



**Tesoro Savage
Vancouver Energy Distribution Terminal
Socio-Economic Analysis
EFSEC Application No. 2013-01**

PREPARED BY

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LIST OF ACRONYMS & ABBREVIATIONS

B & O – Washington State Business and Occupation tax

EFSEC – Energy Facility Site Evaluation Council

IMPLAN – Impact Analysis for Planning input-output model from MIG, Inc.

MSA – Metropolitan Statistical Area

OEA - and Oregon Office of Economic Analysis

OFM - Washington Office of Financial Management

WAC - Washington Administrative Code

1.0 SOCIOECONOMIC IMPACT

1.1 Existing Conditions

The proposed Tesoro Savage Vancouver Energy Distribution Terminal (Project) is located at the Port of Vancouver, adjacent to the Columbia River in Vancouver, Washington. Vancouver is the largest city in Clark County, and Clark County is part of the larger Portland, Oregon metropolitan area. The majority of services, such as police, fire, and ambulance, will be supplied by Vancouver or Clark County providers, but the larger metropolitan area and other surrounding counties are likely to supply a portion of workers and construction material. The Project is proposed by Tesoro Savage Petroleum Terminal LLC (Applicant).

For this socio-economic analysis, the study area is defined as those counties within a one-hour commute of the project site, in accordance with Washington Administrative Code (WAC) 463-60-535. These include Clark, Skamania, and Cowlitz County in Washington, and Multnomah, Clackamas, Marion, Yamhill, and Washington County in Oregon. Small portions three other counties may fall within a one hour commute of the project site (depending on traffic conditions), but these small areas are sparsely populated and workers associated with the project are not likely to live there. These three counties include Wahkiakum County in Washington and Clatsop County and Tillamook County in Oregon.

The following analysis provides county-level detail for each of the counties in the study area, and city-level detail for municipalities in Clark County.

1.1.1 Population Trends

According to data from the Washington Office of Financial Management (OFM)¹ and Oregon Office of Economic Analysis (OEA)², the population of the study area grew by nearly 800,000 between 1992 and 2012, to approximately 2.8 million. This represents an increase of 38.8% over the period. Growth was faster between 1992 and 2002 (i.e. 450,000 new residents, or 22.4%) than it was between 2002 and 2012 (i.e. 330,000 new residents, or 13.4%).

During the same periods Clark County experienced faster growth than the study area as a whole. Between 1992 and 2012 the population of Clark County grew from approximately 257,000 to 431,000, or 68.1%. Between 1992 and 2002 the population grew by 98,000, or 38.2%, and between 2002 and 2012 it grew by nearly 77,000, or 21.6%.

Neighboring counties within the study area experienced varying levels of growth between 1992 and 2012. The two counties in Washington (i.e. Cowlitz and Skamania) are mostly rural and saw relatively limited population growth. Combined, these two counties account for approximately one-quarter of the population of Clark County.

In contrast, the Oregon counties in the study area are in a fast-growing urban area, and experienced strong population growth between 1992 and 2012. Nearly 75% of the study area population growth over that period occurred in Oregon.

¹ *Historical and Projected Population for Growth Management and Other Purposes, Medium Series: History 1960 to 2010, Projections 2015 To 2040*, Forecasting Division of the Office of Financial Management (OFM), May 2012.

² *Forecasts of Oregon's County Populations and Components of Change, 2010 – 2050*, Prepared by Office of Economic Analysis, Department of Administrative Services, State of Oregon, Release date: March 28, 2013

Construction of the project is anticipated to be completed during 2016. Based on population projections from OFM and OEA, the population of the study area is projected to grow by 6.3% between 2012 and 2016, or by more than 176,000. Growth in Clark County is anticipated to be slightly faster, with the population rising by 28,000, or 6.5%.

The long term forecast projects total study area population to grow by 789,000 between 2016 and 2036, or a total of 26.6%. In Clark County, the population is projected to grow by a total of nearly 113,500, or 24.7%.

Table 1.1-1 – Total Population and Forecast Growth by County in the Project Vicinity

County Name	(Thousands)					Growth Rate			
	1992	2002	2012	2016	2036	Actual		Forecast	
						1992-2002	2002-2012	2012-2016	2016-2036
Washington State	5,072.1	6,022.9	6,817.8	7,175.6	8,619.1	1.7%	1.2%	1.3%	0.9%
Clark	256.5	354.5	431.3	459.2	572.7	3.3%	2.0%	1.6%	1.1%
Cowlitz	84.1	94.2	103.1	106.5	116.5	1.1%	0.9%	0.8%	0.4%
Skamania	8.6	10.0	11.3	11.4	13.0	1.5%	1.2%	0.2%	0.7%
Oregon State	2,985.8	3,515.5	3,883.7	4,100.0	5,089.1	1.6%	1.0%	1.4%	1.1%
Clackamas	294.0	349.2	381.7	404.7	524.2	1.7%	0.9%	1.5%	1.3%
Columbia	38.9	44.8	49.7	52.6	65.3	1.4%	1.0%	1.4%	1.1%
Hood River	17.7	21.1	22.9	24.4	32.7	1.8%	0.8%	1.7%	1.5%
Marion	241.8	293.5	320.5	340.9	440.7	2.0%	0.9%	1.6%	1.3%
Multnomah	603.5	675.4	748.4	783.8	922.2	1.1%	1.0%	1.2%	0.8%
Polk	52.6	65.1	76.6	83.3	116.7	2.2%	1.6%	2.1%	1.7%
Washington	341.4	463.1	542.8	590.8	803.8	3.1%	1.6%	2.1%	1.6%
Yamhill	69.9	88.2	100.6	108.1	147.0	2.4%	1.3%	1.8%	1.5%
Study Area	2,008.9	2,459.0	2,788.8	2,965.7	3,754.8	2.0%	1.3%	1.5%	1.2%

Source: Washington Office of Financial Management, Oregon Office of Economic Analysis

According to data from OFM³, most Clark County residents live in incorporated areas of the county, but a large minority lives in unincorporated areas. Even as the total county population grew between 2002 and 2012 the share living in incorporated area remained near 48%.

Vancouver is the largest incorporated municipality in Clark County, and was home to 37.9% of all county residents in 2012. However, even though Vancouver added 13,000 new residents between 2002 and 2012, its population did not increase as fast as other parts of the county, such as Battle Ground, Camas, and Washougal, and its share of county population declined from 40.9%.

Table 1.1-2 – Total Population and Forecast Growth by City in Clark County

City Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Change 2002- 2011
Clark County	364.9	374.1	385.4	394.6	404.7	412.7	419.1	423.8	425.4	425.4	428.0	66.4
Uninc.	176.0	181.7	186.9	192.5	197.8	199.5	202.3	203.4	203.3	203.3	204.6	29.8
Incorp	188.8	192.4	198.5	202.2	206.9	213.2	216.8	220.4	222.0	222.0	223.4	36.6
Battle Ground	11.2	12.4	14.0	14.7	15.6	16.0	16.7	17.2	17.6	17.6	17.8	6.7
Camas	13.9	14.7	16.1	16.4	17.0	17.7	18.4	18.8	19.4	19.4	19.6	6.1
La Center	1.8	1.9	2.0	2.2	2.4	2.6	2.7	2.7	2.8	2.8	2.8	1.1
Ridgefield	2.2	2.2	2.3	2.7	3.4	3.8	4.2	4.6	4.8	4.8	5.0	3.0
Vancouver	149.3	150.1	152.1	153.5	154.9	158.6	159.8	161.6	161.8	161.8	162.3	13.9
Washougal	9.1	9.7	10.7	11.3	12.2	12.9	13.5	13.9	14.1	14.1	14.2	5.2
Woodland	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Yacolt	1.1	1.1	1.1	1.2	1.2	1.4	1.5	1.5	1.6	1.6	1.6	0.5

Source: Washington Office of Financial Management

³ April 1, 2013 Population of Cities, Towns and Counties Used for Allocation of Selected State Revenues State of Washington, Office of Financial Management (OFM), April 2013

Nearly one-quarter of the study area population is under 18 years of age, and 15% is 62 years old or older. The remaining 61% is working age adults, a total of 1.66 million people. The population of Clark County is somewhat younger than that of the study area, with nearly 27% under 18 years of age and less than 15% aged 62 years or more. The working-age adult population in Clark County is approximately 248,000.⁴

Females outnumber males in the study area, with 0.978 males for each female. This male-female ratio in Clark County is nearly identical, with 0.976 males for each female.

