JOINT COUNCIL AND PLANNING COMMISSION WORK SESSION & COUNCIL WORK SESSION MEETING AGENDA

Online via Zoom and In Person at
Tumwater City Hall, Council Chambers,
555 Israel Rd. SW, Tumwater, WA 98501

Tuesday, July 09, 2024
6:00 PM

1. Call to Order
2. Roll Call

Joint Council & Planning Commission Work Session - 6:00 PM

3. 2025 Comprehensive Plan Periodic Update – Climate Element (Community Development Department)

Council Work Session - immediately following the Joint Meeting

4. Fire Department Strategic Plan Briefing (Public Health and Safety Department)
5. Intergovernmental Agreement Between the City of Tumwater and the Confederated Tribes of the Chehalis Reservation (Executive Department)
6. Mayor/City Administrator's Report
7. Adjourn

Meeting Information
The public are welcome to attend in person, by telephone or online via Zoom.

Watch Online
https://us02web.zoom.us/j/82627366967?pwd=XL4MWPMa24UkLV9cALl9LlykySRuVF.1

Listen by Telephone
Call (253) 215-8782, listen for the prompts and enter the Webinar ID 826 2736 6967 and Passcode 328270.

Public Comment
The public may submit comments by sending an email to council@ci.tumwater.wa.us, no later than 4:00 p.m. the day of the meeting. Comments are submitted directly to the Councilmembers and will not be read individually into the record of the meeting.

Post Meeting
Video recording of this meeting will be available within 24 hours of the meeting.

Accommodations
The City of Tumwater takes pride in ensuring that people with disabilities are able to take part in, and benefit from, the range of public programs, services, and activities offered by the City. To request an accommodation or alternate format of communication, please contact the City Clerk by calling (360)

252-5488 or email CityClerk@ci.tumwater.wa.us. For vision or hearing impaired services, please contact the Washington State Relay Services at 7-1-1 or 1-(800)-833-6384. To contact the City's ADA Coordinator directly, call (360) 754-4129 or email ADACoordinator@ci.tumwater.wa.us

TO: City Council and Planning Commission

FROM: Alyssa Jones Wood, Sustainability Coordinator

DATE: July 9, 2024

SUBJECT: 2025 Comprehensive Plan Periodic Update – Climate Element

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1) Recommended Action:

This is a discussion item about the new Climate Element for the 2025 Comprehensive Plan periodic update.

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2) Background:

On a ten-year cycle, the City is required to conduct a Growth Management Act periodic update of its Comprehensive Plan and related development regulations. The updated Comprehensive Plan will address diversity, equity, and inclusion throughout the Plan. 2025 Comprehensive Plan Update | City of Tumwater, WA contains links to guidance materials and information about the update. The intent of this briefing is to provide an update on the City's progress in preparing a Climate Element.

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3) Policy Support:

City Council Strategic Priorities and Council Goals 2025 - 2026

- Be a leader in Environmental Health and Sustainability
  - Outreach the community on the benefits of environmentally sustainable practices, community involvement, and highlight local career pathways.
  - Assess climate change vulnerabilities of City infrastructure and resources.

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4) Alternatives:

❑ None.

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5) Fiscal Notes:

The City was awarded grant funding from the Washington Department of Commerce in the amount of $420,000 towards the development of the Climate Element. $320,000 has been allocated for the development of the Climate Element and an additional $100,000 of the grant award has been allocated towards creating a bicycle and pedestrian plan in the Transportation Plan which will help meet state requirements related to climate.

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6) Attachments:

A. Staff Report
B. Presentation
C. Climate Element Public Engagement Strategy Addendum
D. Climate Element Planning Guidance

Attachment A

STAFF REPORT

Date: July 9, 2024
To: City Council and Planning Commission
From: Alyssa Jones Wood, Sustainability Coordinator

2025 Comprehensive Plan Update – Climate Element

On a ten-year cycle, the City is required to conduct a Growth Management Act periodic update of its Comprehensive Plan and related development regulations. In accordance with the Climate grant contract with the Washington Department of Commerce, the City must complete a draft of the new Climate Element by June 30, 2025.

The updated Comprehensive Plan will address diversity, equity, and inclusion throughout the Plan and incorporate a large number of state-required changes addressing housing, climate change, and other topics.

The intent of the joint City Council and Planning Commission work session on July 9, 2024, is to discuss the City's approach to developing the new Climate Element as part of the 2025 Comprehensive Plan periodic update.

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1 – New Requirements

On May 3, 2023, Governor Inslee signed into law HB 1181, which added a new climate change and resiliency goal to the Growth Management Act. The City will need to adopt a new Climate Element as part of 2025 Comprehensive Plan periodic update by December 31, 2025, to meet the state deadline.

The legislation includes the following key changes:

- Adds as climate mitigation sub-element to address greenhouse gas emissions reduction as part of a Climate Element that is mandatory for the City and would require actions to reduce overall greenhouse gas emissions and vehicle miles traveled. The City is required to use 2022 as their emissions baseline year and set incremental targets that lead to achieving net zero emissions in 2050, consistent with Washington's statewide target.
- Adds a climate resilience sub-element as part of a Climate Element that is mandatory for the City. The Thurston Hazards Mitigation Plan, which was updated and adopted by the City in 2024, can be adopted, by reference, to satisfy the climate resilience sub-element requirements.
- Requires consideration of environmental justice as part of the development of a Climate Element to avoid worsening environmental health disparities.

2 – Growth Management Act – Climate Change and Resiliency Goal

The state Growth Management Act (Chapter 36.70A RCW) requires that the City demonstrate that each Element in its Comprehensive Plan meets the relevant fifteen planning goals contained within the Act. The fifteen goals guide the development and adoption of the City's Comprehensive Plan and development regulations.

The following is a summary of how the new Climate Element will need to meet the goal related to climate change and resiliency. The state legislature added this goal in 2023.

14. ***Climate change and resiliency***. *Ensure that comprehensive plans, development regulations, and regional policies, plans, and strategies under RCW 36.70A.210 and chapter 47.80 RCW adapt to and mitigate the effects of a changing climate; support reductions in greenhouse gas emissions and per capita vehicle miles traveled; prepare for climate impact scenarios; foster resiliency to climate impacts and natural hazards; protect and enhance environmental, economic, and human health and safety; and advance environmental justice.*

The Conservation Element, Land Use Element, and Transportation Plan of the Comprehensive Plan will need to address this as a new goal in coordination with the new Climate Element. A

new overarching Comprehensive Plan goal will address increasing climate resiliency by promoting sustainability, reducing pollution, promoting health habitats, and supporting clean air and water.

3 – Sub-Elements

The Climate Element will need to incorporate two sub-elements: climate mitigation, which addresses greenhouse gas reduction, and climate resilience.

A. Climate Mitigation

Climate mitigation addresses greenhouse gas emission reductions that involve actions taken to reduce or eliminate the emissions of greenhouse gases to reduce the rate and extent of climate change damage.

Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and any other gas or gases designated by the State Department of Ecology.

Increasing emissions of carbon dioxide and other greenhouse gases are changing City's climate in ways that will impact both human and natural systems. In general, we can expect to experience hotter, drier summers and warmer, wetter winters. These changes are anticipated to worsen existing hazards—like floods, landslides, and wildfires—and introduce new threats—like invasive plants, insects, and infectious diseases.

To ensure that the City significantly reduces local contributions to climate change, the Thurston Regional Planning Council, Thurston County, and the cities of Lacey, Olympia, and Tumwater adopted the following greenhouse gas emissions reduction targets in 2021 as part of the Thurston Climate Mitigation Plan (TCMP):

- Forty-five percent reduction below 2015 levels by 2030; and
- Eighty-five percent below 2015 levels by 2050.

The City adopted the Thurston Climate Mitigation Plan in 2021, the actions of which will be updated and incorporated into the climate mitigation sub-element of the City's new Climate Element. Note that the Plan's goals and baseline are not consistent with the new statewide requirements for a 2022 baseline year and net-zero by 2050 goal.

The figures below are from the 2022 Greenhouse Gas Emissions Inventory for Thurston County, completed in 2024. They show current greenhouse gas emissions, the emissions targets, and the breakdown of emissions by sector.

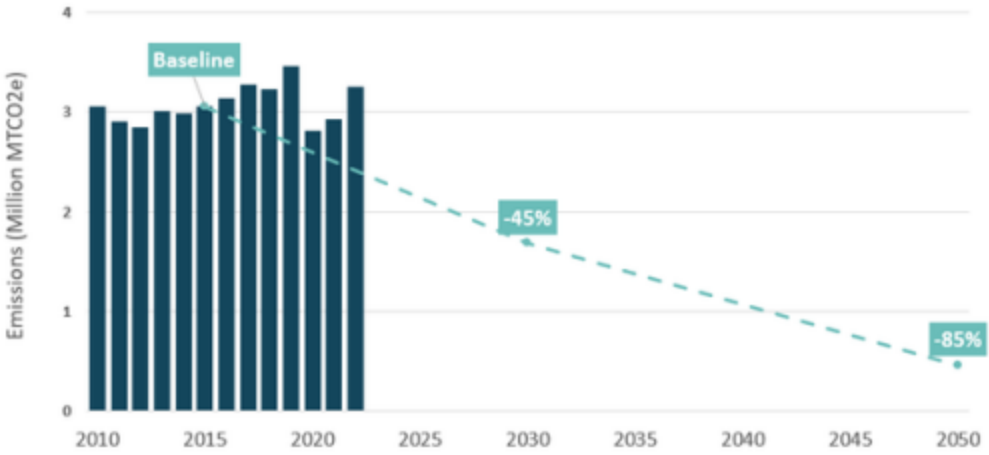


Figure 1. Total Emissions and Thurston County Climate Mitigation Plan Emission Reduction Targets.

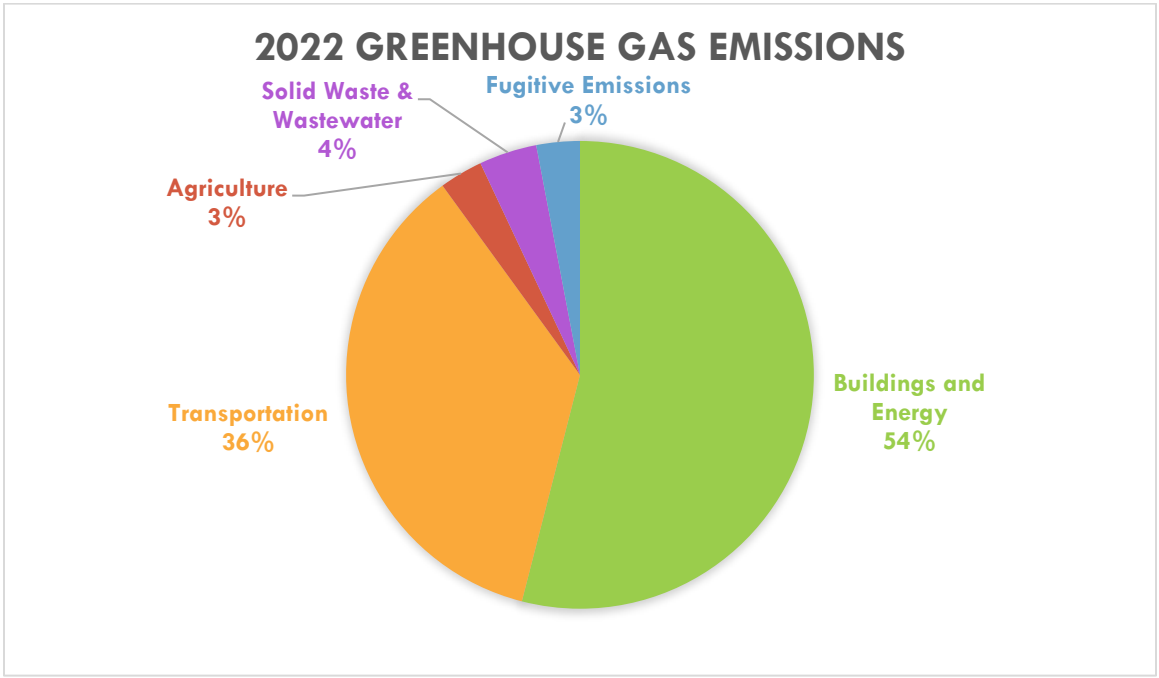


Figure 2. 2022 Emissions by Sector.

The State Department of Commerce has identified the following three pathways to meet the new state requirement for a climate mitigation sub-element.

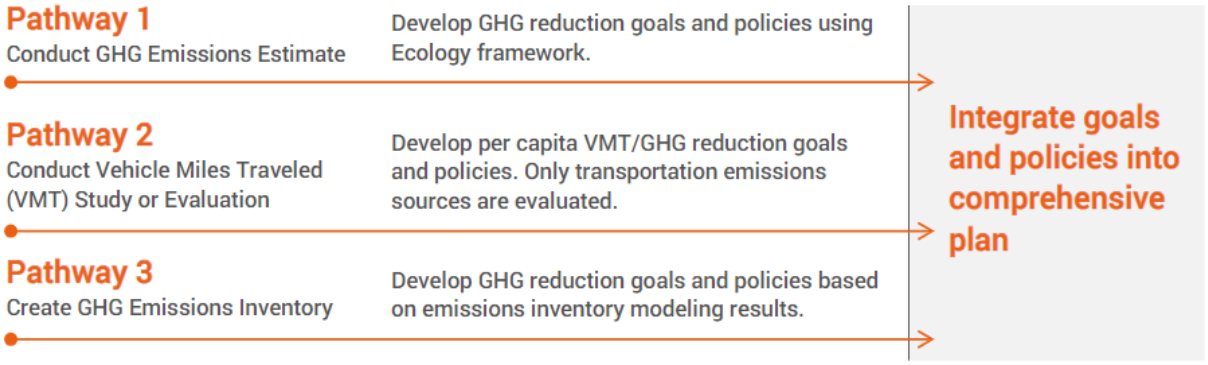


Figure 3. Pathway summary for GHG sub-element.

Staff will pursue pathway one and supplement the Tumwater GHG estimate with the 2022 Thurston County GHG Emissions Inventory recently completed by the Thurston Climate Mitigation Collaborative (TCMC). Department of Commerce staff have confirmed that method is acceptable for meeting requirements.

B. Climate Resilience

RCW 70A.65.010 defines climate resilience as:

> *"…the ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities. For natural systems, increasing climate resilience involves restoring and increasing the health, function, and integrity of our ecosystems and improving their ability to absorb and recover from climate-affected disturbances. For communities, increasing climate resilience means enhancing their ability to understand, prevent, adapt, and recover from climate impacts to people and infrastructure."*

The State Department of Commerce has identified the following five step process to meet the new state requirement for a climate resilience sub-element.

Figure 4. Steps and pathways to integrate resilience into Comprehensive Plan.

The Thurston Hazards Mitigation Plan with the City of Tumwater annex was adopted by the City Council in 2024. The Thurston Hazards Mitigation Plan to date addressed Steps 1 through 3. The Thurston Hazards Mitigation Plan is in substantial conformance with the state guidance, so in Step 4, the City will be adopting the Plan, by reference, to satisfy the state climate resilience sub-element requirements.

In addition, the Thurston Regional Planning Council adopted the Thurston Climate Adaption Plan in 2018, the actions of which will be updated and incorporated into the climate resilience sub-element of the City's new Climate Element.

Staff and consultants will also utilize the Department of Commerce Climate Element Workbook to ensure any gaps between state requirements and previously developed content from the Thurston Hazards Mitigation Plan and/or Thurston Climate Adaptation Plan will be investigated and addressed.

4. Environmental Justice

The new state legislation requires that the Climate Element must:

- Prioritize greenhouse gas reductions in overburdened communities.
- Prioritize climate resilience in communities that will disproportionately suffer from compounding environmental impacts.

In addition, HB 1181 requires that as part of the required Comprehensive Plan periodic update process that:

- The Land Use Element avoids worsening environmental health disparities.
- The Transportation Plan ensures multimodal levels achieve environmental justice goals.

5. Transportation and Land Use Changes

In addition, the new state legislation requires other transportation and land use changes such as:

- Requiring that the Washington State Department of Transportation maintain a summary of the per capita vehicle miles traveled for cities and the unincorporated portions of counties. This resource will in turn support the required updates to the Transportation Plan and the new Climate Element.
- Adds multimodal concurrency.
- Must accommodate all users "safely, reliably and efficiently."

6. Progress Update

A. Consultant

On April 29, 2024, the City entered into a Service Provider Agreement with EXP, Inc. to engage the community, develop a Climate Element and related Development Code amendments, and assist with the adoption and state acceptance process. EXP was selected from a competitive bid process. City staff and EXP are meeting on a bi-weekly basis to manage the project.

B. Community Engagement Strategy

On May 30, 2024, EXP produced a first draft of a Climate Element Engagement Strategy, intended as an addendum to the overall Comprehensive Plan Engagement Strategy. Goals for this engagement strategy include:

- Understand why and how residents think services and processes need to change and develop to increase GHG reduction and climate resilience.
- Engage the broader community, ensuring sufficient representation from diverse groups through in-person, virtual, or hybrid outreach and both digital and printed resources.
- Meet people where they are and ensure that all engagement efforts are accessible and equitable. This means not excluding anyone with certain health, physical, or working conditions, and it requires that needs around language, mobility, or family care are thoughtfully addressed.
- Keep the energy positive and focus on success stories, while also stressing the need for action and potential risks.
- Support clear and consistent messaging to current and potential stakeholders that communicates the importance of the Climate Element.
- Be responsive to community insights and allow for shared influence between communities and the organizations that serve them.
- Focus on reducing inequalities and fostering greater community ownership of the Climate Element which will lead to equitable outcomes to benefit frontline communities.
- Seek how best to intentionally allocate resources to overcome the cumulative impacts of institutional racism on historically underserved and under-represented people.
- Articulate Tumwater's role as a climate leader, aligning with County and State priorities and harnessing local experience and expertise.
- Position Tumwater City staff and residents to make better-informed decisions, driving smarter investments to that the City develops safely in a healthier environment, even with growing climate impacts.

The draft Climate Element Public Engagement Strategy Addendum is included as Attachment B.

C. Climate Policy Advisory Team

The Department of Commerce Intermediate guidance suggests forming a Climate Policy Advisory Team (CPAT) composed of community volunteers and other stakeholders as the primary advisory committee for the Climate Element. To develop the recruitment list for the CPAT, staff focused on bringing four categories of stakeholders to the table. Staff initially developed a list of forty-six potential CPAT candidates and reached out to an initial group of fifteen via invitation email or phone call on May 9, 2024.

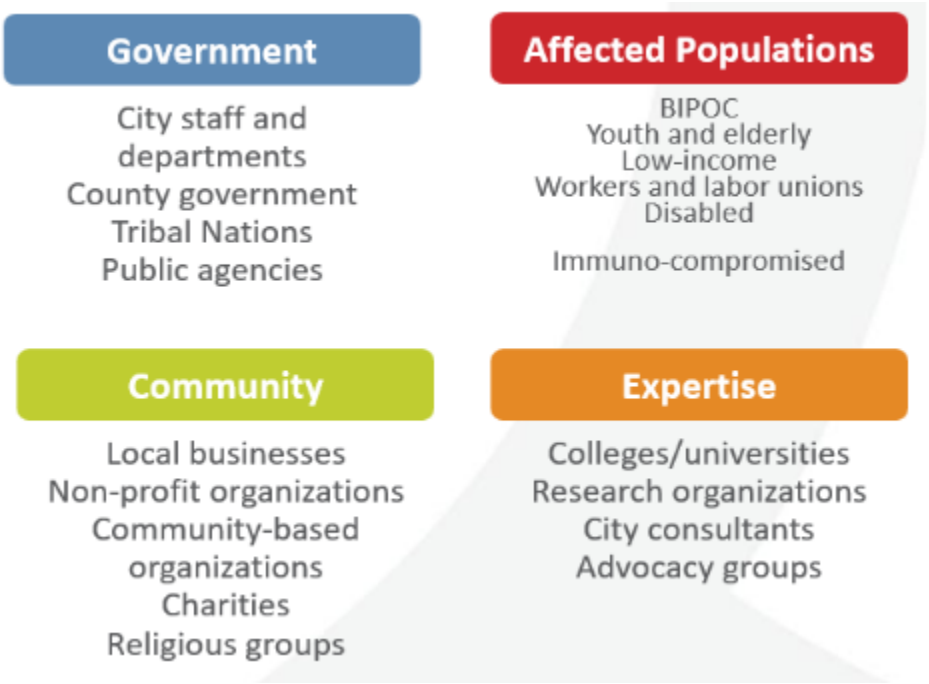


Figure 5. Categories of stakeholders for CPAT.

Thirteen CPAT invitees accepted the invitation to join the CPAT. Current CPAT members include:

CPAT Member	Category	Affiliation (if any)
Anna Stusser	Affected Populations	SEIU775 Service Employees International Union
Anthony Levenda	Expertise	Evergreen Center for Climate Action & Sustainability
Bernie Gertje	Government	City of Tumwater Transportation Engineer
Clint Bryson	Affected Populations	International Brotherhood of Electrical Workers (IBEW) 76 Leadership
Gordon Wheat	Expertise	Physicians for Social Responsibility
Graham Clumpner	Community	Oil Gas Action Network; Tumwater Resident

CPAT Member	Category	Affiliation (if any)
Janine Linsey	Expertise	Thurston Climate Action Team; Tumwater Property Owner
Jessie Simmons	Community	Olympia Master Builders
Kerri Wilson	Government	Intercity Transit Walk N Roll; Tumwater Resident
Lynn Fitz-Hugh	Expertise	Restoring Earth Connections; Friends of Trees
Morris McKellery	Affected Populations	Tumwater Resident
Rachael Childs	Affected Populations	Homes First
Taylor Wener	Affected Populations	IBEU 46 Rank and File Member

The CPAT held its first meetings on June 11 and June 18, 2024. The first CPAT meeting focused on introductions of the group, the Climate Element requirements, feedback on the Climate Element Public Engagement Strategy Addendum draft and planning an upcoming Open House.

