ATTACHMENT I: SOCIOECONOMIC REVIEW

Socioeconomic Review

Hop Hill Solar and Storage Project

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1.0 PROJECT OVERVIEW

HOHI bn, LLC (HOHI), a subsidiary of BNC DEVCO, LLC, which is a joint venture between BrightNight, LLC and Cordelio Power, proposes to construct the Hop Hill Solar and Storage Project (Project) in unincorporated Benton County, Washington. Located approximately 11 miles north of the city of Prosser and 7 miles east of the State Route (SR) 241 and SR 82 interchange, the Project is an up to 500-megawatt[1] (MW) solar photovoltaic (PV) generation facility coupled with an up to 500-MW battery energy storage system (BESS), as well as related interconnection and ancillary support infrastructure. Electricity generated by the Project will be transmitted to the electrical grid via one of three point of interconnection (POI) options. The Project's proposed POI with the regional electrical grid is the Bonneville Power Administration (BPA) transmission system at the Midway Substation on federal U.S. Department of Energy lands. The Project also includes two POI options near the BPA Wautoma Substation, which is located on BPA-managed federal lands. Project construction is anticipated to begin in the first quarter of 2024, with a Commercial Operations Date planned for the last quarter of 2025 (24-month construction schedule).

2.0 SUMMARY OF RESULTS

This Socioeconomic Review addresses components of Washington Administrative Code (WAC) 463-60-535 for the Streamlined Solar Application for Site Certification (ASC). The document contains information about impacts to population, labor force, and housing. The following review indicates that, at peak construction, the locally available workforce should be sufficient to meet demand for local direct workers, which HOHI has set a goal to account for about 75 percent of the total construction workforce. Local workers are those who normally reside within daily commuting distance of the Project site and would commute daily to the Project site from their homes. Non-local workers hired from outside the area are expected to temporarily relocate to the vicinity of the Project for the duration of their employment. The following review suggests that there are sufficient housing resources to accommodate non-local workers and the temporary influx of these workers is not expected to constrain the housing market for existing residents or result in changes in housing values, rents, or new housing construction.

3.0 SOCIOECONOMIC STUDY AREA

The primary socioeconomic study area for this analysis is based on WAC 463-60-535 and incorporates areas that may be affected by employment within a one-hour commute of the Project area. The Project area for the purpose of this assessment consists of the Solar Array Siting Area (approximately 11,179 acres) and the Transmission Line Corridor Siting Area (approximately 10,841 acres) that runs approximately 17 miles north to the proposed POI (the Midway Substation). The socioeconomic study area is primarily based on the location of the Solar Array Siting Area, where the majority of the Project's construction workforce would be employed. Communities within one-hour of the Midway Substation, the northernmost point of the Transmission Line Corridor Siting Area, were also considered.

[1] Megawatt rating provided in alternating current (MWac)

The Solar Array Siting Area is located in west Benton County, immediately adjacent to the Benton-Yakima county line. Areas within one hour of the Solar Array Siting Area include the city of Yakima, the Tri-Cities of Kennewick, Pasco, and Richland, and 16 other smaller incorporated communities in four counties (Benton, Franklin, Grant, and Yakima Counties, Washington). Six additional incorporated communities are within one hour of the Midway Substation: two each in Adams. Franklin, and Grant Counties.

Together, Benton and Franklin Counties make up the Kennewick-Richland Metropolitan Statistical Area (MSA). MSAs consist of integrated geographic regions typically made up of an urbanized economic core and economically related counties (Office of Management and Budget 2020). The Tri-Cities of Kennewick, Pasco, and Richland are the core of the Kennewick-Richland MSA. Benton and Franklin Counties are the economically related counties that share a high degree of economic integration with the urbanized core and one another. The cities of Kennewick and Richland are located in Benton County; the city of Pasco is located in Franklin County. Yakima County makes up the Yakima MSA. The city of Yakima is the urbanized core, which shares a high degree of economic integration with the surrounding county. These three counties—Benton, Franklin, and Yakima counties—make up the study area for the following review.

Adams, Grant, and Klickitat Counties are also partially within an approximately one-hour commute of the Project area. Although within a one-hour approximate commute, existing employment and commuting patterns suggest that Project employment would have limited impacts on these counties. These counties are, therefore, not included as part of the study area.

4.0 POPULATION, LABOR FORCE, AND HOUSING

This section addresses components of WAC 463-60-535 related to population, labor force, and housing.

4.1 Population and Labor Force Impacts

(a) Population and growth rate data for the most current ten-year period for the county or counties and incorporated cities in the study area.

Benton County had an estimated population of 212,300 in 2022 (Table 1). A majority of the population (82 percent) lived in one of five incorporated communities, with more than two-thirds of the total living in Kennewick (40 percent) and Richland (29 percent). The tenth most populated county in Washington, Benton County had an average population density of 124.9 people per square mile in 2022 compared to a statewide average of 118.3 people per square mile (Washington Office of Financial Management [OFM] 2022a, 2022b).

Total population in Benton County increased by 28,800 people or 15.7 percent between 2013 and 2022, an increase above the state average of 13.8 percent over the same period (Table 1). Population growth results from either net in-migration or natural increase. Net in-migration occurs when more people move to an area than leave. Natural increase occurs when there are more births than deaths. Migration accounted for 73 percent of statewide population growth between 2013 and 2022, with natural increase accounting for the remaining 27 percent. Migration played a slightly smaller role in

Benton County, accounting for approximately 67 percent of population growth over this period, with natural increase accounting for the remaining 33 percent (Washington OFM 2022c).