Table 1.1-3 – Population Age Distribution in the Project Vicinity

County Name	Total		Under 18 Years		18 Years to 61 Years		62 Years and Older	
	Pop.	M/F Ratio	Pop.	% of Total	Pop.	% of Total	Pop.	% of Total
Washington State	6,652,845	0.993	1,563,419	23.5%	4,071,541	61.2%	1,017,885	15.3%
Clark	421,154	0.976	112,448	26.7%	248,060	58.9%	60,646	14.4%
Cowlitz	101,901	0.980	24,966	24.5%	57,676	56.6%	19,259	18.9%
Skamania	10,979	0.996	2,459	22.4%	6,609	60.2%	1,910	17.4%
Oregon State	3,801,991	0.980	866,854	22.8%	2,284,997	60.1%	650,140	17.1%
Clackamas	373,832	0.969	89,346	23.9%	220,935	59.1%	63,551	17.0%
Columbia	49,247	1.002	11,918	24.2%	28,711	58.3%	8,618	17.5%
Hood River	21,962	0.991	5,710	26.0%	12,980	59.1%	3,272	14.9%
Marion	313,020	0.996	82,950	26.5%	180,613	57.7%	49,457	15.8%
Multnomah	724,803	0.977	149,309	20.6%	479,820	66.2%	95,674	13.2%
Polk	74,734	0.940	18,086	24.2%	42,897	57.4%	13,751	18.4%
Washington	524,275	0.970	134,739	25.7%	323,478	61.7%	66,059	12.6%
Yamhill	98,293	1.009	24,770	25.2%	57,796	58.8%	15,727	16.0%
Study Area	2,714,200	0.978	656,701	24.2%	1,659,574	61.1%	397,926	14.7%

Source: U.S. Census Bureau, 2007-2011 American Community Survey

According to 2012 estimates from the U.S. Census Bureau, the ethnic mix of the study area population is primarily white, with white residents accounting for 86.3 % of the total. Residents of Asian ethnicity accounted for 5.3% of the population, African-American accounted for 2.7% American Indian and Alaska Natives accounted for 1.5%, Hawaiian and other Pacific Islanders accounted for 0.5%, and two or more races accounted for 3.7% of the population. Residents of Hispanic origin (of all races) accounted for 12.9% of the study area population.⁵

In Clark County non-white residents account for a smaller share of the population, although the share of Native Hawaiian/Pacific Islander and two or more races is slightly higher than in the study area as a whole. Hispanic residents (of all races) account for 8.1% of the Clark County population.

⁴ 2007-2011 American Community Survey, U.S. Census Bureau, accessed June 17, 2013

⁵ Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin: April 1, 2010 to July 1, 2012, U.S. Census Bureau, Population Division, June 2013

Table 1.1-4 – Race Composition by County in the Project Vicinity

	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Two or More Races	Total	Hispanic (all races)
Washington State	5,625.34	268.66	126.53	531.40	46.14	298.95	6,897.01	807.6
Clark	385.13	9.24	4.58	19.42	3.20	16.72	438.29	35.4
Cowlitz	93.92	0.83	1.94	1.69	0.29	3.33	102.00	8.2
Skamania	10.46	0.06	0.20	0.11	0.01	0.34	11.19	0.6
Oregon State	3,444.77	77.56	68.96	156.08	15.85	136.14	3,899.35	474.2
Clackamas	348.69	3.78	4.10	14.89	1.03	11.38	383.86	31.0
Columbia	46.08	0.25	0.72	0.48	0.11	1.66	49.29	2.2
Hood River	21.24	0.16	0.25	0.34	0.05	0.54	22.58	6.8
Marion	287.97	4.33	7.97	6.90	2.61	10.21	319.99	80.3
Multnomah	614.11	43.75	11.40	52.23	4.73	33.05	759.26	84.3
Polk	69.53	0.55	1.86	1.54	0.27	2.60	76.35	9.7
Washington	454.77	11.49	6.44	50.85	2.90	21.23	547.67	87.8
Yamhill	92.41	1.03	2.02	1.65	0.23	2.92	100.26	15.4
	2,424.31	75.45	41.47	150.09	15.44	103.97	2,810.72	361.44
<i>Share of Total</i>								
Washington State	81.6%	3.9%	1.8%	7.7%	0.7%	4.3%	100.0%	11.7%
Clark	87.9%	2.1%	1.0%	4.4%	0.7%	3.8%	100.0%	8.1%
Cowlitz	92.1%	0.8%	1.9%	1.7%	0.3%	3.3%	100.0%	8.0%
Skamania	93.5%	0.5%	1.8%	1.0%	0.1%	3.0%	100.0%	5.5%
Oregon State	88.3%	2.0%	1.8%	4.0%	0.4%	3.5%	100.0%	12.2%
Clackamas	90.8%	1.0%	1.1%	3.9%	0.3%	3.0%	100.0%	8.1%
Columbia	93.5%	0.5%	1.5%	1.0%	0.2%	3.4%	100.0%	4.4%
Hood River	94.1%	0.7%	1.1%	1.5%	0.2%	2.4%	100.0%	30.2%
Marion	90.0%	1.4%	2.5%	2.2%	0.8%	3.2%	100.0%	25.1%
Multnomah	80.9%	5.8%	1.5%	6.9%	0.6%	4.4%	100.0%	11.1%
Polk	91.1%	0.7%	2.4%	2.0%	0.4%	3.4%	100.0%	12.6%
Washington	83.0%	2.1%	1.2%	9.3%	0.5%	3.9%	100.0%	16.0%
Yamhill	92.2%	1.0%	2.0%	1.6%	0.2%	2.9%	100.0%	15.3%
Study Area	86.3%	2.7%	1.5%	5.3%	0.5%	3.7%	100.0%	12.9%

Note: Population figures are Census estimates for 2012

Source: U.S. Census Bureau

1.1.2 Poverty

The number of people living in poverty in the study area climbed 70.0% between 2002 and 2011, according to the U.S. Census Bureau. During that period the number of residents living in poverty increased in all but two years, and grew from approximately 252,000 in 2002 to 428,000 in 2011.⁶

In Clark County the growth in poverty was slightly lower than in the larger study area, but the share of residents living in poverty still grew by 61.2%, climbing from approximately 36,000 in 2002 to nearly 59,000 in 2011. Only one county in the study area, Skamania, saw poverty levels grow by less than 50%, and in several counties the growth was greater than 80%.

Table 1.1-5 – Population Living Below the Poverty Level – All Ages

County	Thousands										Change 2002- 2011	% Change
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		
Washington	623.0	671.2	715.3	732.0	736.9	722.6	727.2	803.3	890.3	931.6	308.6	49.5%
Clark	36.4	41.0	44.8	45.9	41.6	39.2	41.6	50.6	53.7	58.7	22.3	61.2%
Cowlitz	11.8	13.0	13.8	14.3	15.4	15.2	14.7	16.0	20.8	19.6	7.8	66.5%
Skamania	1.2	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.5	1.6	0.5	38.7%
Oregon	396.2	423.3	462.2	497.3	487.4	476.6	501.5	536.8	596.6	655.2	259.1	65.4%
Clackamas	27.3	30.4	33.1	32.5	29.7	34.2	34.7	35.9	38.8	41.5	14.2	52.1%
Columbia	3.7	4.0	4.5	5.0	4.3	4.3	5.5	5.8	6.6	6.0	2.3	62.4%
Hood River	2.4	2.6	2.7	3.1	3.1	2.6	2.8	2.7	2.9	3.3	0.9	36.8%
Marion	38.3	41.1	44.5	44.7	44.0	45.8	48.0	50.5	55.0	63.4	25.2	65.8%
Multnomah	78.7	85.3	93.9	112.8	103.7	103.2	99.0	107.6	130.6	142.3	63.6	80.8%
Polk	6.3	6.8	7.7	10.4	9.4	7.9	9.0	10.0	11.6	10.5	4.2	67.0%
Washington	36.9	42.2	46.5	48.0	49.1	44.7	50.1	53.3	50.9	67.5	30.7	83.2%
Yamhill	8.9	9.3	9.8	11.2	11.9	10.7	11.7	11.5	13.8	13.4	4.5	50.2%
StudyArea	251.7	276.8	302.6	329.1	313.6	309.1	318.4	345.3	386.2	427.7	176.1	70.0%

Source: U.S. Census Bureau

The share of the population living below the poverty level grew from 10.1% to 15.6% in the study area, between 2002 and 2011. Clark County residents fared somewhat better during this time, but the share of residents living below the poverty level grew from 9.6% in 2002 to 13.7% in 2011. Directly north of Clark County the poverty rate in Cowlitz County grew from 12.5% to 19.5%, and directly to the south the poverty rate in Multnomah County grew from 11.8% to 19.4%.⁷

