria even though the industry and Cluster do not. The data and analysis in this 5-Year Plan provide detailed information at the industry level for employee and proprietor income so that evaluative assessment can be made.⁶⁸ The reader can use that analysis as a tool to conduct a first-round assessment of expected economic impacts. The qualitative measures, however, are aggregated at the Cluster level.⁶⁹

Drivers of Economic Development

One additional criterion needs to be introduced – drivers of economic development. IMPLAN analyzes direct impacts. A direct impact results from the expansion or introduction of a business, industry or group of industries. That direct impact causes an increase in the value of output, which is used to cover the costs of intermediate inputs, the cost of labor (employees and proprietors), taxes and other property income. Some of those intermediate costs move through the local supply chain. The

⁶⁷ Related to this discussion is the prosperity wage analyzed previously. Or, more precisely, the range of wages that might bring prosperity. In Table 115, only Forest Products provides a prosperity wage under all the potential circumstance shaping the range in Table 13.

⁶⁸ This detailed analysis by industry is provided for each Cluster in the section, Economic Impacts by Cluster.

⁶⁹ The EDC Community Survey was constructed so that answers can be sorted by employee or proprietor.

employment and wage impacts then affect spending in the local economy, further increasing the total economic impact. It is critical to understand the assumption that is involved here: the direct impact increases the total demand for production with corresponding sales, which represents an injection of money from outside the County into the local economy. Economic growth in the County will then result. Critical is to recognize that an increase in the value of output for a business may not increase economic activity within a County. This can occur when the expansion of a business, or the creation of a new one, draws sales away from existing businesses within the County. In this case there is a redistribution in employment and wages between competing businesses. For the expansion or recruitment of a new business to be a driver of economic development – total employment and wages in the County increase – its sales revenues must come outside the County, or from reduced leakages by providing goods and/or services that residents currently buy outside the County. To the extent this condition is not satisfied, there will be a redistribution between businesses in the County.

How does this criterion affect the list of targeted Clusters? The sales in Finance, Real Estate and Insurance are primarily to local residents. As the number of residents increases, or the income of residents increases, the demand for those services increases. Thus, doubling the number of businesses in Finance, Real Estate and Insurance will not double the demand for those services by existing residents. Rather, there will be twice as many businesses providing the same service. Therefore, that Cluster is not a driver of economic development. What about Forest Products? The Forest Products industry provides value added from the ground in the forest, on the highways to mills, in the production of wood products and recycled cardboard, and their export to distant markets. Those exported products bring sales revenue to the County which supports employment and wages. Forest Products is a driver of economic development. So too is Manufacturing and Maritime. To a lesser extent some elements of Health Care and Assistance are drivers of economic development when an increase in any business in that Cluster increases local demand by decreasing leakages from buying those services outside the County.

Three Targets for Economic Development

The EDC Executive Board met on December 1, 2022 to review the summary values in Table 114. Using the criteria for prosperity described above, Colleen McAleer, Executive Director of the EDC, recommended that Construction, Forest Products, and Manufacturing and Maritime be targeted for expansion and recruitment. The rationale for including Construction, which did not satisfy all three criteria, was that access to affordable housing is the number one ranked challenge in Clallam County. In addition, a shortage of affordable housing was text ranked as the number one challenge to recruiting qualified employees in the EDC Employer Survey. Forest Products satisfied all three criteria. In addition, it pays the highest average annual wage of any Cluster examined in this 5-year plan, at \$81,953 with a positive wage premium of \$33,061. It is also the only Cluster that pays a prosperity wage, exceeding the threshold range of \$75,000 to \$79,000. Manufacturing and Maritime satisfied all three criteria. While the average annual wage falls below the range for prosperity, it does pay \$64,748 with a positive wage premium of \$15,586. Thus, every new job in Manufacturing and Maritime will increase the average annual wage in Clallam County.

Finance, Real Estate and Insurance was not recommended as a target Cluster. While it satisfied the first two criteria for prosperity, it is not a driver of economic development. It provides a service primarily to existing residents. Recruitment of new businesses in the Cluster, or expansion of existing businesses, will likely result in a redistribution of employment and wages and increase overall economic prosperity. Health Care and Assistance also was not recommended as a target Cluster. Like Finance, Real Estate and Insurance, it satisfied the first two criteria for prosperity. However, for most areas in Health Care and Assistance, it is likely not a driver of economic development, as there is insufficient local demand to increase specialty care currently provided outside the County. Exceptions may be primary care physicians and behavioral health specialists. In addition, it is believed that the primary providers of health care have sound business plans and do an effective job of changing service levels in response to changes in local conditions.