Table 1. Population

Geographic Area	Population Estimates		2013 to 2022		
	2013	2022	Net Change	Percent Change	Annual Growth Rate (Percent)
Benton County[1/]	**183,504**	**212,300**	**28,796**	**15.7**	**1.5**
Benton City	3,214	3,710	496	15.4	1.4
Kennewick	76,113	85,320	9,207	12.1	1.1
Prosser	5,748	6,195	447	7.8	0.8
Richland	51,682	62,220	10,538	20.4	1.9
West Richland	13,193	17,410	4,217	32.0	2.8
Unincorporated	33,554	37,445	3,891	11.6	1.1
Franklin County	**84,251**	**99,750**	**15,499**	**18.4**	**1.7**
Connell	5,335	4,840	-495	-9.3	-1.0
Mesa	463	390	-73	-15.8	-1.7
Pasco	65,735	80,180	14,445	22.0	2.0
Other Incorporated[2/]	192	145	-47	-24.5	-2.8
Unincorporated	12,526	14,195	1,669	13.3	1.3
Yakima County	**246,825**	**259,950**	**13,125**	**5.3**	**0.5**
Grandview	11,021	11,020	-1	0.0	0.0
Granger	3,175	3,740	565	17.8	1.7
Harrah	614	580	-34	-5.5	-0.6
Mabton	2,188	1,975	-213	-9.7	-1.0
Moxee	3,666	4,665	999	27.3	2.4
Naches	861	1,125	264	30.7	2.7
Selah	7,412	8,365	953	12.9	1.2
Sunnyside	15,960	16,500	540	3.4	0.3
Toppenish	8,863	8,870	7	0.1	0.0
Union Gap	6,164	6,640	476	7.7	0.7
Wapato	4,901	4,615	-286	-5.8	-0.6
Yakima	93,093	98,200	5,107	5.5	0.5
Zillah	3,122	3,195	73	2.3	0.2
Other Incorporated[3/]	1,259	1,505	246	19.5	1.8
Unincorporated	84,526	88,955	4,429	5.2	0.5
Washington State	**6,909,445**	**7,864,400**	**954,955**	**13.8**	**1.3**

Source: Washington OFM 2022c

1/ All five incorporated communities in Benton County are within an approximately one-hour commute from the Project.

2/ Three of the four incorporated communities in Franklin County are within an approximately one-hour commute; the fourth (Kahlotus) is more than one hour away.

3/ Thirteen of the 14 incorporated communities in Yakima County are within an approximate one-hour commute; the 14th (Tieton) is more than one hour away.

Franklin County had an estimated population of 99,750 in 2022 (Table 1). The majority of the population (80 percent) lives in the city of Pasco, with the remaining population divided between three other incorporated communities (Mesa, Connell, and Kahlotus) (6 percent) and unincorporated areas (14 percent). Franklin County was the 14th most populated county in Washington in 2022, with an average population density of 80.3 people per square mile compared to a statewide average of 118.3 people per square mile (Washington OFM 2022a, 2022b).

Total population in Franklin County increased by an estimated 15,500 people or 18.4 percent between 2013 and 2022, an increase above the state average of 13.8 percent (Table 1). Natural increase accounted for about two-thirds (66 percent) of the increase, with net in-migration making up the remaining 34 percent (Washington OFM 2022c).

Yakima County had an estimated population of 259,950 in 2022 (Table 1). More than one-third of the population (38 percent) lives in the city of Yakima, 28 percent lives in one of the 13 other incorporated communities, and the remaining 34 percent lives in unincorporated parts of the county. Yakima County is the eighth most populated county in Washington, with an average population density of 60.5 people per square mile in 2022 compared to a statewide average of 118.3 people per square mile (Washington OFM 2022a, 2022b).

Total population in Yakima County increased by an estimated 13,125 people or 5.3 percent between 2013 and 2022, an increase below the state average of 13.8 percent (Table 1). More people moved from than to Yakima County over this period, resulting in a loss of almost 1,500 people through net out-migration. This loss was, however, more than offset by natural increase, which accounted for all of the population gain over this period (Washington OFM 2022c). A number of the smaller communities in Yakima County lost population over this period (Table 1).

(b) Published forecast population figures for the study area for both the construction and operation periods.

The Project is expected to have an operational life of 50 years. The Project's operational life extends beyond available population projections. Projections are available through 2050 and provide useful insight into anticipated population growth over the operational life of the Project.

The Washington OFM prepares county population projections for planning under Washington State's Growth Management Act (GMA). High-, medium- and low-growth expectations are prepared for each county, with the medium series considered the most likely because it is based on assumptions that have been validated with past and current information (Washington OFM 2018a). Current projections developed in support of the GMA extend through 2040, with supplemental projections developed from 2040 through 2050 to provide additional data for counties. Population is projected to continue grow from 2020 through 2050 in the study area counties, as well as statewide (Table 2).

From 2020 to 2025, population was projected to increase by 7 percent, 15 percent, and 5 percent in Benton, Franklin, and Yakima Counties, respectively, compared to a statewide average of 6 percent. Population is projected to increase at a faster rate in Franklin County from 2020 to 2050, with a projected increase of about 83 percent (82,900 people), compared to smaller relative increases of 33

percent (65,600 people) in Benton County, 25 percent (65,100 people) in Yakima County, and 29 percent (2.2 million people) statewide (Table 2).

Projected annual rates in Benton County are higher than the state average from 2020 to 2040 and the same from 2041 to 2050 (Figure 1). Annual growth rates in Franklin County are expected to be more than twice the state average for almost the entire period. Annual gains in Yakima County are mostly lower than the state average from 2021 to 2040 and mostly the same from 2041 to 2050.

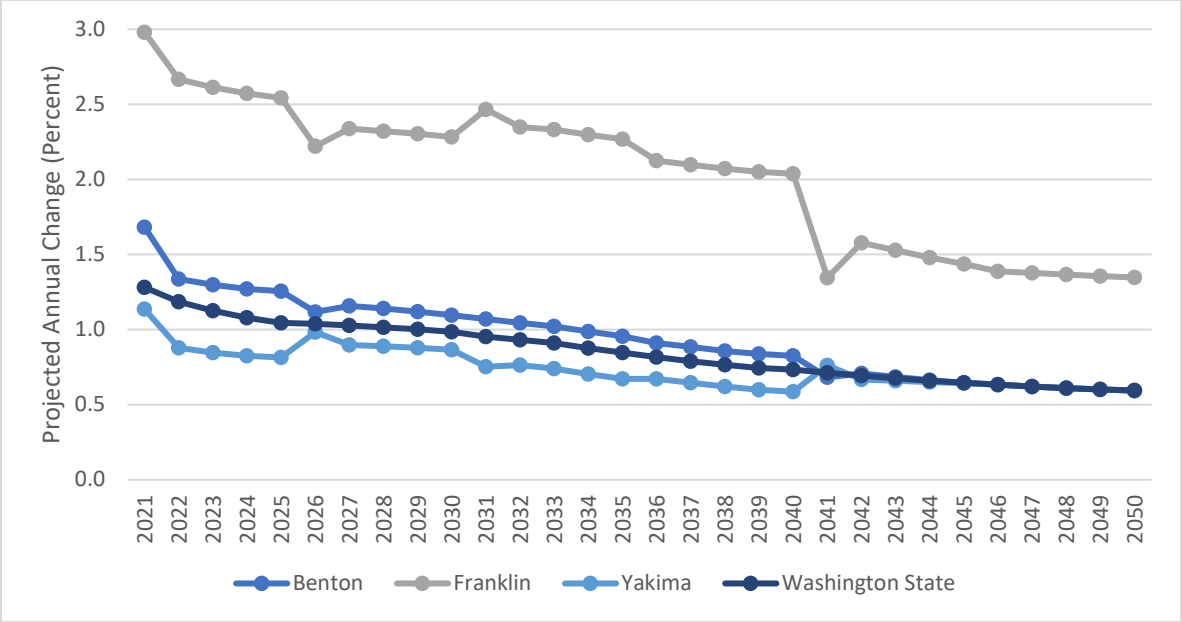
Table 2. Population Projections 2020 to 2050

