ORDINANCE NO. 29075

BY REQUEST OF MAYOR WOODARDS AND COUNCIL MEMBER WALKER

AN ORDINANCE relating to the Tideflats Subarea Plan; adopting the Tideflats Subarea Plan as an element of the One Tacoma Comprehensive Plan, by replacing the Container Port Element and revising the Future Land Use Map and Land Use Designations, as recommended by the Tideflats Steering Committee and Planning Commission, effective January 5, 2026.

WHEREAS the Tideflats Subarea Plan ("Plan") is a shared long-term vision supported by goals and policies that provide a roadmap to achieve the vision, and

WHEREAS the Plan is intended to create a more coordinated approach to development, environmental review, and strategic capital investments in the Tideflats, and was developed through intergovernmental collaboration and community engagement and is guided by the vision and guiding principles that came out of this process, and

WHEREAS the five participating governments who co-developed the Plan with community are: City of Tacoma, Port of Tacoma, Puyallup Tribe of Indians ("Puyallup Tribe"), City of Fife, and Pierce County, and

WHEREAS the Plan's vision, goals, and policies support economic prosperity, strengthens existing center assets, expands transportation choices, and improves environmental quality, and

WHEREAS on December 5, 2024, the Tideflats Steering Committee ("Committee") members unanimously recommended the draft Plan with specific aspects including:

(1) Balancing Industrial Success with Environmental Restoration: Plan policies called for coordinated actions and investments to restore ecosystems, improve water quality, and protect biodiversity alongside industrial development;

(2) Indigenous Values: The Plan honors both the natural and cultural landscapes of the region. Policies and action recognize the Puyallup Tribe's rights and interests in the Tideflats and ensure that any development respects their cultural, economic, and environmental connections to the land;

(3) Comprehensive Climate Action: The Plan's policies integrate climate resilience strategies, with specific actions around decarbonization goals, adaptive measures for sea-level rise, and restoration of natural habitats;

(4) Economic and Industrial Adaptation: The Plan supports economic flexibility by preserving core industrial uses and encouraging industries that meet environmental goals and facilitate innovation in clean energy. It demonstrates how a world class port can thrive alongside growing urban neighborhoods;

(5) Transportation and Infrastructure Innovations: The Plan takes a holistic approach to transportation infrastructure, promoting proactive investments in multimodal transportation systems that support both the industrial sector and the surrounding community. It also incorporates green infrastructure solutions to mitigate pollution and improve the urban landscape as well as public access to the waterfront, and

(6) Collaboration and Stakeholder Engagement: The Plan was developed through a seven-year collaborative process that set up ongoing dialogue among

local governments, tribes, businesses, and residents, fostering shared accountability and coordinated problem-solving for long-term implementation, and

WHEREAS following the Committee's recommendation, the Planning Commission ("Commission") conducted a public hearing on both the Plan and related amendments to the One Tacoma Plan, Land Use Regulatory Code, and Shoreline Master Program, and

WHEREAS the Commission concluded their review on July 16, 2025, and forwarded their recommendations to the City Council; these recommendations were presented to the City Council on August 12, 2025, and

WHEREAS on September 9, 2025, the City Council adopted Amended Resolution No. 41751, both setting the public hearing date and incorporating the following amendments into the public review exhibits:

1) Nonconforming residential/institutional uses in the Seaport Core Zoning Districts,
2) Transit Oriented Use and Development Standards in the Seaport Transition TOD District,
3) Minor Code Amendments – in response to public comments, and
4) Landscaping Code Amendments for Public Agencies, and

WHEREAS, the Plan identifies noise as one of the determinants of health and includes proposed actions to alleviate the impacts of noise on adjacent communities, and

WHEREAS in addition to this ordinance adopting a new Tideflats Subarea Plan as a new chapter of the One Tacoma Comprehensive Plan, replacing the Container Port Element and revisions to the Future Land Use Map of the Comprehensive Plan, the Committee recommended amendments to Title 13 by revising the Zoning Map and incorporating new zoning districts, land use tables, and development standards; and amendments to TMC Title 19 the Shoreline Master Program, and

WHEREAS, in support of the Plan and related amendments to Title 19, the City conducted an Environmental Impact Statement ("EIS") which considered a range of future development and land use scenarios, sea level rise and climate vulnerability, and employment growth scenarios for the Subarea, and

WHEREAS the EIS considered area wide cumulative impacts in its assessment, and

WHEREAS the EIS determined that the proposed Plan and related amendments would likely not result in any significant adverse impacts to plants and animals, and

WHEREAS the Plan and related amendments to Title 19 Shoreline Master Program and Title 13 Land Use Regulatory Code includes an updated citywide approach for the review and mitigation of risks and impacts to cultural and archeological resources as part of development review and incorporates a process for Tribal consultation in that review, and

WHEREAS the City partnered with the Tacoma-Pierce County Health Department to conduct a Health Impact Assessment that concluded that the proposed goals, policies, actions, and code amendments would likely result in improved overall public health outcomes, and

WHEREAS the Plan and related amendments were developed through a public process consistent with the procedural requirements of the Growth Management Act, Shoreline Management Act, and State Environmental Policy Act, and

WHEREAS City staff held an informational community meeting on October 16, 2025, and the public hearing was advertised through direct mailings, email to interested parties, legal notice, social media, public notice signs, and direct notifications to public agencies, and

WHEREAS on October 28, 2025, the City Council conducted a public hearing on the draft Tideflats Subarea Plan and related amendments; Now, Therefore,

BE IT ORDAINED BY THE CITY OF TACOMA:

Section 1. That the City Council hereby adopts the Recitals of this Ordinance as its formal legislative findings.

Section 2. That the Recommendations of the Tideflats Steering Committee and Planning Commission regarding the Tideflats Subarea Plan and related amendments to the One Tacoma Plan, Land Use Regulatory Code,

and the Shoreline Master Program, are hereby adopted as additional legislative findings.

Section 3. That the Tideflats Subarea Plan is hereby adopted as an element of the One Tacoma Comprehensive Plan, by replacing the Container Port Element, as recommended by the Tideflats Steering Committee and Planning Commission, as set forth in Exhibit "A," effective January 5, 2026.

Section 4. That the One Tacoma Comprehensive Plan is hereby amended, by revising the Future Land Use Map and Land Use Designations, as recommended by the Tideflats Steering Committee and Planning Commission, as set forth in Exhibit "B," effective January 5, 2026.

Section 5. That the City Council Community Vitality and Safety Committee will review the effectiveness and enforcement of the City's noise ordinance, Tacoma Municipal Code Chapter 8.122, as part of the Committee's ongoing review of nuisance codes and code compliance.

Section 6. That the City Clerk, in consultation with the City Attorney, is authorized to make necessary corrections to this ordinance, including, but not limited to, the correction of scrivener's/clerical errors, references, ordinance numbering, section/subsection numbers, and any references thereto.

Passed _____

_____
Mayor

Attest:

_____
City Clerk

Approved as to form:

_____
Chief Deputy City Attorney

Exhibit A

TACOMA TIDEFLATS

SUBAREA PLAN

STEERING COMMITTEE RECOMMENDED DRAFT, DEC. 5 2024

DRAFT

30,480 KG
67,200 LB

CITY OF Tacoma

Acknowledgments

CITY COUNCIL
Victoria Woodwards, Mayor
John Hines, Deputy Mayor
Sarah Rumbaugh
Jamika Scott
Sandesh Sadalge
Joe Bushnell
Kiara Daniels
Olgy Diaz
Kristina Walker

PLANNING COMMISSION
Jordan Rash
Morgan Dorner
Payton Swinford
Robb Krehbiel
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Brett Marlo
Christopher Karnes, Chair
Matthew Martenson

PLANNING + DEVELOPMENT SERVICES DEPARTMENT
Peter Huffman, Director

Planning Services Division
Brian Boudet, Manager
Stephen Atkinson, Principal Planner
Adam Nolan
Mary Crabtree

OTHER CITY DEPARTMENTS

City Attorney's Office
Steve Victor, Chief Deputy City Attorney

Community + Economic Development Department
Pat Beard

Environmental Services Department
Mike Carey
Dana DeLeon
Shauna Hansen

Office of Environmental Policy and Sustainability
Kristin Lynett
Lakecia Farmer

Public Works Department
Jennifer Kammerzell

PROJECT MANAGEMENT TEAM
Stephen Atkinson, City of Tacoma
Deirdre Wilson, Port of Tacoma
Andrew Strobel, Puyallup Tribe of Indians
Chris Larson, City of Fife
Sean Gaffney, Pierce County

PARTICIPATING GOVERNMENTS
Puyallup Tribe of Indians
Port of Tacoma
City of Fife
Pierce County

STEERING COMMITTEE
Victoria Woodards, Mayor, City of Tacoma
Kristina Walker, Council Member, City of Tacoma
Bill Sterud, Chair, Puyallup Tribe of Indians
Annette Bryan, Councilmember, Puyallup Tribe of Indians
Dick Marzano, Commissioner, Port of Tacoma
Deanna Keller, Commissioner, Port of Tacoma
Bruce Dammeier, County Executive, Pierce County
Ryan Mello, Council Chair, Pierce County
Kim Roscoe, Mayor, City of Fife
Bryan Yambe, Deputy Mayor, City of Fife

CONSULTANTS
Seva Workshop; Radhika Nair
BERK Consulting; Lisa Grueter
Environmental Science Associates; Pam Xander
Fehr and Peers; Ariel Davis
Moffat and Nichol; Younes Nouri
Heffron and Associates; Marni Heffron

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PLAN LEADERSHIP PARTNERS

TIDEFLATS ADVISORY GROUP

Adjacent Jurisdictions
Mike Brandstetter, City of Lakewood
Ryan Windish, City of Sumner
Bill Adamson, Joint Base Lewis McChord

Neighborhoods
Yvonne McCarty, NE Tacoma NC
Tom Ebenhoh, New Tacoma NC
Heidi Stephens, South Tacoma NC

Business and Industry
Chris Rye, Port Tenant
Tony Belot, Tideflats-Non-Port
Andrew Troske, Energy Company
Cindy Piper, Frederickson

Labor
Jared Faker, ILWU Local 23
Jared Ross, P.C. Building and Construction Trades

Environmental
Melissa Malott, Wildlife
Lexi Brewer, Air Quality
Joel Baker, Water Quality
Donna Thompson, Climate Change Resiliency

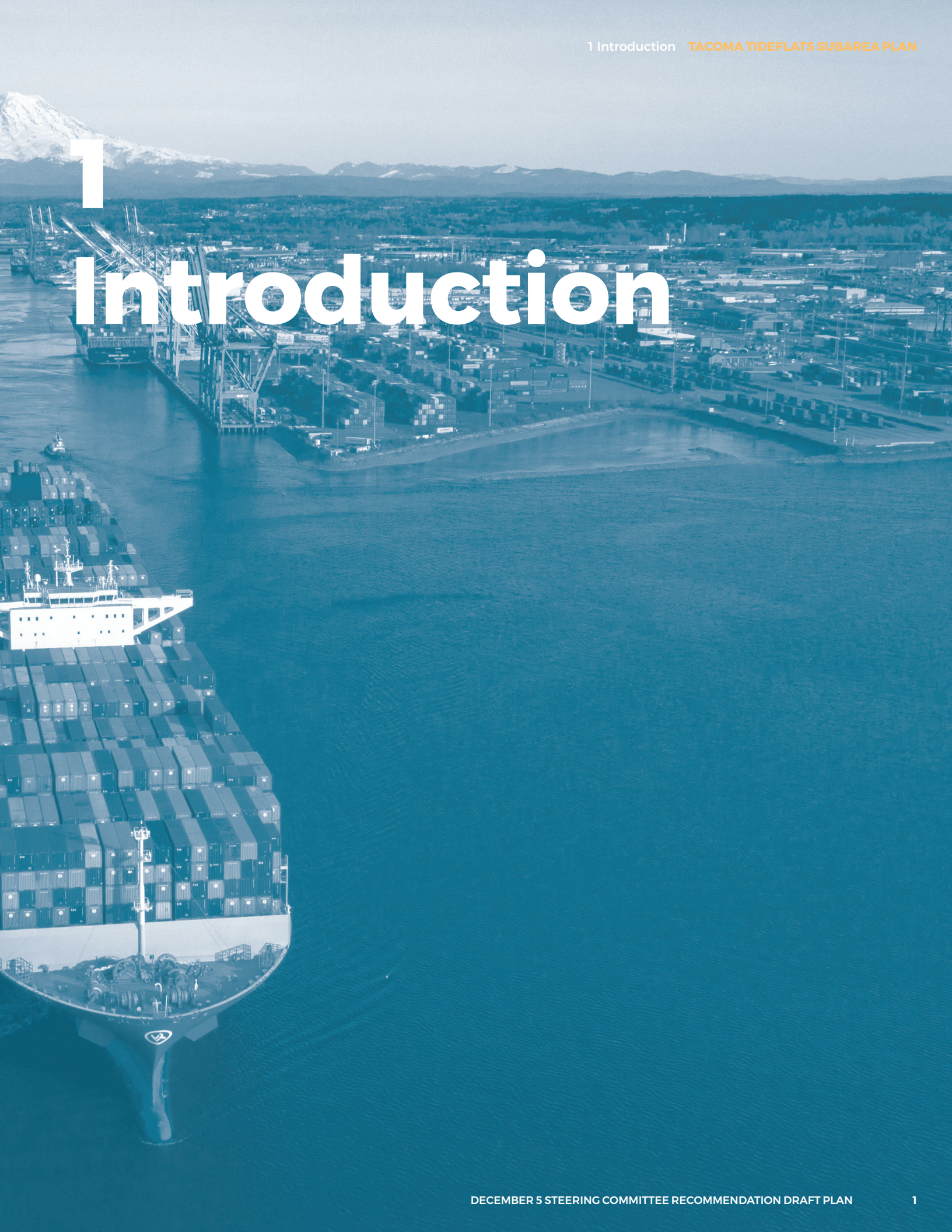
Regional Economic
Andrea Reay, TPC Chamber of Commerce
Bruce Kendall, TPC EDB

General
Phillip Waldner, Transportation
Ryan Spence
Tom Deming

Table of Contents

Figure List

1 Introduction



Introduction 1

1.1 PURPOSE

The Tideflats Subarea Plan is a shared long-term vision supported by goals and policies that provide a roadmap to achieve the vision. The Subarea Plan is intended to create a more coordinated approach to development, environmental review, and strategic capital investments in the Tideflats. The Subarea Plan reflects community aspirations for this center while planning for anticipated growth and change. The Plan was developed through intergovernmental collaboration and community engagement and is guided by the vision and guiding principles that came out of this process.

The Plan's vision, goals and policies supports economic prosperity, strengthens existing center assets, expands transportation choices, and improves environmental quality. The Subarea Plan fits under the City's Comprehensive Plan umbrella, Pierce County Countywide Planning Policies, the Puget Sound Regional Council Vision 2050, and other city and regional plans and policies. The subarea plan is intended to be the Container Port Element of the City of Tacoma's Comprehensive Plan.

Port and port-related industrial activities play a vital role in the Tacoma and Pacific Northwest economy, contributing thousands of jobs and millions of dollars in revenues and state and local taxes to the region. Preservation of available industrial waterfront land for port and port-related container and industrial activity is vital to the City's economy. This subarea plan provides policy guidance to help "ensure that local land use decisions are made in consideration of the long-term and widespread economic contribution of our international container ports and related industrial lands and transportation systems and to ensure that container ports continue to function effectively alongside vibrant city waterfronts." This subarea plan is part of the City of Tacoma's Comprehensive Plan and satisfies the requirements of RCW36.70A.085.

Regional Partners

"Regional Partners" is used throughout the plan to refer to the City of Tacoma, Port of Tacoma, Puyallup Tribe of Indians, City of Fife, and Pierce County.

1.2 HOW THIS PLAN IS ORGANIZED

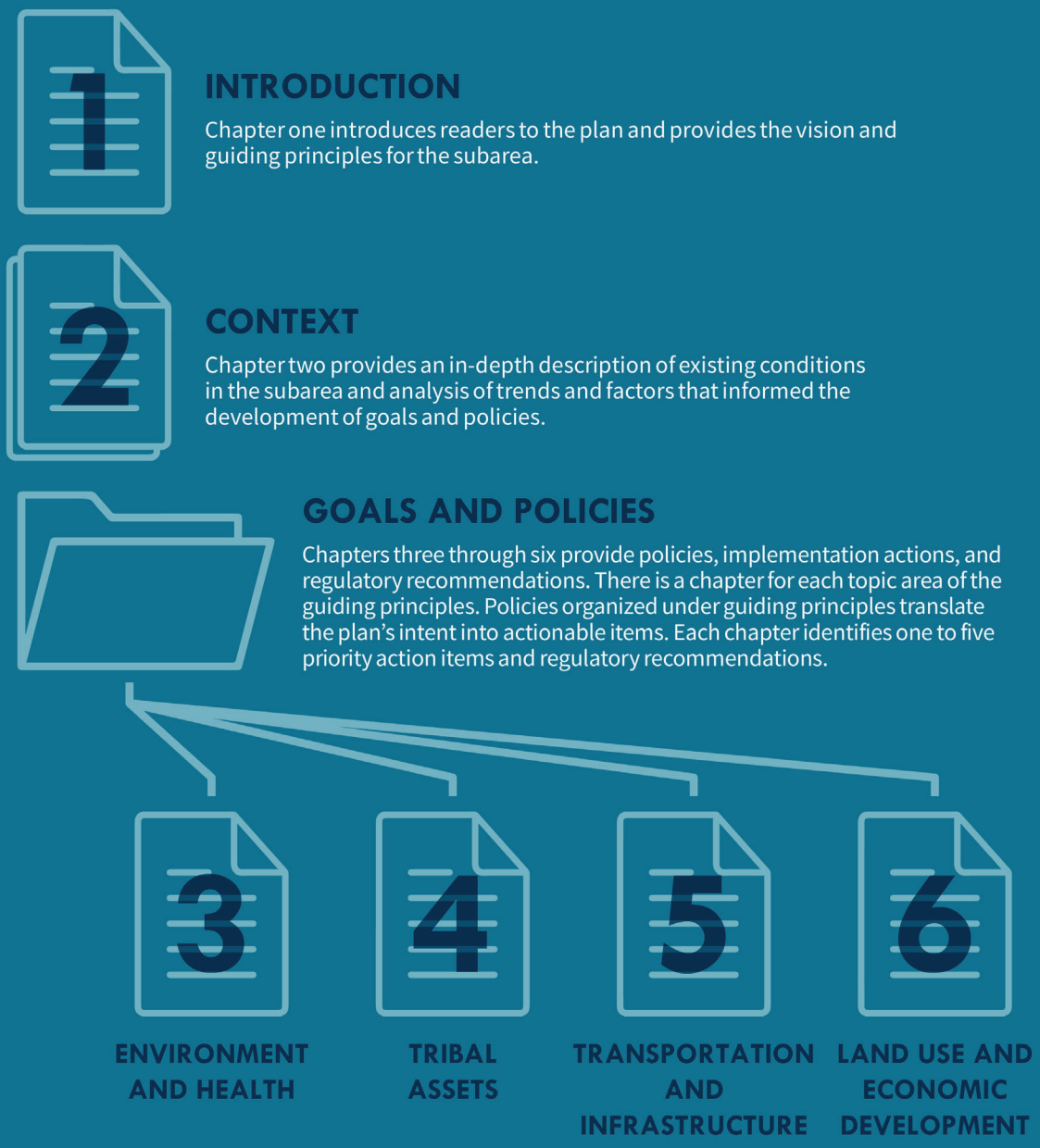


Figure 1. Plan Organization

1.3 SUBAREA VISION AND GUIDING PRINCIPLES

The Tideflats Subarea Plan is a unique and innovative plan. It creates a shared vision among five governments that balances industrial growth with environmental protection, community needs, and the long-term resilience of the region. It is a model for future planning in industrial areas that can inspire other areas facing similar challenges. Specific aspects include:

> **Balancing Industrial Success with Environmental Restoration:** Plan policies called for coordinated actions and investments to restore ecosystems, improve water quality, and protect biodiversity alongside industrial development.

> **Indigenous Values:** The Plan honors both the natural and cultural landscapes of the region. Policies and action recognize the Puyallup Tribe's rights and interests in the Tideflats and ensure that any development respects their cultural, economic, and environmental connections to the land.

> **Comprehensive Climate Action:** The Plan's policies integrate climate resilience strategies, with specific actions around decarbonization goals, adaptive measures for sea-level rise, and restoration of natural habitats.

> **Economic and Industrial Adaptation:** The Plan supports economic flexibility by preserving core industrial uses and encouraging industries that meet environmental goals and facilitate innovation in clean energy. It demonstrates how a world class Port can thrive alongside growing urban neighborhoods.

> **Transportation and Infrastructure Innovations:** The Plan takes a holistic approach to transportation infrastructure, promoting proactive investments in multimodal transportation systems that support both the industrial sector and the surrounding community. It also incorporates green infrastructure solutions to mitigate pollution and improve the urban landscape as well as public access to the waterfront.

> **Collaboration and Stakeholder Engagement:** The Plan was developed through a seven-year long collaborative process that set up ongoing dialogue among local governments, tribes, businesses, and residents, fostering shared accountability and coordinated problem-solving for long-term implementation.

Vision Statement

By 2050 the Tideflats will be a thriving job center of regional significance, a connected, healthy and culturally unique place that demonstrates how a world class port can succeed alongside growing and vibrant urban neighborhoods.

Guiding Principles

This subarea plan describes how the Regional Partners can work collaboratively to ensure the continued long-term viability of the Port, while providing for effective buffers and transition to surrounding non-industrial uses and protecting Commencement Bay, a unique shoreline environment containing river deltas, tidal creeks, freshwater and salt marshes. The plan protects Tribal Treaty resources, particularly Tribal fishing rights recognizing the presence of sensitive tribal and cultural resources in the subarea and the need to protect them from further degradation and harm. The subarea plan includes a list of transportation and infrastructure projects aiming for a resilient subarea and regional coordination to reduce climate impacts.

The following guiding principles were adopted by the Tideflats Subarea Plan Steering Committee to guide the Plan.

Figure 3. Subarea Plan Guiding Principles
Source: Steering Committee Discussion, 2024; Seva Workshop, 2024

Environment and Health

1. Salmon and shellfish are thriving and plentiful in Commencement Bay, the Puyallup River, Wapato Creek, and Hylebos Creek.
2. The subarea supports healthy communities and ecosystems with clean air, water, and soil.
3. Employees in the subarea have a safe and healthy work environment.
4. An inclusive and equitable growth strategy fulfills environmental justice principles and protects frontline communities from health and human hazards.
5. The subarea offers diverse opportunities to participate in cultural, educational, scientific, and recreational activities.

Planning impacts health through its influence on the social and community determinants of health. These factors include housing, jobs, access to fresh produce, education, air quality, heat exposure, access to parks, and transportation. Lack of access to economic opportunity, substandard housing, lack of access to grocery stores, good schools and transit are all factors that contribute to poor health.

Housing, transportation, public services, economy, public safety and environmental stewardship are all factors that impact health and are most likely to be influenced by the policies of this Subarea Plan. Policies and actions related to health are therefore discussed across the chapters of the Subarea Plan.

Figure 2. Determinants of Health

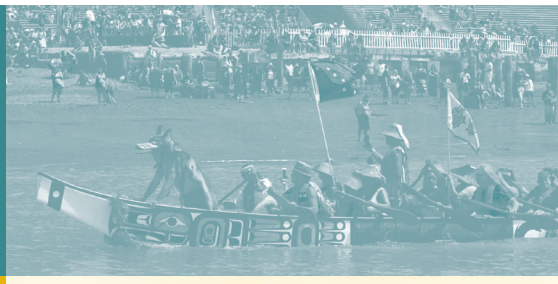
Transportation	Public Services	Economy	Environment	Housing
> Vehicle Miles Traveled (VMT) > Travel time to work > Public transit access and use > Bike lanes > Pedestrian injuries > Multimodal transit hubs	> Childcare > After school programs > Restaurants > Emergency response times > Evacuation (disaster response)	> Living wage jobs > High employment rates > High number of jobs that provide health insurance	> Access to public space and recreation > Total impervious area > Air quality > Indoor Air Quality > Noise > Water quality > Food Source Purity	> Access to affordable housing for workers in the Tideflats > Homelessness response—access to permanent supportive housing and emergency housing

Source: Ricklin A, Madeley M, Whitton E, Carey A. The State of Health Impact Assessment in Planning. American Planning Association. July 2016.

Tribal Assets

6 Reservation and tribal lands are protected from encroachment, preserving the unique cultural characteristics that support the Puyallup Tribe of Indians' traditional way of life.

7 Cultural and historic resources are protected, elevating the subarea as a site of cultural practices for the Puyallup Tribe of Indians.



Transportation and Infrastructure

8 The Subarea Plan ensures reasonably efficient freight access to the Seaport Core districts through identified freight corridors.

9 The Subarea Plan supports completing a multimodal network and shifting commute modes away from single-occupancy-vehicles.

10 The Subarea Plan identifies steps to achieve decarbonization of Port and industrial activity and to accelerate emission reductions.

11 Climate science and greenhouse gas impacts are integrated into plans, programs, and investments. The subarea is more climate resilient by identifying and protecting vital infrastructure subject to future impact to climate change.

12 Coordinated and proactive investment in infrastructure supports mobility, economic development, environmental protection, and climate resiliency.

Land Use and Economic Development

13 Industrial lands are preserved and valued, protecting the increasingly rare and valuable industrial and manufacturing lands and working waterfront from encroachment.

14 The Port of Tacoma Manufacturing 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.

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

16 The subarea offers expanded access to jobs with diverse career pathways and entry points.

17 The subarea has effective transitional areas and buffers with neighboring communities that demonstrate how a world class port can thrive alongside growing and vibrant urban neighborhoods.

Implementation

18 Ongoing coordinated problem solving among stakeholders with a shared sense of responsibilities and priorities, and proactive leadership among the partners.

19 Ongoing collaboration and dialogue among governments, agencies, communities, and businesses implements the subarea plan.

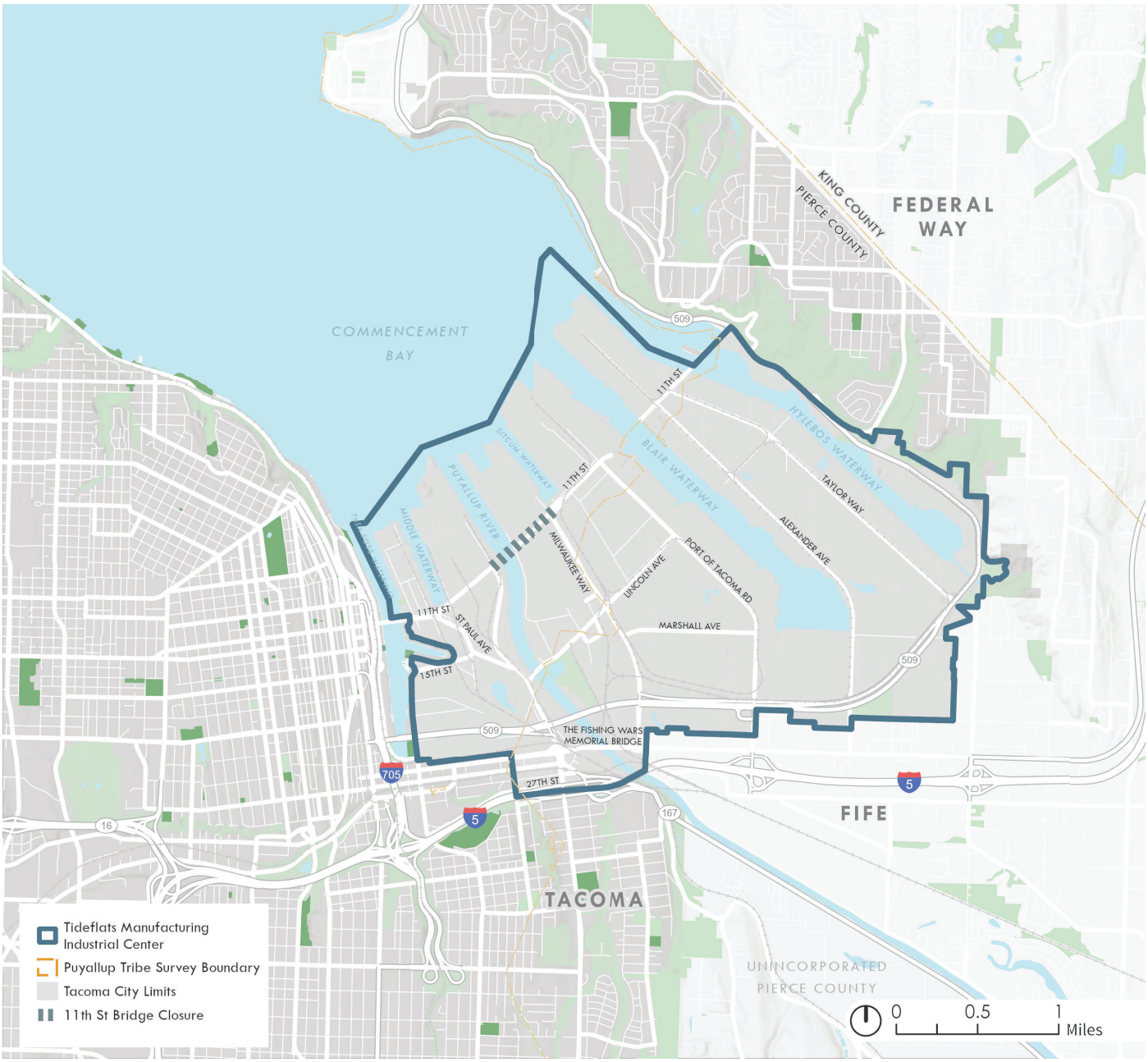
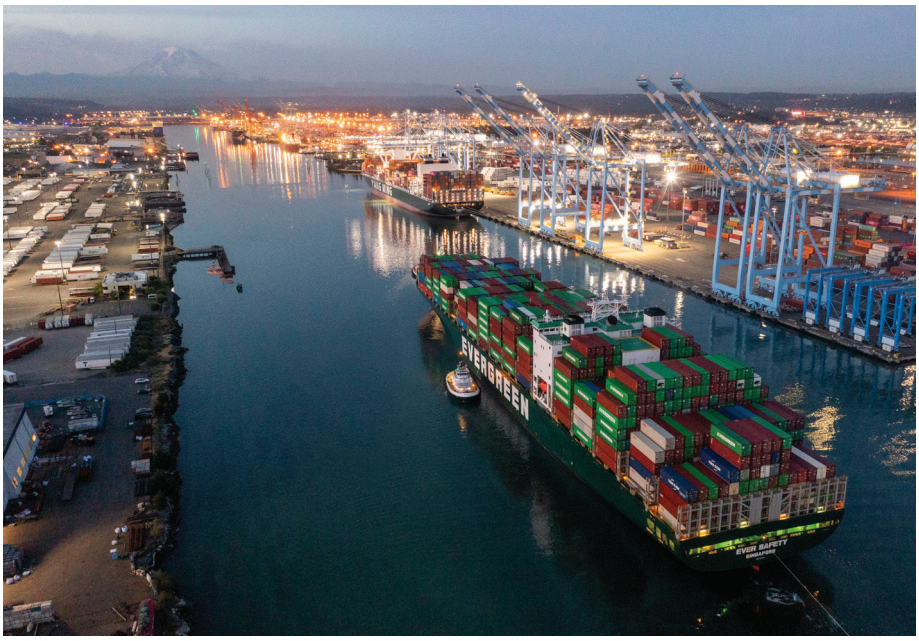


Figure 4. Study Area
Source: City of Tacoma, 2020; Seva Workshop, 2024

1.4 THE TACOMA TIDEFLATS SUBAREA

Located in the heart of Commencement Bay, the Tideflats Subarea is comprised of over 5,000 acres of waterfront land and designated as the Port of Tacoma Manufacturing Industrial Center (MIC). With about 9,800 employees, the MIC is home to Tacoma and Pierce County's highest concentration of industrial and manufacturing activity.

The Tideflats Subarea is a unique environment containing shoreline, river deltas, tidal creeks, freshwater and salt marshes, naturalized creeks, and river channel corridors. Over 1,000 acres of this vital saltwater and estuarian habitat is home to several species of salmon, shellfish, and other marine life. Development in the Tideflats Subarea consists primarily of industrial and manufacturing uses, with a



Container ships along the busy Blair Waterway

major focus on port maritime industrial activities. The Tideflats Subarea also serves as an important location for cultural traditions and the practice of tribal treaty rights.

The future of the City of Tacoma is currently directed by the City's existing Comprehensive Plan (City of Tacoma 2019) and the associated subarea plans and implementing regulations.

The Tideflats is located within Pierce County in the City of Tacoma and the Puyallup Indian Reservation, and it borders the City of Fife. The area is largely used for industrial, and port uses. The study area includes 3,963 upland parcel acres spread across 752 parcels with a diverse range of uses.

1.5 THE SUBAREA PLAN AND EIS

Subarea Plan

The Tideflats Subarea Plan is a shared long-term vision supported by goals and policies that provide a roadmap to achieve the vision. The Subarea Plan is intended to create a more coordinated approach to development, environmental review, and strategic capital investments in the Tideflats. The Plan was developed through intergovernmental collaboration and community engagement and is guided by the vision and guiding principles that came out of this process. The five participating governments who co-developed the Plan with community are: City of Tacoma, Port of Tacoma, Puyallup Tribe of Indians, City of Fife, and Pierce County.

The Subarea Plan is an innovative, area-wide vision for the Tideflats. The Plan's vision, goals, and policies supports economic prosperity, strengthens existing center assets, expands transportation choices, and improves environmental quality. The Subarea Plan fits under the City's Comprehensive Plan umbrella, Pierce County Countywide Planning Policies, the Puget Sound Regional Council Vision 2050, and other city and regional plans and policies. Port and port-related industrial activities play a vital role in the Tacoma and Pacific Northwest economy, contributing thousands of jobs and millions of dollars in revenues and state and

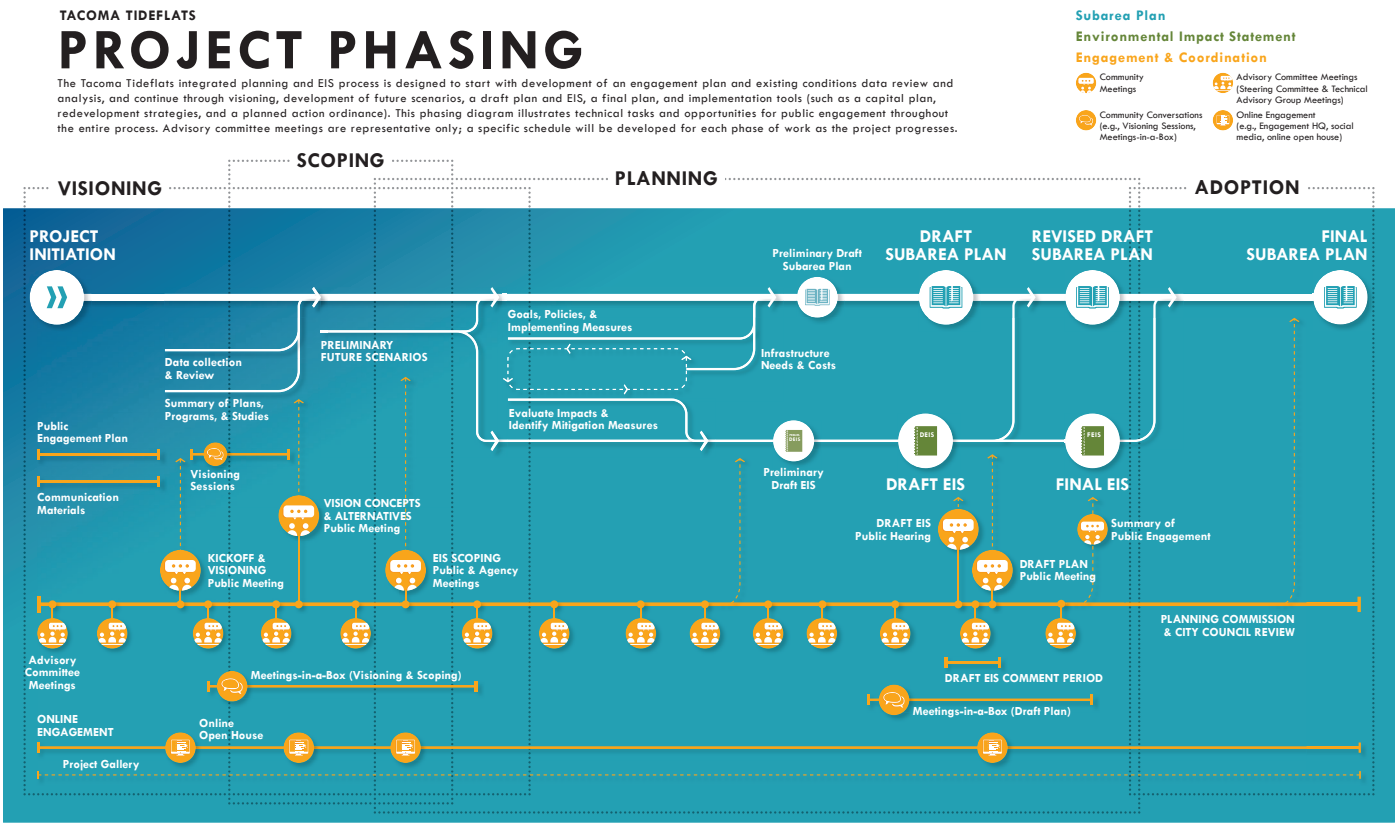


Figure 5. **Project Phasing Diagram**
Source: BERK, 2020, Seva Workshop, 2024

local taxes to the region. Preservation of available industrial waterfront land for port and port-related container and industrial activity is vital to the City's economy. This subarea plan provides policy guidance to help "…ensure that local land use decisions are made in consideration of the long-term and widespread economic contribution of our international container ports and related industrial lands and transportation systems and to ensure that container ports continue to function effectively alongside vibrant city waterfronts." This subarea plan is part of the City of Tacoma's Comprehensive Plan and satisfies the requirements of RCW36.70A.085. The subarea plan is intended to be the Container Port Element of the City of Tacoma's Comprehensive Plan.

Environmental Impact Statement (EIS)

A non-project EIS and Planned Action ordinance was developed for the Subarea Plan. The Draft EIS was released on April 9, 2024 and the final EIS release is anticipated in March, 2025.

A non-project EIS involves a cumulative environmental impact and mitigation analysis for the entire Subarea, rather than piecemeal analysis on a project-by-project basis. The non-project EIS eliminates the need for subsequent environmental review associated with project specific development proposals that comply with the Subarea Plan, adopted regulations and EIS mitigation. As such, the non-project EIS provides developer certainty and predictability that will streamline the environmental review process and further State Environmental Policy Act (SEPA) and GMA goals.

Subarea Plan Benefits

The Subarea Plan is intended to create multiple benefits for the City and the region. Some are described in this section.

Accommodate Regional Growth

The Subarea Plan promotes job growth that leverages the center's location, assets and infrastructure. In doing so, it supports the achievement of regional and City objectives for the center. The Subarea Plan also helps to strengthen and preserve regional industrial lands by supporting the growth of the Port of Tacoma and by promoting the center's role as a local and regional Manufacturing Industrial Center (MIC).

Improve Environmental Conditions

Strategies in the Plan will aim to alleviate current flooding, improve water quality in the Puyallup River, and other waterbodies in the center, and protect and recharge the South Tacoma Aquifer. Investments in the street network will improve mobility and enable mode shift with the expansion of the pedestrian, bicycle, and local and regional transit network. This is expected to reduce greenhouse gases and improve air quality.

Health

The Subarea Plan recognizes that health is a vital concern that is interrelated with many policy considerations. Countywide Planning Policies recommend that "each municipality shall incorporate provisions addressing health and well-being into appropriate local planning and decision-making processes." Specifically, the City of Tacoma and the Tacoma–Pierce County Health Department promote a "health-in-all-policies" approach to address the complex factors that influence health and equity in the neighborhood and broader community, such as access to healthy food, health care, affordable housing, transportation options and neighborhood safety. As adopted by the Pierce County Board of Health, the "healthin-all-policies" approach presents an integrated foundation for a balanced equitable social environment, a viable economy and a livable built and natural environment. Policies and actions in the Plan support living wage jobs, transportation choices, and cleaner air and water to improve community health.

Shared Prosperity

Policies and actions in the Plan support the role of the Tideflats MIC as an economic center for the region. Focused development in priority sectors will create and maintain jobs in the center.

1.6 COMMUNITY ENGAGEMENT

Community Engagement Process and Outcomes

Outreach Strategy

Meaningful public engagement was an important goal of this project. Engagement was designed to hear from a broad group of community members who reflected the many interests and perspectives surrounding the history, current uses, and future of the Tideflats. The principles listed in the sidebar, based on guidance from One Tacoma, the City of Tacoma's Comprehensive Plan, provided guidance for engagement activities.

The COVID-19 pandemic began shortly after engagement efforts were initially launched, which required a pivot to virtual interaction rather than the in-person engagement opportunities originally envisioned. The revised outreach approach included virtual public meetings, focus groups, expert panel discussions, an online survey, small group briefings, social media and participation by the Tideflats Advisory Group (TAG).

Outreach Conducted

Engagement was promoted via communication materials and outreach methods designed to build awareness about the project and advertise opportunities to engage. These methods included:

> PROJECT IDENTITY AND TEMPLATES

The project identity created a consistent "look and feel" for all project materials to increase visibility and overall public awareness of the project.

> FAQ SHEET

The FAQ sheet provided overview information about the project, key issues, and options and was developed based on the comments, questions, and issues raised in early engagement.

> EMAILS TO PROJECT LISTSERV

The project team emailed a comprehensive list of all project participants, including public meeting attendees, advisory group members, elected officials, media representatives, and any other groups that may be interested in the project.

> PROJECT WEBSITE

The website offered an up-to-date, accessible source of information for all aspects of the project.

> SOCIAL MEDIA

The project team used Facebook, Twitter, and Instagram to announce project news and promote and document events and solicit feedback from a broader audience. Figure 6 shows an example of a social media post advertising the visioning survey.

ENGAGEMENT PRINCIPLES

Communicate **early, often, and clearly** about purpose and process so the community is well informed and engaged in the planning of the project

Actively solicit information from businesses, residents, property owners, organizations, and other governments about their **questions, priorities, and concern**s

Apply an **equity lens** to identify and intentionally engage across different demographic, racial, cultural, and economic spectrums that make up our community to **seek the perspectives of those who may have been historically marginalized or excluded** and unlikely or unable to participate in the process

Focus engagement around issues that can be molded and influenced by public input to ensure it remains relevant and **consistent with community needs**

Build project support through outreach and engagement efforts that allow for **meaningful input** throughout the constantly evolving process

Integrate plan development with environmental review to ensure a seamless experience for participants and multiple opportunities to comment

Figure 6. Sample Social Media Post Advertising the Visioning Survey

Source: BERK, 2021

Figure 7. Advertisement for the Community Kickoff

Source: City of Tacoma, 2021

> PRESS RELEASES

Press releases were drafted and distributed by all five participating governments in advance of the two large public meetings during the visioning process.

> PROMOTIONAL VIDEO

A 30-second promotional video provided a visually engaging overview of the Tideflats Subarea and why the community should be invested in the subarea planning process.

The five participating governments actively participated in engagement and promotion of communications. Their efforts were coordinated using a detailed Communications Plan that ensured staff at each participating government would share the same information with their respective audiences on the same timeline.

Community Engagement Methods by Phase

Engagement was conducted during each phase of the project to ensure the community and interested stakeholders could meaningfully participate in all aspects of the project.

> PHASE 1: KICKOFF

Community Kickoff. The project team hosted a virtual community kickoff meeting on Thursday, February 4, 2021 to initiate the public engagement period of the project. The meeting occurred via Zoom, was streamed live to Facebook, and included Spanish interpretation and English closed captioning. Participants provided input via online real-time polling. Figure 7 shows an advertisement for the kickoff.

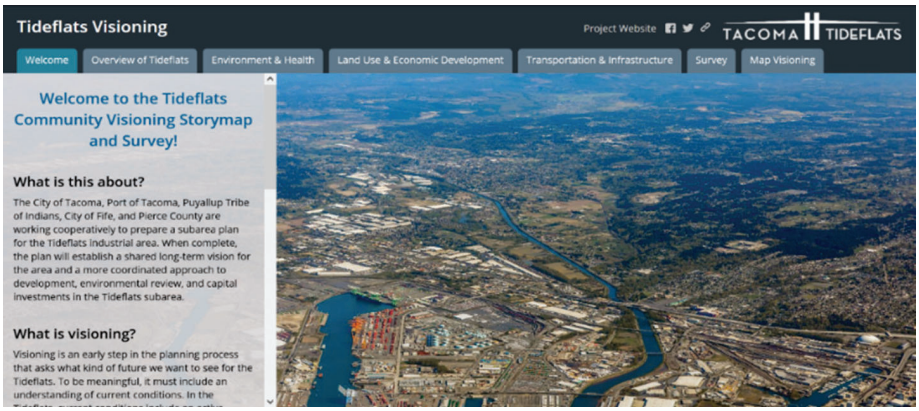


Figure 8. Story Map
Source: BERK, 2021

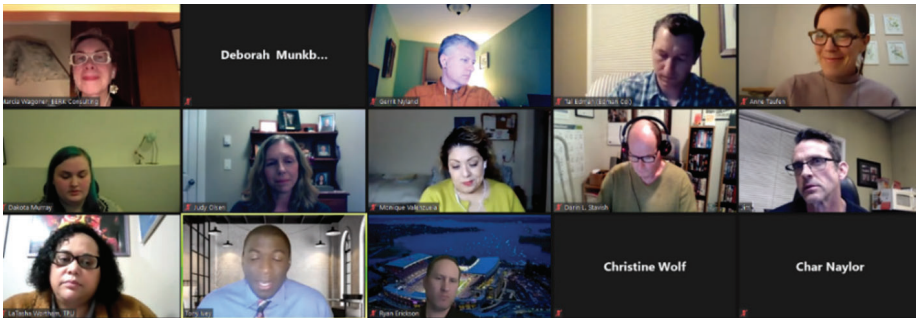


Figure 9. Focus Group Participants
Source: BERK, 2021

> PHASE 2: VISIONING

Survey and Story Map. An online survey was the primary method for stakeholders and the public to provide visioning input on their own schedules and in an open-ended format. The survey went live on March 15, 2021 and the survey remained open through April 30, 2021. During this time, 602 individuals provided input via the survey, including 1,172 open-ended comments.

The survey was integrated into an online interactive story map that allowed interested individuals to learn more about the Tacoma Tideflats while responding to the survey. See Figure 8 for an image of the Story Map. The survey blended multiple choice and open-ended questions, including an option to respond with an open-ended "other" response to any multiple-choice question. This offered respondents a fully open-ended opportunity to provide input to the visioning process.

Visioning focus groups. Two focus groups meetings were conducted. Participants were invited to ensure a balanced mix of interests in economic development, natural environment, transportation, and capital facilities planning. The meetings were designed to gather visions from a wide range of perspectives and allow for an in-depth discussion of issues through a facilitated focus group discussion. See Figure 9 for an image from one of the virtual focus groups.

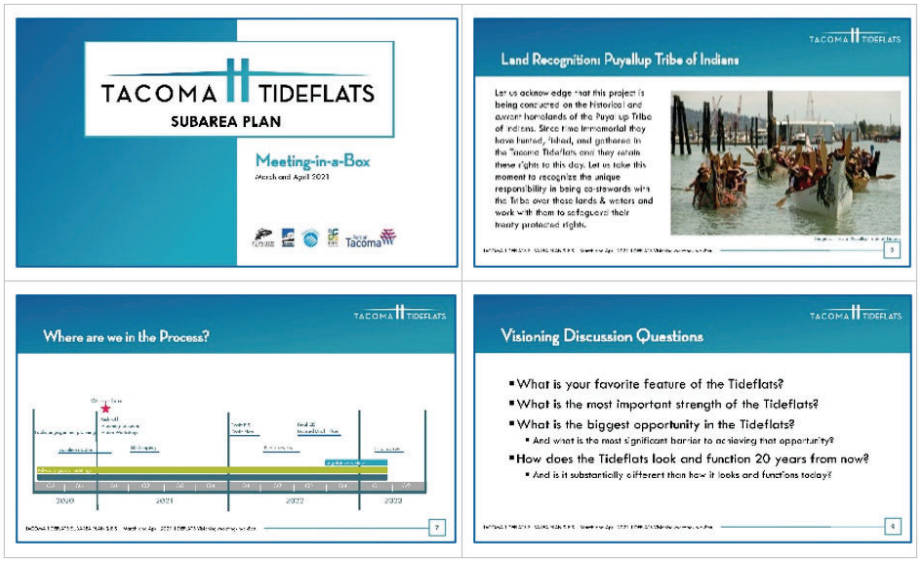


Figure 10. Sample Meeting-in-a-Box Slides
Source: BERK, 2021

Figure 11. Transportation and Infrastructure Panel
Source: BERK, 2021

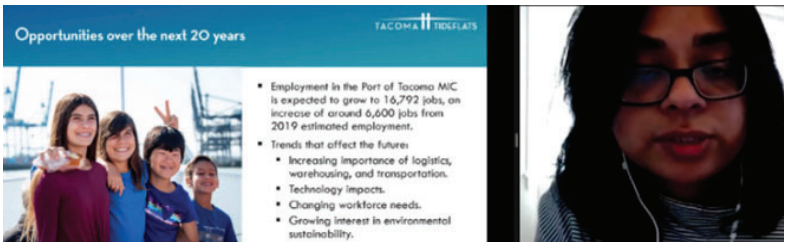


Figure 12. Visioning Report Out
Source: BERK, 2021

"Meetings-in-a-Box." Members of the Project Management (PM) Team, Staff Leadership Team, and TAG hosted informational discussions at existing community meetings to share information about the process and seek input. Meeting hosts were all provided a set of materials that described the project and provided a discussion guide with questions that allowed a consistent set of responses. See Figure 10 for a selection of some of the Meeting-in-a-Box slides.

Visioning panels. Panelists with an interest in the Tideflats area participated in a panel discussion of three visioning themes: (1) land use and economic development, (2) natural environment and health, or (3) transportation and infrastructure. Panels occurred in a public meeting setting and focused on panelists' perspectives on opportunities, challenges, and their 20-year visions in the Tideflats. These discussions were intended to provide background information in support of the online survey. Panel discussions were followed by a question-and-answer session for attendees. See Figure 11 for an image from one of the panels.

Visioning Report Out. Project staff presented key themes and takeaways from the visioning meetings outlined above. Panelists participated by answering a series of informal Zoom polls. See Figure 12 for an image from the presentation.

> PHASE 3: DRAFT PLAN &EIS

Engagement for the draft subarea plan will occur after this document is published. The final subarea plan and EIS will describe these engagement efforts.

EIS Engagement

Scoping: The City followed legal notification requirements and conducted outreach activities to notify agencies, tribal governments, and members of the public and stakeholders of the scoping comment period and public scoping meeting in accordance with Section 13.12.610 of the City of Tacoma Municipal Code.

City staff conducted early community engagement to present the preliminary alternatives recommended by the Steering Committee, and to share information on the scoping process and how to participate.

Due to the ongoing COVID-19 pandemic, the City opted to host a virtual public scoping meeting via Zoom on July 13, 2022. The project team provided information about the proposed Subarea Plan and Planned Action, the SEPA process, and an opportunity to provide a verbal comment on the scope of the proposed EIS. 43 attendees joined the virtual public scoping meeting and 15 provided verbal scoping comments. A recording of the meeting is included on the project website at www.cityoftacoma.org/tideflatsplan

The City also conducted outreach and engagement when the Draft EIS was released.

Project-Long Stakeholder Engagement Methods

Two committees provided perspectives and guidance to the project at regular meetings throughout the project duration:

> TIDEFLATS ADVISORY GROUP (TAG)

The TAG included representatives from a wide range of interests including adjacent jurisdictions, neighborhoods, business and industry, labor, environmental interests, regional economic interests, and others. The TAG provided input and feedback for the Subarea Planning Process. TAG members also served as liaisons to the broader stakeholder groups they represent, and some served as panelists at topic-focused public engagement meetings. The TAG met 21 times from February 2020 through October 2024.

> STEERING COMMITTEE (SC)

The SC consisted of two elected leaders and alternates (elected officials) from each participating government, including the City of Fife, City of Tacoma, Pierce County, Port of Tacoma, and the Puyallup Tribe. The SC provided guidance for policy decisions and facilitated mutual understanding and a closer alignment of interests across jurisdictions throughout the subarea planning process. The Steering Committee also recommended an initial draft Subarea Plan for consideration by the Tacoma Planning Commission. The SC met 17 times from July 2020 through December 2024.

Outcomes

Figure 13 shows the number of community members and stakeholders who participated in the various meeting types during the kickoff and visioning phase.

The collective feedback that resulted from all engagement methods covered the following themes:

> STRENGTHS

Participants identified strengths of the subarea as the Port of Tacoma's shipping, trade activity, and jobs; natural habitat; the natural deep-water port; and proximity to on-land transportation and districts.

> CHALLENGES

Participants identified challenges as complex interests, community divisiveness, and incohesive uses; environmental contamination or neglect; and barriers to public education.

> OPPORTUNITIES

Opportunities for the Tideflats included restoration and cleanup of natural areas, including water and air quality; preserving and strengthening jobs; transitioning away from fossil fuel facilities and increasing clean industry; addressing climate change; and making transportation improvements.

> BARRIERS

Barriers included a lack of community understanding; poor transportation and infrastructure; and politics.

> FEATURES

Top features of the Tideflats to maintain included natural resources and wildlife; the Port of Tacoma and working waterfront; recreation opportunities; environmental protection and clean industry; and jobs, business, and economic development.

> LAND USES

Preferred land uses include a wide range of industrial uses, such as green industrial uses or industrial uses that promote a more environmentally sustainable economy or mixed industrial uses with a wider range of businesses and activities; container shipping and international trade; port maritime uses; and complementary land uses including cultural, educational, and maritime heritage facilities; small-scale manufacturing spaces for fabrication or production; and public shoreline access and recreation facilities.

> ECONOMIC DEVELOPMENT

Participants' top visions for economic development included environmental remediation, investments in infrastructure to expand port facilities, and investments in transportation improvements.

MEETING TYPE	PARTICIPANT TYPE	MEETING	DATE	ATTENDEES
Tideflats Advisory Group	TAG	TAG Meeting 3	1/21/21	18
	TAG	TAG Meeting 4	2/18/21	14
	TAG	TAG Meeting 5	4/15/21	16
Community Kickoff	Public	Kickoff	2/4/21	56+
Visioning Focus Group	Key Stakeholders (by invite)	Visioning Focus Group 1	3/2/21	14
		Visioning Focus Group 2	3/4/21	13
Meetings in a Box	City of Fife Council	Tideflats Subarea Plan Visioning	2/16/21	
	Community Group	Tacoma Transportation Club	3/8/21	85
	Puyallup Tribe of Indians	Puyallup Tribe of Indians Planning Commission	3/9/21	3
	Puyallup Tribe of Indians	Puyallup Tribe of Indians Fishing Commission	3/12/21	4
	Community group	Propellor Club of Tacoma	3/16/21	25
	City of Tacoma	Sustainable Tacoma Commission	3/18/21	13
	Pierce County	Pierce County Council*	3/21	12
	Chambers of Commerce	Fife/Milton/Edgewood Chamber of Commerce*	3/30/21	12
	Community Group	Pierce County Green Drinks	4/1/21	11
	Community Group	Citizens for a Healthy Bay Pt. 1 of 2	4/1/21	4
	Chambers of Commerce	Puyallup/Sumner Chamber of Commerce*	4/6/21	34
	Community Group	Citizens for a Healthy Bay Pt. 2 of 2	4/6/21	1
	Chambers of Commerce	Lakewood Chamber of Commerce	4/8/21	n/a
	Community Group	Citizens for a Healthy Bay Policy and Technical Advisory Committee	4/15/21	8
	Community Group	Northeast Tacoma Neighborhood Council	4/15/21	20
	City of Tacoma	Tacoma Transportation Commission	4/21/21	26
	City of Tacoma	Puyallup River Watershed Council	4/22/21	20
	City of Fife	Fife Planning Commission*	4/5/21	14
Visioning Panels	Public	Panel 1: Land Use and Economic Development	3/17/21	45
		Panel 2: Environment and Health	3/18/21	32
		Panel 3: Transportation and Infrastructure	3/20/21	10

Figure 13. Visioning Meetings
**Informational. Engagement not conducted.*
Source: BERK, 2021

> TRANSPORTATION

Traffic congestion and backups was a primary concern. Other concerns included train and truck safety, limited walking options, and limited bridge access across the Puyallup River and other waterways. The most common suggested improvements were adding more biking, transit, and walking options.

> NATURAL RESOURCES

Common themes include a desire to clean up contaminated areas, protect salmon, shellfish, and marine life, establish green industrial development standards to promote sustainability and reduce greenhouse gas emissions, and provide more shoreline/habitat restoration and enhancement.

2 Context and History

Context and History

2

2 Context

2.1 LOCATION AND TOPOGRAPHY

The location and topography of the subarea is shown in Figure 14. The subarea includes 3,963 acres in the City of Tacoma and the Puyallup Tribe of Indians Reservation. It is at the mouth of the Puyallup River, on Commencement Bay, at the southern end of the Puget Sound basin between the Olympic Mountain Range to the west and the Cascade Mountain Range to the east. The subarea is generally flat and close to sea level. It contains the Puyallup River, the Thea Foss Waterway, the Blair Waterway, and the Hylebos Waterway. Steep topography northeast of the subarea separates it from Northeast Tacoma. The Thea Foss Waterway forms the western boundary of the subarea and separates it from Downtown Tacoma. The City of Fife forms the southern boundary of the subarea. There are two major roads in and around the southern part of the subarea, SR 509 and I-5. These roads separate the subarea from most of Fife and areas further up the Puyallup River. Commencement Bay forms the northwest boundary. The combination of topography and transportation corridors creates strong edges that physically separate the subarea from adjacent neighborhoods.

For further information

This chapter describes conditions in the subarea. Additional detail is provided in the Appendices

The Tideflats area as viewed from Downtown Tacoma, across the Thea Foss Waterway. A drastic topographical shift, visible in the distance, separates Commencement Bay and the Tideflats subarea from Northeast Tacoma.