Expected Economic Impacts by Cluster

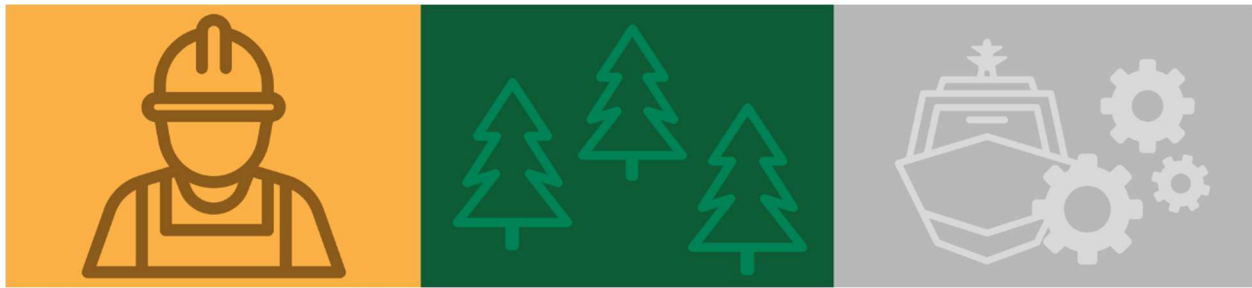
The data and analysis contained in the 5-Year Plan reveal that all Clusters are not equal in their contributions to economic prosperity when measured in terms of employment and wages. Table 115 provides a comparative summary of economic impacts by Cluster in terms of the total direct value of output and direct employment and wage multiplier effects driven by a \$1,000,000 change in value of output. When Clusters are compared on the basis of value of output, Health Care and Assistance contributed an estimated \$640,794,548 in 2019 (2021\$). This was followed by Specialized Services at \$506,641,650, and then Retail at \$384,886,208. For two of those Clusters – Health Care and Assistance and Retail – the majority of that value of output was driven by sales to existing residents. This is less the case in Specialized Services where Scientific research and development services contribute \$153,596,653, likely derived from providing services to the public sector, federal and state.

This type of analysis is important because some of the value of output contributed by a Cluster is driven by sales to residents, while the remainder is driven by out of County sales. The targeted Clusters of Forest Products and Manufacturing and Maritime are Clusters where the value of output is predominately supported by sales outside the County. That value of output becomes a source of income that would not exist otherwise. Respectively, they contribute an estimated \$263,788,185 and \$260,098,474 in value of output and the employment and wages it makes possible. Those employed then spend that income derived from sales outside the County at local businesses.

Thus, Forest Products and Manufacturing and Maritime are drivers of economic development, satisfying all three criteria for prosperity.

REMINDER:

Total employment values by Cluster and Industry within each Cluster can be found in previous sections. Similarly, average annual wages for covered employment and proprietors can be found, with summaries by Cluster in Table 115.



Cluster	Total Direct Value Output	Multipliers for \$1,000,000 Change in Value of Output			
	2019 (2021\$)	Additional Jobs		Additional Wages	
		Employees	Proprietors	Employees	Proprietors
Agriculture and Fishing	\$20,022,758	7.1	22.9	\$232,078	\$179,935
Construction	\$343,610,055	4.9	1.9	\$238,994	\$131,929
Finance, Real Estate, Insurance	\$383,539,667	1.2	4.2	\$61,692	\$61,113
Forest Products	\$263,788,185	3.3	0.6	\$270,311	\$29,932
Health Care and Assistance	\$640,794,548	5.6	1.1	\$356,978	\$43,908
Hospitality and Tourism	\$348,210,662	8.9	1.6	\$269,018	\$92,546
Human Services	\$130,085,287	11.5	1.7	\$386,427	\$31,577
Manufacturing and Maritime	\$260,098,474	2.5	0.5	\$162,349	\$6,704
Personal Services	\$33,107,265	20.8	8.7	\$316,149	\$584,561
Retail	\$384,886,208	7.3	2.1	\$305,795	\$42,346
Specialized Services	\$506,641,650	2.6	5.8	\$165,785	\$91,727
Trades	\$99,110,216	5.6	1.4	\$319,477	\$159,701
Transportation	\$87,418,915	4.5	2.8	\$281,554	\$62,842
Wholesale	\$85,043,074	3.2	0.9	\$207,449	\$15,880

Table 115: Total direct value of output by Cluster and employment and wage impacts for a \$1,000,000 change in value of output in 2019 (2021\$).

