ECONOMIC DEVELOPMENT

TACOMA TIDEFLATS SUBAREA PLAN & EIS

April 24, 2024

This issue paper summarizes information specific to economic development for the Port of Tacoma Manufacturing Industrial Center. Existing conditions, goals, policies, and actions relevant to economic development are included in the document. This content, along with content from issue papers focused on other topics, will be integrated into the Draft Subarea Plan.

Workplan Outcomes

When the Tideflats subarea planning effort began, the City of Tacoma, the Port of Tacoma, the Puyallup Tribe, Pierce County, and the City of Fife agreed that the eventual adoption of the Tideflats Subarea Plan would lead to outcomes that included environmental protections, environmental remediation, human health and safety, economic development, preservation of manufacturing and industrial lands, and streamlined permitting and review.

The outcomes that are relevant to this issue paper are:

- The Subarea Plan will protect the fisheries and shellfish resources that are culturally and economically essential to the tribe and shall support continued growth of the regional economy and the currently estimated 29,000 existing family-wage jobs in the maritime, manufacturing and industrial sectors; the provision of infrastructure and services necessary to support these areas; and the important role of the Tideflats area as an economic engine for the City of Tacoma, Pierce County, Washington State, and the region while protecting the livability of surrounding areas.
- The Plan will support, protect, and improve health and safety of area employees and residents of surrounding communities.
- The Plan will ensure the ability of the participating governments to compete effectively for grant funding.
- The Subarea Plan will retain sufficient planning flexibility to secure emerging port and manufacturing/industrial opportunities and other economic opportunities.

Planning Requirements

The study area for the Subarea Plan is the Port of Tacoma Manufacturing Industrial Center (MIC). The Tideflats Subarea Plan will meet PSRC requirements around planning for MICs). The requirements that are relevant to this paper are:

- Include a vision statement that commits to accommodating employment growth and preservation of an urban industrial land base.
- Describe the center's economic role within the city, county, and region.
- Encourage coordination with tribes, ports, military installations, and special purpose districts, and adjacent jurisdictions, when applicable.
- Include the existing number of jobs in the center. Industrial Employment Centers should have at least 10,000 existing jobs. Industrial Growth Centers should have at least 4,000 existing jobs.
- Include the share of existing industrial employment. Regional manufacturing/industrial centers must retain a minimum 50% industrial employment.
- Establish employment growth targets that accommodate a significant share of the jurisdiction's manufacturing/industrial employment growth, in support of VISION 2050 and the Regional Growth Strategy. Policies should demonstrate capacity to accommodate employment growth targets. Industrial Employment Centers should plan for at least 20,000 jobs. Industrial Growth Centers should plan for at least 10,000 jobs.
- Describe key economic sectors and industry clusters in the center, including those recognized in the Regional Economic Strategy.
- Demonstrate the center's market potential for accommodating future job growth.
- Identify strategies to support or retain manufacturing/industrial industries and jobs (i.e., workforce, apprenticeships, land value policies, parcel aggregation, etc.)
- Work to reduce the risk of industrial displacement through a variety of anti-displacement strategies.
- Expand access to economic opportunities through actions such as adopting a priority hire ordinance, encouraging workforce development partnerships, and identifying pipeline education or training opportunities.

Existing Conditions

Key Takeaways

- **The Tideflats is a local, regional, and national asset.** The MIC is an active industrial area with significant existing jobs in core industrial sectors. The area has a long history of industrial employment and is a key component of a regional system of manufacturing and industrial centers that stretches from the Cascade Industrial Center in the North to the Frederickson MIC in the south.

- **Industrial activities rely on a diverse and concentrated support cluster present in the study area**, including businesses engaged in fueling operations, marine electronics, refrigeration and gear manufacture, naval architecture, and other professional services. The study area also includes a range of industrial services and repair, metal fabricators and machine shops, and commercial, residential, and civil construction contractors and builders.
- **As of 2019, total employment within the Port of Tacoma MIC was 10,161, an increase of 735 jobs over the preceding ten years.** About 68% of employment in the MIC is either within the Wholesale Trade, Transportation, and Utilities (WTU) sector (42%) or the Manufacturing sector (26%). Much of the growth between 2010 and 2019 has been driven by the WTU sector while the Manufacturing sector has shrunk from 2010 levels.
- **Industrial activities provide a range of job opportunities.** Manufacturing, transportation, utility, maritime, industrial services and repair, metal fabricators, machinist, and contractor jobs are available to workers with formal education less than a college degree. These jobs provide a source of stable family-wage employment with opportunities for advancement, relative to service sector jobs accessible at similar levels of education.

Economic and Employment Profile

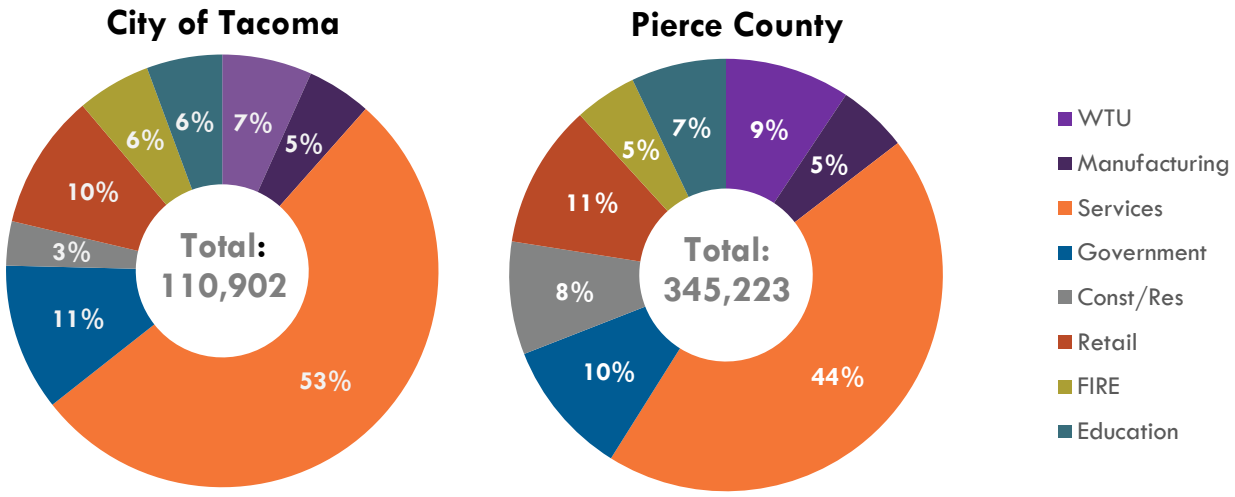
The Tideflats has an established history of maritime industrial activity, dating back to the 1800s. Early uses included lumber and shingle mills, as well as shipyards, flour mills, electrometallurgy, and electrochemical companies. Today it continues to be a key component of the regional industrial ecosystem, though the definition of U.S. domestic industrial activity has grown to include the storage and transportation of goods and products on their way to final consumer in addition to more traditional industrial production activities like manufacturing - a shift due to increased competition stemming from globalization. A modern definition of the industrial sector describes a range of activities centered on not just the production, but also distribution and repair of goods and materials. For the purposes of this study, we define the industrial sector as including Manufacturing, WTU (Warehousing, Transportation, and Utilities), and Construction and Resources.

The Port of Tacoma MIC is an active industrial area with significant existing jobs in core industrial sectors, including cargo terminals, manufacturers, warehouses, repair facilities, and rail yards, and is a catalyst for significantly more related and indirect jobs throughout the region. The study area's industrial strengths center around the warehousing, transportation, and utility (WTU) sector which is closely related to the Port of Tacoma's presence in the study area.

The Port of Tacoma enjoys assets such as a strategic location relative to the origins and destinations of container traffic, a naturally deep harbor with the ability to accept large ships, significant public investment in a robust set of terminal facilities, and efficient cargo handling operations. The Port of Tacoma's activities are centered around the port and industrial lands adjoining the Hylebos Waterway, Blair Waterway, Sitcum Waterway, Puyallup River, Saint Paul Waterway, and Middle Waterway.

Exhibit 1 outlines Tacoma's and Pierce County's employment by sector in 2019. Combined manufacturing and WTU jobs make up about 12% and 14% of Tacoma's and Pierce County's total employment, respectively. Construction jobs make up 3% Tacoma's jobs while it makes up 8% of Pierce County jobs. Services are by far the most significant employment sector at 53% and 44% of Tacoma's and Pierce County's total employment, respectively.

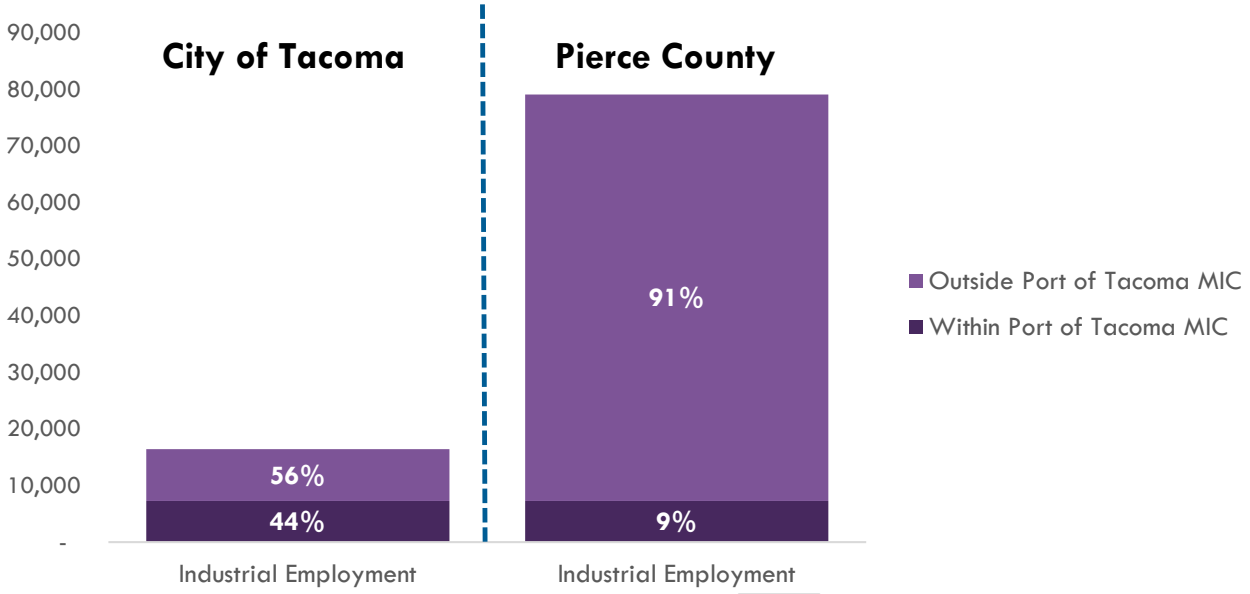
Exhibit 1 Tacoma and Pierce County Employment by Sector, 2019



Source: PSRC, 2020; BERK, 2020.

Unsurprisingly given its status as a one of three manufacturing industrial centers in Pierce County, the Port of Tacoma MIC accounts for a significant portion of both the City of Tacoma's and Pierce County's industrial employment. Exhibit 2 outlines the share of Tacoma's and Pierce County's industrial employment coming from within the Port of Tacoma MIC and the share coming from outside the Port of Tacoma MIC.