Some of the feedback provided by the CPAT in this first meeting and how staff are working to include those suggestions include:

CPAT Feedback	Staff Intentions
The open house needs to feel welcoming - advertise that food will be provided for attendees and hold the open house at a location other than an official City building.	Staff are committed to providing food at the Open House and advertising that food will be provided. Staff is looking into alternative locations to host the Open House that are not government buildings.
Engagement needs to be more than one open house. Examples: table at parks, table at the Department of Social and Health Services, and/or door-knock in neighborhoods that are more disadvantaged and/or overburdened.	Staff and CPAT members will work together to identify opportunities for tabling and/or door-knocking and will work on that outreach together. WRS Staff has a tabling event scheduled in the summer at the Tumwater satellite location of the Thurston County Food Bank.
Focus more on the urban forests of Tumwater as part of both mitigation and adaptation to climate change.	The contributions of urban forests will be included at Open House tables on mitigation and adaptation.
Include Youth.	Staff has reached out to the Thurston Youth Climate Coalition about attending/facilitating a special youth caucus at the Open House.

CPAT Feedback	Staff Intentions
Distribute a save the date flyer that clearly communicates how people will be expected to participate and how the City will be accountable to what they hear.	Staff and the consultant team are working to develop a save the date flyer with this information. Staff and CPAT members will distribute the flyer early throughout the community once it is finalized.
Provide space both for table activities and a large group listening session. Provide options for people to engage who may be less likely to speak aloud.	Staff and the consultant team will incorporate a large group listening session at the end of the open house agenda. Boxes with paper/pen will be available for community members to engage with without speaking if that is their preference. The online open house will also be advertised as an option for sharing feedback outside of the one-night Open House event.

D. Climate Element Open House

Staff will develop two options for participating in the Climate Element Open House: one virtual and one in-person. The in-person Open House will be held on August 14, 2024, from 7 to 9 p.m. The location is yet to be determined at this time, given feedback from the CPAT. Staff will be creating an online registration for the in-person event to get an accurate headcount for supplies and food. The online Open House will be launched on August 14, 2024, and will remain accessible until at least August 31, 2024. Both open houses will contain the same content and opportunities to engage.

7 – Schedule

The Climate Element is now engaged in the third stop along the pathway pictured below (Figure 6). Work is underway to implement the equity-driven public engagement Addendum and produce engagement results. Concurrently, EXP is working on document review and the development of a Gap Analysis which will be complete by the end of September 2024.

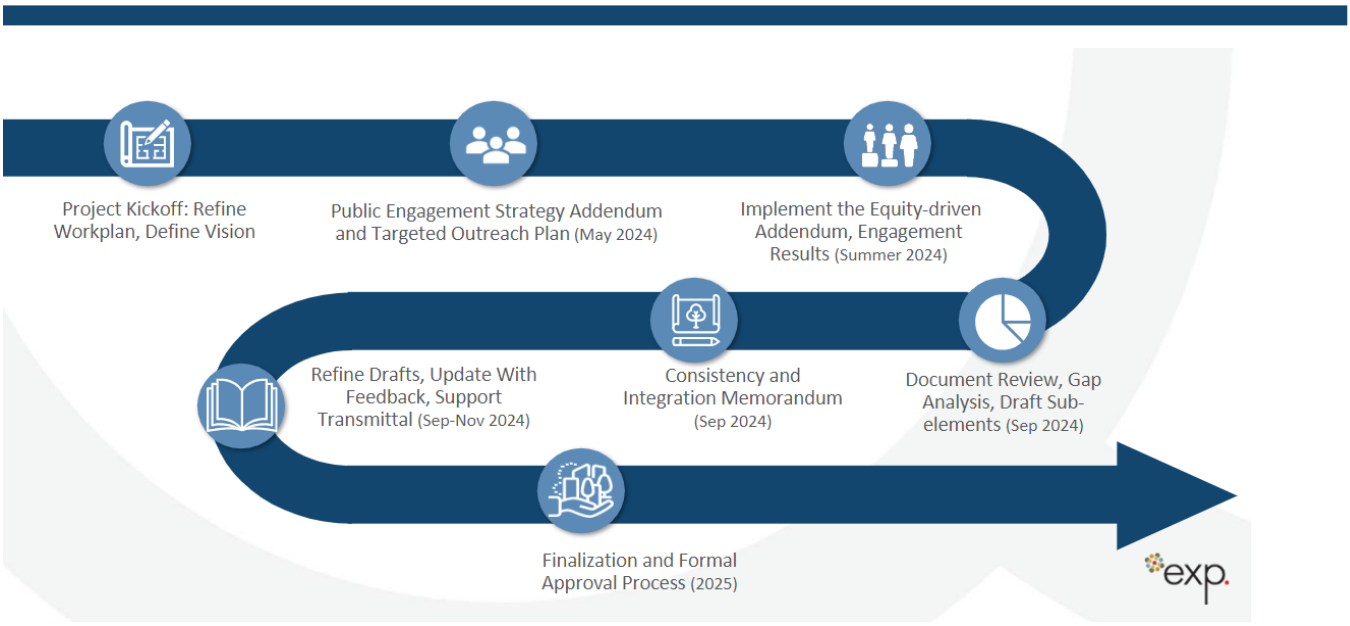


Figure 6. Timeline of Climate Element

Staff will engage the City Council and the Planning Commission again in November 2024 with the draft Element. Time has been set aside on the General Government Committee meeting agenda for July 10, 2024, for any immediate follow up on the City Council and Planning Commission discussion of the Climate Element at their joint work session.

Appendix A – Guidance

The State Department of Commerce has provided guidance specific to the periodic update on their Periodic Update webpage.

https://www.commerce.wa.gov/serving-communities/growth-management/periodic-update/

www.commerce.wa.gov/serving-communities/growth-management/growth-management-topics

The State Department of Commerce has a webpage for Climate Element guidance.

https://www.commerce.wa.gov/serving-communities/growth-management/growth-management-topics/climate-change-2/

In addition, the Puget Sound Regional Council is conducting a series of workshops on a variety of topics related to the periodic update.

www.psrc.org/our-work/passport-2044-comprehensive-plan-workshop-series)

The Municipal Research Services Center has a Comprehensive Planning webpage as well as webpage addressing the new legislative requirements.

https://mrsc.org/getdoc/d7964de5-4821-4c4d-8284-488ec30f8605/Comprehensive-Planning.aspx

MRSC - New Legislation Related to Climate and the Natural Environment

Climate Element
2025 Comprehensive Plan Update

Balancing Nature and Community:
Tumwater's Path to Sustainable Growth

Alyssa Jones Wood, Sustainability Coordinator

Joint City Council and Planning Commission Work Session, July 9, 2024

Intent

Discuss the City's approach to addressing recent State requirements to add a new Climate Element to the Comprehensive Plan as part of the periodic update

New State Climate Element Requirements

1. A **climate mitigation sub-element** to address actions to reduce overall greenhouse gas emissions and vehicle miles traveled
2. A **climate resilience sub-element** to address climate adaptation
3. Consideration of **environmental justice** to avoid worsening environmental health disparities

1. Climate Mitigation Sub-Element

- Climate mitigation addresses greenhouse gas emission (GHG) reductions that involve actions taken to eliminate the emissions of GHGs to reduce the rate and extent of climate change damage
- GHGs include carbon dioxide, methane, nitrous oxide, HFCs, and any other gas or gasses designated by the State

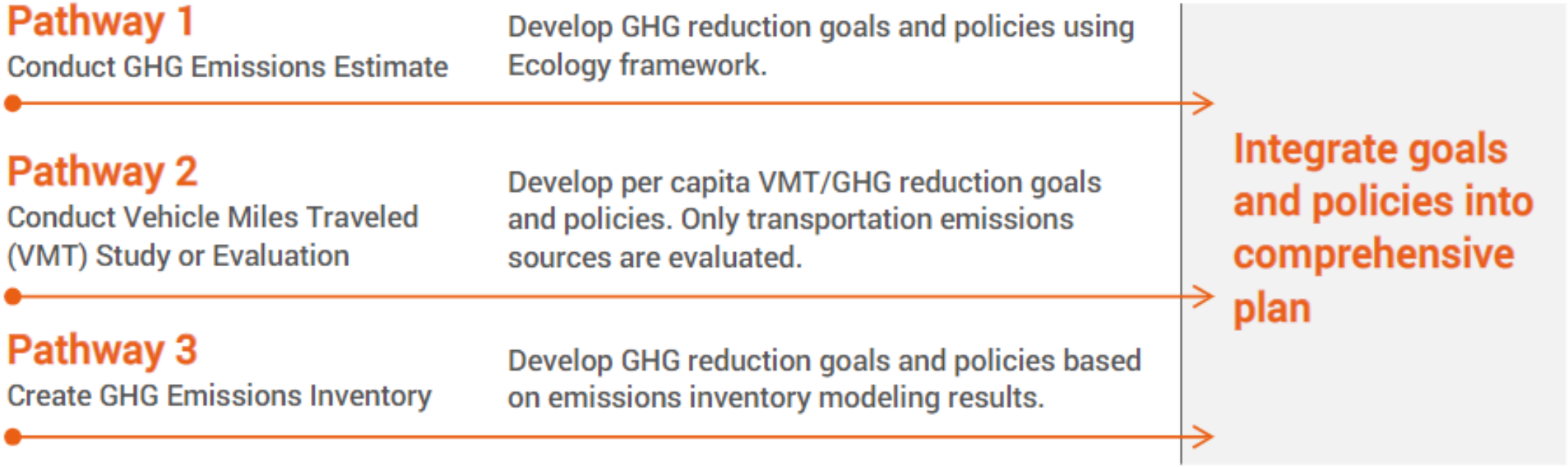
1. Climate Mitigation Sub-Element

- New requirements include adding goals and strategies that lead to achieving Net-Zero Emissions by 2050, consistent with Washington's statewide target
- These requirements are above the current GHG reduction goals in the Thurston Climate Mitigation Plan adopted by the City Council in 2021

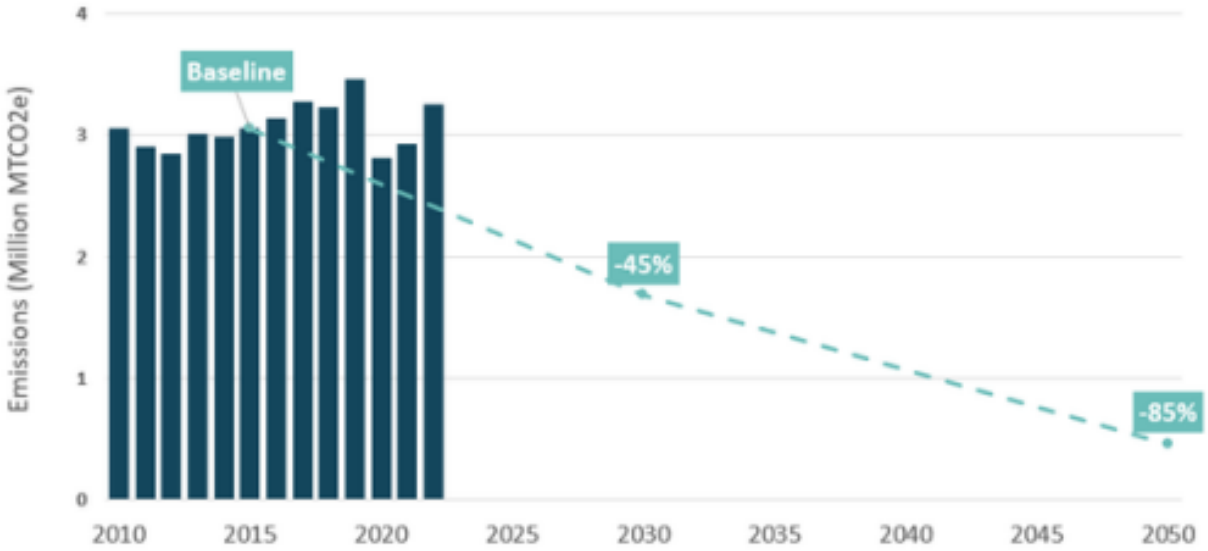
1. Climate Mitigation Sub-Element

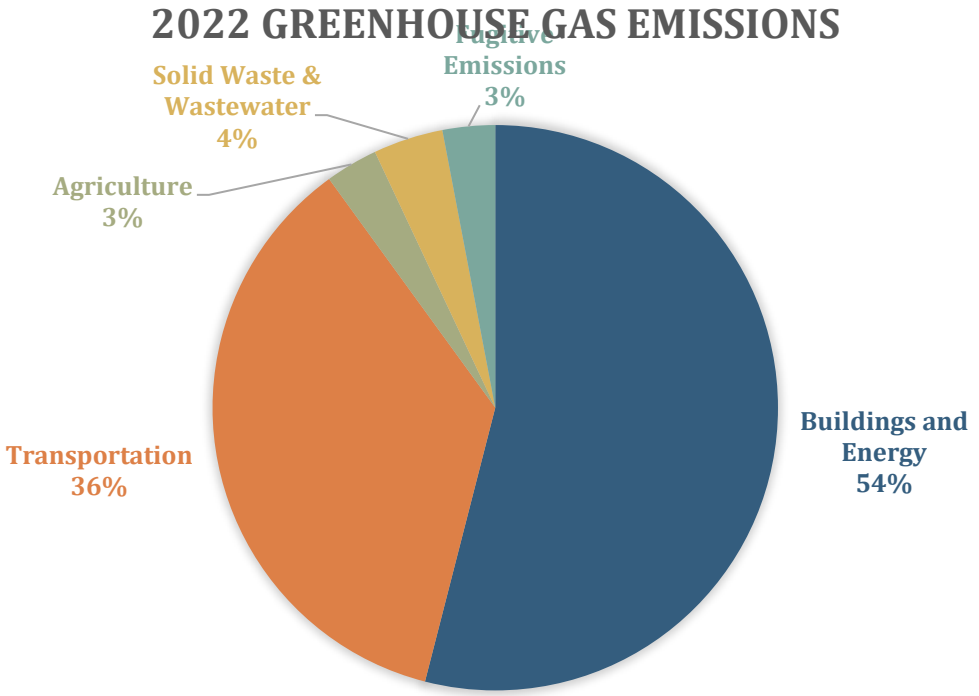
- The Thurston Climate Mitigation Plan will be incorporated into the Climate Mitigation Sub-Element
- Additional goals and strategies will be added to bridge the gap between the TCMP goals and State's net-zero by 2050 goals

Climate Mitigation Pathways



Thurston County 2022 GHG Inventory





2022 Thurston County GHG Emissions were ~6.2% HIGHER than the 2015 baseline

2. Climate Resilience Sub-Element

2. Climate Resilience Sub-Element

- The Thurston Hazards Mitigation Plan is in substantial conformance with the State Guidance
- In addition, actions from the Thurston Climate Adaptation Plan will be updated and incorporated into the sub-element
- Staff and consultants will also utilize the Department of Commerce Climate Element Workbook to ensure any gaps between state requirements and previously developed content from the Thurston Hazards Mitigation Plan and/or Thurston Climate Adaptation Plan will be investigated and addressed

11 sectors

Agriculture & Food Systems

Buildings & Energy

Cultural Resource

Economic Development

Emergency Management

Health & Well-being

Ecosystems

Transportation

Waste Management

Water Resources

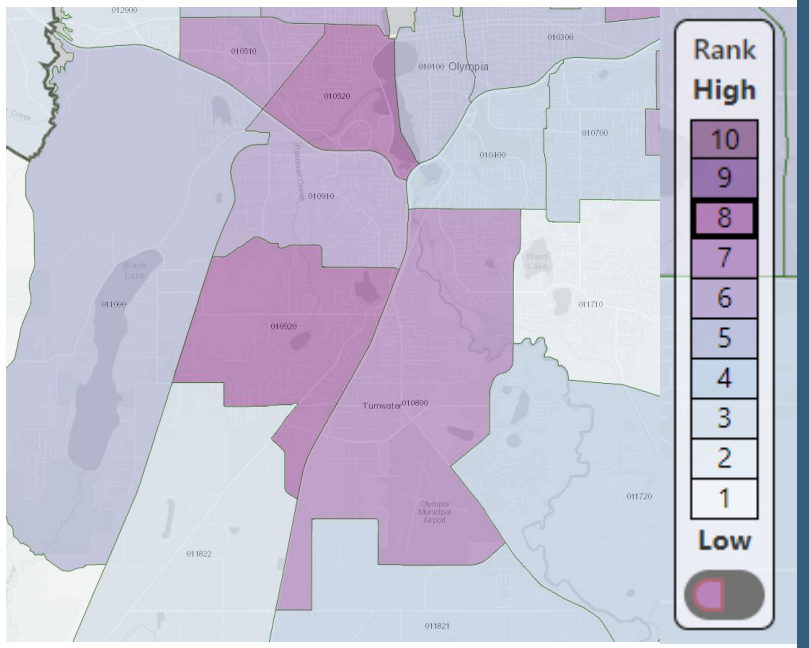
Zoning & Development

- There must be at least one goal per sector

3. Environmental Justice

The Climate Element must:

- Prioritize GHG reductions in overburdened communities
- Prioritize climate resilience in communities that will disproportionately suffer from compounding environmental impacts



WA
DOH Environmental
Health Disparities

Progress To Date

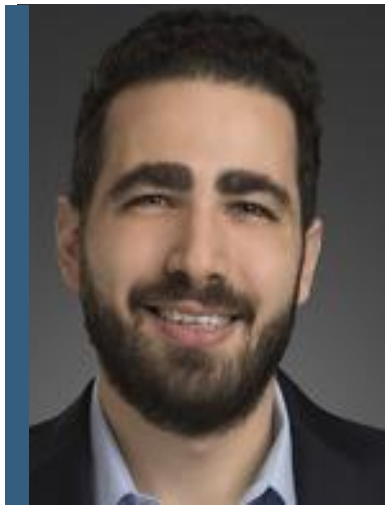
1. Hired EXP as consultant
2. Thurston Climate Mitigation Collaborative (TCMC) Community Advisory Workgroup Visioning and Values Exercise
3. Draft Community Engagement Strategy
4. Climate Policy Advisory Team
5. Open House Scheduling

EXP Team

EXP is a multidisciplinary planning, design engineering, & firm

Keren Bolter, PhD
Project Manager

Keren has > 20 years of experience leading climate initiatives which bridge the information-action gap. She is a professor at PSU and has been a planner in local government



Louis Spanias ENV SP
Sustainability Lead

Louis has 10+ years of experience leading decarbonization, climate adaptation and resilience projects

PRIME CONSULTANT exp. SUBCONSULTANT CUMMING GROUP

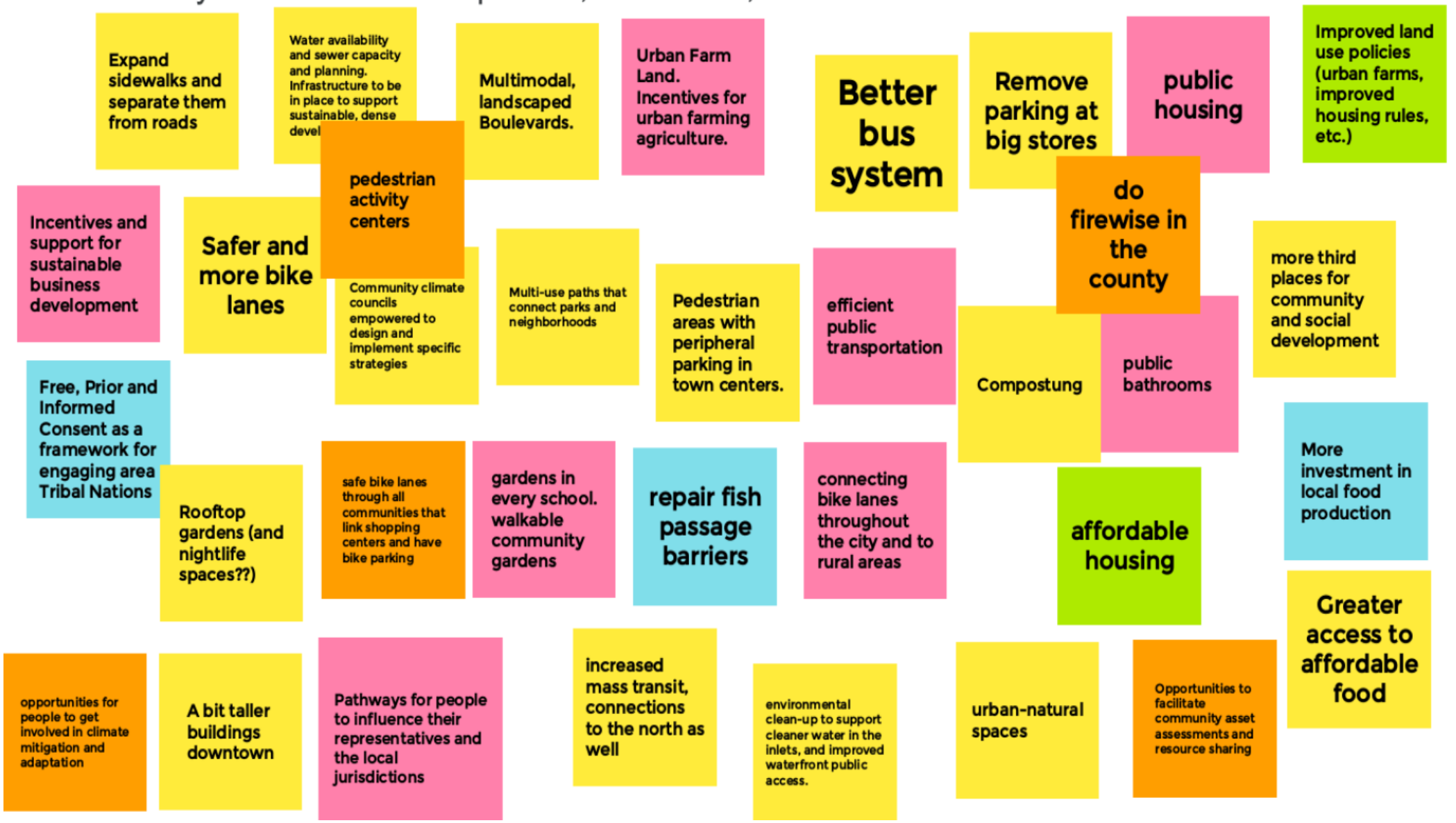
TCMC Community Advisory Workgroup Visioning