⁶ *Small Area Income and Poverty Estimates*, U.S. Census Bureau, December 2012

⁷ *ibid*

Table 1.1-6 – Poverty Rates in Study Area – All Ages

County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change 2002- 2011
Washington	10.3%	11.0%	11.6%	12.0%	11.8%	11.4%	11.3%	12.3%	13.5%	13.9%	3.6%
Clark	9.6%	10.5%	11.2%	11.5%	10.2%	9.5%	9.9%	11.8%	12.7%	13.7%	4.1%
Cowlitz	12.5%	13.6%	14.3%	15.0%	15.7%	15.4%	14.8%	16.0%	20.6%	19.5%	7.0%
Skamania	11.6%	10.9%	11.5%	11.1%	12.5%	11.9%	12.2%	12.4%	13.8%	14.9%	3.3%
Oregon	11.3%	12.0%	12.9%	14.1%	13.4%	13.0%	13.5%	14.3%	15.8%	17.3%	6.0%
Clackamas	7.6%	8.4%	9.0%	8.9%	8.0%	9.2%	9.2%	9.4%	10.4%	11.0%	3.4%
Columbia	8.0%	8.6%	9.5%	10.5%	8.8%	8.8%	11.3%	11.9%	13.4%	12.3%	4.3%
Hood River	11.7%	12.5%	13.0%	15.3%	14.7%	12.7%	13.2%	12.9%	13.0%	14.7%	3.0%
Marion	13.2%	14.1%	15.1%	15.4%	14.7%	15.2%	15.8%	16.4%	17.9%	20.5%	7.3%
Multnomah	11.8%	12.9%	14.2%	17.3%	15.5%	15.0%	14.1%	15.1%	18.0%	19.4%	7.6%
Polk	9.7%	10.3%	11.3%	15.4%	13.2%	10.8%	11.9%	13.2%	15.7%	14.1%	4.4%
Washington	7.7%	8.7%	9.3%	9.7%	9.6%	8.6%	9.5%	10.0%	9.7%	12.6%	4.9%
Yamhill	10.5%	10.8%	11.2%	13.0%	13.3%	11.7%	12.5%	12.3%	14.7%	14.1%	3.6%
StudyArea	10.1%	11.0%	11.8%	13.0%	12.1%	11.7%	11.9%	12.7%	14.3%	15.6%	5.5%

Source: U.S. Census Bureau

1.1.3 Housing

According to data from the U.S. Census Bureau, the study area has more than 1.1 million housing units, with more than 166,000 in Clark County⁸. Results from the most recent American Community Survey indicate that there are more than 9,000 vacant housing units in Clark County, and that the vacancy rate for rental housing in Clark County is 5.2%. Within the larger study area, there are an estimated 73,000 vacant housing units. Vacancy rates for rental housing range between 4.1% and 8.1%.

Table 1.1-7 – Housing Units and Vacancy by County in Study Area

County	Total	Housing Units		Vacancy	
		Occupied	Vacant	Homeowner	Rental
Clark	166,270	157,179	9,091	1.9%	5.2%
Cowlitz	43,227	39,793	3,434	1.9%	5.3%
Skamania	5,577	4,435	1,142	3.3%	5.1%
Clackamas	156,150	144,588	11,562	1.6%	6.3%
Columbia	20,600	19,173	1,427	1.7%	4.3%
Hood River	9,193	8,204	989	1.9%	5.8%
Marion	120,482	112,841	7,641	1.9%	5.5%
Multnomah	322,567	302,224	20,343	2.5%	4.1%
Polk	30,044	28,111	1,933	2.6%	4.2%
Washington	211,045	198,593	12,452	2.2%	5.3%
Yamhill	36,831	33,804	3,027	2.2%	8.1%
Study Area	1,121,986	1,048,945	73,041		

Source: U.S. Census Bureau, 2007-2011 American Community Survey

County-wide median house values in the study area range between \$193,800 and \$326,300, according to data from the U.S. Census Bureau, 2007-2011 American Community Survey. In Clark County the median house value is \$254,200. The largest number of housing units in both the study area and in Clark County is valued between \$200,000 and \$299,999, but there is also a large number of housing units valued at less than \$200,000. In the study, area one out of four housing units is valued at less than \$200,000, and in Clark County nearly one-third of housing units are valued at less than \$200,000.⁹

⁸ *Housing Unit Estimates for Counties in Washington: April 1, 2010 to July 1, 2011*, Source: U.S. Census Bureau, Population Division, June 2012

⁹ *ibid*

Table 1.1-8 – Housing Values by County in Study Area

County	Less than \$50,000	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 to \$299,999	\$300,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 or more	Median (dollars)
Clark	4,124	2,157	5,739	16,597	39,112	27,929	8,730	1,132	\$254,200
Cowlitz	1,638	1,955	3,996	6,451	6,951	4,534	999	258	\$193,800
Skamania	151	179	291	416	1,053	910	200	123	\$257,600
Clackamas	5,848	1,471	2,542	7,227	27,631	36,422	16,622	3,893	\$326,300
Columbia	1,072	668	1,604	2,831	4,702	2,854	873	117	\$221,200
Hood River	197	257	298	414	1,333	1,789	1,045	212	\$326,900
Marion	5,053	2,632	8,270	16,710	19,766	11,801	3,971	586	\$206,700
Multnomah	5,415	2,201	6,915	19,664	58,394	51,365	20,105	2,857	\$281,900
Polk	877	605	1,742	4,038	6,055	4,344	1,070	163	\$231,900
Washington	4,247	1,449	3,638	10,253	42,238	44,612	15,393	1,944	\$300,200
Yamhill	1,909	991	1,888	3,911	6,951	5,238	2,363	384	\$237,700
Study Area	30,531	14,565	36,923	88,512	214,186	191,798	71,371	11,669	

Source: U.S. Census Bureau, 2007-2011 American Community Survey

A second source of housing information is the Washington Office of Financial Management, which provides detail at the municipality level. As illustrated in Table 1.1-9 on the following two pages, approximately 55% of the housing in Clark County is located in incorporated parts of the county and 45% is in unincorporated areas. Vancouver accounts for most of the housing in the incorporated areas, with an estimated 70,249 out of 93,319 housing units in 2012, or 75.7%. Battle Ground, Camas, and Washougal account for most the other housing in incorporated areas.¹⁰

Between 2002 and 2012 the number of housing units in Clark County grew by more than 27,600. Vancouver accounted for more than 28.4% of this total, adding more than 7,800 new housing units. Battle Ground, Camas, and Washougal each added more than 2,000 new housings units, while unincorporated parts of the county added nearly 11,800 new units.

Housing vacancy rates have remained steady over the past 10 years in Clark County, ranging between 5.2% and 5.8%. In Vancouver the vacancy rate has generally ranged between 6.2% and 6.7%, and in 2012 it was estimated that there were 4,5316 unoccupied housing units in Vancouver.

¹⁰ *Historical Estimates of April 1 Population and Housing for the State, Counties, and Cities*, Washington Office of Financial Management, <http://www.ofm.wa.gov/pop/april1/hseries/default.asp>, accessed July 3, 2013

Table 1.1-9 – Housing Characteristics by City in Clark County

City Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*
Housing Units											
Clark County	142,050	146,196	150,712	154,819	158,999	162,191	164,926	166,721	167,413	168,416	169,667
Unincorporated	64,562	66,722	68,725	70,868	72,951	73,672	74,784	75,302	75,498	75,908	76,348
Incorporated	77,488	79,474	81,987	83,951	86,048	88,519	90,142	91,419	91,915	92,508	93,319
Battle Ground	3,857	4,311	4,809	5,119	5,375	5,465	5,706	5,857	5,952	6,042	6,084
Camas	5,251	5,533	6,026	6,122	6,382	6,574	6,796	6,925	7,072	7,182	7,341
La Center	652	671	723	765	884	903	941	965	981	996	1,061
Ridgefield	797	815	827	1,022	1,273	1,431	1,544	1,641	1,695	1,779	1,857
Vancouver	62,816	63,785	64,845	65,865	66,655	68,375	69,159	69,875	70,005	70,249	70,663
Washougal	3,695	3,942	4,337	4,627	5,021	5,276	5,468	5,628	5,673	5,717	5,764
Woodland	57	55	53	56	59	47	52	53	53	53	53
Yacolt	363	362	367	375	399	448	476	475	484	490	496
Occupied Housing Units											
Clark County	134,671	138,146	142,394	145,885	149,723	152,780	155,350	157,242	158,099	158,841	160,021
Unincorporated	61,600	63,640	65,529	67,551	69,512	70,176	71,212	71,680	71,843	72,257	72,676
Incorporated	73,071	74,506	76,865	78,334	80,211	82,604	84,138	85,562	86,256	86,580	87,339
Battle Ground	3,687	4,086	4,596	4,807	5,071	5,207	5,402	5,554	5,652	5,729	5,769
Camas	4,938	5,200	5,650	5,731	5,935	6,125	6,333	6,472	6,619	6,709	6,857
La Center	614	635	685	726	809	859	894	920	942	951	1,013
Ridgefield	753	770	781	935	1,156	1,302	1,429	1,529	1,591	1,658	1,731
Vancouver	59,207	59,730	60,698	61,462	62,210	63,795	64,542	65,404	65,691	65,744	66,132
Washougal	3,483	3,705	4,070	4,275	4,610	4,864	5,046	5,191	5,256	5,282	5,325
Woodland	54	45	45	51	55	43	49	49	51	50	50
Yacolt	335	335	340	347	365	409	443	443	454	458	463