Geographic Area	2020 (Census Count)[1/]	2020 (Projection)[2/]	2025	2030	2040	2050
Benton County	206,873	201,563	215,740	228,162	250,524	267,139
Franklin County	96,749	99,712	113,781	127,443	158,574	182,589
Yakima County	256,728	262,887	274,932	287,567	307,591	327,994
Washington State	**7,705,281**	**7,638,415**	**8,085,043**	**8,503,178**	**9,242,022**	**9,855,117**

Sources: Washington OFM 2018b; U.S. Census Bureau 2020a

1/ Census counts for 2020 are federal census counts for that year. Estimates for 2022 are provided in Table 1.

2/ The population projections here, including the 2020 projection, are Medium series projections developed in 2017 in support of Washington State's GMA.



Source: Washington OFM 2018b

Figure 1. Projected Annual Change in Population, 2021 to 2050

(c) Numbers and percentages describing the race/ethnic composition of the cities and counties in the study area.

According to the 2020 decennial census, almost two-thirds (63.8 percent) of the population of Washington State is White. People of Hispanic or Latino origin are the single largest minority group, accounting for 13.7 percent of the total population (Table 3). A similar share of the total population in Benton County was identified as White (65.6 percent), with people of Hispanic or Latino origin accounting for a much larger share than the statewide average (23.8 percent compared to 13.7

percent) (Table 3). The majority of the populations in four of the incorporated communities in Benton County were White, with White populations ranging from 58.6 percent (Benton City) to 76.8 percent (West Richland). In Prosser, the other incorporated community in Benton County, slightly less than half of the population (47.4 percent) was identified as White, with people of Hispanic or Latino origin accounting for 46.0 percent of the total (Table 3).

Table 3. Race and Ethnicity, 2020

Geographic Area	Total Population[1/]	Percent of Total				
		White[2/]	Hispanic or Latino	American Indian and Alaska Native[2/]	Other Race[2/,3/]	Two or More Races[2/]
Benton County	**206,873**	**65.6**	**23.8**	**0.6**	**5.1**	**4.9**
Benton City	3,479	58.6	34.8	0.8	1.7	4.1
Kennewick	83,921	59.2	30.2	0.6	5.3	4.7
Prosser	6,062	47.4	46.0	0.4	3.3	3.0
Richland	60,560	73.3	13.3	0.4	7.4	5.6
West Richland	16,295	76.8	13.7	0.6	3.5	5.4
Franklin County	**96,749**	**38.5**	**54.2**	**0.5**	**4.1**	**2.8**
Connell	5,441	42.5	41.1	2.0	10.2	4.2
Mesa	385	19.5	76.1	0.0	1.6	2.9
Pasco	77,108	35.3	57.5	0.4	4.1	2.7
Yakima County	**256,728**	**40.3**	**50.7**	**3.6**	**2.2**	**3.1**
Grandview	10,907	13.9	83.9	0.3	0.9	1.0
Granger	3,624	6.5	90.9	1.7	0.4	0.6
Harrah	585	17.8	63.9	14.5	1.9	1.9
Mabton	1,959	4.9	94.1	0.2	0.3	0.5
Moxee	4,326	46.4	45.7	1.2	2.7	3.9
Naches	1,084	62.1	31.3	1.4	1.8	3.4
Selah	8,153	68.0	23.6	0.8	2.9	4.6
Sunnyside	16,375	11.4	86.7	0.3	0.9	0.7
Toppenish	8,854	7.1	84.4	6.6	0.7	1.3
Union Gap	6,568	35.1	58.6	1.8	1.6	2.8
Wapato	4,607	4.6	85.7	6.0	2.7	1.0
Yakima	96,968	43.5	48.5	1.4	3.2	3.5
Zillah	3,179	44.2	46.6	4.1	1.1	4.0
Washington	**7,705,281**	**63.8**	**13.7**	**1.2**	**14.6**	**6.6**

Source: U.S. Census Bureau 2020b.
1/ Data are census counts for 2020 from DEC Redistricting Data (PL 94-171)
2/ Non-Hispanic only. The federal government considers race and Hispanic/Latino origin to be two separate and distinct concepts. People identifying as Hispanic or Latino origin may be of any race. The data summarized in this table present Hispanic/Latino as a separate category.
3/ The "Other Race" category presented here includes census respondents identifying as Black or African American, Asian, Native Hawaiian and Other Pacific Islander, or Some Other Race.

Less than half (38.5 percent) of the population in Franklin County was identified as White, with people of Hispanic or Latino origin accounting for an estimated 54.2 percent of the total. The White share of

the population in the three incorporated communities within one hour ranged from 19.5 percent (Mesa) to 42.5 percent (Connell), with the Hispanic or Latino share ranging from 41.1 percent (Connell) to 76.1 percent (Mesa). In Pasco the corresponding totals were 35.3 percent (White) and 57.5 percent (Hispanic or Latino) (Table 3).

Similar to Franklin County, in Yakima County, less than half (40.3 percent) of the population was White in 2020, with people of Hispanic or Latino origin accounting for slightly more than half (50.7 percent) of the total. The Hispanic/Latino share of the population exceeded the county average in eight of the 13 incorporated communities in Yakima County within one hour, ranging from about 59 percent (Union Gap) to 94 percent (Mabton) of the total (Table 3). The American Indian share of the population in Yakima County also exceeded the state average, 3.6 percent compared to 1.2 percent. The American Indian population exceeded the county average in four of the incorporated communities in Yakima County: Zillah (4.1 percent), Wapato (6.0 percent), Toppenish (6.6 percent), and Harrah (14.5 percent) (Table 3).