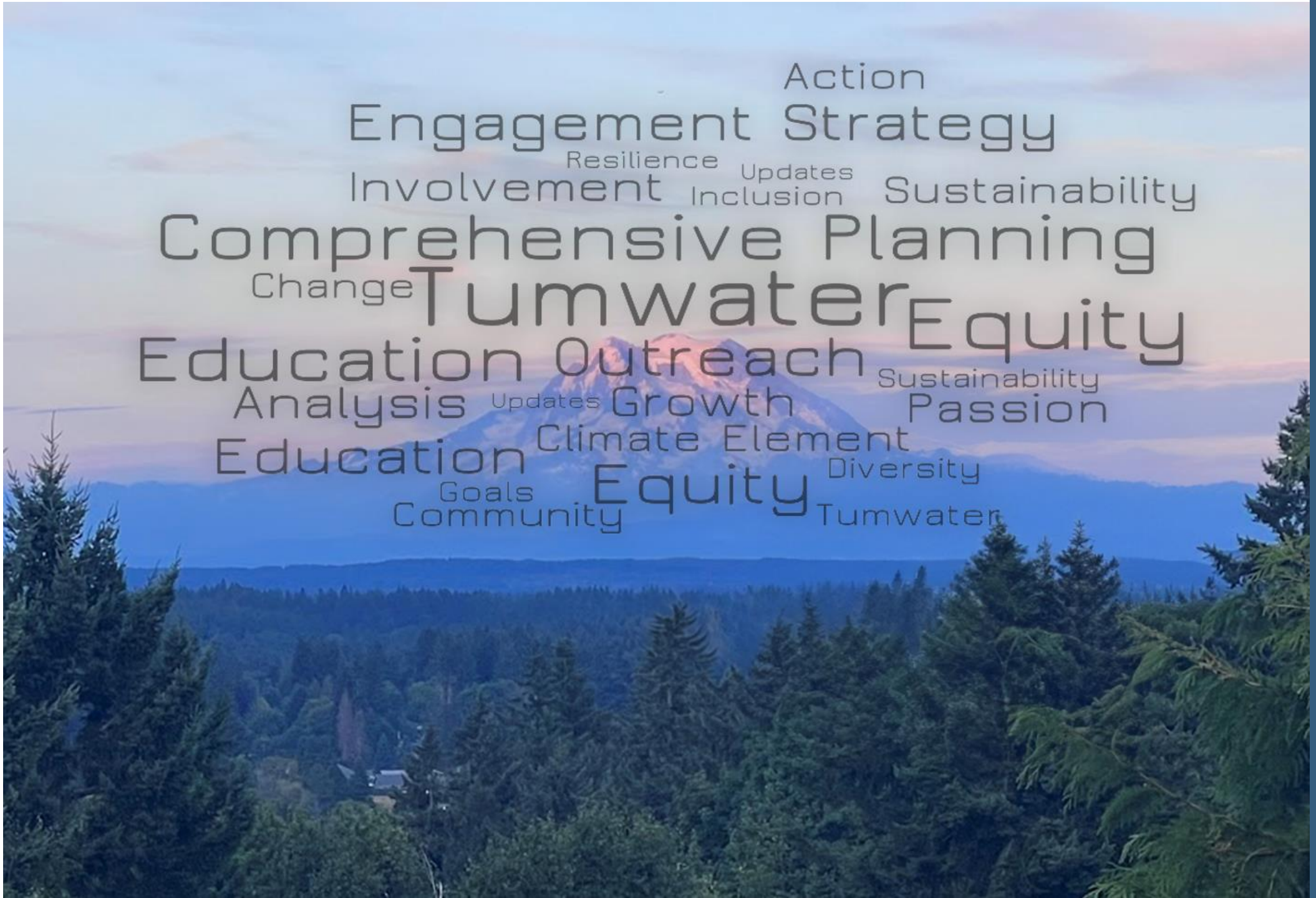
I want... (in climate action work and resiliency)
to see vegetation EVERYWHERE
Clarity and commitment by leadership and all community members. Real conversations & plans that move towards action items. Urgency. Change.
to invest in local food systems both as a mitigation effort, but also because of the increased likelihood of multi-crop failures globally.
Decrease roads in size
More trees
To be able to get around the county without having to drive
More outdoor pedestrian centers, but not strip malls :)
leadership
anti-siloing of environmental agencies, advocacy groups, etc. more connection and communication!!
more free educational events on climate change and related issues
To be able to bike safely and easily in the county
neighborhoods of diverse incomes
Remove the need for lawns in many of our neighborhoods
everyone to find their unique role in supporting climate action
To have mandatory composting
Reduce or remove these huge parking lots
Facilitated community activities to community asset mapping and resource sharing during emergencies and climate events.
bold vision
More pilots, experimental programs, to be a leader as a city
a diverse, inclusive community that is having success at mitigating GHG
willingness to break boundaries and rules for the greater good
bike safely anywhere in the community
more use of wood as a building material (renewable resource)
100% clean energy
Roadways and streets that are pleasant to walk and roll through without a car
sense of common purpose, community cohesion
To use the climate crisis as a needed impetus towards healthier lifestyles, closer relationships, and ultimately a stronger, thriving community.
working together to prevent harm and protect each other from harm
willingness to take necessary risks
Safe walkable communities
embrace new cultural norms that are environmentally conscious
Improved access to basic needs like healthcare, more accessible healthcare systems, health care systems prepared for climate events
more climate research opportunities and funding, especially on social science studies of climate change
a large-scale climate coalition :)
more options for recycling or getting waste out of the landfills
Strengthened emergency response programming, including community response teams, etc.

What do you hope will be true about the Thurston Region in the future?

What do you want to see preserved?

What do you want to see improved, enhanced, or created if it doesn't exist now?




Action
Engagement Strategy
Resilience
Updates
Involvement
Inclusion
Sustainability
Comprehensive Planning
Change
Tumwater
Equity
Education Outreach
Sustainability
Analysis
Updates
Growth
Passion
Climate Element
Education
Diversity
Goals
Equity
Community
Tumwater

Community Engagement Strategy Goals

1. Understand why and how residents think services and processes need to change and develop to increase GHG reduction and climate resilience
2. Engage the broader community, ensuring sufficient representation from diverse groups through in-person, virtual, or hybrid outreach and both digital and printed resources
3. Meet people where they are and ensure that all engagement efforts are accessible and equitable – This means not excluding anyone with certain health, physical, or working conditions, and it requires that needs around language, mobility, or family care are thoughtfully addressed

Community Engagement Strategy Goals

4. Keep the energy positive and focus on success stories, while also stressing the need for action and potential risks
5. Support clear and consistent messaging to current and potential stakeholders that communicates the importance of the Climate Element
6. Be responsive to community insights and allow for shared influence between communities and the organizations that serve them
7. Focus on reducing inequalities and fostering greater community ownership of the Climate Element which will lead to equitable outcomes to benefit frontline communities

Community Engagement Strategy Goals

8. Seek how best to intentionally allocate resources to overcome the cumulative impacts of institutional racism on historically underserved and under-represented people
9. Articulate Tumwater's role as a climate leader, aligning with County and State priorities and harnessing local experience and expertise
10. Position Tumwater City staff and residents to make better-informed decisions, driving smarter investments to that the City develops safely in a healthier environment, even with growing climate impacts

Community Engagement Strategies

- Community-wide surveys
- Open houses and public workshops
- Small-group workshops or community dialogues
- Pop-up events and door-knocking
- Passive engagement

Accessibility and inclusion

Relationship building

Alignment with stakeholders and policy

Representation and equity

Robustness and wholeness

Engagement Themes and Topics (1 of 2)

Themes/Topline Messages	Pertinent Topics or Priorities
Characterization/Background	• Every fraction of a degree of warming matters • Net-Zero by 2050 • Regulatory and legislative drivers (e.g. CCA, CETA, GMA, etc.)
Planning Process	• Internal group activities and priorities (e.g. City Departments, Elected Officials, Staff, etc.) • Community-wide activities, priorities, and advisory (CPAT, Open Houses, etc.)
Fact Base/Analysis	• Climate change (e.g. human activities, local and global impacts) • GHG emissions • Climate vulnerability, risk, adaptation, and resilience
Equity	• Identifying, understanding, and addressing existing disparities and gaps across demographics, socioeconomic status, race, ethnic, and gender identity, ability, etc. • Climate hazard sensitivity and exposure for frontline communities

Engagement Themes and Topics (2 of 2)

Themes/Topline Messages	Pertinent Topics or Priorities

Goals	• Short- and long-term emissions reduction (community-wide and municipal)
	  • Transportation
	  • Land Use
	• Climate resilience and adaptation
	  • Overarching goals
	  • Sector – and asset-specific goals

Policies	• Governance and leadership • Communication, education, and outreach • Land use, zoning, and development • Food and agriculture systems • Urban forests, watersheds, and ecosystems • Transportation and mobility • Buildings and energy • Consumption and solid waste • Water supply, wastewater, and stormwater • Health, hazard mitigation, and emergency management • Focus on wildfire, extreme heat, flooding, etc.
Implementation	• Roles and responsibilities • Interorganizational coordination • Prioritization (criteria) • Feasibility (cost estimation, labor capacity, etc.) • Monitoring and evaluation

Engagement Phases and Schedule

Phase	Description and Activities	Timeline
Listening	Open house, CPAT kickoff and Feedback requests	Summer 2024
Visioning	TCMC CAW Presentation	September 2024
Strategizing	Briefing and work sessions with the Planning Commission on draft Climate Element and related updates to other Plans and Elements including TMC	Through March 2025
Finalizing	Briefings with General Government Committee and work sessions with City Council on draft Climate Element and related updates to other Plans and Elements	Through March 2025

Climate Policy Advisory Team

Government

City staff and departments
County government
Tribal Nations
Public agencies

Affected Populations

BIPOC
Youth and elderly
Low-income
Workers and labor unions
People with disabilities
Immuno-compromised

Community

Local businesses
Non-profit organizations
Community-based organizations
Charities
Religious groups

Expertise

Colleges/universities
Research organizations
City consultants
Advocacy groups

Climate Policy Advisory Team

CPAT Member	Category	Affiliation (if any)
Anna Stusser	Affected Populations	SEIU775 Service Employees International Union
Anthony Levenda	Expertise	Evergreen Center for Climate Action & Sustainability
Bernie Gertje	Government	City of Tumwater Transportation Engineer
Clint Bryson	Affected Populations	International Brotherhood of Electrical Workers (IBEW) 76 Leadership
Gordon Wheat	Expertise	Physicians for Social Responsibility
Graham Clumpner	Community	Oil Gas Action Network & Tumwater Resident
Janine Linsey	Expertise	Thurston Climate Action Team & Tumwater Property Owner
Jessie Simmons	Community	Olympia Master Builders
Kerri Wilson	Government	Intercity Transit Walk N Roll & Tumwater Resident
Lynn Fitz-Hugh	Expertise	Restoring Earth Connections & Friends of Trees
Morris McKellery	Affected Populations	Tumwater Resident
Rachael Childs	Affected Populations	Homes First
Taylor Werner	Affected Populations	International Brotherhood of Electrical Workers 46 Rank and File Member

Accountability to CPAT and Community

CPAT Feedback	Staff Follow Up
The open house needs to feel welcoming - advertise that food will be provided for attendees and hold the open house at a location other than an official City building	Staff are committed to providing food at the Open House and advertising that food will be provided Staff has booked ASHHO Cultural Community Center for the open house
Engagement needs to be more than one open house – Examples: table at parks, table at the Department of Social and Health Services, and/or door-knock in neighborhoods that are more disadvantaged and/or overburdened	Staff and CPAT members will work together to identify opportunities for tabling and/or door-knocking and will work on that outreach together. WRS Staff has a tabling event scheduled in the summer at the Tumwater satellite location of the Thurston County Food Bank
Focus more on the urban forests of Tumwater as part of both mitigation and adaptation to climate change	The contributions of urban forests will be included at Open House tables on mitigation and adaptation
Include Youth	Staff has reached out to the Thurston Youth Climate Coalition about attending/facilitating a special youth caucus at the Open House
Distribute a save the date flyer that clearly communicates how people will be expected to participate and how the City will be accountable to what they hear	Staff and the consultant team are working to develop a save the date flyer with this information Staff and CPAT members will distribute the flyer early throughout the community once it is finalized
Provide space both for table activities and a large group listening session – Provide options for people to engage who may be less likely to speak aloud	Staff and the consultant team will incorporate a large group listening session at the end of the open house agenda with boxes with paper/pen will be available for community members to engage without speaking if that is their preference The online open house will also be advertised as an option for sharing feedback outside of the one-night Open House event

Hybrid Climate Element Open House

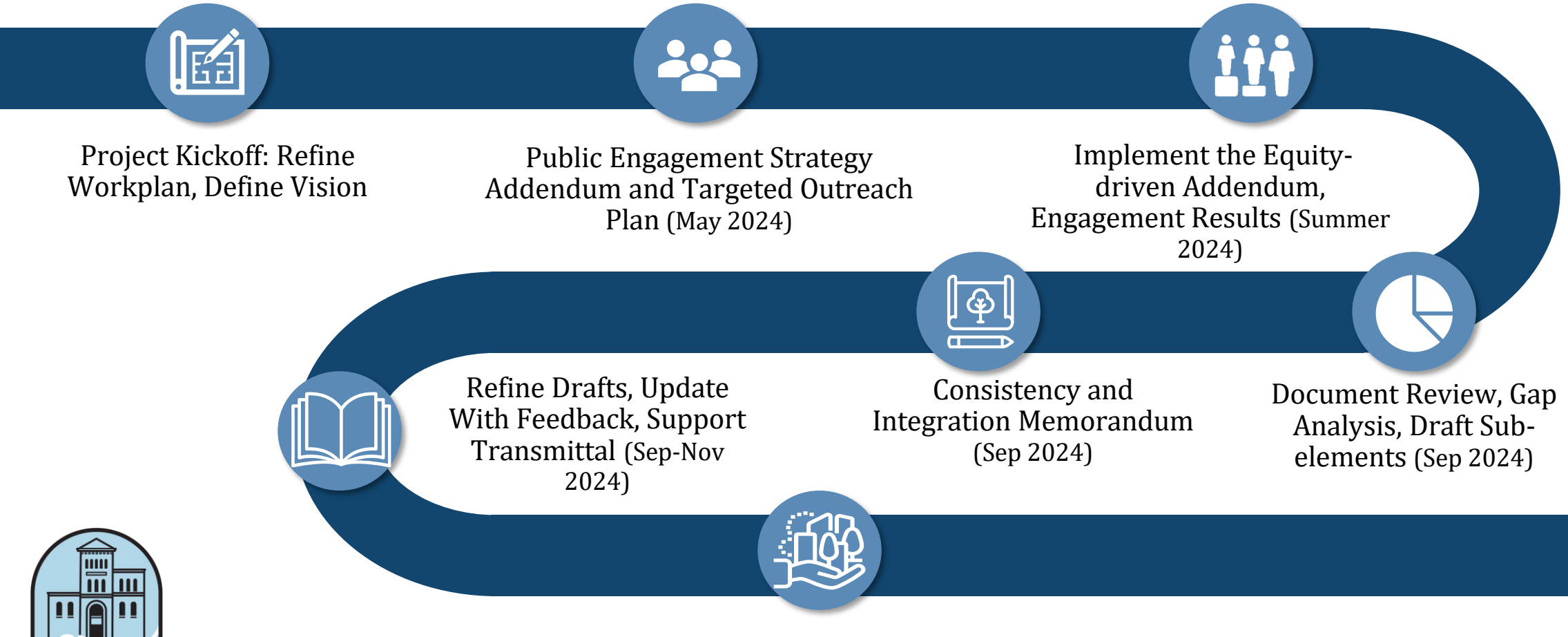
In Person

- August 14, 2024, from 7 p.m. to 9 p.m.
- ASHHO Cultural Community Center
- Will include online registration to get headcounts for food

Virtual/Online

- August 15 - September 30, 2024
- Available 24/7
- Translatable using google translate
- Hosted as an online storymap

Schedule


Project Kickoff: Refine Workplan, Define Vision
Public Engagement Strategy Addendum and Targeted Outreach Plan (May 2024)
Implement the Equity-driven Addendum, Engagement Results (Summer 2024)
Document Review, Gap Analysis, Draft Sub-elements (Sep 2024)
Consistency and Integration Memorandum (Sep 2024)
Refine Drafts, Update With Feedback, Support Transmittal (Sep-Nov 2024)
Finalization and Formal Approval Process (2025)

Project Web Site

All documents related to the periodic update are on the City's periodic update webpage, including:

- Information on all meetings
- State guidance materials
- Drafts of the Elements as they are prepared
- Staff reports and presentations

Submitting Comments or Questions

Written comments or questions are welcome at any time during the periodic update process

- The periodic update email is compplan@ci.tumwater.wa.us
- City of Tumwater Contact:

Brad Medrud, AICP
City of Tumwater Planning Manager
Community Development Department
555 Israel Road SW
Tumwater, WA 98501
Phone: 360-754-4180
Email: bmedrud@ci.tumwater.wa.us

Discussion Questions

- What are the City Council's values and visions for the Climate Element?
- Is there anything missing from our engagement strategy that needs to be addressed?

Attachment C

CLIMATE ELEMENT ENGAGEMENT STRATEGY

Addendum to the Final Community Engagement Plan for Tumwater's 2025 Comprehensive Plan Periodic Update

June 2024

DRAFT

CUMMING GROUP

Tumwater 2025 Comprehensive Plan Periodic Update

"Balancing Nature and Community: Tumwater's Path to Sustainable Growth"

CLIMATE ELEMENT ENGAGEMENT STRATEGY
Community Engagement Plan Addendum

June 2024

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A. Overview

This **Climate Element Engagement Strategy** is issued as an official addendum to the City of Tumwater's **Final Community Engagement Plan** for the **Tumwater 2025 Comprehensive Plan Periodic Update.** This Engagement Strategy dictates the City's planned approach to facilitating equitable, data-driven, and comprehensive public engagement process, whereby the Tumwater community is enabled to shape the creation, adoption, and implementation of Tumwater's **Climate Element**. The Climate Element is an amendment to Tumwater's 2025 Comprehensive Plan, communicating the City's approach to mitigating greenhouse gas (GHG) emissions and bolstering community-wide resilience to climate hazards, and will both prioritize environmental justice and maximize economic, environmental, and social co-benefits.

1. Tumwater's Comprehensive Plan Update 2025 and New Requirement

Every ten years, the State of Washington requires Tumwater to conduct a periodic update of its Comprehensive Plan and related development regulations to comply with the requirements of the State's **Growth Management Act (GMA)**. The Comprehensive Plan lays out the City's vision for decisions and investments related to housing and land use, local job creation, transportation and mobility, utilities, parks, and other public assets over a 20-year period. The Plan serves as a roadmap for future growth and services in the City, and affects neighborhoods, businesses, transportation, public facilities and services, and the environment.

In May 2023, the Governor signed House Bill (HB) 1181, which added climate change and resiliency as the fourteenth planning goal of the GMA and required the preparation of a Climate Element requirement to the GMA. The goal states:

> *Ensure that comprehensive plans, development regulations, and regional policies, plans, and strategies under **RCW 36.70A.210** and chapter **47.80** RCW adapt to and mitigate the effects of a changing climate; support reductions in greenhouse gas emissions and per capita vehicle miles traveled; prepare for climate impact scenarios; foster resiliency to climate impacts and natural hazards; protect and enhance environmental, economic, and human health and safety; and advance environmental justice.*

The Climate Commitment Act (CCA) and Senate Bill (SB) 5187 have made $30 million available statewide for grants to support these efforts. The City of Tumwater obtained a grant to fund its new Climate Element.

2. What is a Climate Element?

Incorporating a Climate Element into Tumwater's Comprehensive Plan is not only a state requirement, but more importantly it signifies Tumwater's commitment to sustainability and resilience in the face of climate change and safeguarding communities, economies, and ecosystems. The development of the Element requires collaboration across various sectors and disciplines, including urban planning, environmental science, public policy, health, and community advocacy. It provides a framework for integrating the economic, environmental, and social factors of climate change into the other related elements of the comprehensive plan.

The Climate Element consists of two sub-elements:

- **Greenhouse Gas (GHG) Reduction Sub-element**,[1] which will address baseline conditions (i.e., offer an inventory of community-wide GHG emissions) and planned policies and strategies to reduce GHG emissions and vehicle miles traveled (VMT) per capita across Tumwater; and
- **Climate Resilience[2] Sub-element**, which will address baseline conditions and planned policies and strategies related to Tumwater's sensitivity, exposure, and adaptive capacity to climate hazards, which will include science-based goals and policies that address local community hazards. The analysis will include consideration of how natural areas can foster resiliency and protect vital habitat for species migration.

As the City's population continues to grow and needs for housing and infrastructure increase, it is critical to plan for smart development to meet these needs while minimizing hazard risks and GHG emissions.

3. Equity, Environmental Justice, and Frontline Communities

The Engagement Strategy must support environmental justice by establishing equity goals and desired outcomes. Tumwater believes the integration of equity principles into this process is important for success, so that disadvantaged communities which are already disproportionately burdened by climate change, aren't adversely impacted further by new plans and policies.

4. About the Climate Element Engagement Strategy

This Climate Element Engagement Strategy builds upon Tumwater's existing Community Engagement Plan (finalized on July 12, 2023), outlining a process for community members to be

[1] Greenhouse gases, as defined by the U.S. Environmental Protection Agency, are "gases that trap heat in the atmosphere."
[2] Climate resilience, as defined by the State of Washington, is "the ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities."

involved in guiding policy decisions that will shape Tumwater's climate future. It specifically provides the community and stakeholders with meaningful opportunities to participate in the Comprehensive Plan periodic update throughout the process with a focus on climate action and adaptation and the intersection of those topics with other Comprehensive Plan elements. The Engagement Strategy identifies tactics, strategies, and platforms to inform and consult the community and stakeholders throughout the periodic update. As outlined in the Final Community Engagement Plan, the Tumwater community will continue to be notified of Comprehensive Plan Update meetings and open houses via the periodic update webpage, social media, the Tumwater On-Tap e- newsletter, and City's interested party contact list.