As the three target Clusters expand, either by expanding existing businesses or through recruitment of new ones, how will that change likely affect prosperity in Clallam County? Beginning with Construction, each new home built will help solve the lack of affordable housing challenge that residents confront, and businesses trying to hire qualified people.

In the Construction Cluster overall, every additional \$1,000,000 in value of output will result in 4.9 additional covered employees earning a total of \$238,994 in wages; for proprietors, it is 1.9 additional jobs and \$131,929 in wages. That \$1,000,000 in value of output would also support 1.4 covered employees and \$73,338 in wages in the supply chain; for proprietors, it is 0.5 jobs and \$11,969. For the overall economy, it's 1.3 covered employees and \$55,986 in wages; for proprietors, it is 0.4 and \$9,554.

In the Forest Products Cluster overall, every additional \$1,000,000 in value of output will result in 3.3 additional covered employees earning a total of \$270,311 in wages; for proprietors, it is 0.6

additional jobs and \$29,932 in wages. That \$1,000,000 in value of output would also support 1.5 covered employees and \$103,155 in wages in the supply chain; for proprietors, it is 0.6 jobs and \$25,838. For the overall economy, it's 0.9 covered employees and \$39,496 in wages; for proprietors, it is 0.4 and \$9,338.

In the Manufacturing and Maritime Cluster overall, every additional \$1,000,000 in value of output will results in 2.5 additional covered employees earning a total of \$162,349 in wages; for proprietors, it is 0.5 additional jobs and \$6,704 in wages. That \$1,000,000 in value of output would also support 0.5 covered employees and \$28,269 in wages in the supply chain; for proprietors, it is 0.4 jobs and \$7,997. For the overall economy, it's 0.7 covered employees and \$30,475 in wages; for proprietors, it is 0.3 and \$5,309.

BRINGING PROSPERITY TO CLALLAM COUNTY

Overview

In the previous section, the Clusters Construction, Forest Products, and Manufacturing and Maritime were identified as targets for expansion and recruitment because they satisfied the three criteria for prosperity:

- (1) Have a Likelihood Ratio indicating support for home ownership, provide job security, make it possible to meet financial obligations, and offer wage progression;
- (2) Pay a wage with a positive wage premium that is close to the range for prosperity;
- (3) Drive economic development.

The identification of targets for economic development is fundamental to the process of improving the profitability of local businesses and providing employment for residents at good wages. The next step in the process involves analyzing and assessing the local business environment. Is that environment conducive to expansion and recruitment of the kinds of businesses that will help Clallam County thrive? In this last section of the 5-Year Plan barriers to the successful expansion and recruitment of businesses are presented and explained. In addition, results from the EDC Employer Survey and discussion with businesses owners and managers are used to identify barriers to prosperity. Some suggestions are made to help reduce those barriers.

When a prospective business in Construction, Forest Products, and Manufacturing and Maritime examine and evaluate the economic feasibility of a new or expanded facility in Clallam County, there are at least five institutional and structural needs that must be met to successfully operate. These are:

- (1) Sufficient land designated for industrial development,
- (2) Reliable harvest from private and public forestlands,
- (3) The availability and sufficiency of electricity at competitive prices,
- (4) The presence of a local labor force with necessary knowledge-skill sets,
- (5) The presence of land-based infrastructure.

Each of these needs are explained and analyzed. It is revealed that the inadequacy of each is a barrier to economic development. General suggestions on how to reduce those barriers are presented.

Institutional and Structural Barriers to Economic Development

Expanding or opening a business in Construction, Forest Products or Manufacturing and Maritime requires physical space – land. Regulatory zoning determines the extent and location of land to meet that need. There needs to be sufficient acreage located near markets, transportation networks, with the necessary land-based infrastructure.