(d) Aggregate per capita and household incomes, including the number and percentages of the population below the poverty level for the cities and counties within the study area.

Income and poverty data are summarized by county, city, and state in Table 4. Per capita and median household incomes were below the state averages in all three counties. This was also the case for all the incorporated communities within an approximately one-hour commute of the Project area, with the exception of Richland and West Richland in Benton County and Moxee in Yakima County (Table 4). Median household income was higher than the state average in all three of these communities.

Table 4. Income and Poverty by County and City

Geographic Area	Per Capita Income[1/,2/]		Median Household Income[1/]		Poverty[1/]	
	2020 Dollars	Percent of State Per Capita	2020 Dollars	Percent of State Median	Population below Poverty Level	Percent of Total Population
Benton County	**34,287**	**84**	**72,046**	**94**	**20,319**	**10.2**
Benton City	20,786	51	54,792	71	346	10.2
Kennewick*	27,731	71	62,283	81	10,136	12.5
Prosser	23,472	57	53,333	69	986	15.7
Richland	40,322	99	77,981	101	4,689	8.2
West Richland	36,735	90	102,974	134	1,027	7.0
Franklin County	**25,875**	**63**	**66,904**	**87**	**12,880**	**14.2**
Connell	16,266	40	71,831	93	539	14.2
Mesa	12,368	30	60,000	78	342	49.2
Pasco	26,075	64	64,756	84	10,500	14.3
Yakima County	**24,305**	**60**	**54,917**	**71**	**40,710**	**16.5**
Grandview	17,241	42	50,444	66	1,481	13.4
Granger	14,806	36	54,107	70	649	17.1
Harrah	23,561	58	62,500	81	89	14.2
Mabton	13,759	34	43,971	57	516	23.7

Geographic Area	Per Capita Income[1/,2/]		Median Household Income[1/]		Poverty[1/]	
	2020 Dollars	Percent of State Per Capita	2020 Dollars	Percent of State Median	Population below Poverty Level	Percent of Total Population
Moxee*	20,561	53	83,649	109	546	13.3
Naches*	31,848	82	68,214	89	62	9.7
Selah	34,474	84	58,854	76	774	9.9
Sunnyside	15,307	37	40,766	53	3,183	19.2
Toppenish	16,977	42	52,981	69	1,266	14.5
Union Gap*	17,832	46	51,200	66	1,327	21.9
Wapato	17,233	42	42,981	56	1,178	24.1
Yakima	24,061	59	48,220	63	17,513	19.2
Zillah	27,723	68	63,750	83	351	11.4
Washington State	**40,837**	**100**	**77,006**	**100**	**751,044**	**10.2**

Sources: U.S. Census Bureau 2022a, 2022b, 2022c.
* Per capita income estimates are for 2015-2019.
1/ Estimates are annual totals developed as part of the 2016-2020 American Community Survey 5-Year Estimates with four exceptions (see below).
2/ Per capital income estimates for 2016-2020 are not available for four communities: Kennewick, Moxee, Naches, and Union Gap. Per capita data included here for these communities are presented in 2019 dollars for 2015-2019, with per capita estimates shown as a percent of the 2015-2019 Washington total ($38,915).

The estimated share of households below the poverty level in Washington State was 10.2 percent in 2020. The corresponding rates in all three counties were either the same (Benton County) or higher than the state average, with an estimated 14.2 percent and 16.5 percent of households below the poverty level in Franklin and Yakima Counties, respectively. The share of households below the poverty level in the five incorporated communities in Benton County ranged from 7.0 percent (West Richland) to 15.7 percent (Prosser). In Franklin County, the share of households below the poverty level in Connell (14.2 percent) and Pasco (14.3 percent) was the same and slightly higher than the county average, respectively, with almost half of households in Mesa (49.2 percent) below the poverty level. In Yakima County, the corresponding shares for 2020 ranged from 9.9 percent (Selah) to 24.1 percent (Wapato) (Table 4).

(e) A description of whether or not any minority or low-income populations would be displaced by this project or disproportionately impacted.

As indicated in Part 3, Section 15 of the ASC, construction and operation of the Project is not expected to displace or otherwise affect existing or future housing, including housing for minority or low-income populations.

(f) The average annual work force size, total number of employed workers, and the number and percentage of unemployed workers including the year that data are most recently available. Employment numbers and percentage of the total work force should be provided for the primary employment sectors.

Average annual workforce, employment, and unemployment data are summarized for Benton County, Franklin County, Yakima County, and the state of Washington in Table 5. The average annual employment rate in Washington state in 2021 was 5.2 percent. Viewed by county, the corresponding

rates were 5.6 percent, 6.6 percent, and 7.0 percent in Benton, Franklin, and Yakima Counties, respectively (Table 5).

Table 5. Average Annual Workforce, 2021

Geographic Area	Civilian Labor Force	Employment	Unemployment	Unemployment Rate
Benton County	104,709	98,851	5,858	5.6%
Franklin County	43,810	40,929	2,881	6.6%
Yakima County	131,144	121,998	9,146	7.0%
Washington State	**3,913,513**	**3,708,738**	**204,775**	**5.2%**

Source: Washington Employment Security Department 2022.

Employment data by economic sector is summarized for Benton County, Franklin County, Yakima County, and the state of Washington in Table 6.

- An estimated 111,173 people were employed in Benton County in 2020. Healthcare and social assistance was the largest economic sector based on employment, accounting for about 13.5 percent of total employment, followed by government, which accounted for 11.2 percent (Table 6).
- An estimated 42,590 people were employed in Franklin County in 2020. Government was the largest sector, accounting for 16.3 percent of total employment (Table 6).
- An estimated 132,124 people were employed in Yakima County in 2020. Agriculture was the largest employer, accounting for 14.6 percent of employment, followed by the healthcare and social assistance sector (13.8 percent) and government (13.7 percent) (Table 6).