Figure 1 shows the 4 main step for the process as laid out in the Washington State Department of Commerce's **Climate Element Planning Guidance** (updated December 2023).

Figure 1. Tumwater Climate Element Engagement Strategy Overview

This document provides a detailed overview of the Climate Element Engagement Strategy Process and is laid out as follows:

- Goals for Climate Element Engagement Strategy;
- Climate Policy Advisory Team;
- Community-wide Engagement for Draft Climate Element; and
- Feedback integration into Final Climate Element and Comprehensive Plan Update

This process overview is followed by the City's planned approach to develop the Climate Element with an intentional focus on holistic and equitable community engagement. The Engagement Strategy will highlight the approaches identified by the City to inform, consult, and involve the community in the development of GHG reduction and climate resilience goals and policies. This includes details on the specific platforms and media to be used to engage community members as well as the siting and schedules by which the City intends to execute this Engagement Strategy. This approach is intended to ensure that the engagement process is equitable and puts the frontline communities that experience climate change 'first and worst' at the front and center of the Climate Element.

B. Climate Element Engagement Strategy

1. Goals for Climate Element Engagement Strategy

The Climate Element Engagement Strategy will supplement the City's existing engagement plan for its Comprehensive Plan Update. The Engagement Strategy is intended to provide as much opportunity to the Tumwater community to engage in the development of GHG reduction and climate resilience goals and policies as possible, while at the same time offering flexibility to Tumwater residents to provide input into other aspects of the Comprehensive Plan Update as events and opportunities arise. Laid out here are vision and goals that are both specific to the climate planning process, as well as complementary to the City's existing Community Engagement Plan.

The key goals of the Final Community Engagement Plan for the 2025 Comprehensive Plan Periodic Update extend to this Climate Element Engagement Strategy, which are to:

1) Provide information to enhance community understanding of issues.
2) Seek early and continuous involvement from people who care about the Comprehensive Plan and the community.
3) Offer opportunities for the community to provide feedback to staff and appointed and elected officials.
4) Develop an accessible, equitable, and engaging Plan.
5) Make community-driven planning the priority for the Plan.
6) Highlight projects implemented since the last Comprehensive Plan periodic update.
7) Use a flexible, phased approach.
8) Integrate and consolidate goals from all Elements of this Plan.
9) Develop a Plan that is in an easy to read and understandable format.
10) Rely on multiple communications strategies, tactics, and platforms to share information.

As it specifically pertains to the Climate Element, the goals of this Engagement Strategy are to:

1) Understand why and how residents think services and processes need to change and develop to increase GHG reduction and climate resilience.
2) Engage the broader community, ensuring sufficient representation from diverse groups through in-person, virtual, and/or hybrid outreach and both digital and printed resources.

3) Meet people where they are and ensure that all engagement efforts are accessible and equitable. This means not excluding anyone with certain health, physical, or working conditions, and it requires that needs around language, mobility, or family care are thoughtfully addressed.

4) Keep the energy positive and focus on success stories, while also stressing the need for action and potential risks.

5) Support clear and consistent messaging to current and potential stakeholders that communicates the importance of the Climate Element.

6) Be responsive to community insights and allow for shared influence between communities and the organizations that serve them.

7) Focus on reducing inequalities and fostering greater community ownership of the Climate Element which will lead to equitable outcomes to benefit frontline communities.

8) Seek how best to intentionally allocate resources to overcome the cumulative impacts of institutional racism on historically underserved and under-represented people.

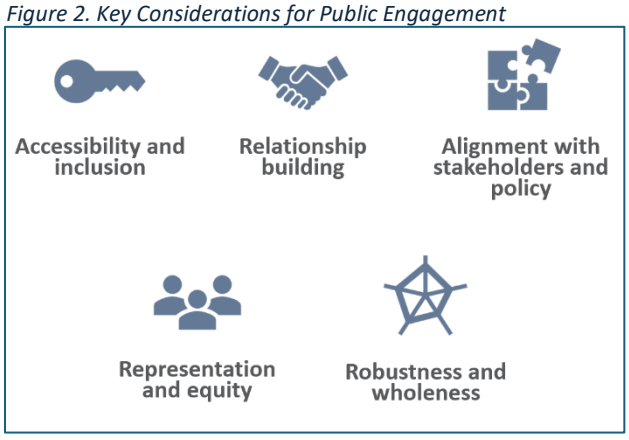
9) Articulate Tumwater's role as a climate leader, aligning with County and State priorities and harnessing local experience and expertise.

10) Position Tumwater City staff and residents to make better-informed decisions, driving smarter investments so that the City develops safely in a healthier environment, even with growing climate impacts.

Centering Equity and Environmental Justice

The City of Tumwater recognizes that climate change is inherently an issue of inequity and social and environmental justice. Communities across Washington State and the United States have suffered from the inequitable distribution of benefits and burdens that are especially relevant to the issue of climate change. Climate impacts tend to be felt 'first and worst' by certain communities, especially low-income communities, and communities of color, who remain without the same access to institutions and services that would otherwise protect them from the impacts of climate change. These communities are unfairly seated at the front lines of climate change, and consequently must be prioritized in the climate planning process.

Figure 2. Key Considerations for Public Engagement



This Engagement Strategy is intended to ensure that the Climate Element planning process centers and uplifts the voices of frontline communities who are already being disproportionately affected by climate change. To achieve this, the Strategy adheres to several key principles and frameworks:

- **Targeted Universalism**: Developed by the Othering & Belonging Institute at the University of California, Berkeley, Targeted Universalism "…means setting universal goals pursued by targeted processes to achieve those goals. Within a targeted universalism framework, universal goals are established for all groups concerned. The strategies developed to achieve those goals are targeted, based upon how different groups are situated within structures, culture, and across geographies to obtain the universal goal."
- **Reciprocity**: Avoiding 'extractive' and 'transactional' interactions with community members and organizations by providing and sharing resources and crediting others for their time, effort, and participation.
- **Appreciative Inquiry**: An approach whereby conversations are focused on inspiring collective action and establishing a common vision based on strengths, successes, and relationships. In addition, conversations are set up to ensure equal footing and to assign as much value to lived experience as is commonly assigned to technical expertise.

Furthermore, the Engagement Strategy (and the Climate Element by extension) more specifically refers to multiple types of equity, as defined by the Urban Sustainability Directors Network:

- **Procedural equity**: Embedding authentic, inclusive, and accessible community engagement into policy and program development.
- **Distributional equity**: Equitably distributing benefits and burdens across all communities.
- **Structural equity**: Recognizing historical, cultural, and institutional dynamics that lead to inequality.
- **Transgenerational equity**: Accounting for impacts of policies and programs on future generations.

2. Climate Policy Advisory Team (CPAT)

The Washington State Department of Commerce's **Climate Element Planning Guidance** (updated December 2023) recommends the establishment of a Climate Policy Advisory Team, or CPAT, a climate-focused interdisciplinary team that advises on the primary planning and public engagement efforts associated with updating housing, land use, transportation, and other comprehensive plan elements. Per the Climate Element Planning Guidance, the CPAT is "a group of citizens representing a broad cross-section of community interests that will support the City's Climate Element development."

The CPAT is tasked with reviewing and commenting on work products, guiding public outreach and engagement efforts, and creating opportunities for frontline community members to engage with the process and stay involved after the Climate Element's adoption. Tumwater will work with the CPAT to ensure that the Climate Element reflects the best available science, meets the community's needs, and positions the jurisdiction for a sustainable, resilient future.

Tumwater's CPAT, assembled in May 2024, has 13 members from the community. The representatives were invited to represent:

- **Government:** Local, regional, and Tribal;
- **Community** groups and organizations (e.g., local businesses, non-profit and community-based organizations, charities, etc.);
- **Subject matter experts** from colleges, universities, research organizations, and consultancies; and
- **Affected populations** (e.g., Black and Indigenous communities of color, youth and elderly populations, low-income communities, workers and labor unions, disabled and/or immunocompromised individuals, monolingual non-native speakers, etc.).

3. Community-wide Engagement for Draft Climate Element

Tumwater is committed to a public engagement process that leads to a community-driven, data-driven, equity-driven, and actionable Climate Element. The community-wide engagement process will deploy various tools and strategies, including but not limited to:

- **Community-wide surveys** (digital or printed) focused on collecting general feedback on key priorities and interests;
- **Open houses and public workshops** (in-person, virtual, and hybrid) designed to bring community members into shared spaces and guide participants through interactive visioning and strategizing processes;
- **Small-group workshops or community dialogues** with trusted community leaders and targeted communities for information sharing and gathering;
- **Pop-up events** that use existing community gatherings as venues for continued engagement on the Climate Element and Comprehensive Plan Update; and
- **Passive engagement**, including informational outreach through social media, mailings, and other media to keep community members updated and engaged throughout the Climate Element planning process.

This multi-faceted approach will ensure that the Climate Element is driven as much by the community's priorities and interests as it is by data and resource availability. The City of

Tumwater commits to a transparent, detailed, and thoroughly documented engagement process that strengthens community trust, creates shared ownership of the planning process, and establishes partnerships between and among groups that are mutual and lasting. In addition, the diversity of tools and strategies listed provides multiple, accessible opportunities for stakeholders to engage, allowing stakeholders to be selective (but also, to have sufficient participation options) about when they participate, preventing engagement fatigue and information overload.

Engagement Themes and Topics

While the Climate Element will largely be focused on the broader themes of GHG emissions reduction and climate resilience, there are several sectors, issues, and complexities that will emerge under those two broader subject categories. In alignment with State guidance and best practice, key topics and themes have been categorized to ensure that stakeholders are not overwhelmed with too much information while still having sufficient exposure and opportunity to engage with important topics.

Among the best practices reviewed to inform this Engagement Strategy, Tumwater reviewed Baynham & Stevens' (2014) evaluation of mitigation and adaptation plans and content. Their evaluation found that most plans are stronger with respect to goals and policies, rather than tailoring a specific process for implementation. Consequently, the City draws upon their recommendations to strengthen the municipal climate planning process, including a scorecard with key messages and topics. These have been modified and adapted for Tumwater's Climate Element. Table 1 provides these key themes and topline messages, accompanied by topics pertinent to Tumwater.

Table 1. Climate Element Themes and Topics

Themes/Topline Messages	Pertinent Topics or Priorities
Characterization/Background *(describes how the Climate Element was established, the need, policy context, and relevance of climate change locally/globally)*	- Think globally, act locally - Every fraction of a degree (of warming) matters - Set incremental targets that lead to achieving net zero emissions in 2050, consistent with Washington's statewide target. - Regulatory and legislative drivers (e.g., Climate Commitment Act, Clean Energy Transformation Act, Growth Management Act, HB 1181)
Planning Process	- Internal group activities and priorities (e.g., City departments, elected officials, staff, etc.) - Community-wide activities, priorities, and advisory (e.g., CPAT, open houses, Comprehensive Plan Update, engagement with County and State entities, community groups, etc.)
Fact Base/Analysis	- Climate change (e.g., human activities, local and global impacts)

Themes/Topline Messages	Pertinent Topics or Priorities
	- Greenhouse gas emissions (e.g., greenhouse gases, inventory structure and requirements, scenario projections) - Climate vulnerability, risk, adaptation, and resilience (e.g., community and asset evaluations, risk assessments, impacts on assets and marginalized communities, etc.)
Equity	- Identifying, understanding, and addressing existing disparities and gaps across demographics, socioeconomic status, race, ethnic, and gender identity, ability, etc. - Climate hazard sensitivity and exposure for frontline communities (and community-wide)

Goals	- Short- and long-term emissions reduction (community-wide and municipal)
	  - Transportation
	  - Land Use
	- Climate resilience and adaptation
	  - Overarching goals
	  - Sector- and asset-specific goals

Policies *(potential sectors)*	- Governance and leadership - Communication, education, and outreach - Land use, zoning, and development - Food and agriculture systems - Urban forests, watersheds, and ecosystems - Transportation and mobility - Buildings and energy - Consumption and solid waste - Water supply, wastewater, and stormwater - Health, hazard mitigation, and emergency management - Focus on wildfire, extreme heat, flooding, etc.
Implementation *(highlights key issues: responsibilities, feasibility, monitoring, priorities, funding, integration with other planning; addresses strengths and challenges)*	- Roles and responsibilities (leading and supporting departments) - Interorganizational coordination (regional and community partners) and alignment (local and regional plans, regulatory drivers) - Prioritization (criteria) - Feasibility (cost estimation, labor capacity, etc.) - Monitoring and evaluation (measurable objectives or performance metrics, data management, reporting)

Engagement Phases and Schedule

The Engagement Process primarily will take place between June 2024 through June 2025, at which point the Climate Element will be finalized and submitted to the Washington State Department of Commerce. Table 2 below outlines the phases, activities, and schedule by which the City of Tumwater will conduct its engagement process for the Climate Element. There are more details on the briefing and work sessions in the final section of this strategy.

Table 2. Climate Element Engagement Schedule and Activities

Phase	Description and Activities	Timeline
1. Listening	Open House, CPAT Kickoff and Feedback requests	Summer 2024
2. Visioning	Thurston Climate Mitigation Collaborative Meetings (TCMC) Community Advisory Workgroup (CAW) Presentation	September 2024
3. Strategizing	Briefing and work sessions with the Planning Commission on Comprehensive Plan amendments related to the Climate Element and related updates to other Plans and Elements including municipal code and related development guide amendments	Through March 2025
4. Finalizing	Briefings with the General Government Committee and work sessions with City Council on Comprehensive Plan amendments related to the Climate Element and related updates to other Plans and Elements.	Through March 2025

Key Stakeholders and Community Groups

Which communities are most vulnerable to climate impacts?

- Priority Audiences
  - Thurston Climate Mitigation Collaborative Meetings (TCMC) Community Advisory Workgroup (CAW)
  - Organizations affected by implementation of Element actions
  - Communities most vulnerable to climate impacts
  - Other hard-to-reach populations

Stakeholders

The following page has a simplified version of the stakeholder list in Tumwater's broader Community Engagement Plan.

Internal Stakeholders

- Mayor
- Elected or Advisory Boards
  - City Council, Commissions, and Boards
- Administrative Regulatory or Advisory Bodies
  - Tumwater Departments

External Stakeholders

- Community Members
- Regulatory and Advisory Agencies or Bodies

  - State and Regional governments
- Other Governments
  - Squaxin Island Tribal Nation
  - Chehalis Tribal Nation
  - Nisqually Tribal Nation
- Thurston County
- Cities of Lacey and Olympia
- Other Public Agencies
  - Tumwater and Olympia School Districts, State Agencies, Port of Olympia, LOTT
- Business / Development
  - Thurston County and Tumwater Chambers of Commerce
  - Puget Sound Energy
  - Olympia Master Builder
  - Thurston County Realtors
- Environmental / Public Interest
- Social Service Agencies
- Arts / Culture / Hospitality

Engagement Materials and Resources

A series of print and digital resources will be developed to share with stakeholders, including the following:

- **Open House** (in-person and virtual)
  - The in-person Open House will have an opening presentation followed by an opportunity for attendees to rotate around a series of tables which will have facilitators and boards to illustrate and collect feedback on Climate Element components.
- CPAT meeting materials and guidance
- Presentations to Thurston Climate Mitigation Collaborative (TCMC) Community Advisory Workgroup (CAW)
- Briefings and work sessions for the Tumwater Planning Commission, the General Government Committee, and City Council
- FAQ sheet
- **One-pagers:** A one-page fact sheet will be developed to explain the background, highlight the process, and invite participation
- Landing page and **website** with resources

- **Feedback platform** for reviewing and commenting on drafts
- **Register of comments** collected and how they were addressed – to be summarized in a **Memorandum on Consistency and Integration**
- **Public Engagement Results Report** with metrics for measuring success
- **Gap Analysis/Doc Review Resource Repository** **DRAFT HERE**

Stakeholders will be asked about any needs they have that would need to be met for them to participate prior to each engagement opportunity.

Engagement Metrics and Evaluation

In November of 2023 City staff posted a community survey related to the Comprehensive Plan. The full survey and 975 responses show that many respondents selected "prepare for climate change" as a strategy that Tumwater should pursue. However, this option was one of 9 choices, 6 of which were more popular.

The following metrics are being considered as potential measurements to record for the Public Engagement Results Report.

Participation Metrics:

- Feedback on process and Climate Element draft: Number of comments.
- Event Attendance: Number of attendees at meetings, workshops, and various community events.
- Volunteer Involvement: Number of volunteers, hours contributed.
- Stakeholder Participation: Engagement levels of stakeholders, considering overall contribution, committee involvement, and quality of work.

Engagement Quality Metrics:

- Feedback Quality: Evaluation of feedback from surveys, meetings, and other networks.
- Community Sentiment: Changes in community sentiment measured through surveys and social media monitoring.
- Diversity and Inclusion: Representation of different community groups in engagement activities.

Outcome Metrics:

- Implementation of Initiatives: Number of initiatives incorporated into the Element directly from community-based ideas.

- Online Activity: Measuring whether user interest and activity on the City's website have increased due to heightened engagement from the project.

Although the Public Engagement Results Report will not be able to track long-term success, some indicator of future persistence of engagement include:

- Long-Term Engagement: Continuity and frequency of engagement activities over time.
- Resource Allocation: Effectiveness of resource usage for engagement activities.
- Partnership Strength: Longevity and effectiveness of partnerships formed.

Comments

Written comments are welcome at any time during the periodic update process. To be considered for the Planning Commission and City Council public hearings, formal written comments should be submitted by the deadline included in the public notices for the hearings. Staff will address and publish all formal comments.

City of Tumwater Contact:

The periodic update email ***compplan@ci.tumwater.wa.us*** will be used for project communications. All documents related to the periodic update are located on the City's periodic update webpage: Comprehensive Plan Updates.

C. Refinement and Plan Integration

The refinement period is the moment to show internal and external stakeholders that they have been heard, and that there is a real intention to incorporate their input into the City's plans. The project team will be documenting results and integrating relevant feedback to draft and refine the Resilience and GHG sub-elements. After the draft language has been vetted by decision-makers and the community, the final version will go through transmittal, finalization, and approval.

As the project team will have drawn from engagement to prioritize strategies and measures, feedback will be assessed alongside customized criteria. The Project Team will also draw from the Menu of Measures provided by state guidance to help identify measures that meet certain implementation and impact criteria, and then ensure that they align with what stakeholders have identified as the most significant criteria to them. Ultimately, that final list of prioritized measures should meet the community ask, meet the State ask, and match the City's anticipated ability to fund and implement. The outcome will map out a quantifiable path to meet Tumwater's adopted

goals. There will be context to help illustrate this impact so that the City and stakeholders understand the implications of certain actions over time.

1. Related Plan and Element Alignment

Supported by public engagement activities described here, the project team will research, prepare, and adopt an ordinance that includes a Climate Element and related updates to other Plans and Elements as part of the 2025 Comprehensive Plan periodic update process.

- The 2018 **Thurston Climate Adaptation Plan** has a vision statement, 12 goals, and 9 guiding principles. It describes climate resilience actions which are prioritized for Thurston County and South Puget Sound to address 85 risks that were identified in the 2016 Risk Assessment.
- The City adopted the **Thurston Climate Mitigation Plan** in 2021, the actions of which will be updated and incorporated into the climate mitigation sub-element of the Climate Element.
- The **Tumwater Bicycle and Pedestrian Plan** is being developed as part of Comprehensive Plan Transportation Plan update that addresses the requirements of SB 5187 and the Thurston Climate Mitigation Plan.
- The **Conservation Element**, **Land Use Element**, and **Transportation Plan** of the Comprehensive Plan will need to address the climate change and resiliency goals in coordination with the Climate Element.
- The existing Comprehensive Plan's **Capital Facilities Plan** and the **Utilities Element** will be reviewed and evaluated to ensure alignment.
- **Existing development regulations** will be reviewed and evaluated for needed updates to support the Climate Element.

2. Final Steps for Climate Element Adoption and Related Update to Other Plans and Elements

The adoption of the Climate Element and related updates to other Plans and Elements will require the following steps:

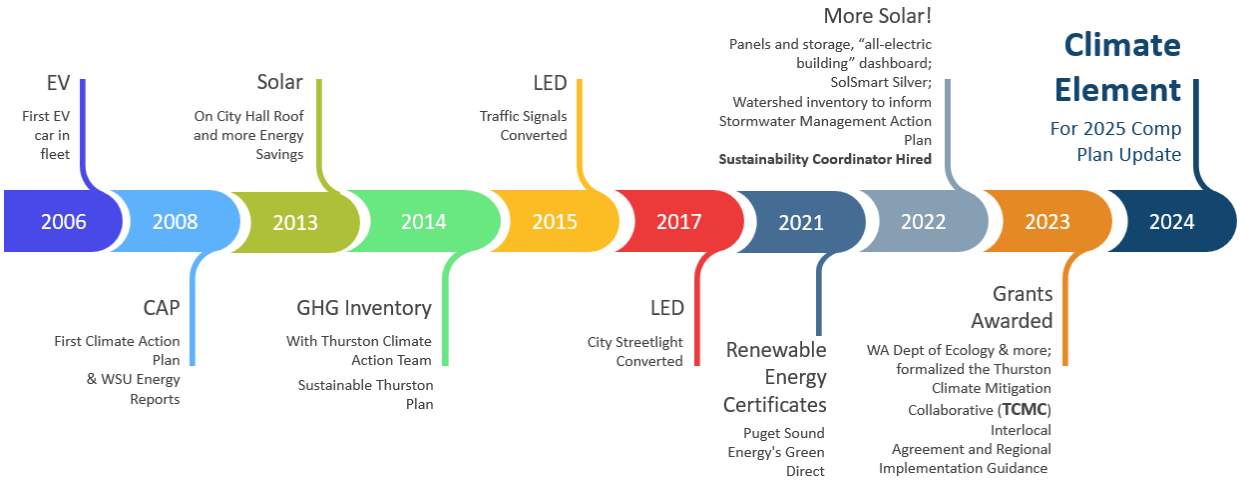
- **December 2024** - The draft 2025 Comprehensive Plan Update Ordinance, which will include the Climate Element and related updates to other Plans and Elements will be submitted to the State Department of Commerce for State agency review (RCW 36.70A.106).
- **February 2025** - Planning Commission public hearing on adoption of the Climate Element and related updates to other Plans and Elements.