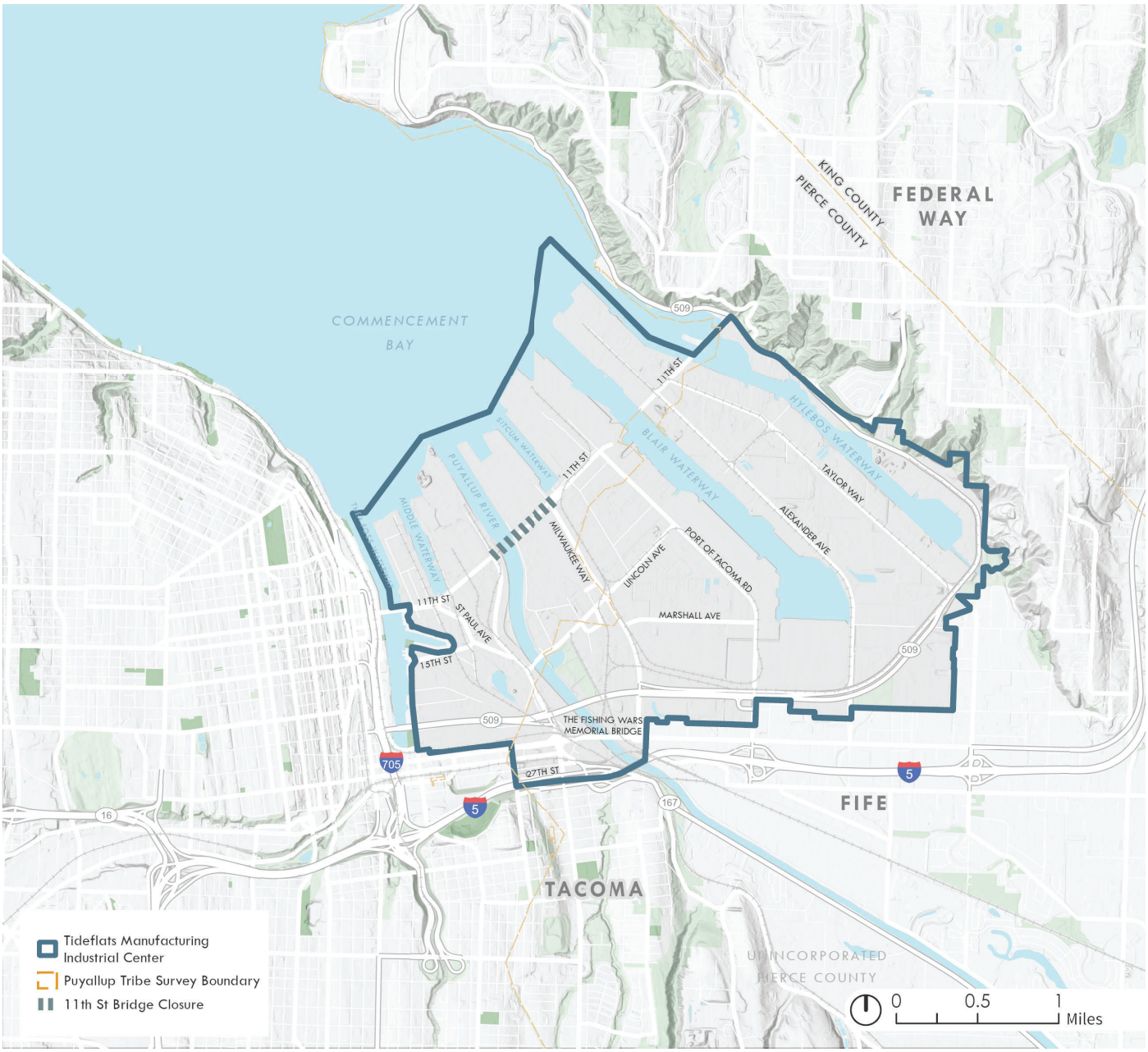


Figure 14. **Location and Topography of Subarea**

Source: City of Tacoma, 2020; Seva Workshop 2024

2.2 HISTORY OF DEVELOPMENT

The subarea is part of the ancestral lands of the Puyallup Tribe of Indians. For centuries, the Puyallup Tribe, with other Native American communities, fished the rivers, hunted in the forest, and lived in the lands along the shores of Puget Sound and the Puyallup-White River watershed, including the subarea.

In the 1800s European settlers came to the region with a different view of land use and ownership. In 1854, Territorial Governor Issac Stevens executed the Treaty of Medicine Creek. Various Tribes ceded their claims to land in Washington in return for relatively much smaller land within reservations, hunting and fishing rights, and promises of cash payments. By 1857, the Puyallup reservation was created and expanded to 18,060 acres. The reservation lay along the Puyallup River and Commencement Bay and included parts of the cities of Tacoma, Fife, and Puyallup, including the subarea.

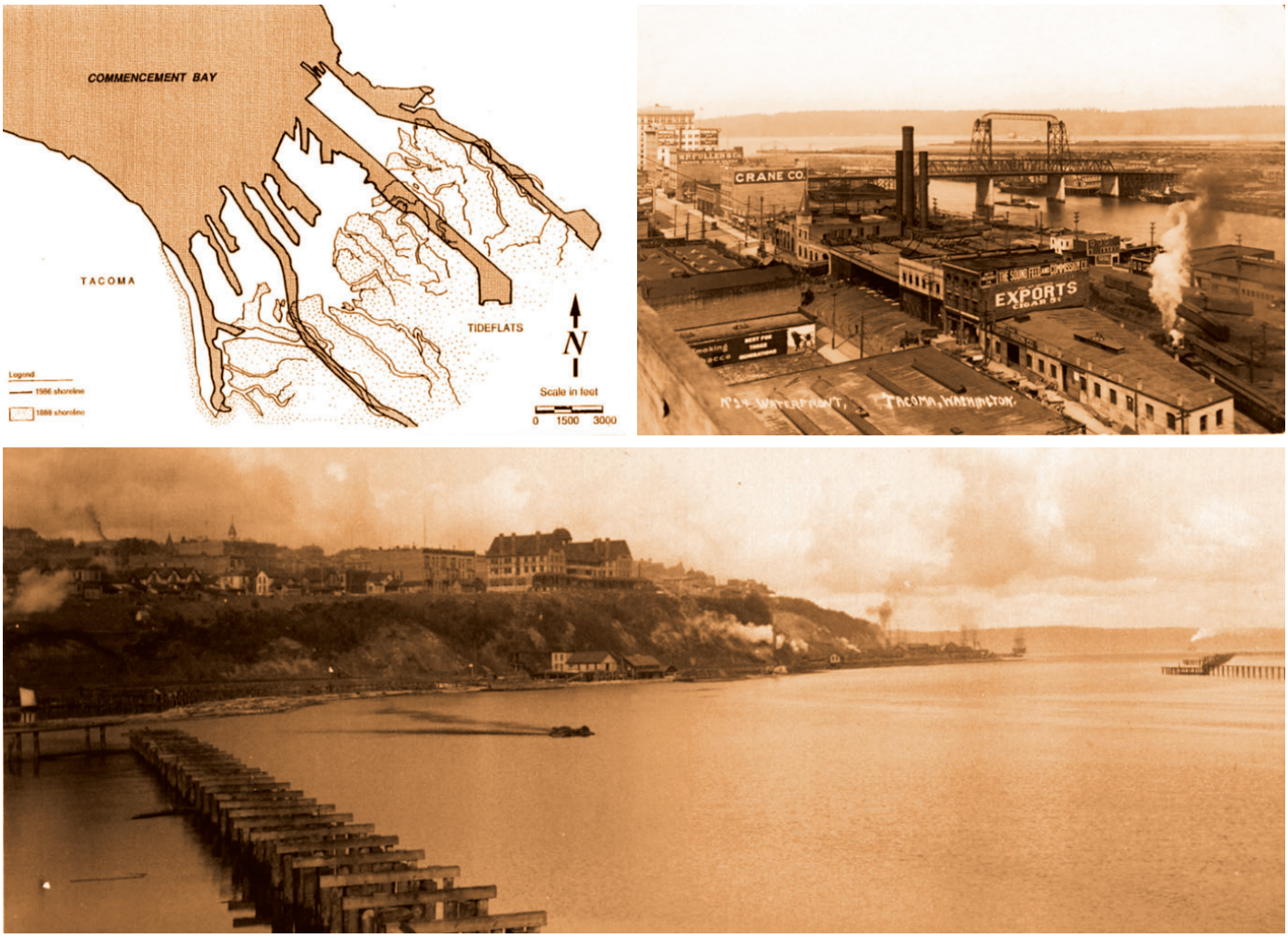


Figure 15. Tideflats Activities in the 1890s-1900s

Note: Top left image, 1888 shoreline and shoreline modifications in 1986. Top right image, waterfront and 11th Street bridge looking east. Bottom image, A look from Commencement Bay in 1890, with the old Northern Pacific Railroad trestle bridge that crossed the Tideflats with the Tacoma Hotel in the background. Source: City of Tacoma, Marv Coleman: Department of Ecology Toxics Cleanup Program, and Tacoma Public Library, 2020; Washington Department of Historic Preservation,2020

The arrival of the transcontinental railroad in the 1880s spurred development in Tacoma. Much of the tribal lands were stolen, alienated, or sold to non-Indian ownership. The railroad brought thousands of new settlers and new trade, business and port activities to Tacoma.

Starting from this time in the 1880s, the study area has a history of maritime industrial activity, as shown in Exhibit 10. Early uses included lumber and shingle mills, as well as shipyards, flour mills, electrometallurgy, and electrochemical uses. In 1918, the Port of Tacoma was established. Starting in 1919, the Port of Tacoma started to build industrial facilities to support local and regional trade.

In 1966, the Port dredged and extended the Blair and Hylebos waterways creating more than 1,400 acres of new land. The waterway extension and dredging set the stage for increased activity with new terminals, industrial development sites and jobs. By 1981, shipping and transportation innovations transformed the subarea. Changes such as the addition of the North Intermodal Yard shifted the Port's activities into the logistics of cargo handling.

Today, the subarea is developed with a range of industrial, manufacturing, and support uses with a primary focus on port maritime industrial activities. The Tideflats is also a unique natural environment, containing shoreline, river deltas, tidal creeks, marshes, naturalized creeks, and river channel corridors. Much of the area is within Puyallup Indian Reservation boundaries and is an important location for cultural traditions and the practice of tribal treaty rights.

2.3 TRIBAL RESOURCES

The subarea is located within the ancestral lands of the Spuyaləpabš who are also known today as the Puyallup Tribe of Indians. The Tribe has been in the subarea for hundreds of years. The subarea contains many tribal resources that are part of people's day to day lives, and this plan seeks to protect them. Tribal members continue to hunt, fish, and gather food in the subarea. They meet in the subarea for ceremonies and cultural activities. The subarea is also a place where Tribal members work, and where the Tribe owns land and operates businesses and administrative offices.

Cultural Resources

The Spuyaləpabš, who are also known as the Puyallup Tribe of Indians, have lived on the headwaters of the Puyallup River since time immemorial. The Spuyaləpabš continue to live and practice traditional lifeways in this area such as hunting, fishing, and gathering. There are 19 recorded ethnographic places known to be within or near the Tideflats; these include locations of important events, village sites, burial locations, and geographical features.

2018 Power Paddle to Puyallup, hosted by the Puyallup Tribe of Indians, landing in Commencement Bay. Photo: Andrew Strobel.

Depending on the relative depths of site burial and ground disturbances caused by historic and recent development, this area has the potential to contain Holocene archaeological sites. The Department of Archaeology and Historic Preservation's Statewide Predictive Model classifies the study area as Very High risk for precontact-era archaeological sites (DAHP 2010). This is consistent with the Tribe's Historic Preservation Department models as well.

Activities within the Tideflats have the potential to both directly and indirectly impact cultural resources. Potential restoration work can impact known and unknown archaeological resources because of the associated ground disturbance and associated increases in public access. With increased public access comes the increased likelihood that archaeological resources could be damaged or destroyed, or the character of unknown cultural resources associated with a traditional tribal belief or practice could be impacted. Areas that should be approached with caution are:

- Submerged lands that previously served as coastal areas
- Areas above the historic shoreline
- Areas near recorded precontact-era archaeological sites
- Areas with a high probability of containing unrecorded precontact-era archaeological sites
- Areas near Spuyaləpabš cultural sites

Natural Resources

Natural resources in the subarea are connected to the Tribe's culture and traditions. The traditional diet of the Tribe was based on fishing, shellfish harvesting, hunting, and gathering of roots, bulbs, and berries. Salmon were an especially important part of tribal culture and continue to be so today.

The natural environment in the subarea is currently degraded due to the history of industrial land use and filling and dredging of the Puyallup River estuary. Despite this, the subarea still has salmon and shellfish populations. The Tribe has been working with the City, Port, and other partners to restore habitat areas and protect the natural resources that have long been part of their culture.

Treaty and Land Resources

Treaty of Medicine Creek: Puyallup Tribe of Indians Reservation (1854, 1857, 1873)

The Puyallup Tribe of Indians Reservation was established in 1854 by the Treaty of Medicine Creek which is the supreme governing law over the subarea. The reservation was enlarged two subsequent times through presidential executive orders in 1857 and 1873. The treaty federally designated several proto-land use types including reserving the lands for hunting, gathering, fishing, and homesteading. The following articles of the Treaty of Medicine Creek outline these uses:

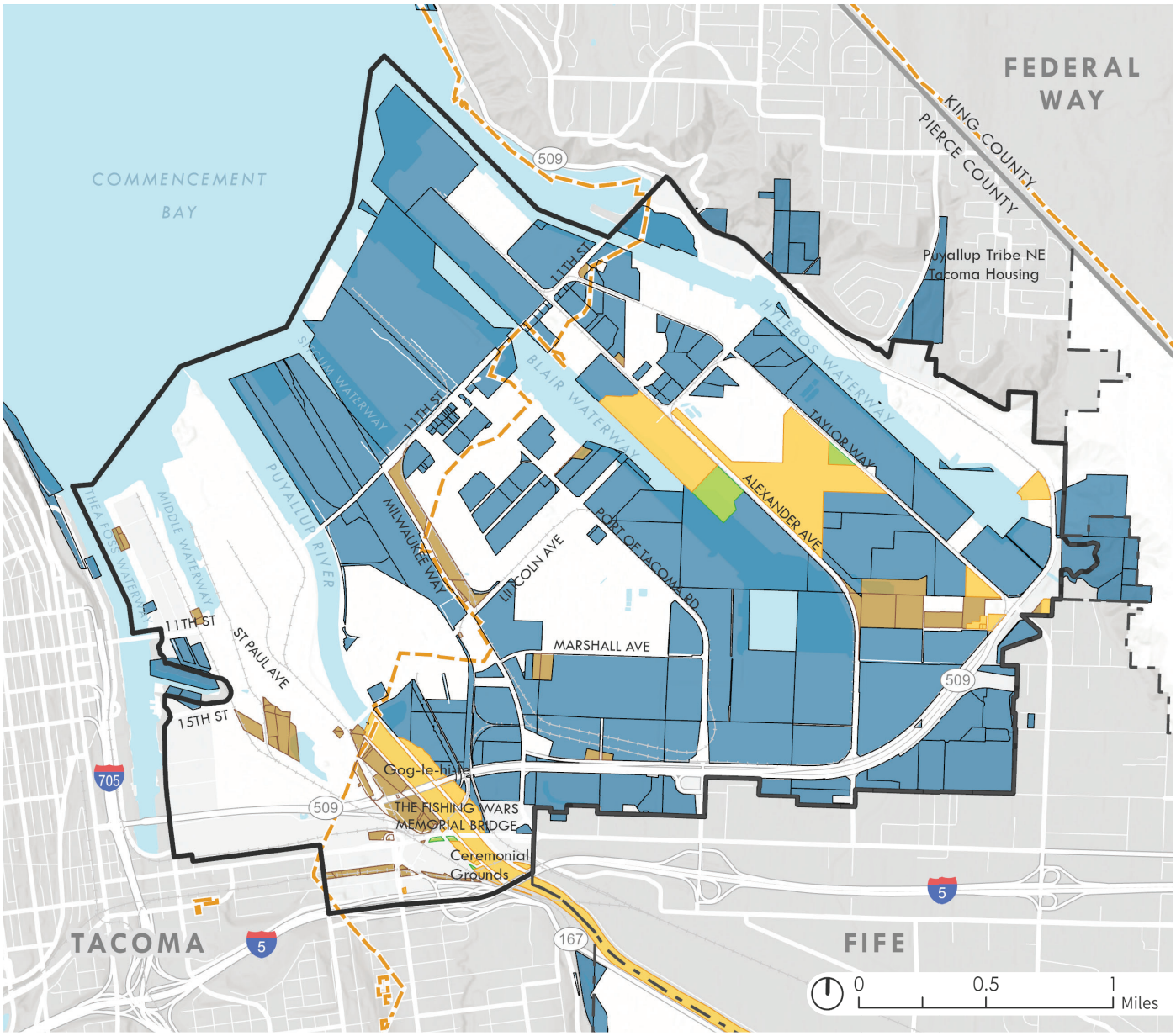
ARTICLE 3: The right of taking fish, at all usual accustomed grounds and stations, is further secured to said Indians in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses on open and unclaimed lands[...]

ARTICLE 5: To enable the said Indians to remove to and settle upon their aforesaid reservations, and to clear, fence, and break up a sufficient quantity of land for cultivation[…]

Puyallup Tribe of Indians Land Claims Settlement (1990)

A federal appeals court ruled in 1983 in the tribe's favor, awarding 12.5 acres of the Port of Tacoma to the Tribe. In 1988, the Tribe, the Port, and numerous other governments and private entities entered into a Land Settlement Agreement, a historic event that resolved a number of land, jurisdictional, and other issues between the parties. President Bush signed the Puyallup Indian Settlement in 1989, making way for future growth and Port Tribe cooperation. One of the most significant elements of that agreement was the return of close to 900 acres of land to the Puyallup, including land on the Blair Waterway which the parties envisioned would be developed by the Tribe as an international marine terminal. The agreement outlines the federal requirement for notification and consultation on all development and planning within the Tacoma Tideflats.

In April 2008 the Tribe and the Port signed agreements to aid in the development of facilities on the Blair-Hylebos Peninsula. As part the agreement, the parties exchanged additional parcels of land and agreed to cooperate on the ongoing development of the Blair Waterway.



Reservation Lands

Today the Tribe owns various parcels within the subarea. The most significant of these properties is located along the Hylebos and Blair Waterways. The Tribe utilizes these properties for economic, cultural and administrative uses. The Tribe operates a marina, automobile import facility, and processing facilities. The Tribe also has non-industrial uses within the area including a cultural site, dx^{w}ɬalilali "a place to come ashore" and the Tribal Ceremonial Grounds. These are places where various ceremonies and cultural activities take place. Additionally, the Tribe operates several administrative departments within the area. In addition to these properties, parts of the Puyallup River within the subarea are also owned by the Puyallup Tribe. See Figure 16.

Figure 16. Non-Private Ownership, 2020

Note: Port and public ownership based on land use designation, taxpayer address, and business name fields in the assessor data. Source: City of Tacoma, 2020; BERK, 2020; Seva Workshop 2024

Manufacturing Industrial Center
Puyallup Tribe Survey Boundary
City Limits

Puyallup Tribal Land

Fee Ownership
In Trust

Other Non-Private

Port Owned Parcels
Other Public Parcels

2.4 LAND USE CONDITIONS

The subarea contains a large and diverse set of land uses, including a working port, an industrial support sector, and a range of land uses that also need transportation access and outdoor storage and need to be located away from residential uses. Industrial uses (including manufacturing, warehousing, and transportation) account for the majority of the subarea, about 70%. State, regional, and local policies support the subarea as being a concentrated area of industrial activity and it is also a designated manufacturing industrial center (MIC). See **Figure 17** for current land uses in the subarea.

This Subarea Plan establishes a new zoning concept for the planning area. Since 2014, there have been three zones in the subarea: Port Maritime and Industrial District (PMI), M2 Heavy Industrial District, and M1 Light Industrial District. PMI represents the majority of the subarea and allows the most intensive industrial uses and Port facilities, as well as a mix of commercial uses. M2 allows heavy industrial and commercial uses. There are slight variations between PMI and M-2 but they are pretty limited. The M-2 does allow some more commercial and civic/service uses (like a detox center) but the allowances are minor. For the most part the two zones both focus primarily on heavy industry. M1 is intended to serve as a buffer zone between heavy industrial and commercial/residential uses, allowing a variety of commercial uses and smaller scale light industrial uses. See **Figure 18** for a 2020 zoning map of the subarea.

There is a need for better transitions between the subarea and surrounding areas and adjacent jurisdictions to help reduce land use conflicts between industrial and non-industrial development. There are a variety of uses surrounding the subarea: tourist attractions, residential and commercial development to the west, the Tacoma Export Marketing Company Grain Terminal to the north, commercial uses (within the City of Fife) and a tribal community to the south, and open space to the east. Industrial activity in the subarea produces several impacts, including air quality, noise, and odor that have the potential to impact surrounding land uses and jurisdictions. The Tacoma Comprehensive Plan and the Container Port Element supports providing adequate buffers to avoid land use conflicts, though these policies largely rely on geography (such as the Thea Foss Waterway separating the subarea from surrounding development) and may need to be further evaluated to ensure buffers are adequate. There are also opportunities to improve transitions and connections to the South Downtown Subarea and the Tacoma Dome Station area.

Public access to the shoreline is available at points along the Thea Foss Waterway, such as at the City of Tacoma Fire Department Facility. There is interest and opportunity to expand public shoreline access in the subarea while still meeting goals and requirements outlined in Tacoma's Shoreline Master Program.

Lastly, there is a large share of publicly owned land in the subarea that represents potential opportunities for future development for public use. Further evaluation of this land for its development potential and vulnerability to climate change impacts will need to be studied. See **Figure 16** for a map of non-private land ownership in the subarea.

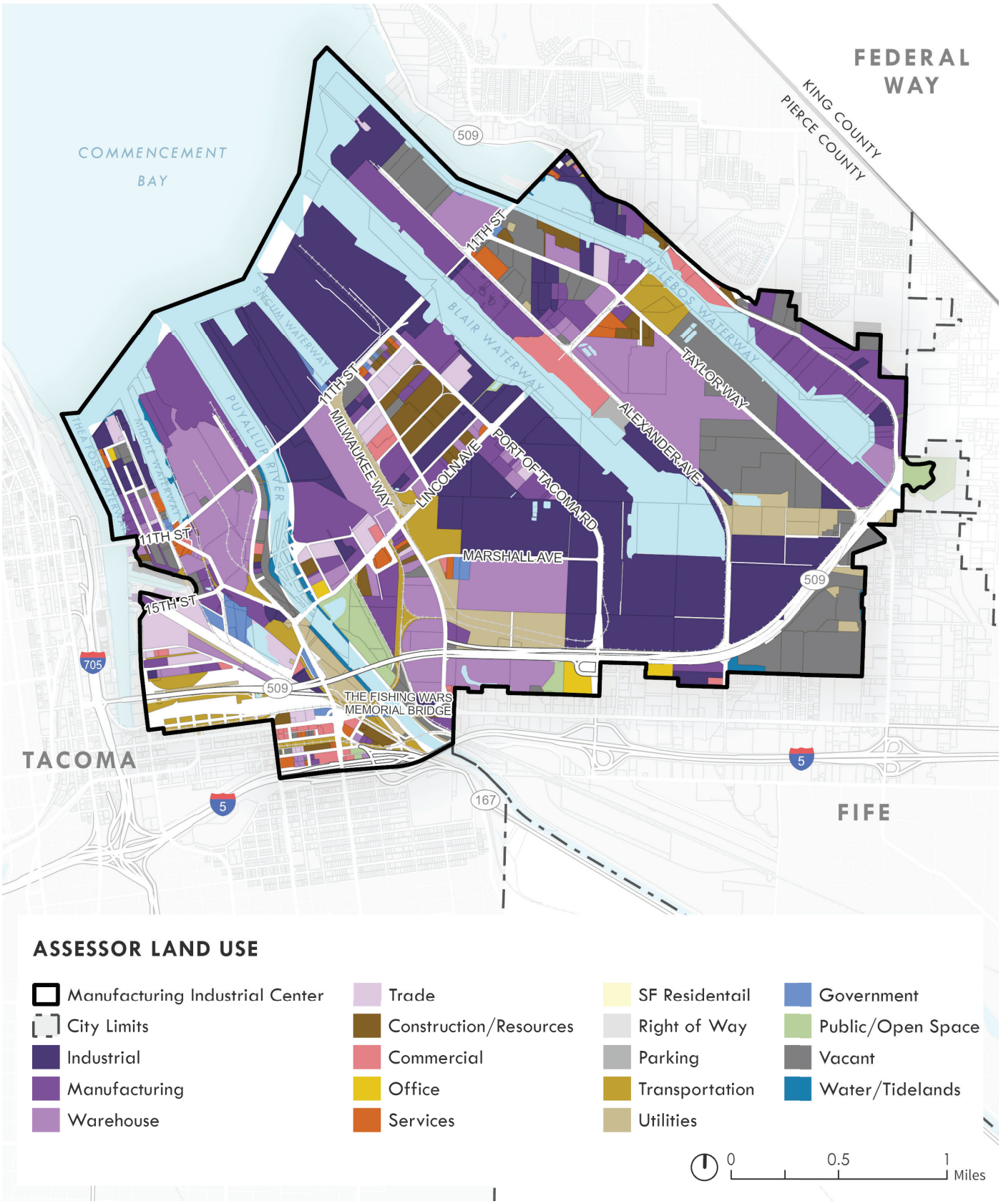


Figure 17. Land Use, 2020

Source: City of Tacoma, 2020; BERK, 2020; Seva Workshop 2024

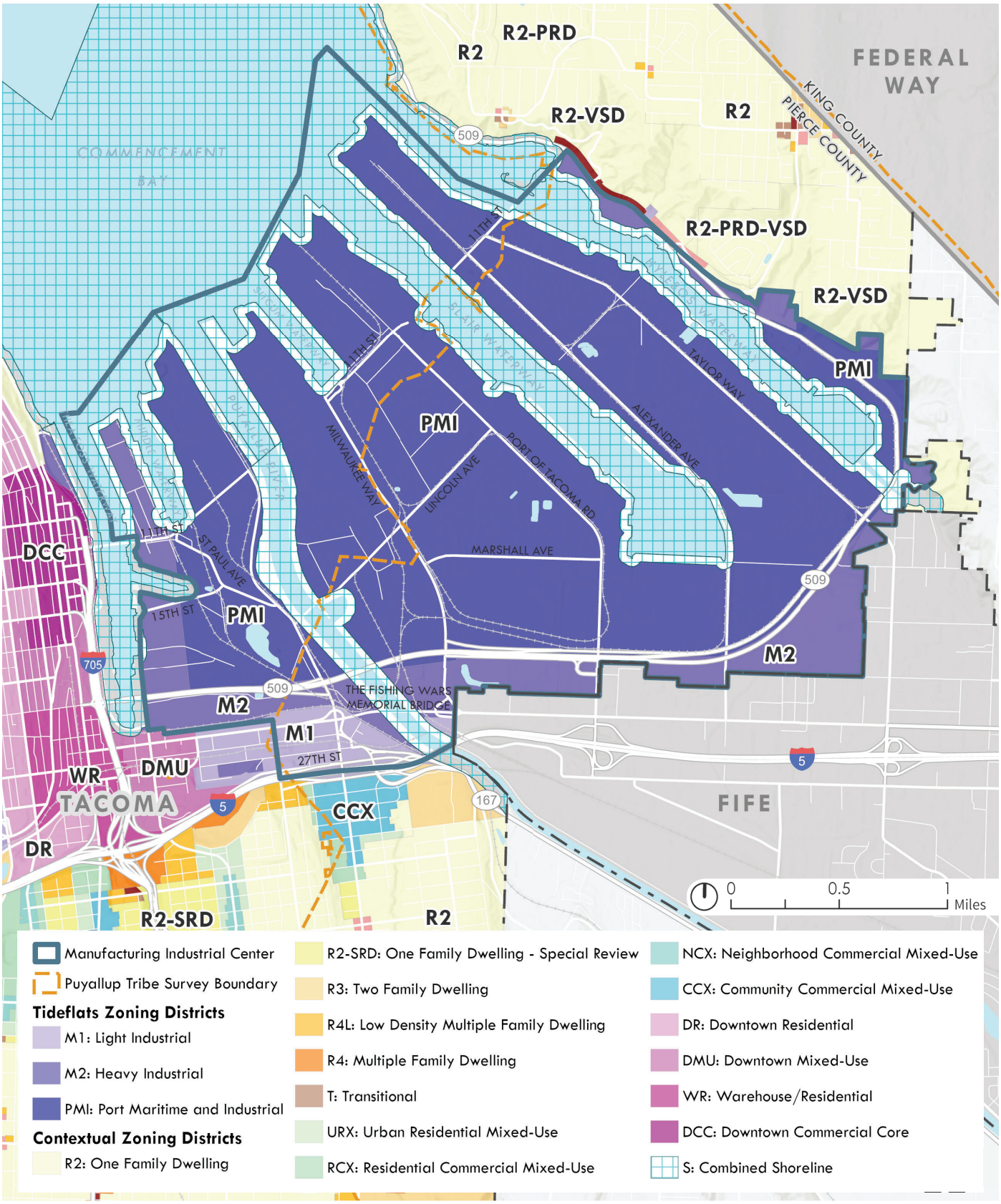


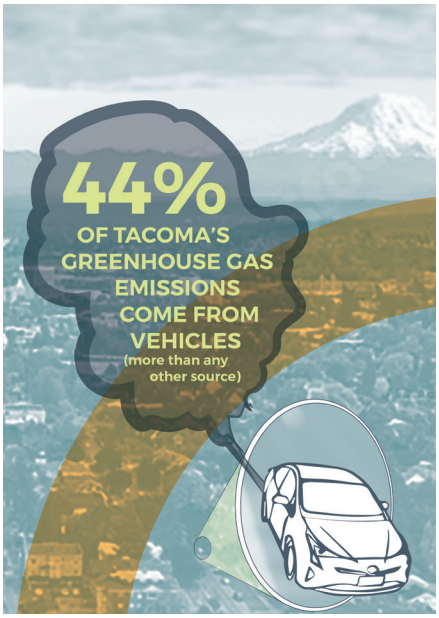
Figure 18. Zoning Districts, 2020
City of Tacoma, 2020; BERK, 2020; Seva Workshop 2024

2.5 ENVIRONMENTAL CONDITIONS

The Tideflats are an environmentally important area containing shoreline, river deltas, tidal creeks, marshes, naturalized creeks, upland forests, and river channel corridors. These areas support a variety of plant and animal species even though habitat for plants and animals is limited due to intense industrial and port land uses. Commercial and industrial activity has significantly transformed the Tideflats, and adjacent communities, impacting air and water quality, intensifying the urban heat island effect and reducing ecosystem services.

Air Quality

Air quality is affected by pollutants that are generated by both natural and manmade sources. The largest manmade contributors to air emissions are transportation vehicles and power-generating equipment, both of which typically burn fossil fuels. Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Population subgroups sensitive to the health effects of air pollutants include groups that encounter environmental or occupational health exposures (e.g., indoor air quality), which affect cardiovascular or respiratory diseases. Workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupational Safety and Health Administration (OSHA) to ensure the health and well-being of their employees (BAAQMD 2011). There is some concern for cumulative air quality impacts due to multiple industrial discharge points within the Tideflats.



One Tacoma community engagement infographic

The primary pollutant of concern for the Tacoma Tideflats study area is diesel particulate matter (DPM), primarily because of the number of diesel-fueled vehicles and equipment operating within and near the MIC. On road vehicles, primarily heavy-duty trucks, nonroad equipment, vessel operations, and locomotive operations are existing sources of air pollutants including DPM. Additionally, the subarea is bordered by I-705 and State Highway 509, which carry a high volume of diesel truck traffic. Particulate matter emissions (both PM_{10} and $PM_{2.5}$) are also pollutants of interest given the history of elevated concentrations in the region. Summertime wildfire smoke also contributes to unhealthy air.

In 2019, industrial activity city-wide accounted for 30% of Tacoma's total greenhouse gas emissions (GHG)[1]. Transportation across the city accounted for 44% of its emissions.[2] The Tideflats receive energy services from both Tacoma Power and Puget Sound Energy. The fuel mix of these providers includes fossil fuels like coal and natural gas as well as renewables such as wind and hydroelectricity. As climate change impacts become more salient, activities to reduce GHG emissions are becoming common practice.

Ecology began monitoring air toxics found in the Tacoma Tideflats in 1987. The Tideflats area was designated as nonattainment for PM_{10} at the time the 1990 Clean Air Act Amendments were enacted. In 1999 the region had demonstrated attainment with the PM_{10} established National Ambient Air Quality Standards (NAAQS) and the EPA approved the maintenance plan in 2001. With the region's continued compliance with the PM_{10} NAAQS, the maintenance plan expired in May 2021.

1 *Tacoma Climate Action Plan, 2021*

2 *Emissions from transportation include gasoline and diesel for personal vehicles, commercial vehicles, public buses, and freight.*

LOCAL JURISDICTIONS	GHG EMISSIONS REDUCTIONS TARGET
City of Tacoma	Net zero by 2050
Northwest Seaport Alliance	Phase out scope 3 emissions from seaport-related activities by 2050, scope 1 and 2 emissions by 2040
Port of Tacoma	Phase out scope 3 emissions from seaport-related activities by 2050, scope 1 and 2 emissions by 2040
Puyallup Tribe of Indians	Transition existing fossil fuel facilities to non-fossil fuel sources by 2035 Commitment to a carbon neutral economy by 2050
Pierce County	Reduce emissions 45% below 2015 levels by 2030
Puget Sound Clean Air Agency	Reduce regional emissions to 50% below 1990 levels by 2030

Figure 19. GHG Emissions Reductions Comparison

The Tacoma-Pierce County area was designated as nonattainment for the 24-hour $PM_{2.5}$ NAAQS in 2009. In 2012, the region's $PM_{2.5}$ design values demonstrated compliance with the NAAQS and the EPA suspended the need for attainment plans. Despite this suspension, Ecology elected to continue with the plans, with a particular focus on reducing residential wood smoke county. The region's maintenance plans identified wood smoke as a primary driver to the elevated concentrations of $PM_{2.5}$ and, historically, PM_{10}. The ongoing attainment planning proved to correspond with decreasing $PM_{2.5}$ concentrations in the region and in 2015, the EPA redesignated the Tacoma-Pierce County nonattainment area to attainment. The county currently operates under a maintenance plan that will expire in March of 2035. In 2021, The Northwest Seaport Alliance, Port of Seattle, Port of Tacoma, and Port of Vancouver, British Columbia, updated the Northwest Ports Clean Air Strategy (NWPCAS), setting the direction for their air quality and sustainability programs for the next 30 years and beyond. The NWPCAS is an opportunity for ports to align emission reduction strategies with current policy, including the ports' response to the Paris climate accord, align with current technology trends, increase stakeholder involvement, increase visibility and clarity around how emission reduction projects are prioritized, and improve flexibility in achieving performance-based targets. The NWPCAS is a collaboration to voluntarily reduce seaport-related emissions that contribute to air pollution in the shared Puget Sound-Georgia Basin Airshed as well as climate change.

First adopted in 2008, the NWPCAS was the first international strategy of its kind in the Port community. The original Strategy sought to encourage environmental action above competition and created a means for the four Northwest Ports to work collectively and voluntarily to reduce air pollution. To date, the NWPCAS has focused on diesel particulate matter (DPM), the key driver of air pollution related impacts in the Puget Sound region, and greenhouse gasses (GHGs). In the 2020 NWPCAS, the ports place increased focus on other air pollutants and emissions that affect climate such as nitrogen oxides, volatile organic compounds, and black carbon, while maintaining focus on DPM and GHGs.

The ports met the DPM and GHG emission reduction goals for 2020 by the end of 2016. Based on the 2015/16 inventories, a total of 174.8 million metric tons of cargo were moved through the four ports, and port-related activities resulted in the emission of 501 metric tons of DPM and 1.75 million metric tons of GHG emissions.1 DPM emissions per metric ton of cargo moved: 80% lower in 2015/16, compared to 2005. GHG emissions per metric ton of cargo moved: 17% lower in 2015/16, compared to 2005.

The significant reductions in DPM emissions can be attributed to changes in international, national and provincial regulations, industry action, and port policies and programs to accelerate the turnover of equipment and use cleaner fuels, with the most substantial impact resulting from implementation of sulfur limits on fuel used in the North America Emission Control Area. Overall DPM emissions also dropped by 75%. Progress continues to be documented in annual *Implementation Reports*.[3]

In addition to the federal standard, the PSCAA Board of Directors adopted a more stringent health goal for 24-hour $PM_{2.5}$ of 25 µg/m3 in 1999, based on recommendations from the PSCAA Particulate Matter Health Committee. In 2021, the Tideflats had 6 days where air quality exceeded PSCAA's health goal; wildfire smoke contributed to 1 day. In 2022, the Tideflats had 15 days where air quality exceeded PSCAA's health goal; wildfire smoke contributed to 13 days.

Earth

The subarea contains earth hazards due to its history of industrial use, its location in an earthquake prone area, and its soils and topography. For a discussion of contaminated sites and brownfields remediation, see section 2.11.

There are seismic and landslide hazards area in the subarea. Seismic hazards are associated with the major fault zones that traverse the Puget Sound region. Thick deposits of unconsolidated materials and the presence of fill areas, as found in the subarea, can amplify earthquakes waves and cause far more damage to structures than the same waves passing through bedrock. The entire subarea is susceptible to liquefaction hazards, which has often been the cause of damage to structures during past earthquakes. The edges of the waterways are also susceptible to landslide hazards.

Water Quality

There are six receiving waterbodies in the Tideflats area: Thea Foss Waterway, Middle Waterway, Puyallup River, Sitcum Waterway, Blair Waterway (Including Wapato Creek), and the Hylebos Waterway (Including Hylebos Creek). The Puyallup Watershed drain into these waterbodies through streams, creeks, rivers, ditch systems, and underground conveyance systems. The built environment's stormwater and wastewater systems also drain into these waterbodies through pipes and outfalls. Stormwater from precipitation can carry pollutants such as sediment, debris, oil, grease, and chemicals across land surfaces into waterbodies. In the Tideflats, stormwater flows through approximately 2,200 catch basins, which help capture pollutant and debris, and directly discharges into Commencement Bay through about 130 outfalls. Wastewater (separate from stormwater) for numerous jurisdictions is treated at two wastewater plants before it is released into Commencement Bay; the Central Wastewater Treatment Plant is located on the banks of the Puyallup River in the Tideflats. The Central Wastewater Treatment Plant is permitted a Maximum Month Flow (MMF) of 60 Million Gallons per Day (MDG) or 227,000 m3/day.

3 *Northwest Ports Clean Air Strategy | Northwest Seaport - Port of Tacoma (nwseaportalliance.com)*

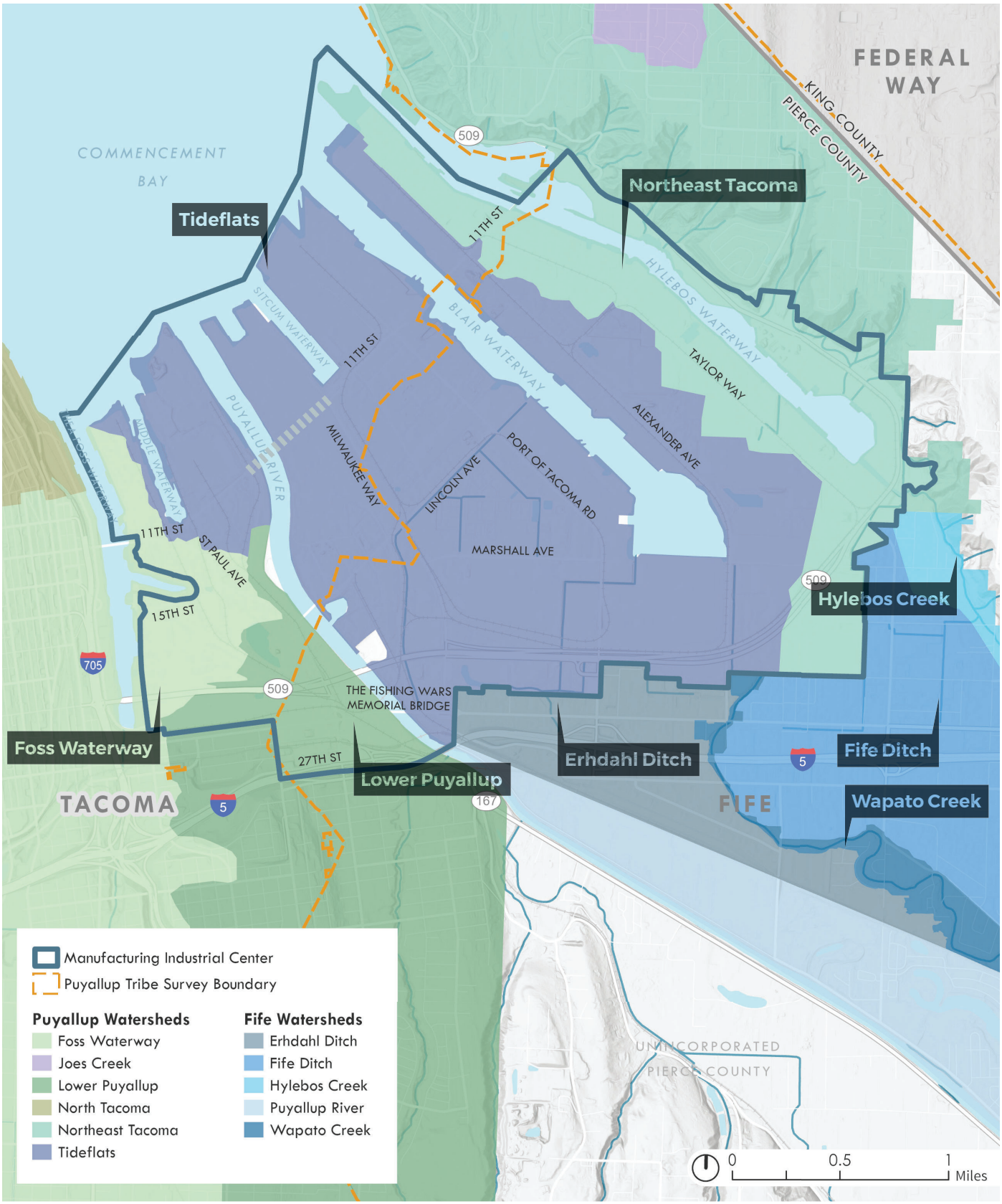


Figure 20. **Watersheds in the Tacoma Tideflats Subarea**
Source: ESA, 2020; BERK, 2020; Seva Workshop, 2024

The Clean Water Act regulates water quality standards for waterbodies through the National Pollutant Discharge Elimination System (NPDES). NPDES permits are required to discharge stormwater and wastewater in municipal and non-municipal systems. NPDES permits are also required for operations with manufacturing, industrial, and certain transportation uses.

The City requires enhanced water quality treatment for projects that discharge to sensitive habitat areas. Tacoma's Stormwater Management Manual (SWMM) Figure P-4 shows the Natural Resource Damage Assessment (NRDA) areas and other sensitive habitat areas proximate to the Tideflats that would be subject to enhanced water quality treatment requirements.

All of the receiving waterbodies are part of the Commencement Bay Superfund site. Various remediation efforts have occurred and continue to occur. For additional information on past and existing remediation efforts, refer to Appendix A.

The Puyallup River supports several salmonid species including coastal cutthroat trout, bull trout, steelhead/rainbow trout, and Chinook (spring and fall), sockeye, coho, pink, and chum salmon (WDFW 2020a; WDFW and NWIFC 2020). Wapato Creek and Hylebos Creek support a smaller set of salmonid species including steelhead, coho, Chinook (fall), pink, and chum. Three of these fish species are listed as threatened under the federal Endangered Species Act (ESA) (Chinook, bull trout and steelhead), have designed critical habitat in the study area and are also listed in Washington State by WDFW.

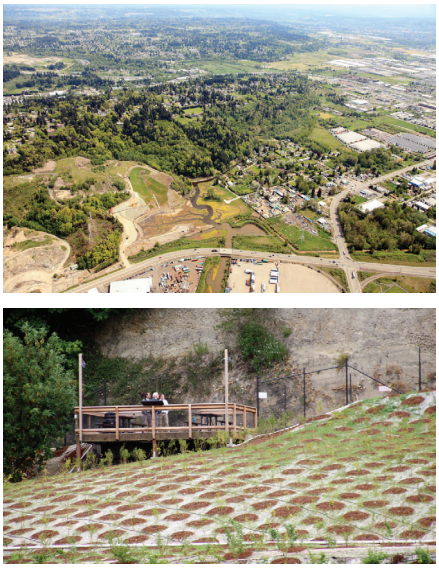
Plants and Animals

The Tideflats have been extensively altered by dredging, filling and diking as well as installing high levels of impervious surface coverage associated with the intense industrial and port land uses. Natural drainage features, which historically supported wetlands and streams important for fish and wildlife, either no longer exist or have been heavily modified. About 230 acres of restoration activity have occurred as mitigation for impacts in the Tideflats, and these areas provide important habitat patches for fish and wildlife traveling through the Tideflats. The Port has participated in restoration and mitigation activities by building most of the mitigation acreage in the lower Puyallup River.

Despite substantial modification of the Commencement Bay nearshore, Washington Department of Fish and Wildlife (WDFW) has documented forage fish (i.e., surf smelt and sand lance) spawning at the west edge of the Middle Waterway, near the mouth of the Puyallup River, and along the upper intertidal zone of the sand-gravel beaches of the former Milwaukee Waterway, which is a 30-acre habitat mitigation site located between the Puyallup River and Sitcum Waterway. Restored intertidal wetlands and riparian buffers associated with mitigation sites have provided habitat for shorebirds, waterfowl, and upland birds to breed and overwinter. The edges of the Tideflats' waterways are also productive habitats for shellfish.

The Tribe also practices commercial and ceremonial crab, shrimp, sea urchin, sea cucumber, and geoduck fisheries within the Tideflats. Fishing Area Section 26D is the area which includes the entirety of the Tideflats. These fisheries can be seasonal in nature or serve a special ceremonial purpose.

Restoration projects recreating intertidal habitat improve plant diversity in the area by installing native plants. Vegetation, where present, is typically grass, street trees, or shrubs. Given the industrial nature of uses in the Tideflats and surrounding urban areas, there are no old-growth forests in the study area.



Habitat restoration in the Tideflats

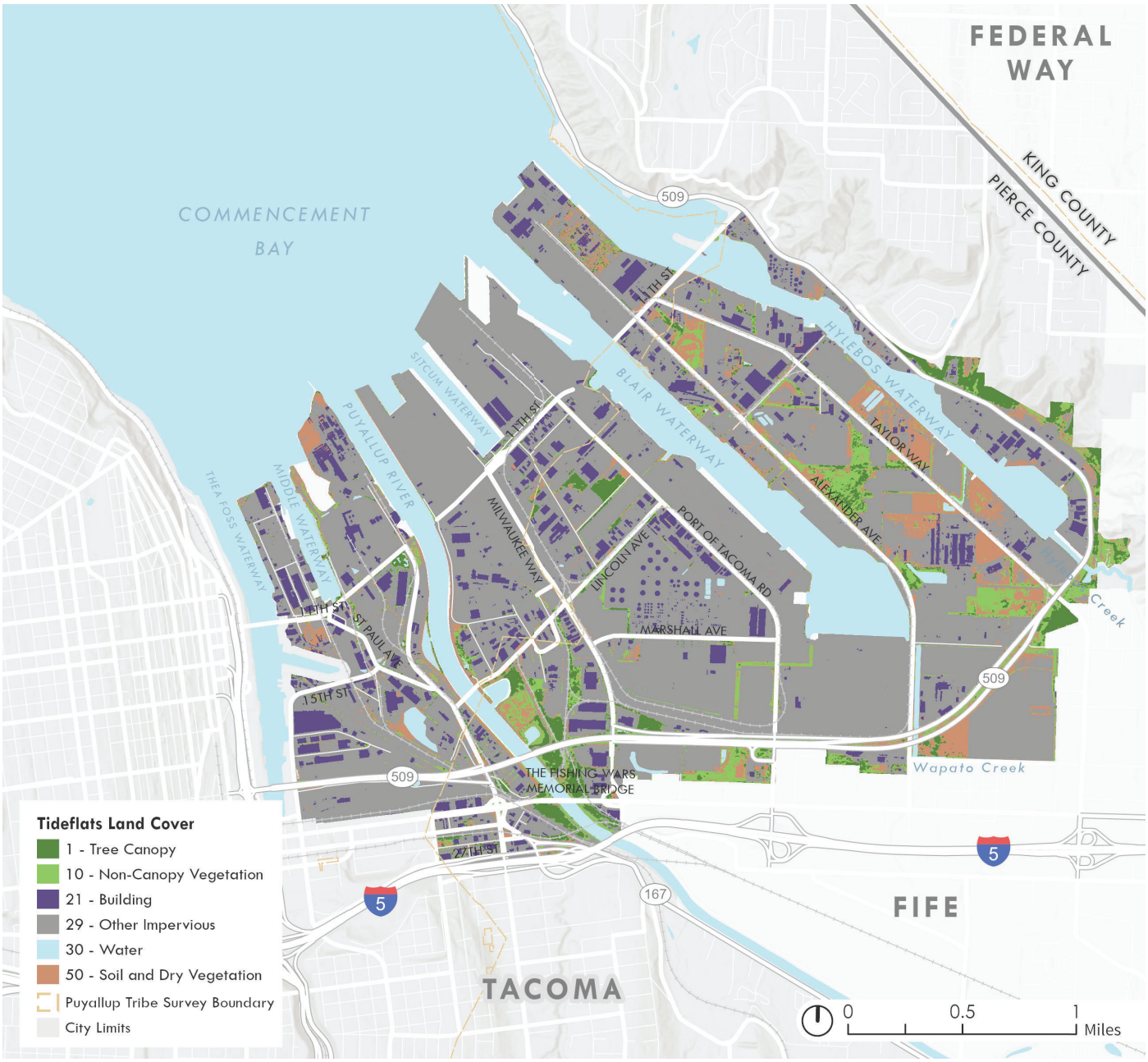


Figure 21. Land Cover by Classification
Source: City of Tacoma Environmental Services, 2017; Seva Workshop, 2024

Tree Canopy

The 2018 Tacoma Tree Canopy Report concluded that Tacoma's urban tree canopy represented 20% of the total land area found within city limits; this is the least amount of tree canopy as a percentage of land cover for all communities assessed in the Puget Sound Region.

The Tideflats have 4% total tree canopy cover. Non-canopy vegetation, bare soil, and dry vegetation[4] represents 14% of the land cover. Further, impervious surfaces represent 81% of the land cover in the Tideflats, which reflects the heavy industrial uses found in the area as well as the historic transformation of the Tideflats.

4 Non-canopy vegetation includes grass, open spaces, and shrubs. Dry vegetation describes landscaping that is dried or dead vegetation.

Impervious surfaces such as pavement and buildings absorb a significant amount of heat during the day and slowly release it back into the surrounding area. Areas with a high prevalence of impervious surfaces, such as the Tideflats, are prone to higher extremes in temperatures, also known as urban heat island effect. Elevated temperatures can pose serious threats to human health, which include increased risk of cardiovascular diseases, respiratory diseases, and heat stroke. The Tideflats subarea currently supports over 10,000 jobs. With limited natural landscapes in the area, workers are exposed to elevated and extreme heat.

Example of extensive impervious surface coverage in the Tideflats.

The 2018 Tacoma Tree Canopy Report identified over 200 acres of land within the Tideflats that could be suitable for plantings, which would expand the tree canopy to represent 10% of the total land cover in the Tideflats. An expanded tree canopy could provide numerous ecological benefits such as improved air quality, enhanced water quality, stormwater management, and temperature regulation. However, it should be noted that 90% of the land was determined as currently unsuitable for plantings due to existing land cover being primarily paved surfaces and structures. Increasing opportunities for tree planting above the 10% of landcover would require pavement removal or other considerations to access new planting areas.

Floodplains

Under current conditions, flooding is not a significant hazard for the subarea. The Federal Emergency Management Agency (FEMA) maps floodplain areas in the United States. The subarea is not mapped within the FEMA 1% annual chance floodplain, except for some isolated low-lying areas (see **Figure 22**). The subarea is protected from flooding by levees on both sides of the Puyallup River. The primary threats to the subarea from flooding relate to Puyallup River levees further upstream overtopping or to the potential inundation of access routes including roads and rail to the Port of Tacoma, potentially causing substantial supply chain delays.

The City of Tacoma's wastewater treatment plant is in the floodplain in the subarea. In a 2009 flood event, the treatment plant was considered at risk of flooding, and 17,000 sandbags were placed around the plant to protect it from inundation. In that event, the banks did not overtop. However, if the treatment plant had flooded, untreated wastewater could have been released into Puget Sound, and business at the Port of Tacoma could have been disrupted. In 2015, a floodwall was constructed with funding from the Pierce County Flood Control Zone District and the City of Tacoma, increasing the protection of the treatment plant from inundation.

While flooding does not currently pose a substantial threat to the Tacoma Tideflats area, climate change will likely increase the risk of flooding in coming years. See section 2.6, Sea Level Rise, for more information.

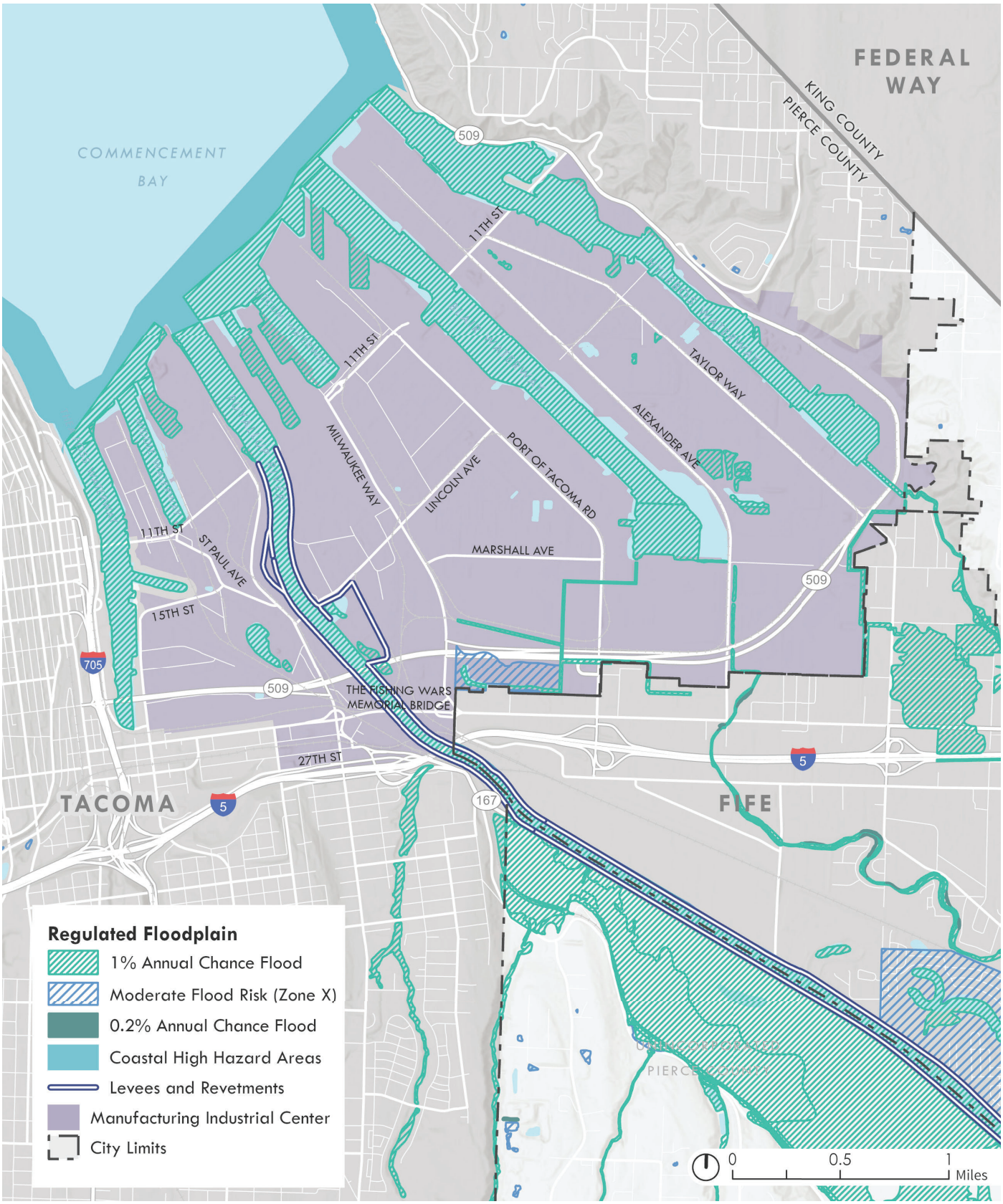


Figure 22. **Regulated Floodplain, Levees, and Revetments in the Subarea**
Source: ESA, 2020; BERK, 2020; Seva Workshop, 2024

Stormwater Management

All surface water in the City of Tacoma drains from two regional watersheds: the Puyallup-White River Watershed and the Chambers-Clover Creek Watershed. The portions of the two regional watersheds that are located within Tacoma's city limits are divided into nine sub-watersheds and drain into local waterbodies. The Tideflats sub-watershed encompasses over 2,600 acres. In addition to the identified nine sub-watersheds, there are 15 priority subbasins[5] identified in the City of Tacoma's Stormwater Management Action Plan; three priority subbasins are located within the Tideflats (Exhibit 5).

Stormwater infrastructure within the Tideflats includes drainage structures, inlets, and catch basins, underground storm drainpipes, and surface ditches. Over 70% of waterfront operations have stormwater treatment/filtration systems installed and operational to capture pollutants from their properties.

As part of the NPDES Phase I Municipal Stormwater Permit (MS4), the City of Tacoma maintains a Stormwater Management Program Plan (SWMP). An Interlocal Agreement (ILA) between the City of Tacoma and the Port facilitates coordinated stormwater compliance. The Puyallup Tribe also manages and permits discharge points within the study area on tribal properties, including the section of the Puyallup River starting at the Lincoln Avenue Bridge and extending beyond the study area boundary upstream (Strobel 2023).