Table 6. Employment by Economic Sector, 2020

Economic Sector	Benton County	Franklin County	Yakima County	Washington State
Total Employment[1/]	**111,173**	**42,590**	**132,124**	**4,385,827**
Percent of Total[2/]				
Agriculture	4.6	9.5	14.6	2.1
Forestry, fishing, and hunting	(D)	(D)	7.9	1.0
Mining	(D)	(D)	0.1	0.1
Utilities	0.1	(D)	0.1	0.1
Construction	8.2	7.5	4.1	6.2
Manufacturing	4.4	9.0	6.5	6.6
Wholesale trade	1.5	4.9	3.7	3.2
Retail trade	10.6	9.7	9.8	10.4
Transportation & warehousing	2.1	(D)	3.5	4.3
Information	0.7	0.4	0.5	3.7
Finance and insurance	3.4	1.7	2.2	3.9
Real estate, rental and leasing	3.5	3.2	2.8	4.6
Professional, scientific, and technical services	10.0	2.8	2.5	7.8
Management of companies and enterprises	0.5	0.1	0.6	1.1

Economic Sector	Benton County	Franklin County	Yakima County	Washington State
Administrative and waste management services	10.3	3.6	2.3	4.9
Educational services	1.0	1.4	1.5	1.8
Healthcare and social assistance	13.5	8.8	13.8	11.2
Arts, entertainment, and recreation	1.4	1.0	1.0	1.8
Accommodation and food services	6.5	4.8	4.9	5.6
Other services (except public administration)	4.4	5.2	3.9	4.8
Government	11.2	16.3	13.7	14.6

Source: U.S. Bureau of Economic Analysis 2021.
(D) Not shown to avoid disclosure of confidential information; estimates for this item are, however, included in the totals.
1/ Employment estimates include self-employed individuals. Employment data are by place of work, not place of residence, and, therefore, include people who work in the area but do not live there. Employment is measured as the average annual number of jobs, both full- and part-time, with each job counted at full weight.
2/ Percentages for Benton and Franklin Counties do not sum to 100 because employment counts are not provided for some sectors to avoid disclosing confidential information (identified by [D] in the table).

(g) An estimate by month of the average size of the project construction, operational work force by trade, and work force peak periods.

Construction is expected to begin in the first quarter of 2024 and will require approximately 24 months to complete. During the first 120 days, there would be clearing and grubbing activities and grading of access roads. Construction personnel would likely involve approximately 60 workers during this period. Once Project construction begins, the number of workers employed on-site will increase and peak at approximately 300 workers. On average, 200 workers will be employed on-site over the 24-month construction period. During the final 30-day period, the electrical work will be completed and the on-site workforce will drop back to approximately 60 workers.

HOHI anticipates that five workers will be employed during operation. Full-time on-site employees will include a site manager, electrician/engineer, and operations specialist, with part-time electrical technicians and vegetation management contractors accounting for about two full-time equivalent positions.

(h) An analysis of whether or not the locally available work force would be sufficient to meet the anticipated demand for direct workers and an estimate of the number of construction and operation workers that would be hired from outside of the study area if the locally available work force would not meet the demand.

HOHI strives to hire locally whenever possible. Local share of workforce will primarily be dependent on skilled workforce availability. HOHI's goal is to hire a majority of the on-site construction workforce locally to the extent workers are available, with an estimated 75 percent of the workforce expected to already reside within a one-hour commute of the Project area. Based on this estimate, the local workforce employed on-site would peak with an estimated 225 workers employed on-site at one time.

Review of occupational data for the two MSAs within one hour indicates that the area has a large construction workforce pool. Representative occupational employment estimates for the disciplines required to construct the Project are presented for the Kennewick-Richland and Yakima MSAs in Tables 7 and 8, respectively. In addition to total employment, Tables 7 and 8 also provide location

quotient information, as well as mean hourly and annual wage data. The location quotients, which are a measure of relative economic specialization, indicate that the local share of employment in the representative occupations identified in Table 7 for the Kennewick-Richland MSA exceeds the corresponding national averages in all six of the identified occupations. The corresponding shares for the Yakima MSA are equal to or exceed the national averages for two of the occupations (Table 8).

Table 7. Existing Construction Workforce in the Kennewick-Richland MSA by Occupation

SOC Code[1/]	Labor Discipline	Total Employment	Location Quotient[2/]	Mean Hourly Wage[3/]	Mean Annual Wage[3/]
11-9021	Construction Managers	360	1.50	54.04	112,390
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,070	1.93	41.69	86,710
47-2061	Construction Laborers	1,680	2.08	26.57	55,260
47-2073	Operating Engineers and Other Construction Equipment Operators	470	1.39	33.69	70,080
47-2111	Electricians	1,020	1.89	38.46	80,000
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,720	1.09	27.03	56,210

Source: U.S. Bureau of Labor Statistics 2022.
SOC = standard occupational classification.
1/ Data are for May 2021, the most current data available.
2/ Location quotients estimated here by the U.S. Bureau of Labor Statistics show an occupation's share of an area's employment relative to the national average. A location quotient above 1.0 indicates that an occupation accounts for a larger share of employment in an area than it does nationally, and a location quotient below 1.0 indicates the area's share of employment in the occupation is lower than the national share.
3/ These wage estimates represent wages and salaries only, and do not include employee bonuses or nonwage costs to the employer, such as health insurance or employer contributions to retirement plans.

Table 8. Existing Construction Workforce in the Yakima MSA by Occupation

SOC Code[1/]	Labor Discipline	Total Employment	Location Quotient[2/]	Mean Hourly Wage[3/]	Mean Annual Wage[3/]
11-9021	Construction Managers	120	0.65	48.78	101,460
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	310	0.73	37.44	77,880
47-2061	Construction Laborers	620	1.00	22.55	46,900
47-2073	Operating Engineers and Other Construction Equipment Operators	190	0.73	29.67	61,710
47-2111	Electricians	410	0.98	32.07	66,700
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,580	1.29	24.55	51,060

Source: U.S. Bureau of Labor Statistics 2022.
See notes to Table 7.

(i) A list of the required trades for the proposed project construction.

Trades required during the construction phase of the Project include:

- Construction managers and supervisors,
- Construction laborers,
- Equipment operators,

- Electricians, and
- Truck drivers.

The corresponding occupational categories are identified above in Table 7.

(j) An estimate of how many direct or indirect operation and maintenance workers (including family members and/or dependents) would temporarily relocate.

Operation and maintenance of the Project is anticipated to employ the equivalent of five full-time workers. These workers and their families are likely to reside within daily commuting distance and will either already reside in the area or permanently relocate. The average U.S. family household consisted of 3.13 people per family in 2021 (U.S. Census Bureau 2021). Assuming that five workers would relocate to the area and applying this average family household size would result in about 16 people permanently relocating to the Project vicinity during Project operation.