- **April 2025** - General Government Committee briefing on Planning Commission recommendation.
- **May 2025** - City Council work session on Planning Commission recommendation.
- **June 2025** - City Council consideration and adoption of the Climate Element and related development regulation amendments and related updates to other Plans and Elements supporting the Climate Element. (note: there has been an extension granted to December 2025 if needed)

The project team will keep the process positive and hopeful, while also stressing the urgency and need for climate action now. To empower residents to take action towards positive solutions and to support the City's initiatives, it is important to celebrate Tumwater's history of commitment to climate action.

The Climate Element builds on commitments and actions made by Tumwater and Thurston County. The timeline below reflects on nearly two decades of Tumwater's key accomplishments in sustainability, which provides a solid foundation for the Climate Element.

Figure 3. Timeline of Key Tumwater Sustainability Efforts



Appendix

1. Requirements and Recommendations for Sub Elements

Climate Resilience Sub-element

Minimum Requirements

- Address natural hazards created or aggravated by climate change, including sea level rise, landslides, flooding, drought, heat, smoke, wildfire, and other effects of changes to temperature and precipitation patterns.
- Identify, protect, and enhance natural areas to foster climate resilience, as well as areas of vital habitat for safe species migration.
- Identify, protect, and enhance community resilience to climate impacts, including social, economic, and built-environment factors, which support adaptation to climate impacts consistent with environmental justice.

Overarching Recommendations

- Equitably enhance the resilience of communities and ecological systems to climate change.
- Be consistent with best available science and scientifically credible climate projections and impact scenarios
- Prioritize and benefit overburdened communities that will suffer disproportionately from environmental impacts and climate-exacerbated natural hazards.
- Address the 11 sectors required by the Department of Commerce

Figure 4. Sectors required to be addressed by the Department of Commerce

Greenhouse Gas (GHG) Sub-element

Minimum Requirements

- Result in reductions in overall greenhouse gas emissions generated by transportation and land use within the jurisdiction but without increasing emissions elsewhere in Washington;
- Result in reductions in per capita vehicle miles traveled within the jurisdiction but without increasing greenhouse gas emissions elsewhere in Washington; and
- Prioritize reductions that benefit overburdened communities to maximize the co-benefits of reduced air pollution and environmental justice.

Overarching Recommendations

- When selecting goals and policies that reduce emissions and per capita VMT, your jurisdiction will need to report on its five-year progress implementing the measures.
- Use 2022 as the emissions baseline year and set incremental targets that lead to achieving net zero emissions in 2050, consistent with Washington's statewide target.
- Use a Commerce-provided emissions inventory to select mitigation goals and policies to satisfy the minimum requirements.

2. References

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3. Website Pages and Other Documents

2025 Comprehensive Plan Update Website:

https://www.ci.tumwater.wa.us/departments/community-development-department/tumwater-comprehensive-plan/2025-comprehensive-plan-update

2025 Comprehensive Plan Update Survey:

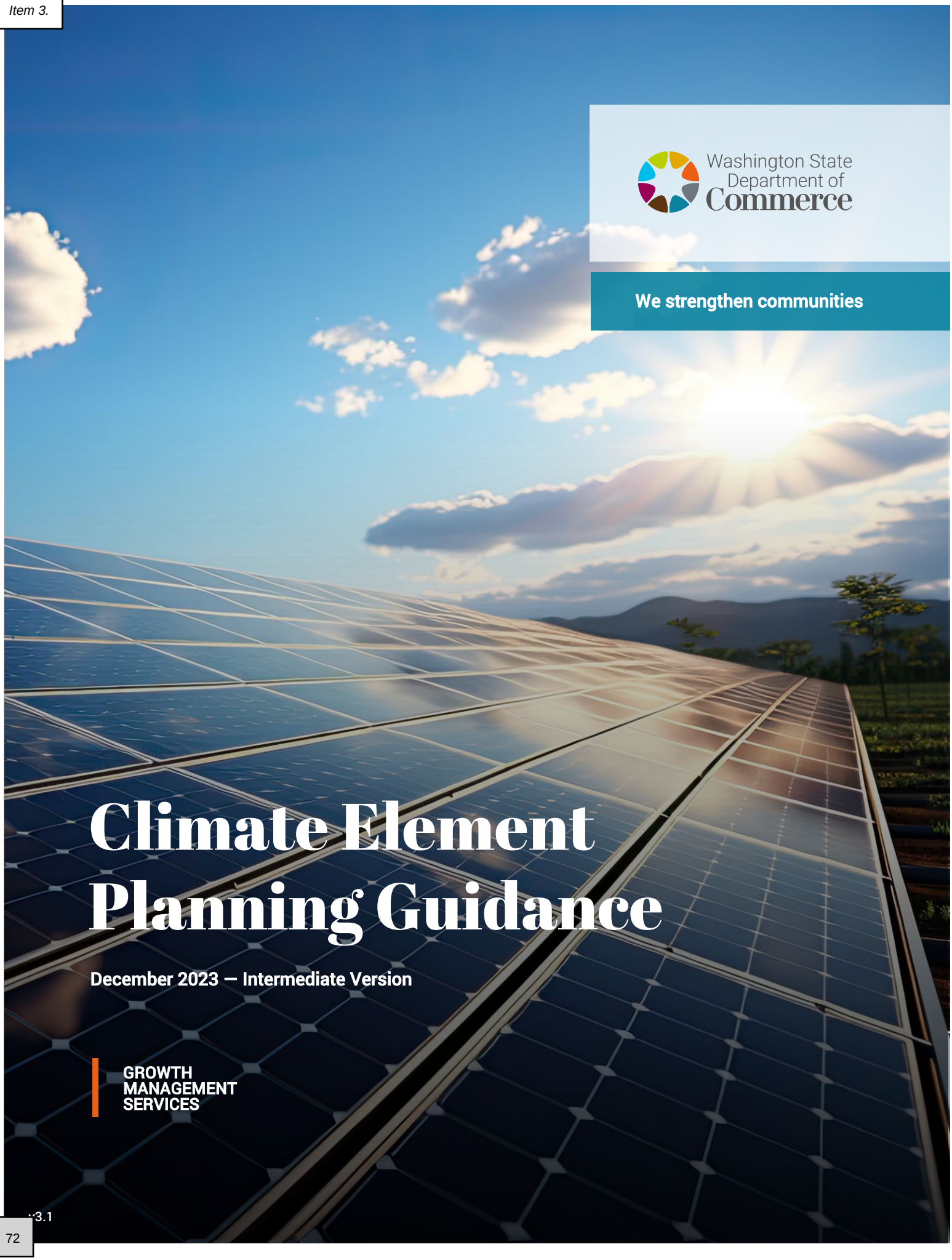
https://www.ci.tumwater.wa.us/home/showpublisheddocument/25766/638466238413470000

MRSC Community Engagement Resources:

https://mrsc.org/explore-topics/engagement/resources/community-engagement-resources

Tumwater 2025 Comprehensive Plan Periodic Update Document:

https://www.ci.tumwater.wa.us/home/showpublisheddocument/25183/638272767037470000



Washington State Department of Commerce

We strengthen communities

Climate Element Planning Guidance

December 2023 — Intermediate Version

GROWTH MANAGEMENT SERVICES

v3.1

The Washington State Department of Commerce published this December 2023 "intermediate" climate element planning guidance for local governments planning under the Growth Management Act. In 2025, the agency will publish on its website "full" guidance that reflects the results of a rulemaking process for 2023 legislation (E2SHB 1181).

This guidance and related grants are supported with funding from Washington's Climate Commitment Act. The CCA supports Washington's climate action efforts by putting cap-and-invest dollars to work reducing climate pollution, creating jobs, and improving public health. Information about the CCA is available at www.climate.wa.gov.

Questions and comments may be sent by email to GMSClimate@commerce.wa.gov.
Washington State Department of Commerce, P.O. Box 42525,
Olympia, WA 98504-2525 www.commerce.wa.gov

For people with disabilities, this report is available on request in other formats. To submit a request, please call 360.725.4000 (TTY 360.586.0772).

Acknowledgments

The Washington Department of Commerce developed this climate element planning guidance with contributions from tribal, federal, state, and local governments, universities, businesses, nonprofits, and residents. Without the time and talent of those listed below and other contributors, these pages would be empty and our state would be farther from its climate goals. We hope this guidance inspires Washington's cities and counties to adopt and implement innovative, equitable, and sustainable climate solutions for current and future generations.

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Washington's Climate Planning Law

Washington's social, economic, and environmental sectors and systems face serious climate risks, which require a dynamic mix of measures to reduce emissions and build resilience. Burning fossil fuels and other human activities are increasing emissions of carbon dioxide and other greenhouse gases (GHGs) that are trapping heat in the atmosphere and changing the climate. Even as Washington encourages residents to drive electric cars, install rooftop solar panels, and take other actions to mitigate greenhouse gas emissions, The Evergreen State faces unavoidable climate impacts.

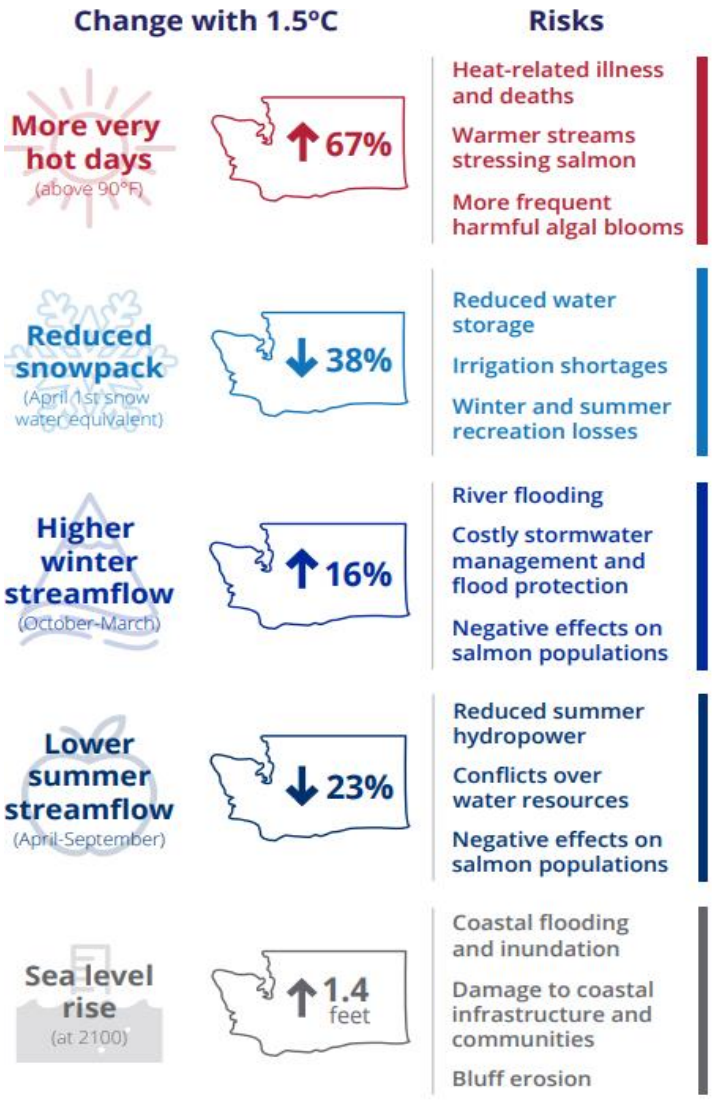
A Changing Climate

Our diverse landscape of snowy peaks, rolling fields, verdant forests, and rocky shores is already witnessing the effects of a warming world in the form of devastating wildfires, deadly heat events, rising seas, and other hazards. Many of the climate consequences we're seeing today will become more severe over the 21st century, absent mitigation and adaptation measures.

Human activities (anthropogenic) are estimated to have caused 1.1°C of global warming above pre-industrial (1850-1900) levels, and most emissions scenarios assessed project that global warming is likely to reach 1.5°C by the early 2030s.[1] Here in Washington, that would make the average year warmer than the hottest year of the 20th century.[2] Warming of 1.5°C would raise risks for the economy, environment, and human health and well-being [*Figure 1*]. For example, just one year of heat-related activity losses equates to more than $426.1 million in direct losses to industry sales, $178.3 million in lost gross state product, and 1,481 full-time-equivalent jobs.[3]

Climate change also impacts residents within Washington differently. Overburdened and vulnerable communities, such as ones with higher rates of poverty and limited English proficiency, are more vulnerable to climate change due to historical trends, including the impact of redlining. These practices and other forms of discrimination concentrated people of color in communities that

Figure 1: Washington Climate Impacts Associated with a 1.5°C Temperature Increase



SOURCE: University of Washington Climate Impacts Group

[1] IPCC report (2023), Synthesis Report of the IPCC Sixth Assessment Report (AR6), Summary for Policymakers
[2] UW CIG report (2019), No Time to Waste. The Intergovernmental Panel on Climate Change's Special Report on Global Warming of 1.5°C and Implications for Washington State
[3] UW CIG and Washington State University report (2022), Biophysical Climate Risks and Economic Impacts for Washington State

also experience disproportionately negative health impacts that can be exacerbated by climate change. There is a more than five-year difference in life expectancy between communities ranked at highest risk versus those at lowest risk in the Washington Department of Health's Environmental Health Disparities Map.[4]

Thinking Globally, Planning Locally

Washingtonians know effective ways to mitigate our carbon emissions, reduce our risks, and build a more resilient and equitable state. From Port Angeles to Pullman, Woodland to Whatcom County, many of Washington's local jurisdictions are already implementing replicable policies to foster sustainable communities in the face of a changing climate.[5]

"*Every Washingtonian deserves to live in a healthy environment, regardless of their ZIP Code or socioeconomic status,"* Governor Jay Inslee remarked after signing the landmark Climate Commitment Act and HEAL Act into law in 2021. *"We've studied the issue long enough. Now is the time to get to work and create a more just, healthy, and equitable future for all Washingtonians*."

E2SHB 1181, signed into law in 2023,[6] requires Washington's cities and counties to use their principal planning document — the comprehensive plan — to build community resilience and reduce greenhouse gas emissions that contribute to global climate change. The new law (referred to henceforth as HB 1181) integrates climate planning into Washington's landmark Growth Management Act (GMA)[7] and includes the following provisions [*HB 1181 sections referenced in text, statutes referenced in footnotes*]:

> *"Comprehensive plans are more than just visioning documents for the future. They tend to be legally adopted by the local decision-making body, can require alignment with existing regulations and clear linkages with future infrastructure investments, and can spur the community to rewrite codes and regulations. Embedding climate science and information into plans can therefore be a trigger for more in-depth analysis as plan recommendations become a reality."*
>
> **— American Planning Association,** Using Climate Information in Local Planning

- Adds a GMA climate change and resiliency goal to: "ensure that comprehensive plans, development regulations, and regional policies, plans, and strategies under RCW 36.70A.210 and chapter 47.80 RCW adapt to and mitigate the effects of a changing climate; support reductions in greenhouse gas emissions and per capita vehicle miles traveled; prepare for climate impact scenarios; foster resiliency[8] to climate impacts and natural hazards; protect and enhance environmental, economic, and human health and safety; and advance environmental justice" [*Sec. 1(14)*].[9]
- Adds a climate change and resiliency element that is designed to result in reductions in overall greenhouse gas emissions and that must enhance resilience to and avoid the adverse impacts of climate change, which must include efforts to reduce localized GHGs and avoid creating or worsening localized

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[4] Washington State Department of Health Environmental Health Disparities Map (accessed June 1, 2023)
[5] MRSC website (2022), Local Government Climate Change Planning Documents
[6] https://lawfilesext.leg.wa.gov/biennium/2023-24/Pdf/Bills/Session%20Laws/House/1181-S2.SL.pdf?q=20231006104601
[7] RCW 36.70A
[8] HB 1181 uses the term resiliency, which is most often used today in academic contexts. This planning guidance generally uses the term resilience, which is more widely used by planners, emergency managers, and other practitioners. The terms are variations of the same word.
[9] RCW 36.70A.020(14)

climate impacts to vulnerable populations and overburdened communities [*Sec. 3(9)*].[10] The new climate element includes two sub-elements:

  - A GHG emissions reduction sub-element[11] that is mandatory for 11 counties and their cities and requires actions to reduce overall emissions and per capita vehicle miles traveled (VMT) [*Sec. 4(1)*].[12]
  - A resilience sub-element that is mandatory for all jurisdictions planning under RCW 36.70A.040 [*Sec 3(9c)*].[13] A natural hazard mitigation plan in substantial conformance with the guidance could be adopted, by reference, to satisfy the resilience sub-element requirements.

- Took effect on July 23, 2023 and applies first to the jurisdictions with 2025 comprehensive plan periodic update deadlines [*See guidance's Sec. 1.3: Who Must Create a Climate Element*].
- Directs the Washington Department of Commerce (Commerce) to create this climate planning guidance to support jurisdictions updating their comprehensive plans. Cities and counties with a 2025 comprehensive plan update deadline should use this intermediate planning guidance to develop their climate element [*Sec. 5(3)*]. Commerce must update the guidance at least every five years [*Secs. 5(3) and 9(8)*].
- Directs Commerce to adopt rules setting minimum standards for compliance with state law and publish full guidance by Dec. 31, 2025.
- Considers environmental justice to avoid worsening environmental health disparities [*Sec. 5(1)*].

Changes to Other GMA Goals and Elements

HB 1181 makes the following changes to other GMA goals and comprehensive plan elements:

- Amends the transportation goal to state: Encourage efficient multimodal transportation systems that "will reduce greenhouse gas emissions and per capita VMT, and" are based on regional priorities and coordinated with county or city comprehensive plans [*Sec. 1(3)*].[14]
- Amends the open space and recreation goal to state: Retain open space "and green space," enhance recreational opportunities, "enhance" fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities [*Sec. 1(9)*].[15]
- Amends the environment goal to state: Protect "and enhance" the environment and enhance the state's quality of life, including air and water quality, and the availability of water [*Sec. 1(10)*].[16]
- Amends the citizen participation and coordination goal to state: Encourage involvement of citizens in the planning process, "including the participation of vulnerable populations and overburdened communities," and ensure coordination between communities and jurisdictions to reconcile conflicts [*Sec. 1(11)*].[17]
- Lists the shorelines of the state goal: For shorelines of the state, the goals and policies of the Shoreline Management Act as set forth in RCW 90.58.020 shall be considered an element of the county's or city's comprehensive plan [*Sec. 1(15)*].[18]
- Amends the land use element to include the following: element should designate "green spaces, urban and community forests within the urban growth area"; element must "give special consideration to achieving environmental justice in its goals and policies, including efforts to avoid creating or worsening environmental health disparities"; element must reduce per capita vehicle miles traveled within the

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[10] RCW 37.70A.070(9)(a)
[11] Referred to as the "GHG reduction sub-element" in this guidance.
[12] RCW 37.70A.070(9)(c)
[13] RCW 37.70A.070(9)(c)
[14] RCW 36.70A.020(3)
[15] RCW 36.70A.020(9)
[16] RCW 36.70A.020(10)
[17] RCW 36.70A.020(11)
[18] RCW 36.70A.020(15)

jurisdiction, but without increasing greenhouse gas emissions elsewhere in the state"; element must "reduce and mitigate the risk to lives and property posed by wildfires by using land use planning tools" (lists Firewise USA program, International Wildland-Urban Interface Code, and other practices) [*3(1)*].[19]

- Amends the capital facilities element to state that a capital facilities plan must include an inventory of existing capital facilities owned by public entities, "including green infrastructure." Additionally, requires that the city or county shall "identify all public entities that own capital facilities and endeavor in good faith to work with other public entities (for example, special purpose districts) to gather and include within its element the information required. A good faith effort must, at a minimum, include consulting the public entity's capital facility or system plans and emailing and calling the staff of the public entity" [*3(3)*].[20]
- Amends the utilities element to include the location and capacity of "telecommunications" and natural gas "systems." Additionally, requires that the jurisdiction "identify all public entities that own utility systems and endeavor in good faith to work with other public entities" to gather and include within its element the information required [*3(4)*].[21]
- Amends the transportation element to require the following: estimated "multimodal level of service" impacts on state-owned transportation facilities; an inventory of "active transportation facilities"; "multimodal level" of service standards for all locally owned arterials, "locally and regionally operated transit routes that serve urban growth areas, state-owned or operated transit routes that serve urban areas if the department of transportation has prepared such standards, and active transportation facilities" to serve as a gauge to judge performance of the system "and success in helping to achieve the goals of this chapter consistent with environmental justice"; forecasts of "multimodal transportation demand and needs within cities and urban growth areas, and forecasts of multimodal transportation demand and needs outside of cities and urban growth areas"; identification of state and local system needs to "equitably" meet current and future demands; and, other miscellaneous changes [*3(6)*].[22]
- Amends the park and recreation element to require an "evaluation of tree canopy coverage within the urban growth area" [*3(8)*].[23]
- Adds a requirement that county comprehensive flood control management plans include "consideration of climate change impacts, including the impact of sea level rise and increased storm severity on people, property, natural resources, and the environment." A county may incorporate the portion of its flood control management plan relating to land use restrictions in its comprehensive plan and development regulations adopted pursuant to chapter 36.70A RCW [*12(6)*].

Climate planning requirements for other state agencies

- Requires that the Department of Transportation maintain a summary of the per capita VMT for cities and unincorporated portions of counties; and, adds multimodal concurrency [*Sec. 10*].
- Requires that the Department of Ecology "update its shoreline master program (SMP) guidelines to require that SMPs address the impact of sea level rise and increased storm severity on people, property, and shoreline natural resources and the environment" [*Sec. 11*].
- Requires that the Department of Health ensure that Group A water system plans that serve 1,000 or more connections and are initiated after June 30, 2025 include a climate resilience element at the time of approval. The department shall also provide financial assistance for such planning and projects. [*Sections17 and 18*].