Source: Washington Office of Financial Management

City Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	2012*
Occupancy Rate											
Clark County	94.8%	94.5%	94.5%	94.2%	94.2%	94.2%	94.2%	94.3%	94.4%	94.3%	94.3%
Unincorporated	95.4%	95.4%	95.3%	95.3%	95.3%	95.3%	95.2%	95.2%	95.2%	95.2%	95.2%
Incorporated	94.3%	93.7%	93.8%	93.3%	93.2%	93.3%	93.3%	93.6%	93.8%	93.6%	93.6%
Battle Ground	95.6%	94.8%	95.6%	93.9%	94.3%	95.3%	94.7%	94.8%	95.0%	94.8%	94.8%
Camas	94.0%	94.0%	93.8%	93.6%	93.0%	93.2%	93.2%	93.5%	93.6%	93.4%	93.4%
La Center	94.2%	94.6%	94.7%	94.9%	91.5%	95.1%	95.0%	95.3%	96.0%	95.5%	95.5%
Ridgefield	94.5%	94.5%	94.4%	91.5%	90.8%	91.0%	92.6%	93.2%	93.9%	93.2%	93.2%
Vancouver	94.3%	93.6%	93.6%	93.3%	93.3%	93.3%	93.3%	93.6%	93.8%	93.6%	93.6%
Washougal	94.3%	94.0%	93.8%	92.4%	91.8%	92.2%	92.3%	92.2%	92.6%	92.4%	92.4%
Woodland	94.7%	81.8%	84.9%	91.1%	93.2%	91.5%	94.2%	92.5%	96.2%	94.3%	94.3%
Yacolt	92.3%	92.5%	92.6%	92.5%	91.5%	91.3%	93.1%	93.3%	93.8%	93.4%	93.4%
Unoccupied Housing Units											
Clark County	7,379	8,050	8,318	8,934	9,276	9,411	9,576	9,479	9,314	9,575	9,646
Unincorporated	2,962	3,082	3,196	3,317	3,439	3,496	3,572	3,622	3,655	3,651	3,672
Incorporated	4,417	4,968	5,122	5,617	5,837	5,915	6,004	5,857	5,659	5,928	5,980
Battle Ground	170	225	213	312	304	258	304	303	300	313	315
Camas	313	333	376	391	447	449	463	453	453	473	484
La Center	38	36	38	39	75	44	47	45	39	45	48
Ridgefield	44	45	46	87	117	129	115	112	104	121	126
Vancouver	3,609	4,055	4,147	4,403	4,445	4,580	4,617	4,471	4,314	4,505	4,531
Washougal	212	237	267	352	411	412	422	437	417	435	439
Woodland	3	10	8	5	4	4	3	4	2	3	3
Yacolt	28	27	27	28	34	39	33	32	30	32	33

*For 2011 and 2012, the number of occupied housing units, occupancy rate, and unoccupied housing units were estimated on based on occupancy rates for 2008 through 2010.

Source: Washington Office of Financial Management

1.1.4 Workforce

According to data from the Bureau of Labor Statistics, between 2002 and 2012 the workforce in the study area grew from 1.33 million to 1.43 million, an increase of more than 108,000 workers or 8.1%. In Clark County, the number of workers increased from approximately 187,000 to 211,000, an increase of approximately 24,000 workers or 12.9%.¹¹

During the same period the number of workers who were employed grew by 7.4% in the study area. The number of workers employed grew from 1.22 million to 1.32 million, an increase of more than 91,000. In Clark County, the number of workers with jobs grew by more than 19,000 (from approximately 170,000 to 189,000), an increase of 11.4%.

Because the size of the workforce grew faster than the number workers employed, the number of unemployed workers in the study area grew by nearly 17,000 between 2002 and 2012. However, the 2012 unemployment number represents a significant improvement over the situation of the prior three years, which saw the number of unemployed jump to nearly 155,000 before slowly declining.

¹¹ *Local Area Unemployment Statistics Not Seasonally Adjusted*, Bureau of Labor Statistics, data extracted on: July 1, 2013

In Clark County, the number of unemployed workers was 4,800 higher in 2012 than in 2002, with approximately 22,000 workers not employed. The number of unemployed workers in Clark County had dropped to less than 12,000 in 2006 and 2007, but grew to nearly 29,000 in 2009 and to more than 30,000 in 2010.

The unemployment rate in the study area declined from 7.8% in 2002 to 5.0% in 2007, but the impact of the recent recession was a doubling of that rate, to 10.8% in 2009 and 10.6% in 2010. By 2012 the unemployment rate had dropped to 8.4%, an improvement over the situation during the height of the recession but substantially higher than in 2007.

In Clark County the unemployment rate fell from 9.2% in 2002 to a low of 5.6% in 2007, before the recession. During the recession the Clark County unemployment rate grew for three consecutive years, to a high of 14.0% in 2010. The rate dropped in each of the most recent two years, but was still 10.2% in 2012.

Table 1.1-10 – Size of Workforce by County in the Project Vicinity

County Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Change 2002- 2012	% Change
Washington State	3,481,463	2,913,230	2,999,526	3,075,972	3,155,384	3,232,652	3,284,836	3,194,251	3,166,880	3,161,818	3,197,293	376,765	12.1%
Clark	211,442	170,968	180,700	188,730	192,679	196,119	198,829	188,747	186,527	187,179	189,421	24,123	12.9%
Cowlitz	43,067	38,553	39,051	39,637	39,843	40,581	40,493	38,659	38,590	37,912	38,380	284	0.7%
Skamania	5,060	4,295	4,510	4,624	4,688	4,666	4,687	4,415	4,501	4,461	4,515	292	6.1%
Oregon State	1,962,908	1,699,679	1,714,447	1,740,990	1,792,039	1,821,827	1,827,032	1,753,853	1,761,867	1,785,400	1,791,730	119,168	6.5%
Clackamas	199,576	175,118	177,506	180,656	185,938	187,337	188,717	181,268	178,777	181,905	183,824	9,838	5.2%
Columbia	24,221	20,823	21,102	21,619	22,409	22,380	22,476	21,357	21,526	21,683	21,912	1,143	5.0%
Hood River	14,497	11,155	11,441	11,538	11,922	12,296	12,632	12,815	13,196	13,304	13,487	2,406	19.9%
Marion	154,899	136,976	137,804	138,962	142,018	143,510	145,044	140,510	141,020	140,720	140,106	7,600	5.2%
Multnomah	404,357	342,767	338,901	340,275	349,215	360,495	365,458	351,922	360,613	369,121	373,015	24,841	6.5%
Polk	38,442	31,996	32,680	33,733	35,249	36,560	37,458	36,391	35,548	35,352	35,198	4,660	13.8%
Washington	293,472	245,736	249,121	255,825	266,761	271,610	273,971	263,334	262,950	269,929	272,777	28,109	10.6%
Yamhill	48,611	40,330	40,790	41,581	43,273	44,232	44,778	42,767	43,386	44,010	44,475	4,866	11.1%
Study Area	1,437,644	1,218,717	1,233,606	1,257,180	1,293,995	1,319,786	1,334,543	1,282,185	1,286,634	1,305,576	1,317,110	108,162	8.1%

Source: *Local Area Unemployment Statistics Not Seasonally Adjusted* (Bureau of Labor Statistics)

Table 1.1-11 – Employment by County in the Project Vicinity

County Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Change 2002- 2012	% Change
Washington State	2,877,022	3,146,154	3,199,234	3,255,527	3,319,252	3,386,775	3,473,010	3,523,739	3,516,008	3,482,239	3,481,463	320,271	11.1%
Clark	170,096	189,109	195,202	201,564	204,406	207,853	214,101	217,536	216,991	213,635	211,442	19,325	11.4%
Cowlitz	38,218	42,820	42,663	42,724	42,607	43,327	44,119	44,627	44,376	43,072	43,067	162	0.4%
Skamania	4,293	4,779	4,928	5,002	5,042	5,001	5,126	5,075	5,188	5,103	5,060	222	5.2%
Oregon State	1,704,131	1,850,024	1,849,720	1,856,062	1,893,267	1,921,081	1,954,125	1,972,962	1,973,793	1,975,393	1,962,908	87,599	5.1%
Clackamas	176,583	189,349	190,199	191,232	195,283	196,328	200,108	201,930	198,863	199,654	199,576	7,241	4.1%
Columbia	20,899	23,233	23,207	23,340	23,771	23,737	24,188	24,586	24,484	24,265	24,221	1,013	4.8%
Hood River	11,095	12,200	12,353	12,321	12,612	12,878	13,346	13,936	14,384	14,438	14,497	2,392	21.6%
Marion	136,577	148,851	149,066	148,651	150,558	151,714	155,295	157,808	158,598	156,976	154,899	3,529	2.6%
Multnomah	348,945	374,435	366,118	362,362	368,171	379,016	388,198	392,741	400,065	404,114	404,357	24,070	6.9%
Polk	31,647	34,348	34,993	35,752	37,090	38,455	39,688	40,136	39,198	38,834	38,442	3,551	11.2%
Washington	247,008	265,300	265,583	269,807	279,060	283,871	289,259	290,455	288,873	292,843	293,472	25,769	10.4%
Yamhill	40,511	43,915	43,969	44,285	45,617	46,566	47,868	48,294	48,538	48,604	48,611	3,964	9.8%
Study Area	1,225,872	1,328,339	1,328,281	1,337,040	1,364,217	1,388,746	1,421,296	1,437,124	1,439,558	1,441,538	1,437,644	91,238	7.4%