The Port manages stormwater through their own NPDES Phase I MS4 permit as a secondary permittee. As part of this permit, the Port is also required to maintain a SWMP for lands it owns and operates within the Tideflats. The SWMP summarizes how the Port complies with its permit requirements including: an education program, public involvement and participation, illicit discharge detection and elimination, construction site runoff control, post-construction stormwater management for new development and redevelopment, operation and maintenance program, and source control in existing developed areas.

Through the management of the City of Tacoma's SWMP, the Tideflats were identified as a priority area in the City of Tacoma's stormwater planning process. The City of Tacoma is conducting several studies to find ways to improve surface water quality prior to discharge to waterways, such as stormwater treatment devices and Low Impact Development (LID) technologies. Further, Tacoma's Capital Facilities Program plans to expand its stormwater system with an increasing emphasis on green infrastructure. The City of Tacoma is also in the process of developing Tacoma's first Urban Waters Protection Plan, which is a watershed management plan to protect Tacoma's streams, wetlands, lakes, and shorelines from pollutants carried in stormwater.

The City of Fife, through the Western Washington Phase II Municipal Stormwater Permit, manages stormwater through a Stormwater Management Manual. Stormwater runoff generated in Fife reaches the Tideflats waterways through a combination of storm drains, pipes, pumps, man-made ditches, and streams. Three natural watercourses flow through Fife before entering the Tideflats: Puyallup River, Wapato Creek, and Hylebos Creek. Two manmade ditch systems provide

5 A subbasin is a smaller delineated area within a larger watershed. Planning at the subbasin level allows for more detailed analysis and understanding of the distribution of water resources, hydrological processes, and potential impacts from human activities. Planning at the subbasin level usually targets localized water quality issues, managing stormwater runoff, protecting sensitive habitats or species, and addressing infrastructure needs such as drainage systems or flood control measures.

storm drainage to large portions of Fife, with their outfalls being locating within the MIC boundary. The Fife Ditch discharges into the Hylebos Waterway, and drains approximability 1,205 acres in Fife, including the City Center and ST TDLE station location(s). The Fife Ditch is currently under the control of a special purpose district, Drainage District 23, who has been in conversations with the City of Fife to dissolve into Fife's drainage system. The Erdahl Ditch discharges into the Blair Waterway via a city/privately maintained system of ditches which terminate in two pumps in the southwest corner of the Blair turning basin. The Erdahl system drains approximately 1,100 acres of Fife including development on Tribal Trust property (70 acres) and property owned by the Union Pacific Railroad (200 acres). The City of Fife also consults and coordinates with the Puyallup Tribe and Drainage District 23, a special purpose district that manages the drainage ditches and culverts in north Fife and adjoining Pierce County areas.

Stormwater management around the Puyallup River, Blair Waterway, and Hylebos Waterway[6] is critical as these waterbodies support several salmonid species, including coastal cutthroat trout, bull trout, steelhead/rainbow trout, and Chinook (spring and fall), sockeye, coho, pink, and chum salmon. Three of the fish species found in these waterways are listed as threatened under the federal Endangered Species Act (ESA): Chinook, bull trout, and steelhead.

2.6 SEA LEVEL RISE

For over a century, the Tideflats has been industrialized and transformed into a strategic seaport. It hosts critical infrastructure and services, supports marine cargo operations and major shipping activities, and serves as a prime location for manufacturing. While economically significant, the Tideflats also provide important environmental services as a unique natural enviornment, containing shoreline, river deltas, tidal creeks, marshes, naturalized creeks, and river channel corridors. Additionally, much of the area is part of the ancestral lands of the Puyallup Tribe and is an important location for cultural traditions, the practice of tribal treaty rights, and essential governmental facilities. Natural, human, or technological hazards can endanger and threaten the facilities, overall operations, and activities found within the Tideflats as well as public health and safety.

As climate change impacts become more salient, climate related hazards such as sea level rise and coastal flooding are emerging. Communities and infrastructure in low-lying areas may see increased flooding risks in the future if no actions are taken today to protect existing facilities, assets, and infrastructure.

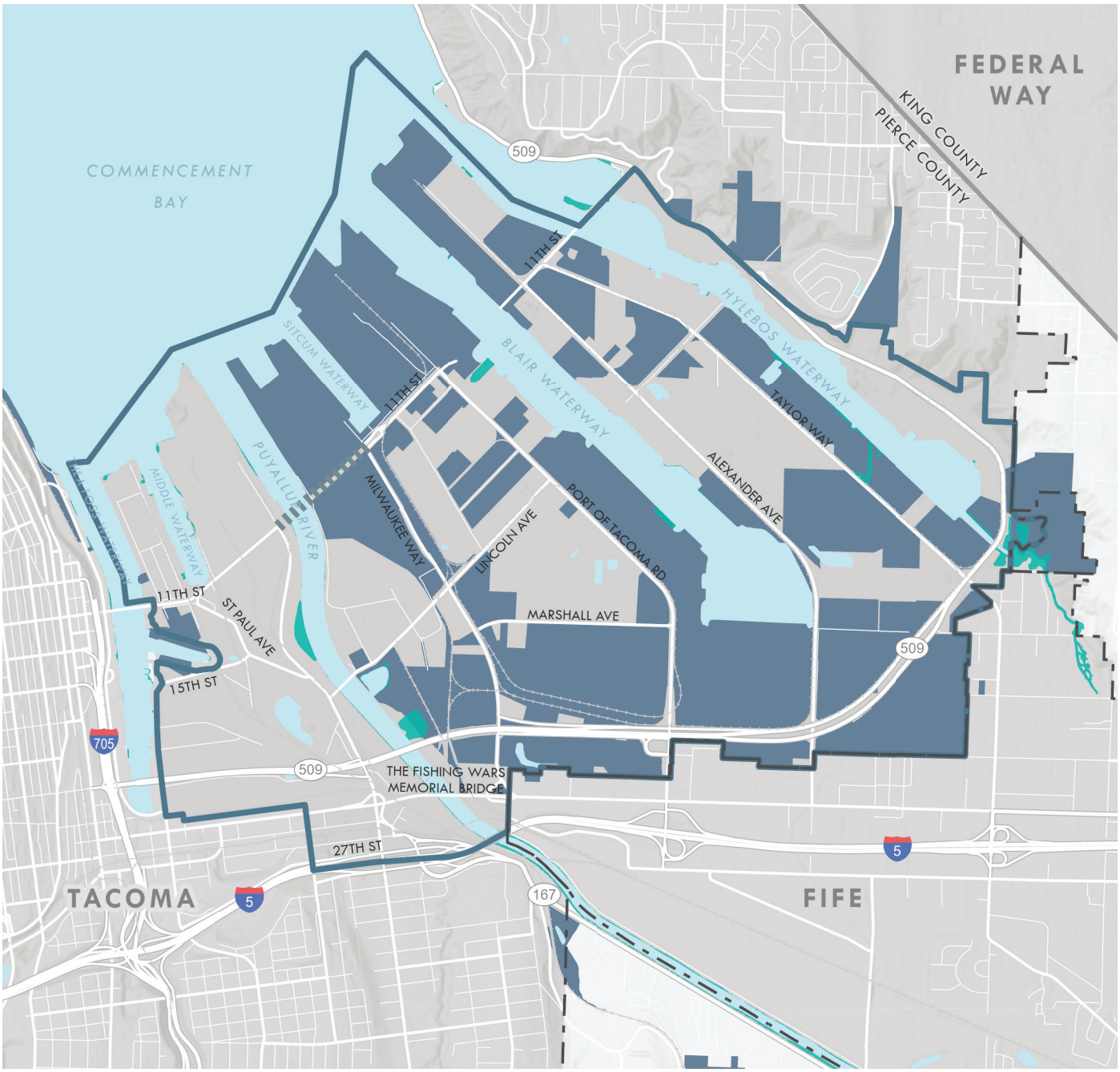
Existing Policies and Regulations

There is a range of existing policies and regulations that highlight mitigation and adaptation strategies for sea level rise and climate change related hazards. The following table (**Figure 23**) provides an overview of these policies and regulations.

6 The Wapato Creek drains to the Blair Waterway. The Hylebos Creek drains to the Hylebos Waterway.

Figure 23. Policies and Regulations Related to Sea Level Rise

PLANNING GOAL, POLICY, CODE, ORDINANCE	JURISDICTION	DESCRIPTION
Goal EN-1, One Tacoma Plan	City of Tacoma	Ensure that Tacoma's built and natural environments function in complementary ways and are resilient to climate change and natural hazards.
Policy EN-1.30, One Tacoma Plan	City of Tacoma	Promote community resilience through the development of climate change adaptation strategies. Strategies should be used by both the public and private sectors to help minimize the potential impacts of climate change on new and existing development and operations, include programs that encourage retrofitting of existing development and infrastructure to adapt to the effects of climate change.
Policy EN-3.5, One Tacoma Plan	City of Tacoma	Discourage development on lands where such development would pose hazards to life, property or infrastructure, or where important ecological functions or environmental quality would be adversely affected: a. Floodways and 100-year floodplains b. Geologic hazard areas c. Wetlands d. Streams e. Fish and wildlife habitat conservation areas f. Aquifer recharge areas g. Shorelines
Chapter 19.06.010 Shoreline Use	City of Tacoma	Evaluate sea level rise data and consider SLR risk and implications in the development of regulations, plans and programs.
Chapter 19.06.020 Site Planning	City of Tacoma	Development should be located, designed, and managed both to minimize potential impacts from sea level rise and to promote resilience in the face of those impacts, by such actions as protecting wetland and shoreline natural functions, incorporating green infrastructure, retaining mature vegetation, and considering soft-shore armoring wherever possible. Assess the risks and potential impacts on both City government operations and on the community due to climate change and sea level rise, with special regard for social equity.
Chapter 19.06.040 Critical Areas and Marine Shoreline Protections	City of Tacoma	Protect natural processes and functions of Tacoma's environmental assets (wetlands, streams, lakes, and marine shorelines) in anticipation of climate change impacts, including sea level rise.
Policy 7.6, Puyallup Tribes of Indians Comprehensive Land Use Plan	Tribal	Create and restore off-channel habitat (including wetlands and marshes) in place to prepare for the inundation of saline conditions as sea level rise pushes the salt wedge further inland.
Policy 11.3, Puyallup Tribes of Indians Comprehensive Land Use Plan	Tribal	Encourage local jurisdictions to remove bulkheads and shore defense works to restore shoreline, preserve natural processes, and help adapt to sea level rise.
Policy 16.1, Puyallup Tribes of Indians Comprehensive Land Use Plan	Tribal	Identify Tribal facilities & land that will be inundated by sea level rise and explore options for federal compensation.
Policy 16.2, Puyallup Tribes of Indians Comprehensive Land Use Plan	Tribal	Inventory Tribal property, structures, and cultural sites at risk from natural hazards and sea level rise. Create criteria for assessing an approach for adaptation or relocation of identified land and facilities.
Policy 16.4, Puyallup Tribes of Indians Comprehensive Land Use Plan	Tribal	Study economic development impacts associated with sea level rise in the Tideflats.
MPP-CC-10, Vision 2050 PSRC	Regional	Address rising sea water by siting and planning for relocation of hazardous industries and essential public services away from the 500-year floodplain.
CC-Action-4, Vision 2050 PSRC	Regional	Cities and counties will update land use plans for climate adaptation and resilience. Critical areas will be updated based on climate impacts from sea level rise, flooding, wildfire hazards, urban heat, and other hazards.
Northwest Ports Clean Air Strategy 2021 Joint Resolution	Regional	[The Port of Seattle, Port of Tacoma, The Northwest Seaport Alliance, and The Vancouver-Fraser Port Authority] embrace the aspirational vision articulated in the 2020 NWPCAS: "Phase out emissions from seaport-related activities by 2050, supporting cleaner air for our local communities and fulfilling our shared responsibility to help limit global temperature rise to 1.5°C."



Baseline Conditions

Sea level is a measure of the relative height of the ocean and land surface. In a tectonically active region like the Puget Sound, land motion is an important consideration for determining sea level rise, which represents an increase in overall water levels. It is expected that with higher water levels, sea level rise will increase the likelihood of coastal flooding or inundation of areas within the Tideflats.

Coastal floods are caused by extreme sea levels, which arise as a combination of four main factors: waves, King Tides, storm surges, and relative mean sea level. The effects of coastal flooding can occur during high tide events and storm events. While high tide events are predictable, sea level rise projections indicate that these events are expected to become more severe over time.

Figure 24. **0' Mean Higher-High Water**
Note: The map does not account for areas that may be inundated by wave runup.
Source: NOAA, 2020; BERK, 2020; Seva Workshop, 2024

- Inundated Areas
- Port of Tacoma Parcels
- Manufacturing Industrial Center
- City Limits
- 11th St Bridge Closure

The typical high tide in the Tideflats today is represented by 0' Mean Higher-High Water (MHHW)[7] as seen in Figure 24. Under the 0' MHHW condition, a few low-laying areas are at risk of flooding during a high tide event.

Sea Level Projections

Most coastal areas of Washington State and the Puget Sound will be affected by sea level rise. Regionally, sea level has risen by 7.8 inches over the last century. Under a low and high emissions scenario[8], sea levels in Washington State are projected to increase by -0.1 to 1.6 feet by 2050, and by 0.3 to 4.7 feet by 2100, relative to 2000 levels. Tacoma is projected to see 1.5 to 3.3 feet of sea level rise by 2100 as described in Figure 25. The rate of rise is projected to accelerate throughout the 21st century, with the largest changes occurring after 2050 (Tacoma Climate Change Resilience Study, 2016 and NWSA Resilient Gateway – Vulnerability Assessment, 2023). The potential extent of flooding due to sea level rise can be seen illustrated in Figure 26.

Flooding Vulnerabilities

While high tide events are predictable, sea level rise predictions indicate that high tide events and storm events are expected to become more severe over time, which ultimately increases the likelihood of coastal flooding. Tidal events can aggravate stream, river, and upland flooding by backing up water into those channels and into nearshore drainage pipes and infrastructure. Likewise, wind events can increase the impacts from wave action and exacerbate damage from high tide events, which is often referred to as "storm surge." A rise in sea level will increase the reach of coastal floods even in the absence of a change in surge and wave heights. This means that coastal flood elevations should be expected to rise in tandem with sea level rise (Pierce County Comprehensive Flood Hazard Management Plan, 2023).

The tides they are a-changing

Water levels are always changing with the tides and weather conditions. In Washington, there are two low tides and two high tides. The difference between the typical low and high tide in Tacoma is over 11 feet.

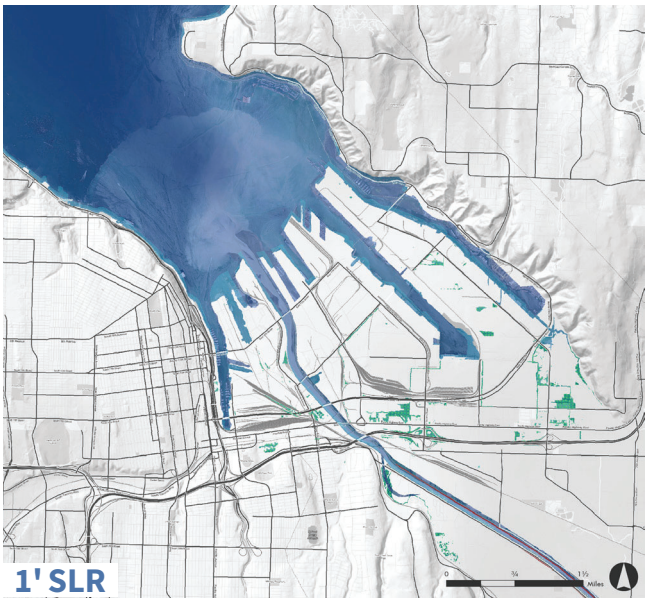
7 The MHHW is the average of the higher of the two high tides.

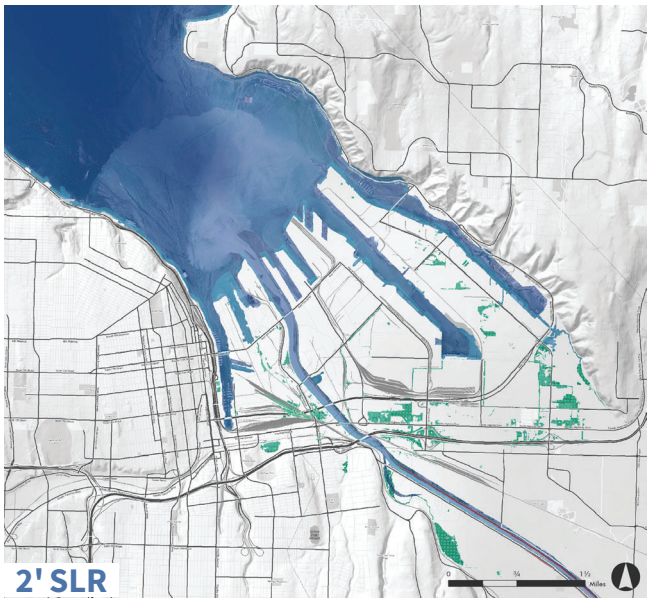
8 Representative Concentration Pathways (RCP) describe different possible futures based on the volume of greenhouse gases emitted over time. RCPs are labeled after the expected radiative forcing level by 2100; radiative forcing quantifies the imbalance between incoming solar radiation and outgoing infrared radiation, which influences the Earth's temperature. The Intergovernmental Panel on Climate Change (IPCC) uses 4 RCPs – RCP 2.6, 4.5, 6.0, 8.5. For the purposes of this issue paper, low and high RCPs refer to RCP 4.5 and 8.5, respectively. RCP 4.5 is a low scenario, where emissions peak around mi-century and then decline. RCP 8.5 is a high scenario that assumes increases in emissions until the end of the century.

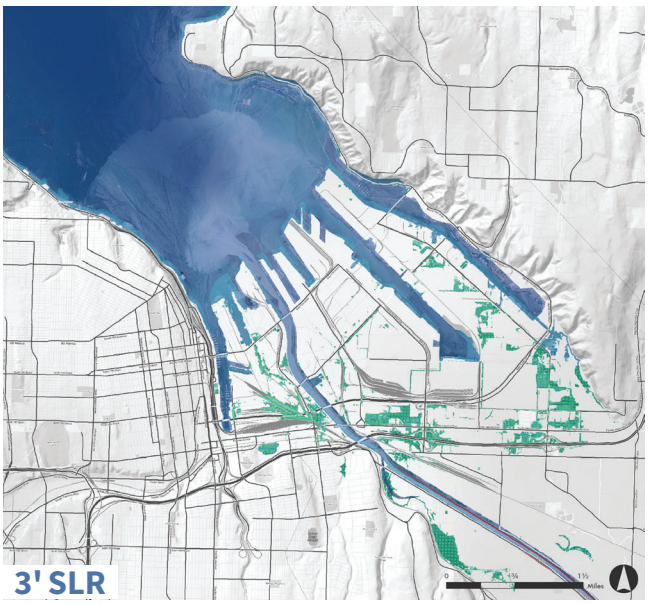
Figure 25. Tacoma Harbor Sea Level Rise Projections

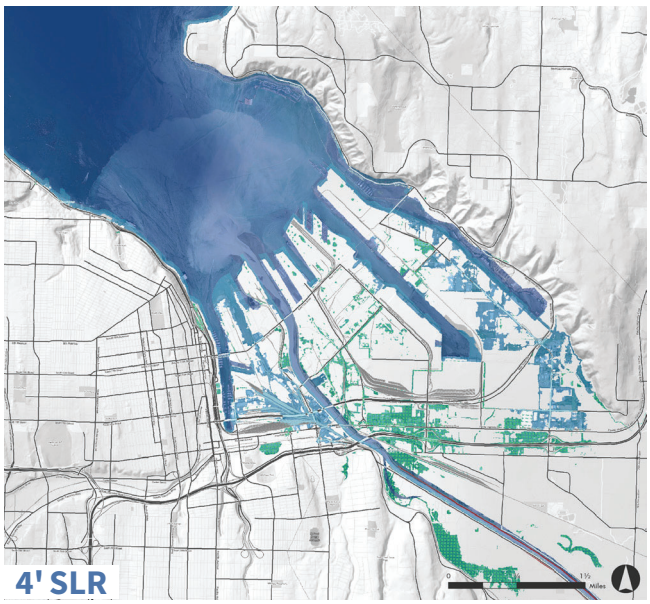
TIME PERIOD	GREENHOUSE GAS SCENARIO	TACOMA HARBOR LIKELY RANGE OF SLR (FT)
2050	Low	0.6 - 1.1
	High	0.7 - 1.2
2100	Low	1.5 - 2.7
	High	1.9 - 3.3
2150	Low	2.1 - 4.6
	High	3.0 - 5.7

Note: Greenhouse gas scenario low corresponds with the Representative Concentration Pathway (RCP) 4.5 and high corresponds with RCP 8.5. These projections are probabilistic, that is, the likelihood that the sea level will rise above a certain level. The projected sea level rise quoted in this table has a probability range of 17-83% probability, but the uncertainty range can expand beyond that. Source: Washington Coastal Resilience Project









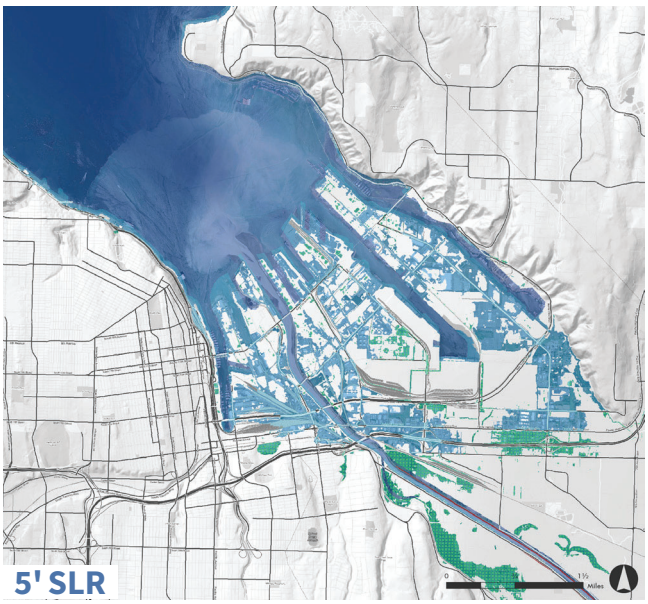


Figure 26. Flooding impacts due to sea level rise across 1ft to 5ft scenarios

Source: Climate Central Surging Seas Risk Zone Map, additional elevation data courtesy of NOAA

According to the relative sea level rise (RSLR) scenarios[9], flooding is largely restricted to low-lying areas bordering drainage canals and do not extend into any terminal areas in the Tideflats. Exposed infrastructure under mean higher high water (MHHW) conditions for 1ft and 2ft RSLR primarily consists of outfalls and stormwater infiltration ponds. Additionally, flood hazard exposure for potable water, wastewater, and power infrastructure is minimal. Similarly, flood hazard exposure for transportation infrastructure is also minimal, with only the local roadways bordering Hylebos Waterway drainage channels projected to experience flood impacts.

Exposure to risks increase under a 1% annual chance floodplain condition[10]. Under this condition, coastal flood projections with 1ft RSLR show inundation at additional stormwater outfalls and important utility resources such as the Central Wastewater Treatment Plant. The flood hazard exposure for power utility infrastructure also increases under a 1% annual chance flood condition with 2 ft RSLR as flood projections illustrate potential inundation at several substations in areas bordering the Hylebos Waterway, Blair Waterway, and Sitcum Waterway. The flood hazard exposure for water utility infrastructure also becomes significant under these conditions due to projected flooding at numerous outfall locations.

Roadways such as Taylor Way and St Paul Avenue located within areas under a 1% annual chance flood conditions will also see its flood hazard exposure increase. Additionally, low-lying areas surrounding State Route 509 are also projected to experience flooding between the Thea Foss Waterway and Puyallup River under these conditions. Further, under the 1% annual chance flood conditions with 2 ft RSLR hazard exposure grows to encompass significant portions of local roadways within the Tideflats. Segments of Interstate 5 south of the Blair Waterway are projected to experience flooding. However, bridges crossing the Thea Foss Waterway, Puyallup River, and Hylebos Waterway are expected to have minimal flood hazard exposure across the 1 ft and 2 ft RSLR scenarios due to their elevation above grade or at Puyallup River levee height.

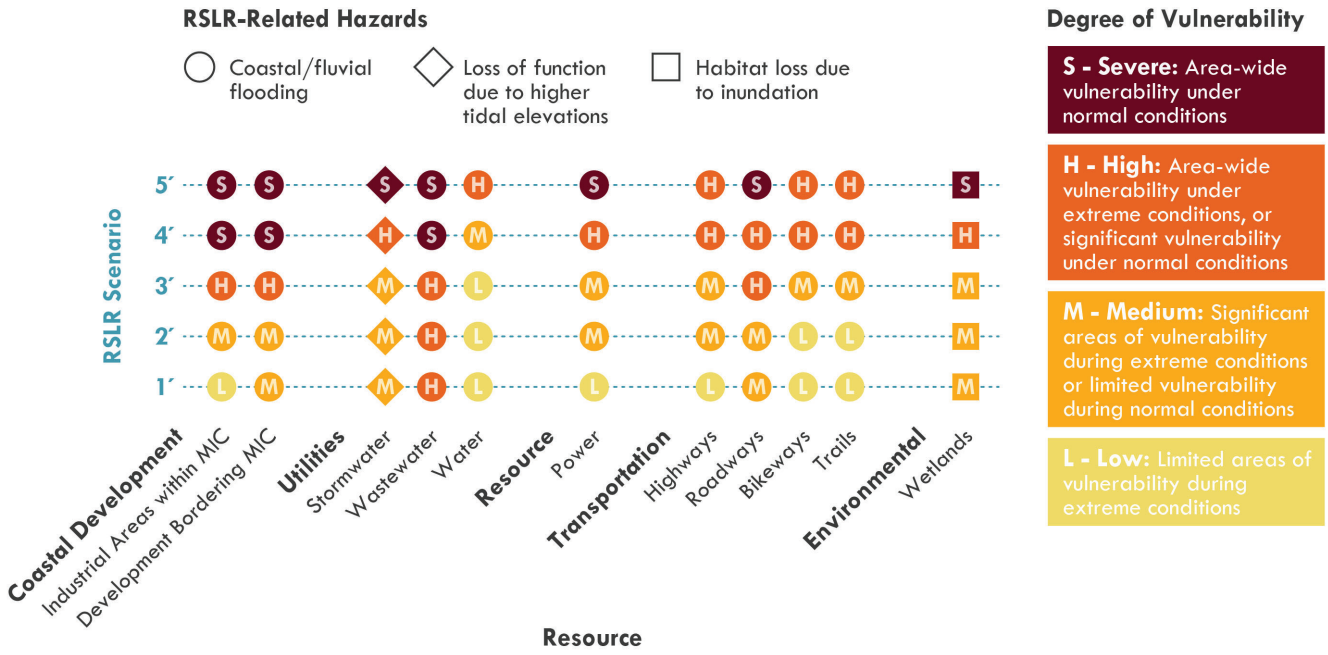
Coastal environmental resources such as wetlands have a high exposure to RSLR hazards as these areas are continuously exposed to changes in tidal water elevations over time. Though wetlands are largely resistant to temporary inundation hazards, coastal wetlands can be highly sensitive to consistently elevated non-storm water levels, as these changes can significantly alter the structure and function of wetland ecosystems. This is particularly true if the inland migration of tidal floodwaters exceeds the landward migration rate or sediment accretion rate of wetland areas. If wetlands areas cannot match the gradual increase in tidal elevations due to RSLR, these systems will gradually transition to subtidal areas, covered by water at all states of the tide.

Figure 26 summarizes the flooding vulnerabilities for RSLR scenarios 1ft to 5ft.

9 Relative sea level rise (RSLR) combines estimates of absolute sea level rise and vertical land movement. RSLR scenarios are limited to a 20-year planning horizon and utilize MHHW conditions, which illustrate flooding during high tide events.

10 Areas designated by the Federal Emergency Management Agency (FEMA) with a 1% annual chance floodplain have a 1% chance that a 100-year flooding event will occur in any given year. Areas within the Tideflats that are designated with a 1% annual chance floodplain has a 1% chance of a flood reaching water conditions of 1-2 ft in height under the 1-2 ft RSLR scenario in any year through the end of the century.

Figure 27. Vulnerability Rating for Resources and Infrastructure within the Study Area
Source: Draft Tideflats Baseline Report, 2024



As illustrated in Figure 26, flooding under 1ft to 3ft is limited to a few areas in the Tideflats. While flooding does not currently pose a substantial threat to the Tideflats, the risk of flooding due to sea level rise and climate related hazards remains.

Sea levels will rise in Commencement Bay, impacting not only the shoreline. Sea level rise will also impact the riverine, stream and urban systems directly connected or in close proximity to saltwater sources; the rise in the sea level limits the ability of these systems to drain causing back water situations in urban systems and sediment deposition in riverine systems (Pierce County Comprehensive Flood Hazard Management Plan, 2023). Both rainstorms and riverine flooding will become more frequent and severe. It is projected that there will be an increase in streamflow volume of 37% or greater during a 100-year flood. Furthermore, it is projected that there will be an increase of 5 or more additional days of heavy rain events (an increase from 2 days to 7 days) by the 2080 and a 22% increase in the intensity of 24-hour rain events by the 2080s (Climate Change in the Puyallup River: A Quick Reference Guide for Local Decision-Makers, 2018). These factors suggest that flooding could become a significant threat to the Tideflats in the coming decades.

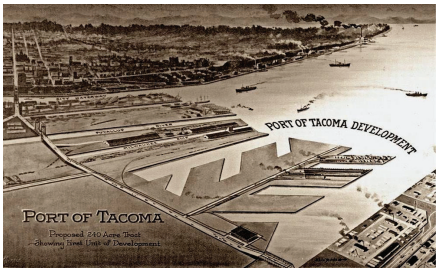
Additionally, high and severe vulnerability ratings become more common beyond the 20-year planning horizon at 3ft and greater RSLR scenarios. Vulnerability becomes high to severe across all resource types for the 4ft and 5ft RSLR scenarios except for potable water infrastructure, which maintains moderate vulnerability under the 4ft RSLR scenario due to lack of projected flooding at pump stations.

2.7 ECONOMY

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.



Top: Ackerman Mill in the 1880s. Bottom: 1918 Port of Tacoma master plan.

Key Economic Takeaways

1 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.

2 Industrial activities rely on a diverse and concentrated support cluster present in the study area.

This includes 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.

3 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.

4 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.

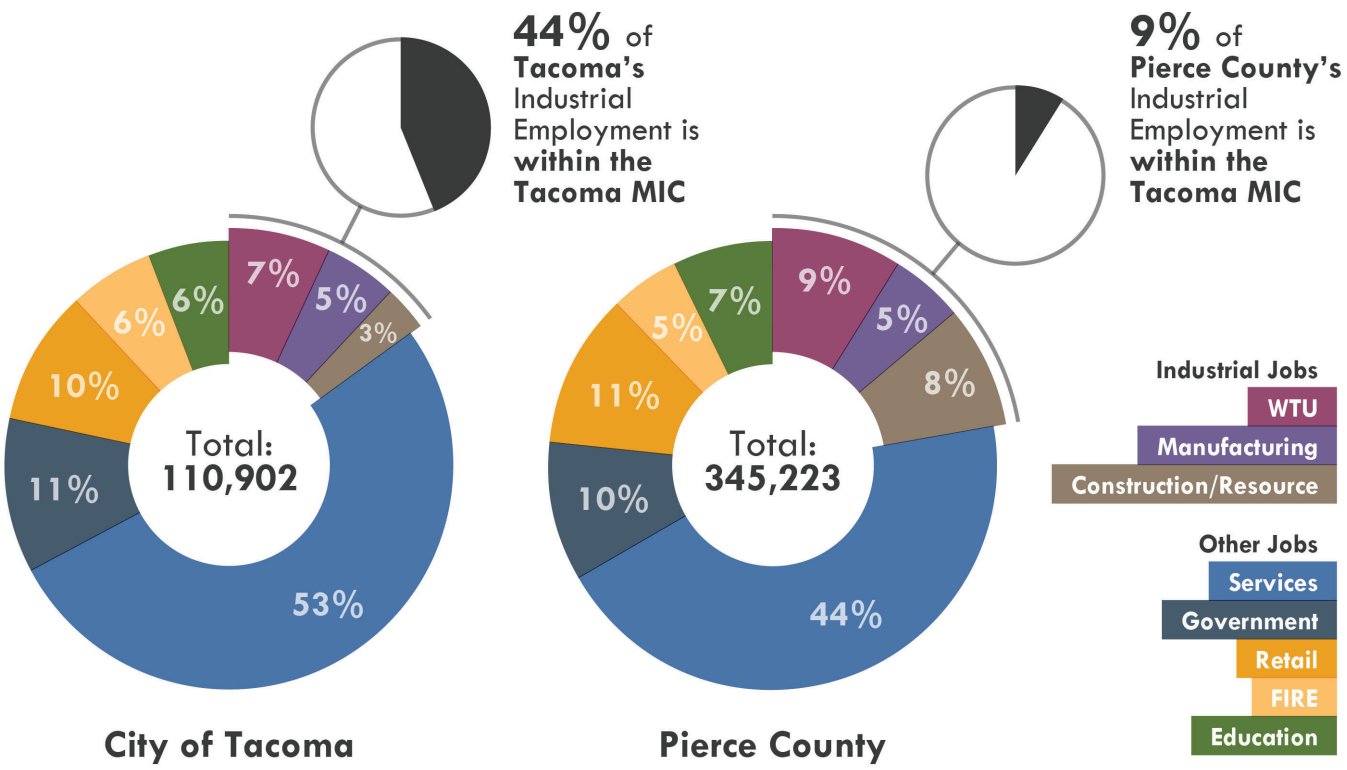


Figure 28. Tacoma and Pierce County Employment by Sector and Share of Industrial Employment Within the Port of Tacoma MIC, 2019

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

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.

Figure 28 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.

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. Figure 28 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.

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 Figure 29.

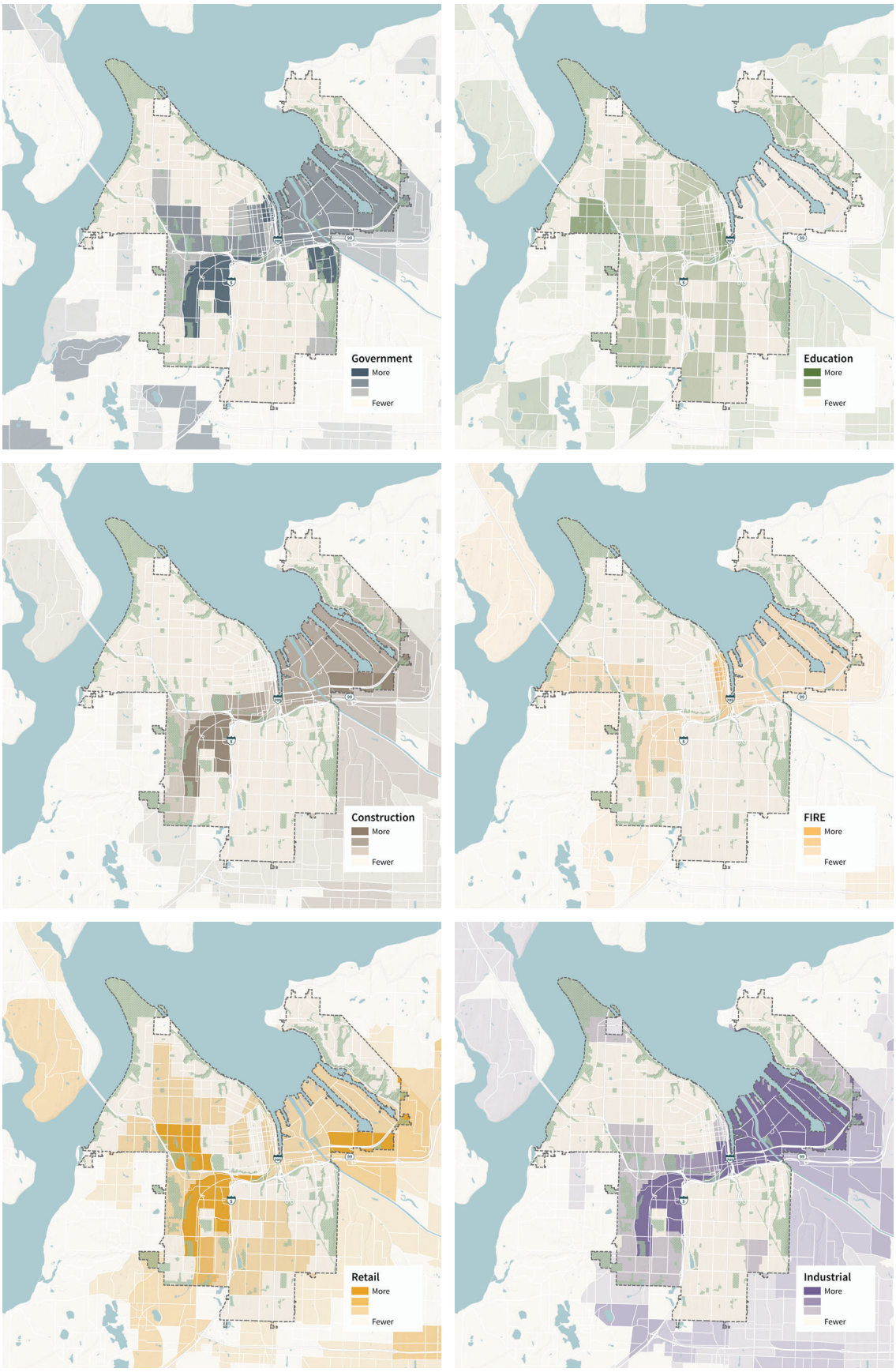
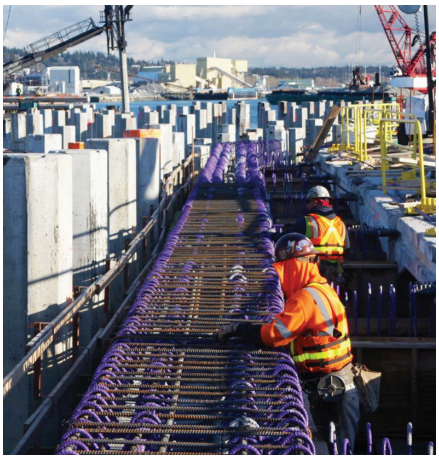


Figure 29. Employment Concentrations by Major Industry – City of Tacoma, 2022

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.[11]

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 Figure 30 and Figure 31.



Construction activity in the Tideflats

11 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.

Figure 30. Industrial Sectors Compared with Other Sectors – Tacoma, 2018

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

SECTOR	EMPLOYMENT	%	MEDIAN ANNUAL EARNINGS
Industrial: Manufacturing, WTU, and Construction			
Manufacturing	**8,922**	**8.7%**	**$46,802**
Transportation, 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

Figure 31. 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

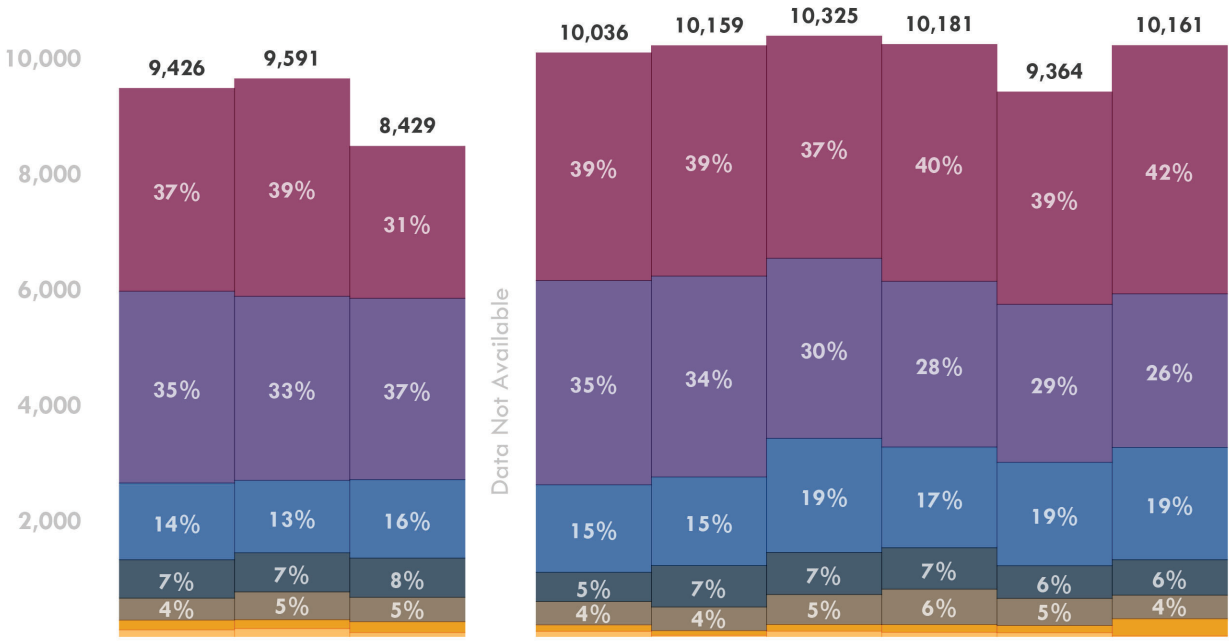
	AVERAGE INCOME
The Northwest Seaport Alliance (2017)	**$94,662**
Containerized Cargo	$100,837
Automobiles	$83,335
Breakbulk, Logs, and Other Cargo	$74,840
Port of Seattle Sea-Tac International Airport (2017) *	**$41,819**
Port of Seattle Commercial Fishing (2017)	**$43,524**
Port of Seattle Recreational 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

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.

Business Profiles: Radius Recycling

For more than a century, Radius Recycling has developed robust networks to collect, process, and deliver recycled metals to customers around the world. As one of North America's largest manufacturers and exporters of recycled metal products, their integrated operating model advances a circular economy where metals never become waste and instead are redesigned into new products.



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**

Figure 32. Tacoma MIC Employment by Sector, 2010-2019

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

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 Figure 32. Other significant industry sectors include Services (19%), Government (6%), and Construction & Resources (4%).

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.

Industry	CAGR 2010-19	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/Resource	1.5%	4%	4%
Retail	5.5%	2%	3%
FIRE	5.6%	1%	1%
TOTAL	0.8%		

Figure 33. Tacoma MIC Employment Growth Rates Overall and by Sector, 2010-2019

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 (Figure 34). 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 Figure 34 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.

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

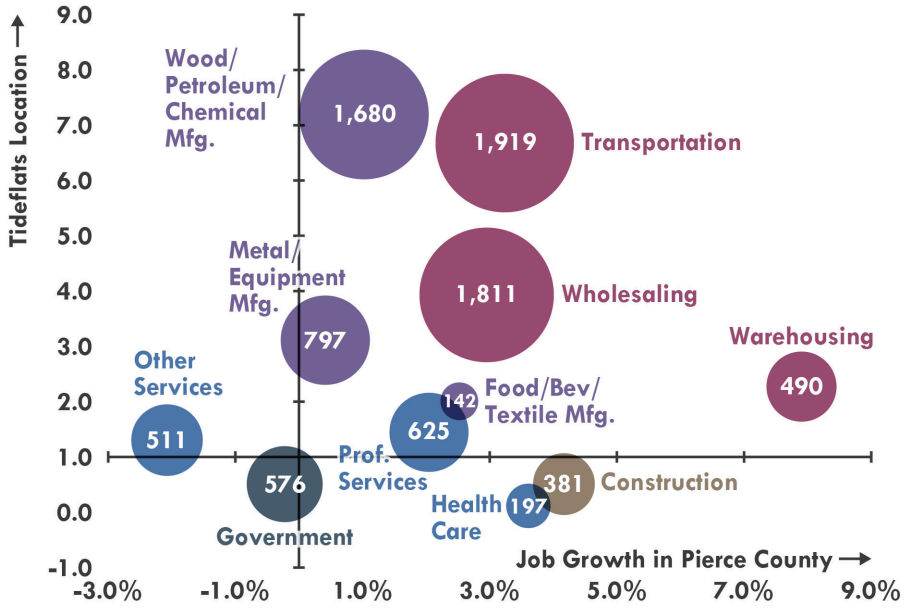


Figure 34. Location Quotient and Job Growth Analysis, 2019

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

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 Figure 35.

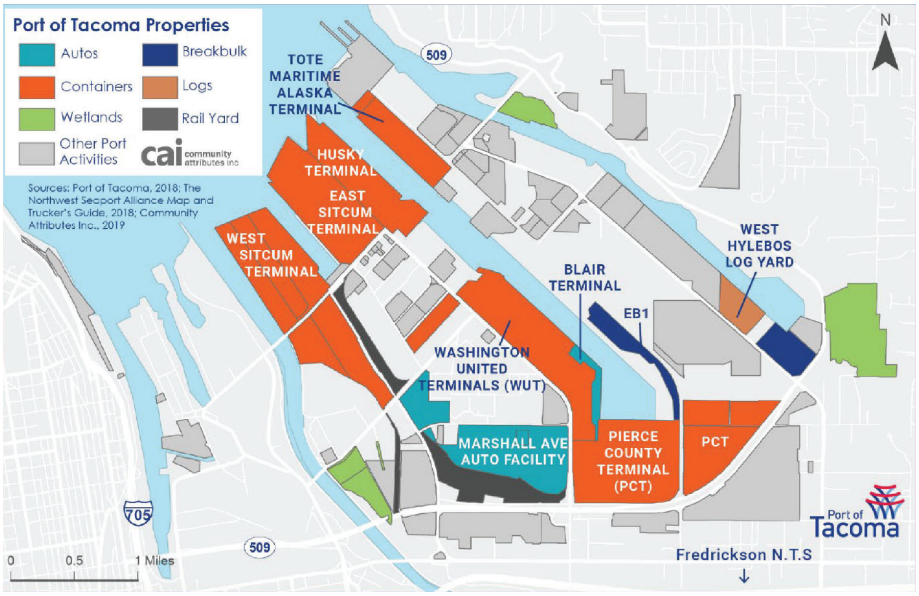


Figure 35. South Harbor Properties – Northwest Seaport Alliance

Sources: CAI, 2019

Figure 36. Port of Tacoma Tenant Properties
Sources: CAI, 2019

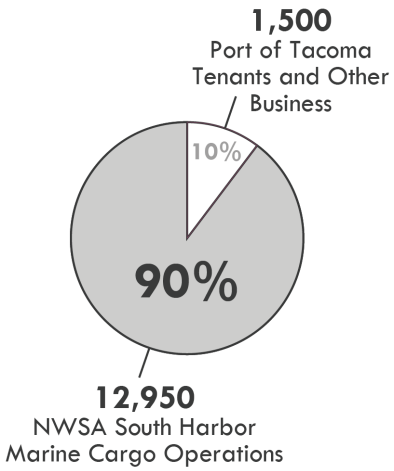


Figure 37. Port of Tacoma Employment, 2017
Source: CAI, 2019

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.

As shown in Figure 37, 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

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
TOTAL	**34,390**	**$8,238.1**	**$2,756.9**

Figure 38. Direct Jobs, Revenue, and Income by Jurisdiction, King and Pierce Counties, 2017
Sources: CAI, 2019

CATEGORY	JOBS
Port of Tacoma MIC	10,161 (2019)
Port of Tacoma MIC	9,941 (2022)

Figure 39. Port of Tacoma MIC Employment
Sources: PSRC, 2022

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.

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 (Figure 40). 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).

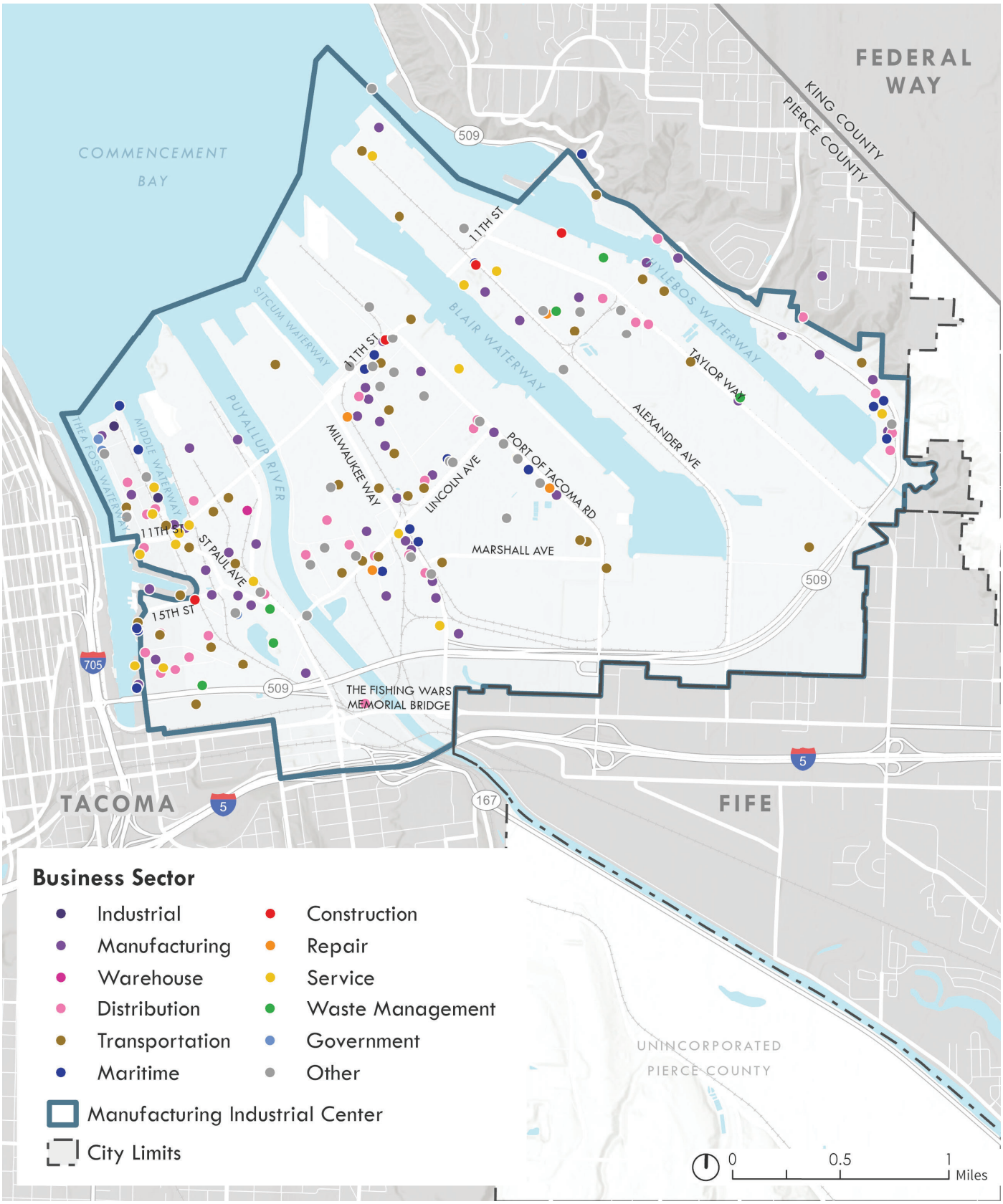
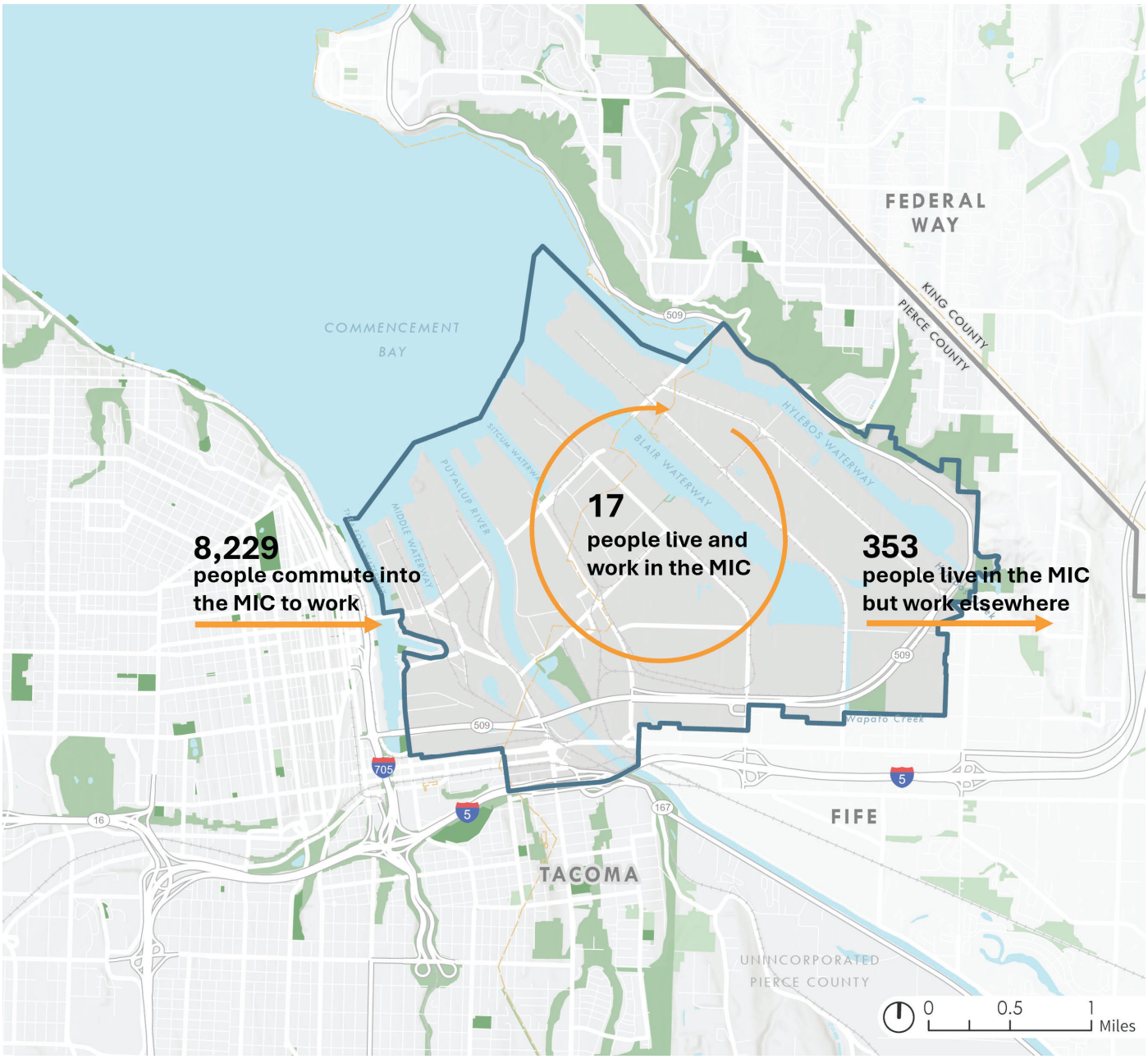


Figure 40. Map of Firms by Sector, Port of Tacoma MIC

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

Figure 41. 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; Seva Workshop, 2024

Figure 41 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.

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. Figure 42 outlines the home locations of workers with jobs located in the Port of Tacoma MIC.

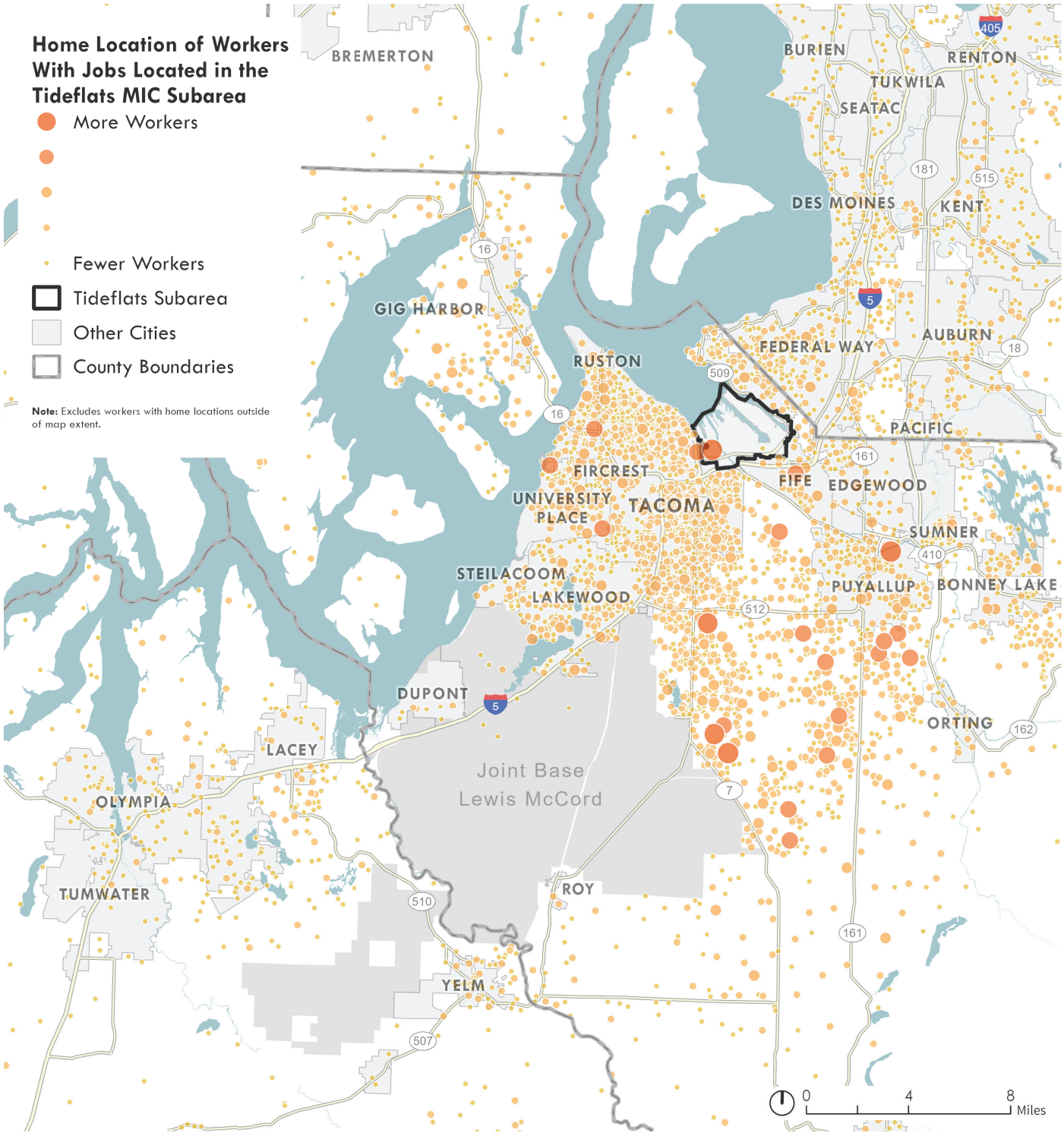


Figure 42. **Home Location of Workers with Jobs Located in the Port of Tacoma MIC**
Sources: U.S. Census Bureau, OnTheMap, 2017; Seva Workshop, 2024

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.