(k) An estimate of how many workers would potentially commute on a daily basis and where they would originate.

Workers hired locally (i.e., within Benton, Franklin, and Yakima Counties) would commute daily between the Project and their normal place of residence. During construction an estimated peak of 225 local workers would commute daily to the Project site (see Section (h) above). Based on the existing distribution of population in the three counties, the majority of these workers would likely normally reside in the larger cities of Kennewick, Richland, Pasco, and Yakima (see Table 1).

The remainder of the estimated construction workforce (with an estimated peak of 75 workers) would be non-local and would temporarily relocate to the vicinity of the Project for the duration of their employment. The majority of these workers would likely seek temporary accommodation in the larger nearby communities, where much of this type of accommodation is located (see Housing Impacts, Section (a), below). These workers would commute daily between the Project and their temporary place of residence.

During operations, an estimated five workers would commute daily to and from the Project.

4.2 Housing Impacts

(a) Housing data from the most recent ten-year period that data are available, including the total number of housing units in the study area, number of units occupied, number and percentage of units vacant, median home value, and median gross rent. A description of the available hotels, motels, bed and breakfasts, campgrounds or other recreational facilities.

Housing resources are summarized by city, county, and state in Table 9. The data presented in this table are annual estimates for 2020 prepared by the U.S. Census Bureau using 5 years of data (2016 to 2020) (U.S. Census Bureau 2022d). The U.S. Census Bureau defines a housing unit as a house, apartment, mobile home or trailer, group of rooms, or single room occupied or intended to be occupied as separate living quarters. There were an estimated 77,486 housing units in Benton County in 2020, with the cities of Kennewick and Richland together accounting for almost three-quarters of

the total, 41 percent and 31 percent, respectively (Table 9). An estimated total of 4,413 units were vacant in Benton County in 2020, approximately 5.7 percent of the total. Median values for owner-occupied homes were below the state median ranging from about $174,300 in Benton City to about $292,500 in West Richland. Median rent for renter-occupied units ranged from $787 (Benton City) to more than $1,409 (West Richland).

Table 9. Housing Characteristics

Geographic Area	Total Housing Units	Occupied Housing Units	Vacant Housing Units		Median Home Value (dollars)	Median Gross Rent (dollars)
			Number	Percent of Total		
Benton County	**77,486**	**73,073**	**4,413**	**5.7%**	**255,000**	**1,027**
Benton City	1,239	1,195	44	3.6%	174,300	787
Kennewick	32,123	30,232	1,891	5.9%	239,200	955
Prosser	2,579	2,448	131	5.1%	185,700	872
Richland	23,663	22,382	1,281	5.4%	283,200	1,128
West Richland	4,872	4,640	232	4.8%	292,500	1,409
Franklin County	**28,618**	**27,263**	**1,355**	**4.7%**	**226,500**	**915**
Connell	1,321	1,214	107	8%	161,400	951
Mesa	136	136	0	0%	90,800	845
Pasco	23,126	22,174	952	4.1%	222,000	927
Yakima County	**89,354**	**83,765**	**5,589**	**6.3%**	**191,400**	**868**
Grandview	3,449	3,322	127	3.7%	148,300	870
Granger	851	825	26	3.1%	114,400	876
Harrah	207	204	3	1.4%	143,100	841
Mabton	556	526	30	5.4%	100,600	757
Moxee	1,192	1,072	120	10.1%	202,600	1,340
Naches	335	312	23	6.9%	165,200	1,036
Selah	3,463	3,192	271	7.8%	249,400	1,116
Sunnyside	4,810	4,550	260	5.4%	146,700	755
Toppenish	2,473	2,404	69	2.8%	142,300	741
Union Gap	2,177	2,010	167	7.7%	126,800	917
Wapato	1,452	1,388	64	4.4%	109,400	752
Yakima	35,763	33,752	2,011	5.6%	182,900	879
Zillah	1,269	1,174	95	7.5%	189,600	969
Washington	**3,150,194**	**2,905,822**	**244,372**	**7.8%**	**366,800**	**1,337**

Source: U.S. Census Bureau 2022d
1/ Estimates are annual totals developed as part of the 2016-2020 American Community Survey 5-Year Estimates.

Franklin County had an estimated total of 28,618 housing units in 2020, with the city of Pasco accounting for 81 percent of the total (Table 9). An estimated 1,355 or 4.7 percent of all housing units were vacant in Franklin County in 2020. Median values for owner-occupied homes were lower than in adjacent Benton County, with a county-wide median of $226,500 compared to a Benton County median of $255,000. Median rent for renter-occupied units in Franklin County was $915, slightly lower than the median in Benton County ($1,027) (Table 9).

Yakima County had an estimated total of approximately 89,354 housing units in 2020. The city of Yakima accounted for 40 percent of the total, with 25 percent located in the other 13 incorporated communities and the remaining 35 percent of the total located in unincorporated areas (Table 9). An estimated 5,589 or 6.3 percent of housing units were vacant in Yakima County in 2020. Median values for owner-occupied homes ($191,400) and median rent for renter-occupied units ($868) were both lower than the corresponding values for Benton and Franklin Counties (Table 9).

The number of housing units has increased statewide and in all three counties over the last decade (since 2013), with net gains of about 11,100 units (15.4 percent), 4,800 units (18.4 percent), and 5,400 units (6.2 percent) in Benton, Franklin, and Yakima Counties, respectively (Table 10). Viewed by community, the largest absolute increase (4,588 units) and fourth largest relative increase (22.0 percent) was in Pasco, followed by Richland (4,273 units) and Kennewick (3,672 units) (Table 10).