Source: *Local Area Unemployment Statistics Not Seasonally Adjusted* (Bureau of Labor Statistics)

Table 1.1-12 – Unemployment by County in the Project Vicinity

County Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Change 2002- 2012	% Change
Washington State	227,676	232,924	199,708	179,555	163,868	154,123	188,174	329,488	349,128	320,421	284,170	56,494	24.8%
Clark	17,223	18,141	14,502	12,834	11,727	11,734	15,272	28,789	30,464	26,456	22,021	4,798	27.9%
Cowlitz	4,565	4,267	3,612	3,087	2,764	2,746	3,626	5,968	5,786	5,160	4,687	122	2.7%
Skamania	475	484	418	378	354	335	439	660	687	642	545	70	14.7%
Oregon State	139,609	150,345	135,273	115,072	101,228	99,254	127,093	219,109	211,926	189,993	171,178	31,569	22.6%
Clackamas	13,155	14,231	12,693	10,576	9,345	8,991	11,391	20,662	20,086	17,749	15,752	2,597	19.7%
Columbia	2,179	2,410	2,105	1,721	1,362	1,357	1,712	3,229	2,958	2,582	2,309	130	6.0%
Hood River	996	1,045	912	783	690	582	714	1,121	1,188	1,134	1,010	14	1.4%
Marion	10,722	11,875	11,262	9,689	8,540	8,204	10,251	17,298	17,578	16,256	14,793	4,071	38.0%
Multnomah	30,571	31,668	27,217	22,087	18,956	18,521	22,740	40,819	39,452	34,993	31,342	771	2.5%
Polk	2,135	2,352	2,313	2,019	1,841	1,895	2,230	3,745	3,650	3,482	3,244	1,109	51.9%
Washington	18,355	19,564	16,462	13,982	12,299	12,261	15,288	27,121	25,923	22,914	20,695	2,340	12.7%
Yamhill	3,234	3,585	3,179	2,704	2,344	2,334	3,090	5,527	5,152	4,594	4,136	902	27.9%
Study Area	103,610	109,622	94,675	79,860	70,222	68,960	86,753	154,939	152,924	135,962	120,534	16,924	16.3%

Source: *Local Area Unemployment Statistics Not Seasonally Adjusted* (Bureau of Labor Statistics)

Table 1.1-13 – Unemployment Rate by County in the Project Vicinity

County Name	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Washington State	7.3%	7.4%	6.2%	5.5%	4.9%	4.6%	5.4%	9.4%	9.9%	9.2%	8.2%
Clark	9.2%	9.6%	7.4%	6.4%	5.7%	5.6%	7.1%	13.2%	14.0%	12.4%	10.4%
Cowlitz	10.7%	10.0%	8.5%	7.2%	6.5%	6.3%	8.2%	13.4%	13.0%	12.0%	10.9%
Skamania	10.0%	10.1%	8.5%	7.6%	7.0%	6.7%	8.6%	13.0%	13.2%	12.6%	10.8%
Oregon State	7.6%	8.1%	7.3%	6.2%	5.3%	5.2%	6.5%	11.1%	10.7%	9.6%	8.7%
Clackamas	6.9%	7.5%	6.7%	5.5%	4.8%	4.6%	5.7%	10.2%	10.1%	8.9%	7.9%
Columbia	9.4%	10.4%	9.1%	7.4%	5.7%	5.7%	7.1%	13.1%	12.1%	10.6%	9.5%
Hood River	8.2%	8.6%	7.4%	6.4%	5.5%	4.5%	5.3%	8.0%	8.3%	7.9%	7.0%
Marion	7.3%	8.0%	7.6%	6.5%	5.7%	5.4%	6.6%	11.0%	11.1%	10.4%	9.6%
Multnomah	8.1%	8.5%	7.4%	6.1%	5.1%	4.9%	5.9%	10.4%	9.9%	8.7%	7.8%
Polk	6.3%	6.8%	6.6%	5.6%	5.0%	4.9%	5.6%	9.3%	9.3%	9.0%	8.4%
Washington	6.9%	7.4%	6.2%	5.2%	4.4%	4.3%	5.3%	9.3%	9.0%	7.8%	7.1%
Yamhill	7.4%	8.2%	7.2%	6.1%	5.1%	5.0%	6.5%	11.4%	10.6%	9.5%	8.5%
Study Area	7.8%	8.3%	7.1%	6.0%	5.1%	5.0%	6.1%	10.8%	10.6%	9.4%	8.4%

Source: *Local Area Unemployment Statistics Not Seasonally Adjusted* (Bureau of Labor Statistics)

According to data from the *2011 County Business Patterns* (U.S. Census Bureau), health care and social assistance is the largest source of jobs in the study area, accounting for approximately 150,000 of the 1 million jobs. Retail trade is the second largest source of employment, accounting for 126,000 jobs, followed by manufacturing (110,000 jobs), accommodation and food services (99,000 jobs), and wholesale trade (69,000 jobs).¹²

The Project falls into the transportation and warehousing sector, which accounted for nearly 37,000 jobs in the study area in 2011.

Average wages vary significantly by sector and county. According to the County Business Pattern data, the average annual wage for the region, across all sectors, was \$45,700. In the transportation and warehousing sector the average annual wage is slightly lower, at \$44,300, and in Clark County it is \$39,200. (See tables on following two pages.)

¹² *2011 County Business Patterns*, U.S. Census Bureau,
<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>, accessed July 8, 2013

Table 1.1-14 – Employment by Sector in 2011

NAICS	Description	Clark County, Washington	Cowlitz County, Washington	Skamania County, Washington	Clackamas County, Oregon	Columbia County, Oregon	Hood River County, Oregon	Marion County, Oregon	Multnomah County, Oregon	Polk County, Oregon	Washington County, Oregon	Yamhill County, Oregon	Study Area Total
0	Total for all sectors	107,452	30,312	1,185	121,901	6,948	8,501	93,122	375,965	10,795	223,496	26,599	1,006,276
11	Agriculture, forestry, fishing and hunting	110	737	2	243	245	150	1,152	700	410	258	232	4,089
21	Mining, quarrying, and oil and gas extraction	277	89		50	54		286	50	10	66	50	872
22	Utilities	50	50		300	150	50	251	4,272	50	700	50	4,523
23	Construction	8,710	2,872	101	8,347	357	378	5,005	15,509	807	10,936	1,089	54,111
31-33	Manufacturing	11,195	5,974	150	15,779	1,177	1,095	8,247	31,389	1,564	26,982	5,547	109,099
42	Wholesale trade	5,601	1,109	14	9,180	56	300	3,735	22,714	289	26,003	300	69,001
44-45	Retail trade	15,238	4,678	142	17,281	1,347	1,269	15,420	37,000	1,606	28,400	3,312	125,693
48-49	Transportation and warehousing	2,986	983	10	4,087	296	106	3,551	20,718	244	3,088	560	36,629
51	Information	3,751	369	14	1,909	55	192	1,827	10,789	50	9,146	188	28,290
52	Finance and insurance	4,633	877	50	5,053	292	142	3,540	20,119	245	9,911	800	45,662
53	Real estate and rental and leasing	2,067	344	10	2,450	89	50	2,034	8,631	181	4,713	257	20,826
54	Professional, scientific, and technical services	6,535	838	50	8,294	251	385	3,891	29,224	333	16,581	614	66,996
55	Management of companies and enterprises	1,872	700		2,751	10	50	1,347	14,282	10	11,640	199	32,801
56	Administrative and support and waste management and remediation services	6,693	741	10	6,304	165	139	6,029	25,117	270	18,065	833	64,366
61	Educational services	1,369	294		2,051	47	50	3,000	14,799	187	5,739	2,778	30,264
62	Health care and social assistance	18,946	5,634	85	17,213	999	1,790	18,616	56,182	2,455	24,088	4,357	150,365
71	Arts, entertainment, and recreation	1,817	349	10	1,773	69	653	1,132	6,390	161	3,291	216	15,851
72	Accommodation and food services	10,477	2,572	504	12,284	914	1,241	9,498	40,086	1,247	16,415	3,976	99,214
81	Other services (except public administration)	5,065	1,176	27	6,549	300	356	4,731	18,026	653	7,402	1,079	45,364

Source: *2011 County Business Patterns* (US Census Bureau)