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**

Figure 43. Estimated Total Impacts from Port of Tacoma in the Port of Tacoma MIC

Sources: CAI, 2019; BERK, 2020

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.

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**

Figure 44. Estimated Total Impacts from Private Businesses in the Port of Tacoma MIC

Sources: Center for Business Analytics at Milgard School of Business University of Washington, Tacoma, 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 Figure 43. It should be noted that this study was not a professionally prepared study and the findings should be used for reference purposes only.

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.

Business Profiles: DTG Recycling

www.dtgrecycle.com/facilities/tacoma-wa

DTG Recyling (formerly Recovery 1) is a waste management and recycling center located inthe Tideflats for construction and demolition (C&D). Recovery 1 accepts primarily mixed C&D loads from local contractors, haulers, and government organizations and through separation, shredding and sorting develops products. Recovery 1 has been an industry leader in recycling innovation for over two decades and has received the prestigious CORR certification by the Recycling Certification Institute (RCI), a protocol for verifying the accuracy of recycling and recovery rates of building materials with a high level of confidence.

> **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 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.

Business Profiles: Aloha Carbon

Aloha Carbon is a sustainable aviation fuel company seeking a site here to establish a green refinery. This would divert organic C&D waste from the landfill and convert it to a fuel. This project to create renewable jet fuel for the commercial aviation market by converting construction debris is an example of the type of business that could locate in the Tideflats based on the vison of this subarea plan.

> **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.

2.8 TRANSPORTATION

Vehicle Freight

The subarea is a vehicle-oriented environment, and its roads primarily serve the Port of Tacoma and other freight, manufacturing, and industrial facilities. There is a large share of truck freight traveling between the subarea and regional roads. Congestion occurs both in and out of the subarea, with congestion occurring on some roads outside the subarea and near terminals within the subarea. This congestion leads to increased delay for commuters trying to access the Subarea, in addition to introducing delay to freight and military vehicles accessing the Port. There are limited over-water connections to the subarea, meaning that traffic generated by the subarea has a limited number of access points to the regional road network.

The transportation network within and around the Subarea move millions of tons of freight per year, both over land (via roadway and rail) and over sea. This includes a strategic waterway classified as W-2 that connects the Port to the wider strategic waterway system. This classification means that the waterway is designated to support the movement of between 10 and 25 million tons of goods to and from the Port of Tacoma. Several roads in the subarea have significant designations to provide strategic connection to this waterway. For example, Power Projection Platform (PPP) routes connect Joint Base Lewis-McChord (JBLM) via I-5 to the Port of Tacoma and are specifically designated to deploy military equipment on public roads to strategic seaports during a national emergency. Additionally, many roads within and connecting to the Port are classified as Strategic Freight Corridors by the Freight Mobility Strategic Investment Board (the T-1 and T-2 truck routes, as shown in **Figure 46**). These corridors are identified as transportation corridors of great economic importance within an integrated freight system and are eligible for grant funding.

Rail Freight

As with vehicle infrastructure, the subarea contains a large amount of rail infrastructure to facilitate connection to the strategic waterways and support the subarea's terminals and other facilities. Of these, two are classified as Class 1 (the BNSF Railway and the UP Railroad), both of which serve as PPP rail routes that connect the Port of Tacoma directly to the national Strategic Rail Corridor Network, providing a freight rail connection between the port and JBLM. These two rail connections are also identified as strategic rail corridors by WSDOT. A significant portion of the rail operations in the subarea are conducted by Tacoma Rail, a short line railroad owned by the City of Tacoma.

Although much of the major rail line connections are separated from major highways (such as SR 99, SR 509, and I-5) via grade separation, there are many points where the rail lines crosses highway at-grade (i.e. at the same level). These at-grade crossings can delay vehicle traffic and create the potential for safety conflicts between trains and other users in the right-of-way, as shown in **Figure 45**.

Figure 45. **Rail Crossings Within the Tideflats Subarea**
Source: Fehr & Peers and Heffron Transportation, 2024

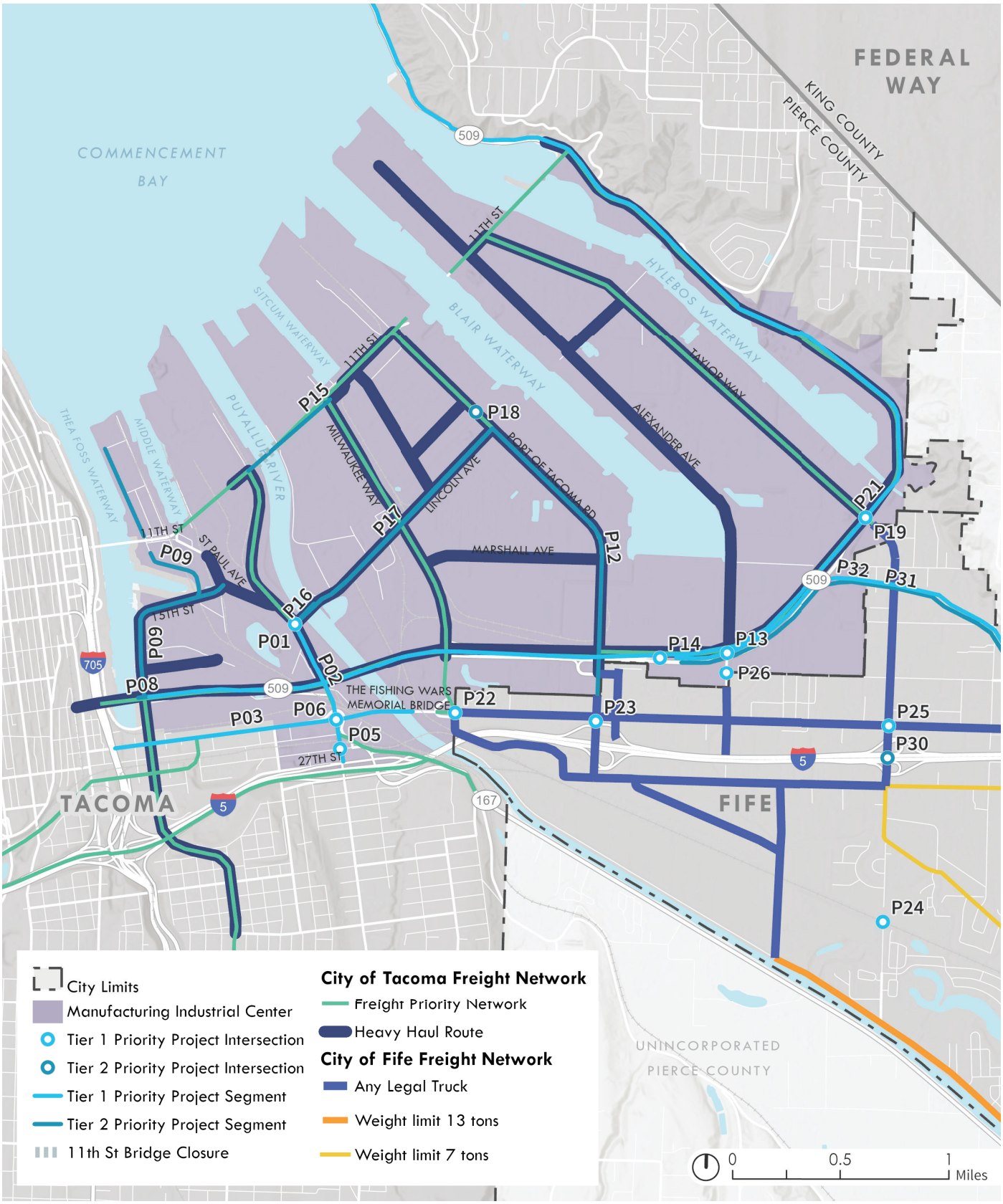


Figure 46. Existing Facilities and Planned Vehicle and Freight Improvements within the Subarea
Source: Fehr & Peers and Heffron Transportation, 2024

Planned Vehicle and Freight Network

There are several planned investments in the vehicle and freight networks within the subarea, including City of Tacoma and City of Fife projects, as well as more regional Pierce County and WSDOT projects. The planned vehicle and freight network (including rail infrastructure updates) within the subarea is shown in Figure 46. Included in this map are projects flagged as a priority for City investment by subarea plan stakeholders. More detail on each of these projects is provided in the Investments section of the Implementation chapter.

Parking

The subarea currently has an abundance of both on- and off-street parking (i.e., surface parking lots) for general purpose vehicles outside of the industrial area. That said, it is critical to maintain existing supply and explore options to better support truck parking (as part of freight activity) through a more centralized approach. Demand for parking and queuing areas is high in certain areas of the MIC and the City of Fife, during certain times of the day. Parking options for larger trucks, which are a critical component of the freight activity in the subarea, are more limited. Although there are larger firms that provide off-street parking lots for truck drivers parking overnight, many drivers still park in the subarea and adjacent communities overnight, using on-street parking supply and non-approved locations. Additionally, off-street staging areas are at times inadequate to accommodate truck demand, and the spill-over from these staging areas take up on-street parking areas while waiting at the terminals.

Transit

Currently, only the Tideflats Runner on-demand transit (provided by Pierce Transit) serves areas within the Subarea. This Runner service is point to point, providing limited on-demand transit service anywhere within the Subarea. Additionally, the surrounding roadway network is served by both Pierce Transit and Sound Transit, providing a mix of bus, light rail, and Sounder commuter rail service to downtown and areas southwest and west of the subarea. The Tacoma Dome Station is a key regional transportation facility where Pierce Transit and Sound Transit services converge. The Station generates many regional commute trips. The Tacoma Dome Link Extension will bring additional light rail service to the subarea and immediately adjacent neighborhoods as early as 2035.

Future Transit Network

Figure 47 shows the existing and planned transit adjacent to the subarea, including the Tacoma Dome Link Extension, which is considered a priority project for the subarea. Pierce Transit is current defining its Long-Range Plan for the 2045 horizon, including considering service to facilitate access to Sound Transit's planned Tacoma Dome Link Extension. Additionally, Sound Transit's long-term plans include a light rail extension connecting the current Tacoma Link to Tacoma Community College, which would further expand the local high-capacity transit network. One additional consideration for the subarea would be to coordinate with Pierce Transit to further expand the Tideflats Runner service. This would facilitate connection between

Figure 47. Existing Facilities and Planned Transit Improvements within the Subarea

Note: The exact route and station locations for the Tacoma Dome Light Rail Link Extension is still being finalized; the routing on the map represents the most recent preferred alternative. Source: Pierce Transit and Sound Transit, 2024. Data compiled by Fehr & Peers, 2024

employment centers within the subarea and the light rail, commuter rail, and bus networks.

Longer-term, the City could consider coordination with Pierce Transit and Sound Transit to evaluate fixed-route service within the subarea itself, including the key employment centers on the peninsulas. The City should also consider opportunities to improve pedestrian and bicycle infrastructure within a buffer of key transit facilities to improve safe connection to and from the transit stops.

Active Transportation

Pedestrian Network

Major roads outside of the industrial area generally have sidewalks on at least one side of the street. However, some of these sidewalks do not meet the City's minimum width, do not have Americans with Disabilities (ADA) compliant ramps, and do not provide for continuous travel. Within the industrial area, sidewalks are generally not present (except on portions of selected major roads), which presents challenges for pedestrians to move around the industrial area. There are limited marked pedestrian crossings within the subarea. Additionally, there are a limited number of corridors providing pedestrian access into and out of the subarea itself, most of which carry high levels of vehicle traffic.

Bicycle Network

Most major roadways within the subarea do not have any bike facilities, and none have protected/separated bike lanes or a shared use path. Some lower traffic volume roads within the industrial area have surplus right of way width, which could easily accommodate bike lanes separate from vehicular lanes in future redesigns.

There are gaps in the pedestrian and bicycle networks, with primary needs being improving local connections to land uses within and through the subarea. For example, there is currently no safe connection for bicyclists to travel to/from Northeast Tacoma, Downtown, or Fife. It is likely that adding such a connection will require either expansion of an existing bridge or construction of a new bridge as the existing bridges over the Puyallup River are not suitable for bike facilities to make the connection to Downtown Tacoma.

Future Active Transportation Network

Figure 48 shows a map of existing and planned active mode facilities and improvements within and around the subarea. These include shared use facilities to accommodate both bicyclists and pedestrians, with the intent of improving safety for these vulnerable users by improving separation as well as design in facilities that would see interaction between freight vehicles and vulnerable users. It also includes any active mode or multimodal roadway projects flagged as a priority for City investment by subarea plan stakeholders. More detail on each of these projects is provided in the Investments section of the Implementation chapter.

The City's priority when it comes to active transportation within the subarea is to expand opportunities for those walking, cycling, or rolling to connect with employment, retail, and other uses. This includes focusing investments in areas that would facilitate connection to transit stops in and around the subarea.

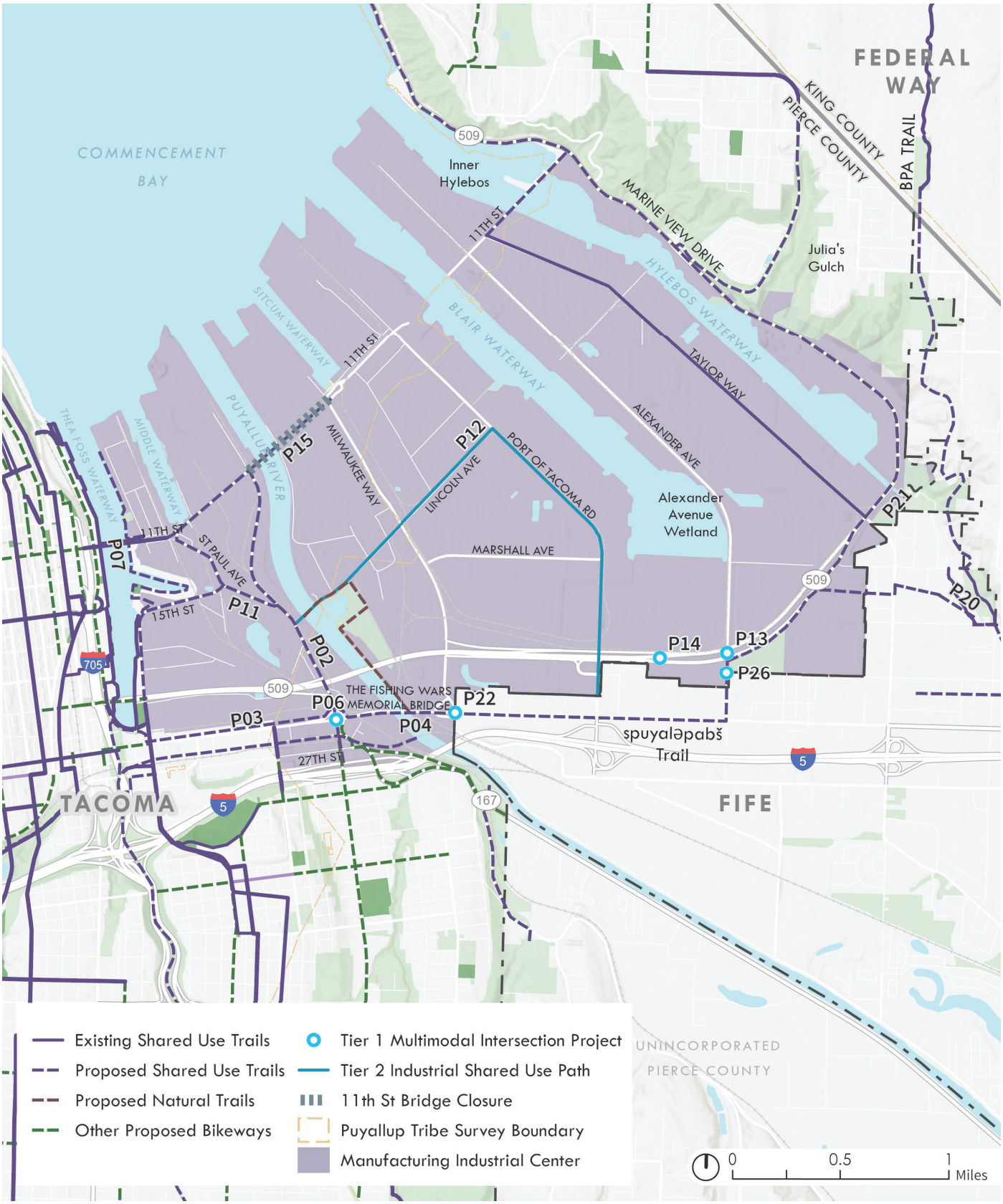


Figure 48. **Existing Facilities and Planned Active Mode Improvements within the Subarea**
Source: Fehr & Peers, 2024; Seva Workshop, 2024

Past Planning Efforts

City of Fife Comprehensive Plan – Transportation Element (2023)

The City of Fife plan for transportation is contained within the Transportation Element of the City's Comprehensive Plan project list which is implemented by adoption of the City 6-year transportation improvement plan. The City's transportation efforts consistently focus on freight movement to and from the port and attempts to balance the impacts on residential and commercial portions of Fife. In addition, the City's transportation planning efforts are focusing on the Tacoma Dome Link Extension and the expected transit-oriented development that will follow. As it relates to freight access to the port, this includes routing large truck traffic around the "City Center" area through the implementation of various transportation improvement projects, namely State Route (SR) 167, 54th Interchange Improvements, Port of Tacoma Road Interchange Improvements, Wapato Way Frontage Road, and a gridded street pattern with pedestrian facilities in the station area core.

Tacoma Vision Zero Action Plan (2022)

The Tacoma Vision Zero Action Plan, adopted in September 2022, built upon the City's past work on traffic safety plans, actions and policies to outline a holistic, equitable and data-driven approach to achieving zero traffic deaths in Tacoma, with a particular emphasis on safe walking and biking. The goal of the Vision Zero Action Plan is zero traffic deaths or serious injuries on Tacoma roadways. Identified as key methods for achieving Vision Zero were designing and constructing safe roads, implementing safe speeds, planning for vulnerable users, and proactively assessing crash causation and data to make informed policy decisions. Within the Port of Tacoma area, Portland Avenue from Lincoln Avenue southward was identified as a high-risk pedestrian corridor, while the following segments were identified as high-risk motorist corridors:

- SR 509 from Port of Tacoma Road to ~2,000 feet east of Alexander Avenue
- Marine View Drive from McMurray Road to the Hylebos Marina

The Vision Zero Action Plan identified several broad actions to address safety across the City, including lowering the speed limit citywide, implementing traffic calming measures, and implementing recommendations from the City's previous Local Road Safety Plan.

Port of Tacoma's 2021–2026 Strategic Plan (2021)

The *Port of Tacoma's 2021–2026 Strategic Plan*, adopted in 2021, aims to identify strategic investments in the harbor and community that promote prosperity, trade, and jobs, while protecting and enhancing the environment. The plan includes five foundational goals: community connections, environmental leadership, economic vitality, organizational success, and transportation advocacy. Under transportation advocacy, strategies include supporting infrastructure projects that increase Port freight mobility, advocating for infrastructure and system management needs of Port-related businesses in the subarea, and developing policies to guide decision-making for transportation advocacy and prioritizing infrastructure investments.

Port of Tacoma Comprehensive Scheme of Harbor Improvements (2017)

The Port of Tacoma maintains a *Comprehensive Scheme of Harbor Improvements*, as mandated by state law; generally, these schemes should be updated every 10 to 20 years. The intent of this document and its amendments is to give the public a reasonably detailed picture of the Port's planned improvement projects and the geographic limits of development needed to support these projects, prior to the Port Commission's vote and adoption of a comprehensive scheme of harbor improvements.

Tideflats Emergency Response Plan (2016)

The *Tideflats Emergency Response Plan* assesses the ability for emergency services to access and egress the study area considering the impact of rail and traffic congestion through 2035. The plan outlines a set of recommendations that can address emergency response needs in the subarea over the short, medium, and long term based on emergency response analysis. The recommendations are related to transportation infrastructure, fire station locations, staffing, and operations. Two high-priority infrastructure improvements identified in the plan are the Fishing Wars Memorial Bridge Replacement and Port of Tacoma Road and I5 Interchange. The document acknowledges that the planned roadway projects would improve overall accessibility to and from the subarea, but they alone would not be sufficient to substantially affect emergency response times given the locations of existing fire stations and general increases in traffic congestion in 2020 and 2035. Note: this plan was completed prior to the implementation of Fire Station No. 5 at E 11th Street and Taylor Way.

Puyallup Tribe Road Safety Audit – SR509/Marine View Drive (2016)

The *Puyallup Tribe Road Safety Audit* identified several different routes and their corresponding safety concerns withing the Puyallup Tribe's transportation network. Road Safety Audits are a tool designed to take in-office safety analysis performed during the development of the Tribe's Safety Plan and enhance those findings to provide opportunities for improvements with onsite physical assessments of specific corridors and intersections. SR 509/Marine View Drive was studied as part of this plan and is located within this plan's study area.

Tacoma Transportation Master Plan (2015)

The *Tacoma Transportation Master Plan* (TMP) is an element of the One Tacoma Comprehensive Plan and contains a vision for how the future transportation network will serve additional growth (City of Tacoma 2015 and 2018 amendments). The TMP states that the City is moving toward a more multimodal approach that considers more than the traditional vehicle delay metrics. Currently, the City uses two metrics to evaluate transportation performance: first, a system completeness measure to track progress in implementing the multimodal transportation network, and second, an intersection level of service (LOS) standard of D in the Tideflats area. The plan includes several policies related to freight mobility, including addressing inter-modal conflicts and strengthening Tacoma as a primary hub for goods movement by integrating freight considerations into the transportation network.

Tideflats and Port of Tacoma ITS Strategic Plan (2015)

The *Tideflats and Port of Tacoma Intelligent Transportation Systems (ITS) Strategic Plan* identifies the needs and strategies to improve safety, increase freight mobility, and accommodate growth in the subarea. The plan assesses six high-level ITS strategies including signal optimization, signal priority and pre-emption, incident management, subarea "511" service, active lane management, and supporting ITS infrastructure. Specific projects tied to the strategies were developed and prioritized for short (0–5 years), mid (6–10 years), and long-term (over 10 years) phasing, with cost estimates for short-term projects. Two short-term ITS projects recommended constructing initial ITS infrastructure needed for basic information sharing among stakeholders and adding cameras to key existing at-grade rail crossings.

Port of Tacoma Land Use & Transportation Plan (2014)

The *Port of Tacoma Land Use and Transportation Plan* guides future development and infrastructure priorities to achieve the goals considered in the Port's 2012–2022 Strategic Plan. The plan establishes a development vision for all Port-owned property in the subarea using seven development designations: marine terminals, commercial, mixed commercial/maritime support, marine services, industrial/maritime support, public utilities/public safety, and habitat/public access. These designations are consistent with the adopted City of Tacoma land use and shoreline regulations. The transportation section of the plan prioritizes freight system improvement strategies and investments in four user group areas: regional and port access, subarea circulation and preservation, rail facilities, and waterways. Two of the high-priority projects highlighted in the plan are the SR 167 Completion project (in Tacoma and Fife) and the Port of Tacoma Road/I5 Interchange project (in Fife). These two facilities would serve major port-related traffic once completed. Regarding rail infrastructure, the plan considers nine Tacoma Rail capital projects and eight Port and Tacoma Rail collaborative projects. High-priority rail projects include the connection of EB1 Terminal to the railroad system (now completed) and the construction of industrial lead tracks and preservation of Taylor Way crossings to support future cargo customers on the Blair-Hylebos Peninsula.

Tideflats Area Transportation Study (2011)

The *Tideflats Area Transportation Study* examines the multimodal transportation network within the subarea, with project partners including the Port of Tacoma, City of Tacoma, City of Fife, Puyallup Tribe, and Pierce County. Based on input from stakeholders, future travel demand forecast, and micro-simulation of the roadway network, the plan recommends a package of roadway and rail transportation improvement projects to increase mobility, accessibility, and safety. The plan highlights the need to complete the portion of SR 167 between SR 161 in Puyallup and SR 509, to reduce the potential for a highly congested network. The recommended projects, which have an estimated cost of $290–$335 million (in 2010 dollars), are categorized according to the user group that they most benefit: subarea, Port, industrial, and local access. Two additional high-priority projects include extending Canyon Road from Pioneer Way across the Puyallup River to 70th Avenue E and adding truck lanes on Port of Tacoma Road.

East Thea Foss Waterway Transportation Corridor Study (2008)

The East Thea Foss Waterway Transportation Corridor Study analyzes and develops a transitional transportation corridor system to improve access, circulation, and functional separation in the East Thea Foss Peninsula area. The recommendations focus primarily along the East D Street corridor and are elaborated for two future scenarios, with and without an operational Murray Morgan Bridge. The study's priority recommendations include improving the E 11th Street/East F Street/St. Paul Avenue intersection and moving forward with the East D Street/SR 509 ramp feasibility study working with WSDOT and BNSF.

Assumed Transportation Improvements

Several vehicle and transit projects were assumed to be completed as part of the future modelling efforts performed for the EIS and Subarea Plan. As such, these projects are not considered to be actions, but are considered a baseline assumption for the subarea. These projects are at various stages of planning and completion and are mapped in **Figure 49**.

See the Draft EIS summary for findings of the EIS. This Subarea Plan will focus on fostering interagency collaboration to develop a funding plan that combines the following potential funding sources to address proposed actions and mitigation:

> City and County impact fees

> SEPA mitigation fees, related to:
- Concurrency
- Safety
- Multimodal

> Local Improvement District

> Transportation Benefit District

> Grant funding

Figure 49. **Planned Transportation Projects Within or Related to the Subarea**
Source: Fehr & Peers, 2024

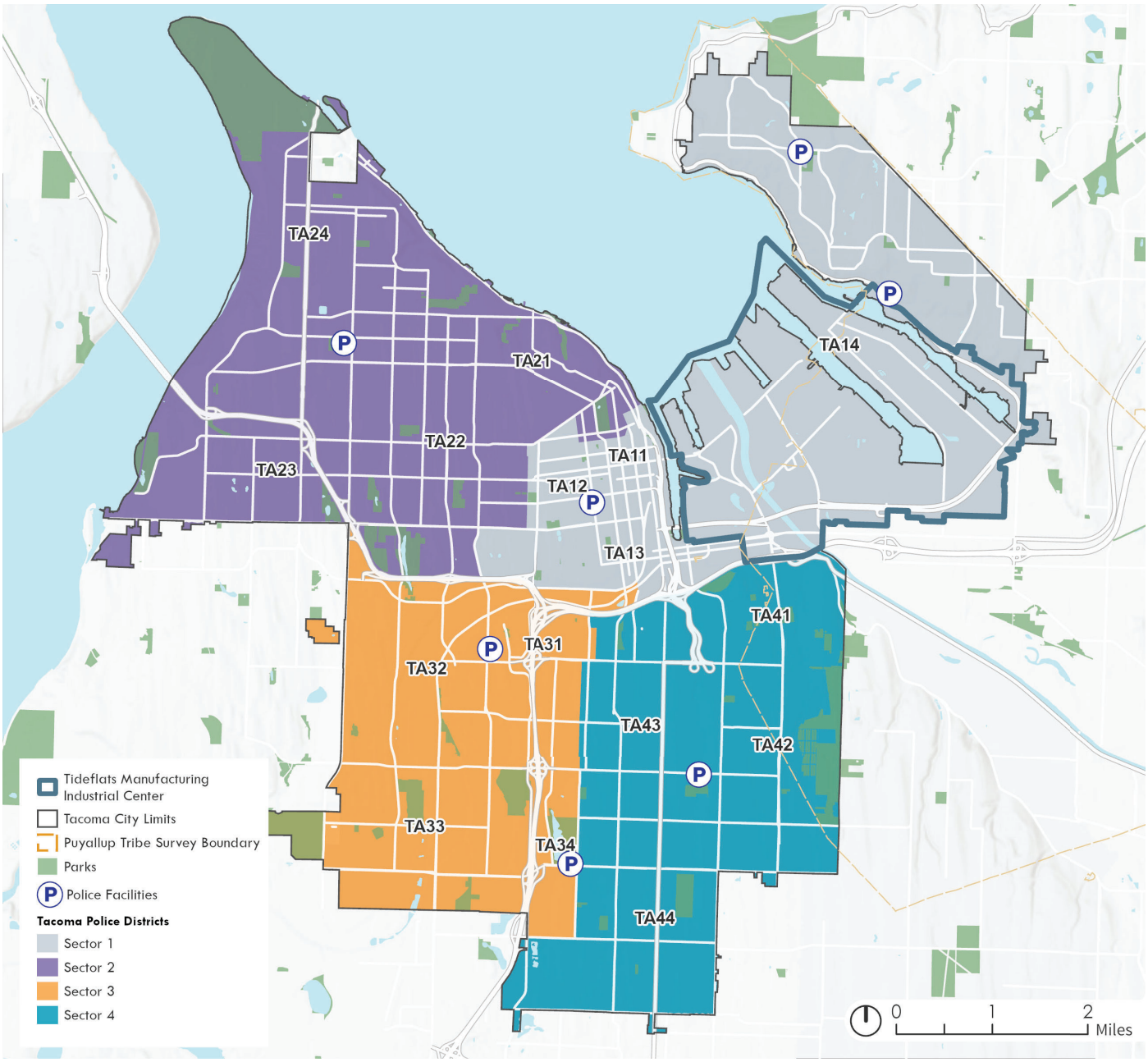


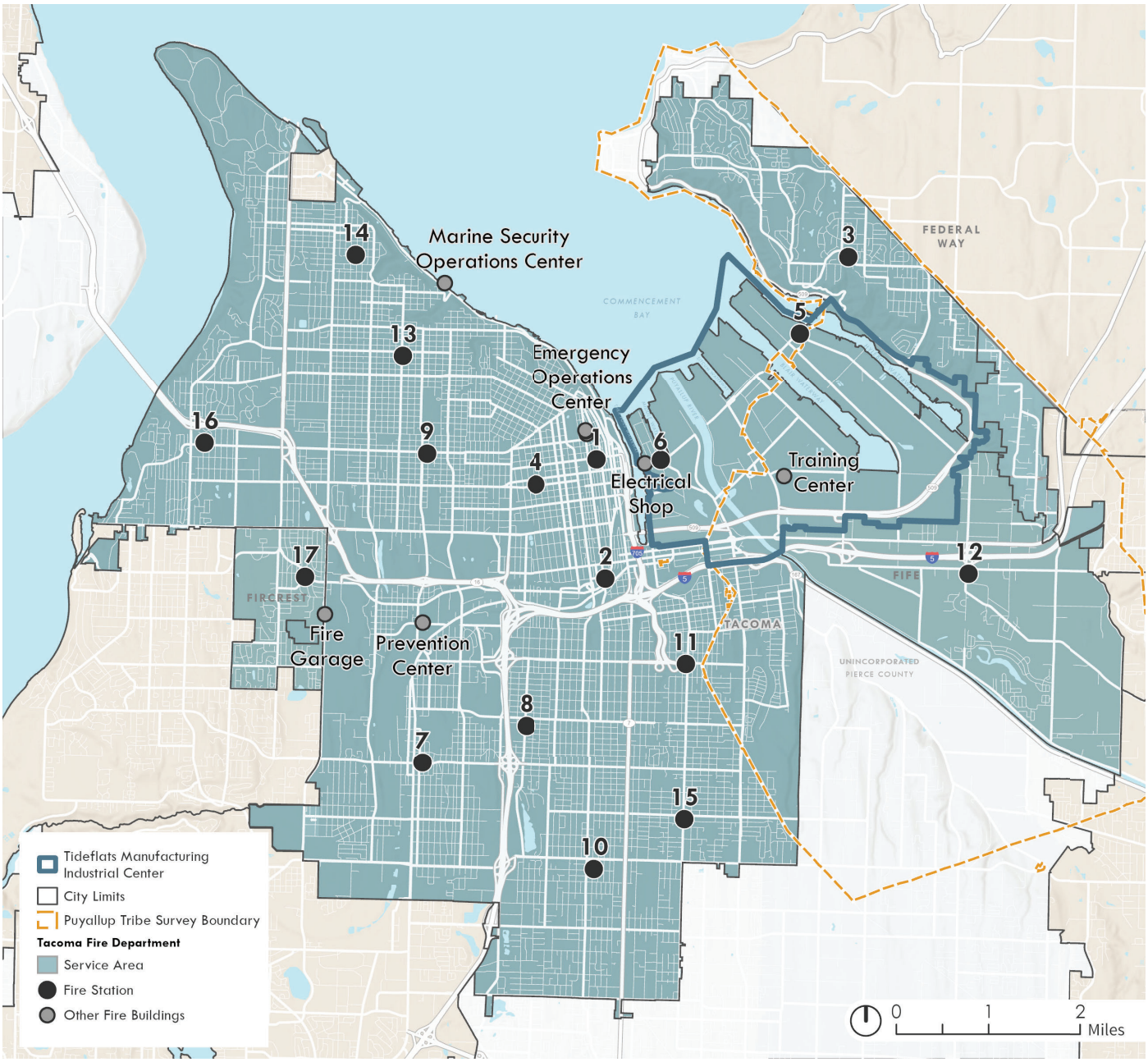
Figure 50. **Tacoma Police Department Service Sectors and Facilities, 2020**

Sources: City of Tacoma, 2024; Seva Workshop, 2024

2.9 PUBLIC SERVICES

Police and Fire

Police and fire services for the subarea are provided by the City of Tacoma. The Puyallup Tribe also has officers that can enforce Puyallup Tribal Law in the portion of the subarea that overlaps the Puyallup Reservation. Additionally, The Port of Tacoma has its own security team with port officers that monitor facilities, rail and road systems, respond to calls, and have authority to access all marine terminals and cargo facilities. The Port of Tacoma is one of 17 federally designated Strategic Seaports that coordinate efficient port operations during peacetime and national emergencies. The Port is a key support facility for Joint Base Lewis McChord (JBLM).

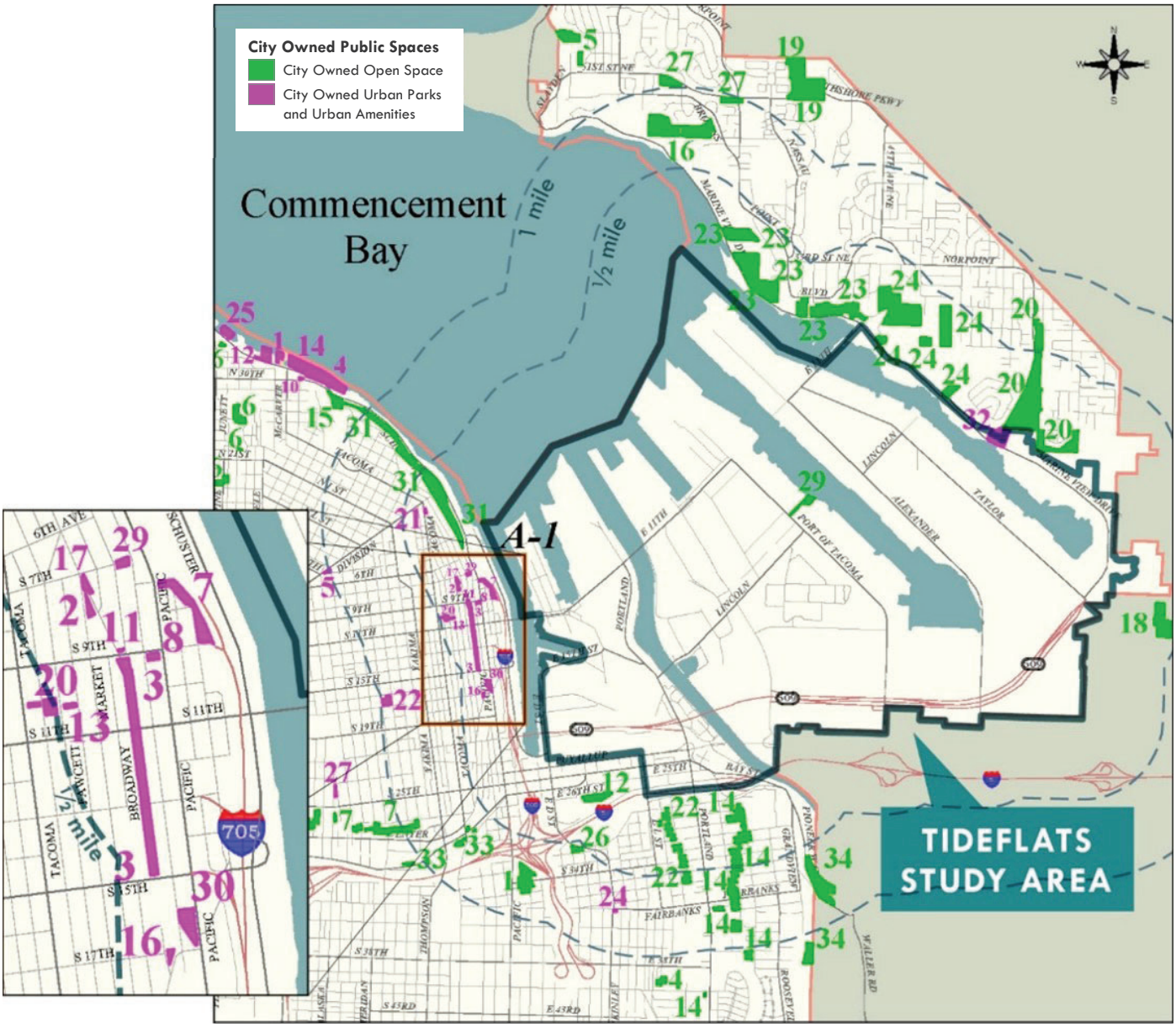


Both the Tacoma Police Department (TPD) and Fire Department (TFD) are currently meeting level of service standards established by the City. While this is the case, emergency response times in the subarea can be lengthy at times due to impacts from rail and the limited number of access routes. TPD and TFD will likely need additional staff, equipment, and facilities in the future in order to maintain service levels, because calls for police and fire service increases over time as development occurs. The City has regular planning and budgeting processes in place to minimize the impacts of growth and meet future demand for police and fire services. For instance, Fire Station No. 5 was recently built at 3510 E 11th Street to provide additional fire response, EMS, and hazardous materials capabilities in the Port area.

See Figure 50 for a map of TPD service facilities and Figure 51 for a map of TFD's facilities. There are no police stations in the subarea but there are stations located nearby to the east and west. There are three fire stations located in the subarea.

Figure 51. Tacoma Fire Department Service Area and Fire Buildings, 2020

Sources: Pierce County GIS, 2020; Tacoma Fire Department, 2020; City of Tacoma 2021-2026 Capital Facilities Plan, 2020; BERK, 2020



Parks

Parks and open space services for the subarea are provided by the City of Tacoma and Metro Parks. There is one urban park (Viewpoint Park) and one open space (qwiqwəlut "Little Marsh" formerly known as Rhone Poulenc) on the subarea. Additionally, there are two City of Tacoma signature trails that run within and adjacent to the subarea (Puyallup River Levee and Marine View Drive). There are no Metro Parks facilities within the subarea, though there are several within one mile. See Figure 52 and Figure 53 for City of Tacoma owned parks and trails near and within the subarea. See Figure 54 for Metro Parks owned facilities near the subarea.

Figure 52. City of Tacoma Owned Parks and Open Space Near the Subarea, 2020

Note: The City departments with primary management responsibility for urban parks/ amenities include Public Works – Real Property Services and Street Operations Divisions, and Planning and Development Services. The City departments with primary management responsibility for open space properties include Public Works – Real Property Services and Environmental Services.
Sources: City of Tacoma, 2019; City of Tacoma 2021-2026 Capital Facilities Plan, 2020; BERK, 2020

Figure 53. City of Tacoma Signature and Natural Trails Near the Subarea, 2020

Source: One Tacoma Comprehensive Plan, 2019 (Figure 37); BERK, 2020

The City of Tacoma is currently not meeting Parks level of service standards, meaning that they are not providing parks services at the minimum level established, which is 3 acres per 1,000 people and within ¾ mile of all residents. Most of the subarea is not within ¾ mile of a local park, though the western portion of subarea is generally within ¾ mile of recreation facilities, located either in Downtown or south of I-5.

City of Tacoma and Metro Parks have identified a need to maintain open space and expand parks facilities in the future. The Foss Waterway Parks project includes the design for two parks in the subarea along the Foss Waterway. Melanie Jan Laplant Dressel Park is currently under construction and is expected to be complete Spring/ Summer 2024, while the Waterway Park is currently on hold.

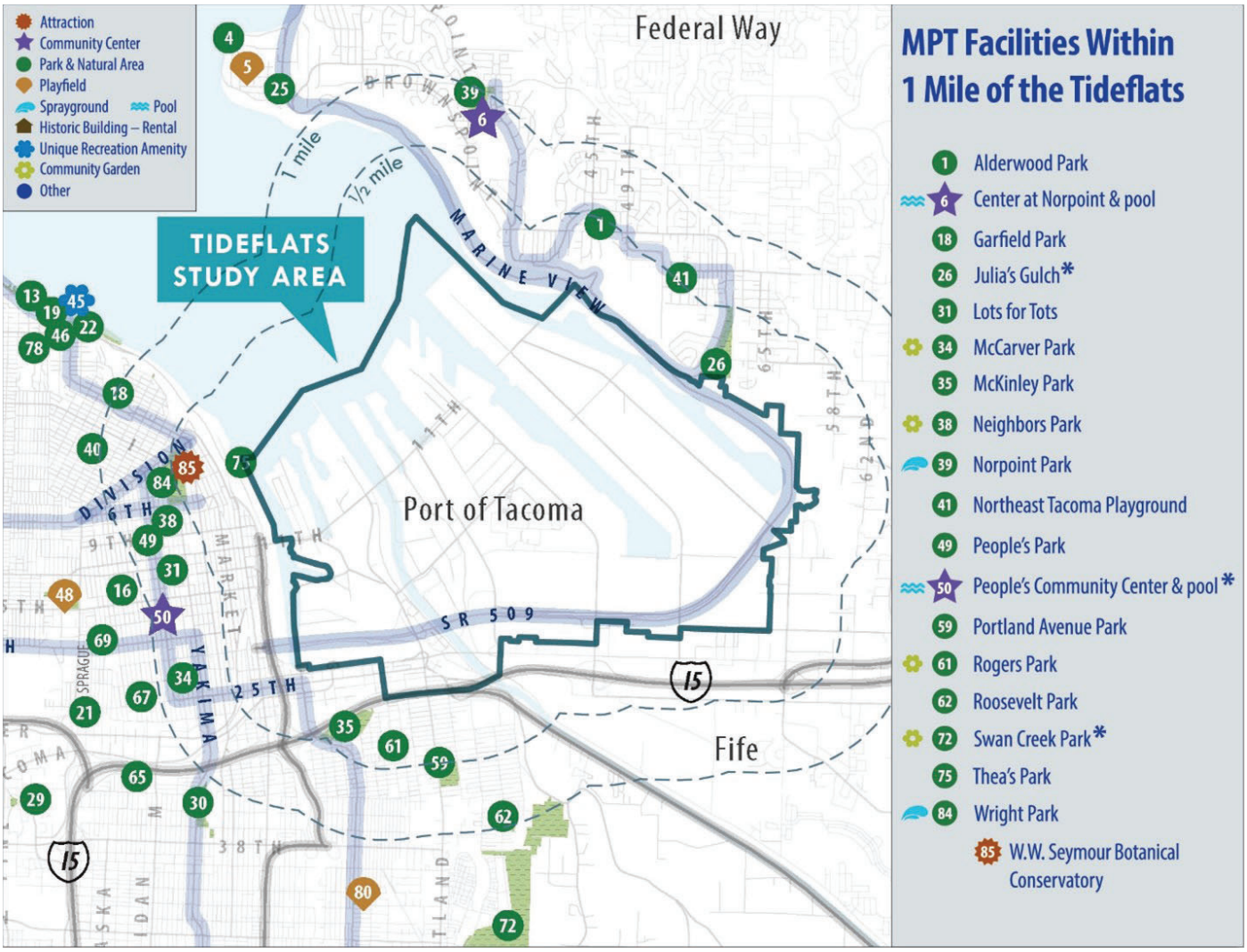


Figure 54. **Metro Parks Tacoma Facilities Near the Study Area, 2020**

** Facility owned partially or fully by the City of Tacoma (see **Figure 52**). Julia's Gulch is owned by the Port of Tacoma and Swan Creek Park is primarily owned by Metro Parks and Pierce County, though the City of Tacoma owns some parcels as shown in **Figure 52**.*
Source: Metro Parks Tacoma, 2020; BERK, 2020.

2.10 PLANS AND POLICIES

The subarea is located within Pierce County in the City of Tacoma and the Puyallup Indian Reservation. Many plans and policies guide growth and development in the subarea. These plans and policies come from the local, regional, state, and federal levels.

Local Policy Framework

City of Tacoma

The City of Tacoma's Comprehensive Plan is the community's vision for 2040 and includes goals and policies to accommodate growth in the City. The subarea is designated as a Manufacturing/Industrial Center (MIC), which is an area intended to serve as a key employment center over the long-term. The Comprehensive Plan's Container Port Element contains policies to protect industrial lands in the subarea, reduce land use conflicts, promote economic vitality, support continued preservation of the environment, and ensure adequate facilities, services, and transportation within and beyond the subarea.

The City's Shoreline Master Program (SMP) sets guidelines and regulations to protect and guide development along the City's shorelines. The subarea contains several waterways that are subject to the SMP. Public access to and recreation along the shoreline is identified by the City's Public Access Alternatives Plan (PAAL). There are several existing public access points in the subarea and other potential opportunities identified. As discussed in Section 2.4, Land Use Conditions, the subarea contains three City of Tacoma zoning designations.

Port of Tacoma

Port districts in the state of Washington are required to prepare and update a Comprehensive Scheme of Harbor Improvements (CSHI), which describes development goals for the Port. The current Port of Tacoma CSHI was last updated in 2017 , and has an update planned for late 2024. The CSHI is updated periodically as the Port of Tacoma explores new opportunities for property acquisitions or investments that change represent a change in character of a Port-owned property. The Port of Tacoma 2021-2026 Strategic Plan includes goals and strategies to promote prosperity, trade, and jobs, and to protect and enhance the environment.

City of Fife

The primary area of growth and development for the City of Fife will be in support of the future light rail station provided by Sound Transit, located in the "City Center". The City of Fife, as confirmed by the Pierce County Regional Council, has designated the City Center as a Center of Local Importance (COLI) pursuant to the Pierce County Countywide Planning Policies. This area is focused on the new sound transit station and encourages mixed-use high-density development and a pedestrian-oriented transportation system connecting to transit. This is where the city will accommodate most of its residential growth over the planning period. As part of their 2024 periodic update and in preparation for the development of the light rail station, the City will be adopting a new City Center Element, a planned action EIS, and new development regulations encouraging the desired mixed use/TOD land use pattern. The city center is bisected by the Interstates 5/54th Ave interchange, one of the primary entrances to

the port of Tacoma. The NW corner of Fife's City Center, and the SE corner of the MIC boundary touch each other at the intersection of 12th St E, and 52nd Ave E, in Fife.

In addition to the City Center, the City's Future Land Use map contains sufficient area of industrial zoning, and maintains a core residential area with smaller neighborhoods immediately adjacent to the Port.

Parcels along the southern and eastern edge of the study area are adjacent to the City of Fife boundary. The southern edge is adjacent to the primary business district, which runs east and west along Pacific Highway E. This area contains several commercial establishments that support both port operation as and the traveling public, tribal enterprises, scattered industrial uses, small residences (Willows Neighborhood), and underdeveloped land. This area is zoned Regional Commercial, along with some pockets of Industrial, Business Park, and Neighborhood Commercial, zoning.

The eastern edge of the study area is adjacent to the 54th St corridor as well as small portions of the Pacific Hwy Corridor. This area contains industrial uses and the residential neighborhood known as the Benthien Loop. The zoning in this area is Industrial and Neighborhood Commercial. This is the location where the study area is immediate adjacent to the City Center.

County Policy Framework

Pierce County Countywide Planning Policies

The Pierce County Countywide Planning Policies (CPPs) apply to Pierce County and its cities and provide a framework for directing growth and investment throughout the County. The CPPs direct cities to concentrate growth in designated centers. The subarea is a designated Manufacturing/Industrial Center.

Regional Policy Framework

PSRC VISION 2050

The Puget Sound Regional Council (PSRC) is a Metropolitan Planning Organization (MPO) that develops policies and makes decisions about transportation planning, economic development and growth management in the four-county (King, Kitsap, Pierce, and Snohomish) central Puget Sound region. PSRC's Vision 2050 Plan established a long-term land use and transportation framework for the region and designated the Tideflats as one of 10 Manufacturing/Industrial Centers (MIC) in the region. Vision 2050 recognizes MICs as important employment locations that serve both current and long-term regional economic objectives and calls for the provision of infrastructure and services in MICs necessary to serve intensive manufacturing and industrial activity. MICs are given funding priority both for transportation infrastructure and for economic development. PSRC provides guidance for jurisdictions in updating their center plans, including Regional Manufacturing Industrial Center Plans.

State, Tribal and Federal Policy Framework

Growth Management Act

The Washington State Growth Management Act (GMA) was adopted in 1990 in response to concerns over uncoordinated growth and its impacts on communities and the environment. The GMA includes 15 planning goals to help guide its implementation. GMA mandates certain topics to be included in Comprehensive Plans, and jurisdictions are allowed to include additional topics, such as subarea plans like the Tideflats Subarea Plan. Tacoma's strategy for growth in the One Tacoma Comprehensive Plan is consistent with GMA goals which restricts urban growth to urban areas to prevent sprawl and supports economic development.

Treaties & Tribal Codes

Treaties and land claims settlement relevant to the subarea are discussed in Section 2.3, Tribal Resources. The subarea includes land located within the Puyallup Tribe of Indians reservation and Tribal-owned parcels. The Puyallup Tribe operates and administers a set of laws and regulations collectively referred to as the Puyallup Tribal Codes (PTC). Title 15 of the PTC addresses land use with a Zoning Ordinance (Chapter 15.12) that contains district classifications for all lands which exist within the boundaries of the Puyallup Reservation as defined by the Plat Map of the 1873 Survey conducted by the United States General Land Office and filed in 1874 and the Puyallup Land Claims Settlement Act of 1989, Public Law 101-41. In addition, Chapter 15.08 Land Use Consultation Process Ordinance sets out the process for tribal land use decisions and land use decisions by local governments.

Puyallup Tribe of Indians Comprehensive Land Use Plan (2023)

The Puyallup Tribe of Indians Comprehensive Land Use Plan provides a land use plan and policies intended to guide its planning area (1873 boundaries and greater area) and beyond. Its planning area includes the entire Tideflats study area. The Puyallup Tribe of Indians' Comprehensive Land Use Plan has no stated zoning for the Tideflats. However, there are a mixture of recognized cultural sites that likely will remain undeveloped or in a restoration site like state (Ceremonial Grounds, Gog-le-hi-te) and economic development sites like the Tribe's Blair frontage and backup properties which are planned to serve industrial and port maritime related uses.

2.11 BROWNFIELDS

The Tideflats have been used for industrial and commercial purposes for over 140 years and are currently heavily developed for commercial and industrial use. With its long history, there is a high concern for past industrial and commercial land uses to have released hazardous materials and waste to the subsurface. Prior to modern environmental practices, it was common for industrial activities to dispose of hazardous waste without regard for potential environmental impacts or concerns.

Before the 1972 Clean Water Act[12], industry would discharge process and wastewater directly into Commencement Bay. Industries then shifted to disposing their wastes into unlined ponds. The Resource Conservation and Recovery Act (RCRA) was enacted in 1976, creating a framework for proper management of hazardous and non-hazardous solid waste. By this time, Commencement Bay had already been severely impacted by industrial practices. Decades of industrial activity released pollutants into the water and sediment, including arsenic, lead, zinc, cadmium, copper, mercury, Polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), dioxins, and phthalates. Action was needed to restore the health of Commencement Bay.

The uncertainty posed by the presence of known and suspected brownfields is a barrier to economic development. The cleanup of contaminated sites can add significant delay and expense to development projects, increasing the financial risk associated with redevelopment and private investment. For these reasons, the potential presence of brownfields is not only an environmental health issue but also a serious impediment to economic development, creating additional, long-term negative impacts on community welfare.

For further information

See Appendix A for more information on the history of cleanup in the Tideflats.

History of Cleanup in the Tacoma Tideflats

Ports and industrial facilities work under a multitude of environmental regulations and laws, which are described in Figure 55. The laws that govern brownfield cleanup are the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Model Toxics Control Act (MTCA). These were enacted to force industry to cleanup legacy chemical releases, from both upland and in-water contaminated areas. The passage of these two laws has resulted in a multitude of cleanup actions conducted in the Tacoma Tideflats.

The work first began under CERCLA, when the EPA identified Commencement Bay and nearby tideflats in the south Puget Sound as a Superfund Site in 1983. The site is made of about 10 -12 square miles of shoreline, sediment in shallow water, and industrialized land between the Hylebos Waterway and Point Defiance in both Ruston and Tacoma, Washington. The site consists of seven operable units (OUs) that were established for cleanup in the EPA's 1989 Record of Decision[13]:

> Tideflat sediments - Commencement Bay sediment remediation (OU 1)

> Asarco Smelter and Tacoma Tar Pits related areas (OU 2, 3, 4, 6, 7)

12 The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972.

13 EPA ROD R10-98/020 Commencement Bay Nearshore/Tideflats, WA Second Remedial Action

POLICY	YEAR	LEVEL	DESCRIPTION
Clean Air Act	1963	Federal	Regulates emissions of air pollutants from stationary and mobile sources.
National Environmental Policy Act	1970	Federal	Required federal agencies to assess the environmental impacts of proposed actions prior to decision-making.
State Environmental Policy Act	1971	State	Like the National Environmental Policy Act, Washington's State Environmental Policy Act requires state and local agencies to identify potential environmental impacts related to proposed projects prior to decision-making.
Clean Water Act	1972	Federal	Regulates the discharge of pollutants into navigable waters and regulates surface water quality.
Water Pollution Control Act	1973	State	Chapter 90.48 RCW Water Pollution Control Act in conjunction with Chapter 173-200 WAC Water Quality Standards for Ground Waters regulate the current and future beneficial uses of groundwater.
Toxic Substances Control Act	1976	Federal	Regulates existing and new commercial chemical substances by assessing health or environmental risks and determining the appropriate limits distribution and use.
The Resource Conservation and Recovery Act	1976	Federal	Regulates the management and disposal of solid waste and hazardous waste.
Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)	1980	Federal	Authorizes the federal government to respond to releases or threatened releases of hazardous substances that may endanger public health or the environment.
Hazardous Waste Management Act	1985	State	The Hazardous Waste Management Act (HWMA) is articulated in RCW Chapter 70.105 (recodified as RCW 70A.300) and the Dangerous Waste Regulations WAC Chapter 173-303. Through the HWMA, Ecology is authorized by the EPA to implement the Resource Conservation and Recovery Act within Washington State, which regulates the management and disposal of hazardous waste.
Model Toxics Control Act	1989	State	Authorizes the Washington State Department of Ecology to oversee or manage the cleanup of contaminated sites.
Sediment Management Standards	1991	State	Chapter 173-204 WAC, Sediment Management Standards, was created in 1991 under RCW Chapters 90.48, 70.105D, 90.70, 90.52, 90.54, and 43.21 and establishes marine, low salinity, and freshwater surface sediment management standards (SMS).

Figure 55. Environmental Regulatory Framework
Source: Port of Tacoma, 2023

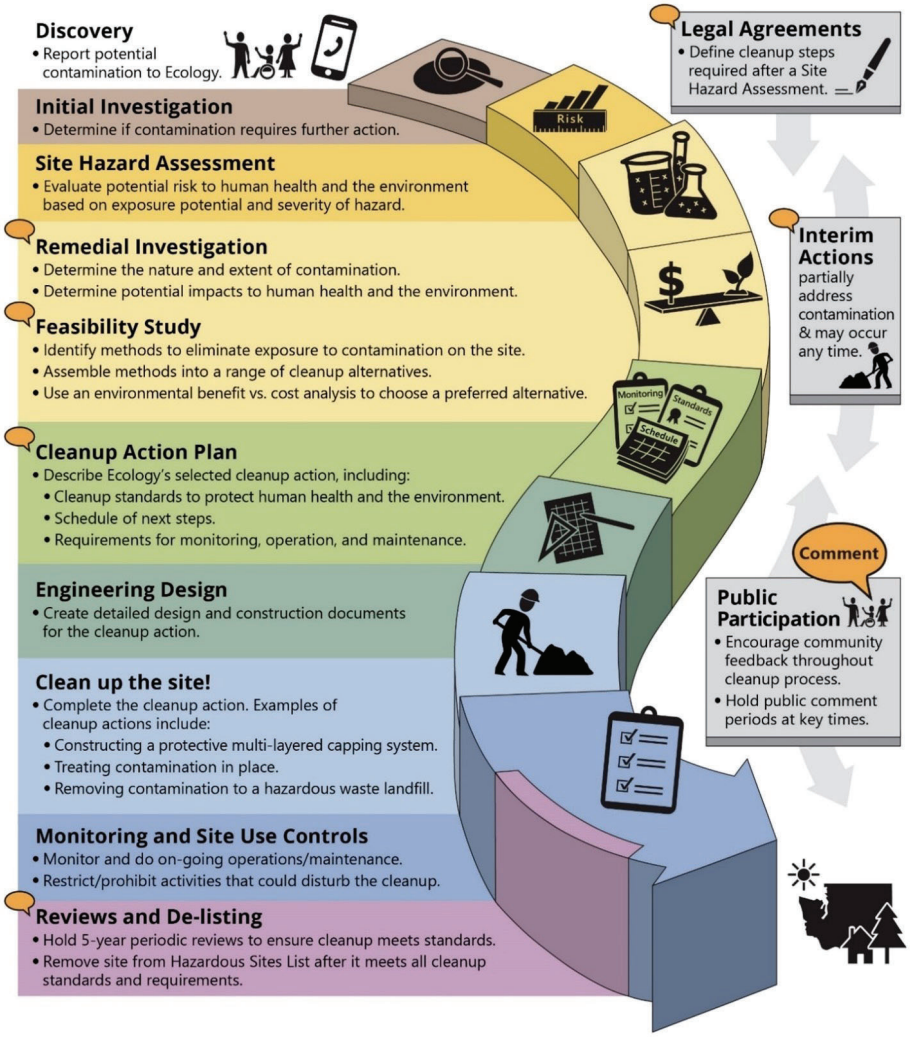


Figure 56. Steps in the formal MTCA cleanup process

Note: How the cleanup process work, from https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-process.
Source: Washington State Department of Ecology, 2023

> Tideflats uplands - Commencement Bay source control (OU 5), consisting of over 6,000 acres of potential upland sources of sediment pollutants

Ecology's identified sources largely focused on shoreline industrial properties, except for the Thea Foss, where upland stormwater was identified with the potential to re-contaminate the Waterway. The identified upland sources were also addressed through Ecology's cleanup process.