Table 10. Number of Housing Units, 2013 to 2022

Geographic Area	2013	2022	2013 to 2022	
			Net Change	Percent Change
Benton County	**71,956**	**83,014**	**11,058**	**15.4%**
Benton City	1,239	1,493	254	20.5%
Kennewick	29,460	33,132	3,672	12.5%
Prosser	2,149	2,400	251	11.7%
Richland	22,253	26,526	4,273	19.2%
West Richland	4,868	6,278	1,410	29.0%
Franklin County	**26,206**	**31,036**	**4,830**	**18.4%**
Connell	953	1,038	85	8.9%
Mesa	130	121	-9	-6.9%
Pasco	20,884	25,472	4,588	22.0%
Yakima County	**86,891**	**92,315**	**5,424**	**6.2%**
Grandview	3,166	3,316	150	4.7%
Granger	831	987	156	18.8%
Harrah	184	187	3	1.6%
Mabton	552	563	11	2.0%
Moxee	1,139	1,507	368	32.3%
Naches	351	413	62	17.7%
Selah	2,840	3,194	354	12.5%
Sunnyside	4,640	4,901	261	5.6%
Toppenish	2,334	2,461	127	5.4%
Union Gap	2,193	2,318	125	5.7%
Wapato	1,297	1,326	29	2.2%
Yakima	35,438	38,028	2,590	7.3%
Zillah	1,160	1,155	-5	-0.4%
Washington State	**2,946,937**	**3,295,162**	**348,225**	**11.8%**

Source: Washington OFM 2022d

Rental housing resources are summarized in Table 11. Viewed by county, these estimates suggest that rental housing is available in all three counties, with more than 1,300 units available for rent in Benton County, 110 units available in Franklin County, and almost 920 units available in Yakima County. More than 95 percent of the estimated units available in Benton County are in Kennewick (62 percent) and Richland (35 percent). Estimated rental vacancy rates in Kennewick (7.0 percent) and Richland (5.4 percent) were higher and the same as the Benton County average (5.4 percent), respectively (Table 11).

Table 11. Rental Housing, 2020

Geographic Area	Total Vacant Housing Units[1/]	Rental Vacancy Rate[1/]	Units Available for Rent[1/]	Seasonal, Recreational, or Occasional Use[1,/2/]
Benton County	**4,413**	**5.4**	**1,316**	**634**
Benton City	44	1.7	4	12
Kennewick	1,891	7.0	813	68
Prosser	131	1.4	16	0
Richland	1,281	5.4	457	350
West Richland	232	0.0	0	48
Franklin County	**1,355**	**1.3**	**110**	**75**
Connell	107	5.6	25	0
Mesa	0	0	0	0
Pasco	952	1.0	70	42
Yakima County	**5,589**	**2.8**	**917**	**1,074**
Grandview	127	1.8	29	0
Granger	26	3.6	13	0
Harrah	3	1.3	1	0
Mabton	30	9.4	16	0
Moxee	120	0.0	0	0
Naches	23	0.0	0	0
Selah	271	0.0	0	37
Sunnyside	260	1.8	36	35
Toppenish	69	0.7	6	7
Union Gap	167	9.1	67	0
Wapato	64	5.2	36	0
Yakima	2,011	3.2	514	117
Zillah	95	5.7	28	13
Washington State	**244,372**	**3.7**	**40,974**	**91,085**

Sources: U.S. Census Bureau 2022d, 2022e.
1/ All data are annual estimates from the American Community Survey 5-year estimates for 2016-2020.
2/ Housing units for seasonal, recreational, or occasional use are generally considered to be vacation homes. They are not included in the estimated number of housing units shown here as available for rent.

These data suggest that rental housing markets are tighter in Franklin and Yakima Counties, with respective estimated vacancy rates of 1.3 percent and 2.8 percent. In Franklin County, an estimated 110 housing units were available for rent, with almost two-thirds (64 percent, 70 units) of this total located in the city of Pasco (Table 11). In Yakima County, an estimated 917 units were available for

rent, with 56 percent (514 units) located in the city of Yakima. Additional units classified for seasonal, recreational, or occasional use may also be available in all three counties (Table 11).

Rental housing options may also include other special living situations, such as Airbnb units and spare bedrooms in homes that residents would be willing to rent to construction workers. These types of potential housing opportunities are not included in the data presented in Table 11.

Temporary housing is also available in the form of hotel and motel rooms. Data compiled by STR Global, a travel research firm, identified 44 hotels in the Tri-Cities area in November 2017, with a total of 4,063 guestrooms (ECONorthwest 2018). STR Global compiles data for commercial lodging establishments with at least 15 rooms. They do not count single room occupancy hotels, most bed and breakfast inns, or short-term rentals, like Airbnb. A number of new hotels have opened in the Tri-Cities in recent years and several others are currently under construction. With these additions, the number of guestrooms in the Tri-Cities is expected to increase to about 4,700 (Culverwell 2020). Other recent trends in the area include the potential conversion of existing hotels and motels to micro-apartments (Carter 2022; Culverwell 2022). Lodging facilities available elsewhere in Benton County include four hotels in Prosser, with more than 140 guestrooms.

Hotels in the Tri-Cities had an overall average occupancy rate of 62.5 percent from December 2016 to November 2017. The market is seasonal, with monthly occupancy rates ranging from 42 percent in December to 77 percent in June. Occupancy in July and August averaged 69 percent. The Tri-Cities attracts a larger than average share of business and meeting visitors, which tends to support fairly strong occupancy in the shoulder seasons (spring and fall) (ECONorthwest 2018).

In Yakima, there were 30 hotels and motels in 2017, with an estimated total of 2,400 guestrooms. Occupancy rates in the area have historically averaged around 55 to 60 percent (Hoang 2017).

Temporary accommodation in the study area also includes recreational vehicle (RV) parks and campsites. Facilities in Benton and Franklin Counties within one hour of the Project area include 19 RV parks and campgrounds, with an approximate total of 2,030 RV spaces. Parks and campgrounds are located in Kennewick, Richland, West Richland, Pasco, Prosser, Benton City, and Vantage. An additional six RV parks and campgrounds, with a total of 390 spaces are located within one hour of the Project area in Yakima County, including locations in Yakima, Sunnyside, and Selah.[2]

(b) How and where the direct construction and indirect work force would likely be housed. A description of the potential impacts on area hotels, motels, bed and breakfasts, campgrounds and recreational facilities.

Project construction is expected to begin in the first quarter of 2024 and require approximately 24 months to complete. An estimated peak of 300 workers will be employed on-site at one time. The non-local share of the workforce is estimated to be approximately 25 percent, with non-local workers expected to temporarily relocate to the vicinity of the Project for the duration of their employment. As

[2] Data on RV parks and campsites were compiled from a number of online sources, including visittri-cities.com, rvshare.com, goodsam.com, and campgroundreviews.com, as well as individual campground web sites.

a result, an estimated peak total of 75 workers are expected to seek temporary accommodation in the Project vicinity.