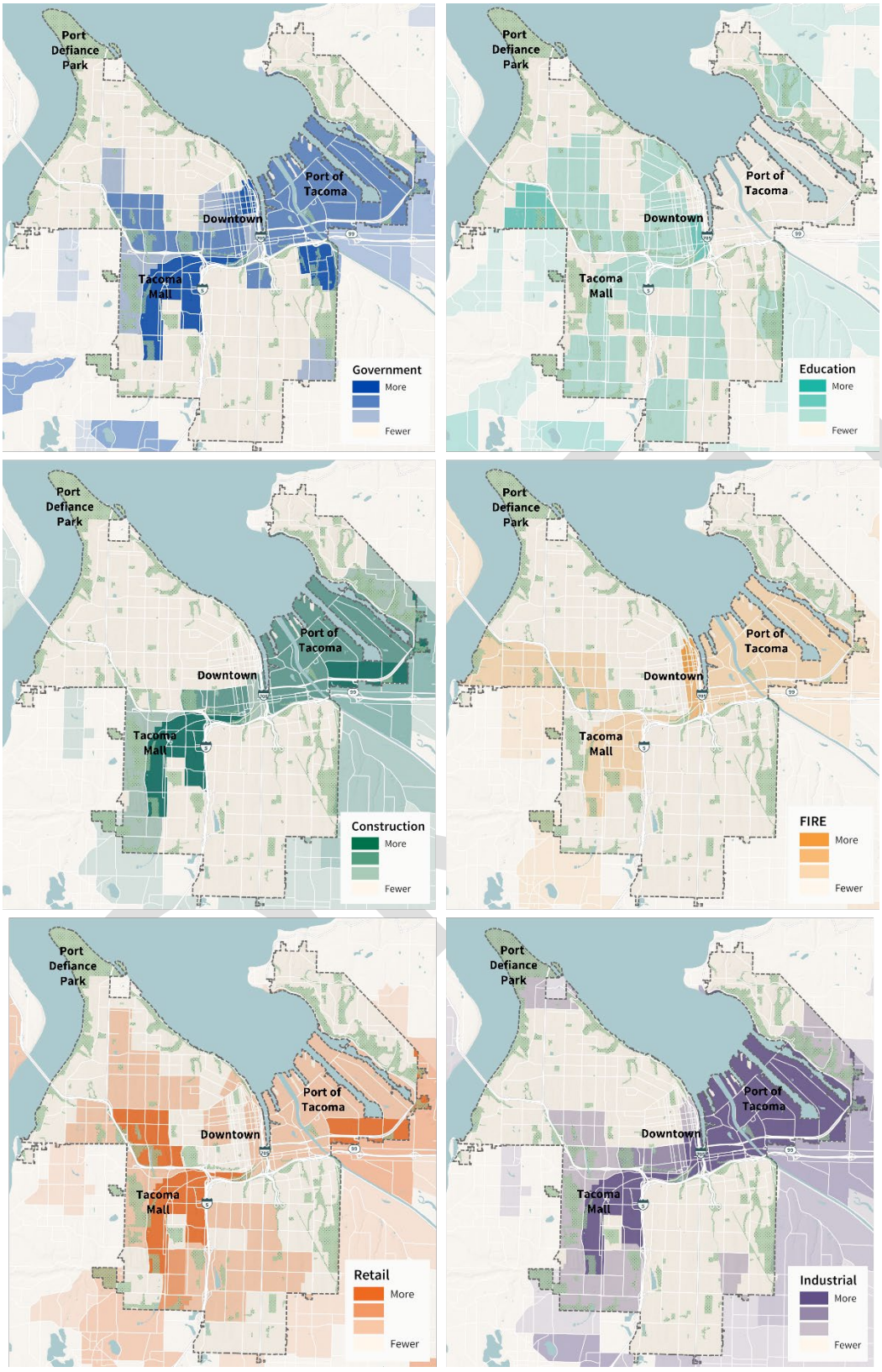
Exhibit 2 **Share of Industrial Employment Within the Port of Tacoma MIC – Tacoma and Pierce County, 2019**



Notes: Industrial employment defined as including manufacturing, WTU, and construction and resources jobs.
Source: PSRC, 2020; BERK, 2020.

Industrial jobs in the Port of Tacoma MIC account for 44% of all industrial jobs in Tacoma. Other clusters of industrial jobs in Tacoma include the southern portion of Central Tacoma around the Interstate 5 (I-5) and Highway 16 (WA-16) crossing as well as portions of South Tacoma alongside both sides of South Tacoma Way. Industrial jobs in the City of Tacoma are clustered in these three areas while jobs in other sectors are more distributed across the city. This pattern likely reflects the locational needs and advantages of the study area and South Tacoma for industrial uses as well as zoning and land use regulations within the city. See Exhibit 3.

Exhibit 3 Employment Concentrations by Major Industry – City of Tacoma, 2022



Source: PSRC, 2022; Seva Workshop, 2023;

Industrial jobs in the Port of Tacoma MIC account for 9% of all industrial jobs in the County. In comparison, the Frederickson MIC accounted for about 4% of all industrial jobs in the County as of 2010 while the Sumner-Pacific MIC accounted for about 14% of all industrial jobs in the County as of 2015.[1]

Industrial jobs can be a significant source of employment for people without college degrees. For workers without a college degree and/or lower skilled workers, industrial jobs can typically provide higher wages, better benefits, and better opportunities for career advancement and skill development compared with other employment opportunities-. For some workers in the region, industrial jobs are a pathway to economic advancement. See Exhibit 4 and Exhibit 5.

[1] Employment density alone does not capture the extent and impact of industrial activity, especially for an area like the Port of Tacoma MIC, since trends such as containerization have reduced the need for personnel but increased productivity.

Exhibit 4. Industrial Sectors Compared with Other Sectors – Tacoma, 2018

Sector	Employment	%	Median Annual Earnings
Industrial: Manufacturing, WTU, and Construction			
Manufacturing	**8,922**	**8.7%**	**$46,802**
Transportation and warehousing, and utilities	**6,447**	**6.3%**	**$41,726**
Wholesale trade	**2,906**	**2.8%**	**$47,832**
Construction	**6,711**	**6.5%**	**$42,893**
Services			
Educational services, and health care and social assistance	25,084	24.4%	$39,701
Arts, entertainment, and recreation, and accommodation and food services	10,883	10.6%	$22,323
Professional, scientific, and management, and administrative and waste management services	9,925	9.7%	$51,458
Other services, except public administration	5,347	5.2%	$27,851
Information	1,862	1.8%	$49,432
Retail			
Retail trade	12,012	11.7%	$27,925
Resources			
Agriculture, forestry, fishing and hunting, and mining	623	0.6%	$24,634
Government			
Public administration	6,680	6.5%	$59,638
Finance, Insurance, and Real Estate (FIRE)			
Finance and insurance, and real estate and rental and leasing	5,230	5.1%	$41,058

Sources: American Community Survey (ACS) 5-Year Estimates, 2014-2018; BERK, 2020.

More detailed and recent information on average incomes at the Port of Tacoma and the NWSA show the same patterns. Containerized cargo employment, on average, provides the highest annual compensation among all lines of business and segments across both Ports and The Northwest Seaport Alliance. The overall average estimated annual total compensation for the NWSA was $94,700 for 2017.

Exhibit 5. Average Annual Labor Income by Line of Business and Segment, Port of Seattle, Port of Tacoma, and The Northwest Seaport Alliance, Washington, 2017 and 2019

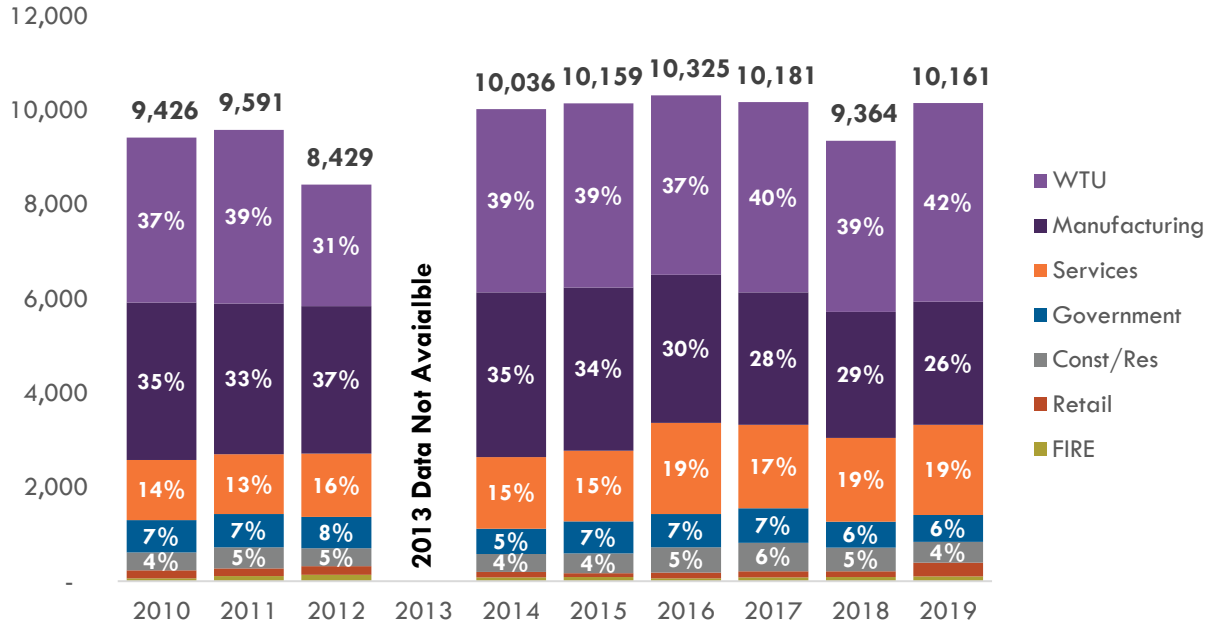
	Average Income
The Northwest Seaport Alliance (2017	**$94,662**
Containerized Cargo	$100,837
Automobiles	$83,335
Breakbulk, Logs, and Other Cargo	$74,840
Port of Seattle Sea-Tac International Airport (2017) *	**$41,819**
Port of Seattle Commercial Fishing (2017)	**$43,524**
Port of Seattle Recreational Marinas and Other Business (2017)	**$99,217**
Port of Tacoma Tenants and Other Business (2017	**$76,225**

Note: * Average income of Sea-Tac International Airport are sourced from the Port of Seattle's Sea-Tac International Airport Economic Impacts study, August 2018.
Source: Community Attributes Inc., 2019.

Historic Growth Trends

As of 2019, total employment within the Port of Tacoma MIC was 10,161, an increase of 735 jobs over the past 10 years. About 68% of employment in the MIC is either within the Wholesale Trade, Transportation, and Utilities (WTU) sector (42%) or the Manufacturing sector (26%). Much of the growth since 2010 has been driven by the WTU sector while the Manufacturing sector has shrunk from 2010 levels. See Exhibit 6. Other significant industry sectors include Services (19%), Government (6%), and Construction & Resources (4%).

Exhibit 6 Tacoma MIC Employment by Sector, 2010-2019



Industry	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
WTU	3,504	3,693	2,583		3,894	3,915	3,813	4,044	3,639	4,220
Manufacturing	3,342	3,198	3,135		3,501	3,469	3,145	2,810	2,679	2,619
Services	1,284	1,273	1,341		1,528	1,506	1,939	1,778	1,784	1,912
Government	686	703	669		535	679	703	730	549	576
Construction/Resource	378	455	381		382	420	543	607	504	437
Retail	172	157	183		112	81	117	130	119	294
FIRE	60	112	137		84	89	64	82	90	103
Total	**9,426**	**9,591**	**8,429**	**-**	**10,036**	**10,159**	**10,324**	**10,181**	**9,364**	**10,161**

Notes: Total employment estimates for 2013 are currently unavailable.
Source: PSRC, 2020; BERK, 2020.

Based on PSRC data from 2010 to 2019, employment in the Tacoma MIC has grown at a compound annual rate of 0.8%. However, the mix of employment has been shifting over time. Manufacturing jobs which comprised over one-third of jobs in the area in 2010, account for about one-quarter in 2019, equivalent to an annual decline of 2.4%. Government employment has also been on a declining trajectory, by 1.7% annually. Warehousing, transportation, and utilities (WTU) accounts for about 42% of employment in 2019 and continues to grow in pace with the overall employment growth. Sectors that are growing more rapidly compared to overall growth include Services (4.1%), Retail (5.5%), and FIRE (5.6%), albeit from a smaller initial base of employment.