Ecology's cleanup process begins when the release of a potential contaminant is reported. The reported incident may be the result of a spill, soil testing indicating the need for offsite disposal, or through due diligence related to a property transaction. Upon receiving the alert, Ecology will complete a Site Hazard Assessment and determine if additional evaluation is required. Ecology requires liable parties, the owner or operator of the property, to complete all site investigations, develop a cleanup action plan, and implement any required cleanup. Cleanups are conducted either through the formal process under an Ecology Order, through the Voluntary Cleanup Program, or independently. Ecology accepts public input when an interim action is considered and when selecting a preferred cleanup option. If contamination is left on the site, Ecology will place restrictions on how the site is used to ensure Site conditions are protective. Ecology will conduct periodic monitoring on the site to ensure it is meeting all cleanup standards and requirements; these reports are shared for public comment.

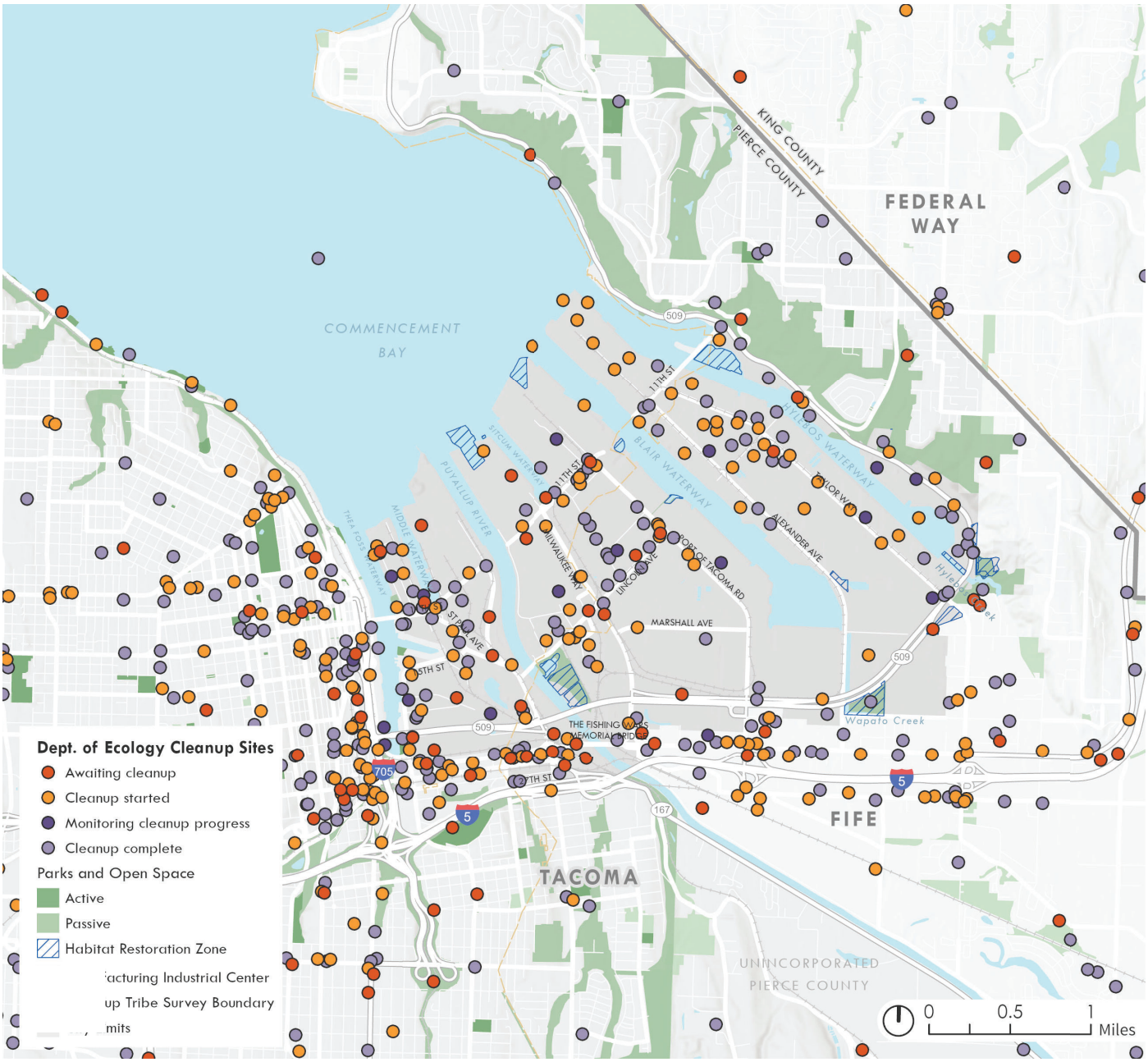


Figure 57. Cleanup Sites in the Tideflats Subarea

Source: Department of Ecology, 2023; Seva Workshop, 2023

Since 2001, Ecology has continued to oversee upland cleanup efforts in the Tacoma Tideflats in cooperation with the liable parties. Over time, Ecology has focused on addressing high priority sites through Orders, while also supporting cleanup efforts through the Voluntary Cleanup Program. Orders are typically used for the more contaminated and impacted properties, while the Voluntary Cleanup Program is often used by developers during property redevelopment.

Figure 57 displays Ecology's current confirmed and suspected cleanup sites, in the Tacoma Tideflats and surrounding areas. Specifically, within the Manufacturing Industrial Center, there are a total of 216 cleanup sites, 42 % are complete, 38% are started, 6% are being monitored, and 14% are awaiting cleanup. Complete means no further remedial action is necessary, a determination made by Ecology. Started means remedial actions are taking place, including a Phase 1 and Phase 2 Environmental Site Assessment, feasibility studies, and design and implementation

of an action plan. Monitoring cleanup process means protection, performance, and confirmation monitoring, which ensures remedial action attains the standards and long-term effectiveness described within the respective cleanup action plans. Awaiting cleanup means a site has been identified as a candidate for cleanup through an initial notice and investigation; however, no remedial actions have been confirmed.

Port of Tacoma's Brownfield Advisory Committee

In 2022, the Port of Tacoma was awarded an EPA Region 10 Brownfield Community-Wide Assessment Grant and established a cooperative agreement with the EPA. The identified period of performance for this grant is between October 1, 2022, through September 30, 2026. As a result of receiving the grant funding, various projects and activities have been identified including community engagement through the development of a Brownfield Advisory Committee (BAC), the development of a site inventory of the Tacoma Tideflats, and completed Phase 1 and Phase 2 Environmental Site Assessments, which will help characterize and identify sites that meet the EPA's eligible funding criteria.

To date, the established BAC has met twice and will continue to meet on a quarterly basis. The site inventory, now largely complete, includes the development of a web-based application, combining multiple databases in one location, including Ecology's Contaminated Sites list, as well as the Pierce County Assessor's 2020 Buildable Lands Inventory. The site inventory web-based tool is suitable for identifying sites that are part of the Superfund site, sites that are under formal order with Ecology, sites that are under the Ecology's Voluntary Cleanup Program, and sites that were completed by independent action. The tool also categorizes sites by stage in the formal cleanup process, as well as properties that are not listed with Ecology. While not developed for this purpose, the BAC web-application is an excellent tool for illustrating existing brownfield remediation efforts in the Tideflats subarea.

Existing Brownfield Remediation Efforts

There are 371 properties in the Tideflats Subarea. Sixty-two properties are part of a formal cleanup – 32 are active, 29 are completed. These properties are Ecology's highest priority. They are the most complex, technically challenging, and likely most expensive to cleanup. The formal sites listed as active in Ecology's database are in different stages of the MTCA cleanup process, possibly just starting the Remedial Investigation or all the way through cleanup into long-term monitoring. The term active is somewhat of a misnomer, as little progress may be occurring due to various reasons, including Ecology staffing limitations.

Ninety-four properties are part of an independent cleanup – 30 are active, 46 are completed, and 18 are inactive. The 30 active sites are likely in Ecology's Voluntary Cleanup Program, undergoing investigations, cleanup planning, remediation design or actively undergoing cleanup. For completed sites, the cleanup action has been completed and Ecology has rendered an opinion of remedy sufficiency. For the inactive properties, Ecology has not engaged the property owner, or responsible party; however, the owner may be conducting cleanup work independently without Ecology's oversight.

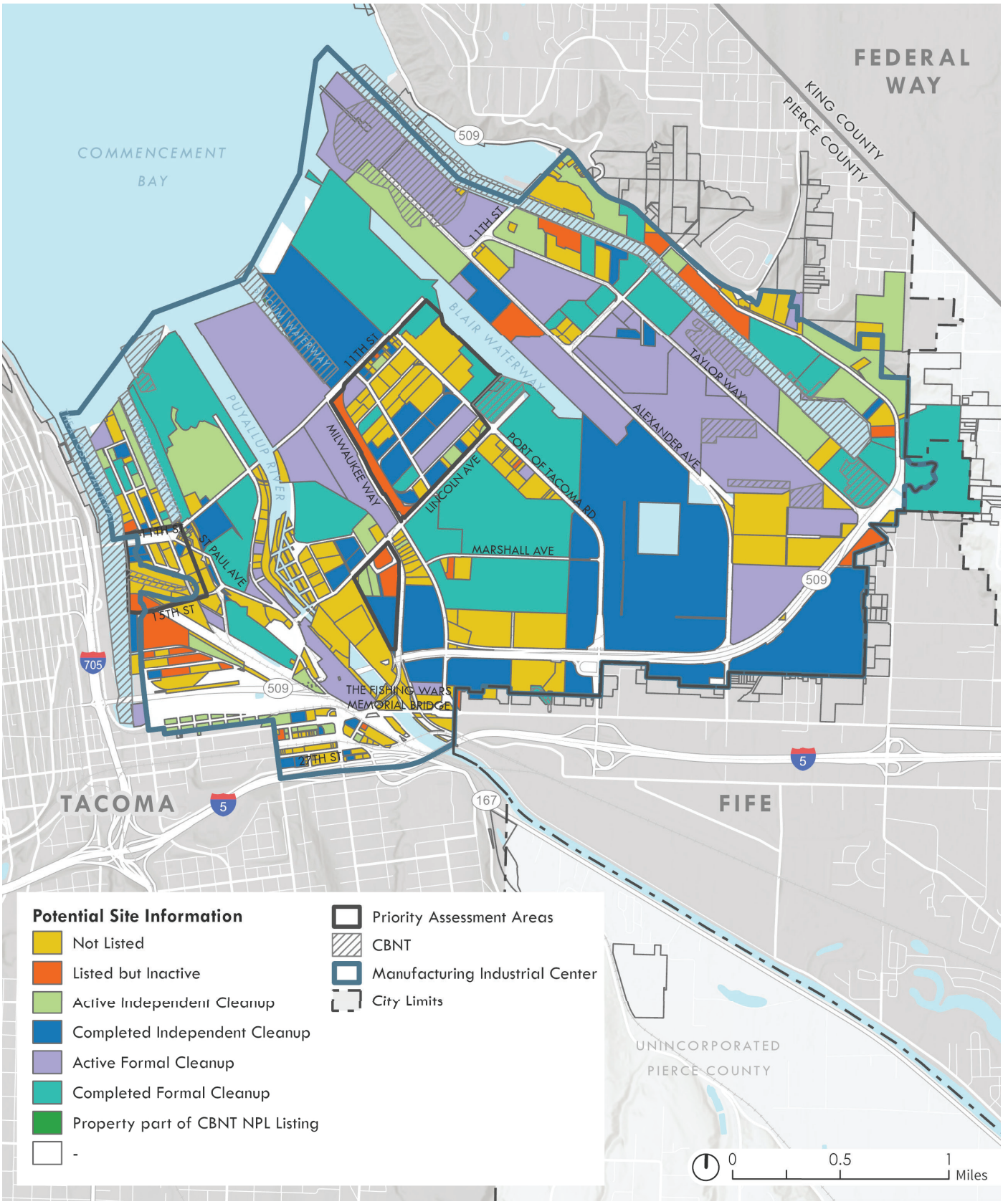


Figure 58. Cleanup Status of Potential Sites
Source: Port of Tacoma, 2024; Seva Workshop, 2024

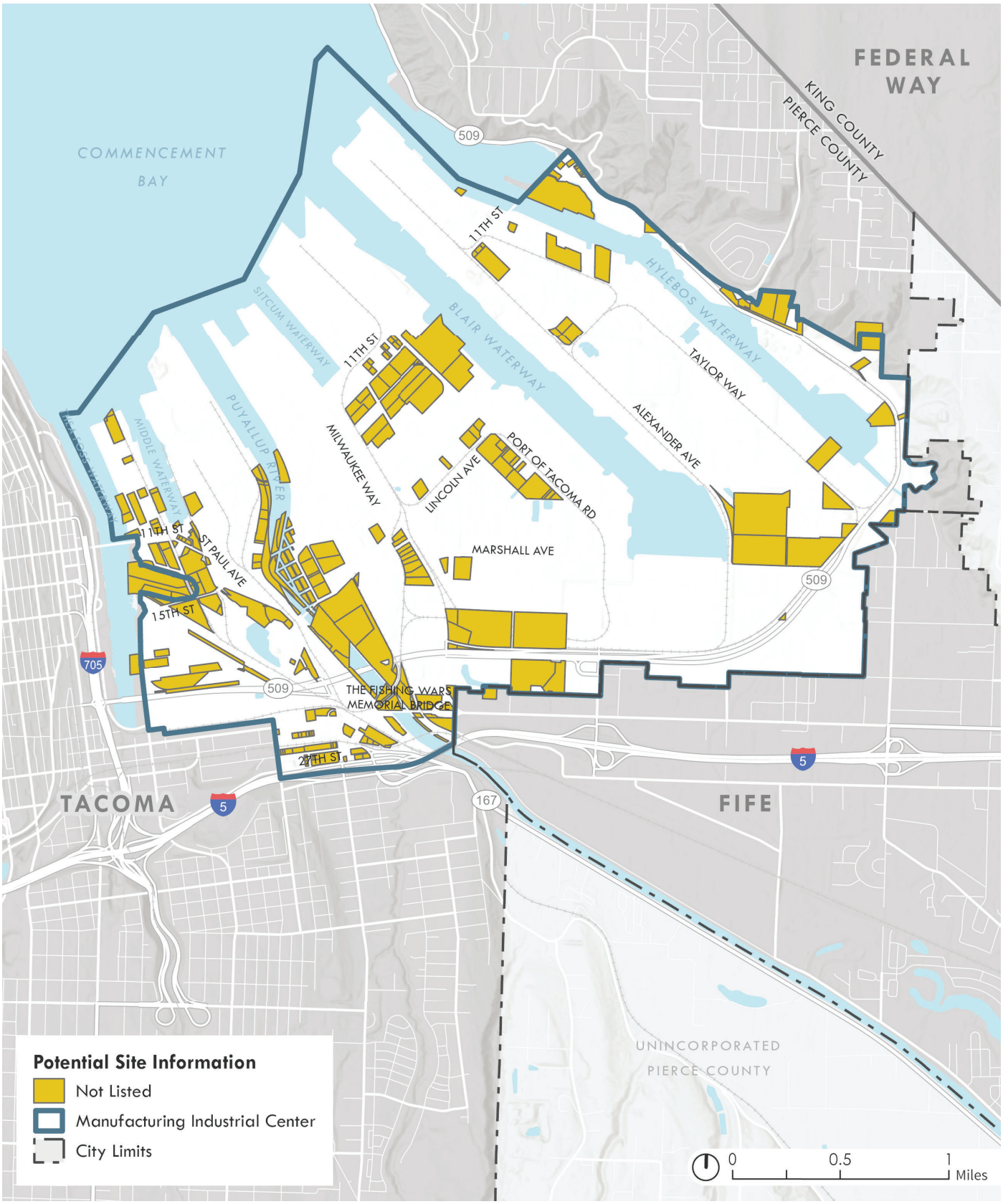


Figure 59. Unlisted Properties

Source: Port of Tacoma, 2024; Seva Workshop, 2024

Two hundred and fifteen properties are unlisted. These properties represent 22% of the uplands in the Tideflats Subarea. Most of these properties are not owned by the Port and tend to be smaller in size. If a property transaction has not occurred in the recent past, with all appropriate inquiries conducted to evaluate environmental conditions, the owner may not be aware that their property is contaminated. It is likely that many of these unlisted properties are in fact contaminated and will require cleanup in the future.

Future Brownfield Challenges and Opportunities

Encompassing approximately 5,000 acres, with 371 upland properties, and over 100 years of heavy industrial use, most of the lands in the Tideflats have been touched by contamination. Cleanup of contaminated properties are often long, complicated, and expensive. The uncertainty posed by the presence of known and suspected brownfields is a barrier to economic development. The cleanup of contaminated sites adds significant delay and expense to development projects, increasing the financial risk associated with redevelopment and private investment. For these reasons, the potential presence of brownfields is not only an environmental health issue but also a serious impediment to economic development, creating additional, long-term negative impacts on community welfare.

As the major property owner in the Tideflats, owning approximately 50% of the land mass, the Port of Tacoma is uniquely positioned and qualified to manage contaminated brownfield properties. The Port of Tacoma has been a leader in addressing legacy contamination for decades. The Port is committed to cleaning up contaminated sites and finding new uses for them. The Port began on 200 acres a century ago and has been growing ever since, buying contaminated property in the Tideflats and repurposing them for the next economic opportunity. Unlike private landowners, ports can offset some costs by accessing state and federal funds, including money from state taxes paid by companies that import toxic chemicals. The Port of Tacoma also uses some property tax revenue for remediation and tries to recover costs from the original polluters.

To date, the Port has spent over $200 million remediating over 1,100 acres in the Tideflats. The Port is actively working with Ecology to remediate a few hundred more acres of port-owned contaminated property. In 2024, the Port is working toward remedy selection at 10 properties as well as conducting long-term monitoring and maintenance at 14 other properties where remedies were previously implemented. Figure 60 maps the Port's ongoing remediation efforts.

Additionally, the Port is working with the EPA and the BAC through the Brownfield Community-Wide Assessment Grant. Twelve candidate sites, shown in Figure 61, have been identified for Phase 1 and Phase 2 Environmental Site Assessments. These are a mixture of Port, City, and privately held properties. Based on the results of the Environmental Site Assessment, the properties will be recommended for cleanup eligibility based on factors of underutilization, location within a Port priority area, potential for environmental sources, and existing or anticipated site access.

Lastly, the Port is also always looking to acquire strategically located brownfield properties that may prove to be contaminated.

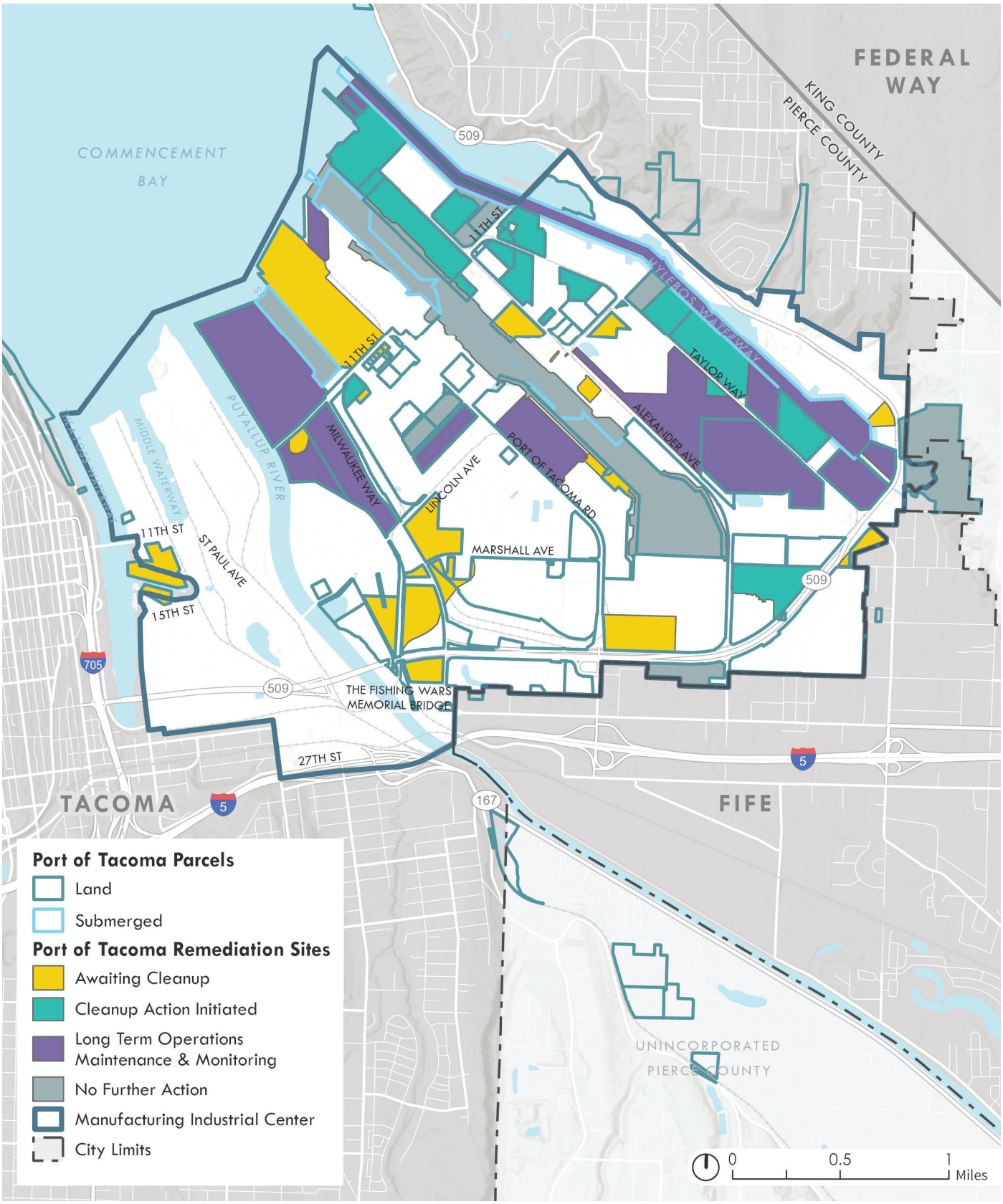


Figure 60. **Port Properties and Remediation Projects**
Source: Port of Tacoma, 2024; Seva Workshop, 2024

Figure 61. Sites Identified for Phase 1 and Phase 2 Environmental Assessments

Source: Port of Tacoma, 2024; Seva Workshop, 2024

2.12 SHORELINE PUBLIC ACCESS AND RECREATION

The Tacoma Tideflats shoreline is predominantly developed with heavy industrial and Port/Terminal related facilities. As a result, there is very limited opportunity for the public to reach and touch the water in this area. Through the visioning process, many respondents noted an interest in increased shoreline public access and recreation opportunities. The community saw the role of increased shoreline public access and recreation to help understand and make connections to a working waterfront as well as learn to be better stewards of the natural environment. Shoreline public access and recreation can serve both employees and residents; and serve as educational opportunities.

Increased shoreline public access and recreation that expands the ability of the public to see, touch, and enjoy the water and shorelands, where practical, is part of the shared vision of the Tideflats Subarea Plan. The Subarea Plan envisions that development in the Tideflats contributes toward the establishment of a shoreline public access and recreation system. Access is planned in areas that will not interfere with port operations or cause public safety concerns. Where possible, trails are planned that would link recreation and transportation systems, but these are generally located on the periphery of port/industrial operations and along existing publicly owned lands and rights-of- way.

There is also considerable cleanup and restoration activity that has been undertaken in this shoreline area which could accommodate limited access, including natural trails, kayak hand launch sites, Tribal fisheries access, or separated habitat viewing platforms. Access would need to be designed sensitively to prevent damage or harm to natural areas and mitigation sites.

Family fun in Commencement Bay

Existing Policy Framework

Existing policies limit shoreline public access to the core area to ensure industrial activities are not affected. Recreation access is focused on the edges of the MIC. The hillside of NE Tacoma offers visual access to the study area.

City of Tacoma Shoreline Master Program (2019) and Public Access Alternatives Plan (2010)

The City of Tacoma's 2019 Shoreline Master Program (SMP) establishes two goals related to public access and recreation within shorelines areas in the city:

- Public Access Goal: To increase the ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and/or to view the water and the shoreline from adjacent locations, provided that private rights, the public safety, and shoreline ecological functions and processes are protected consistent with the U.S. and State constitutions, state case law, and state statutes.
- Recreation Goal: To provide opportunities, spaces, and appropriate facilities for diverse forms of water-oriented recreation that takes advantage of the unique waterfront setting.

Specific objectives call for establishing a linear system of public access along the Tacoma shoreline starting with high-density intensive-use urban activity on the Thea Foss Waterway, and encouraging cooperation with other public agencies, non-profit groups, and private landowners to increase and diversify recreation opportunities.

The City's Public Access Alternatives Plan (PAAL) is a stand-alone implementation plan associated with the SMP that further articulates the vision for public access to the shoreline and recreation. Several existing public access areas are within the study area (City of Tacoma, 2010, pp. 17-21):

> Existing viewpoint at the Port of Tacoma Observation Tower.

> Existing public marinas, private marinas, and hand boat launches on the northern shore of the Hylebos Waterway and eastern shore of the Thea Foss Waterway (including at Waterway Park).

> Existing habitat observation points on the southern shore of the Blair Waterway (the Lincoln Ave public street end) and northern shore of the Puyallup River (near the wetlands by the Lincoln Ave bridge).

The PAAL identifies other potential projects on the Thea Foss Waterway, on Marine View Drive, and on Port Industrial shorelines in areas that will not interfere with port operations or cause public safety concerns. These projects include a pedestrian walkway on the Thea Foss Waterway, motorized and non-motorized boat launches, additional habitat observation points, improved public access/viewing signage, and new viewpoints (City of Tacoma, 2010, pp. 25-29).

Existing Regulations

Existing City regulations implement the Shoreline Master Program's public access goals. The City currently requires shoreline public access as part of public projects and non-water dependent projects. General priority is given for shoreline public access on site, but current regulations prefer off-site public access for projects in the port/Tideflats area. The diagram below shows the public access requirements for different projects.

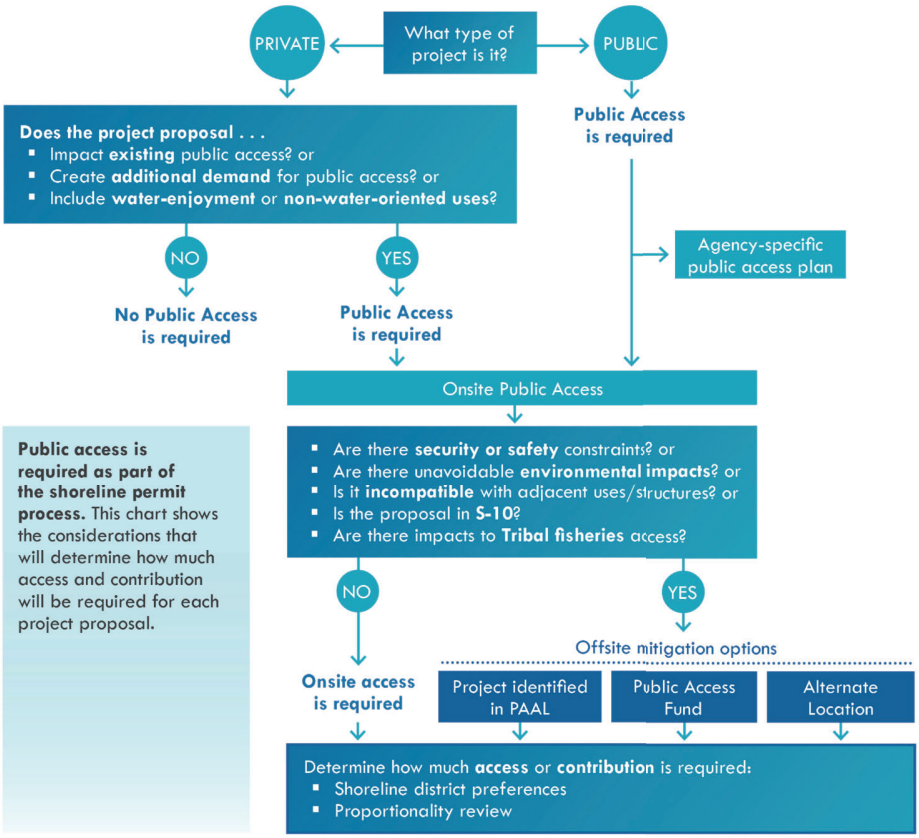


Figure 62. Existing Public Access Requirements Flow Chart

Source: City of Tacoma, 2023

City of Tacoma & Port of Tacoma Interlocal Agreement

The City of Tacoma and the Port of Tacoma entered an interlocal agreement to authorize a flexible approach to shoreline public access provision that the Port and its tenants could use at their discretion to fulfill the public access requirements of the City's adopted Shoreline Master Program, in lieu of site-by-site requirements.

The ILA established a Fee-in Lieu and a public access fund and methodology. It also identified priority public access project locations. According to the ILA, after consultation with the City, the Port and its tenants may direct any fee-in-lieu payment associated with a particular shoreline permit to any of the following projects:

> Chinese Reconciliation Park

> West Foss Central Park

> Waterway Park

> Balfour Dock Esplanade

> Schuster Parkway Trail

> 11th Street Public Boat Launch

> Or other sites as mutually agreed upon by both parties

The Port and its tenants can also direct any fee in-lieu payment associated with a particular shoreline permit in the form of public access investments to any Port owned sites at the following locations:

> Dick Gilmur Kayak Launch and the associated Saltchuck mitigation site

> Julia's Gulch and NE Tacoma Trail Network

> Youth Marine Foundation

> Or other sites as mutually agreed upon by both Parties

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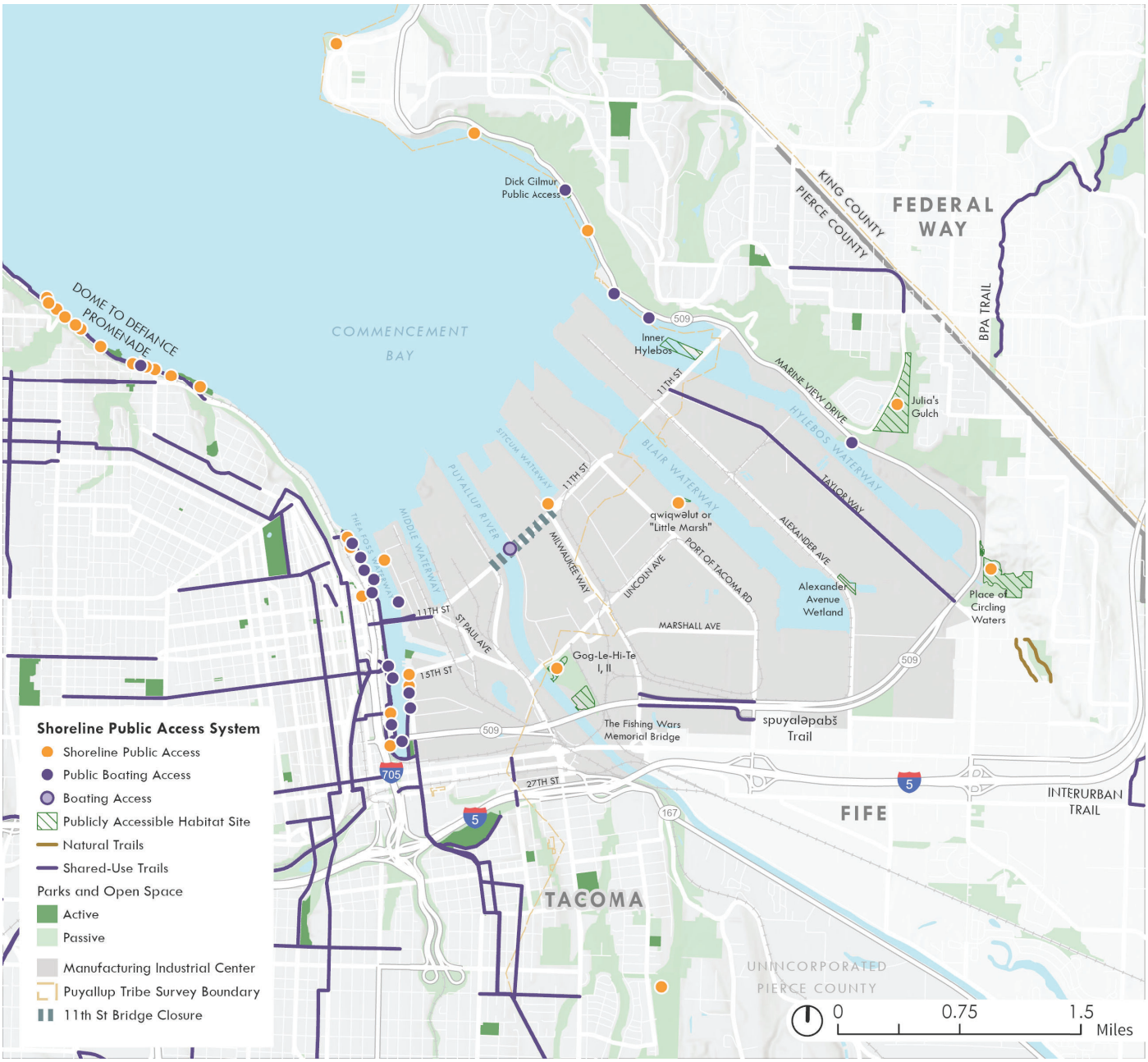


Existing Shoreline Public Access and Recreation System

The existing shoreline public access and recreation system in the Tideflats includes trails, parks and open spaces, public access points including boating access, bikeways, and publicly accessible habitat restoration sites. See Figure 63 and Figure 64.

Figure 63. Existing Shoreline Public Access and Recreation System

Note: Public Boating Access points include locations such as marinas and boat launches. Shared-use trails allow for off-street pedestrian and bicycle use. Wheelchairs, joggers, skaters and other non-motorized users are also welcome.
Source: City of Tacoma, 2023; Seva Workshop, 2023

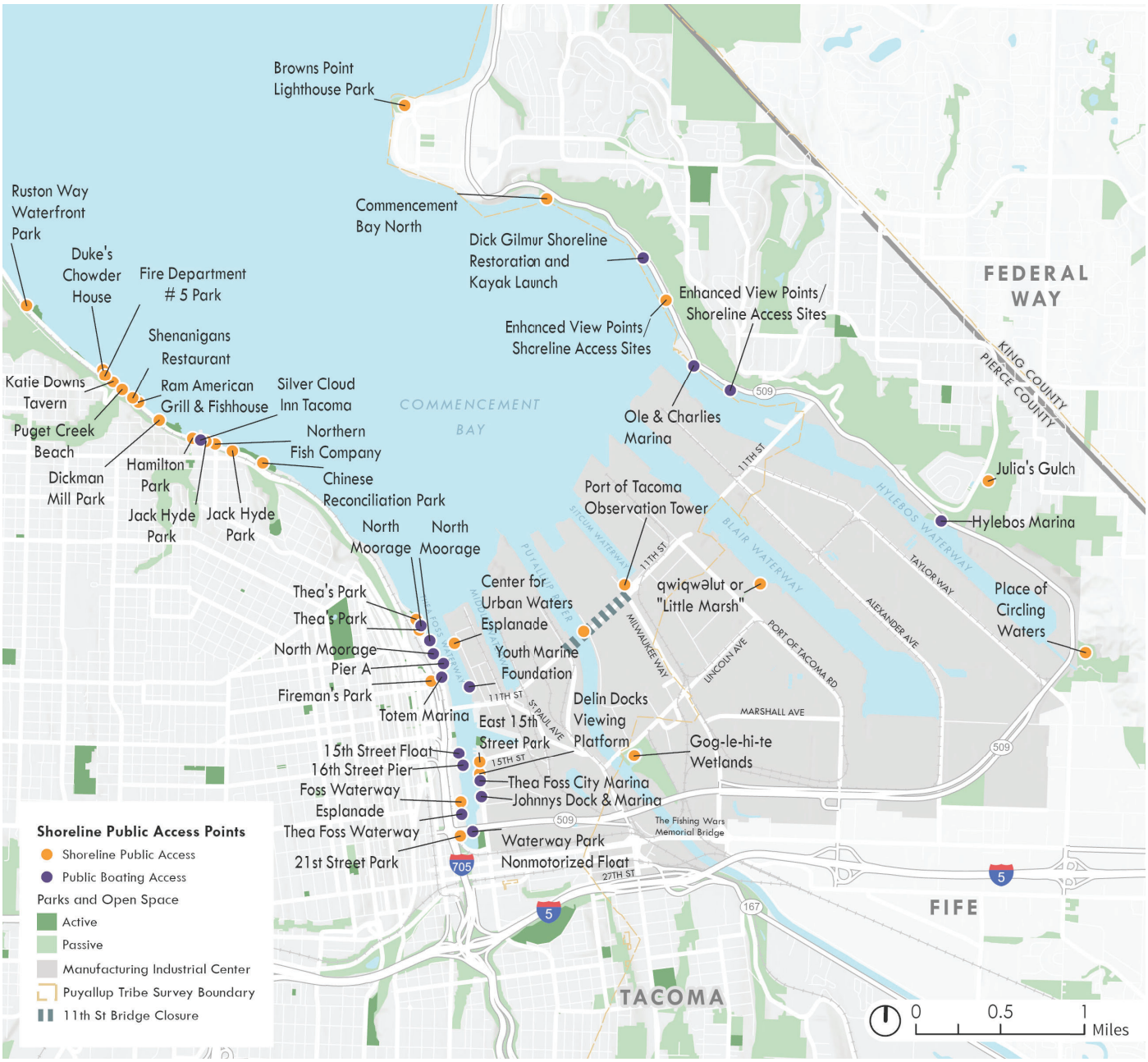


Figure 64. Existing Shoreline Public Access and Recreation Points
Source: City of Tacoma, 2023; Seva Workshop, 2023

Planned Shoreline Public Access and Recreation System

The following projects will be necessary to complete the shoreline public access and recreation system as shown in Figure 65:

Thea Foss Waterway

> Complete Foss Waterway Park and Recreation facilities, including the West Foss Central Park, Melanie Dressel Park, public esplanade, and pedestrian improvements along E D Street from 11th Street to the Center for Urban Waters

Marine View Drive

> Marine View Drive scenic viewpoint and habitat area site improvements. Complete pedestrian sidewalks and protected bike facilities on Marine View Drive to ensure safe connectivity to shoreline public access and recreation sites along the Marine View Drive Shoreline. Enhance restoration sites to incorporate signage, parking

> Connect the Taylor Way bikeway to Marine View Drive across 11th Street

> Evaluate the feasibility of gulch trails connecting Northeast Tacoma neighborhoods to Marine View Drive

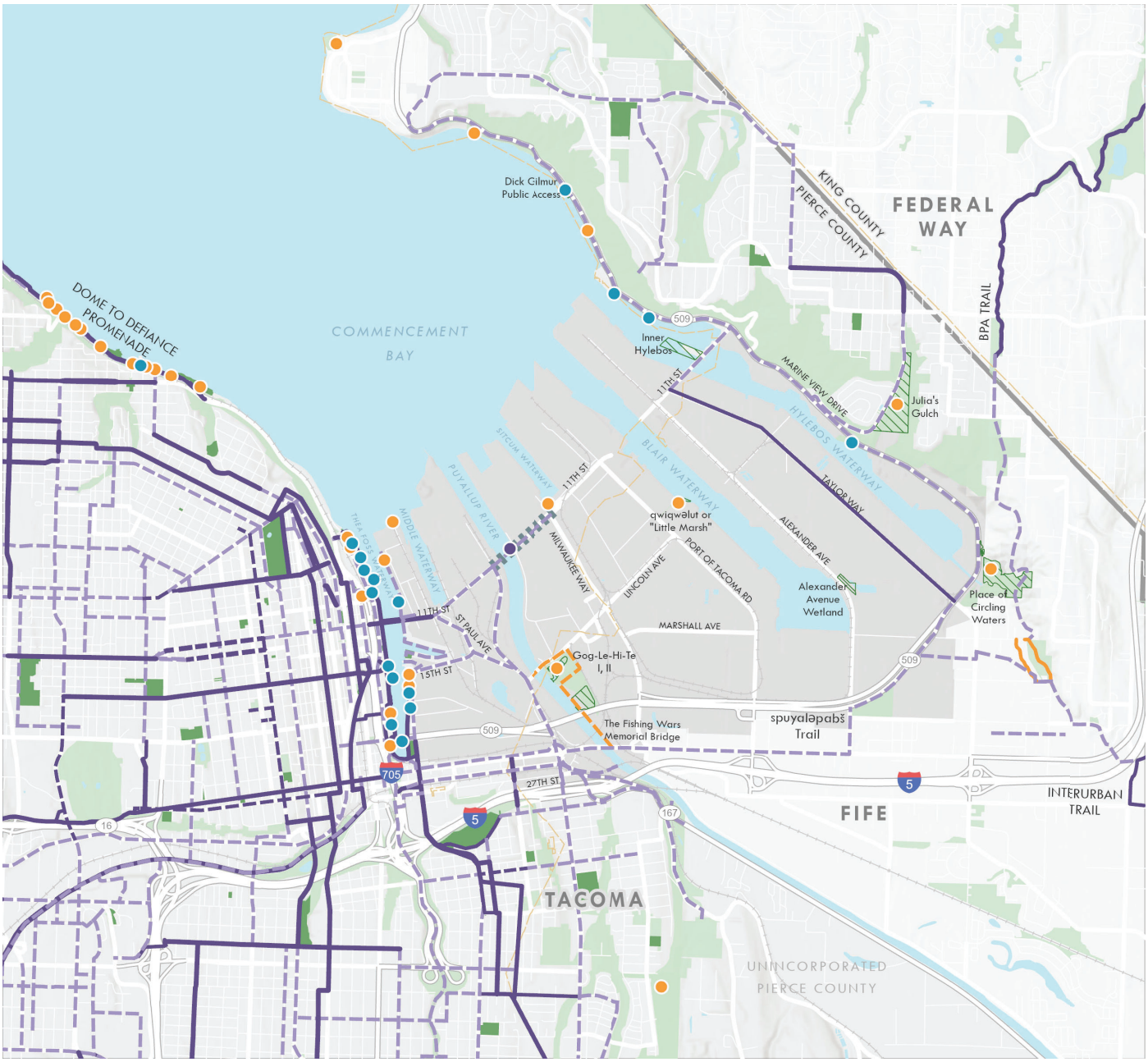
Regional Trails

> Tacoma to Puyallup Regional Trail

> Evaluate feasibility of BPA Trail route alignments to connect to Fife and Marine View Drive

Puyallup River

> Establish Puyallup River Levee Trail from Downtown Tacoma, along 11th Street, connecting to existing access sites at the Gog-li-hi-te wetland



Existing and Planned Shoreline Public Access

Shared-Use Trails
- Existing
- Funded
- Proposed

Natural Trails
- Existing
- Proposed

Shoreline Access Points
- Shoreline Public Access
- Public Boating Access
- Boating Access

Parks and Open Space
- Active
- Passive
- Publicly Accessible Habitat Site

- Manufacturing Industrial Center
- Puyallup Tribe Survey Boundary
- 11th St Bridge Closure

Figure 65. Planned Shoreline Public Access and Recreation System

Source: City of Tacoma, 2023; Seva Workshop, 2023

Goals and Policies

CONTENTS

3 Environment and Health

ENVIRONMENT AND HEALTH GUIDING PRINCIPLES

GUIDING PRINCIPLE 1: Salmon and shellfish are thriving and plentiful in Commencement Bay, the Puyallup River, Wapato Creek, and Hylebos Creek.

GUIDING PRINCIPLE 2: The subarea supports healthy communities and ecosystems with clean air, water, and soil.

GUIDING PRINCIPLE 3: Employees in the subarea have a safe and healthy work environment.

GUIDING PRINCIPLE 4: An inclusive and equitable growth strategy fulfills environmental justice principles and protects frontline communities from health and human hazards.

GUIDING PRINCIPLE 5: The subarea offers diverse opportunities to participate in cultural, educational, scientific, and recreational activities.

Environment and Health

3

3.1 INTRODUCTION

The purpose of this chapter is to provide policy guidance and priority implementation actions and regulatory recommendations, in order to protect the environment and improve community health in the Tacoma Tideflats Subarea.

3.2 POLICIES

GUIDING PRINCIPLE 1: Salmon and shellfish are thriving and plentiful in Commencement Bay, the Puyallup River, Wapato Creek, and Hylebos Creek.

Policy EH-1: Monitor salmon and shellfish populations, and work with partners to develop strategies to support them.

GUIDING PRINCIPLE 2: The subarea supports healthy communities and ecosystems with clean air, water, and soil.

Policy EH-2: Work in partnership with the Port of Tacoma and other property owners to promote protection, restoration and enhancement of native vegetative cover, waterways, wetlands and buffers.

Policy EH-3: Encourage the use of low impact development standards and stormwater features.

Policy EH-4: Partner with the Port of Tacoma and other interested stakeholders to establish environmental improvement goals for Commencement Bay, including providing for greater baywide diversity of ecosystems, restoration of historic functions and improvement of physical conditions. Support efforts to identify funding mechanisms and legislative support for strategies to achieve these goals.

Policy EH-5: Address the legacy of industrial pollution in the center, working with property owners to clean up contaminated sites, and ensuring permitting processes require site-specific evaluation and mitigation.

Policy EH-6: Develop partnerships with local municipalities to advance brownfield cleanup and redevelopment.

Policy EH-7: Pursue public/private partnerships to support cleanup funding.

Policy EH-8: Pursue federal and state grants for Site Assessment and Cleanup.

Policy EH-9: Improve subarea site assessment databases to support brownfield prioritization, cleanup, and facilitate due diligence around future property transactions.

Policy EH-10: Work with Ecology to streamline the MTCA process specific to the Tideflats.

Policy EH-11: Partner with local Universities to advance research and the state of the science while supporting job skills development.

GUIDING PRINCIPLE 3: Employees in the subarea have a safe and healthy work environment.

Policy EH-12: New critical facilities should be located outside of geohazard and flood hazard areas when possible – however, still close enough to provide workers in the center with services such as police, fire, emergency medical, and childcare.

Policy EH-13: Collaborate with businesses and workers in the subarea to support workplaces that meet or exceed the latest standards for health and safety, reducing employee exposure to air pollution and other occupational hazards.

GUIDING PRINCIPLE 4: An inclusive and equitable growth strategy fulfills environmental justice principles and protects frontline communities from health and human hazards.

Policy EH-14: Avoid or mitigate environmental impacts for vulnerable populations, including communities who already bear a higher burden of environmental impacts within the subarea and neighborhoods immediately adjacent to the subarea. *Existing vulnerable populations include the Benthien Loop Neighborhood, NE of the intersection of 4th St E/54th Ave E. and the Willows neighborhood/tribal residents on the south side of 12th St E, east of Alexander Ave E.*

Policy EH-15: Establish design standards that help mitigate environmental health impacts of manufacturing and industrial activities both within the center and on adjacent areas.

Policy EH-16: Site and design public spaces to minimize exposure to health hazards including those generated by current and past industrial and transportation sources.

GUIDING PRINCIPLE 5: The subarea offers diverse opportunities to participate in cultural, educational, scientific, and recreational activities.

Policy EH-17: Where practical, development should include public recreation spaces within the subarea, including access to tidal areas and views of historic and cultural sites. Within these public spaces provide educational signage or other opportunities for people to learn about the history and culture of the area.

Policy EH-18: Where practical, provide opportunities, spaces, and appropriate facilities for diverse forms of water-oriented recreation that take advantage of the unique waterfront setting within the Tideflats subarea and informs and educates the community about a maritime industrial Port.

Policy EH-19: Promote and protect access to tidelands and waterways within the subarea for traditional Tribal cultural practices like fishing, clamming, crabbing, and canoeing activities consistent with federal maritime security regulations.

Policy EH-20: Ensure shoreline public access within the Port of Tacoma Manufacturing Industrial Center is consistent with federal maritime security regulations and is not focused on the cargo shipping waterways.

Policy EH-21: Coordinate with property owners in the center to provide programming opportunities where people can learn about local industries and the history and culture of the area.

Policy EH-22: Shoreline public access and recreation should be sited in such a way as to:

> Avoid and minimize conflicts with Port operations

> Avoid and minimize conflicts with Tribal Treaty fishing rights

> Ensure safety and security of the site and adjacent uses

> Provide low-impact access to natural areas and habitat sites

Policy EH-23: Where practical, focus shoreline public access and recreation in the transition areas to balance the needs of industrial activities and Port operations in the core area.

Policy EH-24: Where practical, development should include shoreline public access and public recreation spaces within the subarea, including access to tidal areas and views of historic and cultural sites. Within these public spaces provide educational signage or other opportunities for people to learn about the history and culture of the area.

Policy EH-25: Where practical, provide opportunities, spaces, and appropriate facilities for diverse forms of water-oriented recreation that takes advantage of the unique waterfront setting within the Tideflats subarea and informs and educates the community about a maritime industrial Port.

Policy EH-26: Coordinate changes in shoreline public water access and design of public access sites with the Puyallup Tribe to ensure these sites are supportive of Treaty fisheries access.

Policy EH-27: Design facilities to respond to the unique cultural, maritime, and environmental setting of the site.

3.3 PRIORITY ACTIONS AND REGULATORY RECOMMENDATIONS

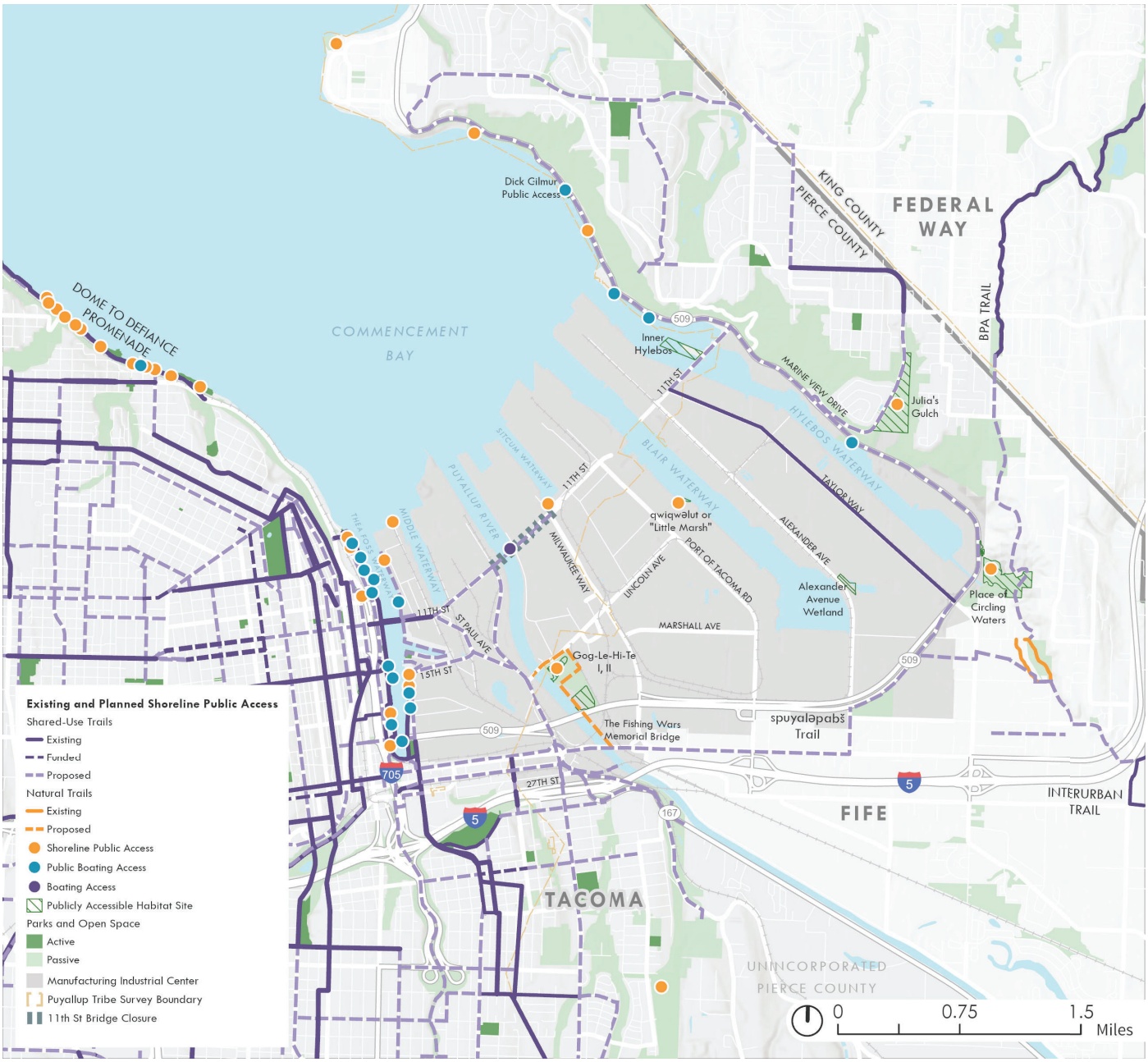
Action A-1: Support existing programmatic efforts to increase shoreline public access and recreation to the subarea such as boat tours, and maritime-oriented cultural facilities like the Foss Waterway Seaport.

Action A-2: Support regular coordination between government and Tribal partners to regularly communicate access issues related to boat ramps and other fisheries & water vessel access points.

Action A-3: Limit on-site access to restoration sites to protect ecological functions while providing opportunities for wildlife viewing and education about the area's ecology and restoration efforts.

Action A-4: Consider offering public access fee-in-lieu methodology into the Shoreline Master Program to provide greater clarity and certainty to future permit applicants. Consider performance tracking and periodic updates to the fee methodology and priority project list to ensure the program is effective in delivering public access opportunities.

Action A-5: On the Foss Waterway, consider new development opportunities and public facilities such as fishing piers, bike paths, an exercise course, a boat



launch, and benches and paths along the shoreline where feasible, and consistent with the Shoreline Public Access Alternatives Plan and Tacoma Waterfront Design Guidelines.

Figure 66. Planned Shoreline Public Access and Recreation System

Source: City of Tacoma, 2023

Action A-6: Work with the Washington Department of Natural Resources, Department of Ecology, Department of Fish and Wildlife, the National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program, and the Coast Guard to remove and dispose of abandoned or derelict vessels in marinas or surrounding waters.

Action A-7: Where practical, promote access to shellfish harvesting and fishing in the subarea through protecting existing shoreline environments from further encroachment, consider expansion of these environments, and identify rehabilitation efforts to prevent contamination.

Action A-8: Implement priority near-term shoreline public access improvements that include:

> Thea Foss Waterway

Complete Foss Waterway Park and Recreation facilities, including the West Foss Central Park, Melanie Dressel Park, public esplanade, and pedestrian improvements along E D Street from 11th Street to the Center for Urban Waters.

> Marine View Drive

Implement Marine View Drive scenic viewpoint and habitat area site improvements.

Complete pedestrian sidewalks and protected bike facilities on Marine View Drive to ensure safe connectivity to shoreline public access and recreation sites along the Marine View Drive Shoreline; enhance restoration sites to incorporate signage, parking.

> Regional Trails

Funding and construction of the spuyaləpabš Trail

Evaluation of the feasibility of a shared use segment for the Puyallup River Levee Trail that connects Downtown Tacoma to Gog-Le-Hi-Te.

Action A-9: Update Public Access Alternatives Plan with partner governments and Metro Parks Tacoma to re-evaluate city-wide access system and roles and responsibilities, funding mechanisms, and cost estimates to complete the system.

Action A-10: Consider updates to project prioritization criteria in the City of Tacoma Comprehensive Plan Park and Recreation and Transportation Elements to reflect multiple values of projects that enhance waterfront access as well as perform other transportation and recreation functions.

TACOMA MARITIME CENTER FACILITY

A partnership between Tacoma Public Schools (TPS) and the Port of Tacoma has broken ground on a Tacoma Maritime Center facility that will include a TPS Maritime Skills Center facility and Port Maritime Center facility. The facility design is meant to invoke a maritime theme and complement other architecturally significant buildings in Tacoma and encourages public use of the buildings and surrounding outdoor areas, as well as access to the waterfront.

TPS will be involved in the programming efforts specific to their portion of the facility, Maritime|253: an educational/skills center facility specializing in programs and coursework to prepare students to enter the trades related to the maritime and logistics industries. Both TPS and Port facilities will include collaborative spaces that encourage innovation.

The TPS facility is designed to accommodate up to 300 students in a building area of 30-35,000 square feet. The program would include classroom/lecture spaces, lab/shop spaces, collaborative project work areas, offices, storage, warehousing, and administrative and support functions. The Port facility is designed to accommodate approximately 160 staff in a two and a half story building of approximately 60,000 square feet. In addition to the buildings, the project includes extension of utilities, parking lots, walkways, landscaping, off-site improvements and other on- and off-site amenities.