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[19] RCW 36.70A.070(1)
[20] RCW 36.70A.070(3)
[21] RCW 36.70A.070(4)
[22] RCW 36.70A.070(6)
[23] RCW 36.70A.070(8)

Section 1: Introduction

1.1: Planning Guidance Overview

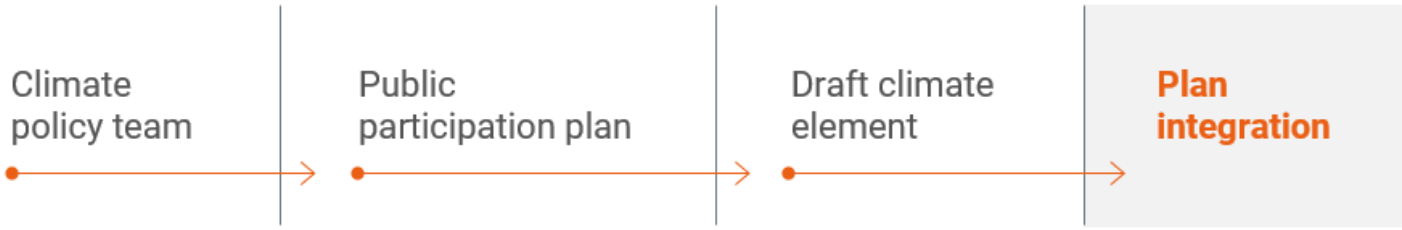
Climate change does not impact everyone equally.[24] To support environmental justice and equity, this planning guidance begins with recommendations for how cities and counties can develop a climate policy advisory team and ensure that historically overburdened and underrepresented communities are included in early and ongoing efforts to develop and implement a comprehensive plan climate element [*Section 2*].

Next, the guidance provides flexible pathways to develop scientifically supported goals and policies to enhance community preparedness, response, and recovery efforts that build resilience to the impacts of wildfires, floods, and other hazards worsened by global climate change [*Section 3*]. The next section of the guidance [*Section 4*] includes pathways toward developing goals and policies that reduce greenhouse gas emissions from land use, transportation, and other sectors.

All pathways conclude with instructions regarding how to integrate a climate element into a comprehensive plan. This could look different depending on a jurisdiction's preferences. A mix of resilience and GHG reduction goals and policies could be consolidated into a single chapter or spread across multiple chapters associated with other GMA elements (housing, transportation, land use, etc.). This flexible planning and implementation approach recognizes that climate change is a cross-cutting issue that affects many sectors and communities in different ways.

The guidance is intended to be followed in order, with the last step resulting in the selection and customization of goals and policies [*Section 5*], which should be brought forward to decision-makers for adoption in a local comprehensive plan [*Figure 2*]. To help with this work, the guidance links to a "menu" of model climate goals and policies, dubbed the Menu of Measures. The guidance's appendix includes additional tools, including: a workbook for capturing the analysis completed with development of the sub-elements [*Appendix B*] and a resource library of climate planning, policy design, funding, and implementation tools [*Appendix E*].

Figure 2: Climate Element Guidance



[24] United Nations Department of Economic and Social Affairs working paper (2017), Climate Change and Social Inequality.

1.2: Climate Planning Concepts

Whether you're creating or updating your comprehensive plan's climate element or talking with community members about climate change, it's important to understand the interrelatedness of key concepts, including climate resilience, adaptation, GHG emissions reduction, hazard mitigation and environmental justice. A glossary of the terms used throughout this guidance and its Menu of Measures can be found Appendix K. Appendix E also includes a curated list of climate planning articles, videos, spatial planning tools, and other resources to assist with deeper learning at any level.

GHG emissions reduction (climate mitigation) means taking action to reduce or eliminate carbon dioxide and other heat-trapping emissions, the quantity of which can determine the extent and severity of climate change over time. This guidance's GHG emissions-reduction strategies [*Section 4*] recommend principally targeting emissions in the buildings & energy, transportation, and zoning & development sectors, which are Washington's biggest sources of emissions.

Climate resilience is "the ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities," as defined by state law.[25] Cities and counties can build their resilience capacity by implementing a mix of climate preparedness, response, and recovery policies, including mitigating natural hazards, adapting to unavoidable impacts, and restoring degraded natural areas that provide key ecosystem services — all with an equity lens to account for how climate impacts may vary based on localized experiences of environmental injustice.

The terms hazard mitigation and adaptation both relate to climate change, as discussed in this guidance. The Federal Emergency Management Agency (FEMA) defines hazard mitigation as “any sustained action to reduce or eliminate long-term risk to people and property from natural hazards and their effects.” The related concept of adaptation is “the process of adjusting to new (climate) conditions in order to reduce risks to valued assets,” which can include everything from roads and buildings, to health and well-being, to forests and streams.[26] These terms are expanded upon within the resilience sub-element guidance [*Section 3*].

Acknowledging the relationships between these concepts, this guidance and its companion model goals and policies aim to promote co-benefits — the additional social, economic, and environmental benefits of a climate policy. Jurisdictions can support potential co-benefits through robust collaboration with communities, especially overburdened and vulnerable communities, that center climate and environmental justice as guiding principles.

For example, a GHG reduction policy that supports increasing compact, mixed-use development near transit, helps to reduce building energy consumption and vehicle miles traveled and also makes housing more plentiful and potentially affordable. This also improves access to public transportation and improves employment and health outcomes for transit-dependent residents who might otherwise be unable to access these opportunities. A resilience policy that supports planting drought-tolerant street trees to adapt to hotter, drier summers also has GHG reduction co-benefits; such trees store carbon and reduce energy demand in adjacent buildings. Collaborating with community partners early in the process can help refine where planting trees should occur first and how this adaptation activity might create shade for neighborhoods without air-conditioning and potentially prevent heat-related illness and death.

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[25] RCW 70A.65.010
[26] NOAA website (2022), U.S. Climate Resilience Toolkit glossary

1.3: Who Must Create a Climate Element

All fully planning cities and counties must adopt a climate change element. For 11 of the state's largest and fastest-growing counties [*see table below*] and their cities with a population greater than 6,000, as of April 1, 2021,[27] the full scope of new requirements includes adoption of a climate element with both a GHG emissions reduction sub-element and a resilience sub-element. Depending on their population and location, these local jurisdictions may have to update other mandatory comprehensive plan elements, such as transportation and land use.[28]

For those fully planning jurisdictions not listed below, only the resilience sub-element is mandatory.

Counties (and cities within) required to develop a resilience sub-element and a GHG emissions reduction sub-element	2025	2026	2029* Progress Report	
Benton		X		*Note: The jurisdictions with the first implementation progress reports due in 2029 are only required to update **two elements** — the transportation element and add a climate element (greenhouse gas emissions reductions sub-element and a resilience sub-element).*
Clark	X			
Franklin		X		
King			X	
Kitsap			X	
Pierce			X	
Skagit	X			
Snohomish			X	
Spokane		X		
Thurston	X			
Whatcom	X			

Resources:

- Commerce provides a complete collection of training and guidance on the Growth Management Act. The following Commerce resources are available online: Periodic Updates; GMA regulations; and an overview of Washington local land use planning.

[27] 2021 population is reported by the Office of Financial Management
[28] RCW 36.70A.095

1.4: Climate Planning and Shoreline Master Programs

As local governments undertake climate planning, they must ensure that the climate resilience provisions within their comprehensive plans and shoreline master programs (SMPs) align. The Department of Commerce will coordinate with the Department of Ecology when conducting rulemaking under HB 1181 to ensure that new requirements are aligned.

Shorelines and shorelands are managed under the city, town, or county's SMP. Shorelines are a planning goal of the GMA, which means that the goals and policies of a local government's SMP are considered an element of their comprehensive plan.[29] SMPs, like comprehensive plans, provide a key lever for implementing climate planning across a jurisdiction's land use policies.

Climate resilience and mitigation provisions developed following this guidance are not automatically applicable within the shoreline jurisdiction governed under the Shoreline Management Act (SMA). Local SMPs regulate new shoreline uses and developments under SMA goals, policies, purpose, and intent. SMPs are developed by local governments and reviewed and approved by Ecology. SMPs are locally tailored policies and use and development regulations that implement the SMA. The SMA has three broad policies: protecting the shoreline environment, promoting public access and enjoyment opportunities, and giving priority to uses that require a shoreline location.[30] Each SMP contains standards that ensure allowed uses and development remain compatible with the shoreline environment and SMP and prevent net loss of shoreline ecological function. Climate resilience provisions intended to apply within the shoreline jurisdiction must be added through an SMP amendment and approved by Ecology prior to being effective. SMP goals, policies, and regulations must be developed consistent with the SMA, and applicable guidelines and are subject to internal consistency requirements for comprehensive plans.[31]

Local governments developing a climate element should consider their SMP alongside their comprehensive plan to improve efficiency and consistency. For example, jurisdictions should consider climate impacts to shorelines and shorelands [*Section 3, Step 1*] and review their SMP during their policy audit [*Section 3, Step 2*]. Ecology recommends that local governments ensure that shoreline jurisdictional area and SMP provisions are considered at each step of the resilience sub-element planning process [*Figure 3*] so that outputs can inform future SMP periodic review or amendment processes. Periodic review of an SMP is required every ten years. Jurisdictions may choose to incorporate climate provisions into their SMP during an SMP periodic review or through a locally initiated amendment.[32]

HB 1181 requires Ecology to update SMP Guidelines[33] and guidance describing how SMPs address the impact of sea level rise and increased storm severity on people, property, and shoreline natural resources and the environment. Local governments addressing climate change under the authorities of their SMP should consult Ecology guidance[34] and work closely with their Ecology shoreline planner.[35]

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[29] RCW 36.70A.020 and 36.70A.480
[30] RCW 90.58.020
[31] RCW 36.70A.480(2) and (3)(a)
[32] WAC 173-26-090
[33] WAC 173-26
[34] https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-planners-toolbox
[35] https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Contacts

Section 2: Planning & Engagement

County and city staff should establish a work plan at the outset of the project that outlines the entire periodic update process — including any new elements, such as climate. The work plan should include approximately two years to develop and adopt a new climate element (one year per sub-element) concurrent with your broader comprehensive plan update. The work plan should also include a public participation plan that should be adjusted throughout the project.[36]

See Commerce's Periodic Update webpage for an example work plan that identifies a procedure and schedule for the public to participate in the periodic update. Communication to the public regarding the work plan should clearly identify the scope of the review and identify when legislative action on the review and update of the component are proposed to occur. The work plan must provide for early and continuous public participation. The best way for a county or city to fulfill this requirement is to schedule public engagement at the beginning of the update process and iteratively review and adjust the plan throughout all the key steps.

County and city staff should also provide for early and continuous public engagement. They should work with community partner organizations to the fullest extent possible to anticipate barriers to public engagement and to make engagement more accessible. Identifying barriers to engagement — and gaps in engagement activities and outcomes — is also an iterative process. Such factors impacting meaningful notice and engagement may include the use of written and verbal materials, day and night opportunities, multiple language options (without community members having to request them), and in-person and virtual engagement.

2.1: Form Climate Policy Advisory Team

Typically, a jurisdiction forms an internal staff team to manage the entire update process and will include at least one advisory committee composed of community volunteers and other stakeholders as its primary advisory committee for the comprehensive plan.

If there is capacity, consider including a climate-focused interdisciplinary team, in addition to the primary advisory committee, to focus on developing and revising the comprehensive plan's climate goals and policies. This team, hereafter referred to as the "climate policy advisory team," would coordinate with the primary planning and public-engagement efforts associated with updating housing, land use, transportation, and other comprehensive plan elements. If capacity is constrained, and only a singular advisory committee is possible, then consider recruiting individuals with expertise as described in this section to fill dual roles.

The main focus of the climate policy advisors is to analyze climate information gathered through periodic update engagement processes and provide recommendations on areas of focus. Such advisors could also provide recommendations on the following: goals with near-term due dates; actions that can be implemented readily; strategies for longer-term actions; and, a structure to update the plan.

Members of a climate policy advisory team should generally include planners and public works professionals, plus a diverse group of community members with the goal of collaboratively creating a climate element that centers equity in policy development and implementation. Such partners should include:

- advisory board members with experience reviewing and developing zoning and land use policy;

[36] RCW 36.70A.035 and 130(2)(2)

- experts in hazard mitigation, public health, transportation, fish and wildlife habitat, forests, and other areas with a climate nexus;
- community engagement specialists;
- representatives from regional clean air agencies and metropolitan planning organizations (MPOs);
- legal advisors to make sure goals and policies are consistent with state and local laws; and,
- elected officials who will provide oversight and can champion the project from beginning to end.

> ***NOTE:*** *You may also want to ask Commerce and other state agencies to provide periodic technical assistance as your team develops or updates its climate element. As a best practice, partnerships with state agencies should be initiated early in the process of updating your comprehensive plan.*[37]

Commerce recommends that your jurisdiction's team include leaders within overburdened communities that are most impacted by the changing climate conditions and whose insight will lead to the most equitable outcomes for your jurisdiction. Use this guidance's companion Climate Element Workbook [*Appendix B*] to list your climate policy advisory team members. The workbook could be adapted to suit your jurisdiction's needs and is designed for your internal use.

Support Community Participants: Regardless of whether there is one or multiple advisory bodies, building an effective and inclusive advisory team will take significant time and trust. The Municipal Research and Services Center (MRSC) advises local jurisdictions to*: "Create a foundation for an ongoing relationship, not a one-off transaction designed to extract information and leave. Once a frontline community has provided input, follow up and show them how their participation has led to tangible results. Community members can also be invited to serve on an advisory or implementation task force."*[38]

Consider the following ways to support people who serve on your advisory team, namely those whose participation is not a paid position within an organization:

- Pay a stipend for participation in and travel to meetings;
- Host meetings in the evenings, and provide food and childcare;
- Offer meeting translation services, and ensure materials are available in multiple languages and formats;
- Ask what support they would need to participate authentically.

Community-based organizations (CBOs) and representatives of these organizations can be particularly helpful partners and collaborators because of their roles as trusted partners in overburdened communities. They also bring broader community perspectives, not only the perspectives of individual community members. When partnering with CBOs, also consider compensating organizations to participate meaningfully in development, implementation, and evaluation of engagement efforts.

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[37] Commerce guidance (2022), A Guide to the Periodic Update Process Under the Growth Management Act
[38] MRSC website (2023), Equity and Engagement in Climate Response.

2.2: Establish Public Engagement Strategy

Your planning process should include a strategy to engage a diversity of community members in equitable and meaningful ways. It is important to integrate community members into your planning process early to provide them agency in shaping and implementing policies. It is also important to coordinate climate engagement efforts with any broader engagement strategy that is required as part of your comprehensive plan update process.[39]

Use the resources below to identify and recruit overburdened community organizations and members — people who experience the first and worst consequences of climate change. Also consider inviting representatives from local businesses, neighborhood associations, schools, and other groups, to participate in your process and share their technical expertise, cultural perspective, and lived experience. List these stakeholders in your Climate Element Workbook.

Using Festivals, Books, and Games to Engage Residents and Build Climate Resilience

During Olympia's fall 2017 Arts Walk festival, the Thurston Regional Planning Council (TRPC), Timberland Regional Library, and other partners hosted "Art of Change," an event that merged climate literacy, art, science, and policy. Against the backdrop of an ocean acidification mural painted on downtown's Puget Sound Estuarium building, Timberland staff hosted a "pop-up" library where festival visitors could sign up for a card and check out climate books, films, and other resources. Olympia staff members discussed the City's sea-level rise strategy, while Arts Walk visitors played a TRPC-created board game called "Resilience Road." The collaborative game enabled players to take *Thurston Climate Adaptation Plan* actions to respond to the impacts of floods, droughts, and other climate-exacerbated hazards.

- **Establish goals and outcomes:** Start by establishing equity goals and desired outcomes for your engagement strategy. Next, identify the level of decision-making you're giving to community members (for example, making policy recommendations directly to your advisory team or elected officials).
- **Design an equitable process:** Ask your stakeholders how they want to participate in your process — for example, as part of the climate policy advisory team, technical or cultural focus groups, or multisector committees. Ensure that all stakeholders have an equitable opportunity to participate collaboratively in your planning process' core steps and policy implementation efforts. Seek out ways to center historically marginalized voices [*see resources below]*.
- **Engage broader community:** Consider the following ways to educate and engage the broader community about climate resilience and emissions mitigation:
  - Host interactive events (virtual and in-person meetings and site tours of at-risk areas of the community) to educate residents about local climate impacts and how you will integrate resilience and emissions-reduction goals and policies into your comprehensive plan;
  - Participate in other issue-specific forums — for example, about affordable housing and health — to discuss their nexus with climate change;
  - Work with leaders of community-based organizations to talk directly with residents about climate change and how your jurisdiction and other partners can help neighborhoods reduce their dependence on fossil fuels and build resilience;
  - Participate in existing community arts and cultural events [*see example above*] to share draft policy ideas and elicit input from residents.
  - See MRSC's Community Engagement Resources webpage for additional ideas.

[39] WAC 365-196-600

Resources:

- The **White House Council on Environmental Quality's** Climate & Economic Justice Screening Tool can help your jurisdiction identify disadvantaged (overburdened and underserved) communities — those that are in census tracts that meet the threshold for at least one of the tool's categories of burden (lack of greenspace, legacy pollution, historic underinvestment/redlining, etc.) and corresponding economic indicator, or that are on lands of a Federally Recognized Tribe.
- A joint **University of Washington-Front and Centered** report — An Unfair Share: Exploring the Disproportionate Risks from Climate Change Facing Washington State Communities — can help you identify potential stakeholders and address inequities through your planning process and policies. The report explains how community members might be exposed differently to climate change and how race, wealth, education, health status and other factors could affect a person's ability to cope with climate impacts.
- An **Antioch University New England** paper, Centering Equity in Climate Resilience Planning and Action, recommends additional best practices for balancing power dynamics through participatory planning and centering equity throughout the planning process.
- The **Washington Department of Health's** Provisional Community Engagement Plan for HEAL Act Implementation suggests additional public engagement best practices.
- The **National Association of Climate Resilience Planners'** community-driven climate resilience planning framework complements your public-sector process by recommending best practices for how community-based organizations can help residents of vulnerable and impacted communities define for themselves the complex climate challenges they face and the climate solutions most relevant to their unique assets and threats.

2.3: Establish Tribal Engagement Strategy

Tribal Engagement is an overarching term that encompasses all levels of tribal communication and partnership, from formal government-to-government (G2G) consultation to informal coordination. Formal G2G consultation by definition happens at the federal and state level. Federally recognized tribes retain their rights as sovereign nations to a direct government-to-government relationship with the federal government through treaties and presidential executive orders, independent of the state or local jurisdictions. Washington state tribal relations policy is guided by the Centennial Accord (1989) and Millennium Agreement (1999), and you can find more information at the Governor's Office of Indian Affairs (GOIA). Commerce's updated Tribal Relations Policy reflects our commitment to effective communication, collaboration, and relationship-building with tribal partners and provision of quality services to tribal people in Washington.

Tribal Sovereignty is a legal term that means the right of a people to self-govern within jurisdictional borders. According to Washington Tribes, "Tribal sovereignty recognizes that American Indian tribes have the political status of nations and that Indian nations are located within the territorial boundaries of the United States. As sovereigns, tribal nations have a government-to-government relationship with the two other sovereign governing bodies in the U.S. — the federal and state governments."

As sovereign nations, tribes will engage to the degree that benefits their community and at their discretion. If tribes decline to participate in your comprehensive planning process due to capacity constraints or any other issue, your jurisdiction should still share updates and continue to invite input in other ways. Local governments can conduct tribal engagement at a level of formal or informal tribal coordination. Formal coordination involves creating a Memorandum of Understanding (MOU) focused on the climate element of your comprehensive plan. Formal coordination can focus solely on this element or can be broader in purpose. This takes place at the local jurisdiction's governance level, sometimes referred to as Council-to-Council

diplomatic protocol by tribal nations. If you are just beginning or renewing your partnership with the tribes near you and would like additional help in preparing for this step you can contact the Tribal Planning Coordination Manager for assistance.

If you have existing working relationships and/or partnerships, informal coordination may work for you. It involves conversations focused on information sharing with tribal staff at a department-to-department level. In both of these coordination efforts, it is important to understand that tribal engagement is on a separate track than public engagement.

Tribal coordination activity that does belong in the public engagement process includes working with Indigenous groups that are not tribal governments, such as urban Native American organizations and/or tribal populations not located in their Indian Country. This might include non-federally recognized tribes, Native American non-profits and Indigenous community-based organizations. There is a distinction between working with federally recognized tribes who are self-governing sovereign nations and other Native American groups.

Your jurisdiction should reach out to tribes that have reservation lands, ancestral lands and waters, and/or "usual and accustomed areas" that neighbor your jurisdiction. We suggest you engage early, often, and with each tribe individually. Local governments have a legal responsibility to uphold sovereignty and treaty rights by consulting with tribal governments to reach consensus. Consider how you can approach this in a culturally appropriate manner by learning about your neighboring tribes through research, talking to mutual contacts, and visiting cultural heritage centers. Key information about Washington's tribal governments and their reservations can be found online at the Governor's Office of Indian Affairs: www.goia.wa.gov.

Many tribes have their own comprehensive plans that have a climate resilience element, and expertise developing climate adaptation plans. Collaborative planning efforts may help identify mutual priority actions and strategies that can inform neighboring jurisdictions. It's possible that tribes may want to collaborate beyond just the climate element of your comprehensive plan, and tribes can now opt-in to local governments' planning processes as per recent updates to the GMA through SHB 1717 (Ch. 252, Laws of 2022). For more information about tribal participation in overall comprehensive planning visit Commerce's Tribal Planning Coordination webpage and/or contact the agency's Tribal Coordination Manager.

2.4: Develop Vision Statement

Early in the local planning process, jurisdictions often begin by creating a vision statement. In this context, your climate policy advisory team should draft a statement about the social, economic, and environmental places, traditions, and values that matter most to your community members. Articulate why and how your community members want to sustain them in the face of a changing climate. The vision statement should include guiding principles or values consistent with those your jurisdiction has articulated already for the comprehensive plan and/or the periodic update in general [*see examples in Appendix H*]. This is also an opportunity to revisit those statements and values, and to view them through the lens of climate and equity:

- Ask your community members to describe their unique perspectives, assets, and climate-related challenges;
- Ask them to define what climate resilience and community well-being mean to them;
- Ask them how the guiding principles — and, ultimately, the comprehensive plan goals and policies — could better serve their communities' unique needs and priorities and leverage their strengths;
- Ask them how they want to be a partner in implementing climate policies in the community and how your jurisdiction could help.