Exhibit 7 Tacoma MIC Employment Growth Rates Overall and by Sector, 2010-2019

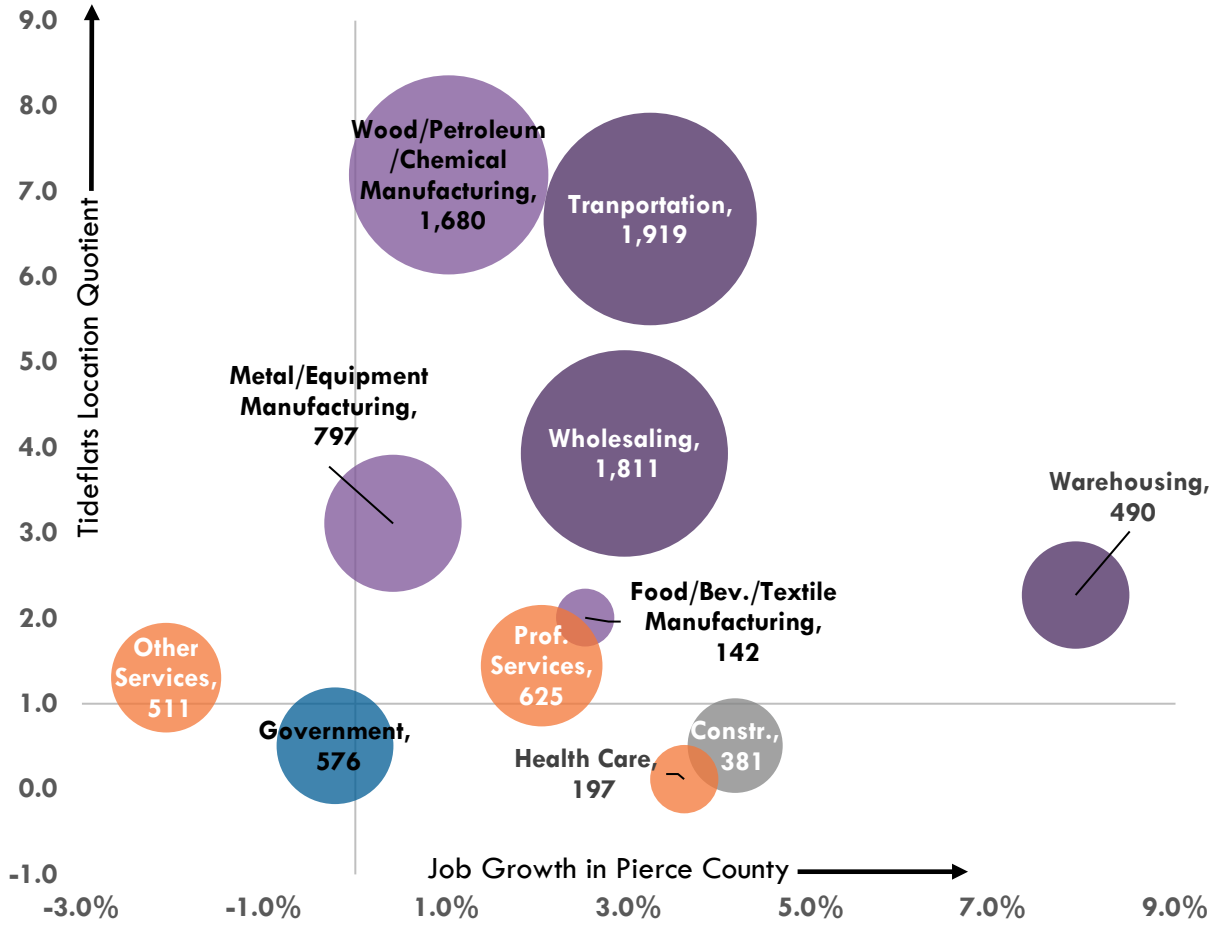
Industry	CAGR 2010-2019	2010 Shares	2019 Shares
WTU	1.9%	37%	42%
Manufacturing	-2.4%	35%	26%
Services	4.1%	14%	19%
Government	-1.7%	7%	6%
Construction/Resources	1.5%	4%	4%
Retail	5.5%	2%	3%
FIRE	5.6%	1%	1%
Total	**0.8%**		

Source: PSRC, 2020; BERK, 2024.

Port of Tacoma MIC Competitive Strengths

The Port of Tacoma MIC has competitive strengths in the sectoral clusters of manufacturing as well as WTU (Exhibit 8). Cluster analysis based on employment data categorized to two-digit NAICS sub-sector codes derived from the Puget Sound Regional Council (PSRC) is one way to analyze competitive strengths. On the vertical axis of Exhibit 8 is the location quotient of each cluster, with sub-sectors with location quotients greater than 1.0 representing sub-sectors that have a greater concentration in the Port of Tacoma MIC than elsewhere in Pierce County. On the horizontal axis is compound annual employment growth in Pierce County over the last ten years from 2010 to 2019. The size of the bubbles represents the employment in each sub-sector in the Port of Tacoma MIC for 2019.

Exhibit 8 Location Quotient and Job Growth Analysis, 2019



Note: Job growth is calculated by taking the compound annual growth rate for each industry sector between 2010 to 2019 for Pierce County. Location quotients are calculated using 2019 employment information provided by PSRC.
Sources: PSRC, 2020; BERK, 2020.

The upper right-hand quadrant of the graph shows the sub-sectoral clusters in the Port of Tacoma MIC with the highest concentration of jobs and highest employment growth. Sub-sectors with both high concentration of jobs and relatively high employment growth include transportation, warehousing, and wholesaling – all sub-sectors associated with the WTU sector. The transportation (6.7 location quotient) and wholesaling (3.9 location quotient) sub-sectors are highly concentrated in the Port of Tacoma MIC. Employment in the transportation subsector is likely fueled by Port of Tacoma marine cargo operations as well as related private businesses involved in general freight trucking, coastal freight transportation, pipeline transportation, general warehousing, and storage, among others. The wholesaling subsector is made up of a diverse array of private firms wholesaling motor vehicle parts, lumber, construction equipment, professional and industrial supplies, hardware, fresh fruit, and groceries, among others.

Other sub-sectors highly concentrated in the MIC include wood, petroleum, and chemical manufacturing (7.2 location quotient) as well as metal and equipment manufacturing (3.1 location

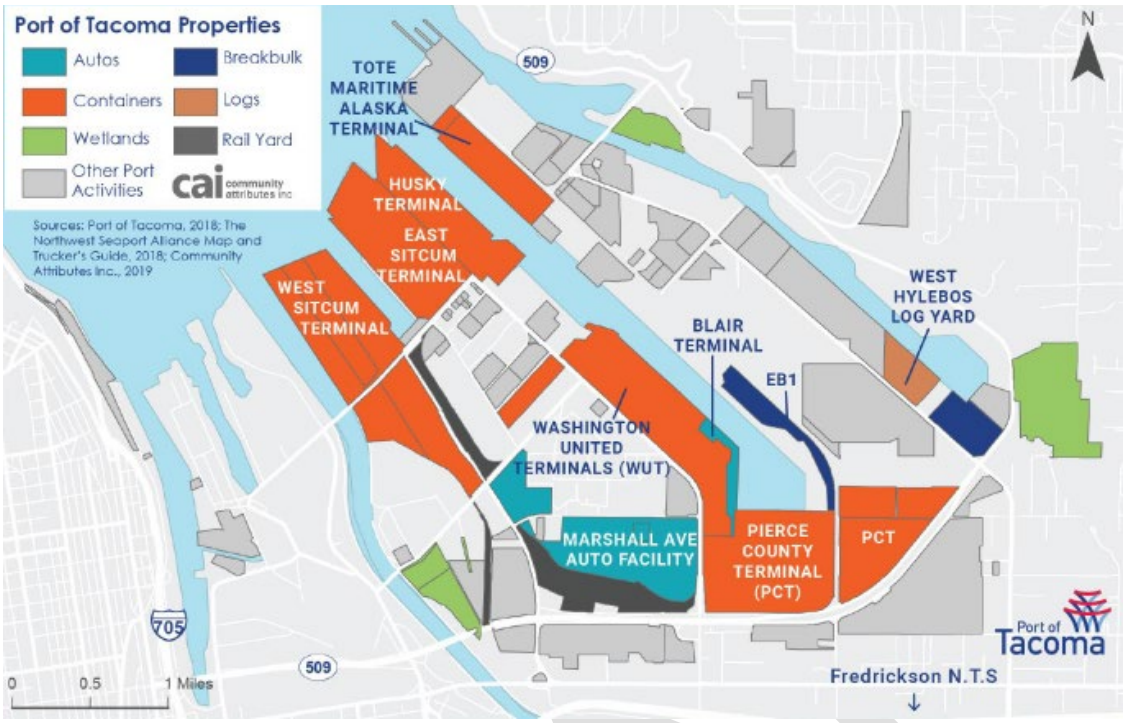
quotient). Firms in the metal and equipment sub-sector include such businesses as boat and shipbuilding firms, firms related to iron foundries and metal manufacturing, and firms manufacturing motor vehicle parts, among others. These sub-sectors are also among the slowest growing sub-sectors in Pierce County over the last several years. One potential cause for the slowing growth of these manufacturing sub-sectors may be recent innovations such as increasing automation. Studies suggest a negative relationship between automation and routine manual employment in local labor markets (Bharadwaj and Dvorkin, 2019).

Employment Centers and Location

Jobs within the MIC include employment from the Port of Tacoma, the Puyallup Tribe, and from private firms within the area. Employment supported by the Port of Tacoma includes both jobs supporting the Port's marine cargo operations as well as jobs with tenants and/or businesses leasing Port of Tacoma real estate. The Puyallup Tribe's employment sectors include a growing marine cargo operation under its subsidiary economic development arm, Tahoma Global Logistics, as well as jobs under general government. Tribal members also fish within the MIC supporting Treaty fisheries-oriented jobs.

In 2015, the Port of Tacoma and Port of Seattle combined marine cargo operations to form the Northwest Seaport Alliance (NWSA). Information on employment supporting marine cargo operations is available for NWSA based on a recent economic impact analysis produced for NWSA in October 2019. Activities included in employment estimates include employment located on South Harbor properties which includes land and activities outside the study area. See Exhibit 9.

Exhibit 9 South Harbor Properties – Northwest Seaport Alliance



Sources: CAI, 2019

Other employment within the Port of Tacoma MIC comes from private businesses. These include a broad range of industrial and non-industrial tenants and activities. These include the Earley Business Center, SAFE Boats for boat manufacturing, and the Fabulich Center which provides office space for government employees. In addition, tenants include Trident Seafoods, Darling International, PepsiCo/Quaker and Puget Sound Energy. Activities in the MIC have seen recent shifts and changes that may not be captured in this data. For example, SAFE Boats closed its Tacoma shipyard and has since reopened but employment has not yet fully recovered.

Exhibit 10. Port of Tacoma Tenant Properties

Sources: CAI, 2019

As shown in Exhibit 11 direct employment at the Port of Tacoma from the NWSA South Harbor Marine Cargo operations was around 12,950 in 2017. Employment with tenants or other businesses leasing real estate from the Port of Tacoma was around 1,500 in 2017. The total direct employment was estimated to be 14,450. These jobs reflect employment connected to the NWSA activities connected to the Port of Tacoma, which includes land and activities outside the MIC study boundary. Direct jobs in the city of Tacoma were estimated to be 10,040. As of 2019, PSRC data on employment indicates there is a total of 10,161 jobs within the MIC. See

Exhibit 11. Port of Tacoma Employment

Category	Jobs
Port of Tacoma – The NWSA South Harbor Marine Cargo Operations	12,950 (2017)
Port of Tacoma Tenants and Other Business	1,500 (2017)

Sources: CAI, 2019.

Exhibit 12. Direct Jobs, Revenue, and Income by Jurisdiction, King and Pierce Counties, 2017

City	Jobs	Output (mils $)	Labor Income (mils $)
Seattle	18,410	$3,297.1	$1,246.2
Tacoma	10,040	$3,298.2	$940.3
Sumner	1,820	$500.2	$174.0
Fife	1,150	$315.8	$110.3
Kent	660	$184.9	$63.2
Puyallup	510	$140.0	$48.9
Uninc. Pierce	480	$132.4	$46.3
Auburn	360	$98.3	$34.3
Renton	250	$68.3	$23.9
Tukwila	220	$62.3	$21.3
Lakewood	190	$52.4	$18.3
Uninc. King	100	$28.2	$9.8
Bellevue	60	$17.5	$5.4
Issaquah	50	$14.5	$5.1
Burien	30	$9.0	$3.2
Kirkland	30	$7.4	$2.6
Des Moines	10	$4.0	$1.4
Kenmore	10	$3.8	$1.3
Edgewood	10	$3.3	$1.2

City	Jobs	Output (mils $)	Labor Income (mils $)
Total	**34,390**	**$ 8,238.1**	**$2, 756.9**

Sources: CAI, 2019.