Table 1.1-15 – Average Wage by Sector in 2011

NAICS	Description	Clark County, Washington	Cowlitz County, Washington	Skamania County, Washington	Clackamas County, Oregon	Columbia County, Oregon	Hood River County, Oregon	Marion County, Oregon	Multnomah County, Oregon	Polk County, Oregon	Washington County, Oregon	Yamhill County, Oregon	Study Area Total
0	Total for all sectors	\$43,100	\$42,000	\$30,000	\$42,800	\$30,200	\$28,900	\$33,300	\$47,300	\$29,100	\$54,600	\$35,100	\$45,700
11	Agriculture, forestry, fishing and hunting	\$60,700	\$47,200	\$55,500	\$27,800	\$40,400	n/a	\$22,600	\$34,100	\$37,700	\$36,400	\$36,200	\$34,600
21	Mining, quarrying, and oil and gas extraction	\$72,100	\$73,000	n/a	n/a	\$54,300	n/a	\$72,400	n/a	n/a	\$53,400	\$42,900	\$64,000
22	Utilities	n/a	n/a	n/a	n/a	n/a	n/a	\$75,300	\$97,300	n/a	n/a	n/a	\$96,100
23	Construction	\$53,100	\$53,700	\$47,100	\$49,400	\$34,900	\$31,400	\$46,400	\$61,200	\$49,000	\$54,400	\$39,800	\$53,900
31-33	Manufacturing	\$53,500	\$64,100	n/a	\$57,300	\$46,300	\$35,800	\$38,800	\$51,700	\$36,500	\$59,300	\$50,700	\$53,700
42	Wholesale trade	\$74,200	\$51,500	\$56,200	\$56,900	\$52,000	n/a	\$46,800	\$55,200	\$42,200	\$117,700	\$76,300	\$80,000
44-45	Retail trade	\$27,200	\$24,100	\$20,000	\$26,500	\$23,700	\$24,400	\$24,000	\$26,900	\$23,700	\$26,900	\$25,600	\$26,300
48-49	Transportation and warehousing	\$43,200	\$39,200	\$24,400	\$38,600	\$32,800	\$29,500	\$44,100	\$45,100	\$34,000	\$44,600	\$83,300	\$44,300
51	Information	\$77,300	\$42,900	\$37,200	\$55,200	\$31,900	\$47,300	\$38,200	\$67,100	\$33,300	\$64,600	\$44,200	\$64,200
52	Finance and insurance	\$55,200	\$42,500	\$14,600	\$57,900	\$36,700	\$50,900	\$47,400	\$78,600	\$34,000	\$58,200	\$45,700	\$65,200
53	Real estate and rental and leasing	\$34,700	\$21,600	\$19,300	\$35,000	\$25,700	\$34,200	\$28,200	\$38,000	\$16,800	\$36,600	\$23,100	\$35,400
54	Professional, scientific, and technical services	\$50,600	\$39,900	\$40,100	\$69,100	\$31,100	\$47,600	\$43,600	\$70,600	\$32,400	\$57,800	\$40,900	\$62,600
55	Management of companies and enterprises	\$99,700	\$77,800	n/a	\$73,700	n/a	n/a	\$61,900	\$92,900	\$45,200	\$114,600	\$78,700	\$97,700
56	Administrative and support and waste management and remediation services	\$27,100	\$25,000	\$15,900	\$30,600	\$24,500	\$21,600	\$23,900	\$28,400	\$27,700	\$29,900	\$25,400	\$28,400
61	Educational services	\$19,700	\$17,300	n/a	\$22,400	\$14,600	n/a	\$21,700	\$26,600	\$20,000	\$22,800	\$20,700	\$24,100
62	Health care and social assistance	\$48,300	\$42,200	\$30,400	\$49,300	\$27,100	\$30,600	\$40,700	\$53,000	\$28,400	\$46,000	\$36,600	\$47,600
71	Arts, entertainment, and recreation	\$19,500	\$16,200	n/a	\$20,300	\$13,000	\$15,100	\$18,400	\$33,400	\$10,900	\$27,600	\$20,900	\$26,500
72	Accommodation and food services	\$15,900	\$14,700	\$20,600	\$16,200	\$12,800	\$16,100	\$14,600	\$17,900	\$13,700	\$16,500	\$22,200	\$16,900
81	Other services (except public administration)	\$23,800	\$21,900	\$18,600	\$23,500	\$20,800	\$22,600	\$23,700	\$29,900	\$21,900	\$29,600	\$19,000	\$26,900

Source: *2011 County Business Patterns* (US Census Bureau)

Projections from the Washington Employment Security Department indicate that job growth in Southwest Washington (i.e. Clark, Cowlitz, and Wahkiakum County) is expected to be strongest in the service industries, including professional and business services, and education and health services. For professional and business services the estimated annual employment growth rate between 2009 and 2014 is 3.2%, and between 2014 and 2019 it is 3.3%. Between 2009 and 2019 the rate is 3.3, compared to a statewide average of 2.9%.¹³

The Project falls into the transportation, warehousing, and utilities sector, which is also projected to have strong job growth in the Southwest Region. Estimated annual job growth for this sector is 2.6% between 2009 and 2014, and 2.3% between 2014 and 2019. Between 2009 and 2019 this sector is projected to add 1,600 jobs in the Southwest Region; projected employment at the Project operation would account for approximately 5% to 7% of this growth.

Table 1.1-16 – Employment Trends and Forecast in Southwest Washington

Industry	Est. Emp. 2009	Est. Emp. 2014	Est. Emp. 2019	Avg. Annual Growth Rate 2009-2014	Avg. Annual Growth Rate 2014-2019	Avg. Annual Growth Rate 2009-2019	State Rate
Natural Resources And Mining	1,000	1,100	1,100	1.9%	0.0%	1.0%	1.4%
Construction	11,500	12,000	13,300	0.9%	2.1%	1.5%	1.1%
Manufacturing	17,800	20,200	21,500	2.6%	1.3%	1.9%	1.1%
Wholesale Trade	6,900	7,700	8,500	2.2%	2.0%	2.1%	1.4%
Retail Trade	19,300	21,000	22,200	1.7%	1.1%	1.4%	1.0%
Transportation, Warehousing And Utilities	5,800	6,600	7,400	2.6%	2.3%	2.5%	1.6%
Information	3,300	3,800	4,100	2.9%	1.5%	2.2%	2.3%
Financial Activities	7,400	7,800	7,900	1.1%	0.3%	0.7%	0.3%
Professional And Business Services	16,200	19,000	22,400	3.2%	3.3%	3.3%	2.9%
Education And Health Services	24,100	27,100	31,100	2.4%	2.8%	2.6%	2.0%
Leisure And Hospitality	15,800	16,800	18,100	1.2%	1.5%	1.4%	1.3%
Other Services	5,800	6,100	6,200	1.0%	0.3%	0.7%	0.4%
Government	30,200	31,500	33,700	0.8%	1.4%	1.1%	0.9%
Total Nonfarm	165,100	180,700	197,500	1.8%	1.8%	1.8%	1.4%

Note: Southwest Washington is Clark, Cowlitz, and Wahkiakum County
Washington Employment Security Department

1.1.5 Major Employers in County

Most of the largest employers in Clark County fall into one of four sectors: medical services, education, manufacturing, and government. The medical sector includes the largest employer in 2012, the Southwest Washington Medical Center; other medical providers in the top 28 employers include the Vancouver Clinic, Legacy Salmon Creek Medical Center, VA Medical

¹³ *Occupational Employment Projections*, Washington Employment Security Department/LMEA, May 2013

Center, and Kaiser Permanente Northwest. These five medical providers account for more than 22% of the jobs generated by the top employers.¹⁴

Education accounts for nearly one-third of the jobs generated by the top 28 employers. Major agencies include the Evergreen, Vancouver, Battle Ground School Districts, as well as Clark College and WSU Vancouver.

Manufacturing accounts for nearly 15% of the jobs provided by the top 28 employers in Clark County. Top manufacturers in the county include WaferTech, Northwest Natural Products, SEH America, Georgia-Pacific, Frito-Lay, and Columbia Machine.

Government agencies represent two of the top 28 employers, and account for more than 9% of the jobs.