Section 3: Resilience Sub-element

3.1: Overview

Washington's cities and counties should use this section to develop comprehensive plan goals and policies that support communitywide climate resilience. The resilience sub-element planning guidance (resilience guidance) that follows will help local jurisdictions use climate modeling to identify and prepare for natural hazards exacerbated by climate change, including floods, droughts, wildfires, and other impacts of changes to temperature and precipitation patterns. The resilience guidance and its companion resources will also help local jurisdictions identify planning and policy approaches to advance environmental justice, adapt to and mitigate the effects of a changing climate, and protect and enhance the environment, economy, and human health and safety.

This section provides a common planning framework with linear steps and flexible pathways [*Figure 3*].

Defining Climate Resilience

Climate resilience is the ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities. Washington's cities and counties can build climate resilience by implementing a mix of preparedness, response, and recovery policies, including mitigating natural hazards, adapting to unavoidable impacts, and restoring degraded natural areas that provide key ecosystem services.

Figure 3: Steps and Pathways to Integrate Resilience into Comprehensive Plan

Steps and Pathways:

Washington's cities and counties should create their climate resilience sub-element and then review and revise it at least once every 10-year comprehensive plan periodic update cycle, based on best available science, updated climate modeling, and communities' evolving needs and priorities. **This section includes four required steps and one optional step** for this work: Start by taking the first two steps to explore local climate impacts (**required Step 1**) and identify resilience policy gaps and opportunities (**required Step 2**). Conclude Step 2 by determining whether your jurisdiction needs to conduct a climate vulnerability and risk assessment (**optional Step 3**) or whether your jurisdiction is ready to choose goals and policies (**required Step 4**) for integration into the comprehensive plan (**required Step 5**). Your jurisdiction should choose its progression of steps and pathway(s) based on its staff capacity, existing body of climate work, budget, and other considerations.

The Pathways Approach Provides Flexibility and Recognizes Existing Work

Below are a few examples of how Washington jurisdictions — ranging in size, capacity, and existing climate planning work — could follow the flexible pathways approach for integrating climate resilience into a comprehensive plan. With each pathway, the jurisdiction could use the Menu of Measures as a resource for selecting goals and polices:

A large jurisdiction could use the guidance to identify resilience gaps and opportunities in its comprehensive plan and then integrate into the plan goals and policies from an existing climate action plan and Commerce's Menu of Measures [*Pathway 1*].

A mid-size jurisdiction could use the guidance to conduct a climate vulnerability and risk assessment to create a climate action plan and then integrate its new goals and policies into the comprehensive plan [*Pathway 2*].

A small jurisdiction with limited staff capacity could use the guidance to update an existing hazard mitigation plan and then adopt it, by reference, in the comprehensive plan [*Pathway 3*].

Minimum Requirements for Developing a Climate Resilience Sub-element:

Following the steps and pathways above will help your jurisdiction meet HB 1181's minimum requirements[40] by ultimately including at least one climate resilience goal and supportive policy for each climate-exacerbated hazard that is relevant to your jurisdiction. The total number and nature of your resilience measures will be based on your science-based assessment of climate impacts, environmental justice considerations, and local planning context and needs. Your collective set of climate resilience goals and policies must include, but are not limited to, those designed to:

- **Requirement 1**: Address natural hazards created or aggravated by climate change, including sea level rise, landslides, flooding, drought, heat, smoke, wildfire, and other effects of changes to temperature and precipitation patterns;
- **Requirement 2**: Identify, protect, and enhance natural areas to foster climate resilience, as well as areas of vital habitat for safe species migration;
- **Requirement 3**: Identify, protect, and enhance community resilience to climate impacts, including social, economic, and built-environment factors, which support adaptation to climate impacts consistent with environmental justice.

Commerce encourages your jurisdiction to address all 11 of this guidance's sectors — including Agriculture & Food Systems and Economic Development [*see Figure 4*] — via its climate resilience sub-element goals and policies. This will help ensure your set of measures enhances beneficial opportunities such as local food security and green job creation and addresses important areas that might not necessarily be included in your jurisdiction's hazard mitigation plan.

By working through this section's steps, engaging community members, and implementing climate goals and policies, your resilience sub-element should accomplish the following, consistent with state law:

- Equitably enhance the resilience of communities and ecological systems to climate change;
- Be consistent with best available science and scientifically credible climate projections and impact scenarios; and,
- Prioritize and benefit overburdened communities that will suffer disproportionately from environmental impacts and climate-exacerbated natural hazards.

[40] RCW 36.70A.070(9)(e)(i)

3.2: Resilience Guidance

Commerce's guidance adapts the U.S. Climate Resilience Toolkit's "Steps to Resilience" framework[41] and integrates additional best practices recommended by the Association of Washington Cities (AWC), Municipal Research and Services Center of Washington (MRSC), American Planning Association (APA), and other organizations. The resilience guidance provides a linear, yet flexible, approach for jurisdictions to explore climate science, assess impacts on local sectors and assets, and consider policy interventions.

The resilience guidance steps and associated tasks have corresponding tabs in the companion Climate Element Workbook for your jurisdiction to record its work [*Appendix B*]. Commerce recommends that jurisdictions review the workbook and the corresponding guidance steps before beginning work on this sub-element, which will take roughly 12 months to develop and adopt as part of a broader comprehensive plan update. The time and sequence of steps needed to complete work on this sub-element will vary based on a jurisdiction's staff capacity and body of planning work. For example, some jurisdictions may be pulling from a recent, separately completed vulnerability assessment rather than doing this step within their update cycle.

Step 1 — Explore Climate Impacts

In this required step, your jurisdiction's climate policy advisory team should use the University of Washington Climate Impacts Group's (UW CIG) Climate Mapping for a Resilient Washington (CMRW) webtool to build baseline awareness of how climate change is expected to affect local sectors (water resources, transportation, etc.) and their social, economic, and environmental assets in coming decades. Commerce considers the CMRW webtool a source of best available science and scientifically credible projections, so this guidance makes using the webtool a required starting point for all jurisdictions that are creating or updating a climate resilience sub-element. Commerce encourages jurisdictions to use additional resources [*examples below*], as needed, to explore climate hazards and impacts on local assets and sectors.

[41] The U.S. Climate Resilience Toolkit is published by the National Oceanic and Atmospheric Administration (NOAA) Climate Program Office. The Washington Department of Commerce adapted into its resilience guidance the NOAA Toolkit's Steps to Resilience risk assessment and decision-support framework and integrated best practices published in the October 2022 report, *Implementing the Steps to Resilience: A Practitioner's Guide*. The Guide includes links to many examples and resources.

Task 1.1: Identify Community Assets

Use the Task 1.1 tab in the Climate Element Workbook to list social, economic, and environmental assets that your community members value and want to protect. In this context, the term "asset" refers broadly to community groups, places, natural resources, infrastructure, and services. Your climate policy advisory team should lead this task and seek input from community members to ensure the list is comprehensive.

- Your initial list should include general asset themes (urban tree canopy, buildings, roads, etc.) within the 11 sectors. You will have an opportunity in Step 3 to refine this general list with specific assets (for example, a key bridge or hospital), should you decide to conduct a more detailed vulnerability and risk assessment.
- Your jurisdiction should consult with special districts, state, and federal agencies responsible for managing local assets. For example, some cities have state or federal highways near floodplains and areas that will be inundated by sea level rise. Such municipalities could coordinate with the agency responsible for the facility and support elevating and protecting it from flooding and erosion, providing some protection for the community.

Resources:

- Your capital facilities and hazard mitigation plans can help you identify physical assets.
- **Washington Department of Ecology's** report — Preparing for a Changing Climate: Washington State's Integrated Climate Response Strategy — can help your jurisdiction broaden its list of social and environmental assets.
- **NOAA's** U.S. Climate Resilience Toolkit report — Implementing the Steps to Resilience: A Practitioner's Guide — provides useful ideas for grouping assets thematically.

Task 1.2: Explore Hazards and Changes in the Climate

In this task, your jurisdiction will explore how expected changes in the climate could exacerbate natural hazards (droughts, floods, etc.) and impact assets (ecosystem degradation, infrastructure damage, etc.).

- First, you might wish to read summarized climate information from statewide or regional reports[42] and key takeaways for your area.[43] You might also wish to review your local hazard mitigation plan to understand your assets' current risk exposure and vulnerability to the identified hazards.

- Next, use the CMRW webtool to explore county-level information about expected changes in the climate. Consider both near-term (20 years) and long-term (more than 20 years) climate projections, recognizing that planning might be required now to deal with changes expected in coming decades.
  - See UW CIG's user guide for its CMRW webtool.
  - Also see UW CIG's companion report, "Biophysical Climate Risks and Economic Impacts for Washington State," for information about filtering and customizing the webtool.
- Finally, use the companion Climate Element Workbook to record your jurisdiction's findings.
  - Use the Task 1.2 tab's “Notes” column to note which emissions scenario(s) you used. You may also wish to identify potential information gaps that might warrant further analysis using other data [*additional resources below*] and/or via a more detailed vulnerability and risk assessment [*Step 3*].

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[42] The State Climate Summary for Washington could be a helpful starting point, in addition to other statewide and regional reports.
[43] The Climate Explorer summarizes key takeaways for cities and counties under the "Take Action" tab of the tool.

- Use the tab's "Hazards" column to note the hazards relevant to your jurisdiction. The CMRW lists seven hazard options: Drought; Extreme Heat; Extreme Precipitation; Flooding; Reduced Snowpack; Sea Level Rise; and, Wildfire.
- Use the tab's "Climate Impacts" column to note current and future climate impacts relevant to your jurisdiction. Figure 4, adapted from a UW CIG report[44], includes helpful examples.

NOTE: *While HB 1181's minimum requirements specifically list landslides and smoke among hazards and effects "created or aggravated by climate change," the CMRW tool does not map projected changes in landslides and smoke the way it does for heat and other hazards because location-specific information on projected changes are not available. UW CIG and Commerce recommend that local governments use extreme precipitation as an indicator of where landslide risks are expected to change in the future because heavy rain events reduce slope stability and can trigger landslides. Supplement this information with slope and soil information to assess where landslide hazards are highest. Similarly, local governments should use wildfire as the primary hazard to assess how the frequency of smoke events might change in the future and supplement this information with spatial data about where vulnerable populations live. This can help you better understand how such populations might be impacted by smoke from local or distant wildfires and what such populations' needs might be.*

Resources:

- **NOAA's** Climate Mapping for Resilience and Adaptation (CMRA) tool provides information about past, present, and future climate conditions at the census tract and tribal reservation scales.
- **NOAA's** U.S. Climate Resilience Toolkit provides additional online resources, including county-scale climate data via The Climate Explorer.
- The **U.S. Global Change Research Program's** Fifth National Climate Assessment includes a Northwest chapter and national climate change impacts for different hazards and sectors.
- **Washington Department of Natural Resources'** Geologic Information Portal includes an interactive map of landslides and geologic hazards across the state.
- **Washington Department of Health's** Environmental Health Disparities Map evaluates environmental health risk factors in communities. It provides a cumulative environmental health impact score for each census tract, reflecting pollutant exposures and factors that affect people's vulnerability to environmental pollution. The tool incorporates indicators that include ozone concentration, wastewater discharge, poverty rate, disability, death from cardiovascular disease, and low birth weight. DOH's map is not fully comprehensive with regard to tribal information, so the map should be complemented by consultation with tribes and guidance from the Environmental Justice Council.
- **University of Washington's** Climate Health and Risk Tool can help users: describe how climate-exacerbated hazards impact health; assess communities' relative vulnerability, exposure, and risk; and, identify policies. It is a useful tool for this and other Section 3 steps.
- **University of Washington's** Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers summarizes existing knowledge about the likely effects of climate change on Washington state. This resource provides contextual information for the projections display in the CMRW webtool.

[44] UW Climate Impacts Group (2007), Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments

Figure 4: Examples of Potential Climate Impacts, by Sector, in Washington

Sector	Potential climate-related impacts
Agriculture & Food Systems (production and distribution, including food processing in industrial areas and community gardens in urban areas)	Changes in crop yields
	Farmworkers increasingly exposed to extreme heat
	Potential ability to "double crop"
	Increased heat stress on crops and livestock
	Reduced water availability for crops, livestock, and processing, as well as increased demand for irrigation due to longer and warmer growing season
	Changes in weeds and/or plants that grow with the crops
	Increased pest outbreaks, disease, and weeds, impacting lending opportunities and crop insurance for farmers
	Increased food scarcity after hazards (for example, floods) that disrupt food transportation and distribution
Buildings & Energy (includes generation, transmission, and consumption)	Reduced heating demand during winter months
	More frequent power loss due to extreme storms and other hazard events
	Shuttered power generating stations or transmission corridors to reduce wildfire risk
	Increased cooling demand during summer months, extreme heat events
	Increased or decreased hydroelectric generating capacity due to higher or lower streamflow
Cultural Resource & Practices (includes historic sites and cultural resources and practices)	Loss of cultural and historical sites on coastline to sea-level rise and related impacts
	Loss of cultural and historic sites due to more frequent and intense severe weather events
	Loss of locally grown, temperature-sensitive foods that are culturally important (berries, shellfish, salmon, etc.)
Economic Development (includes business continuity, opportunities)	Increased disruptions of business continuity and lost revenue and wages from wildfires and other hazards
	Price volatility in energy and raw product markets due to more extreme weather events
	Increased insurance premiums due to more extreme weather
	Fewer shipping disruptions associated with snow and ice
	Impacts on business infrastructure within floodplains or coastal areas

Sector	Potential climate-related impacts
	Shifts in business opportunities
	Increased opportunities for warm-season activities in milder areas
	Decreased opportunities for warm-season activities during the hottest part of the year (for example, from heat, forest fires, low water levels, reduced urban air quality)
	Reduced opportunities for cold-season recreation due to decreased snowpack and/or reduced snow or ice quality
	Increased reliance on snow-making at ski areas
	Shifts in tourism dollars within a jurisdiction from one recreation sector to another, or from jurisdictions losing recreational opportunities to jurisdictions gaining opportunities
Emergency Management (includes preparedness, response, recovery)	Increased costs and demands for emergency preparedness, response, and recovery activities due to more frequent and intense hazards (for example overtime for snowplow drivers, salt/ice-melting tools, overtime for firefighters, sand to put in sandbags, etc.). This diverts resources from planning, equipping, training, and exercising for other community hazards and risks.
	Increased household costs to prepare for, respond to, and recover from natural hazards.
	Additional cost in human well-being as first responders are constantly on alert or responding with little downtime for recovery. In addition to first responders, more residents are impacted by hazards on a year-round basis.
Health & Well-being (includes community well-being, equity, and engagement)	Rising temperatures will lead to an increase in heat-related deaths and illnesses, particularly among the elderly, poor, and other vulnerable populations.
	Rising temperatures and wildfires will increase ozone and particulate matter from smoke, elevating the risk of cardiovascular and respiratory illnesses and death.
	Increasing coastal and inland flooding exposes populations to negative health effects and potential exposure to contaminants spread via floodwaters.
	Extreme precipitation will increase the risk of landslides and avalanches that could cause injury and property damage.
	Ticks and other disease vectors will show earlier seasonal activity and be expanding northward, increasing risk of human exposure to disease.
	Increase in water temperatures will alter timing, extent, location and intensity of vibrio growth and harmful algal blooms, increasing exposure and risk of waterborne disease.
	Changes in exposure to weather-related disasters can cause or exacerbate stress and mental health consequences.
	Increased vulnerability of residents, particularly those who live in poverty and polluted and/or high-risk hazard areas.

Sector	Potential climate-related impacts
	Increased strain added to people experiencing homelessness and service providers.
	Longer pollen seasons and changing pollen composition will cause more severe seasonal allergies, increase hospitalizations for people with chronic respiratory diseases.
Ecosystems (includes terrestrial and aquatic species, habitats, and services)	Increased insect outbreaks
	Increased wildfire and smoke (from forests, grasslands, etc.)
	Loss of near-shore habitat and coastal wetlands to sea-level rise and erosion, where sufficient space for habitat migration is not available
	Periodic drought could impact species diversity and distribution.
	Loss of species not able to adapt to changes
	Increased competition from and expanded coverage of invasive species
	Increase in forest growth and productivity in the near-term where soil moisture is adequate and fire risk is low (and vice versa)
	Reduced presence of ephemeral wetlands
	Increased ocean acidification
	Increased sea surface temperature
	Increased stress on cold-water species in lakes and rivers
	Loss of shrubsteppe ecological function and biodiversity
	Potential reductions in water-based navigation due to lower summer streamflow
Transportation (includes multimodal travel and infrastructure)	Increased road surface damage from higher temperatures
	Increased maintenance requirements for roadside and median strip vegetation
	Increased infrastructure damage from rapid rain/freeze/thaw cycles
Waste Management (includes materials recycling and disposal)	Increased solid waste and potentially hazardous waste (downed tree limbs, building rubble, roof shingles, vehicles, and appliances) and associated environmental and public-safety impacts following severe storms, flooding, and other hazards
	Increased waste associated with population growth (including climate migration) and hazards presents opportunities for recycling materials into new products (cradle-to-cradle)
	Increased emissions of carbon dioxide, methane, and other greenhouse gases associated with the transport and disposal of waste

Sector	Potential climate-related impacts
Water Resources (includes water quality and quantity)	Shift in the timing of spring snowmelt
	Lower summer streamflow
	Impacts of wildfire, smoke, and ash on drinking water supply and storage
	Increased drought impacts on water quality and quantity
	Increased flooding impacts
	Increased aquifer drawdown and competition for water
	Warmer water temperature in lakes and rivers
	Changes in water quality
	Increased demands on stormwater management systems with the potential for more combined stormwater and sewer overflows
	Saltwater intrusion into coastal aquifers due to sea-level rise
	Increased risk of pollution from coastal hazardous waste sites due to sea-level rise
Zoning & Development (includes site use, design, and other development facets)	Increased climate-induced population displacement and migration
	Increased erosion or damage to coastal infrastructure, dunes, beaches, and other natural features due to sea level rise and storm surge
	Increased demand for irrigation of non-native, non-productive landscaping
	Changes in the size and shape of designated environmentally critical areas, buffers, and shoreline environments.
	Changes in housing stock availability due to hazard events
	Increased impervious surface runoff and associated management and maintenance costs
	Increased costs for maintenance and expansion of coastal erosion control
	Need for new or upgraded flood-control and erosion-control structures
	Flooding and erosion exacerbated by sea-level rise increases risk of shoreline property and infrastructure damage and displacement.

Task 1.3: Pair Assets and Hazards and Describe Exposure and Consequences

Pair each of the community assets you identified in Task 1.1 with every climate-influenced hazard that could affect it; enter this information into the Task 1.3 tab of your Climate Element Workbook [*Appendix B*]. Your list will likely include the same asset several times, and some hazards (for example, extreme heat) might affect several assets.

Defining Exposure and Consequences

Exposure is the presence of assets in places where they could be adversely affected by hazards. Consequences are the subsequent results (usually negative) that follow from damage to or loss of an asset due to a hazard.

— U.S. Climate Resilience Toolkit

- Create a numbered row for each asset-hazard pair. Your jurisdiction will use these numbered asset-hazard pairs if it decides to proceed to Step 3 and conduct a vulnerability and risk assessment.
- Select a relevant climate indicator from UW CIG's CMRW webtool for each asset-hazard pair on your list (for example, change in the annual number of hot days) and describe factors that affect the asset's exposure to the hazard (for example, the extent of paved surfaces, tree canopy cover, and other features that exacerbate or ameliorate extreme heat).
- List non-climate stressors that can exacerbate the consequences of climate impacts, where applicable. Non-climate stressors can include population growth and land conversion (for example, development actions such as converting forests into impervious surfaces can increase the urban heat island effect). Non-climate stressors also can include historic neighborhood pollution, redlining, disinvestment and other factors, which may lead to disproportionate climate impacts on overburdened communities.
- Describe potential consequences of the climate impacts in the tab's final column. Factor in exposure, non-climate stressors, and knowledge of how hazards have historically impacted your jurisdiction.

  - **Explore**: Use your hazard mitigation plan and the resources below, as needed, to explore the impacts of past hazard events (for example, the duration and extent of a heat wave and the social, economic, and environmental damage it caused).
  - **Engage**: Encourage your stakeholders to describe their experiences to evoke rich details about the consequences of hazards, as this narrative information will be useful if your community decides to proceed to Step 3 and conduct a vulnerability and risk assessment.

Resources:

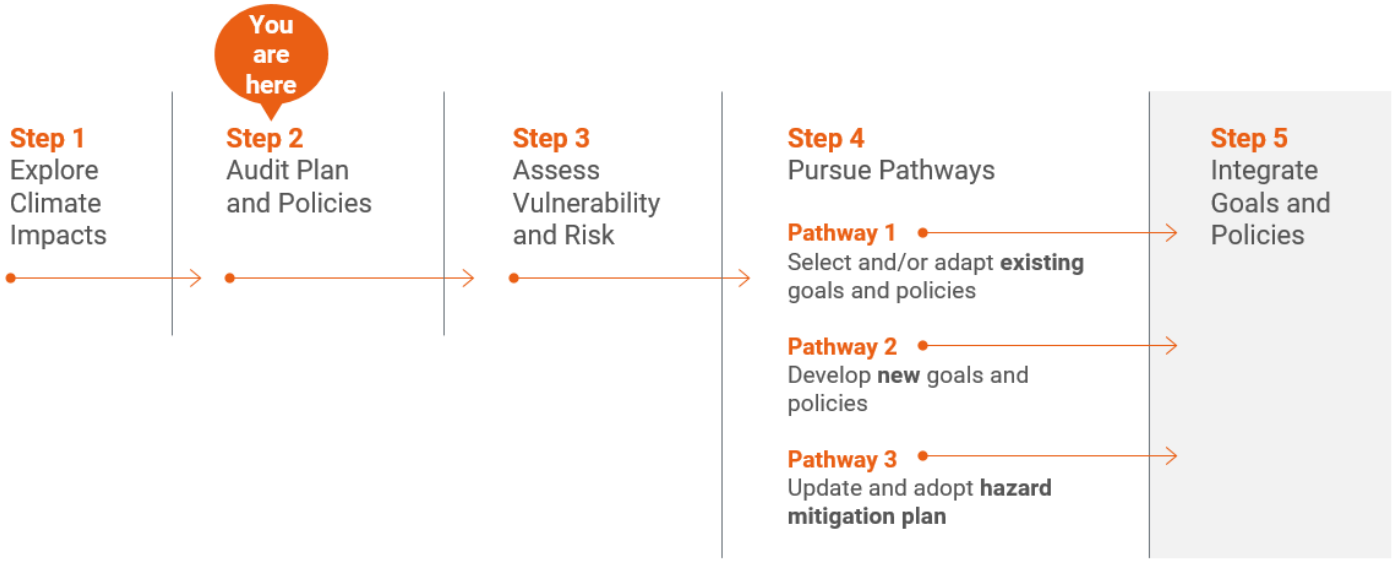
- FEMA's National Risk Index provides a comparative risk score for all counties and estimates estimated annual loss — in U.S. dollars — due to hazards.
- FEMA's Resilience Analysis and Planning Tool (RAPT) examines the interplay of infrastructure locations and hazards, including historic disasters and estimated frequency of hazard risk.
- NOAA's U.S. Climate Resilience Toolkit also has a variety of spatial analysis resources, including sea-level rise projections, to assess potential consequences.