Non-local workers are expected to seek a range of temporary accommodations, including rental housing (houses, apartments, mobile homes), hotel/motel rooms, and RV parks/campgrounds, as well as other special living situations such as Airbnb units and spare bedrooms. The review of temporary housing resources presented above indicates that temporary housing resources in the study area include approximately 2,100 housing units that are vacant and available for rent, with additional units classified for seasonal, recreational, or occasional use that may also be available (Table 11). Temporary housing is also available in the form of hotel and motel rooms. Available estimates indicate that there are about 7,100 hotel and motel rooms in the vicinity of the Project. Assuming a peak occupancy of 77 percent suggests that approximately 1,630 rooms are normally empty and available for rent.

This review indicates that existing temporary housing resources in the study area that are normally vacant and available for rent exceed estimated Project construction-related demand. Viewed as a share of the supply of housing units available for rent (2,100 units) and the normally available supply of hotel and motel rooms (1,630 rooms), peak demand (75 workers) would be equivalent to about 2 percent of the normally available supply. Note that this likely overestimates the number of units that would be required (up to 75 during peak construction) because it assumes that the estimated demand will be single occupancy. In practice, workers are likely to share rental accommodations and also consider sharing hotel/motel rooms to reduce costs.

In addition, temporary accommodation in the study area includes 25 RV parks and campgrounds, with a combined total of more than 2,400 RV spaces (see the preceding section). There are also a number of homes for seasonal, recreational, or occasional use in the Project vicinity and workers may seek alternative living situations including Airbnb units and spare bedrooms in homes that residents would be willing to rent to construction workers.

(c) Whether or not meeting the direct construction and indirect work force's housing needs might constrain the housing market for existing residents and whether or not increased demand could lead to increased median housing values or median gross rents and/or new housing construction. Describe mitigation plans, if needed, to meet shortfalls in housing needs for these direct and indirect work forces.

As discussed in the preceding section, the estimated normally available supply of temporary housing resources exceeds estimated construction-related demand and meeting the construction workforce's housing needs is not expected to constrain the housing market for existing residents or lead to changes in housing values, rents, or new housing construction.

5.0 REFERENCES

Carter, A. 2022. Developer aims at transforming Clover Island Inn to micro apartments. KEPR TV. January 13. Available online at: https://keprtv.com/news/local/developer-aims-at-transforming-clover-island-inn-to-micro-apartments

Culverwell, W. 2020. A1 Hospitality shifts focus to four-star hotel. *Tri-Cities Area Journal of Business*. March. Available online at: https://www.tricitiesbusinessnews.com/2020/03/a1-hospitality/

Culverwell, W. 2022. Portland company's plan for hotels hits two big snags. *Tri-Cities Area Journal of Business*. February. Available online at: https://www.tricitiesbusinessnews.com/2022/02/microapartments-snag/

ECONorthwest. 2018. Columbia Point South – High-Level Feasibility Analysis. Prepared for the Port of Benton. March 26. Available online at: https://www.ci.richland.wa.us/Home/ShowDocument?id=7614

Hoang, M. 2017. Does the Yakima Valley need more hotels? *The Yakima Herald.* March 20. Available online at: https://www.yakimaherald.com/news/local/does-the-yakima-valley-need-more-hotels/article_5e232a60-0d30-11e7-a90d-e726980ff856.html

Office of Management and Budget. 2020. Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas, and Guidance on Uses of the Delineations of These Areas. OMB Bulletin No. 20-01. March.

U.S. Bureau of Economic Analysis. 2021. CAEMP25N Total full-time and part-time employment by industry, 2020. November 16. Available online at: http://www.bea.gov.

U.S. Bureau of Labor Statistics. 2022. Occupational Employment Statistics. May 2021 Data. Available online at: https://www.bls.gov/oes/current/oes_48300.htm

U.S. Census Bureau. 2020a. P1: Race. 2020 Census Redistricting Data (Public Law 94-171). Available online at: https://data.census.gov/cedsci/

U.S. Census Bureau. 2020b. P2: Hispanic or Latino, and Not Hispanic or Latino by Race. . 2020 Census Redistricting Data (Public Law 94-171). Available online at: https://data.census.gov/cedsci/

U.S. Census Bureau. 2021. HH-6. Average Population Per Household and Family: 1940 to Present. Current Population Survey, March and Annual Social and Economic Supplements. December. Available online at: https://www.census.gov/data/tables/time-series/demo/families/households.html

U.S. Census Bureau. 2022a. B19301: Per Capita Income in The Past 12 Months (In 2019 Inflation-adjusted Dollars). 2016-2020 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/

U.S. Census Bureau. 2022b. B19013: Median Household Income in the Past 12 Months (in 2019 Inflation-Adjusted Dollars). 2016-2020 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/

U.S. Census Bureau. 2022c. S1701: Poverty Status in the Past 12 Months. 2016-2020 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/

U.S. Census Bureau. 2022d. DP04: Selected Housing. 2016-2020 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/

U.S. Census Bureau. 2022e. B25004: Vacancy Status. Universe: Vacant Housing Units. 2016-2020 American Community Survey 5-Year Estimates. Available online at: https://data.census.gov/cedsci/

Washington Employment Security Department. 2022. Historical resident Labor Force and Employment, not seasonally adjusted. Index of Washington State and Labor Market Areas, 1990-2021. March 8. Available online at: https://esd.wa.gov/labormarketinfo

Washington OFM (Office of Financial Management). 2018a. 2017 County Growth Management Population Projections by Age and Sex: 2010–40. Forecasting & Research Division. August. Available online at: https://www.ofm.wa.gov/

Washington OFM. 2018b. Supplemental Projections of the Total Resident Population for Growth Management 2017 GMA Projections - Medium Series. Available online at: https://www.ofm.wa.gov/

Washington OFM. 2022a. Estimates of April 1 Population Density and Land Area by County. Forecasting and Research Division. July 26. Available online at: https://ofm.wa.gov/washington-data-research/population-demographics

Washington OFM. 2022b. Population Change and Rank for Counties, April 1, 2020 to April 1, 2022. Forecasting and Research Division. Available online at: https://www.ofm.wa.gov/

Washington OFM. 2022c. Population and Components of Change, 1960 to Present. Forecasting and Research Division. July 26. Available online at: https://ofm.wa.gov/washington-data-research/population-demographics

Washington OFM. 2022d. Postcensal Estimates of April 1 Housing Units, 1980, 1990 to Present. Forecasting and Research Division. February 22. Available online at: https://www.ofm.wa.gov/