Table 1.1-17 – Major Employers in County

2012 Rank	Employer	2012 FTE
1	Southwest Washington Medical Center	2,841
2	Evergreen Public Schools	2,455
3	Vancouver Public Schools	2,203
4	Clark County, Washington	1,561
5	Fred Meyer Stores, Inc.	1,500
6	Battle Ground Public Schools	1,213
7	Bonneville Power Administration	1,181
8	WaferTech, LLC	1,040
9	Clark College	985
10	City of Vancouver	932
11	The Vancouver Clinic	912
12	Legacy Salmon Creek Medical Center	860
13	VA Medical Clinic	809
14	BNSF Railway Railroad	800
15	Northwest Natural Products, Inc.	790
16	Camas School District No. 117	750
17	Kaiser Permanente Northwest	724
18	SEH America	711
19	Wells Fargo	654
20	Dick Hannah Dealerships	650
21	Charter Communications	605
22	Educational Service District No. 112	600
23	Georgia-Pacific LLC	508
24	Frito-Lay, Inc.	475
25	Columbia Machine, Inc.	400
26	Clark Co. Public Transportation Benefit Area	384
27	Washington State University, Vancouver	352
28	Clark Public Utilities	340

Source: Columbia River Economic Development Council

A recent study completed for the Port of Vancouver included an analysis of where workers live. Excluding rail crew and rail headquarters employment, more than 75% of the workers with jobs

¹⁴ *Clark County's Largest Employers, 2013*, Columbia River Economic Development Council, <http://www.credc.org/wp-content/uploads/2012/11/2013-CC-Top-Employers.pdf>, accessed July 2, 2013

directly related to the Port of Vancouver (and its tenants) are residents of Clark County. This includes 45.8% who are residents of Vancouver, and 29.9% who live elsewhere in Clark County. Nearly 20% of port-related workers commute from Oregon, including 12.1% from Multnomah County.¹⁵

Table 1.1-18 – Distribution of Port of Vancouver Direct Jobs by Place of Residence

County	Percent	Direct Jobs
Vancouver	45.8%	579
Other Clark	29.9%	378
Skamania	0.5%	7
Other WA	3.5%	45
Multnomah	12.1%	152
Washington	1.1%	14
Clackamas	3.2%	40
Other OR	3.2%	41
Other U.S.	0.7%	8
Total	100.0%	1,265

Source: Martin & Associates

1.1.6 Lodging

Clark County is one of seven counties in the Portland, Oregon lodging market, as defined by STR Lodging. According to STR Lodging, the Portland market currently has total of 25,903 hotel rooms, of which approximately 10% are in Clark County.¹⁶

The majority of the hotel rooms in Clark County are at hotels rated as upper “Economy”, “Midscale”, or “Upper Midscale”, these hotel types account for approximately two-thirds of the rooms in Clark County. The two least-expensive hotel types, Economy and Midscale, each account for approximately 20% to 23% of the available rooms in Clark County, and there are a total of approximately 1,100 such rooms.

In the Portland market these three least expensive tiers of hotels account for 56% of the total rooms available. Nearly 11,000 available rooms in the Portland market are in Economy or Midscale hotels.

¹⁵ *The Local and Regional Economic Impacts of the Port of Vancouver Marine Terminals and Non-Maritime Real Estate Tenants*, Martin Associates, August 10, 2011.

¹⁶ Portland hotel market data, obtained from STR Lodging on July 2, 2012

Table 1.1-19 – Hotel/Motel Rooms in Portland Market

County	Economy	Midscale	Upper Midscale	Upscale	Upper Upscale	Luxury	Total
Clark County, WA	521	587	571	642	226	-	2,547
Clackamas County, OR	517	525	464	685	230	-	2,421
Columbia County, OR	90	112	40	-	-	-	242
Multnomah County, OR	2,750	2,328	2,417	3,358	3,971	581	15,405
Washington County, OR	1,207	588	1,314	1,013	366	124	4,612
Yamhill County, OR	276	221	66	20	-	93	676
Portland market total	5,361	4,361	4,872	5,718	4,793	798	25,903

Source: STR Lodging

Another source of data for the hotel market is PKF Hospitality Research, LLC. PKF Hospitality provides data for sub-markets of the Portland region, as well historical occupancy data.

According to PKF, occupancy at hotels in the Airport / Vancouver sub-market averaged 59.8% between 2008 and 2012. The revenue per available room (Revenue PAR) averaged approximately \$50.00 during that period, and the estimated revenue per occupied room was approximately \$82.50.¹⁷

The Airport / Vancouver sub-market is the least expensive of the four tracked by PKF. Average occupancy is also relatively low.

Table 1.1-20 – Hotel/Motel Occupancy & Revenue in Portland Market

Year	Downtown		Airport / Vancouver		Beaverton / Sunset Hwy West		Lake Oswego / I-5 South	
	Occupancy	Revenue PAR	Occupancy	Revenue PAR	Occupancy	Revenue PAR	Occupancy	Revenue PAR
2008	72.3%	\$93.94	63.2%	\$56.20	63.3%	\$57.36	60.2%	\$53.36
2009	66.8%	\$78.01	54.2%	\$44.13	57.4%	\$45.84	54.2%	\$43.81
2010	71.3%	\$84.02	57.3%	\$44.83	66.0%	\$50.25	57.7%	\$47.48
2011	74.0%	\$91.45	59.8%	\$48.19	69.6%	\$58.73	59.4%	\$50.43
2012	75.9%	\$100.45	64.6%	\$53.90	72.3%	\$66.55	62.2%	\$55.77
2013 ytd	66.0%	\$77.72	57.2%	\$46.97	65.3%	\$63.72	54.7%	\$46.77

Source: PKF Hospitality Research, LLC

Construction of the project is projected to last approximately nine months to require a total of 250 workers during the project, and peak employment is projected to not exceed 125 per day. The impact on available lodging is likely to be minor.

1.1.7 Fire Protection

The Vancouver Fire Department provides services to 246,441 people in the combined City of Vancouver and Clark County Fire District 5 service area, which is comprised of 90.9 square miles. It serves a population equating to the second largest city in Washington State with the highest call volume per firefighter and the fewest firefighters per thousand in population of

¹⁷ *Hotel Horizons*, PKF Hospitality Research, LLC, June to August 2013

comparable cities in the state. Vancouver Fire Department is a full service fire department, providing: fire suppression, prevention, emergency medical services, hazardous materials, trench and confined space rescue, water rescue, high angle rescue, and citywide emergency management. These services are provided from ten fire stations.¹⁸

Vancouver Fire Department maintains a Class 4 rating from the Washington Surveying and Rating Bureau. Class 1 is the best rating, classified as the ideal fire department, and Class 10 is one with the most deficiency points or no department at all. The Fire Department was downgraded from a class in October 2002 due to staffing, fire prevention, and marine response deficiencies. This resulted in an increase in insurance premiums paid by most businesses in the fire service area.

Table 1.1-21 – Fire Departments in Clark County

Department	City	Personnel
City of Vancouver	Vancouver	198
Clark County	Camas	
City of Camas	Camas	
City Of Washougal	Washougal	
Town Of Yacolt	Yacolt	
Cowlitz County Fire District 1	Woodland	

Source: Dun & Bradstreet

1.1.8 Emergency Medical Care

The closest hospital to the Facility is the Peace Health Southwest Washington Medical Center which is approximately 7.5 miles east of the Facility on Mill Plain Boulevard. Southwest Washington Medical Center is designated as a Level II Trauma Center by the Washington State Department of Health. There are five levels of trauma centers designated by the state with Level I providing the highest level of care and Level V providing the lowest level. Harborview Medical Center in Seattle is the only Level 1 Trauma Center in Washington State. In Oregon, Legacy Emanuel and Oregon Health Sciences University in Portland are both Level I Hospitals designated by the State of Oregon. The State of Oregon has a 4 level designation with Level I providing the highest level of definitive, comprehensive care for severely injured patients. Legacy Emanuel and Oregon Health Sciences University are approximately 10 and 14 miles south of the project site, respectively.

Table 1.1-22 – Ambulance Service Providers in Project Vicinity

Department	City
City Of Vancouver	Vancouver
Clark County	Camas
City of Camas	Camas
City Of Washougal	Washougal
Town Of Yacolt	Yacolt
Cowlitz County Fire District 1	Woodland

Source: Dun & Bradstreet

¹⁸ Dun & Bradstreet master file data accessed from Mailinglistsxpress.com, accessed June 26, 2013

1.1.9 School Enrollment

School enrollment in the study area has grown slowly over the past six school years. Total enrollment grew from 423,542 during the 2007-2008 school year to 425,891 during the 2012-2013 school year. The increase in enrollment of 2,349 students represents average annual growth of just 0.11%.

Within the study area, enrollment in Clark County grew at one of the fastest rates. Clark County schools saw an increase of nearly 2,000 students between the 2007-2008 and 2012-2013 school years, with growth of 0.51%.

Table 1.1-23 – Enrollment Trends in Project Vicinity

County	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	Avg. Annual Growth
Washington State							
Clark	76,106	76,782	76,720	76,644	77,134	78,054	0.51%
Cowlitz	17,930	17,715	17,382	17,161	17,013	16,931	-1.14%
Skamania	1,213	1,294	1,617	1,538	1,307	1,198	-0.25%
Oregon State							
Clackamas	58,590	58,847	58,394	57,996	57,702	57,870	-0.25%
Columbia	8,639	8,584	8,281	8,241	8,139	7,835	-1.93%
Hood River	3,968	3,973	4,026	3,989	4,076	4,086	0.59%
Marion	60,051	60,268	60,068	60,474	60,324	60,691	0.21%
Multnomah	90,278	89,814	90,080	90,474	91,010	90,405	0.03%
Polk	6,749	6,749	6,710	6,666	6,569	6,514	-0.71%
Washington	83,404	83,699	84,165	85,155	85,471	85,863	0.58%
Yamhill	16,614	16,612	16,763	16,506	16,438	16,444	-0.21%
Study Area	423,542	424,337	424,206	424,844	425,183	425,891	0.11%

Source: Washington Superintendent of Public Instruction¹⁹, Oregon Department of Education²⁰

1.2 Impacts

1.2.1 Construction

The Applicant has developed estimates of the manpower needed for the construction of the Vancouver facility. Over the nine month construction period, a total of 250 construction workers will be employed, with a maximum of 125 workers on site per day. The trades represented by these workers will vary over the course of the project, depending on the project phase. The total number of each category of worker is presented in the Table 1.2-1.