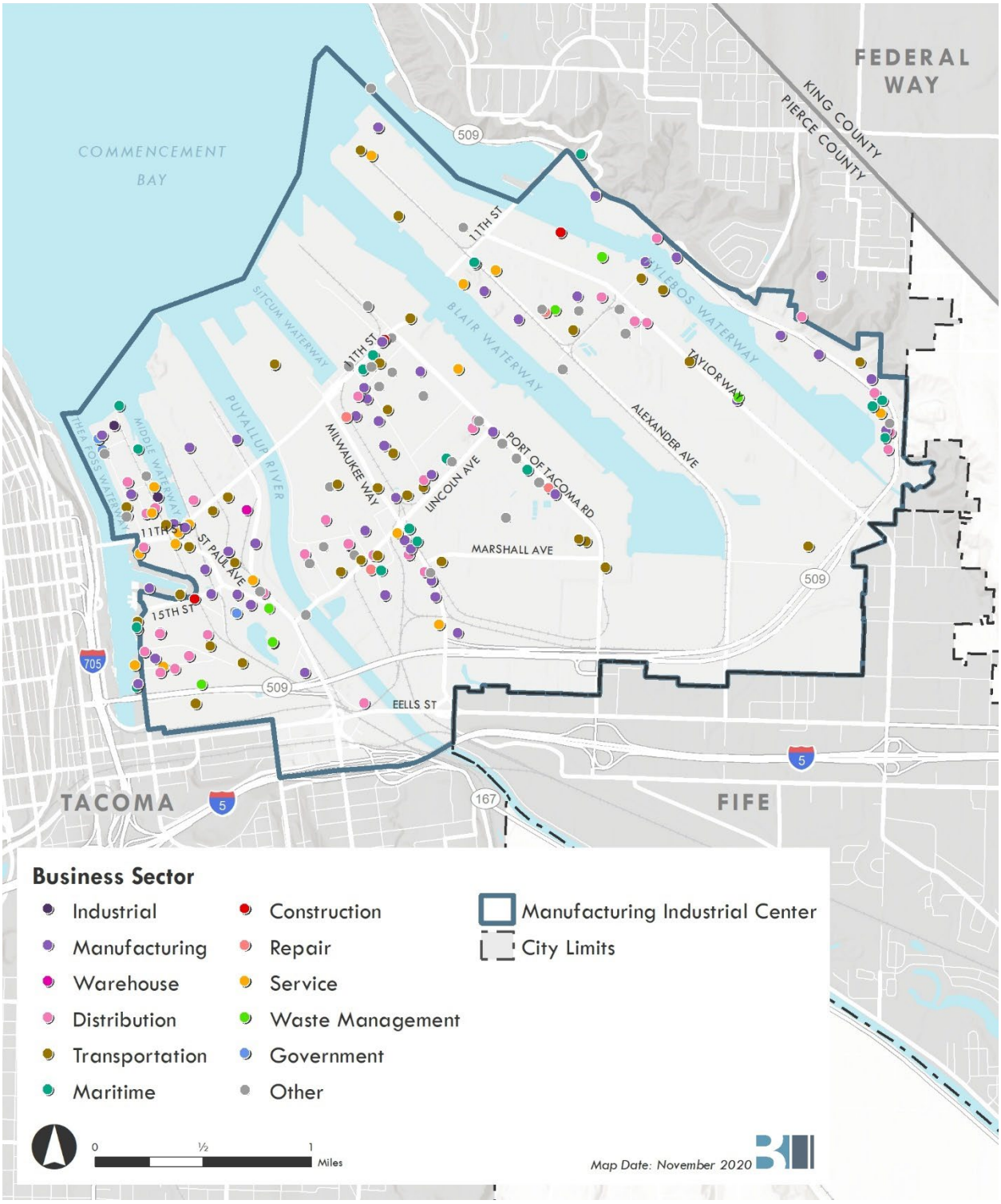
Exhibit 13. Port of Tacoma MIC Employment

Category	Jobs
Port of Tacoma MIC	10,161 (2019)
Port of Tacoma MIC	9,941 (2022)

Sources: PSRC, 2022.

As mentioned previously, significant sub-sectors of employment from private businesses include paper and wood manufacturing, metal and equipment manufacturing, wholesaling, transportation/distribution, and warehousing/storage. These sub-sectors can often be complementary and, as a result, many firms within these sub-sectors may often be located together to take advantage of synergies. In the Port of Tacoma MIC, many of these private businesses are clustered together in the western portion of the MIC alongside the Thea Foss and Middle waterways as well as in the central portion of the MIC between the Puyallup River and Blair Waterway below the Port of Tacoma's Marine Terminal (Exhibit 14). Mapping of firms in the MIC is based on a 2019 study done by the School of Engineering and Technology at the University of Washington – Tacoma (West, 2019).

Exhibit 14 Map of Firms by Sector, Port of Tacoma MIC

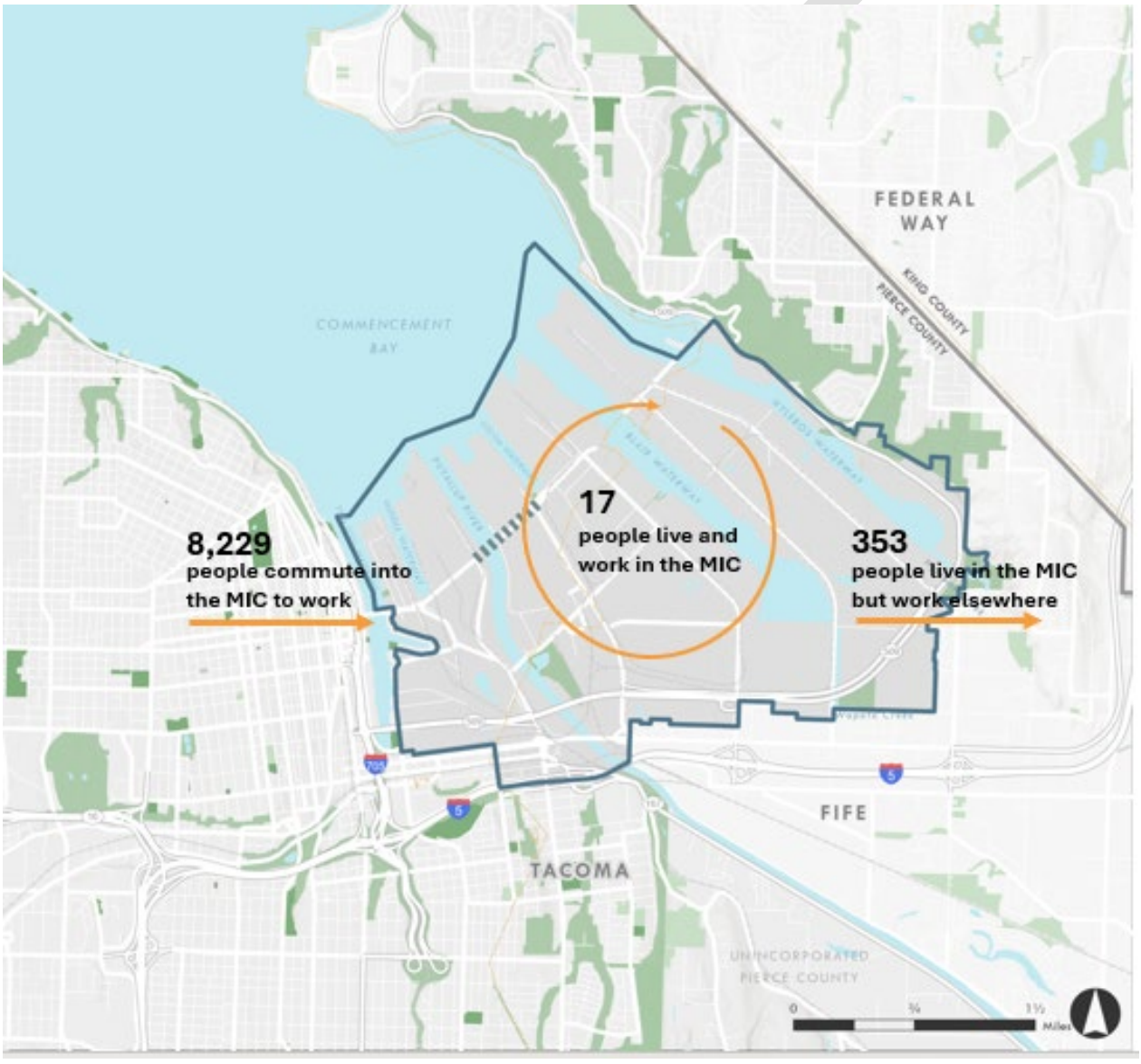


Note: Mapping based on existing 2019 study from UW-Tacoma with additional sector classification done by BERK.
Sources: School of Engineering and Technology, University of Washington – Tacoma, 2019; BERK, 2020.

Journey-to-Work Analysis

Exhibit 15 shows inflow and outflow for all jobs in the Port of Tacoma MIC for 2017. The MIC primarily sees workers who live outside of the area commuting in for work and sees very few residents who live in the area. About 8,229 workers are estimated to commute into the area for work while 353 residents are estimated to leave the area to work in another location. Only 17 residents are estimated to live and work in the MIC area.

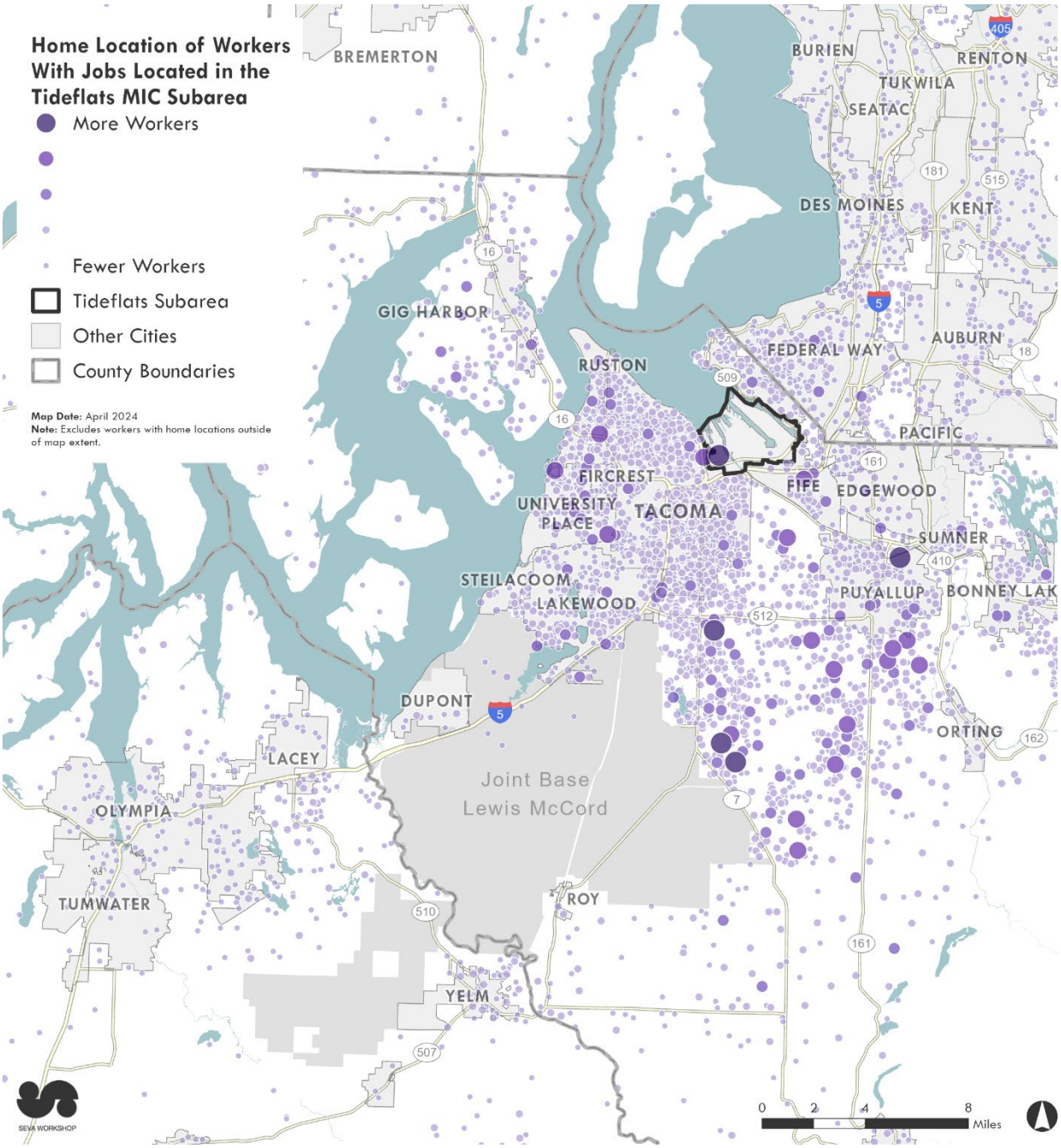
Exhibit 15 Inflow/Outflow Counts of all Jobs for Port of Tacoma MIC, 2017



Note: Overlay arrows do not indicate directionality of worker flow between home and employment locations.
Source: US Census, OnTheMap, 2017.

This data illustrates that the MIC is a regional employment destination within the South Sound. Workers in the Port of Tacoma MIC primarily live in either the City of Tacoma or surrounding communities in the South Sound such as South Hill, Lakewood, Parkland, and Spanaway. Exhibit 16 outlines the home locations of workers with jobs located in the Port of Tacoma MIC.

Exhibit 16 Home Location of Workers with Jobs Located in the Port of Tacoma MIC



Sources: U.S. Census Bureau, OnTheMap, 2017; Seva Workshop, 2022

Employment Estimates

A complex set of economic and market factors affect whether development takes place, whether it results in changes in employment density, and on what timeline these changes will occur. Land use changes and regulatory changes can create conditions where development can occur, but they cannot predict future employment.