The Forest Products industry requires wood fiber – both trees and residual materials – for processing into products for sale. Financial feasibility depends on securing a reliable flow of these necessary materials. Those flows are/can be derived from private lands, public lands, and tribal lands. Changes in the institutional environment make those flows increasingly unreliable. In private markets, reductions are driven by the transfer of forest land into other uses, new environmental restrictions, and a shift from timber harvest to emergent markets like carbon offsets. For public lands, harvests are restricted because of lawsuits and lands removed from harvest inventory due to carbon credit based on sequestration and storage. Harvests from Tribal lands depend upon their goals. Each of these institutional features creates uncertainty and increased uncertainty reduces the expected profitability from any operation.

Forest Products and Manufacturing and Maritime use electricity to power operations. There are two significant constraints they confront. First, the total annual sale of power from PUD to a customer is limited to 10 megawatts, under current federal policy. If demand ever exceeds more than 10 megawatts, a price penalty of 2x applies. This means that large energy users (including businesses) will not consider our community, because our pricing is not competitive. The second constraint is imposed by the physical distribution system. The total quantity of electric power that can be distributed in Clallam County is limited to 200 megawatts, and an ever-increasing share of that capacity is being devoted to electric car and truck charging stations.

Any new business will require a labor force with the knowledge and skills unique to that industry. In some industries local high schools and Peninsula College provide for those educational needs. However, that is not the case in all industries as revealed by the EDC Employer Survey and discussions with business owners and managers. In some cases, on-going training programs are needed. In other cases, there will be a short-term need for necessary training. Two examples are, first, training for composite manufacturing of aircraft parts, and second, water quality technicians working at the city water works.

The last institutional and structural need pertains to the land-based infrastructure needed to support businesses or residential housing. At present there is no systematic planning framework to ensure that water, sewer and electricity are available to support that demand. There is currently no comprehensive mapping process to identify the gaps in infrastructure.

Target Clusters and Barriers to Economic Prosperity: Construction

EDC Employer Survey respondents in Construction provided detailed information about the challenges confronted in the industry. These are of particular concern because a lack of access to affordable housing is one of the Top Three challenges confronting residents of Clallam County. A lack of affordable housing was also listed as a top ranked text response by local employers. Finding pathways to increase affordable housing is thus a major challenge confronting Clallam County.

The number one challenge presented by 95 percent of respondents in Construction is finding qualified workers. A lack of qualified workers was great in this Cluster than the other four targets for economic development. Respondents expressed a need for more local job-skills training. Seven of ten employers said they needed workers in general construction; three identified the need for skilled

workers in HVAC, plumbing and interior design. Two said they need employees with training in construction management. Despite the fact that Peninsula College offers both a degree and certificate program in Construction, only 21% of the employers in the Construction Cluster told us that they employ graduates of the College.

I'd like to see graduates be able to know how to work with tools, understand how to build with wood, and how geometry works with a roof."

Home builder, Sequim.

The second greatest challenge to increasing the supply of housing relates to government regulations. This sentiment was expressed by 54 percent of respondents, and was ranked number 1 by 23 percent, the second highest concern in the survey results. While detailing the regulatory structure of the home building process is beyond the scope of this project, three comments are particularly illuminating.

PA & Sequim are both very unfriendly places to attempt to build homes. Excessive permitting and delays have made it difficult to build homes – and we are losing qualified workers out of the area and state because of the lack of housing."

Building materials supplier, Port Angeles

Being able to develop land to build affordable housing to help our work force to have homes or rentals available. Reduction on fees to develop land and building permits. Rezone land for residential growth."

Home builder, Sequim

With the housing crisis, the City of Sequim should be a partner that is motivated to work with developers in creating subdivisions to build additional housing units. The City of Sequim has had multiple subdivisions seeking approval for the past two years that continuously fail to move forward as a result of unreasonable requirements that are not supported by the municipal code."

Home builder, Sequim

Other text ranked challenges identified by employers in Construction were the increased cost of materials, stated by 84 percent of respondents. This was followed by 58 percent who noted employee retention as a challenge, and 53 percent who stated government regulation.

Target Clusters and Barriers to Economic Prosperity: Forest Products

The EDC Employer Survey was completed by four respondents, a small sample. To increase the sample size this subsection uses in its analysis, interview data from employers in the Forest Products Cluster and results from previous studies completed by Olympus Consulting are used.

The number one challenge to the Forest Products industry is maintaining a sufficient and reliable supply of raw materials.⁷⁰ An insufficient supply of wood fiber has been one of the reasons for the closure of four sawmills on the North Olympic Peninsula since 2014. The supply challenge is the result of the elimination of commercial harvests matrix lands in Olympic National Forest, reductions in DNR harvests caused by land withdrawals and failure to achieve target harvest levels, and shifts in the private forestland base from commercial harvests to ecosystem services. As a result, local log buyers increasingly look for sales outside the County which can require long distance transport.