Action A-11: Building on the Environmental Protection Agency (EPA) and the Port's Brownfield Advisory Committee, create a brownfield redevelopment workgroup and forum to collaborate, prioritize, and advocate for brownfield cleanup in the Tideflats.

Action A-12: Pursue brownfield remediation of contaminated City, Port, Puyallup Tribe, and County-owned properties as a strategy to encourage redevelopment in the Subarea, prioritizing strategically located sites that are at the highest risk to the environment or are potential catalysts for the type of development envisioned in the Plan.

Action A-13: Coordinate with local businesses and possibly team with private developers, to create business support services that reduce the burden of brownfield development.

Action A-14: Develop an intergovernmental partnership plan to answer the following questions:

- What funding tools are readily available, like industrial revenue bonds or tax increment financing, to support private companies to overcome the fear of environmental liability?
- What tools are available to create disincentives for an owner to leave a property underutilized?

Action A-15: Continue to pursue funding, including grants from the EPA, Department of Commerce, Department of Ecology, and other sources to fund area-wide brownfield assessment work.

Action A-16: Coordinate with the funding agencies to clarify and possibly update eligibility requirements. Work to streamline grant requirements while maximizing the benefits of a particular grant.

Action A-17: Maintain and enhance the Site Inventory Tool of the Tideflats, recently developed for EPA's Environmental Assessment Grant.

Action A-18: Review and improve data inputs and data quality of Ecology's database of confirmed and suspected Sites list to better assist in areawide cleanup planning within the Tideflats.

Action A-19: Develop public information pages documenting cleanup status and actions for individual properties to record the site cleanup history, improve public communications, and reduce the due diligence transaction cost with future property lease or sale.

Action A-20: Every contaminated site is treated as if it is unique. However, there are commonalities that could be evaluated through Subarea wide studies. Potential examples include:

- An areawide assessment of drinking water use, to ensure protection of human health and the environment.
- An areawide tidal study to evaluate groundwater to surface water interactions and improve understanding of contaminant plume fate and transport.
- An update to the 1980 Hart Crowser, Geology of the Port of Tacoma.

Action A-21: Develop Model Remedies with Ecology specific to the Subarea to streamline remedy selection.

Action A-22: Develop Remediation Levels that consider Subarea specific human health and ecological exposure pathways, to guide remedy selection and implementation.

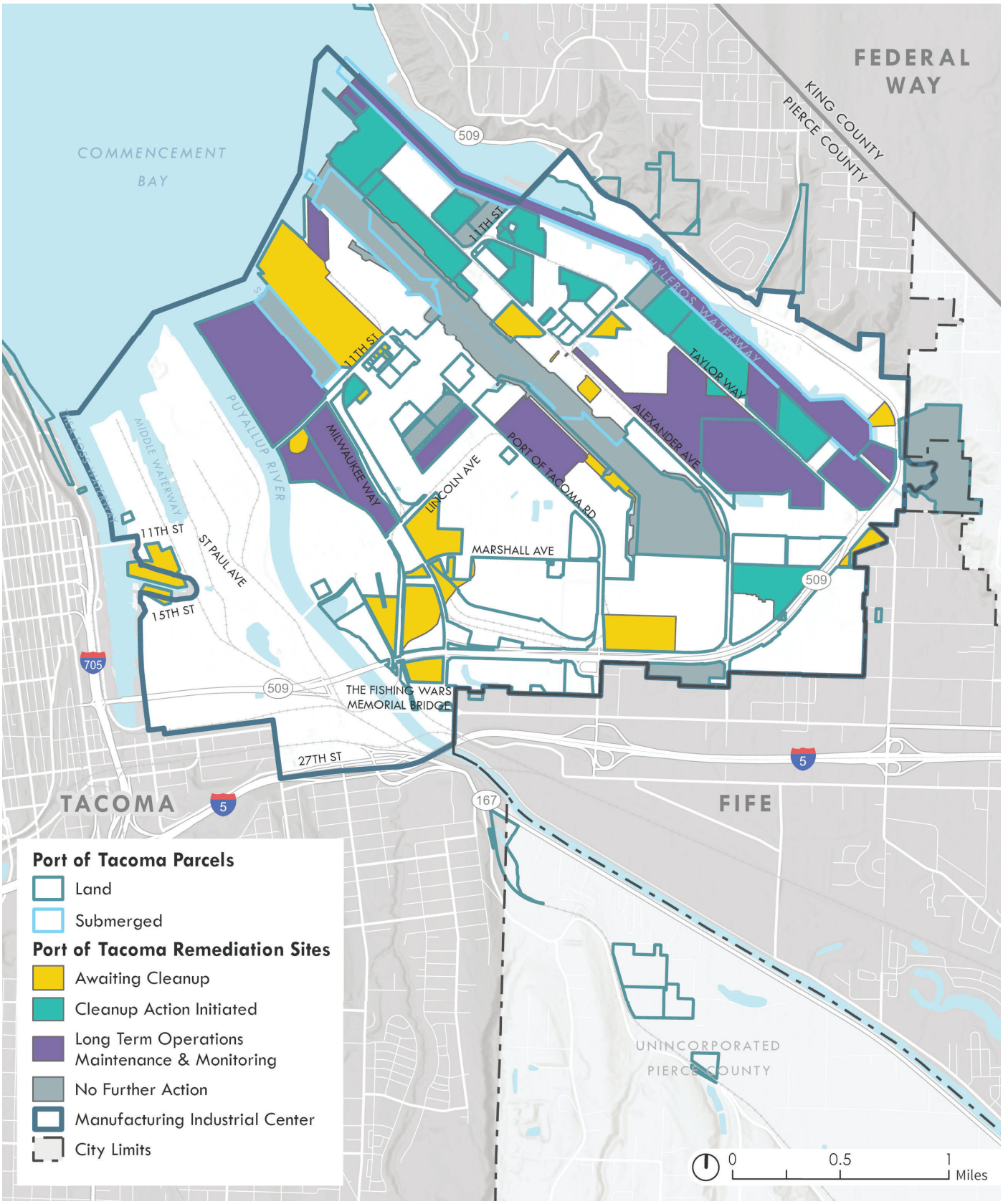


Figure 67. **Port Properties and Remediation Projects**
Source: Port of Tacoma, 2024; Seva Workshop, 2024

Action A-23: Develop partnerships with local universities aiming to combine academic research with the practical implementation of Port and industrial projects within the subarea. Fostering these relationships will improve work skills and lead to enhanced workforce development.

Action A-24: Create a proactive habitat restoration plan for the Tideflats to increase restoration acreage. The Plan can address opportunities and priorities to protect and gain ecological functions. This could include:

- A coordinated mitigation and restoration strategy and site prioritization, a greater focus on connectivity among restoration areas, as well as pro-active investments in restoration.
- A programmatic approach to mitigation and restoration that considers the habitats and species utilizing the study area, and opportunities to structurally enhance specific sites and corridors for the benefit of all or portions of species life history stages.
- Consider sea level rise, and plan to enhance habitats at a range of topographic elevations to allow for habitat adaptation and resiliency to sea level rise.
- Opportunities for the City of Tacoma to collaborate with the other governments to identify and implement further riparian restoration within the Tideflats.
- Identifying sites for mitigation or working with property owners to enhance or preserve existing open space to serve as possible mitigation locations.

Action A-25: Increase tree canopy in the Tideflats from 4% land cover to 8% (as measured at tree maturity) land cover by 2030 and 16% by 2045. Potential steps to increase tree canopy include:

- Modify existing street tree policy to require street trees for all development regardless of location and type of improvement, provided they do not create a safety (such as sightlines) concern for rail or freight truck operations. Existing policy requires street trees in PMI and M1/M2 districts under 2 conditions: 1) for new development, alterations, and street improvements on 4 gateway corridor or 2) for street improvements, sidewalk improvements, or sidewalk replacements.
- Target tree plantings along the gateway corridors: Marine View Drive, E. 11th Street west of Portland Avenue, Portland Avenue (south of E. 11th Street), Port of Tacoma Road (south of E. 11th Street).
- Establish tree credit requirements where active land developments must comply with minimum requirements. Determine the appropriate minimum requirements for the subarea.
- Inventory the subarea to determine potential tree planting opportunity areas that are suitable for additional tree planting before making broad requirements.

Action A-26: Develop landscaping requirements for the subarea to mitigate light and noise of new development while recognizing truck and rail operations must retain appropriate clearance and sightlines for safety. Potential regulatory changes could include:

- Increase site landscaping requirements to 10% of total site area.
- Establish requirements for subarea perimeter landscaping in the Seaport Transition and Seaport Conservancy Districts.

Action A-27: Develop impervious surface standards for the subarea.

- Consider impervious surface limits for new development outside of the Seaport Core Primary and Manufacturing Districts with a limit of 75% of lot area and/or 85% with a mitigation plan.
- Consider incentive programs, education, marketing, and partner programs like Depave Tacoma, that can support existing business and property owners to increase pervious surfaces and implement low impact development.

Action A-28: During the next shoreline master program amendment, consider increasing building setbacks from shoreline for buildings that are not a water-dependent use.

Action A-29: During the next shoreline master program amendment, review best available science to inform updates to the Shoreline Master Program and Critical Areas code regarding critical area buffer widths and functionality, buffer modification allowances, and the potential cumulative impacts of continuing industrial activities. Code updates should also consider increased coastal flooding potential from sea level rise.

Action A-30: Inventory and characterize the culverts within the Tideflat Subarea to determine asset age, replacement needs, and assess potential fish passage barriers.

Action A-31: Implement riparian improvements along Alexander Ave E between 4th St E and 509 to manage stormwater runoff and further improve water quality and habitat value of Wapato Creek.

Action A-32: Increase habitat restoration along the Puyallup River such as correcting encroachment for areas that have seen decreases in buffer widths, designing and implementing projects that ensure ecologically productive buffers.

Action A-33: Require the use of green stormwater infrastructure and low-impact development where feasible to address increased storm intensities and stormwater runoff, especially in areas found within the priority subbasins for Stormwater Management defined below. *See related Action A-27.*

Action A-34: Work with FEMA, Pierce County, and other agencies in the lower Puyallup watershed to update the 100 and 500-year floodplain maps; consider local update and adoption of 500-year floodplain maps for the purposes of applying local building code, critical area development standards, and land use development standards.

Action A-35: Work with the Army Corps of Engineers to update levee standards to improve fish and wildlife habitat along the Puyallup River. Partner with Pierce County and the Flood Control District to acquire properties along the Puyallup River for future flood control and riparian improvements.

Action A-36: Establish an Equitable Climate Action Plan Consistency Checklist. Proposed projects must submit the Checklist; the project must demonstrate it aligns with the Tacoma Climate Action Plan and has a greenhouse gas emissions reduction plan that aligns with local greenhouse gas emissions reduction goals.

Action A-37: Increase street sweeping along roads and highways to decrease exposure to road dust and improve stormwater management. *See related Action A-27.*

Action A-38: Explore the idea of a local pollution surcharge for the largest generators of air and water pollutants and potential revenue to support habitat restoration and mitigation projects.

Action A-39: Develop and implement an urban heat resilience strategy.

Action A-40: Explore with the Puyallup Tribe a phased transfer of ownership of open space and land designated for habitat or habitat protection.

Action A-41: Evaluate integrating health assessment into the permit process.

Action A-42: To ensure indoor air quality in places where people will live, work, or gather, encourage the upgrade of ventilation systems and pursue resources and grants to facilitate conversions.

Action A-43: Require projects and developments that register new air pollution equipment to monitor air emissions and provide the city an annual air quality report.

Action A-44: Work with the Puget Sound Clean Air Agency (PSCAA) and WA State Department of Ecology to establish appropriate regional air toxic standards and mitigation approaches for facility and mobile emission sources. Include standards for limiting cumulative air quality impacts.

Action A-45: Update city code to require new projects to strive for zero greenhouse gas emission design, construction, and operation. Specifically consider updating building and energy codes to increase the number of EV-capable or EV-ready parking spaces and solar readiness.

Action A-46: Incentivize projects which are focused on clean technologies and/or processes as well as those operators that deploy clean fleet relative to fleet standards in Washington.

Action A-47: Improve community information and action for air quality:

> Implement community-based air quality monitoring (CBAQM). Lower-cost air quality sensors could be installed and help identify micro-climates and exposures. It could help inform equitable policies, investments, or actions. The City of Tacoma is working with the Nature Conservancy to set up an AQ monitoring program in specific neighborhoods (currently working on Tacoma Mall Subarea).

> Sponsor Community Action Plans to address environmental justice and health impacts. The City could support communities in Tacoma to create the strategic plans, in conjunction with the Tacoma-Pierce County Health Department, Puget Sound Clean Air Agency (PSCAA), or WA State Department of Ecology.

Action A-48: Incentivize industries focused on clean technologies/processes. Consider strategies in Tacoma's Green Economic Development Strategy (RM Donahue Consulting et al, 2023).

Action A-49: Support zero emission technology innovation in the marine, trucking and rail sector. Offer more incentives to replace diesel trucks with cleaner engines or zero emission engines.

Action A-50: Adopt applicable best management practices (BMPs) to manage particulate tire wear, 6PPD, and 6PPDquinone and their effects on fish habitat:

> **Stormwater source control BMPs:** Prevent stormwater contamination with methods such as street sweeping to control runoff from tires, tire products, and tire wear particulates.

> **Flow control BMPs:** Where possible, reduce runoff volumes using infiltration methods such as ponds, infiltration basins, and bioretention.

> **Runoff treatment BMPs:** Where possible, reduce concentrations of the targeted pollutants, typically through physical filtration or chemical sorption media like biofiltration swales, bioretention, or manufactured treatment devices.

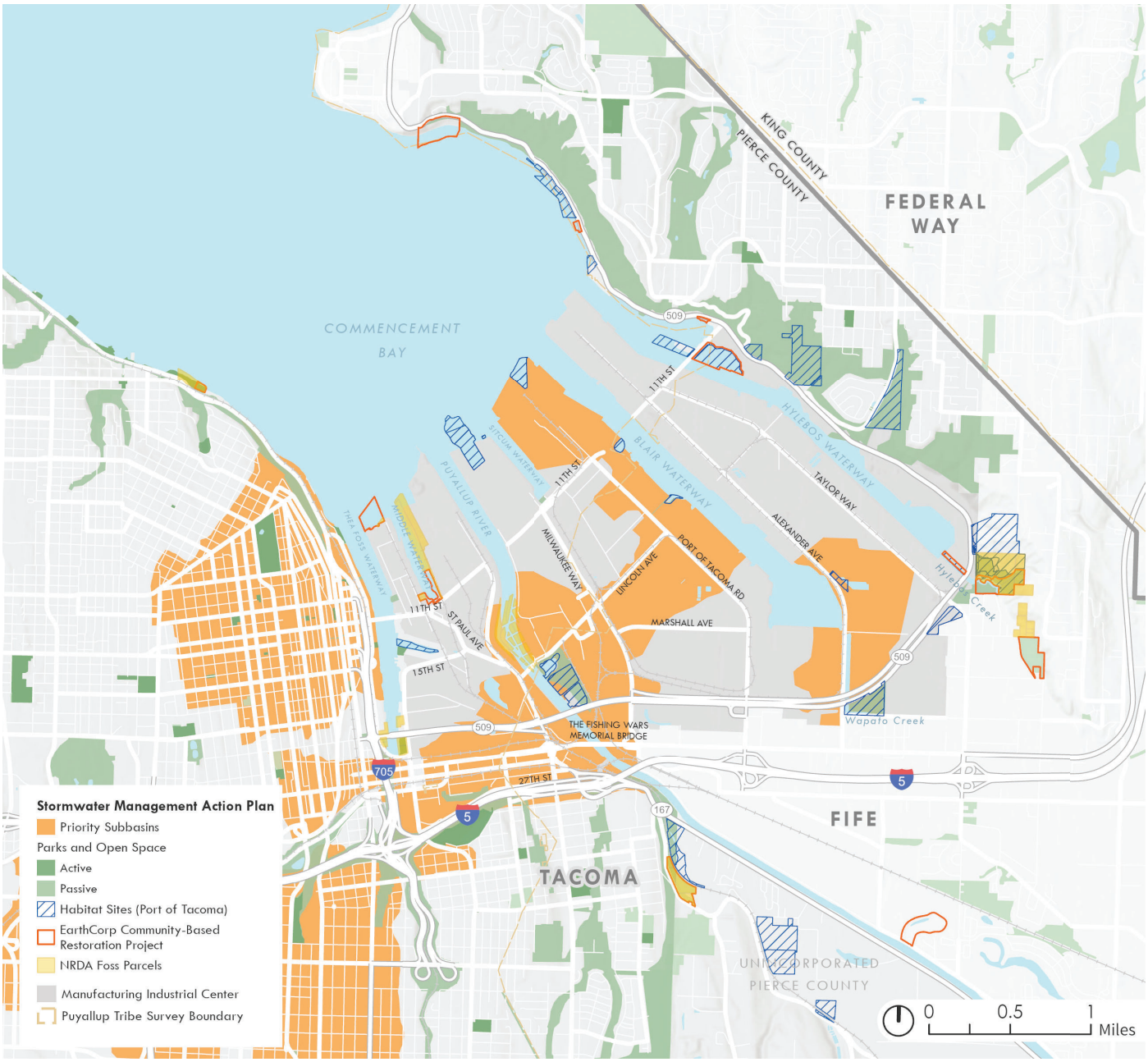


Figure 68. Priority Subbasins for Stormwater Management

Source: City of Tacoma, 2024; Seva Workshop, 2024

> **Support research and design and development of best available science** related to manage particulate tire wear, 6PPD, and 6PPDquinone and their effects on fish habitat.

> Support development of a statewide BMP.

Action A-51: Fund grants for building energy efficiency upgrades to reduce infiltration of pollutants and to install high-efficiency air filtration systems at critical and sensitive facilities (schools, day care facilities, apartments, other).

Action A-52: Expand urban greening to filter pollution and employ equitable funding strategies to advance Tacoma's Urban Forest Management Plan in overburdened communities.

Action A-53: Consider adopting noise standards for non-port related uses (i.e. terminal operations, shipping, trucking, rail) in the subarea and options for

businesses to develop noise compliance plans with measures to reduce noise levels outside the subarea.

Action A-54: Coordinate regularly with agencies who rely on public utilities within the Port of Tacoma MIC to meet state and federal requirements within their jurisdictions. Provide unified support, and funding where appropriate, for necessary upgrades to these facilities.

4 Tribal Assets

TRIBAL ASSETS GUIDING PRINCIPLES

GUIDING PRINCIPLE 6: Reservation and tribal lands are protected from encroachment, preserving the unique cultural characteristics that support the Puyallup Tribe of Indians' traditional way of life.

GUIDING PRINCIPLE 7: Cultural and historic resources are protected, elevating the subarea as a site of cultural practices for the Puyallup Tribe of Indians.

Tribal Assets 4

4.1 INTRODUCTION

The purpose of this chapter is to provide policy guidance and priority implementation actions and regulatory recommendations, in order to protect and celebrate tribal assets in the Tacoma Tideflats Subarea.

4.2 POLICIES

GUIDING PRINCIPLE 20: Reservation and tribal lands are protected from encroachment, preserving the unique cultural characteristics that support the Puyallup Tribe of Indians' traditional way of life.

Policy TA-28: Coordinate with the Puyallup Tribe of Indians to identify and implement encroachment prevention strategies to protect reservation and tribal lands, such as design standards and allowable uses for adjacent properties.

Policy TA-29: Consult with the Puyallup Tribe of Indians on land use decisions that may impact tribal assets within the subarea as per the Puyallup Land Claims Settlement.

Policy TA-30: Analyze zoning and land use with an environmental justice lens to determine compatibility with tribal lands given the subarea's unique designation as a federally designated Indian Reservation.

Policy TA-31: Protect the Treaty-oriented, traditional, and ceremonial activities of the Puyallup Tribe of Indians from development related impacts.

Policy TA-32: To best promote the need for the Puyallup Tribe to have a consolidated land base to serve its members and meet the intent of Federal Indian policy to avoid further fractionation of the Puyallup Reservation, regional partners should identify surplus land strategies to restore ownership of land within the Puyallup Reservation to the Puyallup Tribe of Indians. (Ex. First right of refusal policies, mitigation project transfers, transfer of unimproved right-of-way that does not serve a public benefit, transfer of sites with severe development constraints due to known cultural resources).

GUIDING PRINCIPLE 21: Cultural and historic resources are protected, elevating the subarea as a site of cultural practices for the Puyallup Tribe of Indians.

Policy TA-33: Conduct best practices to prioritize protection of cultural resources within the subarea such as requiring studies where there is high or medium

likelihood for impacting cultural resources and take preventative measures to promote avoidance and disturbance of known cultural resources.

Policy TA-34: Develop measures to protect cultural and historic resources that are exposed due to landslide, erosion, sea level rise, and other climate related impacts.

4.3 PRIORITY ACTIONS AND REGULATORY RECOMMENDATIONS

Action A-55: For archaeological resources, conduct a thorough review under the existing regulatory framework to avoid, minimize, or mitigate impacts on these resources within the study area.

Action A-56: Support cultural resources review by undertaking a comprehensive assessment of the Tideflats area to establish a framework for future cultural resources studies. This comprehensive assessment could include:

> Establishing the cultural and environmental context of the study area.

> Reviewing the previously recorded cultural resources within the study area.

> Incorporating information gathered through tribal consultation.

> Developing expectations for the presence of archaeological resources.

> Providing standard procedures for the inadvertent discovery of cultural resources within the study area.

> A review of the Tacoma Municipal Code (TMC) to identify chapters or sections that could be amended to address cultural resources review of projects or permits. Specifically, language in the TMC should be reviewed or amended to specifically identify the study area as an MIC center (TMC 13.12.570.A), and Title 19 Shoreline Master Program should be reviewed.

> Updating cultural resource data and mapping on a regular basis as new information is provided from cultural resource findings.

Action A-57: Continue historic property inventory surveys, eligibility assessments, and completion of inventory forms to avoid or mitigate any impacts of future development.

Action A-58: Develop a Planned Action permit review process with the Puyallup Tribe of Indians. For example, in the Planned Action Ordinance, the City could identify a decision tree regarding cultural resources review requirements at a project level. This could include:

> Require inadvertent discovery language on all related permits (compliance with RCW 27.53, 27.44).

> Develop a “decision tree” for both above-ground and below-ground resources could be developed to determine the appropriate level of investigation and, if necessary, mitigation. The City could consider the Puyallup Tribe of Indians Cultural Resources Probability Map (see Exhibit 59 below). Less review could be required on sites already previously surveyed in the last 10 years, or on culturally sterile fill, or where no ground disturbance is proposed. If cultural resources are present and ground disturbance is proposed, then a risk assessment and consultation with DAHP and Tribes would be applied. Conditions for monitoring could be developed. Permits could be conditioned with a mitigation strategy.

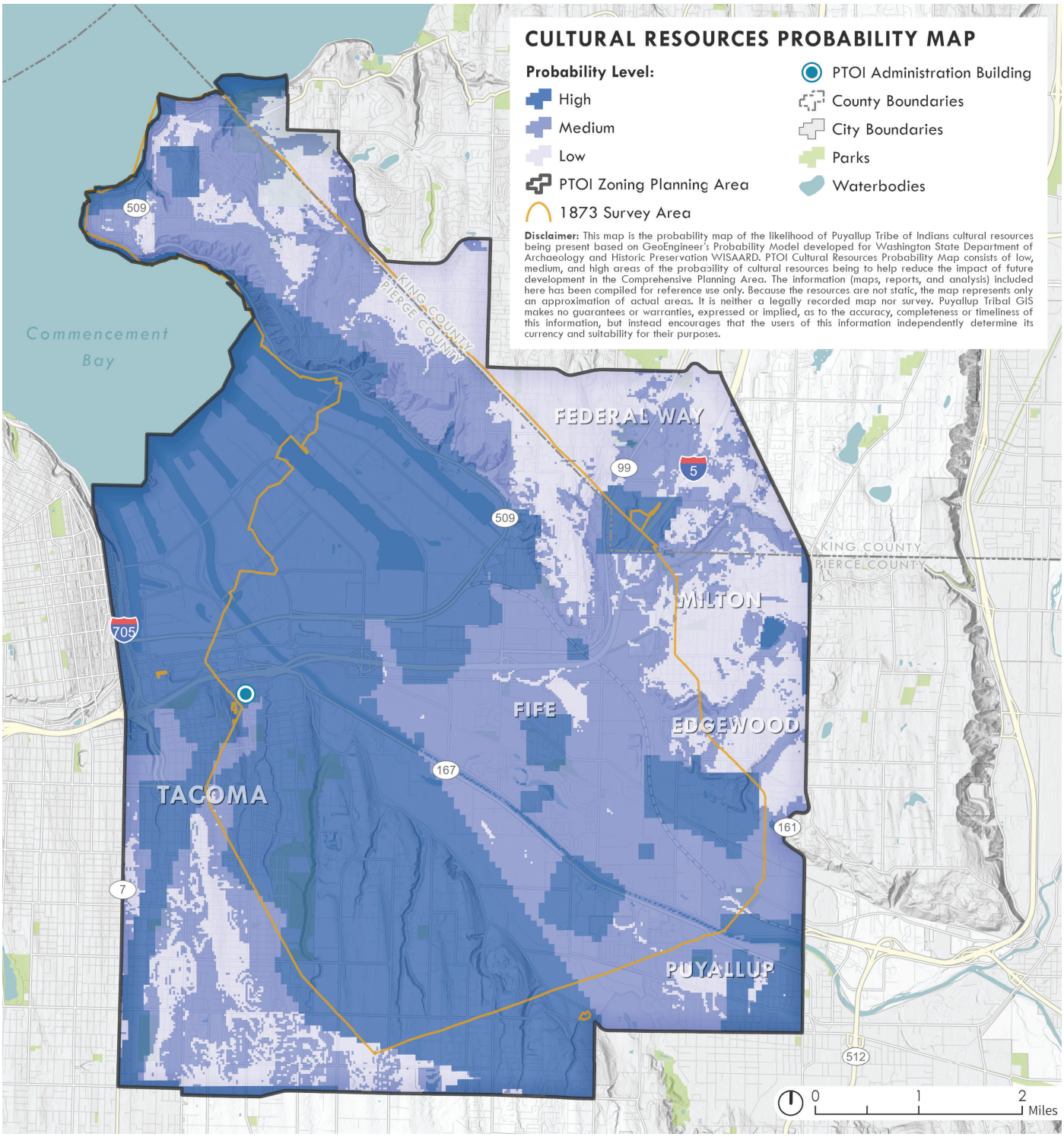


Figure 69. Puyallup Tribe of Indians Cultural Resources Probability Map

Source: Puyallup Tribe of Indians, Comprehensive Plan, 2023; BERK 2021

Action A-59: Protect cultural resources at risk due to exposure to sea level rise.

> Protect, enhance, and restore ecosystems to meet tribal treaty rights and conserve culturally important consumptive and nonconsumptive resources including foods, medicinal plants, and materials that could be adversely impacted by climate change.

> As part of government-to-government efforts with the City and Puyallup Tribe of Indians consider climate impacts on archaeological sites and collaborate on strategies to preserve such sites.

> Protect significant historic sites prone to floods or other hazards worsened by climate change by raising, retrofitting, or relocating buildings that are designated as historic.

Action A-60: Support cultural and natural resources, and treaty rights, including but not limited to:

> Invite the Puyallup Tribe of Indians to contribute to the design of public development or infrastructure in the subarea.

> Develop joint shoreline restoration plans within the Tideflats with the Puyallup Tribe of Indians as part of the Shoreline Master Program to encourage collaborative decision-making and shared governance.

> Develop native landscape standards for public gathering, rights or way, and other green spaces.

Action A-61: Identify parcels for strategic acquisition that are not developable, locations that would provide a buffer or transition adjacent to sensitive uses (habitat or cultural sites), locations that have restoration potential or create contiguous sites, locations such as geo hazards, etc. that would help avoid risks to life and property to avoid property speculation.

5 Transportation and Infrastructure

TRANSPORTATION AND INFRASTRUCTURE GUIDING PRINCIPLES

GUIDING PRINCIPLE 8: The Subarea Plan ensures reasonably efficient freight access to the Seaport Core districts through identified freight corridors.

GUIDING PRINCIPLE 9: The Subarea Plan supports completing a multimodal network and shifting commute modes away from single-occupancy-vehicles.

GUIDING PRINCIPLE 10: The Subarea Plan identifies steps to achieve decarbonization of Port and industrial activity and to accelerate emission reductions.

GUIDING PRINCIPLE 11: Climate science and greenhouse gas impacts are integrated into plans, programs, and investments. The subarea is more climate resilient by identifying and protecting vital infrastructure subject to future impact to climate change.

GUIDING PRINCIPLE 12: Coordinated and proactive investment in infrastructure supports mobility, economic development, environmental protection, and climate resiliency.

Transportation and Infrastructure

5

5.1 INTRODUCTION

The purpose of this chapter is to provide policy guidance and priority implementation actions and regulatory recommendations, in order to develop a transportation network and public infrastructure that supports the vision for the Tacoma Tideflats Subarea.

Sea level rise and coastal flooding has the potential to endanger communities, damage infrastructure and facilities, and disrupt operations. While sea level rise and coast flooding does not present an immediate threat to the facilities, assets, and activities found within the Tideflats, sea levels will increase, and risks will increase in the coming decades. The chapter also includes potential policies and actions13 that could mitigate and adapt to the sea level rise projections for the Tideflats.

5.2 POLICIES

GUIDING PRINCIPLE 22: The Subarea Plan ensures reasonably efficient freight access to the Seaport Core districts through identified freight corridors.

Policy TI-35: Establish and implement design standards for new roadway infrastructure in the Seaport Core districts. Design should prioritize safety, support multimodal transportation, and accommodate and acknowledge semi-truck traffic and the industrial uses of the Tideflats Subarea. All new developments should be required to be consistent with these standards.

Policy TI-36: Identify, protect and preserve the transportation infrastructure and services needed for efficient multimodal movement of freight and people within and between the Seaport Core districts, Transition Areas, and the regional transportation system.

Policy TI-37: Support improvements to Heavy Haul Routes that support safe and efficient movement of trucks, as they are intended for and critical to efficient movement of freight.

Policy TI-38: Support and encourage intermodal facilities and the transport of cargo via rail to help minimize the roadway traffic impacts and to minimize overall travel delays.

Policy TI-39: Prioritize freight truck mobility on Heavy Haul Routes and ensure roads and bridges can handle the heavy loads.

Policy TI-40: Place high priority on maintenance and preservation of existing roads and bridges that serve freight movement within and to the Seaport Core districts and

Transition Areas; and encourage the use of reinforced Portland Cement Concrete pavement along Heavy Haul Routes to maintain improved roadway conditions over longer periods of time.

Policy TI-41: Identify and prioritize improvements in efficiency to the roadway system, such as traffic signal timing and phasing improvements, which will improve roadway freight operations without requiring major capital investment.

GUIDING PRINCIPLE 23: The Subarea Plan supports completing a multimodal network and shifting commute modes away from single-occupancy-vehicles.

Policy TI-42: Collaborate with Pierce Transit and Sound Transit to expand rail and bus service to the Tideflats Subarea and major employment destinations. Coordinate system expansion with future investments in high capacity transit and station area improvements.

Policy TI-43: Support an integrated system of public transportation, active transportation, and demand management programs, to provide mobility alternatives.

Policy TI-44: Support construction of first and last mile connections with local and regional transit service. Work to identify appropriate locations for future transit stops and shelters.

Policy TI-45: Provide an integrated system of shared use facilities that connect nearby residential areas with centers of high employment density with the subarea.

Policy TI-46: Design active transportation networks and facilities to minimize potential conflicts with trucks and trains to allow for the safe and efficient movement of both freight and people.

Policy TI-47: Ensure that all future bridge replacements or widenings incorporate space to accommodate future transit and shared use facilities.

Policy TI-48: All street vacation requests within the subarea should perform safety, multimodal level of service and emergency access analysis prior to approval of vacation.

GUIDING PRINCIPLE 24: The Subarea Plan identifies steps to achieve decarbonization of Port and industrial activity and to accelerate emission reductions.

Policy TI-49: Consider development of measures, such as Low Impact Development (LID) standards, energy efficient lighting technologies, and transportation design features, to reduce greenhouse gas emissions in the port area to help meet state and regional goals for emissions reductions.

Policy TI-50: For new development on private and public properties, encourage expansion of electric and/or lower carbon emission transportation infrastructure such as charging/fueling infrastructure for heavy duty equipment, trucks, and autos.

Policy TI-51: Identify strategies that aim to increase alternatives to driving alone and achieve a mode split goal that advances a more sustainable mix of auto, transit, and active transportation trips. This should include reducing commute impacts through Transportation Demand Management (TDM) strategies consistent with the Tacoma Transportation Master Plan and Regional Transportation Plan.

Policy TI-52: Consider the use of pilot programs and innovative technologies aimed at reducing the carbon emissions from short distance drayage vehicles used to move freight around the port and to other communities within the region.

Policy TI-53: Prioritize habitat preservation and restoration to maximize potential hazard mitigation co-benefits.

Policy TI-54: Support safety and a resilient workforce in the Tideflats.

Policy TI-55: Use nature-based solutions to reduce vulnerability to hazards.

Policy TI-56: Align emissions reductions targets with City and Regional goals and targets.

GUIDING PRINCIPLE 25: Climate science and greenhouse gas impacts are integrated into plans, programs, and investments. The subarea is more climate resilient by identifying and protecting vital infrastructure subject to future impact to climate change.

Policy TI-57: Monitor and evaluate flood protection infrastructure and flood projections at the City of Tacoma's Central Wastewater Treatment Plant, due to this facility's high vulnerability to flood impacts and the risks posed by projected flooding under short-term Relative Sea Level Rise (RSLR) scenarios.

Policy TI-58: Employ a subarea-wide phased RSLR adaptation approach, working to put in place short-term mitigation strategies while at the same time planning for longer-term resilience and mitigation to address anticipated future higher hazards. Monitor and re-evaluate sea level rise and flooding hazards on a regular basis and adapt the phased approach as needed.

Policy TI-59: Coordinate regional adaptation efforts that will improve hazard resilience both in the subarea and throughout the greater area. For instance, strategies related to upstream flooding impacts.

Policy TI-60: Work with property owners to develop a system of flood barriers that mitigates short-term flood impacts such as property damage and operations disruptions.

Policy TI-61: For any redevelopment or new development in the subarea, apply measures early in the design process that will provide resiliency for projected future sea level rise and flooding conditions, such as increased elevation and improved drainage patterns.

> Developments that could result in water contamination, such as wastewater treatment plant and liquid chemical processing, should be designed for 10% probability RSLR for any project designed to last more than 50 years.

> Essential public facilities, such as utilities, transportation infrastructure, should be designed for 10% probability RSLR for any project designed to last more than 50 years.

> Essential public facilities should be discouraged in being sited within the 10% RSLR probability area unless needed for a waterborne purpose.

> Other project types should consider designing to 50% probability RSLR.

> Use design approaches that maintain adaptive flexibility and allow for implementation of future adaptation strategies geared toward more severe RSLR scenarios.

Policy TI-62: Maximize the flood mitigation potential of wetlands, working to maintain and restore wetlands in the subarea where possible as sea level rise occurs.

GUIDING PRINCIPLE 26: Coordinated and proactive investment in infrastructure supports mobility, economic development, environmental protection, and climate resiliency.

Policy TI-63: Provide, protect, and preserve the capital facilities and essential public services needed to support activities within and beyond the subarea, consistent with targeted growth.

Policy TI-64: Coordinate projects and planning efforts with adjacent jurisdictions to ensure safe and efficient movement of freight traffic, both road and rail, through these communities.

Policy TI-65: Partner with the Port to identify required new infrastructure, facilities and services needed to support port activities within the Core Areas, as well as priorities for maintenance and preservation of existing infrastructure, facilities and services. By partnering with the Port, the City can make sure that future infrastructure investments are targeted and prioritized to meet the needs of the Port and the Core Area.

Policy TI-66: Coordinate with Tribal, state, regional and adjacent local jurisdictions to seek joint funding opportunities for projects that enhance freight mobility in the region.

Policy TI-67: Prioritize local investments in the subarea and in corridors leading to the subarea, including a list of specific transportation and other public infrastructure investments and programs.

Policy TI-68: Identify strategies, including funding options, to address deficiencies in the subarea's transportation network, including freight, transit, pedestrian, and bicycle facilities and linkages to adjacent neighborhoods and districts. These funding opportunities could include impact fees, industrial revenue bonds, etc.

Policy TI-69: Coordinate with the Port to identify the location and jurisdiction of major utility easements that are located in the Core Area; and develop and implement a utility access plan to ensure that utility providers have access at all times to all major utilities.

Policy TI-70: Coordinate with state and local agencies to emphasize the importance of regional freight truck corridors to state and local economic health, and support improvements planned on these corridors that enhance freight mobility. These corridors are those designated with a T-1 tonnage classification (carrying over 10 million tons of freight per year) by the Washington State Department of Transportation (WSDOT) as well as the roads that connect the Port to the regional road System, i.e., first/last mile connector routes.

Policy TI-71: Coordinate with the Port to develop strategies to minimize truck queues, work to resolve long duration truck parking within the right-of-way, minimize truck traffic dispersing into prohibited streets, and other traffic elements that could interfere with mobility along these routes and impact adjacent residential communities.

Policy TI-72: Lead coordination of emergency response and evacuation planning for the subarea and surrounding areas to protect people, essential infrastructure, and the role of the seaport for strategic national defense.

Policy TI-73: Monitor and re-evaluate RSLR hazards on a regular basis to maintain flexibility in RSLR adaptation strategies.

Policy TI-74: Utilize lower RSLR scenarios (1ft-3ft) to guide short-term mitigation and adaptation response.

Policy TI-75: Account for 5ft RSLR in long-term planning.

Policy TI-76: Adopt responsive design standards and thresholds to address projected climate change impacts including SLR, coastal flooding, riverine flooding, extreme rainfall, and storm surges.

Policy TI-77: Coordinate RSLR adaptation efforts across jurisdictions and with regional initiatives.

5.3 PRIORITY ACTIONS AND REGULATORY RECOMMENDATIONS

Action A-62: For archaeological resources, conduct a thorough review under the existing regulatory framework to avoid, minimize, or mitigate impacts on these resources within the study area.

Action A-63: Map, monitor, and analyze coastal flood events.

Action A-64: Conduct a Sea Level Rise Risk Assessment or add sea level rise into other hazard assessments such as wave runup, storm surge, and tsunami hazard assessments.

Action A-65: Conduct a review of current science focusing on flooding impacts to critical roads, infrastructure, and steep slopes due to increasing intense rainfall events, sea level rise, flooding, and landslides. Integrate findings into City development codes, emergency management, and capital planning.

Action A-66: Explore smart technologies to monitor changing conditions and identify potential threats. Smart technology applications may be especially useful in monitoring sites and areas that are hard to reach. For example, installing water-detection sensors in underground utility vaults may help identify water intrusion from events like groundwater flooding that may otherwise go unnoticed.

Action A-67: Maintain up-to-date floodplain maps. Collaborate with FEMA and regional partners to develop a systematic way to regularly update the maps as projects affecting the floodplain are completed.

Action A-68: Develop a local floodplain definition to help revise mitigation and adaptation strategies.

Action A-69: Implement flood mitigation measures in low-lying areas such as in surrounding drainage canals within the MIC, the southern portion of the Thea Foss Waterway at the Route 509 bridge, and Near I5 south of the Blair Waterway.

Action A-70: Implement flood mitigation efforts at the Central Wastewater Treatment Plant.

Action A-71: Restrict hazardous uses in the 500-year floodplain.

Action A-72: Develop a retrofit plan for public infrastructure in coastal flood hazard areas. Assess conditions of seawalls, piers, revetments, shoreline

infrastructure, open spaces, parks, and habitat to identify length of service, repair, and maintenance.

Action A-73: Evaluate flooding impacts on existing habitat areas such as areas at the mouth of the Puyallup River, Blair Waterway, Hylebos Waterway, and Wapato Creek. Implement additional modifications to mitigate flooding impacts on surrounding areas.

1. Identify places where infrastructure can be set back as part of capital improvement project implementation.
2. Conduct a shoreline inventory and characterization to establish a baseline and repository of data that can be used to inform:
   - Appropriate changes to existing setback and buffers distances around marine shoreline that are responsive to sea level rise and flooding impacts
   - Sea level monitoring locations
   - Area widths for transitional zones around the nearshore.
3. Ensure that stormwater infrastructure protects against flooding hazards such as coastal flooding, riverine flooding, urban flooding, and groundwater flooding. With rising sea levels and increasing extreme precipitation events, it is especially important to maintain stormwater infrastructure in good condition and adapt stormwater systems to changing conditions.
4. Establish a coastal hazard working group to continue solving coastal flooding issues as they relate to zoning and land use. The group should have representatives from Port/NWSA, Pierce County, City of Tacoma, Puyallup Tribe, and City of Fife.
5. Coordinate with climate change planners to anticipate infrastructure improvements or adaptation techniques to minimize damage to infrastructure or disruption to services related to future sea level rise or other climate-related effects to the community.
6. Collaborate with regional partners to implement the programmatic and project recommendations outlined in the Pierce County 2023 Comprehensive Flood Hazard Management Plan.
7. Develop a Sea Level Rise Flood Damage Ordinance or Flood Damage Protection Ordinance. The ordinance would reduce losses due to flooding by restricting or prohibiting uses that are dangerous to health, safety, and property due to water related hazards, requiring uses vulnerable to floods to be protected, controlling the alteration of natural habitat, and/or regulating development that may increase flooding.
8. Collaborate with regional partners to develop and implement a Commencement Bay Restoration and Resiliency Plan.
9. Collaborate with regional partners to develop uniform flood control standards to prevent riverine flooding due to coastal flooding and tidal influence of Hylebos and Wapato Creeks and the Puyallup River.
10. Collaborate with the City of Fife to maintain functionality and legal compliance of stormwater systems that rely on discharge into Commencement Bay, namely the Erdahl Ditch and Fife Ditch.
11. Where applicable, remove bulkheads and shore defense works to restore shoreline, preserve natural processes, and help adapt to sea level rise.

12. Develop additional habitat sites along the Puyallup River, the Hylebos Creek, and Wapato Creek that support the ecosystem and increase flood storage capacity.

Action A-74: Prioritize protecting existing habitat sites to avoid decrease in ecological function due to coastal flooding impacts.

1. Use green infrastructure to capture stormwater and reduce urban flooding issues.
2. Increase tree and vegetative cover where appropriate to reduce urban heat island effect.
3. Protect shorelines from coastal flooding and erosion using natural hardening methods that help reduce wave action, decrease water velocity, or prevent waters from overtopping the shoreline and getting on terminals.
4. Employ vegetative planting techniques to avoid coastal erosion while avoiding outright armoring of coastal areas.

Action A-75: Maintain Port of Tacoma's status and capabilities as a Strategic Seaport. The Port of Tacoma is a Commercial Strategic Seaport and part of the National Port Readiness Network and must be ready to make the port and its facilities available to support the deployment of military forces.

1. Develop and maintain emergency response plans for various hazards and hazardous working conditions. Allow for coordination and collaboration with stakeholders.
2. Encourage the use of emergency response plans to include worker safety plans in the event of hazards or evacuation.
3. Support development of and collaboration on Continuity of Operations Plans in the Tideflats for continuation or quick recovery after an event.

Action A-76: In coordination with WSDOT, local jurisdictions, transit agencies, law enforcement and other emergency entities, identify high-priority locations to implement intelligent transportation systems (ITS) and other transportation systems management and operations (TSMO) improvements. High-priority investments within the subarea could include signal priority, wayfinding, and geometric improvements for freight, in addition to dynamic roadway messaging and warnings. An initial phase of this effort has already begun.

Action A-77: Recognize the Port of Tacoma MIC is dependent on adjacent transportation infrastructure owners and partner with WSDOT and the City of Fife to coordinate sequencing and construction of planned roadway projects to maintain freight fluidity as well as improve transit and multimodal access at a system level.

Action A-78: Coordinate with pertinent jurisdictions, entities, and private interests to implement a transportation management association (TMA) for the subarea. The purpose of this TMA would be to implement policies and supportive tools to improve travel demand management, such as establishing parking maximums/minimums, reducing spillover parking, unbundling parking costs, increasing parking taxes/fees, and reviewing/revising transit pass provision programs for employees within the subarea.

Action A-79: Partner with Pierce Transit (PT) to phase in transit service expansion over time, including:

Figure 70. Existing Facilities and Planned Transit Improvements within the Subarea

Note: The exact route and station locations for the Tacoma Dome Light Rail Link Extension is still being finalized; the routing on the map represents the most recent preferred alternative. Source: Pierce Transit and Sound Transit, 2024. Data compiled by Fehr & Peers, 2024

- Data sharing to support transit service planning (calls for service from PT and City sharing land use and employment data with PT) and identify opportunities to expand micro-transit within the Tideflats
- Education and marketing to raise awareness of Runner service with major employers
- Prioritize pedestrian and safety improvements around transit locations
- Coordinate with the Port of Tacoma and Pierce Transit to determine potential long term fixed transit routes
- Update roadway design standards to accommodate long-term transit improvements.
- Consider funding options to expand micro transit service within the Tideflats and surrounding neighborhoods, especially in coordination with light rail service expansion and station area improvements.

Action A-80: Develop City-led and private partnerships to encourage the development of safe and accessible infrastructure for all modes within the MIC road network. This would include revising the City's transportation design standards to facilitate balancing multimodal and freight (truck and rail) needs by reflecting safety improvements within the subarea, and to require sidewalks at a minimum as part of future roadway improvements. Safety needs identified include pedestrian crossing and access improvements to facilitate access into and out of the subarea as well as along key corridors within the subarea itself.

Action A-81: Consider parking strategies that manage on-street parking demand and supply, including implementing time limits, restricted parking zones, and implementing additional off-street truck staging and processing facilities. To facilitate additional off-street truck staging, perform a siting study to determine feasible locations for potential staging areas.

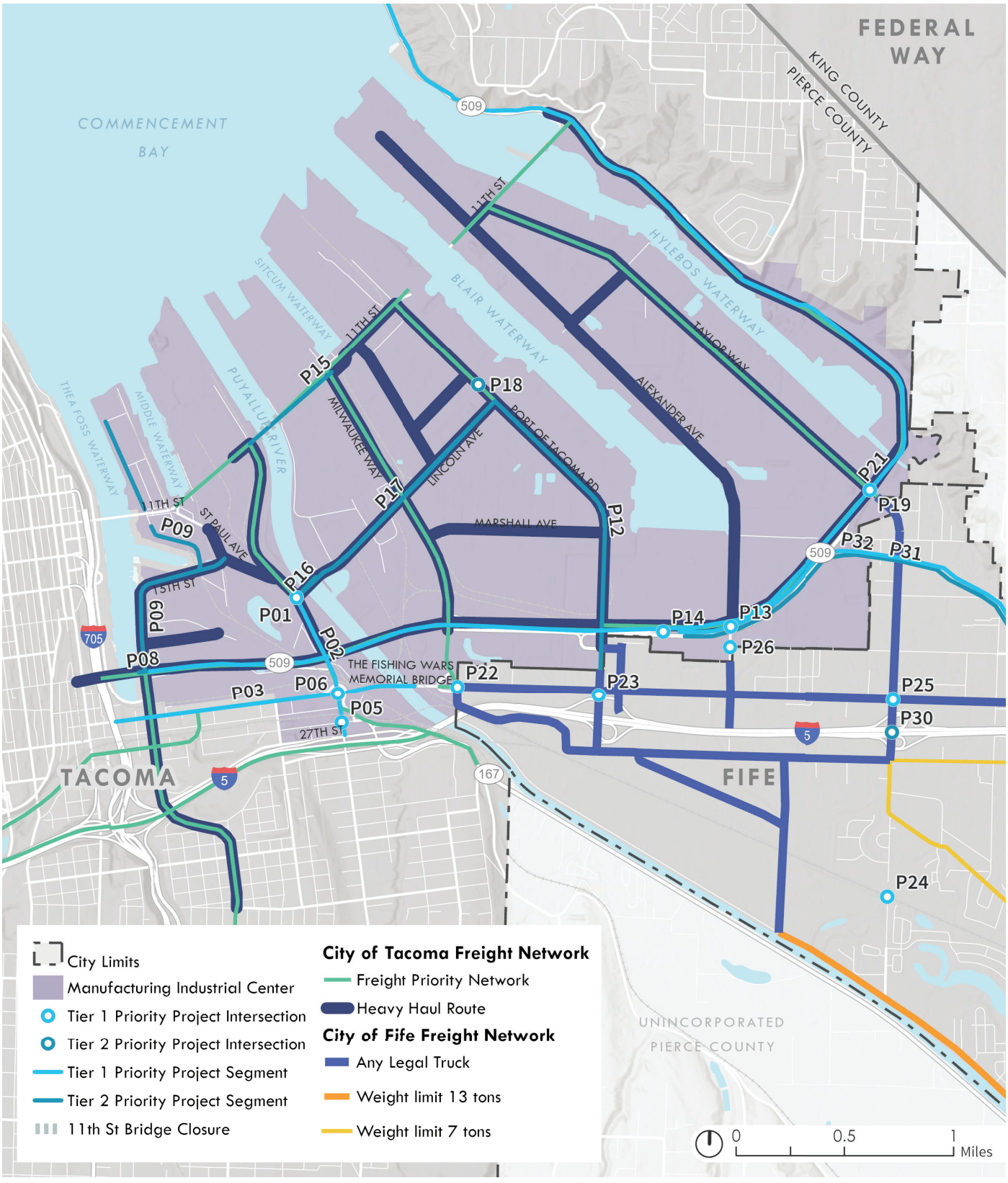
Action A-82: Coordinate with railroad owners on safety or grade separation projects to support movement of freight by rail and compatibility with the roadway network.

Action A-83: Identify opportunities to lower driver speed to reduce severity of crashes through redesign of roadway. This should include implementation of a safety countermeasure fee or fund that new developments within the subarea must pay into. Explore the use of automated speed enforcement cameras to improve traffic safety in the subarea.

Action A-84: For corridors identified as Heavy Haul Routes, update the Public Works Design Manual to prioritize safety, support multimodal transportation, and accommodate semi-truck traffic and the industrial uses of the Container Port.

Action A-85: Identify funding opportunities to fund projects and actions in the Subarea Plan, including:

- City and County impact fees
- SEPA mitigation where commensurate with the impacts of a new development.
- Local Improvement District
- Transportation Benefit District
- Industrial Revenue Bonds
- Federal Safety and Active Transportation Grants
- State and Regional Grant funding



Action A-86: The regional partners will work collaboratively to implement the projects contained in the priority project list, shown in Figure 71. The near-term focus of this implementation would be on Tier 1 projects, with Tier 2 projects being considered longer-term and/or lower-priority investments for the subarea.

Figure 71. Existing Facilities and Planned Vehicle and Freight Improvements within the Subarea

Source: Fehr & Peers and Heffron Transportation, 2024

6 Land Use and Economic Development

TRANSPORTATION AND INFRASTRUCTURE GUIDING PRINCIPLES

GUIDING PRINCIPLE 13: Industrial lands are preserved and valued, protecting the increasingly rare and valuable industrial and manufacturing lands and working waterfront from encroachment.

GUIDING PRINCIPLE 14: 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.

GUIDING PRINCIPLE 15: The subarea is a leader in the green economy promoting industries that meet environmental goals and facilitate a transition to carbon-free energy.

GUIDING PRINCIPLE 16: The subarea offers expanded access to jobs with diverse career pathways and entry points.

GUIDING PRINCIPLE 17: The subarea has effective buffers with neighboring communities that demonstrates how a world class port can thrive alongside growing and vibrant urban neighborhoods.

Land Use and Economic Development

6

6.1 INTRODUCTION

The purpose of this chapter is to provide policy guidance, priority implementation actions, and regulatory recommendations to guide land use and economic development decisions that support the vision for the Tacoma Tideflats Subarea.

6.2 POLICIES

GUIDING PRINCIPLE 27: Industrial lands are preserved and valued, protecting the increasingly rare and valuable industrial and manufacturing lands and working waterfront from encroachment.

Policy LUED-78: Protect the long-term function and viability of the port related industrial area and retain the Manufacturing Industrial Center (MIC or Center) and the Seaport Core district(s) boundaries to help ensure that protection (see Figure 72).

Policy LUED-79: Prioritize, protect, and preserve existing and planned port uses, port-related container and industrial uses, and rail-related uses. Uses should consist primarily of cargo port terminal, port-related container and industrial activity, compatible manufacturing, industrial-related office, cargo yard, warehousing, transportation facilities, and other similar uses.

Policy LUED-80: Prohibit uses that would negatively affect the availability of land for the primary port and port-related cargo and industrial function of the Seaport Core Primary district. Encourage aggregation of industrial land for future development as cargo port terminals and supporting uses.

Policy LUED-81: Clearly identify and prohibit uses that are entirely incompatible with the districts. Examples may include those that attract people to the area for non-industrial purposes or that would be incompatible with typical industrial area impacts (noise, truck movement, etc.). These may include residential, general retail, temporary lodging or other similar uses.

Policy LUED-82: Reduce the potential for land use conflicts between industrial development and surrounding nonindustrial uses by providing for adequate buffer and transitional areas, and clear public commitment to continuation of Port and port-related cargo and industrial uses in the designated Seaport Core districts.

Policy LUED-83: Do not allow unrelated uses to gradually encroach on the Seaport Core districts through incremental development and modifications of the boundary. Consider boundary adjustments only in collaboration with the Port of

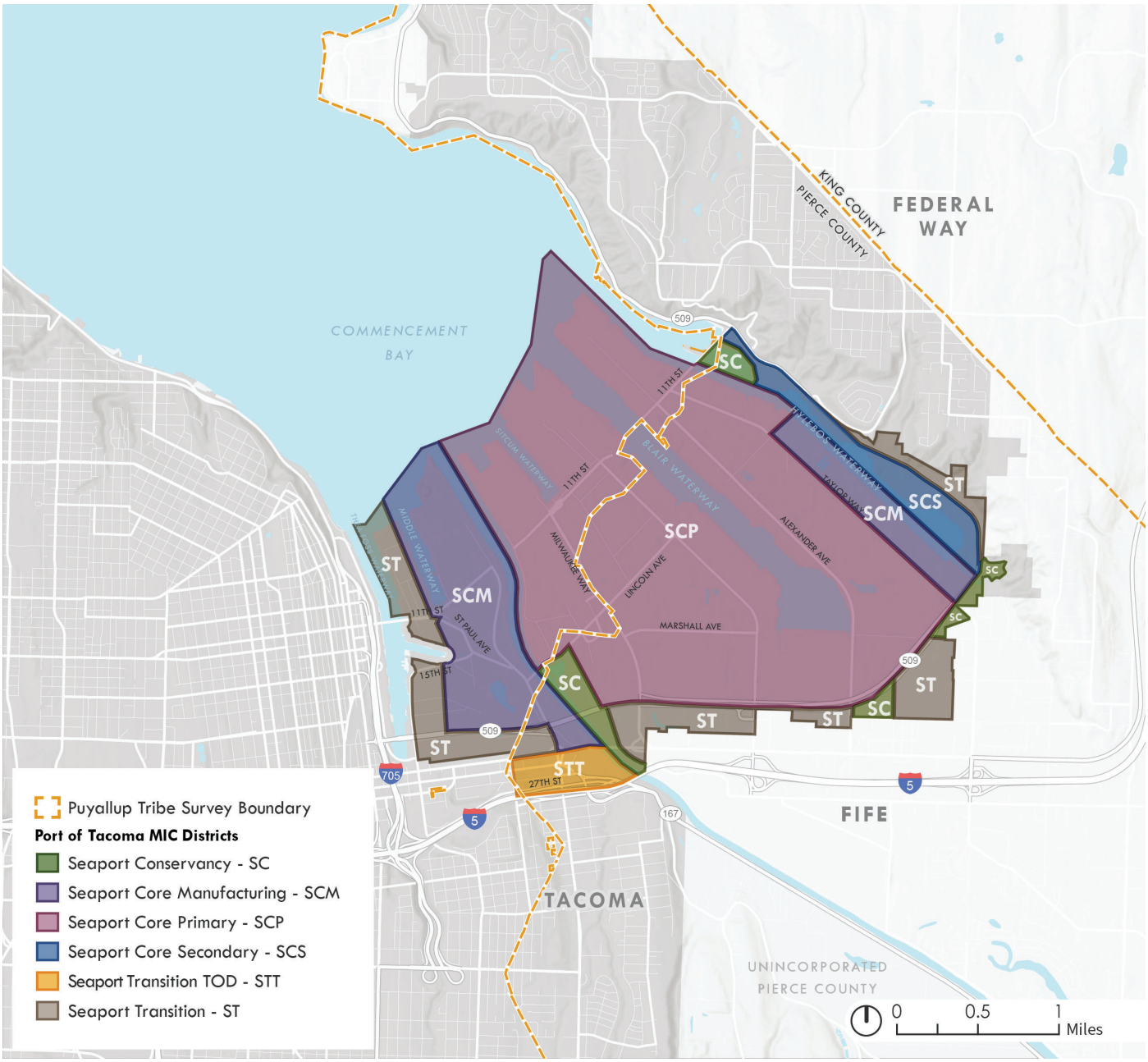


Figure 72. **Port of Tacoma Manufacturing/ Industrial Center (MIC) Districts**

Source: Steering Committee Discussion, 2024; Seva Workshop, 2024

Tacoma and as part of a comprehensive review of long- term port and port-related cargo and industrial land needs.

Policy LUED-84: In the Seaport Core Primary, Seaport Core Secondary, and Seaport Core Manufacturing districts, allow for localized impacts associated with industrial activities, including noise, odor and visual character, that are appropriate and expected in heavy industrial areas but would not be allowed in other parts of the city. Noise and odor may be associated with transportation and manufacturing facilities. Visual character may include outdoor storage, relatively large building mass and impervious surface area. While localized impacts are permitted, continue to require uses to be developed in a manner that protects the environment and preserves public health and safety from a citywide and regional perspective.

Policy LUED-85: Continue to work in close collaboration with the Port of Tacoma to ensure that port and port related cargo and industrial uses remain viable and that land use development along the edges of the Seaport Core districts is thoughtfully planned to avoid land use conflicts and incompatibility.

Consider collaborative efforts to develop landscape and street standards that recognize the special working character of the Seaport Core districts.