The Environmental Impact Statement (EIS) tested a range of employment estimates associated with four development Alternatives. The No Action/Alternative 1 and Alternative 4 were tested with an employment estimate of 12,500 jobs, Alternative 2 had an estimate of 16,800 jobs, and Alternative 3 had an estimate of 20,000 jobs. These estimates were based on historic trends and the compound annual growth rate in jobs from 2010 to 2019. Under the No Action (current plan) Alternative, and Alternative 4, these historic growth trends were continued until 2044. For Alternatives that include land use changes (Alternatives 2 and 3), comparable employment densities from recent regional studies were used to estimate employment.

PSRC sets minimum eligibility criteria for designation as an Industrial Growth Center MIC or an Industrial Employment Center MIC. Under these criteria, the Port of Tacoma MIC today would meet all of the criteria for an Industrial Growth Center MIC but would not meet criteria for designation as an Industrial Employment Center MIC. Policies and actions that address employment retention and additional job creation will be necessary for the Port of Tacoma MIC to reach the 20,000 job target that is required of Industrial Employment Center MIC designation.

Economic Impact Assessment

The Port of Seattle and Tacoma represent a core economic development asset for Washington state and elsewhere in the U.S. In addition to facilitating the movement of millions of twenty-foot equivalent units (TEUs) of containerized cargo as well as millions of metric tons of breakbulk, automobiles, logs, and liquid bulk, these ports support industrial and non-industrial activities that spur job growth and economic wealth creation in the central Puget Sound region and Washington state.

The industrial activity in the MIC is inextricably linked to other key sectors in the greater Pierce County and Washington State economy, such as retail, services and agriculture. For example, food products are stored, packaged and distributed from the study area to restaurants, grocery stores, and other businesses throughout the city and Pierce County region. Similar linkages include local shipbuilding firms supplying the region's maritime economy.

One way to assess and quantify the impact of these linkages is to quantify the purchasing patterns of key sectors as they relate to goods and services demanded by other sectors. This form

of analysis is referred to as input-output analysis. Results of these analyses and the main activities that drive these linkages are described below.

The Northwest Seaport Alliance (NWSA), of which the Port of Tacoma is a part, is one of the largest marine cargo gateways in the U.S. In 2017, The NWSA handled more than 3.7 million twenty-foot equivalent units (TEUs) of containerized cargo. The majority of this cargo was international, though 700,000 TEUs were shipped to and from Alaska, Hawaii, and other domestic locations. In addition to containerized shipping, The Northwest Seaport Alliance also handles non-containerized cargo, including breakbulk, liquid bulk, automobiles, and logs. The Port of Tacoma, as part of the NWSA, is a significant driver of economic activity within the Port of Tacoma MIC. The economic impact of the Port of Tacoma is driven by two lines of business: marine cargo operations and Port of Tacoma tenants. Economic impacts for the Port of Tacoma were estimated by a 2019 study produced by Community Attributes Inc. for the NWSA (NWSA, 2019). The results from this study are outlined in below

Within the NWSA, the largest driver of economic impact was containerized cargo. In 2017, the NWSA handled more than 26.1 million metric tons of containerized cargo, directly supporting an estimated 14,900 jobs, $1.5 billion in labor income (including wages and monetized benefits), and $4.5 billion in business output.

Automobile import activities directly supported 1,330 jobs in 2017, as well as more than $108.4 million in labor income and nearly $309 million in business output. Breakbulk and other marine cargo handling directly supported 3,880 jobs in 2017, nearly $292 million in labor income and more than $1 billion in business output.

Combined across all marine cargo activities, the NWSA directly supported 20,100 jobs, and $1.9 billion in labor income in 2017. The average annual wage among direct jobs supported by marine cargo through the NWSA, including benefits, was nearly $95,000. In total, the NWSA marine cargo directly supported $5.9 billion in business output in 2017.

Factoring in upstream business-to-business transactions (indirect) and worker earned income household consumption expenditures (induced), the NWSA activities supported 58,400 jobs across the state economy, or the equivalent of a job multiplier of 2.9. In other words, for every direct job, marine cargo activities through the NWSA support an additional 1.9 jobs throughout the Washington state economy.

The 2019 study found that the marine cargo operations for Port of Tacoma directly employed a total of 12,950 people and those jobs directly generated $3.70 billion in annual economic output. Port of Tacoma tenants and other businesses were found to directly employ 1,500 people and those jobs directly generated $0.85 billion in annual economic output.

The economic output from the direct jobs supporting marine cargo operations at NWSA indirectly supported an additional 36,900 jobs across the Washington State economy while jobs from Port of Tacoma tenants and other businesses indirectly supported an additional 5,200 jobs across the

Washington State economy. In total, the Port of Tacoma's economic impact across the state was estimated to support 56,550 jobs and $13.88 billion in annual economic output.

Exhibit 17 Estimated Total Impacts from Port of Tacoma in the Port of Tacoma MIC

Economic Impact	Employment	Economic Output
Direct Economic Impact		
Marine Cargo Operations	12,950	$3.70 Billion
Port of Tacoma Tenants and Other Businesses	1,500	$0.85 Billion
Indirect Economic Impact		
Marine Cargo Operations	36,900	$7.78 Billion
Port of Tacoma Tenants and Other Businesses	5,200	$1.55 Billion
Total Economic Impact	**56,550**	**$13.88 Billion**

Sources: CAI, 2019; BERK, 2020.

A 2019 study from the Center of Business Analytics at the Milgard School of Business at the University of Washington-Tacoma utilized an input-output model to measure the economic impact of the private businesses in the Port of Tacoma MIC on Pierce County. The results from this study are shown in Exhibit 17. It should be noted that this study was not a professionally prepared study and the findings should be used for reference purposes only.

Exhibit 18 Estimated Total Impacts from Private Businesses in the Port of Tacoma MIC

Economic Impact	Employment	Economic Output
Direct Economic Impact	5,165	$1.99 Billion
Indirect/Induced Economic Impact	10,640	$3.31 Billion
Total Economic Impact	**15,805**	**$5.30 Billion**

Sources: Center for Business Analytics at Milgard School of Business University of Washington, Tacoma, 2019; BERK, 2020.

The UW-Tacoma study found that all private businesses in the Port of Tacoma MIC directly employed a total of 5,165 people and those businesses directly generated nearly $2 billion in annual economic output. Those businesses and employees were estimated to then support an additional 10,640 jobs indirectly in Pierce County which are estimated to generate over $3 billion in annual economic output. The total impact of the private businesses in the Port of Tacoma MIC on Pierce County is estimated to support 15,805 jobs directly and indirectly and generate over $5 billion in annual economic output.

Economic Development Trends Summary

Global trends including the changing role of ports, trends in sectors such as logistics, warehousing, transportation, and utilities and manufacturing, changes to shipping technology, and growing interest in environmental sustainability will influence and shape the development and composition of the Port of Tacoma MIC in the years to come. These trends include (World Bank Transport Division, 2007):

- **Increased role of ports in regional economies.** Globalization of supply chains ensures that the extent of port access influences the competitiveness of local or regional producers. Low-cost, efficient port services can be a competitive advantage for local and regional firms. Along with anticipated growth in the regional economy, this dynamic suggests continued demand for efficient port services.
- **Consolidation of manufacturing**. Manufacturers have been concentrating production activity in fewer locations. This has increased demand for logistics and makes existing manufacturing activity highly dependent on transportation. Investments in transportation improvements are therefore a key economic development strategy.
- **Growing strength of logistics**. Logistics is a fast-growing sector that is expected to see increased demand. As businesses expand the geographic reach of their sourcing and distribution operations and consolidate manufacturing, logistics and transportation have become increasingly important. Specialist logistics providers have emerged who take on tasks such as preassembly, sequencing of parts, and customization of products. These emerging users prefer port areas and areas with easy access to ports and a key existing strength of the study area is the Warehousing, Transportation, Utility (WTU) sector which includes logistics. Logistic providers are already located in MICS such as the Sumner Pacific MIC with easy access to the Port of Tacoma and other MICs both north and south of Pierce County.
- **Technology impacts.** Technological advances are changing industrial sectors, affecting the nature and extent of port infrastructure and services. For example, containerization has reduced personnel requirements for cargo handling, increased the productivity of existing berths, and increased the capital needs of port operations.

  A range of advances in automation has increased productivity in recent decades. Like containerization, these technology advances in automation may reduce employment densities, but the resultant productivity increases are likely to grow these sectors.
- **Changing workforce needs.** Technology has also changed the skills required for industrial operations, creating workforce development and retraining needs across sectors. Workforce needs are also shifting toward higher-skilled, technologically proficient workers. The relative concentration of these workers in the central Puget Sound region may give this region a competitive advantage over other industrial areas. Economic development strategies will, however, need to directly address these workforce development needs.
- **Balancing environmental quality with economic development.** Industrial areas and maritime ports face growing concerns about environmental protection around a wide range of topics such as water pollution, air pollution, aesthetics, noise, transfer of foreign marine species, and more.

Climate vulnerability is also an issue. These concerns have increased demand for more environmentally sustainable land uses in industrial areas. Many industrial users and ports are making significant investments in facilities and changes in operations to address these concerns.

Local and regional dynamics also offer insight to future economic development strategies:

- **Maritime Sector.** Washington state has a large and diverse maritime sector with several competitive advantages that the Tacoma Tideflats can leverage. The state maritime industry has grown from a strong base of fishing fleets to include the full range of support services, international and regional ports, yard services, and more. The maritime sector now includes 1) commercial fishing and seafood products 2) logistics and shipping 3) passenger water transportation 4) ship and boat building, repair, and maintenance 5) ocean science technology and 6) maritime support services. Regional assets include world class research institutions and capabilities in ocean science, strong technology sector, fishing and seafood sectors that manage the a large. productive and sustainable wild fishing grounds, and the presence of advanced manufacturing including aerospace, military and defense, clean technology, and ship building. in comparison to other maritime clusters, Washington's maritime industry is a global leader in best practices, technology deployment and sustainable actions, from innovative port stormwater systems to the world's first hybrid tugboat. Investments such as the Maritime Innovation Center (MInC), the Tacoma Maritime Blue incubator based out of the Center for Urban Waters in the Tideflats contribute to innovation and economic growth in the region. The Port of Tacoma recently adopted the Northwest Ports Clean Air Strategy, which envisions changes in equipment, fuels, and infrastructure to phase out seaport-related emissions by 2050.
- **Green Energy Sector.** Transitioning to clean energy is key to addressing the climate crisis, and an economic opportunity for companies and cities that can supply viable and affordable clean energy solutions. It is also an enormous economic opportunity for companies that can power their operations with clean energy – doing so enables companies to sell to different customers and markets that are concerned with sustainability, even if the product itself does not change. An example of this is green hydrogen.
- **Industrial Symbiosis Sector.** Symbiosis infrastructure enables the efficient recovery and exchange of "waste" resources such as thermal energy (waste heat), water, nutrients, and bio-feedstock for production of chemicals, plastics, and wide variety of other materials and green products.
- **Green Building Technologies Sector.** This sector includes both new building products (e.g., cross-laminated timber, sustainable concrete) and related processes (e.g., modular building design, waste heat capture system design). Several innovative building products companies are located in Tacoma and the area is well positioned to take advantage of growing demand for these products.
- **Warehousing growth.** National real estate investment companies have been investing in new construction in warehousing and logistics properties, showing market demand for the area.

Given the strength of the logistics sector, strategic focus of the Port of Tacoma on cargo, as well as higher rents found in the Duwamish area, the study area may see demand for development of this type. There have also been trends within neighboring Fife and Puyallup of residential land conversion to industrial lands for this use.

- **Vulnerability to displacement.** Displacement of low and high impact industrial uses is a concern. Lower impact industrial uses may be able to fit into commercial areas but competition with other uses can put these uses at a disadvantage in acquiring space. While commercial land in other locations may be able to absorb some cleaner, lower-impact industrial businesses, some businesses such as metal fabrication are high-impact and are unlikely to be able to find locations that are an easy substitute for the study area. In addition to the need for buffering given their impacts, land values and rents in these locations are unlikely to be affordable to these businesses. Potential displacement of these businesses in the face of growing demand for port-related sites will need to be addressed. The use of space for manufacturing in the study area is declining with new warehousing and logistics development pressure. Manufacturing uses that are not strongly marine- or logistics-oriented may be forced out over time. Anti-displacement strategies and spaces for both low and high impact industrial uses will need to be considered.

Goals and Policies

Guiding Principle 12. The Port of Tacoma Manufacturing Industrial Center (MIC) is a center of global trade and a hub for local, and regional economic activity protecting and enhancing port-related investments and supporting diverse jobs.

Policy LUED-1: (GOAL CP–3) Promote the continued growth and vitality of port and port-related industrial activity.