EDC Employer Survey results indicated that about one-third of respondents had difficulty filling positions. An internet search of job openings at local sawmills indicates the challenge filling vacancies, and this in the third highest paying industry in Clallam County. Randy Johnson, Clallam County Commissioner, recently stated that DNR says it is increasingly difficult to find people qualified to “work in woods,” from survey work to harvesting. This suggests there may be opportunities for job skill training, perhaps especially in the west end of the County. Survey respondents also indicated that increased costs of materials, employee retention and excessive government regulation as challenges.

Another major challenge to the Forest Products Cluster involves transportation. Planned culvert removal along Highway 101 and plans for roundabouts on Highway 103 will slow traffic flow, daily arrival times of product, and increase transportation costs. This will further squeeze operating margins in a cost competitive industry. These highway challenges suggest that other transport options will become increasingly important.

In conclusion, it is to be noted that during at least one interview with a major employer in the Forest Products Cluster, the issue of finding affordable housing arose. Specifically, it was stated that the company has been unable to recruit individuals with the necessary knowledge-skill set because of the cost of housing.

Target Clusters and Barriers to Economic Prosperity: Manufacturing and Maritime

Survey respondents from the Manufacturing and Maritime Cluster expressed a similar challenge recruiting workers as the other targeted clusters. 78 percent of Manufacturing employers expressed difficulty filling positions at their businesses (56 percent extremely difficult and 22 percent somewhat difficult). When asked to “identify the challenges you face doing business in Clallam County”, the most common challenge expressed was “the lack of qualified workers” (78 percent). It was ranked as the number one challenge by 33% of Manufacturing Employers.

The percentage of employers in Manufacturing and Marine Cluster that employed graduates of Peninsula College (78 percent) was significantly higher than the rate for all other clusters combined (27

⁷⁰ Interviews, Interfor, Evergreen Fibre, Green Creek, Port Angeles Hardwoods, Nippon Paper, McKinley Paper.

percent). As 50 percent of respondents were in the Maritime component of the Cluster, these employees are likely graduates of the Peninsula College Welding Program. Discussions with several employers in Maritime indicated a need for people with particular knowledge-skill sets. It is possible these skills could be provided through cooperative training programs developed in conjunction with employers who may be best positioned to establish what that training should consist of.

A total of seven employers in the Manufacturing and Marine Cluster took time to share their training needs in an optional text response question. Training for certifications including ABYC Marine Electrician (2), ABYC Marine Systems, ABYC Aluminum Welding (2), and Human Resources. Other training needs identified by employers in this cluster included diesel mechanic, machine repair (2), logistics project management and accounting.

Related to the need for qualified employees is the general knowledge-skill set of what it takes to be an employee. During one interview, a manufacturing manager stated it was a challenge finding people who knew how to work and were willing to work. When asked that specific skills he was referring to, the manager stated working during the work period, staying off the phone, and paying attention to the job at hand. This general challenge has been expressed by many employers in Clallam County.

The other challenges most often identified by employers in Manufacturing and Maritime were increased cost of materials (67 percent), employee retention (67 percent), and excessive government regulation (44 percent). Also identified was insufficient land and building to operate my business, access to high quality broadband, and lack of a rail barge. This last challenge is similar to that confronted by the Forest Products Cluster. It should be noted that the largest manufacturer in Clallam County noted the “the lack of housing for workers” as a challenge. This issue was also raised in response to open-ended text responses.

The housing cost and cost of living here has gotten to a level that we cannot find skilled employees who are willing to stay in this area for employment. Housing availability is also practically non-existent for future employees.”

Manufacturer, Port Angeles



CONCLUDING THOUGHTS

COLLEEN McALEER, EXECUTIVE DIRECTOR
CLALLAM COUNTY ECONOMIC DEVELOPMENT COUNCIL

The goal of this 5-Year Plan was to answer the question:

“TOWARD WHAT SPECIFIC BUSINESSES AND GROUPINGS OF BUSINESSES SHOULD OUR COUNTY’S SCARCE TIME AND MONEY BE INVESTED TO PROMOTE AND SUSTAIN ECONOMIC PROSPERITY?”