¹⁹ *October Federal & State Ethnicity/Race Enrollment Reports by Aggregate Level - County Level*, Washington Superintendent of Public Instruction, October 2013.

²⁰ *October 1 Enrollment Summary*, Oregon Department of Education, October 2013.

The project is located in a major metropolitan area (i.e. Portland-Vancouver MSA) that is capable of supplying most of the needed construction workforce. As demonstrated in Table 1.2-1, for most of the trades required, peak construction employment will account less than 3.0% of the available local workforce. The exceptions are ironworkers (10.7% of local workforce) and boilermakers (5.9%); a portion of these workers in these trades may need to travel from outside of the Portland-Vancouver region.

Table 1.2-1 – Impact on Local Workforce

Trade	Regional Employment	Project Maximum	% Increase
Mechanical	2,285	50	2.2%
Electricians	4,872	35	0.7%
Operating Engineers	1,689	25	1.5%
Laborers	5,637	53	0.9%
Ironworkers	300	32	10.7%
Carpenters	5,306	20	0.4%
Concrete	876	15	1.7%
Boilermakers	339	20	5.9%
Total	21,304	250	1.2%

Source: Washington Employment Security Department²¹, Tesoro Savage Petroleum Terminal LLC

Over the nine months of the project the direct employment is projected to be 250 workers, with a maximum of 125 on site per day. For this analysis it is assumed that these workers earn the prevailing wage for Clark County. The total capital cost of the project is estimated to be \$110 million, of which an estimated \$10 million will be supplies purchased from out of state.

The estimated direct labor income associated with the project is estimated to \$20.6 million. Labor income includes both employee compensation (wages, benefits, and taxes) and proprietor’s income. While the annual wage in the study area averages \$45,700 across all sectors (see Table 1.1-15), the construction jobs associated with the project are likely to generate direct income (including wages and all benefits) that is substantially higher than the study area average wage.

Total economic impacts were estimated using the IMPLAN input-output model. Including both indirect and induced benefits, the construction project is projected to support a total of 677 jobs in Washington, with associated total income of \$43.6 million.

Table 1.2-2 – Economic Impact of Construction

Trade	Jobs	Labor Income
Direct	250	\$20.6
Indirect & Induced	427	\$23.0
Total	677	\$43.6

Source: Tesoro Savage Petroleum Terminal LLC, BST Associates using IMPLAN

²¹ 2013 Occupational Employment and Wage Estimates, Washington State Employment Security Department/LMEA, June 2013

1.2.2 Operations

The proposed terminal will directly employ an estimated 120 workers at full operation. In addition, the terminal will generate work for longshore labor, vessel assist crews, ships pilots, and railroad employees. The number of additional workers in Washington State is presented in Table 1.2-3. In addition to the 120 workers estimated to be employed at the terminal, the largest impact is on line-haul rail, where the additional rail traffic is projected to support an additional 151 rail workers in Washington.

The Applicant is expected to bring a small number of management employees from out of the area, but the remaining terminal jobs are anticipated to be filled by the local workforce.

In addition to the terminal workers, the projected direct employment impacts include:

- Longshore workers will be used for mooring each vessel that calls at the terminal.
- Ship pilots are required for vessels entering and leaving the Columbia River.
 - Columbia River Bar Pilots guide ships through the mouth of the Columbia River, between Astoria and the open ocean.
 - Columbia River Pilots guide ships between Astoria and the ports and anchorages upriver as far as Portland and Vancouver.
- Each vessel is expected to use the services of two ship-assist tugboats for arrival and departure at the terminal.
- Railroad crews will operate trains from point of origin to the terminal, with approximately one-third of the rail trip occurring in Washington.

Table 1.2-3 – Direct Employment from Operation at Full Build-Out

Type of Worker	Jobs
Terminal workers	120
Longshore	2
Pilots – Bar	4
Pilots – River	11
Tug ship assist	15
Line-Haul Rail	<u>151</u>
Total	<u>303</u>

Source: BST Associates, Tesoro Savage Petroleum Terminal LLC

The direct labor income associated with the full operation is estimated to be \$33.0 million (in 2013 dollars). Labor income includes both employee compensation (wages, benefits, and taxes) and proprietor's income.

Total economic impacts were estimated using the IMPLAN input-output model. Including both indirect and induced benefits, the operation of the terminal is projected to support a total of 890 jobs in Washington, with associated total income of \$64.1 million.

As illustrated in Table 1.1-15, the average wage in the study area is \$45,700 per year across all sectors, and \$44,300 in the transportation and warehousing sector. Including wages and benefits,

the jobs directly associated with operation of the project are likely to generate employee income that is substantially higher than the study area average wage.

Table 1.2-4 – Economic Impact of Full Operation

Trade	Jobs	Labor Income
Direct	303	\$33.0
Indirect & Induced	587	\$31.1
Total	890	\$64.1

Source: Tesoro Savage Petroleum LLC, BST Associates using IMPLAN

1.2.3 Taxes

The project will be subject to a variety of state and local taxes. Taxes on the construction will be assessed on a one-time basis, while taxes on operations will be on-going.

Construction-related taxes evaluated for this analysis include Business and Occupation tax (B & O) and retail sales taxes.

For operations, the annual property tax impact was evaluated.

1.2.3.1 Construction Related Taxes

Businesses in Washington are subject to the B & O tax, which is levied on gross sales.. Construction of the terminal would be subject to the state B & O tax rate of 0.00471. With a construction value of \$110 million, the total state B & O tax associated with construction would be \$518,100.

In addition to the state B & O tax, a number of cities levy a local B & O tax. However, there is no local B & O tax in the City of Vancouver.

Retail sales tax is assessed against the value of the construction project. In Vancouver total sales tax rate is 8.4%, of which 6.5% goes to the State and 1.9% to local government. The \$110 million in construction is projected to generate a total of \$9.24 million, of which the State would receive \$7.15 million and local government \$2.09 million.

In total, construction of the terminal is expected to generate \$9.76 million in non-recurring taxes, of which Washington State can be expected to receive \$7.67 million and local government \$2.09 million.

Table 1.2-5 – Summary of Construction Related Tax (\$ millions)

Trade	State	Local	Total
Business & Occupation	\$0.52	\$0.00	\$0.52
Retail Sales	<u>\$7.15</u>	<u>\$2.09</u>	<u>\$9.24</u>
Total	<u>\$7.67</u>	<u>\$2.09</u>	<u>\$9.76</u>

Source: BST Associates

1.2.3.2 Operations Related Tax

The project is located on land owned by the Port of Vancouver. Port land is not subject to property taxes, but privately owned improvements located on land leased from the Port are subject to property tax. In this case, all of the equipment associated with the Project would be subject to property taxes.

Based on the taxing millage rate of an adjacent parcel, the property tax rate at the project location is \$14.11773 per thousand dollars of assessed value. The distribution of these taxes is presented in the following table. Schools are the primary recipient of property taxes, with \$5.609446 going to Vancouver schools and \$2.489687 going to the state school fund.

The value of the project is estimated to be \$110,000,000. Based on this value, the annual property tax generated is estimated to be \$1,552,951 in current (2013) dollars.

Table 1.2-6 – Property Tax

Taxing District	Tax Rate	Estimated Property Tax
Port Vancouver General Adref	0.000449	\$49
County General Adref	0.003626	\$399
Veterans Asst	0.009925	\$1,092
City Vancouver General Adref	0.010346	\$1,138
Dev Disability	0.012500	\$1,375
Mental Health	0.012500	\$1,375
Vanc Library Capital Facilities	0.256084	\$28,169
SD37 Vancouver M&O Adref	0.016503	\$1,815
Conservation Futures	0.062500	\$6,875
Port Vancouver Bonds	0.223412	\$24,575
Port Vancouver General	0.211683	\$23,285
County General	1.537209	\$169,093
SD37 Vancouver Debt Svc	1.851094	\$203,620
SD37 Vancouver M&O	3.758351	\$413,419
State Schools	2.489687	\$273,866
City Vancouver General	3.161863	\$347,805
Ft Vancouver Reg Library	0.500000	\$55,000
Totals	14.11773	\$1,552,951

Source: Clark County Assessor, BST Associates