Policy LUED-2: Achieve the following employment growth target by 20XX: XXX net new jobs by working together on workforce development and economic development.

Policy LUED-3: (Policy CP–3.1) Work together to target and recruit new businesses that support port and port-related industrial activity.

Policy LUED-4: (Policy CP–3.2) Identify and consider opportunities to remove obstacles to development and to incentivize businesses that support container port and port-related industrial activity.

Policy LUED-5: (Policy CP–3.4) Seek opportunities, such as speaking engagements, articles, and others, to highlight economic development success stories in the port area.

Policy LUED-6: Formalize collaboration among participating governments on regional economic development to create connections between firms, organize government agencies and economic development actors, and present a unified interdisciplinary voice to external partners.

Guiding Principle 13. The subarea is a leader in the green economy promoting industries that meet environmental goals and facilitate a transition to carbon-free energy.

Policy LUED-7: Prioritize high quality living wage jobs that balance environmental sustainability and economic competitiveness.

Policy LUED-8: Promote innovative green building practices in design, materials selection, construction, and maintenance. This may include promotion of the use of clean electricity, promotion of the use of light-emitting diode (LED) lighting, and consideration of Leadership in Energy and Environmental Design (LEED) for buildings in excess of 100,000 square feet.

Policy LUED-9: Encourage retrofitting of existing buildings to reduce building energy use.

Policy LUED-10: Support existing businesses that are greening and recruit new green industries, implement the City's Green Economy Strategy, and consider updating land use policies or expanding infrastructure if needed to support them. Priority sectors include maritime, green energy, industrial symbiosis, and green building technologies sectors.

Policy LUED-11: Focus on economic opportunities out of public and private sector efforts to decarbonize the economy.

Policy LUED-12: Use the purchasing power of the five governments to support new and innovative products and processes.

Policy LUED-13: Strengthen partnerships with institutions of higher education to foster innovation.

Guiding Principle 14. The subarea offers expanded access to jobs with diverse career pathways and entry points.

Policy LUED-14: (Policy CP–3.3) Consider coordinating or facilitating an industrial development workforce program in partnership with businesses, educational institutions, trade associations, and residents to reduce the workforce development burden of individual businesses and expand employment opportunities for the community.

Policy LUED-15: Work with governmental partners and local businesses to retain existing jobs and to provide job retraining programs to support new industries as they develop in the center over time.

Policy LUED-16: Invest in upskill/reskill efforts for current workforce, create pathways into jobs that do not require college degrees, provide supports to students, and help employers redesign hiring practices to remove barriers.

Priority Actions and Regulatory Recommendations

Streamlining Regulations and Processes

Action LUED-1: Work with regulatory agencies to create an approval process for projects meeting economic development goals articulated in the subarea plan. This could be a designated in-water location with streamlined permitting to allow for research, demonstration, testing, and evaluation of new technologies.

Action LUED-2: Pursue intergovernmental tools to promote economic development such as the Economic Free Trade Zone for industries that complement the Port and industrial activity and have less environmental impact.

Priority Sector: Maritime

Action LUED-3: Support the **maritime sector** through these actions:

- Continue to invest in critical port and maritime infrastructure to maintain and increase Tacoma's competitive advantages.
- Simplify the regulatory and permitting process to improve clarity and predictability in marine infrastructure projects.
- Secure funding to develop and support vessels and shoreside infrastructure for electric operations and cleaner low-carbon fuels.
- Invest in supportive facilities (boat ramps, fish processing facility) for seafood production, ranging from fishing and finfish and shellfish aquaculture to seafood packaging and seafood market operations.
- Convene firms, technical experts, and policymakers to help manufacturing firms understand emerging opportunities in the maritime sector and develop new products/processes.
- Translate commitments to decarbonization into market opportunities for local firms, including by finding demonstration projects for local startups (including those graduating from the Maritime Blue incubator or the Cascadia CleanTech Accelerator).
- Fund programming, e.g., an emerging talent fellowship that provides industry exposure for college students of color.

Priority Sector: Green Energy

Action LUED-4: Support the development of a **green energy sector** through these actions:

- Create a **Green Hydrogen Center of Excellence** to coordinate strategy development, create project partnerships, and pursue state and federal funding opportunities. This can be led by TPU and be comprised of city departments, Port of Tacoma, local business organizations, and academic institutions whose work involves energy innovation or management.

- Build on **ongoing experimentation in and around the Port** to make sure Tacoma is the best place in the country to deploy innovative green hydrogen technologies and test and refine them in partnership with public sector entities.
- Work with regional partners to proactively **create inclusive workforce development programs relevant to the green hydrogen economy**, even if these jobs have not yet materialized. If these programs are designed in advance they can be used as business attraction tools.
- Connect firms with opportunities to engage with public sector entities (including the City, Tacoma Public Utilities (TPU), the Port, UW-Tacoma, Joint Base Lewis-McChord, and others) in pilot projects and procurement.

Priority Sector: Industrial Symbiosis

Action LUED-5: Support the development of an **industrial symbiosis sector** through these actions:

- Scan the Tideflats for sets of **businesses that could engage in industrial symbiosis** (especially using waste heat), secure **state funding for demonstration projects**, and **support existing efforts** like the Materials Marketplace.
- Identify small contractors/entrepreneurs with the capability and interest in re-tooling for the green economy.

Priority Sector: Green Building Technology

Action LUED-6: Support the development of a **green building technologies sector** through these actions:

- Help construction firms **pursue embodied carbon certification** or otherwise invest in process innovation and help green building technology manufacturers invest in product development.
- Use **public agency procurement** to help local firms test new processes and products. Push for commitments to green procurement to create demand for green economy firms.

Anti Displacement

- **Action LUED-7:** Offer **capacity-building** services including loan funds, technical assistance, and training courses for small businesses in priority sectors at risk of displacement.
- **Action LUED-8: Support relocation** of existing businesses that are aligned with the Subarea's Plan's goals and may be displaced from the MIC. These include potential relocation from the Core to the Transition Areas within the MIC or from the MIC to elsewhere in Tacoma.

Business and Entrepreneurship Support

Action LUED-9: Attract **business services** to the subarea to support and scale existing businesses and attract new businesses.

Action LUED-10: Work together to **apply for grants** to prepare industrial sites for growth.

Action LUED-11: Create **cooperative spaces** that support entrepreneurship and growth for existing businesses.

Workforce Development

Action LUED -12: Invest in workforce development and career connected learning for youth, for careers in priority sectors.

- Dedicate funding to maritime, green energy, and green building specific training, education and workforce development including expansion of apprenticeships and youth programs.
- Grow and sustain programs that guide youth, especially from underrepresented communities, toward careers in the priority sectors.

Action LUED-13: Invest in **workforce intermediaries** to customize apprenticeships, increase adoption, and provide wraparound support. Strengthen and broaden the efforts of service providers (such as Workforce Central, AJAC, Impact Washington, etc.).

Apprenticeships

Misconceptions about apprenticeship – that it only applies to the trades, or that it requires union participation – often limit firm participation. Proactive efforts to educate firms about the low cost and high value of apprenticeship as well as the external supports available to help them implement programs is needed. In the near-term, this work should focus on generating interest in existing registered apprenticeships in target sectors that can be easily modified to include green skills training. These include:

- Manufacturing: industrial maintenance technician (AJAC)
- Logistics (industrial symbiosis): operations specialist (AJAC)

Action LUED-14: C**onnect existing and desired firms to apprenticeships**. Outreach to targeted firms to identify firms that are good candidates for apprenticeship. Identify intermediaries who can function as part of the team doing initial outreach or be immediately engaged to provide follow-up assistance to firms interested in apprenticeship.

Action LUED-15: Create or scale **pre-apprenticeship** programs that align with desired sectors for the Tideflats to ensure that there is a pipeline of talent into full apprenticeships that is representative of the demographics of Tacoma's emerging workforce (e.g., aged 18 to 30.

Action LUED-16: Invest in Workforce Central's ability to fund (directly or through nonprofits) robust **wrap-around supports and stipends to pre-apprenticeship participants**. Pre-apprenticeship participants have high employment rates upon completion. Tacoma has several promising pre-apprenticeship models to build upon:

- Manufacturing: AJAC's Manufacturing Academy
- Construction: Palmer Scholars, ANEW

Appendix A: Market Information

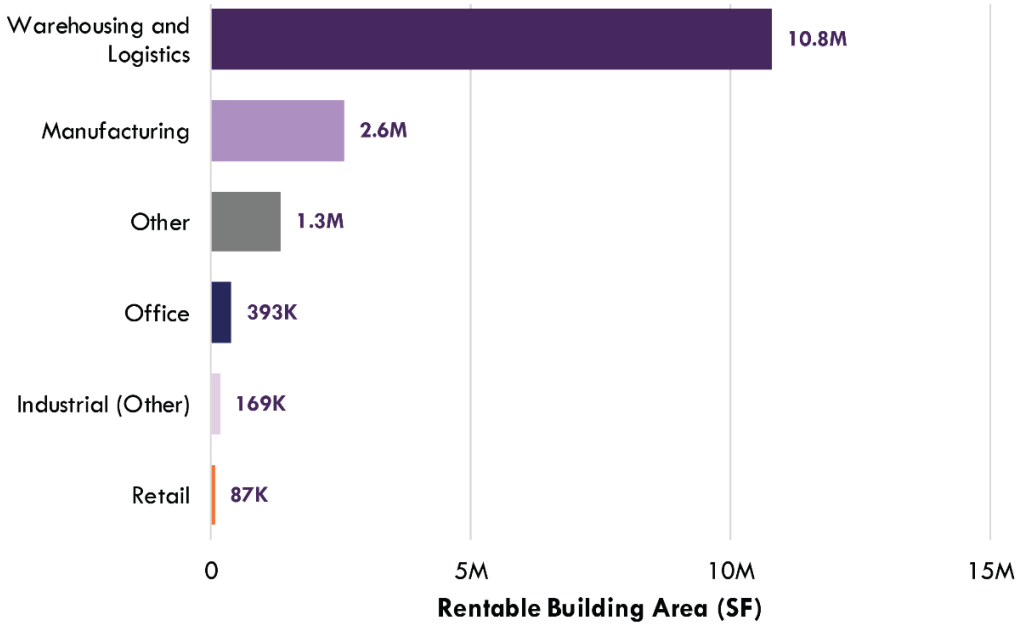
Building Area

Exhibit 19 provides a breakdown of rentable building area information. The dominant type of real estate located within the Port of Tacoma MIC is industrial/flex properties, with the largest amount of rentable building area in warehousing and logistics (with over 10.8 million square feet of space), and manufacturing (2.6 million square feet). The 1.3 million square feet of other uses include:

- Oil and chemical refining
- Resource uses, including cement and gravel plants
- Marinas and shipyards
- Lumberyards
- Railroad yards
- The federal Northwest Detention Center (no longer in use)

There are minor amounts of other uses in this area, including retail and office uses. No multifamily residential development is located within this area, although some non-residential uses do include accessory caretaker units.

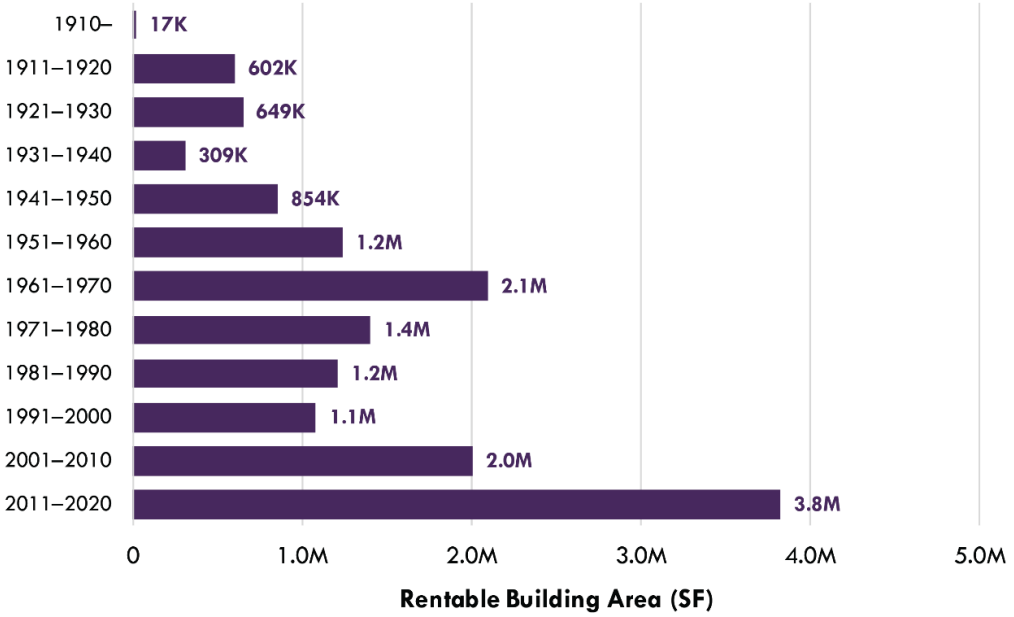
Exhibit 19 Breakdown of Rentable Building Area in the Port of Tacoma MIC, 2020.