The process used to derive an answer was meticulous and data-driven. Along the way we discovered that the top three challenges confronted by working people in Clallam County are securing affordable housing, access to quality health care, and finding a job that allows meeting financial obligations. More jobs that pay higher wages will help solve each of those problems. How high should those wages be to provide prosperity to working people? To answer that question, we considered the cost to support a family of three with two working adults. Those costs included food, transportation, health care, housing and saving for retirement. The result was a target wage for prosperity. For the adult with the highest income, that before tax wage would be \$79,135 when the other adult earned the median private sector wage of \$36,747.

The next step was to discover what Clusters – groupings of similar businesses – would, on average, provide prosperity to their employees. We used three tests to find that group. First, we analyzed average annual wages by Cluster. Second, we used the EDC Community Survey to discover what Clusters made possible home ownership, job security, the ability to meet financial obligations, and offer wage progression. Third, the Cluster needed to be a driver of economic development, or a business that brings income into the County and thus stimulates additional rounds of spending in the local economy. Of the 14 private sector Clusters studied, Construction, Forest Products, and Manufacturing and Maritime met our criteria. Expanding businesses in these Clusters, or recruiting new ones, will provide prosperity for working people in Clallam County, increase the average standard of living for residents, and increase the demand for goods and services throughout the local economy.

The next question is how to do it? That is, how do we promote and sustain prosperity in Clallam County? What will it take to expand business, or recruit new ones, in Construction, Forest Products, and Manufacturing and Maritime? We know what some of the necessary parts for successful economic development are. One is access to affordable housing. Working people told us it’s their number one challenge. Many business people told us the same thing. In the summer of 2022, the median price of a home in Clallam County was \$430,400. What will help increase the supply of new homes and bring down

their prices? One action that can be taken at the local level is to make available contiguous block of land zoned for multiple forms of housing with the necessary infrastructure, which includes electricity, water and sewer. A second local action, identified by home builders in the EDC Employer Survey, is to simplify and expedite the permitting process. A third local action is to improve the incentives to build housing in the forms that best meet local needs. A fourth action where local officials have less ability to exert influence is in the area of new home construction where, since 2018, the average cost of a new home has increased by an average of \$114,000 due to the Washington State Building Code Council energy mandate changes.

A second component of bringing prosperity to working people in Clallam County is transportation. Our remote geographic location puts local businesses at a competitive disadvantage when it comes to importing materials and exporting finished products. Highway 101 is a primary transportation route, and the unobstructed movement of trucks to and from Clallam County is critical to cost effective ground transportation. Proposed roundabouts on the highway will increase travel time, necessitate the use of additional trucks to transport the same volume of goods, and increase transportation costs. In addition to protecting the unobstructed movements of goods by truck, opportunities to use water-based transport can be exploited. Barge operations already provide cost advantages in transport and could be expanded with investments in infrastructure. There is also some potential for air transport opportunities, which are in the process of being defined.

A third component of bringing prosperity to Clallam County is to have a well-trained and adaptive workforce. Local high schools and the community college have pivotal roles to play in this regard. As we see it, what is essential is to have and create workforce training driven by the needs of local employers. Some of these programs will be long-term, like learning the construction trades. Others will be flexible to meet the near-term needs of an employer for a group of people capable of performing specific roles. At present, we see some success in these regards, such as the proposed Career Tech Education Center of Excellence facility at Sequim High School, and new industry-driven programs in marine trades and dental hygiene at Peninsula College.

A fourth component of bringing prosperity to Clallam County involves comprehensive planning that integrates land use zoning and the infrastructure of power, water, sewer and transportation. Needed are contiguous blocks of industrially zone land of sufficient size with necessary infrastructure. Critical to this comprehensive planning process is the existence of permitting certainty, the minimization of investment costs and the maximization of access to markets.

We have learned a great deal about the challenges confronting bringing prosperity to the working people in Clallam County. We have identified what parts of the local economy are most likely to provide the targeted wage for prosperity. We know what parts of the local economy drive economic development and which parts help support it. We also know what some of the barriers to that success are. There is one more thing we also know. We need to be prepared for opportunities. Some of those opportunities we can anticipate and take actions to make them realities. But there are other opportunities that will be unanticipated. We need to be prepared for those as well. The four components outlined above will be essential to preparing for anticipated and unanticipated opportunities for prosperity.