Policy LUED-86: Within the Seaport Core Primary district, the Port should assume a greater role in setting level of service and concurrency standards as established in the Public Facilities and Services Element.

Policy LUED-87: In order to ensure that the Seaport Core districts continues to serve future port needs, encourage the Port of Tacoma to develop and periodically update a comprehensive long-range maritime development program that assesses future cargo market demand, developing technologies, geographic constraints and other factors affecting future intermodal cargo opportunities, and land and capital investment necessary to permit Tacoma to continue to serve port and port-related cargo and related industrial needs.

Policy LUED-88: Ensure transit-oriented development in the Seaport Transition TOD district around high-capacity transit station areas in and near the subarea is compatible with industrial uses and supports the economic vitality of the MIC.

GUIDING PRINCIPLE 28: 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-89: Promote the continued growth and vitality of port and port related industrial activity.

Policy LUED-90: Achieve the following employment growth target by 2044: 17,250 net total jobs by working together on workforce and economic development.

Policy LUED-91: Work together to target and recruit new businesses that support port and port-related industrial activity.

Policy LUED-92: Identify and consider opportunities to remove obstacles to development and to incentivize businesses that support container port and port-related industrial activity.

Policy LUED-93: Seek opportunities, such as speaking engagements, articles and others, to highlight economic development success stories in the port area.

Policy LUED-94: 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 29: 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-95: Prioritize high quality living wage jobs that balance environmental sustainability and economic competitiveness.

Policy LUED-96: 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 commercial buildings in excess of 100,000 square feet.

Policy LUED-97: Encourage retrofitting of existing buildings to reduce building energy use.

Policy LUED-98: 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-99: Focus on economic opportunities out of public and private sector efforts to decarbonize the economy.

Policy LUED-100: Use the purchasing power of regional partners to support new and innovative products and processes.

Policy LUED-101: Strengthen partnerships with institutions of higher education to foster innovation.Coordinated and proactive investment in infrastructure supports mobility, economic development, environmental protection, and climate resiliency.

GUIDING PRINCIPLE 30: The subarea offers expanded access to jobs with diverse career pathways and entry points.

Policy LUED-102: 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-103: 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-104: 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.

GUIDING PRINCIPLE 31: The subarea has effective buffers with neighboring communities that demonstrates how a world class port can thrive alongside growing and vibrant urban neighborhoods.

Policy LUED-105: Establish transitional zones such as Seaport Core Conservancy (SC) and Seaport Transition (ST) around the Seaport Core districts that will protect the continued viability of the district while providing for a compatible transition to development in the larger surrounding area.

Policy LUED-106: Collaborate with adjacent jurisdictions, including Pierce County and the City of Fife, to ensure effective transition areas from the Seaport Core and Transition districts to larger surrounding areas.

Policy LUED-107: Protect natural buffers, such as steep slopes, or vegetated areas and water bodies to help buffer and separate incompatible uses. Ensure that unrelated uses in the transitional zones or natural buffer areas are not allowed to gradually encroach on the Seaport Core district(s) boundary. The transitional zones and buffer areas should remain of sufficient size to provide long-term protection of the Seaport Core districts.

Policy LUED-108: Development standards for industrial and commercial activities in the transitional zones should ensure compatibility with the activity levels and physical character of adjacent less intensive community character.

Policy LUED-109: Recognizing the importance of industrial activity to the local and regional economy, industrial uses in the transitional zones should be preserved and promoted. Industrial uses, including non-water related industry, is compatible with and can support maritime industrial uses in the Seaport Core districts, as well as contributing to the region's economy as a whole.

Policy LUED-110: While the transitional zones may allow a wider range of uses than the Seaport Core districts, incompatible uses that would be impacted by the potential noise, odor and visual character of industrial areas should continue to be prohibited. This includes residential or other sensitive uses.

Policy LUED-111: Establish development or performance standards to allow for continued viability of the transitional zones, while protecting the livability of adjacent areas.

6.3 PRIORITY ACTIONS AND REGULATORY RECOMMENDATIONS

Updating Regulations

Action A-87: Work with adjacent jurisdictions in the adoption of new zoning districts, development regulations, and use restrictions within the tideflats, to further the intent of Policy LUED-105 – LUED 111.

Streamlining Regulations and Processes

Action A-88: 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 A-89: 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 A-90: 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 A-91: 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 A-92: 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 A-93: 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 A-94: Offer capacity-building services including loan funds, technical assistance, and training courses for small businesses in priority sectors at risk of displacement.

Action A-95: 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 A-96: Attract **business services** to the subarea to support and scale existing businesses and attract new businesses.

Action A-97: Work together to **apply for grants** to prepare industrial sites for growth.

Action A-98: Create **cooperative spaces** that support entrepreneurship and growth for existing businesses.

Workforce Development

Action A-99: 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 A-100: 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.).

Action A-101: Connect 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

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)

or be immediately engaged to provide follow-up assistance to firms interested in apprenticeship.

Action A-102: 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 A-103: 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

Action A-104: Collaborate with workforce development providers and stakeholders to promote and retain jobs in the MIC.

Action A-105: Create development regulations that maintain effective transition areas and buffers.

Action A-106: Support and promote land owners who are cleaning up contaminated sites.

Regulatory Recommendations

Seaport Core Primary (SCP) District

The SCP district is intended to define and protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (3)(a). SCP implements the Tideflats Subarea Plan of the Comprehensive Plan by allowing uses that protect the long-term function and viability of the seaport within the Regional Manufacturing/Industrial Center. The subarea is characterized by proximity to deepwater berthing that supports 24-hour regional and

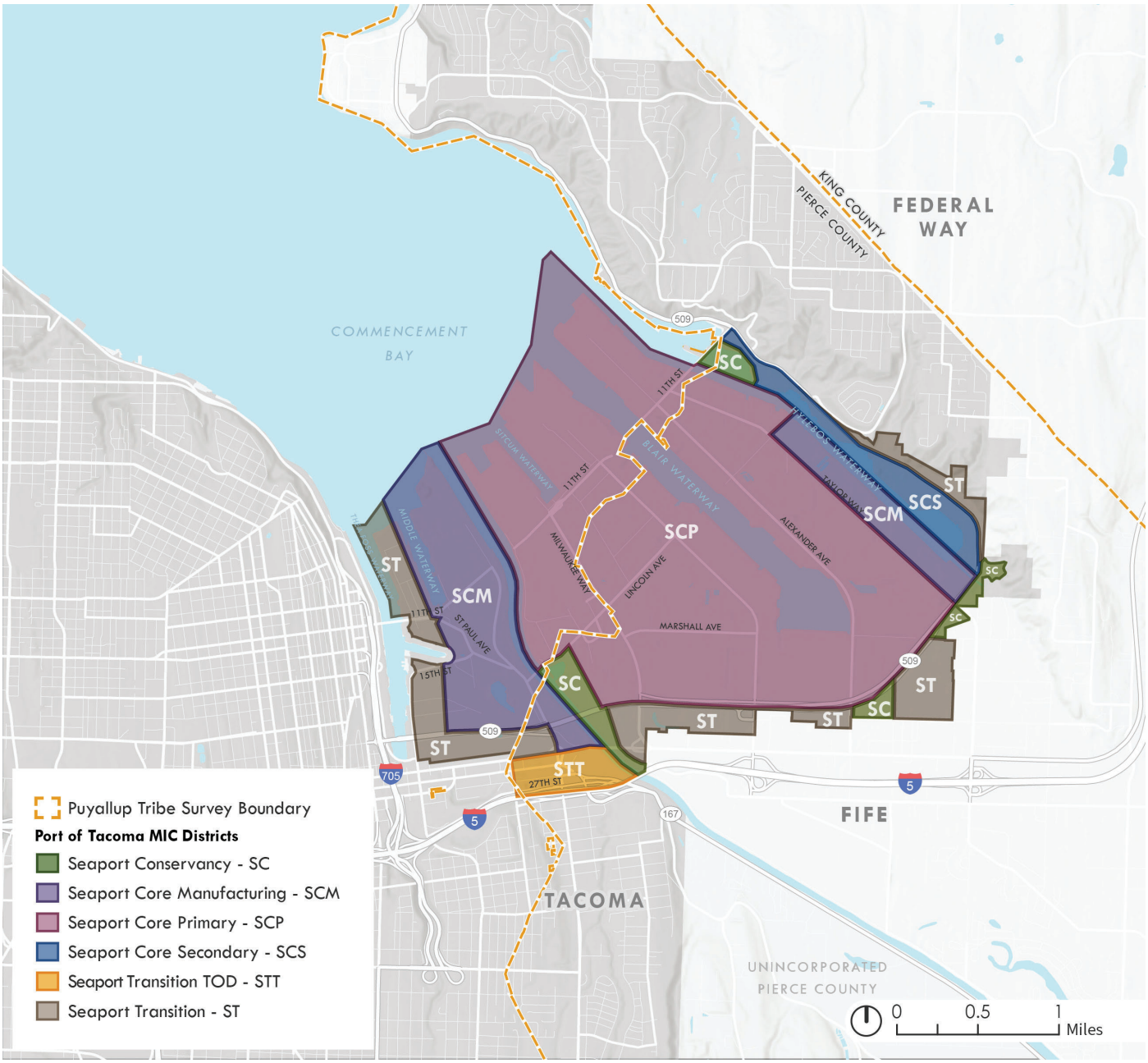


Figure 73. Port of Tacoma Manufacturing/Industrial Center (MIC) Districts
Source: Steering Committee Discussion, 2024; Seva Workshop, 2024

international shipping. Use priorities include cargo shipping terminals, seaport-related container and industrial activity, seaport-related offices, cargo and equipment storage yards, warehousing, transportation facilities, vessel fueling operations and support facilities, and rail yards. The district includes heavy truck traffic and higher levels of noise and odors than found in other city districts. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads. Retail and commercial uses are ancillary and primarily serve the subarea's employees. Housing is allowed only for caretakers of allowed uses.

Seaport Core Manufacturing (SCM) District

The SCM district is intended to define and protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (3)(a). SCM implements the Tideflats Subarea Plan of the Comprehensive Plan by allowing uses that protect the long-term function and viability of the seaport within the Regional Manufacturing/Industrial Center. The subarea is characterized by proximity to deepwater berthing that supports 24-hour regional and international shipping and distribution. Use priorities in SCM include cargo shipping terminals, seaport-related container and industrial activity, seaport-related office, cargo and equipment storage yards, warehousing, transportation facilities, vessel fueling operations and support facilities, and intermodal yards. SCM is distinguished from SCP by allowing compatible basic manufacturing of raw materials and uses which rely on the deep water berthing to transport raw materials for processing or manufacture and distribution, as well as uses involved with final assembly, processing, fabrication, and packaging. The district includes heavy truck traffic and higher levels of noise and odors than found in other city districts. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads. Retail and commercial uses are ancillary and primarily serve the subarea's employees. Housing is allowed only for caretakers of allowed uses.

Seaport Core Secondary (SCS) District

The SCS district is intended to define and protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (3)(a). SCS implements the Tideflats Subarea Plan of the Comprehensive Plan by allowing uses that protect the long-term function and viability of the seaport within the Regional Manufacturing/Industrial Center. The subarea is characterized by proximity to deepwater berthing that supports 24-hour regional and international shipping and distribution. Use priorities in SCS include cargo shipping terminals, seaport-related container and industrial activity, seaport-related offices, cargo and equipment storage yards, warehousing, transportation facilities, and intermodal yards. SCS is distinguished from SCP by allowing compatible final manufacturing, research and development, limited cultural establishments related to and which may rely on or be related to the seaport. The district includes heavy truck traffic and higher levels of noise and odors than found in other city districts. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads. Retail and commercial uses are ancillary and primarily serve the subarea's employees. Housing is allowed only for caretakers of allowed uses.

Seaport Transition (ST) District

The ST district is intended to serve as a transition zone between incompatible uses to protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (6)(c). The ST district is intended to support implementation of the Tideflats Subarea Plan of the Comprehensive Plan, specifically pertaining to the transition between the core area and the neighboring areas, and to protect the long-term function and viability of the seaport within the Regional Manufacturing/ Industrial Center. The ST district provides areas for light manufacturing, warehousing, and a limited mix of commercial or civic uses that are complementary and not detrimental to either existing or proposed seaport uses or neighboring commercial or residential districts. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads. Housing is allowed only for caretakers of allowed uses.

Seaport Transition TOD (STT) District

The STT district is intended to serve as a transition zone between incompatible uses to protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (6)(c). The STT district is intended to support implementation of the Tideflats Subarea Plan of the Comprehensive Plan, specifically pertaining to the transition between the core area and the neighboring areas, and to protect the long-term function and viability of the seaport within the Regional Manufacturing/ Industrial Center (MIC). The STT district provides areas for light manufacturing, warehousing, and a limited mix of commercial or civic uses that are complementary to either existing or proposed seaport uses, neighboring commercial, or residential districts and is distinguished from the ST district by allowing uses compatible with high-capacity transit located in the district such as multi-family housing. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads, but it is also understood that there will be a higher level of pedestrian and bicycle activity in the STT district.

Seaport Conservancy (SC) District

The SC district is intended to serve as a transition zone between incompatible uses to protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (6)(c). The SC district is intended to support implementation of the Tideflats Subarea Plan of the Comprehensive Plan, specifically pertaining to the transition between the core area and the neighboring areas, and to protect the long-term function and viability of the seaport within the Regional Manufacturing/ Industrial Center. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads. Use priorities in SC are habitat preservation intending to protect the long-term function and viability of key wetland, fish and wildlife habitat, and drainage districts.

EXAMPLE USES ALLOWED PORT OF TACOMA MANUFACTURING/INDUSTRIAL CENTER (MIC)					
Use	Seaport Core Primary **SCP**	Seaport Core Manufacturing **SCM**	Seaport Core Secondary **SCS**	Seaport Transition **ST**	Seaport Transition TOD **STT**
Pre-existing uses that existed prior to the subarea plan – subject to development standards TMC 13.06.010 L.	✓	✓	✓	✓	✓
Boat and ship building, storage, and maintenance	✓	✓	✓	✓	
Caretaker housing unit	✓	✓	✓	✓	
Cargo and container marshalling and storage (includes imported autos)	✓	✓	✓	✓	
Cement and asphalt batching plant**		✓			
Chemical manufacturing and plant**		conditional			
Cleaner fuel infrastructure**	conditional	conditional			
Commercial bakery		✓	✓	✓	✓*
Craft production				✓	✓
Food processing		✓	✓*	✓*	
Heavy vehicle and driver services, and fueling	✓	✓	✓	✓	✓
Laundry and dry-cleaning plants**		✓	✓*		
Log yard, lumber yard, sawmill (no chemical treatment) **	✓	✓	✓*		
Manufacturing - basic processing from raw materials		✓	✓*		
Manufacturing - final assembly, processing, fabrication, packaging		✓	✓	✓	✓*
Manufacturing – water dependent on shoreline properties	✓	✓	✓	✓	
Marina			✓	✓	
Marine fueling	✓*	✓*	✓*		
Rail yards and services	✓	✓	✓	✓	✓
Recycling facilities - industrial waste, food, metal	conditional	✓*	conditional		
Seaport terminal	✓	✓	✓		

SYMBOLOGY

✓ Use is allowed.
* Performance standards apply, such as being located indoors and limitations when within proximity to certain uses.
** Use must be located outside shorelines with no discharge to water.

TERMS

Conditional: new use requires review and approval of a Conditional Use Permit (CP) and includes special review criteria.
Ancillary: use is allowed subordinate to and supporting an allowed principal seaport-oriented use.
Seaport related: refers to activities that have a nexus to marine waters.

Figure 74. Port of Tacoma Manufacturing/Industrial Center (MIC) Example Allowable Uses by District
Source: Steering Committee Discussion, 2024; Seva Workshop, 2024

EXAMPLE USES ALLOWED PORT OF TACOMA MANUFACTURING/INDUSTRIAL CENTER (MIC)					
Use	Seaport Core Primary **SCP**	Seaport Core Manufacturing **SCM**	Seaport Core Secondary **SCS**	Seaport Transition **ST**	Seaport Transition TOD **STT**
Storage of bulk or raw materials	✓	✓	✓*		
Truck and chassis parking related to seaport operations	✓	✓	✓	✓	
Urban horticulture – industrial scale		✓	✓	✓	
Warehouse and transload facility	✓	✓	✓	✓	
Wholesale heavy equipment and construction supply		✓	✓	✓	
Daycare – limited in size			ancillary	ancillary	✓
Cultural and historical establishments – seaport related		ancillary	✓	✓	✓
Eating/drinking establishments – limited in size	✓	✓	✓	✓	✓
Housing – multifamily with commercial or industrial					✓
Hotel and motel					✓
Medical facilities – limited in size	✓	✓	✓	✓	✓
Offices - related to a seaport use and limited in size	✓	✓	✓	✓	✓
Recreation - passive and open space	✓	✓	✓	✓	✓
Religious assembly – limited in size				✓	✓
Research and development related to seaport	ancillary	✓	✓	✓	✓
Retail – limited and seaport related		ancillary	ancillary	✓	✓
Vehicle fueling and services	ancillary	ancillary	✓	✓	✓
Workforce training and hiring services for seaport and related trades	✓	✓	✓	✓	✓
Habitat preservation and mitigation sites	✓	✓	✓	✓	✓
Utilities, water, sewer, power, internet, stormwater & decant facilities	✓	✓	✓	✓	✓

Seaport Conservancy (SC) Allowed Uses

Coastal resilience flood plain management projects
Educational/informational signage
Habitat mitigation and restoration
Passive recreation and public access (non-motorized)
Rail tracks and Roads
Tribal Treaty protected uses and resources
Utilities

SYMBOLOGY

✓ Use is allowed.
* Performance standards apply, such as being located indoors and limitations when within proximity to certain uses.
** Use must be located outside shorelines with no discharge to water.

TERMS

Conditional: new use requires review and approval of a Conditional Use Permit (CP) and includes special review criteria.
Ancillary: use is allowed subordinate to and supporting an allowed principal seaport-oriented use.
Seaport related: refers to activities that have a nexus to marine waters.

The following new uses would **not** be allowed in the subarea:

- Adult entertainment
- Animal rendering facilities
- Animal slaughter and husbandry
- Auto wrecking yard
- Cannabis growing and processing
- Golf course
- Hospital
- Institutions (jail, rehab, nursing homes…)
- Ministorage
- Pulp and Paper mill
- Surface mine
- Tire related manufacturing and processing

7 Implementation

TRANSPORTATION AND INFRASTRUCTURE GUIDING PRINCIPLES

GUIDING PRINCIPLE 18: Ongoing coordinated problem solving among stakeholders with a shared sense of responsibilities and priorities, and proactive leadership among the partners.

GUIDING PRINCIPLE 19: Ongoing collaboration and dialogue among governments, agencies, communities, and businesses implements the subarea plan.

Implementation 7

7.1 INTRODUCTION

The purpose of this chapter is to provide an implementation strategy for the subarea plan. Contents of chapter include:

> Policies and actions and regulatory recommendations to guide implementation

> Summary of how implementation will work

> Tables of implementation priorities, responsible parties, performance measures

7.2 POLICIES

GUIDING PRINCIPLE 32: Ongoing coordinated problem solving among stakeholders with a shared sense of responsibilities and priorities, and proactive leadership among the partners.

Policy I-112: The City of Tacoma, Port of Tacoma, Puyallup Tribe of Indians, City of Fife, and Pierce County work together to address any new challenges or opportunities that arise related to this plan.

GUIDING PRINCIPLE 33: Ongoing collaboration and dialogue among governments, agencies, communities, and businesses implements the subarea plan.

Policy I-113: The City of Tacoma, Port of Tacoma, Puyallup Tribe of Indians, City of Fife, and Pierce County work together to implement the actions in this plan and monitor performance measures. They coordinate with local, regional, and federal partners as needed.

7.3 ACTIONS

Figure 75. Implementation Table 1: Actions and Regulatory Recommendations
Source: Steering Committee Discussion, 2024; Seva Workshop, 2024

	ACTION/RECOMMENDATION
ENVIRONMENT AND HEALTH	**Action A-1:** Support existing programmatic efforts to increase shoreline public access and recreation to the subarea such as boat tours, and maritime-oriented cultural facilities like the Foss Waterway Seaport.
	Action A-2: Support regular coordination between government and Tribal partners to regularly communicate access issues related to boat ramps and other fisheries & water vessel access points.
	Action A-3: Limit on-site access to restoration sites to protect ecological functions while providing opportunities for wildlife viewing and education about the area's ecology and restoration efforts.
	Action A-4: Consider offering public access fee-in-lieu methodology into the Shoreline Master Program to provide greater clarity and certainty to future permit applicants. Consider performance tracking and periodic updates to the fee methodology and priority project list to ensure the program is effective in delivering public access opportunities.
	Action A-5: On the Foss Waterway, consider new development opportunities and public facilities such as fishing piers, bike paths, an exercise course, a boat launch, and benches and paths along the shoreline where feasible, and consistent with the Shoreline Public Access Alternatives Plan and Tacoma Waterfront Design Guidelines.
	Action A-6: Work with the Washington Department of Natural Resources, Department of Ecology, Department of Fish and Wildlife, the National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program, and the Coast Guard to remove and dispose of abandoned or derelict vessels in marinas or surrounding waters.
	Action A-7: Where practical, promote access to shellfish harvesting and fishing in the subarea through protecting existing shoreline environments from further encroachment, consider expansion of these environments, and identify rehabilitation efforts to prevent contamination.
	Action A-8: Implement priority near-term shoreline public access improvements that include the Thea Foss Waterway, Marine View Drive, and regional trails.
	Action A-9: Update Public Access Alternatives Plan with partner governments and Metro Parks Tacoma to re-evaluate city-wide access system and roles and responsibilities, funding mechanisms, and cost estimates to complete the system.
	Action A-10: Consider updates to project prioritization criteria in the City of Tacoma Comprehensive Plan Park and Recreation and Transportation Elements to reflect multiple values of projects that enhance waterfront access as well as perform other transportation and recreation functions.

	ACTION/RECOMMENDATION
ENVIRONMENT AND HEALTH	**Action A-11:** Building on the Environmental Protection Agency (EPA) and the Port's Brownfield Advisory Committee, create a brownfield redevelopment workgroup and forum to collaborate, prioritize, and advocate for brownfield cleanup in the Tideflats.
	Action A-12: Pursue brownfield remediation of contaminated City, Port, Puyallup Tribe, and County-owned properties as a strategy to encourage redevelopment in the Subarea, prioritizing strategically located sites that are at the highest risk to the environment or are potential catalysts for the type of development envisioned in the Plan.
	Action A-13: Coordinate with local businesses and possibly team with private developers, to create business support services that reduce the burden of brownfield development.
	Action A-14: Develop an intergovernmental partnership plan to answer the following questions: > What funding tools are readily available, like industrial revenue bonds or tax increment financing, to support private companies to overcome the fear of environmental liability? > What tools are available to create disincentives for an owner to leave a property underutilized?
	Action A-15: Continue to pursue funding, including grants from the EPA, Department of Commerce, Department of Ecology, and other sources to fund area-wide brownfield assessment work.
	Action A-16: Coordinate with the funding agencies to clarify and possibly update eligibility requirements. Work to streamline grant requirements while maximizing the benefits of a particular grant.
	Action A-17: Maintain and enhance the Site Inventory Tool of the Tideflats, recently developed for EPA's Environmental Assessment Grant.
	Action A-18: Review and improve data inputs and data quality of Ecology's database of confirmed and suspected Sites list to better assist in areawide cleanup planning within the Tideflats.
	Action A-19: Develop public information pages documenting cleanup status and actions for individual properties to record the site cleanup history, improve public communications, and reduce the due diligence transaction cost with future property lease or sale.
	Action A-20: Every contaminated site is treated as if it is unique. However, there are commonalities that could be evaluated through Subarea wide studies. See Chapter 3 for more detail.
	Action A-21: Develop Model Remedies with Ecology specific to the Subarea to streamline remedy selection.
	Action A-22: Develop Remediation Levels that consider Subarea specific human health and ecological exposure pathways, to guide remedy selection and implementation.
	Action A-23: Develop partnerships with local universities aiming to combine academic research with the practical implementation of Port and industrial projects within the subarea. Fostering these relationships will improve work skills and lead to enhanced workforce development.

	ACTION/RECOMMENDATION
ENVIRONMENT AND HEALTH	**Action A-24:** Create a proactive habitat restoration plan for the Tideflats to increase restoration acreage. The Plan can address opportunities and priorities to protect and gain ecological functions. See Chapter 3 for more detail.
	Action A-25: Increase tree canopy in the Tideflats from 4% land cover to 8% (as measured at tree maturity) land cover by 2030 and 16% by 2045. See Chapter 3 for more detail.
	Action A-26: Develop landscaping requirements for the subarea to mitigate light and noise of new development while recognizing truck and rail operations must retain appropriate clearance and sightlines for safety. See Chapter 3 for more detail.
	Action A-27: Develop impervious surface standards for the subarea. See Chapter 3 for more detail.
	Action A-28: During the next shoreline master program amendment, consider increasing building setbacks from shoreline for buildings that are not a water-dependent use.
	Action A-29: During the next shoreline master program amendment, review best available science to inform updates to the Shoreline Master Program and Critical Areas code regarding critical area buffer widths and functionality, buffer modification allowances, and the potential cumulative impacts of continuing industrial activities. Code updates should also consider increased coastal flooding potential from sea level rise.
	Action A-30: Inventory and characterize the culverts within the Tideflat Subarea to determine asset age, replacement needs, and assess potential fish passage barriers.
	Action A-31: Implement riparian improvements along Alexander Ave E between 4th St E and 509 to manage stormwater runoff and further improve water quality and habitat value of Wapato Creek.
	Action A-32: Increase habitat restoration along the Puyallup River such as correcting encroachment for areas that have seen decreases in buffer widths, designing and implementing projects that ensure ecologically productive buffers.
	Action A-33: Require the use of green stormwater infrastructure and low-impact development where feasible to address increased storm intensities and stormwater runoff, especially in areas found within the priority subbasins for Stormwater Management defined below. *See related Action A-27.*
	Action A-34: Work with FEMA, Pierce County, and other agencies in the lower Puyallup watershed to update the 100 and 500-year floodplain maps; consider local update and adoption of 500-year floodplain maps for the purposes of applying local building code, critical area development standards, and land use development standards.
	Action A-35: Work with the Army Corps of Engineers to update levee standards to improve fish and wildlife habitat along the Puyallup River. Partner with Pierce County and the Flood Control District to acquire properties along the Puyallup River for future flood control and riparian improvements.

	ACTION/RECOMMENDATION
ENVIRONMENT AND HEALTH	**Action A-36:** Establish an Equitable Climate Action Plan Consistency Checklist. Proposed projects must submit the Checklist; the project must demonstrate it aligns with the Tacoma Climate Action Plan and has a greenhouse gas emissions reduction plan that aligns with local greenhouse gas emissions reduction goals.
	Action A-37: Increase street sweeping along roads and highways to decrease exposure to road dust and improve stormwater management. *See related Action A-27.*
	Action A-38: Explore the idea of a local pollution surcharge for the largest generators of air and water pollutants and potential revenue to support habitat restoration and mitigation projects.
	Action A-39: Develop and implement an urban heat resilience strategy.
	Action A-40: Explore with the Puyallup Tribe a phased transfer of ownership of open space and land designated for habitat or habitat protection.
	Action A-41: Evaluate integrating health assessment into the permit process.
	Action A-42: To ensure indoor air quality in places where people will live, work, or gather, encourage the upgrade of ventilation systems and pursue resources and grants to facilitate conversions.
	Action A-43: Require projects and developments that register new air pollution equipment to monitor air emissions and provide the city an annual air quality report.
	Action A-44: Work with the Puget Sound Clean Air Agency (PSCAA) and WA State Department of Ecology to establish appropriate regional air toxic standards and mitigation approaches for facility and mobile emission sources. Include standards for limiting cumulative air quality impacts.
	Action A-45: Update city code to require new projects to strive for zero greenhouse gas emission design, construction, and operation. Specifically consider updating building and energy codes to increase the number of EV-capable or EV-ready parking spaces and solar readiness.
	Action A-46: Incentivize projects which are focused on clean technologies and/or processes as well as those operators that deploy clean fleet relative to fleet standards in Washington.
	Action A-47: Improve community information and action for air quality. See Chapter 3 for more detail.
	Action A-48: Incentivize industries focused on clean technologies/ processes. Consider strategies in Tacoma's Green Economic Development Strategy (RM Donahue Consulting et al, 2023).
	Action A-49: Support zero emission technology innovation in the marine, trucking and rail sector. Offer more incentives to replace diesel trucks with cleaner engines or zero emission engines.
	Action A-50: Adopt applicable best management practices (BMPs) to manage particulate tire wear, 6PPD, and 6PPDquinone and their effects on fish habitat. See Chapter 3 for more detail.

	ACTION/RECOMMENDATION
ENVIRONMENT AND HEALTH	**Action A-51:** Fund grants for building energy efficiency upgrades to reduce infiltration of pollutants and to install high-efficiency air filtration systems at critical and sensitive facilities (schools, day care facilities, apartments, other).
	Action A-52: Expand urban greening to filter pollution and employ equitable funding strategies to advance Tacoma's Urban Forest Management Plan in overburdened communities.
	Action A-53: Consider adopting noise standards for non-port related uses (i.e. terminal operations, shipping, trucking, rail) in the subarea and options for businesses to develop noise compliance plans with measures to reduce noise levels outside the subarea.
	Action A-54: Coordinate regularly with agencies who rely on public utilities within the Port of Tacoma MIC to meet state and federal requirements within their jurisdictions. Provide unified support, and funding where appropriate, for necessary upgrades to these facilities.
TRIBAL ASSETS	**Action A-55:** For archaeological resources, conduct a thorough review under the existing regulatory framework to avoid, minimize, or mitigate impacts on these resources within the study area.
	Action A-56: Support cultural resources review by undertaking a comprehensive assessment of the Tideflats area to establish a framework for future cultural resources studies. See Chapter 4 for more detail.
	Action A-57: Continue historic property inventory surveys, eligibility assessments, and completion of inventory forms to avoid or mitigate any impacts of future development.
	Action A-58: Develop a Planned Action permit review process with the Puyallup Tribe of Indians. For example, in the Planned Action Ordinance, the City could identify a decision tree regarding cultural resources review requirements at a project level. See Chapter 4 for more detail.
	Action A-59: Protect cultural resources at risk due to exposure to sea level rise. See Chapter 4 for more detail.
	Action A-60: Support cultural and natural resources, and treaty rights. See Chapter 4 for more detail.
	Action A-61: Identify parcels for strategic acquisition that are not developable, locations that would provide a buffer or transition adjacent to sensitive uses (habitat or cultural sites), locations that have restoration potential or create contiguous sites, locations such as geo hazards, etc. that would help avoid risks to life and property to avoid property speculation.

	ACTION/RECOMMENDATION
TRANSPORTATION AND INFRASTRUCTURE	**Action A-62:** For archaeological resources, conduct a thorough review under the existing regulatory framework to avoid, minimize, or mitigate impacts on these resources within the study area.
	Action A-63: Map, monitor, and analyze coastal flood events.
	Action A-64: Conduct a Sea Level Rise Risk Assessment or add sea level rise into other hazard assessments such as wave runup, storm surge, and tsunami hazard assessments.
	Action A-65: Conduct a review of current science focusing on flooding impacts to critical roads, infrastructure, and steep slopes due to increasing intense rainfall events, sea level rise, flooding, and landslides. Integrate findings into City development codes, emergency management, and capital planning.
	Action A-66: Explore smart technologies to monitor changing conditions and identify potential threats. Smart technology applications may be especially useful in monitoring sites and areas that are hard to reach. For example, installing water-detection sensors in underground utility vaults may help identify water intrusion from events like groundwater flooding that may otherwise go unnoticed.
	Action A-67: Maintain up-to-date floodplain maps. Collaborate with FEMA and regional partners to develop a systematic way to regularly update the maps as projects affecting the floodplain are completed.
	Action A-68: Develop a local floodplain definition to help revise mitigation and adaptation strategies.
	Action A-69: Implement flood mitigation measures in low-lying areas such as in surrounding drainage canals within the MIC, the southern portion of the Thea Foss Waterway at the Route 509 bridge, and Near I5 south of the Blair Waterway.
	Action A-70: Implement flood mitigation efforts at the Central Wastewater Treatment Plant.
	Action A-71: Restrict hazardous uses in the 500-year floodplain.
	Action A-72: Develop a retrofit plan for public infrastructure in coastal flood hazard areas. Assess conditions of seawalls, piers, revetments, shoreline infrastructure, open spaces, parks, and habitat to identify length of service, repair, and maintenance.
	Action A-73: Evaluate flooding impacts on existing habitat areas such as areas at the mouth of the Puyallup River, Blair Waterway, Hylebos Waterway, and Wapato Creek. Implement additional modifications to mitigate flooding impacts on surrounding areas. See Chapter 5 for more detail.
	Action A-74: Prioritize protecting existing habitat sites to avoid decrease in ecological function due to coastal flooding impacts. See Chapter 5 for more detail.
	Action A-75: Maintain Port of Tacoma's status and capabilities as a Strategic Seaport. The Port of Tacoma is a Commercial Strategic Seaport and part of the National Port Readiness Network and must be ready to make the port and its facilities available to support the deployment of military forces. See Chapter 5 for more detail.

	ACTION/RECOMMENDATION
TRANSPORTATION AND INFRASTRUCTURE	**Action A-76:** In coordination with WSDOT, local jurisdictions, transit agencies, law enforcement and other emergency entities, identify high-priority locations to implement intelligent transportation systems (ITS) and other transportation systems management and operations (TSMO) improvements. High-priority investments within the subarea could include signal priority, wayfinding, and geometric improvements for freight, in addition to dynamic roadway messaging and warnings. An initial phase of this effort has already begun.
	Action A-77: Recognize the Port of Tacoma MIC is dependent on adjacent transportation infrastructure owners and partner with WSDOT and the City of Fife to coordinate sequencing and construction of planned roadway projects to maintain freight fluidity as well as improve transit and multimodal access at a system level.
	Action A-78: Coordinate with pertinent jurisdictions, entities, and private interests to implement a transportation management association (TMA) for the subarea. The purpose of this TMA would be to implement policies and supportive tools to improve travel demand management, such as establishing parking maximums/minimums, reducing spillover parking, unbundling parking costs, increasing parking taxes/fees, and reviewing/revising transit pass provision programs for employees within the subarea.
	Action A-79: Partner with Pierce Transit (PT) to phase in transit service expansion over time. See Chapter 5 for more detail.
	Action A-80: Develop City-led and private partnerships to encourage the development of safe and accessible infrastructure for all modes within the MIC road network. This would include revising the City's transportation design standards to facilitate balancing multimodal and freight (truck and rail) needs by reflecting safety improvements within the subarea, and to require sidewalks at a minimum as part of future roadway improvements. Safety needs identified include pedestrian crossing and access improvements to facilitate access into and out of the subarea as well as along key corridors within the subarea itself.
	Action A-81: Consider parking strategies that manage on-street parking demand and supply, including implementing time limits, restricted parking zones, and implementing additional off-street truck staging and processing facilities. To facilitate additional off-street truck staging, perform a siting study to determine feasible locations for potential staging areas.
	Action A-82: Coordinate with railroad owners on safety or grade separation projects to support movement of freight by rail and compatibility with the roadway network.
	Action A-83: Identify opportunities to lower driver speed to reduce severity of crashes through redesign of roadway. This should include implementation of a safety countermeasure fee or fund that new developments within the subarea must pay into. Explore the use of automated speed enforcement cameras to improve traffic safety in the subarea.

	ACTION/RECOMMENDATION
	Action A-84: For corridors identified as Heavy Haul Routes, update the Public Works Design Manual to prioritize safety, support multimodal transportation, and accommodate semi-truck traffic and the industrial uses of the Container Port.
	Action A-85: Identify funding opportunities to fund projects and actions in the Subarea Plan. See Chapter 5 for more detail.
	Action A-86: The regional partners will work collaboratively to implement the projects contained in the priority project list, shown in Figure 71. The near-term focus of this implementation would be on Tier 1 projects, with Tier 2 projects being considered longer-term and/or lower-priority investments for the subarea.
LAND USE AND ECONOMIC DEVELOPMENT	**Action A-87:** Work with adjacent jurisdictions in the adoption of new zoning districts, development regulations, and use restrictions within the tideflats, to further the intent of Policy LUED-105 – LUED 111.
	Action A-88: 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 A-89: 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.
	Action A-90: Support the **maritime sector**. See Chapter 6 for more detail.
	Action A-91: Support the development of a **green energy sector**. See Chapter 6 for more detail.
	Action A-92: Support the development of an **industrial symbiosis sector**. See Chapter 6 for more detail.
	Action A-93: Support the development of a **green building technologies sector**. See Chapter 6 for more detail.
	Action A-94: Offer capacity-building services including loan funds, technical assistance, and training courses for small businesses in priority sectors at risk of displacement.
	Action A-95: 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.
	Action A-96: Attract **business services** to the subarea to support and scale existing businesses and attract new businesses.
	Action A-97: Work together to **apply for grants** to prepare industrial sites for growth.
	Action A-98: Create **cooperative spaces** that support entrepreneurship and growth for existing businesses.

	ACTION/RECOMMENDATION
LAND USE AND ECONOMIC DEVELOPMENT	**Action A-99:** Invest in workforce development and career connected learning for youth, for careers in priority sectors. See Chapter 6 for more detail.
	Action A-100: 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.).
	Action A-101: Connect 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 A-102: 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 A-103: Invest in Workforce Central's ability to fund (directly or through nonprofits) robust **wrap-around supports and stipends to pre-apprenticeship participants.** See Chapter 6 for more detail.
	Action A-104: Collaborate with workforce development providers and stakeholders to promote and retain jobs in the MIC.
	Action A-105: Create development regulations that maintain effective transition areas and buffers.
	Action A-106: Support and promote land owners who are cleaning up contaminated sites.

7.4 INVESTMENTS

The table below shows all potential investments, particularly transportation projects that implement the vision of the Subarea plan. These include projects flagged specifically within the EIS, as well as projects flagged as a priority by Port of Tacoma, City of Tacoma, City of Fife, and Puyallup Tribe staff (see the "Priority" column). Other potential projects brought up by jurisdictional staff but not given a priority level are also included, denoted in italics. Projects are also subdivided into which geographic area of the subarea they correspond to; this includes general projects, which apply Subarea-wide.

Figure 76. Implementation Table 2: Projects and Investments
Source: Steering Committee Discussion, 2024; Seva Workshop, 2024

ID	PROJECT NAME	DESCRIPTION	COST	PHASE	PRIORITY	MODE
West of Puyallup River						
TA-P01	Lincoln Ave & Portland Ave	This project is to improve the intersection of Lincoln Ave and Portland Ave to reduce intersection delay. In 2022, the Port prepared several design concepts and have forwarded them to the City. An earmark request to Rep. Kilmer's Office was submitted but does not appear to be receiving a recommendation to advance. A $2.5 million earmark has been awarded to the City of Tacoma to support this project.	TBD	Design	Tier 1	Multimodal
TA-P02	Portland Ave Freight Access	Project to reconstruct Portland Ave from Lincoln Ave to I-5 to heavy haul standards, improve the intersection with SR 509, and install additional fiber connections for ITS. The project was not funded through the FY2027-28 PSRC grant process. Project needs to be monitored to avoid impact to the future improvements at Lincoln Ave and Portland Ave.	$11 million; $692k confirmed for Design	Design	Tier 1	Multimodal
TA-P03	Puyallup Ave Corridor Improvements	Reconstruction of Puyallup Ave to concrete and complete street improvements in the area around the future TDLE Tacoma Dome station.	$41.5 million; $13.5 million unconfirmed	Design	Tier 1	Multimodal
TA-P04	Fishing Wars Memorial Bridge	Finish reconstruction of the Fishing Wars Memorial Bridge to restore the connection from Puyallup Ave to Pacific Hwy, fill the gap in the bicycle and pedestrian network, and lift the weight restriction to open Pacific Hwy, west of Port of Tacoma Road as a transit and freight corridor.	$310 million; $300 million unconfirmed	Design	Tier 1	Multimodal
TA-P05	Portland Avenue & E 26th Street	Perform a detailed engineering study at the intersection of Portland Avenue and E 26th Street to determine appropriate traffic control updates for the intersection. This should be done in coordination with Sound Transit's Tacoma Dome Link Extension.	TBD	Planning	Tier 1	Vehicle/ Freight

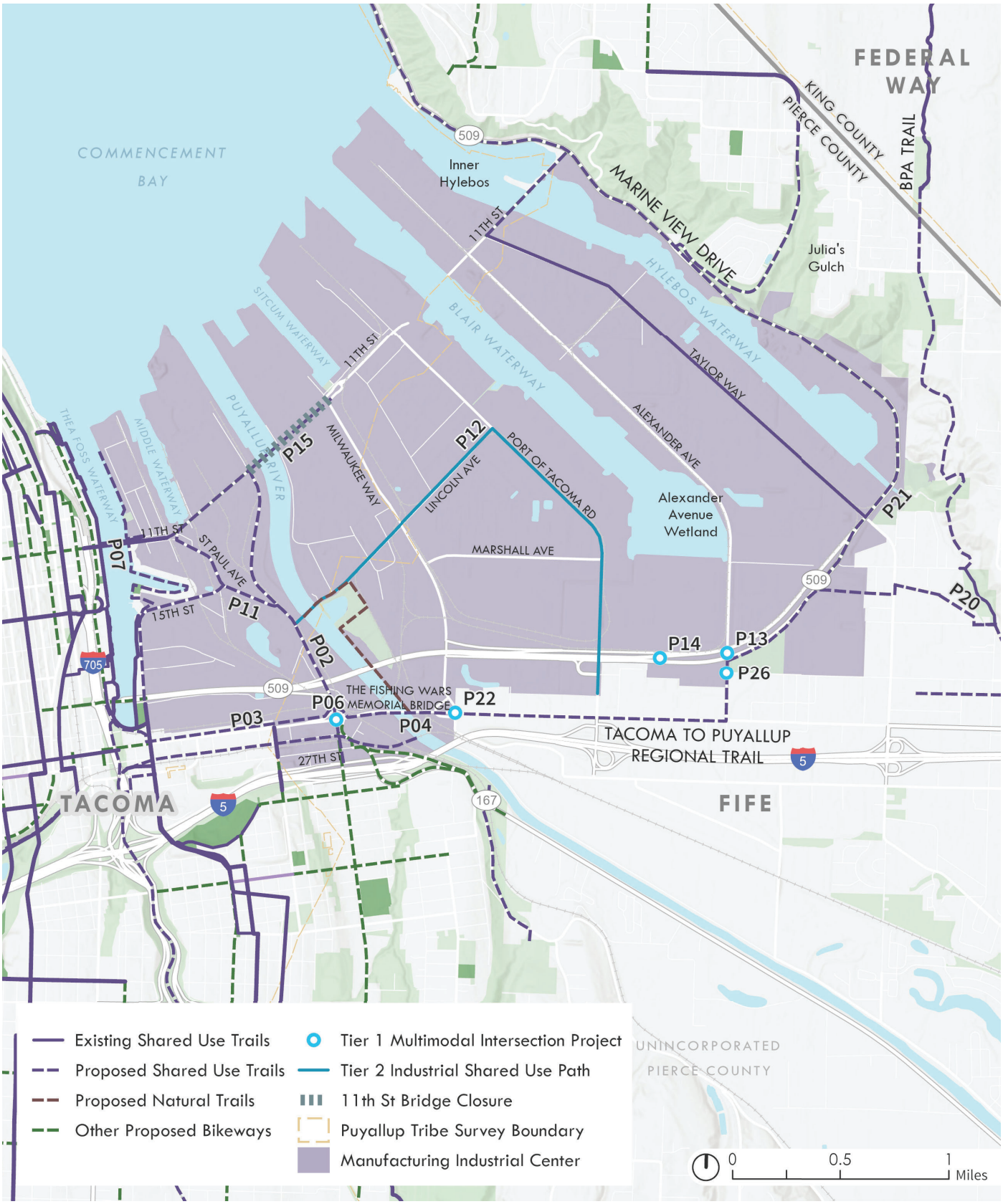


Figure 77. Existing Facilities and Planned Active Mode Improvements within the Subarea
Source: Fehr & Peers, 2024; Seva Workshop, 2024

ID	PROJECT NAME	DESCRIPTION	COST	PHASE	PRIORITY	MODE
TA-P06	Portland Ave & Puyallup Ave	Evaluate potential multimodal, safety, and capacity improvements along Portland Avenue as well as Puyallup Avenue to improve safety at the intersection of Portland Avenue and Puyallup Avenue.	TBD	Planning	Tier 1	Multimodal
TA-P07	East Foss Esplanade and Shoreline Access	Establish a shared use path adjacent to the waterway, where feasible, connecting the north and south ends of the Foss Waterway, from the Dome District to the Center for Urban Waters. When a shoreline alignment is infeasible improvements should be made to accommodate the facility on E D Street.	TBD	Planning and Design	Tier 1	Active
TA-P08	SR 509 Slip Ramps	Construct Half Single Point Urban Interchange at East D St. / SR 509 (Ramps to and from the east) and signal.	TBD	Planning	Tier 2	Vehicle/ Freight
TA-P09	East D Street Redesign	Widen East D St. north of East 11th St. (SB parking lane and 2 - 14' lanes, 10' sidewalk on west side. This also includes: -Improve East 15th St. / East D St. to include 10' sidewalk on west side, SB parking lane,14' SB lane, 12' landscaped median/turn pocket, 14' NB lane. Also improve pedestrian crossings at designated locations. Relocate transit stops/shelters to crosswalk locations. -Extend East D St. south of East 11th St. to link to East 15th St. (10' sidewalk on west side, SB parking lane, 2 - 11' travel lanes, 6' sidewalk on east side).	TBD	Planning	Tier 2	Vehicle/ Freight
TA-P10	11th Street & E F Street Intersection	Realign intersection at E. 11th St. and East F St.	TBD	Planning	Tier 2	Multimodal
TA-P11	Foss Peninsula Shared Use Facilities	Establish shared use facilities for E 11th, St. Paul, and E 15th Street serving the Foss Peninsula.	TBD	Planning	Tier 2	Active
Between Puyallup and Blair Waterway						
TA-P12	Port of Tacoma Rd/ Lincoln Ave Shared Use Path Feasibility Study	Conduct a planning study to evaluate the design feasibility and conceptual alignment of an industrial shared use path from City limits along Port of Tacoma Rd to Lincoln Ave and following Lincoln Ave to Portland Ave. The study should consider bicycle and pedestrian safety and access to major employers, while still giving priority to efficient freight movement throughout the Core Areas of the Port of Tacoma MIC. This includes the need to coordinate with Tacoma Rail about safety at rail crossings. Consolidation of sidewalks to meet shared use facility standards may be considered to provide an enhanced commute trip option for bicyclists and pedestrians and to reduce conflicts with freight access. This project depends on future widening of the Lincoln Ave Bridges.	TBD	Planning	Tier 2	Active

ID	PROJECT NAME	DESCRIPTION	COST	PHASE	PRIORITY	MODE
TA-P13	Alexander Ave & SR 509	Coordinate with WSDOT to update designs and planning for the intersection of Alexander Avenue and SR 509 to provide safe and efficient access at the intersection with the travel demand expected as part of the SR 167 extension and added pedestrian and bicycle demand as part of the spuyaləpabš Trail. Preliminary coordination with WSDOT has already occurred on this project.	TBD	Design (?)	Tier 1	Multimodal
TA-P14	SR 509 Three Grade Crossing Removal	Remove three grade crossing connected with a single railroad crossing signal activation system on SR 509 between Port of Tacoma Road and Alexander Ave. Three at-grade public crossings, the tracks in-between, and all associated signal components will be removed and replaced with asphalt.	$500,000; fully funded	Design	Tier 1	Multimodal
TA-P15	E 11th Street Bridge	Replace the E 11th Street bridge at its current vertical alignment and replace the viaduct with a 40-foot high-rise. The overall width of the structure would be 55 feet. The bridge would include one 12-foot shared use path.	$300 million; unfunded.	Planning	Tier 2	Multimodal
TA-P16	Lincoln Ave Bridge Widening	2022 Tacoma Tideflats Truck Modeling identified the need to add additional lanes for traffic to cross the Puyallup River. Project should incorporate a shared use path. No defined concept at this time.	TBD	Planning	Tier 2	Multimodal
TA-P17	Lincoln Ave Corridor Improvements	Improvements to the Lincoln Ave corridor were a part of the 2022 Tacoma Tideflats Truck Modeling work to ideate ways to improve freight fluidity. Project should incorporate a shared use facility.	TBD	Planning	Tier 2	Vehicle/ Freight
TA-P18	WUT Entrance Improvements	WUT has expressed concern with the way the terminal's entrance to the public street works. NWSA staff regularly coordinates with the City on the short-term operational needs, but long-term improvements are needed to support business growth.	TBD	Planning	Tier 2	Vehicle/ Freight
East of Blair Waterway						
TA-P19	54th Ave & SR 509 Intersection	Project is to add a second left turn lane to NB 54th Ave at the intersection with SR 509 to alleviate congestion. The City of Fife is currently negotiating with WSDOT whether an Intersection Control Evaluation (ICE) is required. An $800,000 earmark has been awarded to the City of Fife for this project.	$1,181,000	Planning	Tier 1	Vehicle/ Freight
TA-P20	spuyaləpabš Trail	The spuyaləpabš Trail, formerly referred to as the Tacoma to Puyallup Regional Trail, will be a 12-mile regional shared use path that connects downtown Puyallup to Fife and downtown Tacoma. This trail will follow along the alignment of the SR 167 extension, and will connect directly with the City of Tacoma's larger trail network.	TBD	Construction	Tier 1	Active

ID	PROJECT NAME	DESCRIPTION	COST	PHASE	PRIORITY	MODE
TA-P21	SR 509/Marine View Drive Multimodal Improvements	Construct multimodal and safety improvements along SR 509 and Marine View Drive, including the improvements identified in the Puyallup Tribe's Road Safety Audit.	TBD	Planning	Tier 1	Multimodal
Tacoma/Fife Transition Area						
TA-P22	Milwaukee Way & Pacific Hwy	This intersection is the last intersection before the FWMB. The pending replacement and removal of the weight restriction of the FWMB provides an opportunity to improve this intersection for freight and improve the utility of Milwaukee Ave for Port business and freight activities.			Tier 1	Multimodal
TA-P23	Port of Tacoma Rd Interchange	Phase 2 will add a new crossing over I-5 and complete the couplet functionality to improve traffic operations at this interchange.	$78,864,000, largely committed	Design	Tier 1	Vehicle/ Freight
TA-P24	54th Ave Grade Separation	Train operations along the UP tracks resulted in the closure of this crossing due to safety concerns involving Columbia Junior High School. Traffic cannot cross at this location until grade separation is achieved, limiting access to residences and the Puyallup Tribe Youth Center on the south side of the track.	$50,000,000	Planning	Tier 1	Multimodal
TA-P25	54th Avenue & Pacific Highway	Coordinate with WSDOT to identify appropriate capacity improvements at the 54th Avenue E and Pacific Highway intersection to facilitate right-turning movement at the intersection.	TBD	Planning	Tier 1	Vehicle/ Freight
TA-P26	Alexander Ave & 12th Street E	Perform a detailed engineering study to confirm the appropriate intersection control and configuration at the intersection of Alexander Avenue E and 12th Street E.	TBD	Planning	Tier 1	Multimodal
TA-P27	Reinstitute NE Tacoma Express	Coordinate with Pierce Transit to reinstitute the NE Tacoma Express route, which passes through the Subarea along SR 509.	TBD	Planning	Tier 1	Transit
TA-P28*	Milroy Bridge Replacement	Replace the existing Milroy Bridge and construct associated roadway/intersections improvements on both sides of the river to accommodate the new crossing. This project is a component of the Canyon Rd Extension regional project listed below.	TBD	Planning	Tier 1	Vehicle/ Freight
TA-P29*	70th Ave Grade Separation	A new overpass to provide grade separation between 70th Ave and the UP-arrival tracks to the Port of Tacoma. The arrival tracks can occasionally block access at the crossing due to congestion at Bullfrog Junction. This project is located on the Canyon Rd corridor and is the last 2 lane bottleneck between Fredrickson and the Port of Tacoma, but they are independent.	$50,000,000	Planning	Tier 2	Vehicle/ Freight

**Project does not appear on the modal maps, as project is outside the mapping extents of the subarea plan.*

ID	PROJECT NAME	DESCRIPTION	COST	PHASE	PRIORITY	MODE
Regional Projects						
TA-P30	54th Ave Interchange	A reconfiguration of the 54th Ave interchange that would include would include extending 51st Avenue E from Pacific Hwy E to 12th Street E to provide an alternate route for traffic around the 54th Avenue/Pacific Hwy intersection and Fife City Center. This project will improve traffic operations, safety, truck travel times and non-motorized facilities. Project will maintain existing bridge over I-5 and eastern half of the interchange and reconfigure the western half of the interchange. This project represents costs from all phases.	$125,000,000; $4,500,000 committed	Design	Tier 2	Vehicle/ Freight
TA-P31	Wapato Way / SR 167 frontage road (New Road)	A new frontage road along SR 167 with a stated intent of providing an alternate route for trucks around the future Fife City Center.	TBD	Planning	Tier 2	Vehicle/ Freight
TA-P32	SR 167 Completion	Part of the Puget Sound Gateway, this project will connect SR 167 in Puyallup to SR 509 at the Port of Tacoma. This includes connection of SR 509 limited access to I-5.		Construction	Tier 1	Vehicle/ Freight
TA-P33	Sound Transit TDLE	This is a light rail project to connect Federal Way to Tacoma. Of interest is the station area in Fife, located east of 54th Ave and a new station along Portland Ave in Tacoma. Both are expected to increase the potential for ROW competition between freight, transit, and pedestrians.		Design	Tier 1	Transit
TA-P34*	SR 18 Widening to I-90	This is a two-phase project to widen SR 18 from Maple Valley to I-90. The corridor provides a vital connection from the Port of Tacoma to Ellensburg as well as an opportunity to improve the flow of traffic on I-90.		Design/ Construction	Tier 1	Multimodal
TA-P35*	Canyon Rd Extension	An extension of Canyon Road to 70th Ave in Fife that would improve system resiliency by providing a secondary connection to the Frederickson MIC. This project is related to, but does not include the 70th Ave railroad crossing.		Planning	Tier 2	Vehicle/ Freight
TA-P36*	I-5 & SR-18 interchange	This project to complete 'Phase 2' of the triangle interchange between SR 18 and I-5. The interchange sees a notable number of trucks from the Port of Tacoma, but it is unknown the level of benefit freight as most of benefits targeted were for WB SR-18 and most maritime freight is entering EB SR-18 at this location. There is no funding path forward for this project.		Planning	Tier 2	Vehicle/ Freight

**Project does not appear on the modal maps, as project is outside the mapping extents of the subarea plan.*

7.5 PERFORMANCE MONITORING

This subarea plan establishes a framework for aligning efforts across the participating governments, coordinating with partners, and measuring progress. The City will monitor and evaluate outcomes on a regular basis. Monitoring provides an early warning system if goals are not being met. It also can alert the City to early successes so that resources can be focused on actions that are the most effective.

The subarea plan monitoring program has two components – implementation monitoring and performance monitoring, described below.

Implementation monitoring will track which of the 99 actions are being implemented and the extent to which partners are participating. Performance monitoring will show whether the subarea plan actions are achieving the desired results. Performance indicators are listed on the following page.

Performance Indicators

Performance indicators include:

> **Number of Actions acted upon**

> **Total jobs**

Increase total employment in the subarea to 17,250 jobs by 2045 from the current baseline of 10,000 jobs

> **Industrial jobs**

Maintain and increase the proportion of jobs in industrial sectors

> **Acreage of habitat restoration added since 2024**

> **Acreage of habitat restoration along the Puyallup River**

> **Salmon and shellfish heath**

Increase in percent change over time of of wild spawners, the number of wild, natural-origin, or hatchery-origin adults harvested in fisheries, individual or composite annual number of smolts

> **Water quality**

This indicator represents the biological and chemical aspects of water quality and the extent to which water quality meets the expectations of the plan. Example metrics: temperature, pH, fecal coliform bacteria, dissolved oxygen, nutrients, and sediments. May also include values for pharmaceuticals, pesticide, industrial pollutants, heavy metals and other contaminants.

> **Air quality Index**

An air quality index indicator summarizes levels of ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide in one measure. This indicator provides a measure of community health and well-being, as well as environmental health. The indicator identifies the percentage of days for which air quality was monitored and found to be unhealthy, either for sensitive groups, such as people with asthma, or the community as a whole.