Sources: CoStar, 2020; BERK, 2020.

The MIC includes both old and new buildings. Exhibit 20 categorizes the rentable building area in the study area. About 10%, or approximately 1.6 million SF, of the identified floor area was built pre-war, and 57% or roughly 5.8 million SF of total rentable building area is 50 years old or older.

Exhibit 20 Rentable Building Area by Building Age, Port of Tacoma MIC, 2006–2020.



Sources: CoStar, 2020; BERK, 2020.

A significant amount of development in the study area is newer, with about 3.8 million SF of building area constructed since 2011. Exhibit 21 shows the characteristics of these projects, including the building locations and owners. Note that all these uses are in warehousing and distribution. Despite the large amount of development by area, only three property owners have had new construction on their sites: Prologis (5 buildings, 2.3 million SF), Black Creek Group (2 buildings, 1.1 million SF), and the Port of Tacoma (three buildings, 428,000 SF).

Exhibit 22 provides the amount of rentable building area in the study area categorized by the top 10 owners in this area. Most notably, Prologis holds the largest amount of floor area, and this almost completely consists of new construction. Similarly, Black Creek Group is the third-largest holder of floor area, with most of this space built in 2018.

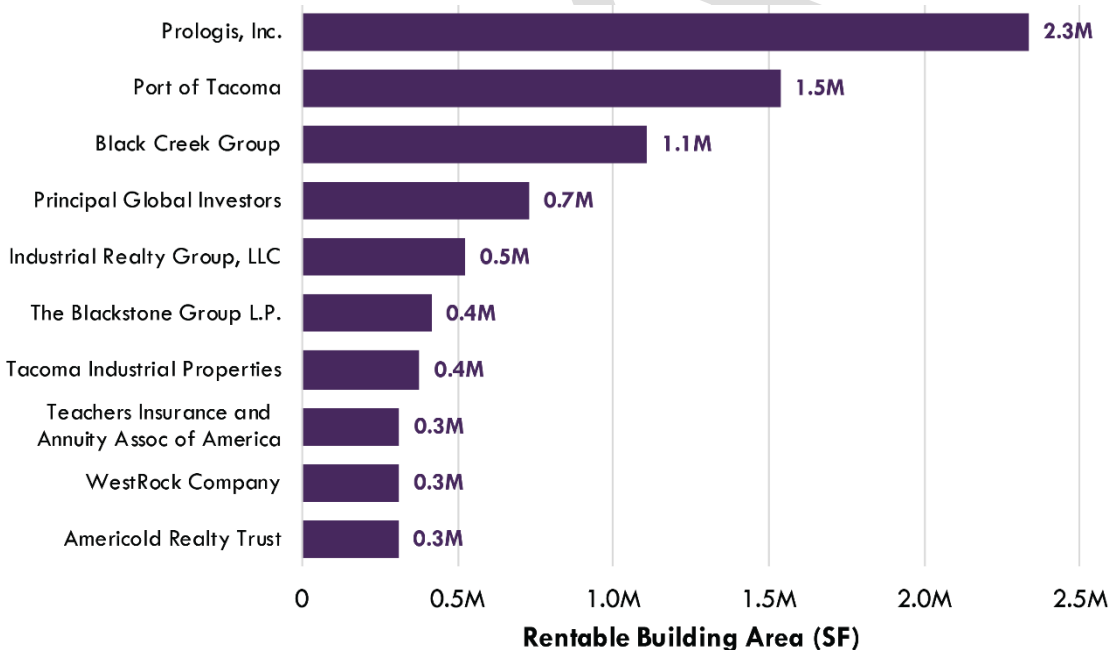
Overall, the construction of new warehousing and distribution facilities by large logistics real estate investment companies such as Prologis and the Black Creek Group indicates the market perception of the study area as an attractive location for such facilities. It will likely continue to see a trend of national and international real estate firms investing capital for larger logistics facilities in this area.

Exhibit 21 New Rentable Building Area, Tacoma MIC, 2011–2021

Property	Building	Address	RBA	Year	Owner
CenterPoint Properties		1651 Lincoln Ave	106,764	2021*	LBA Realty
Portside 55	Building A	1514 Taylor Way	155,100	2019	Port of Tacoma
	Building B	1614 Taylor Way	51,900	2019	Port of Tacoma
	Building C	3401 Lincoln Ave	221,010	2019	Port of Tacoma
Prologis Blair Distribution Center	Building A	2340 Taylor Way	542,750	2018	Prologis, Inc.
	Building B	2600 Taylor Way	428,228	2019	Prologis, Inc.
Prologis Park Tacoma	Building A	5015 8th St E	222,925	2017	Prologis, Inc.
	Building B	5101 E 12th St E	770,195	2017	Prologis, Inc.
	Building D	4801 E 8th St E	319,806	2018	Prologis, Inc.
Tacoma Logistics Center	Building A	927 E 11th St	280,525	2018	Black Creek Group
	Building B	917 E 11th St	828,620	2018	Black Creek Group

*Proposed.
Sources: CoStar, 2020; BERK, 2020.

Exhibit 22 Top Owners of Rentable Building Area in Tacoma MIC, 2020



Sources: CoStar, 2020; BERK, 2020.

There is a very small amount of retail space in the study area. Primarily, this development supports the industrial and logistics uses in this area. A larger district of highway-oriented commercial uses is located directly to the south of the study area in the city of Fife, which provides a greater local and regional draw for retail demand with more direct access from I-5.

The office market in this area is also relatively small, with a total of about 393,000 SF. The largest office building in this area is the Port of Tacoma's multi-tenant Fabulich Center at 72,000 SF. Other significant buildings in the area include the Center for Urban Waters building (48,341 SF), the Former Salvation Army building currently owned by Summit Public Schools (45,000 SF), and the Port of Tacoma administration building (42,100 SF). Other office buildings are smaller, mostly providing support functions for industrial and warehousing activities in the study area.

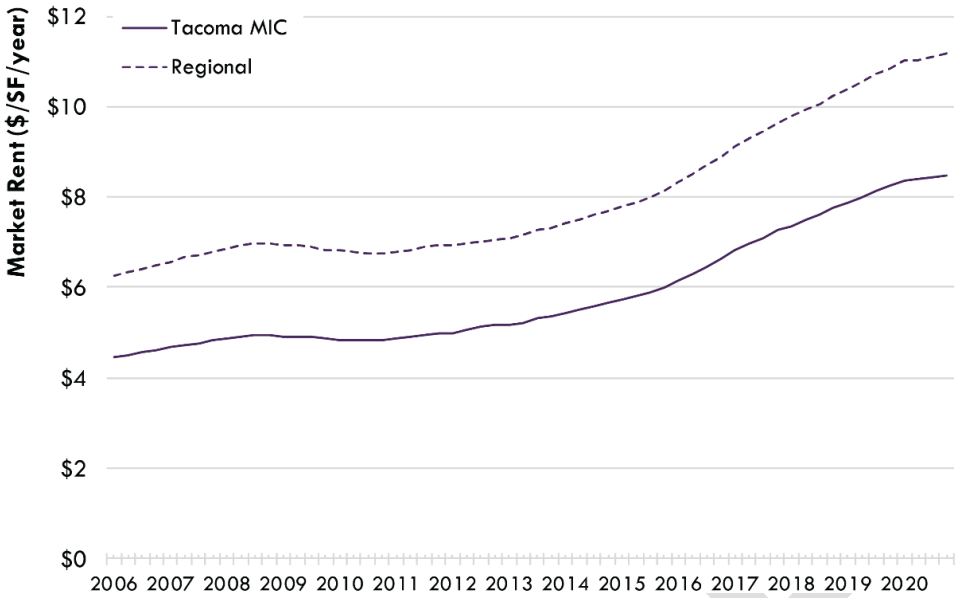
Current office vacancies are around zero with projected rents of approximately $25/SF/year. There has been some notable growth in office rents in the area, with year-over-year rent growth reaching 9% in all four quarters of 2017. The smaller amount of space in the area, as well as greater draw of office uses to downtown Tacoma directly to the west, means that this area is not competitive for higher-end office uses, but could be a location for Class B/C office space.

Data about local and regional real estate markets for warehousing, logistics, and manufacturing between 2006 and 2020 are provided in the following figures:

- **Rents per square foot** for the Port of Tacoma MIC and King and Pierce Counties are included for warehousing and logistics (Exhibit 23) and manufacturing (Exhibit 24).
- **Rent changes year-over-year** (YOY) for the MIC and region are provided in Exhibit 25 (warehousing and logistics) and Exhibit 26 (manufacturing).
- **Vacancy rates** for warehousing and logistics and manufacturing are provided in Exhibit 27 and Exhibit 28, respectively.
- **Net deliveries** of new rentable building area for warehousing and logistics and manufacturing are given in Exhibit 29.
- **Net absorption** of rentable building area for warehousing and logistics and manufacturing are provided in Exhibit 30.

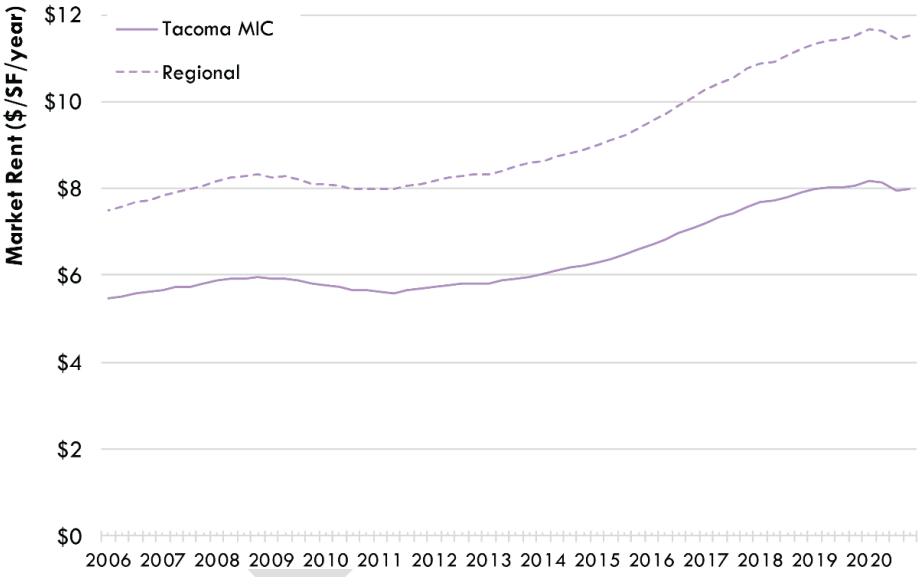
Properties in the Port of Tacoma MIC have industrial rents that are largely below regional averages for King and Pierce Counties. For warehousing, local rents are estimated to be around 75% of the regional average, with 70% of regional rents for local manufacturing uses. In part, this reflects the high pricing of manufacturing and warehousing space elsewhere in the region, such as in the Duwamish area close to the Port of Seattle.

Exhibit 23 Warehousing and Logistics Rent per SF, Port of Tacoma MIC and Region, 2006–2020



Sources: CoStar, 2020; BERK, 2020.

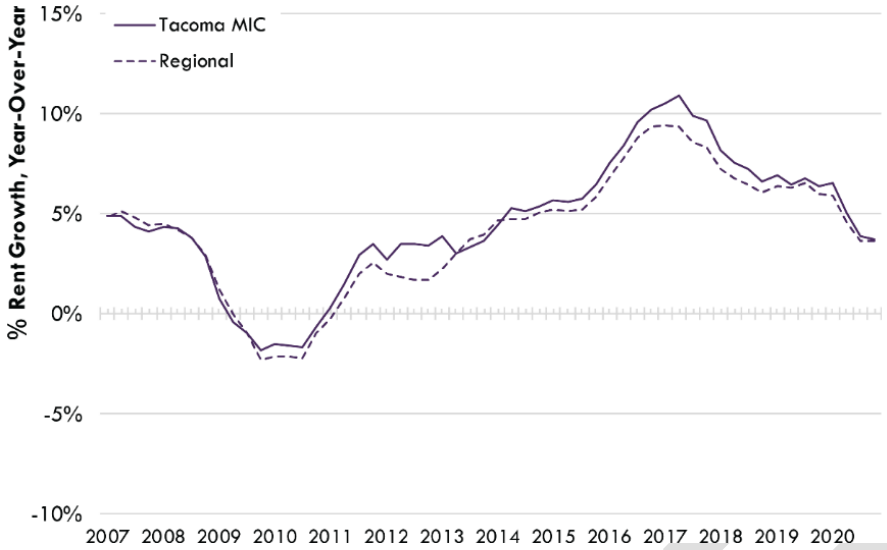
Exhibit 24 Manufacturing Rent per SF, Port of Tacoma MIC and Region, 2006–2020



Sources: CoStar, 2020; BERK, 2020.