> **Brownfield remediation**

Implement cleanup actions on 100 acres by 2030

Brownfield Advisory Committee has been established and at least annual meetings are held

> Percent of tree canopy

Increase tree canopy in the Tideflats from 4% land cover (2024 baseline) to 8% land cover (measured at tree maturity) by 2030 and 16% by 2045

> Percent impervious surface

Reduce impervious surfaces to lower than 81% of the land cover in the Tideflats (2024 baseline)

> GHG emissions

Reduce GHG emissions to achieve zero emissions by 2045

> Renewable energy

Public uses must source 100% of their power from renewable or zero-carbon resources by 2045

> Electrification

10 average megawatts (87,600 MWh annually) of new electric transportation load in 10 years (2030), which is about 10 times the current (2020) estimated electric vehicle load for Tacoma Power

> Transportation

Reduce intersection congestion/delay

Improve truck travel time reliability index for key roads

Reduction in crashes

Reduction in truck idle time

25% of Tier 1 projects have advanced by 2030


WUT
GARDENIA ACE

Appendices

CONTENTS

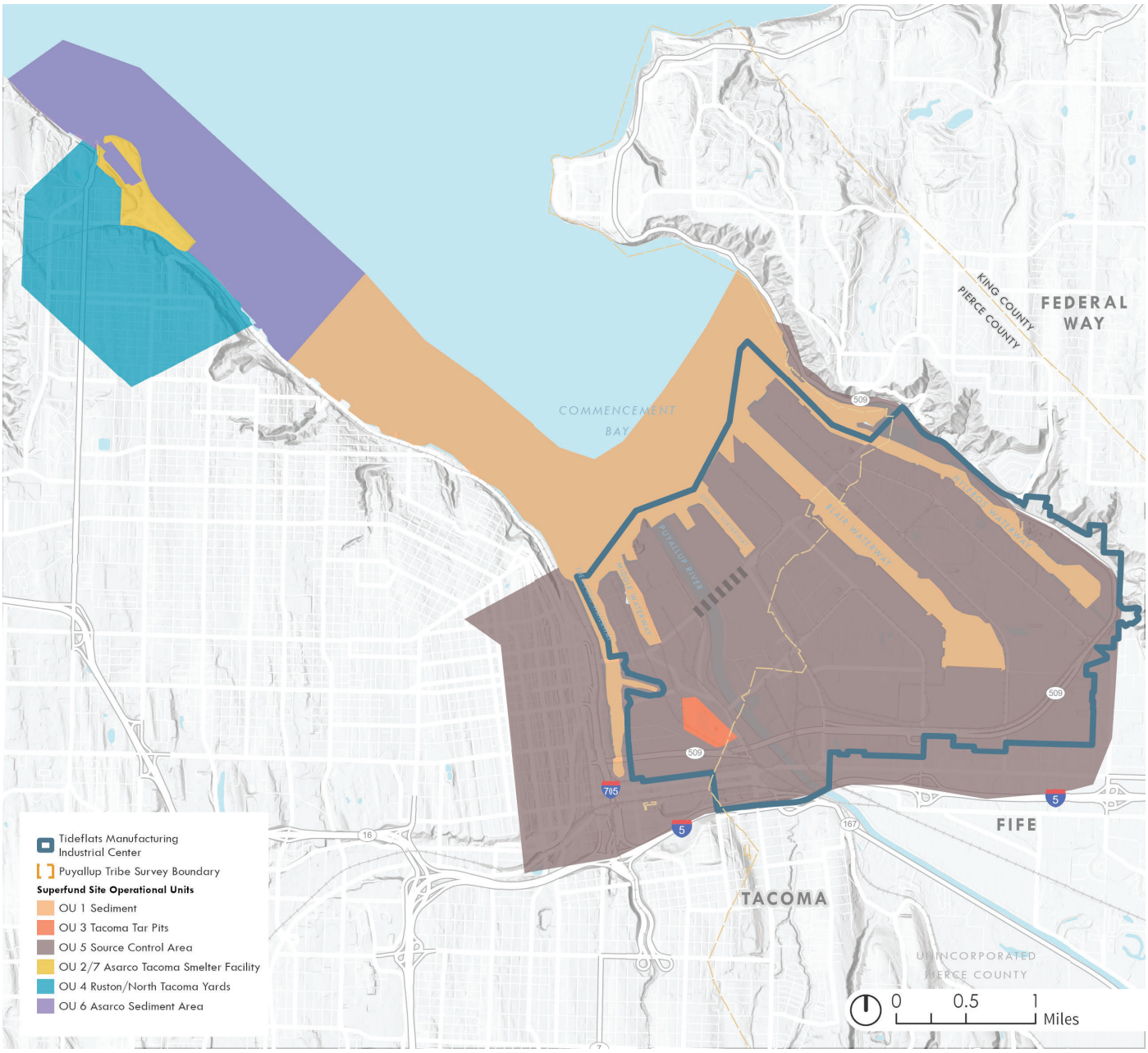
A. HISTORY OF CLEANUP IN THE TACOMA TIDEFLATS

Commencement Bay sediment remediation (OU 1) consisted of nine sediment problem areas including the Thea Foss Waterway, the Wheeler-Osgood Waterway, the Middle Waterway, the St. Paul Waterway, the Milwaukie Waterway, the Sitcum Waterway, and the head and mouth of the Hylebos Waterway. The Blair Waterway wasn't identified as a separate problem area, as it was thought to be less contaminated than the other waterways. Further, the Port was planning to dredge the waterway in association with the Puyallup Land Claims Settlement.

The remedy objectives were to control sources early, achieve specified sediment concentrations, reduce fish tissue relative to the reference area, and maintain functional habitat and enhance fisheries. The remedy components included

Figure 78. Commencement Bay Superfund Cleanup Site

Source: EPA, 2024; Seva Workshop, 2024



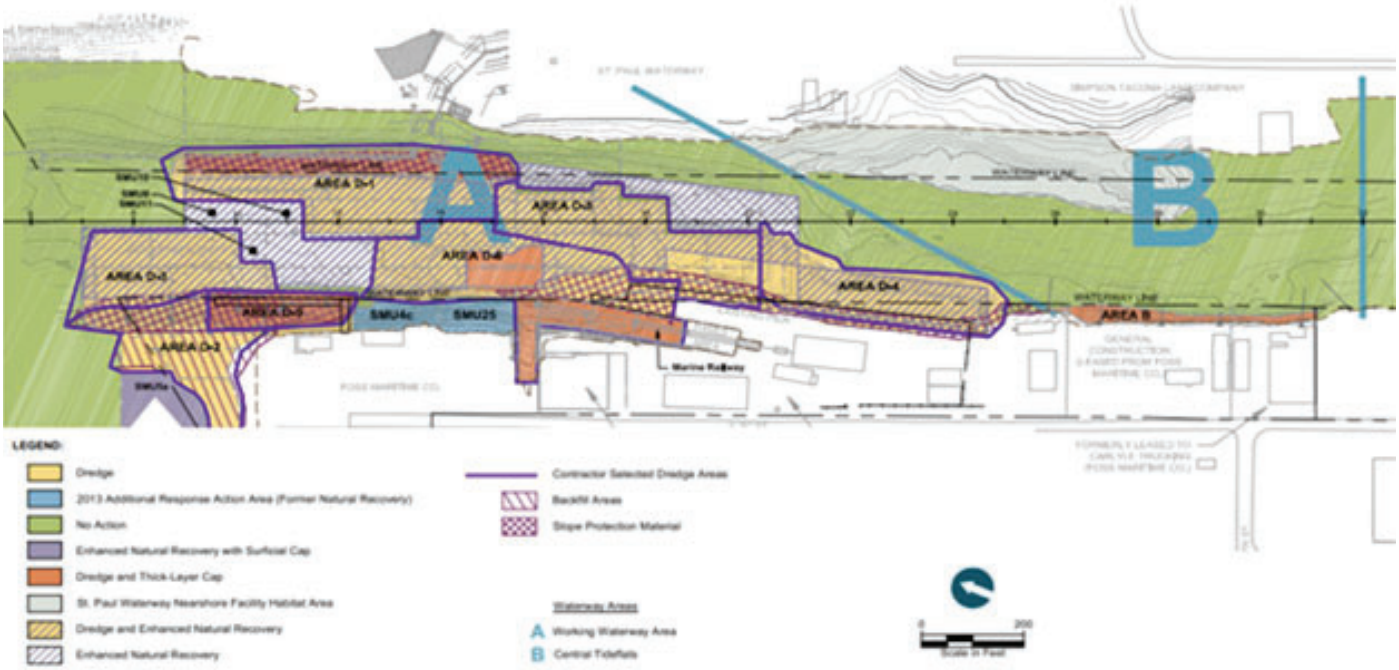


Figure 79. **St. Paul Waterway Cleanup Site**
Source: EPA, 2020

implementing a fish consumption advisory (since 1985), upland source control efforts lead by Ecology, dredging and capping above remedial action levels, and monitoring natural recovery 10 years post construction. Each problem waterway was addressed by different groups of performing parties at different times.

St. Paul Waterway: The cleanup involved improving wastewater treatment at the nearby paper mill in 1988 and capping 25 acres of contaminated sediment with 180,000 cubic meters of clean sand. The cap, which ranged from 1 to 7 meters thick, also created a healthy intertidal beach habitat as part of a joint Natural Resource Damage Assessment (NRDA) consent decree settlement. After seven years of monitoring, the EPA and the Commencement Bay Natural Resource Trustees confirmed that sediment and habitat objectives had been met. The EPA removed the St. Paul Waterway from the Superfund: National Priorities List (NPL) in 1996.

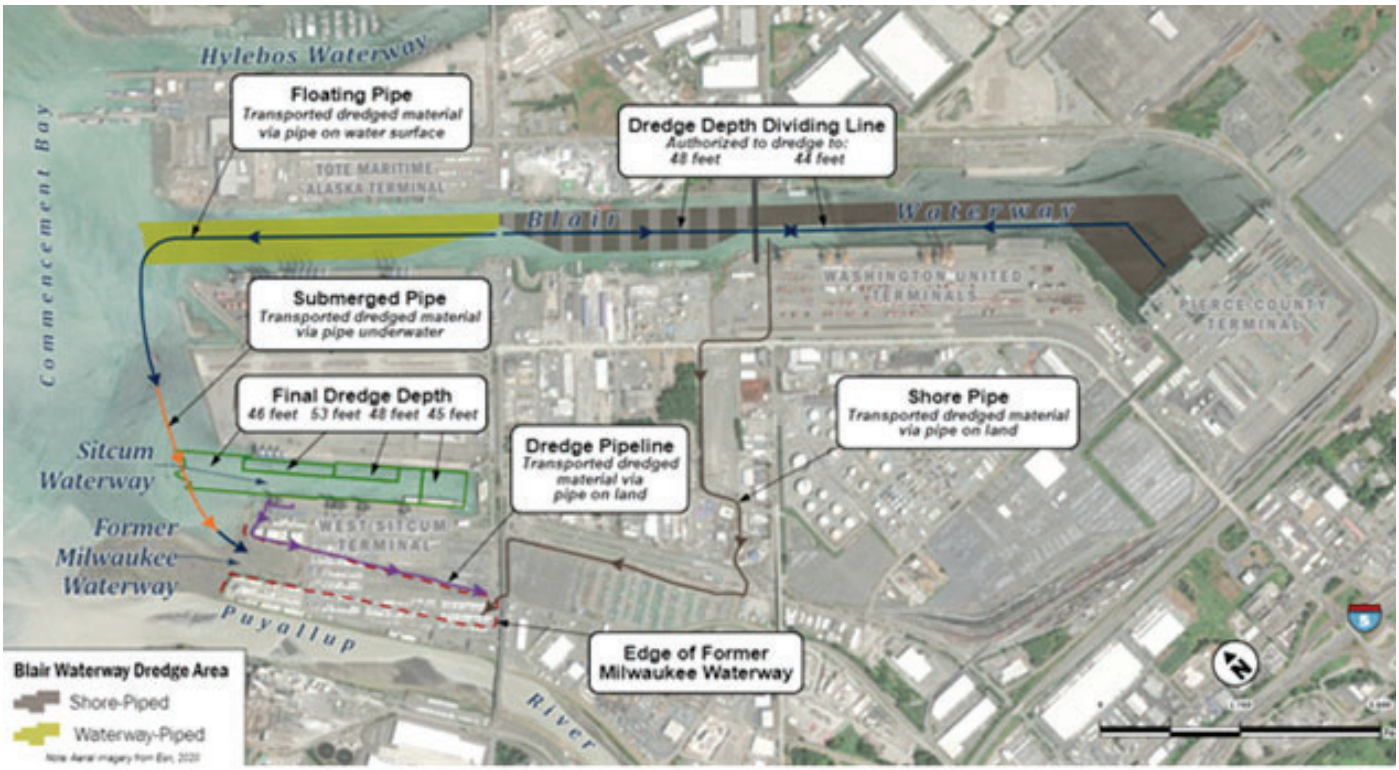


Figure 80. **Blair Waterway Dredge Area**
Source: Port of Tacoma, 2020

Blair, Milwaukie, and Sitcum Waterways: The Port of Tacoma lead the remedial action efforts to address these Waterways. In 1995, the Port of Tacoma completed dredging of the Blair and Sitcum Waterways along with construction of the confined disposal facility and habitat site in the Milwaukee Waterway using about 1,225,400 cubic yards of clean, dredged material. Additionally, approximately 875,600 cubic yards of contaminated sediments were removed from the Blair Waterway, while 396,000 cubic yards of contaminated sediments were removed from the Sitcum Waterway. The Port also constructed the 9.5-acre Clear Creek Habitat Improvement Site. The EPA deleted the Blair Waterway from the National Priorities List (NPL) in 1996.

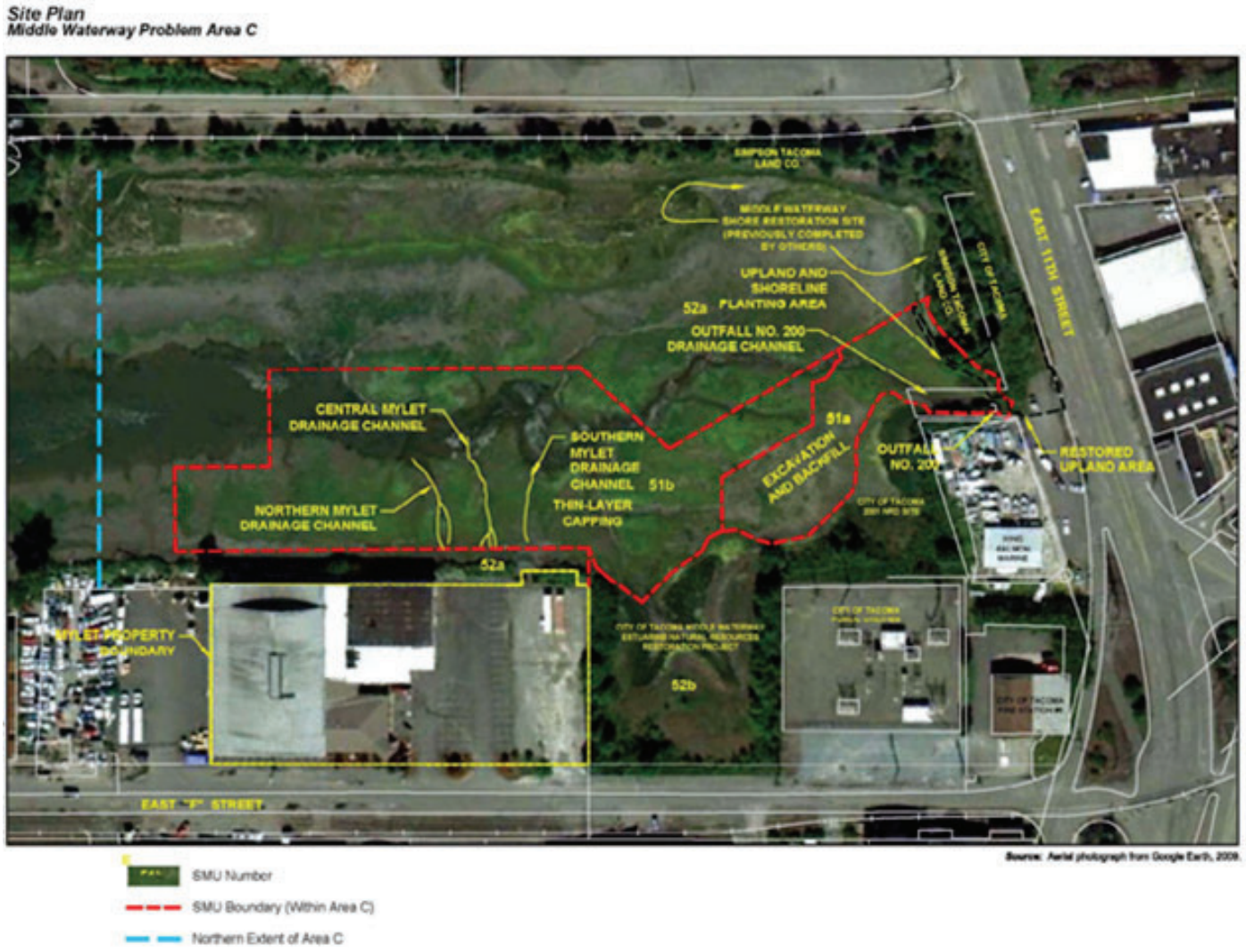


Figure 81. **Middle Way Cleanup Site Plan**
Source: EPA, Fifth 5-year Review Report for Commencement Bay Nearshore/Tideflats Superfund Site, Pierce County, WA

Middle Waterway: From Areas A and B, approximately 109,500 cubic yards of dredged sediments from the Middle Waterway were placed in the Blair Slip 1 Nearshore Confined Disposal Facility (NCDF). In August 2004, additional dredging, enhanced natural recovery, and pile removal and replacement was proposed in Areas A and B to address unanticipated post-remediation issues. This work was completed by January 2005. An additional response action to place enhanced natural recovery material and shoreline stabilization was conducted in 2013 to address mercury contamination in sediment in a Natural Recovery area that did not recover as originally anticipated. The remedial action was completed in 2018.

From Area C, approximately 3,125 cubic yards of contaminated sediment was excavated and disposed in the County's LRI Landfill. The dredged area was subsequently backfilled with clean material. In Area 51a, monitored natural recovery (MNR) was the selected remedial approach. In Area 51b, a thin layer cap (also known as Enhanced Natural Recovery [ENR]) was placed over approximately 1.5 acres.

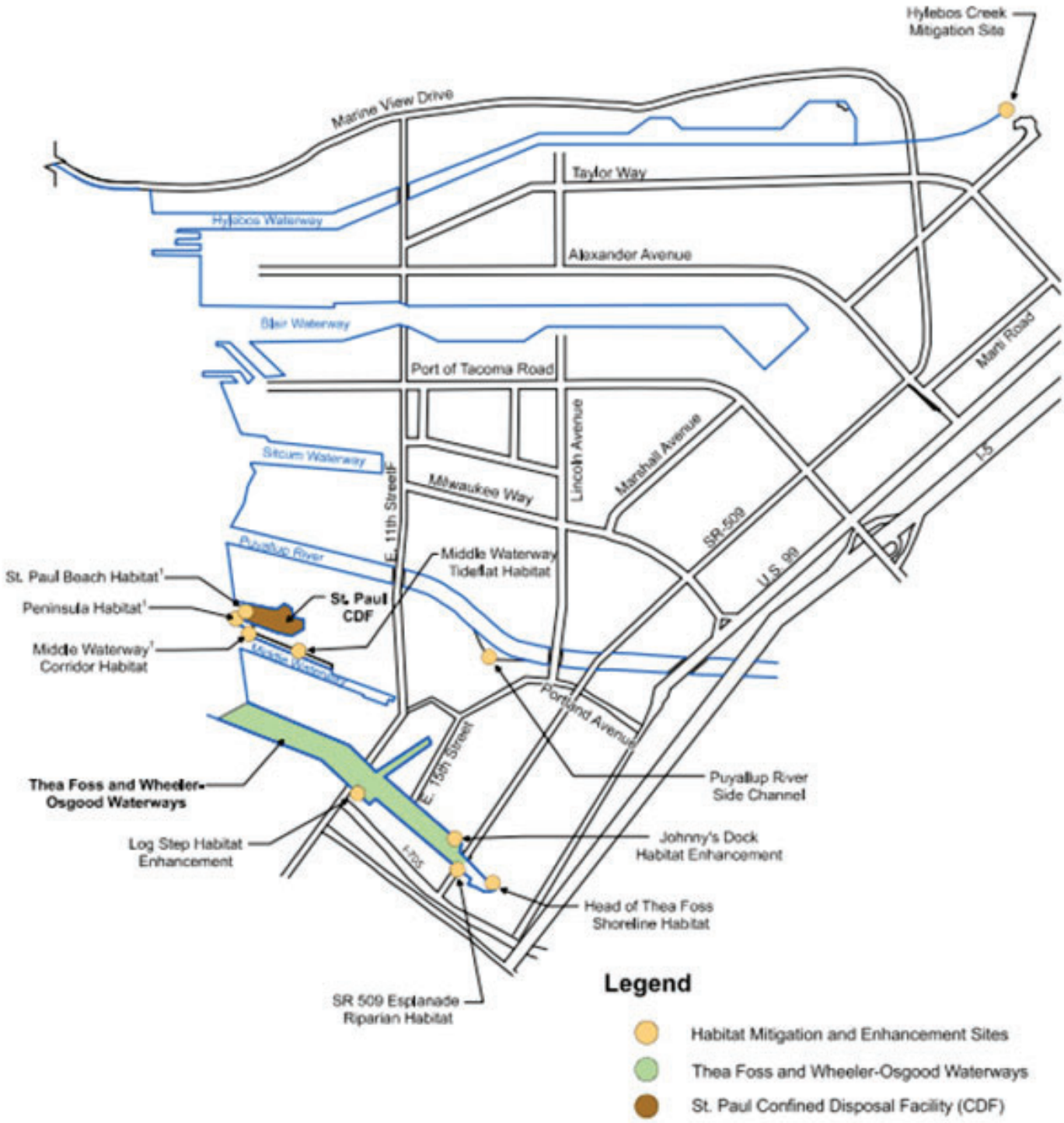


Figure 82. Thea Foss and Wheeler-Osgood Habitat Sites

Source: EPA, 2020

Thea Foss and Wheeler Osgood Waterways: Remedial action at the mouth of the Thea Foss and Wheeler Osgood Waterways included constructing the 11-acre St. Paul Waterway Confined Disposal Facility (St. Paul CDF; see Figure 80) dredging 425,674 cubic yards of contaminated sediment with disposal in the St. Paul CDF, capping 24 acres, four acres of ENR, and designating 21 acres for MNR. Remedial action at the head of the Thea Foss consisted of constructing an 8.8-acre cap, completed in 2004, and removal of the City Pier in 2016. The City has been monitoring natural recovery areas since 2006.

Hylebos Waterway: Remedial construction at the head of the Hylebos Waterway was completed in 2006, which included addressing contamination from multiple embankment areas and dredging 405,000 cubic yards of sediment over 42 acres. Dredged sediments were disposed in the Roosevelt Regional Landfill. Post-dredging sampling results indicated that sediment quality objectives were met throughout the approximately 45-acre subtidal area.

Remedial construction at the mouth of the Hylebos Waterway was completed in 2004 by the Port of Tacoma and Occidental Chemical Corporation. A 10-acre nearshore confined disposal facility (NCDF) was constructed in the Blair Slip 1, with a disposal capacity of 650,000 cubic yards. In 2003 and 2004, dredged sediments were transported to either the Commencement Bay open-water disposal site (receiving approximately 190,000 cubic yards of uncontaminated sediment) or the Blair Slip 1 NCDF (receiving approximately 450,000 cubic yards of contaminated sediment). Additional actions included monitored natural recovery in select areas, and habitat construction.

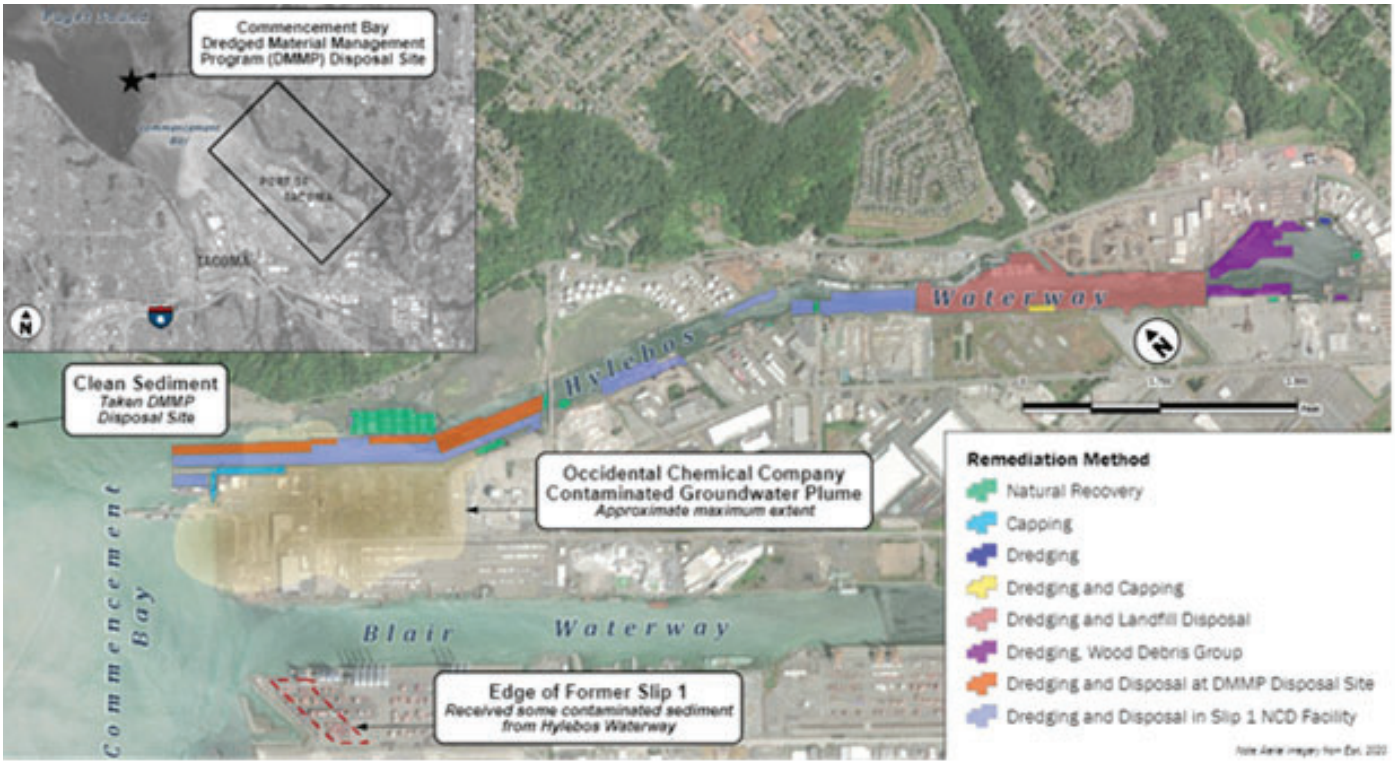


Figure 83. Hylebos Waterway Remediation
Source: Port of Tacoma files, 2020

In summary, the OU1 Sediment Remedy included:
> 500 acres dredged
> 2,400,000 cubic yards to three confined disposal facilities (CDFs)
> 400,000 cubic yards to off-site landfills
> 200,000 cubic yards to open-water disposal
> 40 acres capped
> 60 acres monitored or enhanced natural recovery
> Coordinated with restoration, navigation, and urban renewal

Currently, the responsible parties working with the EPA continue to monitor remedy effectiveness including sediment quality conditions, environmental cap integrity.

MTCA actions

Ecology led the Upland and Nearshore Source Controls efforts for Commencement Bay, starting before 1990 and completed in 2001. These efforts consisted of a series of milestone reports focused on each problem waterway; Milestone 1 – Ongoing Confirmed Sources Identified, Milestone 2 – Essential Administrative Actions in place for Major Sources, Milestone 3 – Essential Remedial Action Implemented for Major Sources, Milestone 4 – Administrative Actions in Place for All Confirmed Sources, and Milestone 5 – Remedial Implementation for all Source. The remedial action could proceed following Ecology's completion and EPA's approval of Milestone 5 report.

Ecology's identified sources largely focused on shoreline industrial properties, except for the Thea Foss, where upland stormwater was identified with the potential to re-contaminate the Waterway. The identified upland sources were also addressed through Ecology's cleanup process.

Head of the Thea Foss, Twin 96-inch outfalls

B. REAL ESTATE MARKET INFORMATION

Building Area

Figure 84 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.

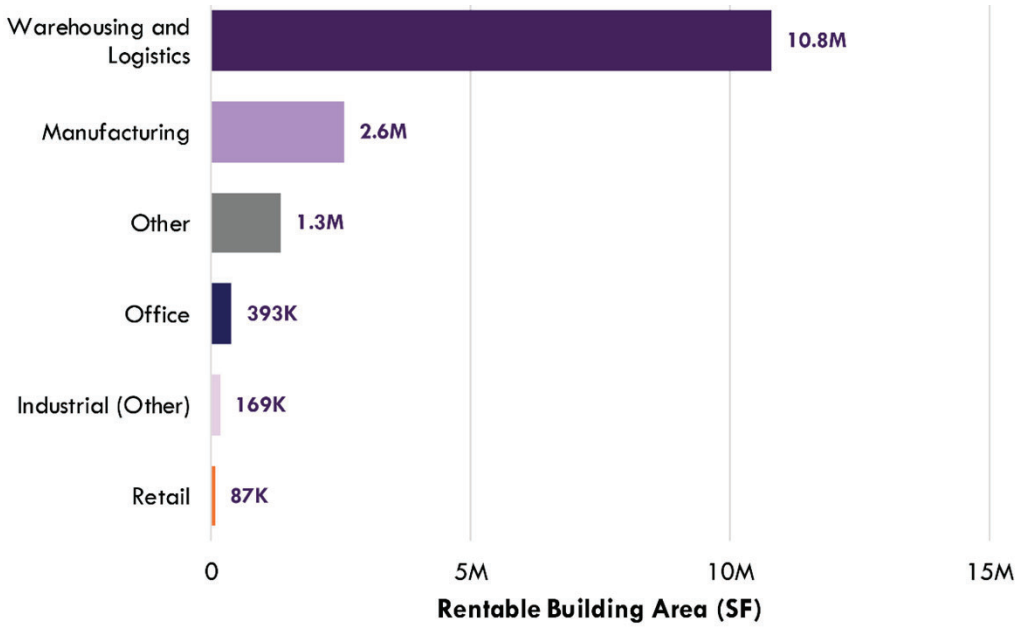


Figure 84. Breakdown of Rentable Building Area in the Port of Tacoma MIC, 2020
Source: CoStar, 2020; BERK, 2020

The MIC includes both old and new buildings. Figure 86 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.

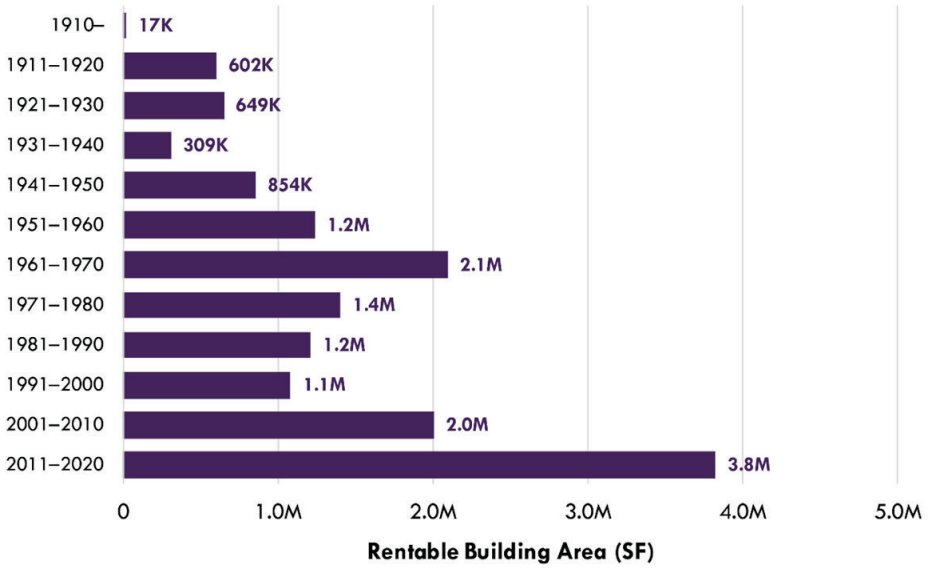


Figure 85. Rentable Building Area by Building Age, Port of Tacoma MIC, 2006–2020

Source: 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. Figure 87 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).

Figure 88 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.

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

Figure 86. New Rentable Building Area, Tacoma MIC, 2011–2021

**Proposed.*

Sources: CoStar, 2020; BERK, 2020

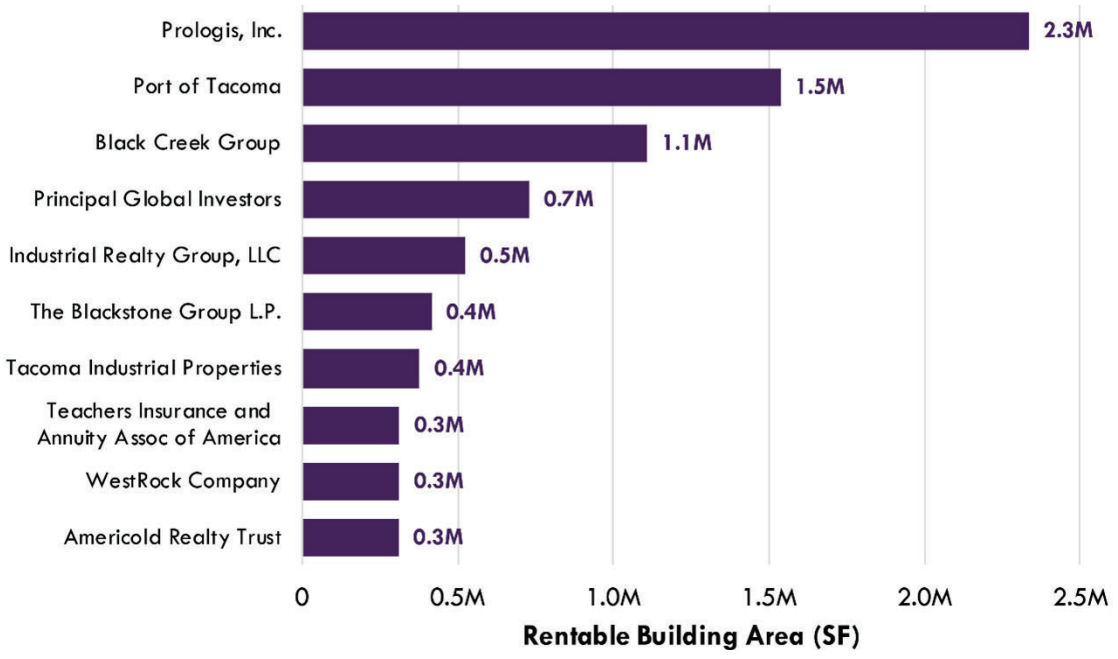


Figure 87. Top Owners of Rentable Building Area in Tacoma MIC, 2020

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 mulP-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 (**Figure 89**) and manufacturing (**Figure 90**).

> **Rent changes year-over-year** (YOY) for the MIC and region are provided in **Figure 91** (warehousing and logistics) and **Figure 92** (manufacturing).

> **Vacancy rates** for warehousing and logistics and manufacturing are provided in **Figure 93** and **Figure 94**, respectively.

> **Net deliveries** of new rentable building area for warehousing and logistics and manufacturing are given in **Figure 95**.

> **Net absorption** of rentable building area for warehousing and logistics and manufacturing are provided in **Figure 96**.

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.

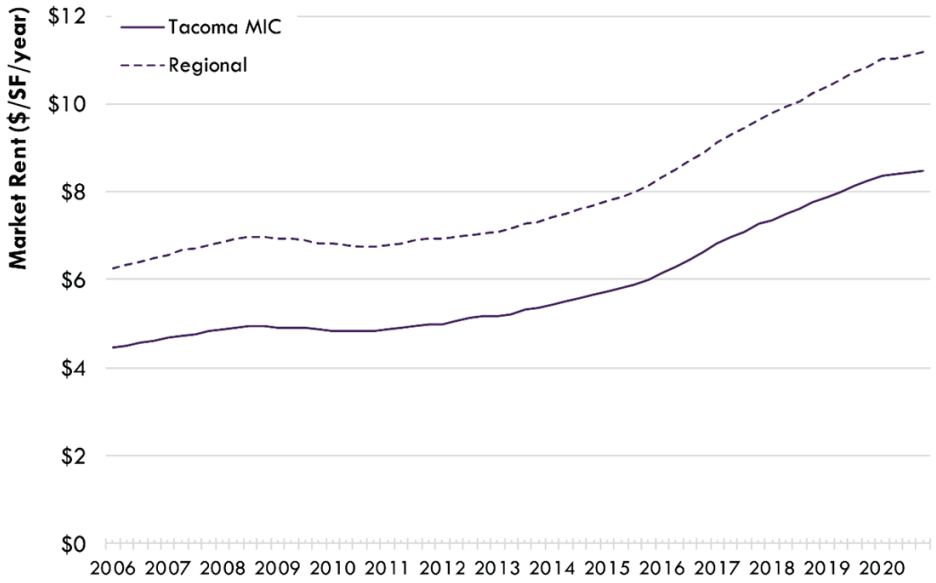


Figure 88. Warehousing and Logistics Rent per SF, Port of Tacoma MIC and Region, 2006–2020

Sources: CoStar, 2020; BERK, 2020

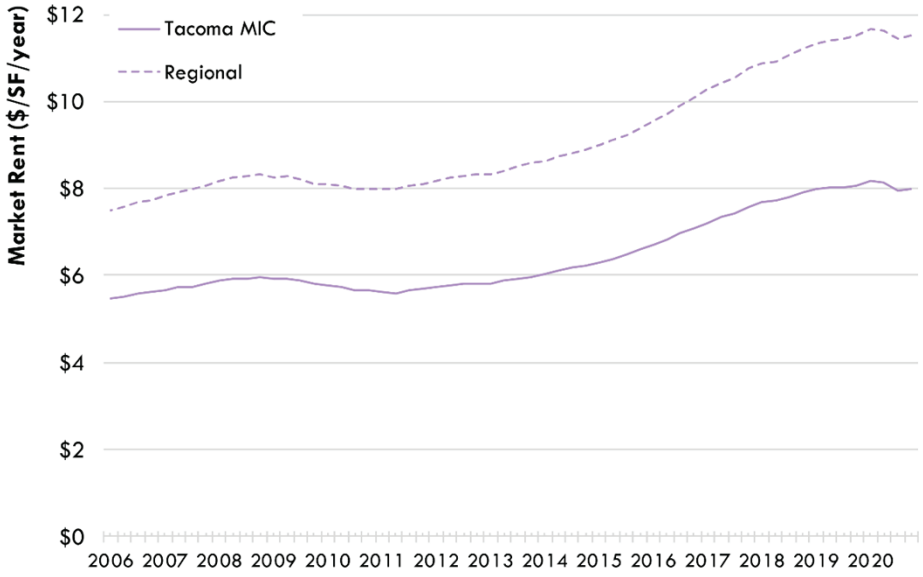


Figure 89. Manufacturing Rent per SF, Port of Tacoma MIC and Region, 2006–2020

Sources: CoStar, 2020; BERK, 2020

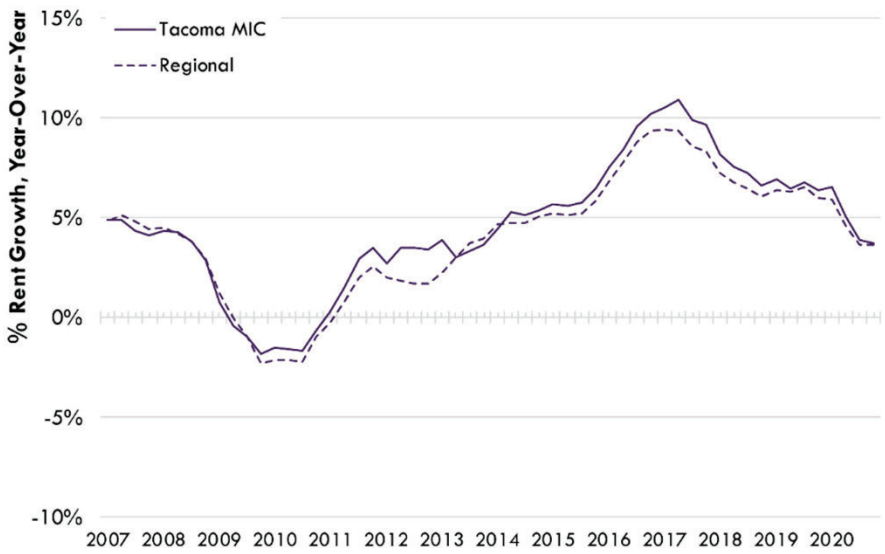


Figure 90. Warehousing and Logistics Rent Growth, Port of Tacoma MIC and Region, 2006–2020

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 Figure 91.

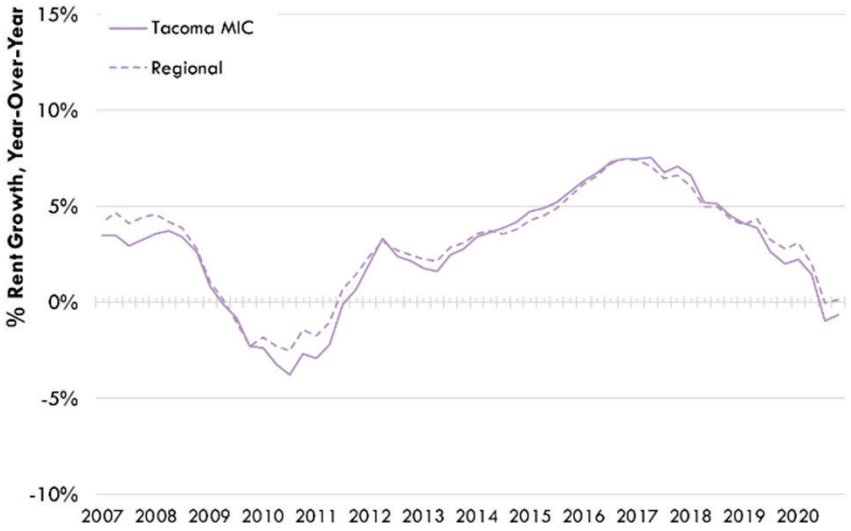


Figure 91. Manufacturing Rent Growth, Port of Tacoma MIC and Region, 2006–2020

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 Figure 92.

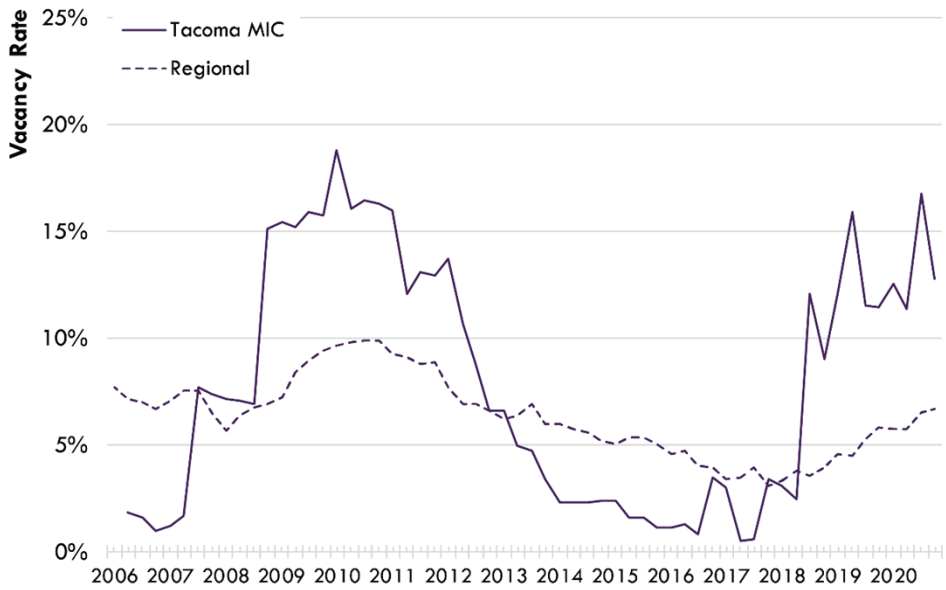


Figure 92. Warehousing and Logistics Vacancy Rates, Port of Tacoma MIC and Region, 2006–2020

Sources: CoStar, 2020; BERK, 2020

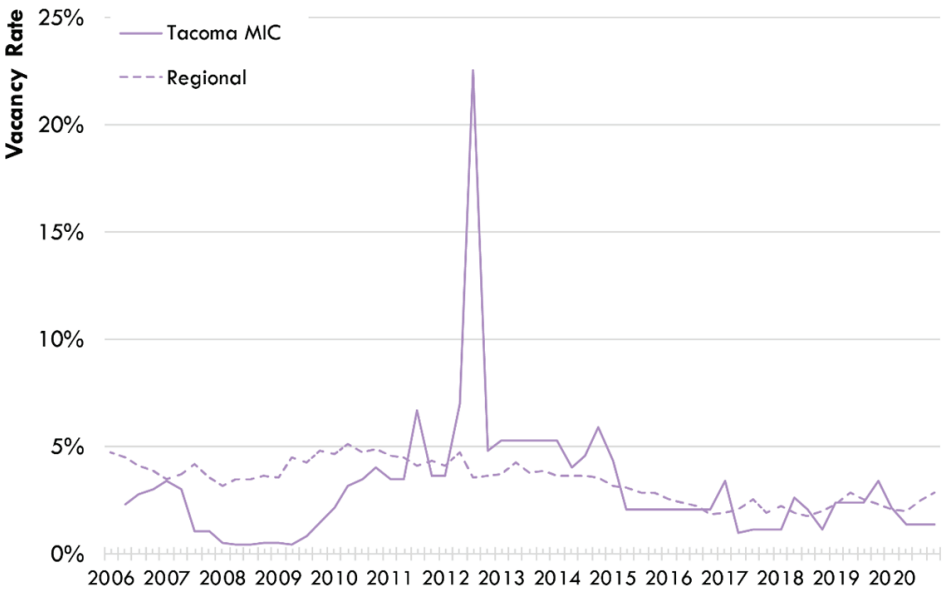


Figure 93. Manufacturing Vacancy Rates, Port of Tacoma MIC and Region, 2006–2020

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 Figure 93 and Figure 94.

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 Figure 95 and Figure 96.

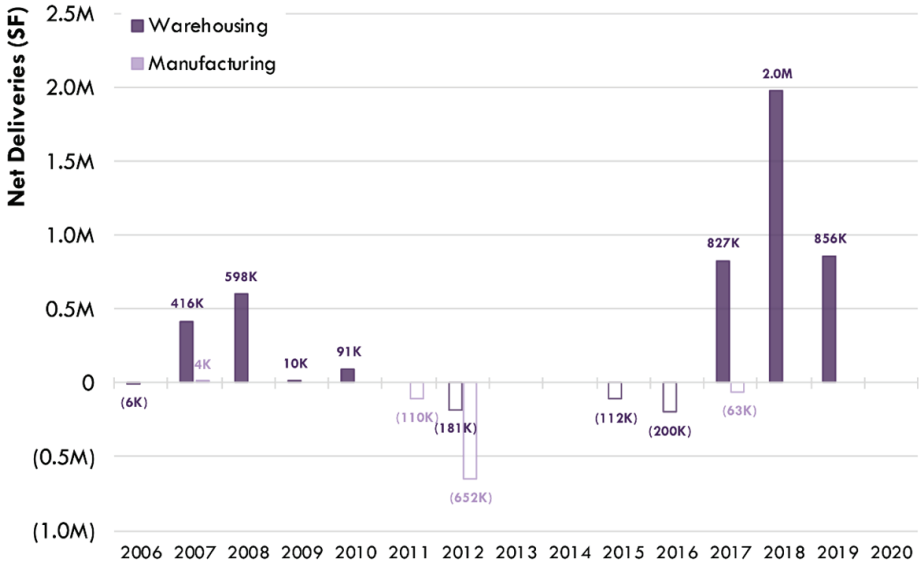


Figure 94. Deliveries of Rentable Building Area in Tacoma MIC, 2006–2020

Sources: CoStar, 2020; BERK, 2020

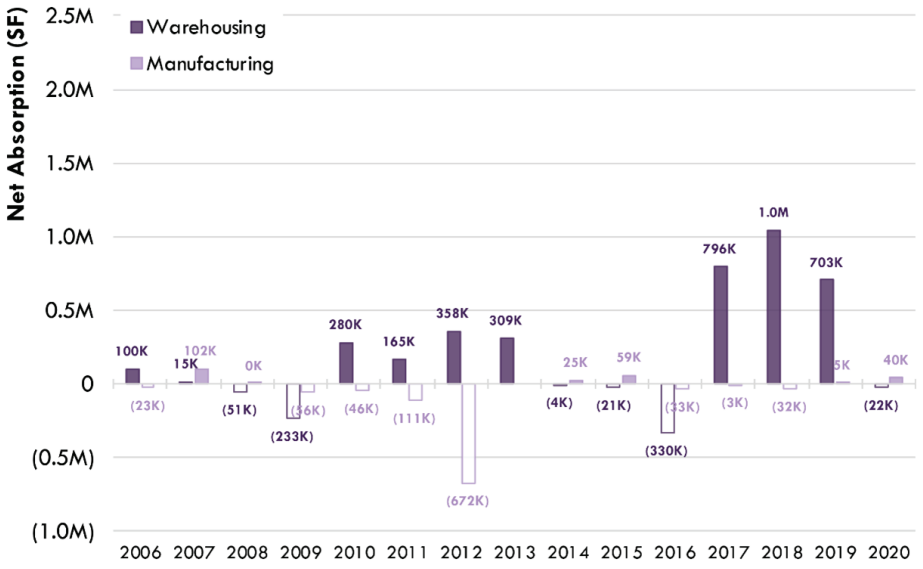


Figure 95. Absorption of Rentable Building Area in Tacoma MIC, 2006–2020

Sources: CoStar, 2020; BERK, 2020

City of Tacoma

Planning and Development Services

Exhibit B

Tideflats Subarea Plan

Amendments to the One Tacoma Comprehensive Plan

Note: These amendments show all of the changes the One Tacoma Comprehensive Plan. The sections included are only those portions of the Plan associated with these amendments. New text is blue underlined and text that has been deleted is shown as ~~red strikethrough~~.

Summary of Amendments

The City's Comprehensive Plan, One Tacoma, guides Tacoma's long-term development and describes how our community's vision for the future will be achieved. In short, it's a blueprint for the future of the city. It guides decisions on land use, transportation, housing, capital facilities, parks, and the environment. It also sets standards for transportation and other infrastructure, identifies how they'll be paid for, and establishes the basis for zoning and development regulations.

Upon adoption, the Tideflats Subarea Plan will become a new element of the City of Tacoma Comprehensive Plan.

This amendment updates the Growth Strategy Chapter of the One Tacoma Plan, specifically Exhibit 17 Future Land Use Map and Exhibit 18 Land Use Designations. The amendment incorporates three new land use designations and applies these to the Tideflats area. These designations include:

a. Seaport Core
b. Seaport Transition
c. Tideflats Manufacturing and Industrial Center

The map below depicts these new land use designations integrated into Future Land Use Map of the Comprehensive Plan. This amendment is intended only to replace the existing land use designations that apply to the Port of Tacoma Manufacturing and Industrial Center.

City of Tacoma

Planning and Development Services

Exhibit B

Exhibit 17: Comprehensive Plan Future Land Use Map

Current Map: To be replaced

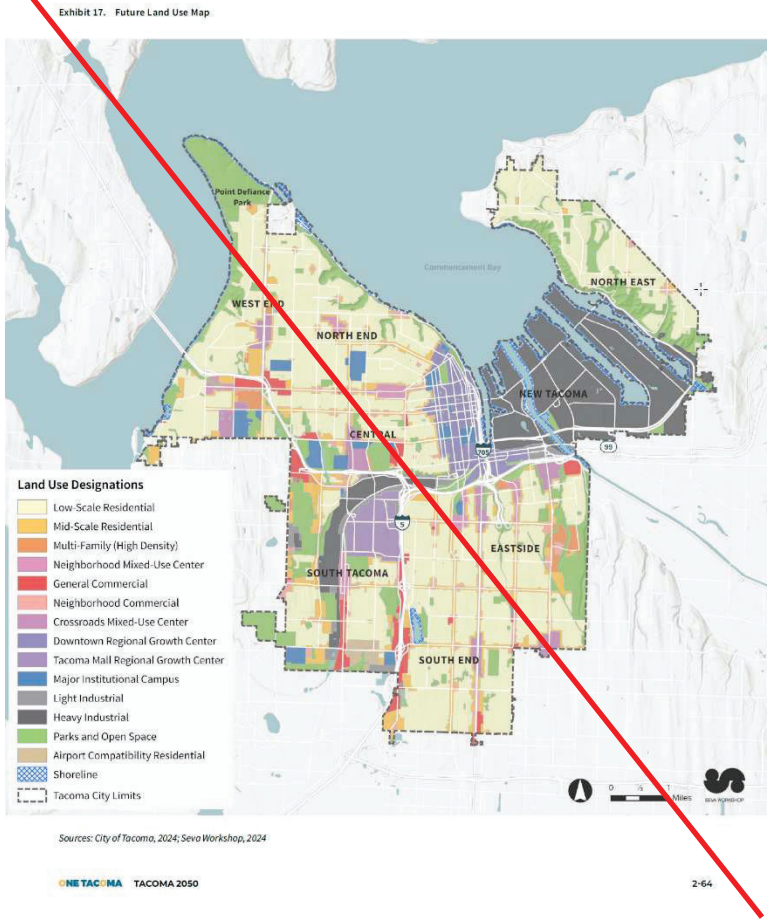


Exhibit 17: Comprehensive Plan Future Land Use Map

Proposed Map

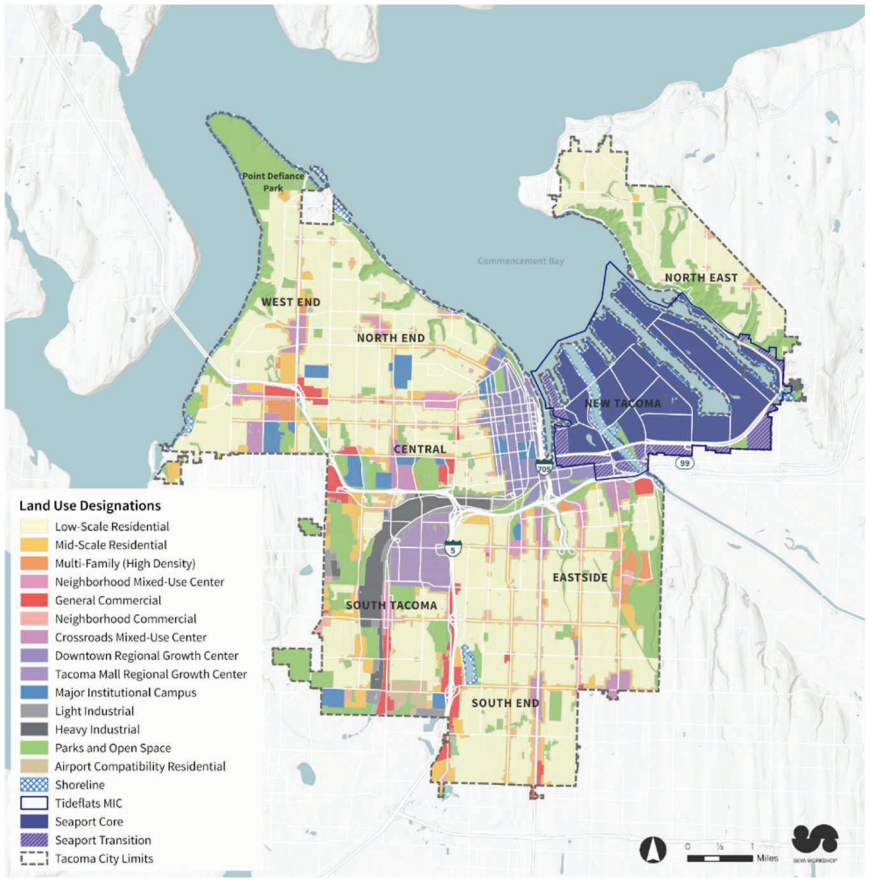


Exhibit 18: Comprehensive Plan Future Land Use Designations and Corresponding Zoning

Light Industrial This designation allow for a variety of industrial uses that are moderate in scale and impact, with lower noise, odors and traffic generation than heavy industrial uses. This designation may include various types of light manufacturing and warehousing and newer, clean and high-tech industries, along with commercial and some limited residential uses. These areas are often utilized as a buffer or transition between heavy industrial areas and less intensive commercial and/or residential areas.	**M-1 Light Industrial District**
Heavy Industrial This designation is characterized by higher levels of noise and odors, large-scale production, large buildings and sites, extended operating hours, and heavy truck traffic. This designation requires access to major transportation corridors, often including heavy- haul truck routes and rail facilities. Commercial and institutional uses are limited and residential uses are generally prohibited.	**M-2 Heavy Industrial District** ~~**PMI Port Maritime and Industrial District**~~
Seaport Core This designation is intended to define and protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (3)(a). The designation implements the Tideflats Subarea Plan of the Comprehensive Plan by allowing uses that protect the long-term function and viability of the seaport within the Regional Manufacturing/Industrial Center. This designation is characterized by proximity to deepwater berthing that supports 24-hour regional and international shipping. Use priorities include cargo shipping terminals, seaport-related container and industrial activity, seaport-related offices, cargo and equipment storage yards, warehousing, transportation facilities, vessel fueling operations and support facilities, and rail yards. The designation includes heavy truck traffic and higher levels of noise and odors than found in other city districts. Freight mobility infrastructure is critically important, with the entire subarea served by road and rail corridors designed for large, heavy trucks and rail loads. Retail and commercial uses are ancillary and primarily serve the subarea's employees. Housing is allowed only for caretakers of allowed uses	**SCP Seaport Core Primary District** **SCM Seaport Core Manufacturing** **SCS Seaport Core Secondary** **SC Seaport Conservancy**

Seaport Transition This designation is intended to serve as a transition zone between incompatible uses to protect the core areas of port and port-related industrial uses within the city, as per RCW 36.70A.085 (6)(c). The designation is intended to support implementation of the Tideflats Subarea Plan of the Comprehensive Plan, specifically pertaining to the transition between the core area and the neighboring areas, and to protect the long-term function and viability of the seaport within the Regional Manufacturing/ Industrial Center.	**ST Seaport Transition** **STT Seaport Transition-TOD** **SC Seaport Conservancy**
Tideflats Manufacturing and Industrial Center The manufacturing and industrial center designation is intended to preserve lands for family-wage jobs in basic industries and trade and provide areas where that employment may grow in the future. Manufacturing/industrial centers form a critical regional resource that provides economic diversity, supports national and international trade, generates substantial revenue for local governments, and offers higher than average wages. This designation is associated with areas that are highly active industrial areas with significant existing jobs, core industrial activity, evidence of long-term demand, and regional role. They have a legacy of industrial employment and represent important long-term industrial areas, such as a deep-water port and major manufacturing. The intent of this designation is to, at a minimum, preserve existing industrial jobs and land use and to continue to grow industrial employment. The designation is applied to the Tideflats Subarea, which has existing employment exceeding 10,000 jobs, capacity to accommodate up to 20,000 jobs, the presence of irreplaceable industrial infrastructure, a regionally designated role for accommodating regional industrial and manufacturing growth, where more than 50% of the existing employment is industrial, and at least 75% of the area is zoned for core industrial uses.	**Seaport Districts**