After a brief downturn in rents in 2009–2011, rents for warehousing and logistics uses have increased, with up to 10–11% from 2016 Q3 to 2017 Q4. Note that this was also a period of very low vacancies in this area, with less than 1% vacancy during this period. These increases in rents have stabilized but are still positive even in 2020 Q3. See Exhibit 25.

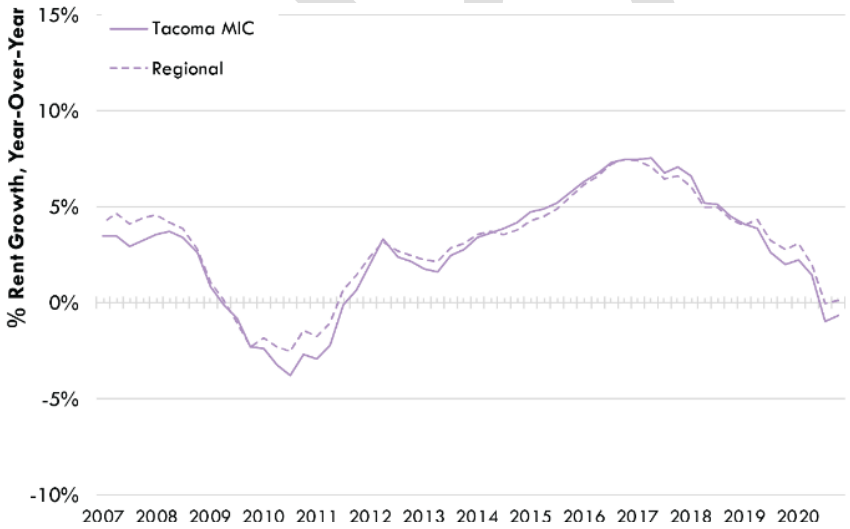
Exhibit 25 Warehousing and Logistics Rent Growth, Port of Tacoma MIC and Region, 2006–2020



Sources: CoStar, 2020; BERK, 2020.

Rent increases for manufacturing spaces have been lower in this area, with only 7–8% rent increases during the same peak in 2016–2017. Manufacturing rents have also experienced slight declines in 2020, with a 0.6–0.9% year-over-year decline in Q2 and Q3. Vacancies in manufacturing spaces have been consistent with regional averages, largely below 5% except for brief peaks due to major tenants moving. See Exhibit 26.

Exhibit 26 Manufacturing Rent Growth, Port of Tacoma MIC and Region, 2006–2020.

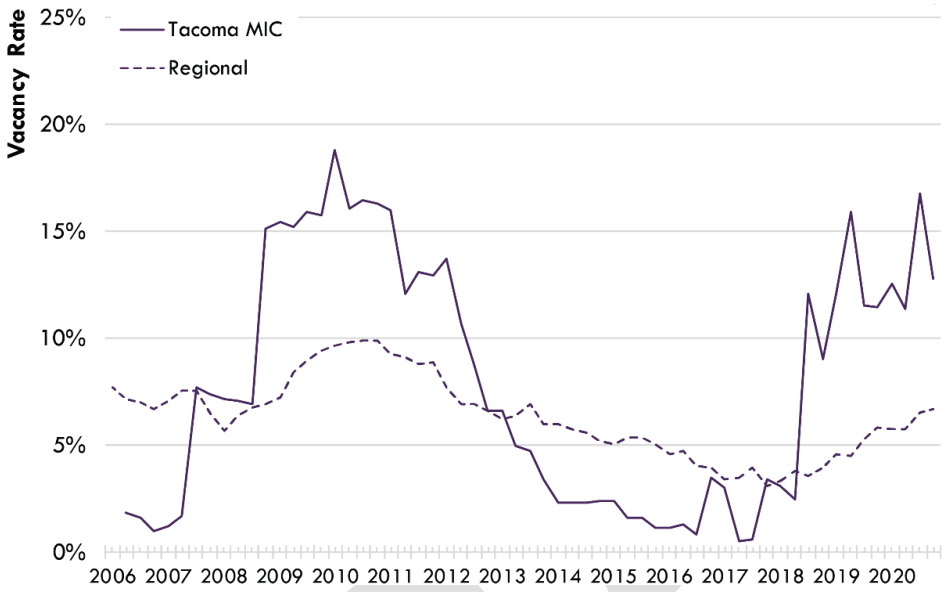


Sources: CoStar, 2020; BERK, 2020

There have been distinct peaks in warehousing and logistics vacancy rates which have lagged the construction and delivery of new warehousing and logistics floor space. Delivery of floor space refers to when a building completes construction and receives a certificate of occupancy. During the

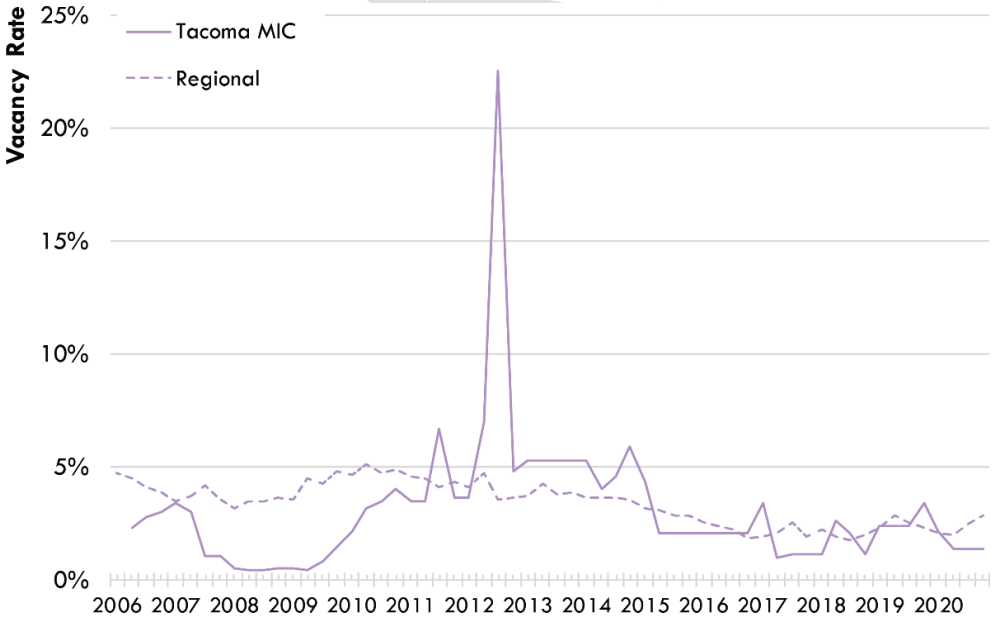
last recession, this resulted in extended vacancies for new warehousing and logistics space in 2007–2008, which was not leased up until 2013. As of 2020, warehousing and logistics vacancy rates are largely around 12-13%. This elevated rate of vacancies for warehousing and logistics space is likely related to the significant amount of new floor space delivered in from 2017 to 2019. See Exhibit 27 and Exhibit 28.

Exhibit 27 Warehousing and Logistics Vacancy Rates, Port of Tacoma MIC and Region, 2006–2020



Sources: CoStar, 2020; BERK, 2020.

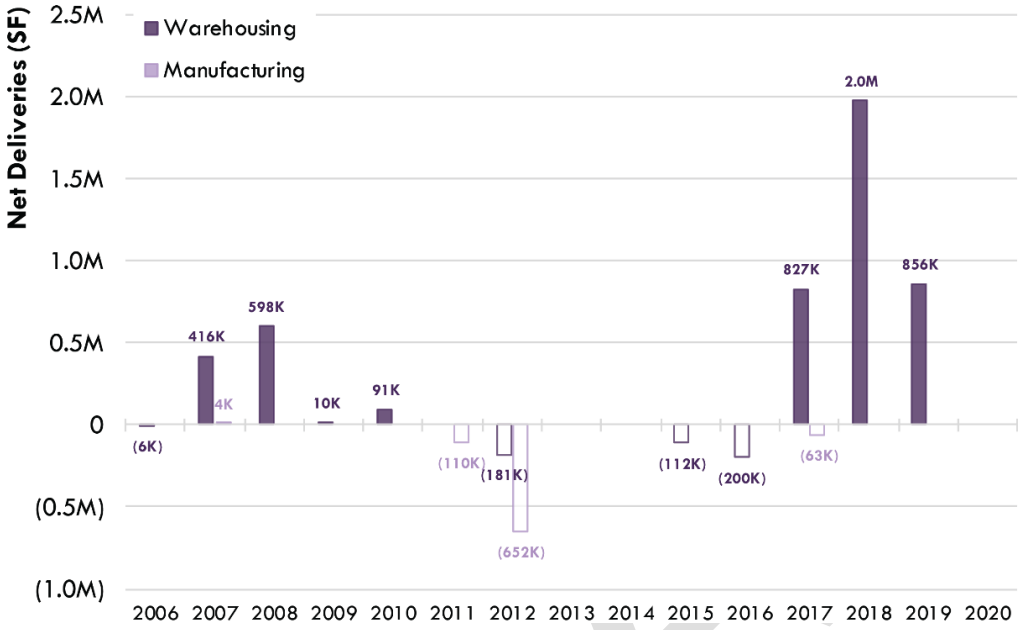
Exhibit 28 Manufacturing Vacancy Rates, Port of Tacoma MIC and Region, 2006–2020



Sources: CoStar, 2020; BERK, 2020.

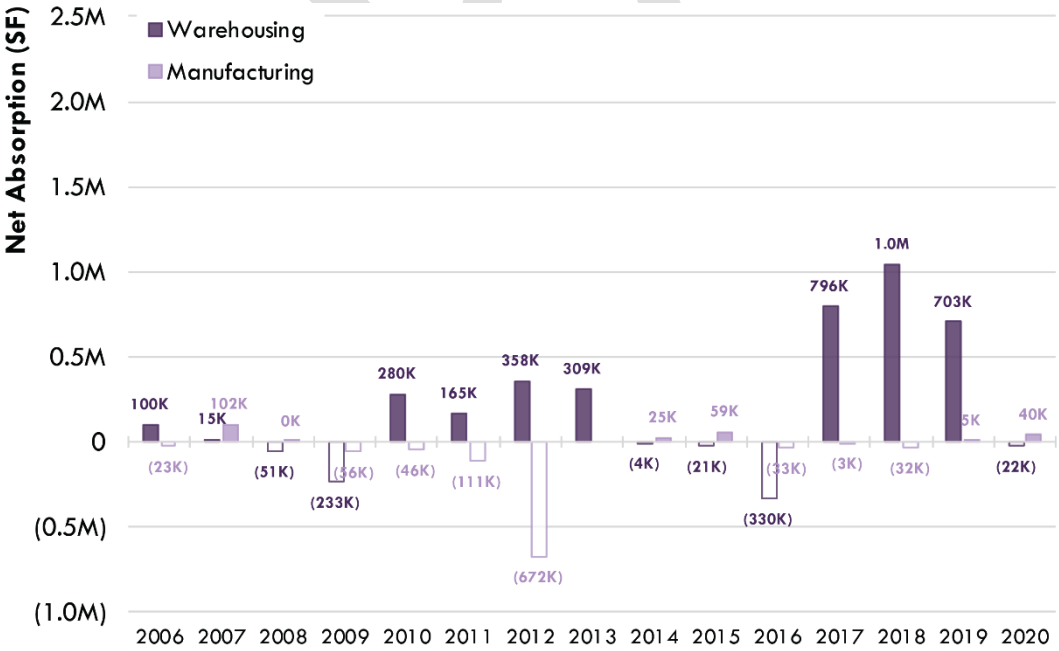
There have been no net positive deliveries of space for manufacturing since 2007, and the area has lost about 824,000 SF of space in manufacturing uses since 2007. Manufacturing space in the Port of Tacoma MIC is typically more than a decade old, less expensive, and more depreciated. See Exhibit 29 and Exhibit 30.

Exhibit 29 Deliveries of Rentable Building Area in Tacoma MIC, 2006–2020



Sources: CoStar, 2020; BERK, 2020.

Exhibit 30 Absorption of Rentable Building Area in Tacoma MIC, 2006–2020



Sources: CoStar, 2020; BERK, 2020.