Task 1.4: Identify Priority Climate Hazards

Decide which climate hazards you need to address in your comprehensive plan based on your use of the CMRW tool and your assessment of exposure and consequences — which are building blocks of vulnerability and risk. These are the relevant hazards you will focus on in your plan and policy audit [*Step 2*] and, if desired, your vulnerability and risk assessment [*Step 3*]. These are also the hazards you must address via your climate resilience goals and policies [*Steps 4 and 5*].

- Use the Climate Element Workbook's Task 1.4 tab to document the relevant climate hazards that your jurisdiction will address in its next steps and comprehensive plan.

Step 2 — Audit Plans & Policies



In this step, your jurisdiction will apply information from Step 1 to assess how well your existing local plans and policies build climate resilience. Your jurisdiction will begin by reviewing your comprehensive plan including your SMP and other local documents (hazard mitigation plan, watershed restoration plan, etc.) and looking for climate resilience opportunities, gaps, and barriers. Your jurisdiction will conclude this step by determining whether to proceed directly to Step 3 or skip to Step 4.

Task 2.1: Review Existing Plans for Resilience Gaps, Opportunities and Barriers

First, review your comprehensive plan and SMP for goals and/or policies that explicitly or implicitly build resilience to the climate hazards and impacts you identified in Step 1 as relevant to your jurisdiction.

- Note which hazards and impacts are not addressed by any policies or where existing policies are insufficient; these are the gaps to focus on as you review other plans and develop goals and policies later in the process.
- Look for maladaptation policies and practices that exacerbate assets' vulnerability to climate change (for example, building neighborhoods in areas prone to wildfire) or create barriers to implementing goals, policies, and more detailed development regulations.
- Begin considering where in the comprehensive plan you will add climate resilience goals and policies.

Next, identify and review other plans that could have measures to build climate resilience (for example, hazard mitigation plan, climate action plan, sustainability plan, community wildfire protection plan, floodplain management plan, community health improvement plan, watershed restoration plan, stormwater management plan, regional transportation plan, parks and open space plan, and water system and electric utility business plans). These plans will include goals, actions, strategies, objectives, recommended projects, and other information that can be adapted or drawn from to develop goals and policies for your comprehensive plan.

- Commerce recommends that your jurisdiction audit 3-5 plans and identify approximately 20-40 collective measures within those plans to make this process manageable. Your audit should, at a minimum, include your comprehensive plan (including SMP) and hazard mitigation plan.
- Use the Climate Element Workbook to list your documents and determine your desired next step for each measure (for example, amend an existing measure; consolidate with a similar measure; add a new

measure; keep existing measure in comprehensive plan). To help identify opportunities, gaps, and barriers, crosswalk each measure with the relevant climate hazards and impacts you identified in Step 1.

The following table [*Figure* 5] can help you note in the workbook which sectors each measure addresses.

Figure 5: Crosswalk of the Climate Guidance's Sectors with the Growth Management Act's Goals[29] (numbered) and Comprehensive Plan Elements

SECTOR	NEXUS WITH GROWTH MANAGEMENT ACT GOALS[45]	NEXUS WITH COMPREHENSIVE PLAN ELEMENTS
AGRICULTURE & FOOD SYSTEMS (INCLUDES PRODUCTION AND DISTRIBUTION)	**(2) Reduce sprawl:** Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development. **(5) Economic Development**: Encourage economic development throughout this state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, promote the retention and expansion of existing businesses and recruitment of new businesses, recognize regional differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities. **(8) Natural resource industries:** Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses. **(10) Environment:** Protect and enhance the environment and enhance the state's high quality of life, including air and water quality, and the availability of water. **(14) Climate change and resiliency:** Ensure that comprehensive plans, development regulations, and regional policies, plans, and strategies under RCW 36.70A.210 and chapter 47.80 RCW adapt to and mitigate the effects of a changing climate; support reductions in greenhouse gas emissions and per capita vehicle miles traveled; prepare for climate impact scenarios; foster resiliency to climate impacts and natural hazards; protect and enhance environmental, economic, and human health and safety; and advance environmental justice.	Rural; Land Use; Natural Resource Lands
BUILDINGS & ENERGY (INCLUDES ENERGY GENERATION, TRANSMISSION, AND CONSUMPTION)	**(4) Housing:** Plan for and accommodate housing affordable to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock. **(12) Public facilities and services:** Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards. **(13) Historic preservation:** Identify and encourage the preservation of lands, sites, and structures, which have historical or archaeological significance. **(14) Climate change and resiliency**	Capital Facilities; Utilities; Housing; Land Use; Ports; Solar Energy; Economic Development; Transportation; Design; Environmental Protection; Conservation

[45] GMA goals 1-15 are in RCW 36.70A.020.

SECTOR	NEXUS WITH GROWTH MANAGEMENT ACT GOALS[45]	NEXUS WITH COMPREHENSIVE PLAN ELEMENTS
CULTURAL RESOURCES & PRACTICES (INCLUDES HISTORIC SITES AND CULTURAL RESOURCES AND PRACTICES)	**(11) Citizen participation and coordination:** Encourage the involvement of citizens in the planning process, including the participation of vulnerable populations and overburdened communities, and ensure coordination between communities and jurisdictions to reconcile conflicts. **(13) Historic preservation** **(14) Climate change and resiliency**	Capital Facilities; Housing; Land Use; Rural; Historic Preservation
ECONOMIC DEVELOPMENT (INCLUDES BUSINESS CONTINUITY, OPPORTUNITIES)	**(5) Economic Development** **(8) Natural resource industries** **(14) Climate change and resiliency**	Economic Development; Land Use; Ports; Capital Facilities; Solar Energy; Conservation
EMERGENCY MANAGEMENT (INCLUDES COMMUNITY PREPAREDNESS, RESPONSE, RECOVERY)	**(11) Citizen participation and coordination** **(12) Public facilities and services** **(14) Climate change and resiliency**	Capital Facilities; Utilities; Housing; Land Use; Ports; Economic Development; Natural Hazard Reduction
HEALTH & WELL-BEING (INCLUDES COMMUNITY WELL-BEING, EQUITY, AND ENGAGEMENT)	**(10) Environment** **(11) Citizen participation and coordination** **(14) Climate change and resiliency**	Housing; Land Use; Capital Facilities; Park & Recreation; Environmental Protection
ECOSYSTEMS (INCLUDES TERRESTRIAL AND AQUATIC SPECIES, HABITATS, AND SERVICES)	**(8) Natural resource industries** **(9) Open space and recreation**: Retain open space and green space, enhance recreational opportunities, enhance fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities. **(10) Environment** **(14) Climate change and resiliency** **(15) Shorelines of the state**: For shorelines of the state, the goals and policies of the Shoreline Management Act as set forth in RCW 90.58.020 shall be considered an element of the county's or city's comprehensive plan.	Land Use; Rural; Park & Recreation; Capital Facilities; Conservation; Housing; Natural Resource Lands; Environmental Protection
TRANSPORTATION (INCLUDES MULTIMODAL TRAVEL AND INFRASTRUCTURE)	**(3) Transportation:** Encourage coordinated, multimodal transportation systems that will reduce greenhouse gas emissions and per capita vehicle miles traveled, and are based on regional priorities and coordinated with county and city comprehensive plans. **(10) Environment** **(14) Climate change and resiliency**	Transportation; Land Use; Housing; Ports; Capital Facilities; Environmental Protection

SECTOR	NEXUS WITH GROWTH MANAGEMENT ACT GOALS[45]	NEXUS WITH COMPREHENSIVE PLAN ELEMENTS
WASTE MANAGEMENT (INCLUDES MATERIALS RECYCLING AND DISPOSAL)	**(5) Economic Development** **(10) Environment** **(14) Climate change and resiliency**	Capital Facilities; Utilities; Economic Development; Conservation; Environmental Protection
WATER RESOURCES (INCLUDES WATER QUALITY AND QUANTITY)	**(10) Environment** **(14) Climate change and resiliency** **(15) Shorelines of the state**	Utilities; Land Use; Capital Facilities; Rural; Conservation; Housing; Economic Development; Public Facilities/Services; Park & Recreation; Environmental Protection
ZONING & DEVELOPMENT (INCLUDES SITE USE, DESIGN, AND OTHER DEVELOPMENT FACETS)	**(1) Urban growth:** Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner. **(2) Reduce sprawl** **(4) Housing** **(6) Property rights:** Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions. **(7) Permits:** Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability. **(11) Citizen participation and coordination** **(12) Public facilities and services** . **(14) Climate change and resiliency** **(15) Shorelines of the state**	Housing; Land Use; Capital Facilities; Park & Recreation; Ports; Conservation; Rural; Recreation; Subarea Plans; Economic Development; Environmental Protection

Task 2.2: Determine Next Step

Your jurisdiction has reached a key decision point: Determine whether to proceed to Step 3 or skip to Step 4. This decision should factor in your initial climate impacts assessment, completed plan and policy audit, and desired pathway(s).

- If you have enough information now to begin choosing climate resilience goals and policies for your comprehensive plan, then proceed to Step 4. If you want to first assess your assets' relative vulnerability and risk, then proceed to Step 3.

Read the description of pathways that follows and use the Task 2.2 tab of the Climate Element Workbook to answer a set of high-level questions that will help your jurisdiction determine the most appropriate next step.

Description of Pathways

The following is a description of each pathway and an example of why a jurisdiction might want to pursue it. Many jurisdictions may find that they will need to pursue a combination of pathways to adequately address their climate-exacerbated hazards and impacts. Pathway 1 will generally require the least amount of time, staff capacity, and budget. Pathways 2 and 3 — in which Commerce recommends incorporating a climate vulnerability and risk assessment — requires more resources but could help a jurisdiction identify its highest relative climate risks to help prioritize and tailor measures that support climate resilience and environmental justice. All pathways conclude with Step 5 — integrating climate goals and policies into a comprehensive plan — and may leverage the Menu of Measures as a resource.

Pathway 1: Select and/or Adapt Existing Goals and Policies.

This pathway may be preferable for a jurisdiction that has already created a climate action plan and/or a climate element in its comprehensive plan. This pathway, like the others, could be taken by itself or in combination with another pathway. For example, if a jurisdiction's Step 2 audit showed comprehensive plan resilience gaps, the jurisdiction might opt to select its existing climate action plan goals and policies [*Pathway 1*], develop new measures [*Pathway 2*], and select supplemental ones from Commerce's Menu of Measures. If your jurisdiction is relying on existing plans, it will be important to show your work. Use the Climate Element Workbook to show how your plans, taken as a whole, meet all the climate planning requirements.

> ***NOTE:*** *To pursue this pathway, a jurisdiction needn't have completed a climate action plan or other hazard-focused plan or strategy (for example, a flood or wildfire protection plan). In such a case, a jurisdiction could simply use its foundational work on Steps 1 and 2 to help identify and adapt existing comprehensive plan goals and policies to address locally relevant hazards and support climate resilience. Again, the Menu of Measures could be a resource to fill remaining gaps.*

Pathway 2: Develop New Goals and Policies.

This pathway provides jurisdictions the flexibility to develop new comprehensive plan goals and policies with or without developing a separate climate action plan and/or conducting a vulnerability and risk assessment. Commerce recommends such an assessment for a jurisdiction that wants to identify its highest relative climate risks to help prioritize and tailor measures for a climate action plan and/or a comprehensive plan and development regulations. Using maps, indicators, and local knowledge to consider the sensitivity and adaptive capacity of social, economic, and environmental assets can help a jurisdiction better understand who and what are impacted by climate change, when, where, how, and why.

For example, reviewing maps that identify areas with less tree canopy/higher sensitivity to extreme heat and areas with a higher poverty rate/lower adaptive capacity can show where you might want to plant street trees and place community resilience hubs. As another example, using flood modeling, topographic maps, and socioeconomic data can help you assess the climate exposure, sensitivity, and adaptive capacity of low-elevation, low-income communities. This can help you identify which areas are most vulnerable to flooding and which residents may be most at risk of climate-induced displacement and migration.

A jurisdiction with less capacity may want to seek outside technical assistance (from a university, Commerce, consultant, etc.) to complete a vulnerability and risk assessment and/or develop a climate action plan. Commerce recommends that jurisdictions that opt to complete a vulnerability and risk assessment follow Step 3's tasks, which are adapted from NOAA's U.S. Climate Resilience Toolkit framework. Commerce considers NOAA's framework a model best practice, but local jurisdictions may use an alternative framework or take a limited approach to assess their assets' relative climate vulnerability and risks. For example, instead of conducting a vulnerability and risk assessment that considers all climate hazards across the entire jurisdiction, a city with less capacity might opt to conduct an assessment of a single sector or hazard within a limited geographic area (for example, a downtown sea-level rise response strategy). Step 3's tasks and tools are applicable for a variety of approaches.

Pathway 3: Update Hazard Mitigation Plan and Adopt it in Your Comprehensive Plan.

A jurisdiction might want to use Step 3's vulnerability and risk assessment framework and resources to help assess climate risks in a hazard mitigation plan. This could provide some efficiencies and better integration of the hazard mitigation plan and the comprehensive plan. The hazard mitigation plan must be approved by the Federal Emergency Management Agency (FEMA). It could be adopted, by reference, in a comprehensive plan, provided it also meets the statutory requirements for the resilience sub-element. If you are planning to use your hazard mitigation plan as your resilience sub-element, the GMA allows you to delay completion to align with the deadline for your hazard mitigation plan [*See Appendix C*].

As of April 2023, FEMA requires that all updated local hazard mitigation plans assess the effects of climate change and other future conditions in the document's required risk assessment [*See Appendix C for requirements*]. Additionally, such plans must identify all natural hazards that can affect the community's assets and include measures (goals, actions, projects) to reduce the effects of those relevant hazards. If your updated and adopted hazard mitigation plan does not address all 11 of this Commerce guidance's sectors [*Figure 5*], your jurisdiction may choose to voluntarily address those sector gaps via supplemental measures in your comprehensive plan. Such supplemental measures may be consolidated in a single climate chapter or dispersed across several other chapters (land use, transportation, etc.).

In this optional step, your jurisdiction will use the exposure information from Step 1 and other resources below to consider the sensitivity and adaptive capacity of local assets to assess their vulnerability to climate-exacerbated hazards and impacts [*Figure* 6]. Your jurisdiction will then characterize risk — the probability and magnitude of hazards impacting your assets [*Figure* 7]. This compound process enables you to identify which assets have the highest relative vulnerability and risks related to climate change hazards and impacts — information that can help you identify and prioritize policies and development regulations.

Figure 6: Elements of climate vulnerability

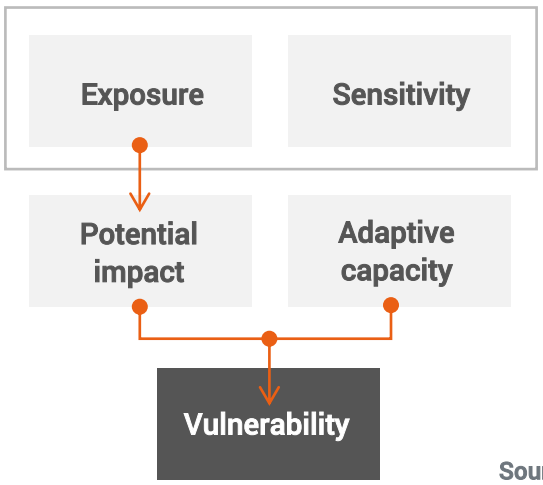
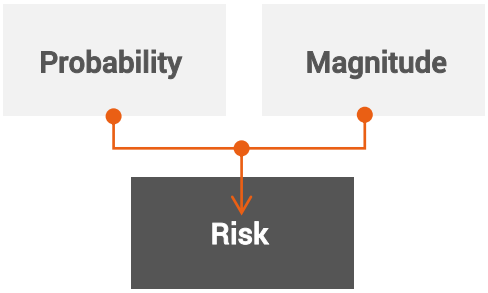


Figure 7: Elements of climate risk



Source: U.S. Climate Resilience Toolkit

Before You Begin

Before beginning this technical step, review the glossary's key terms *[Appendix J]* and watch a U.S. Climate Resilience Toolkit primer video to better understand how elements such as sensitivity and adaptive capacity will help your jurisdiction to characterize the vulnerability of assets. Also, review FEMA's Local Mitigation Planning Policy Guide if your jurisdiction plans to use Step 3 to help assess climate risks in a hazard mitigation plan and then adopt it, by reference in the comprehensive plan [*Pathway 3*]. Appendix D includes a crosswalk of Commerce's resilience guidance and FEMA's requirements for updating local hazard mitigation plans.[46]

Supplementing and Leveraging Hazard Mitigation Plans

Your jurisdiction might use Step 3 of the resilience guidance in a variety of ways, including, but not limited to:

- Your jurisdiction could use the tasks and resources below to assess climate vulnerability and risk for sectors and assets that are typically beyond the core focus of a hazard mitigation plan (for example, winter recreation, active transportation, and urban farms and forests). This can help your jurisdiction to identify comprehensive plan goals and policies to supplement your hazard mitigation plan and address all 11 of this guidance's sectors.

[46] As of April 2023, all updated local hazard mitigation plans' risk assessments must address climate change and other future conditions. For more information, consult FEMA's Local Mitigation Planning Policy Guide (2022).

- Your jurisdiction could also leverage its hazard mitigation plan's information to assess climate vulnerability and risk associated with all hazards relevant to your jurisdiction. Alternatively, your jurisdiction's vulnerability and risk assessment could focus on a single hazard and/or sector — for example, extreme heat impacts on health and well-being.

Task 3.1: Assess Sensitivity

Use the Climate Element Workbook and the following guidance to assess the sensitivity of the asset-hazard pairs your jurisdiction developed in Step 1. The U.S. Climate Resilience Toolkit provides a simple litmus test for sensitivity: If an asset could sustain a negative impact from a hazard, it is sensitive to that hazard. Your task is to assess the degree of sensitivity in qualitative terms (*low, medium, or high*) for each asset-hazard pair using local knowledge and other available information. Commerce recommends the following approach, which uses indicators and rulesets:[47]

Defining Sensitivity

Sensitivity is the degree to which a system, population, or resource is or might be affected by hazards. For example, the yield of crops with a high sensitivity might be reduced in response to a change in daily minimum temperature during the pollination season.

— U.S. Climate Resilience Toolkit

- Start by articulating a core question that your jurisdiction could answer consistently for each asset-hazard pair (for example, transit center-sea level rise). The following example question incorporates the U.S. Climate Resilience Toolkit's definition of sensitivity and could be answered qualitatively with a "low," "medium," or "high" response: *"To what degree would this hazard affect this asset?*
- Next, select 1-3 indicators that your jurisdiction could use to answer this question. Your indicator(s) should be based on the asset type, hazard, and available information.
    - For physical assets, such as buildings and roads, examples of useful indicators include the asset's: age (*What's the asset's age relative to its design life?*); condition (*What's the condition of the asset — poor, good, or excellent?*); and, physical design (*Is the asset physically protected from the hazard?*).
    - For environmental assets, such as forests and wetlands, examples of indicators include the asset's fragmentation, temperature range, and exposure to pests and disease.
    - For social assets, such as community health and well-being, your jurisdiction might want to use air and water quality indicators (for example, concentration of ozone and particulate matter) and socioeconomic and health indicators (for example, population age, poverty rate, disability, disease).

Selecting Indicators

Using indicators to help assess sensitivity and other components of vulnerability and risk is a common practice. Indeed, some practitioners might decide to use the same indicator in different ways (for example, using an asset's age to rate its sensitivity or adaptive capacity). Commerce's advice is for a local jurisdiction to decide where the indicator works best and use it just once.

[47] In October 2022, NOAA published a practitioners' guide for using the US Climate Resilience Toolkit's "Steps to Resilience" framework. Based on the NOAA guide and the pilot tests in Pullman and Port Angeles, Commerce added to this guidance examples of how cities and counties could use indicators and rulesets in their vulnerability and risk assessments.

- Apply a simple ruleset for each indicator: For example, if a coastal transit center's age exceeds its design life — the period for which the building was designed — the building could be rated as having "high" sensitivity to flooding exacerbated by rising sea levels. The ruleset's assumption is that the aging asset is more likely to fail after flooding.
- If your jurisdiction uses more than one indicator, factor the collective information into a composite rating for sensitivity [*Example: Age (high) + Physical Design (low) = medium sensitivity].* Your jurisdiction could repeat this general qualitative approach — and supplement it with quantitative information — to assess adaptive capacity and other vulnerability and risk assessment tasks that follow.

NOTE: *When assessing the predisposition of an asset to be harmed by a hazard, your jurisdiction may want to consider time of impact as an indicator. For example, some assets may have low sensitivity within the 20-year comprehensive planning horizon but have higher sensitivity within a longer timeframe.*

NOTE: *This is a good time to consider revising the asset-hazard pairs you created in Task 1.3, based on your chosen pathway and sensitivity assessment. You might want to include specific assets among your list of general asset themes (for example, a transit center or repetitively flooded structures within your buildings theme) if you want to use this step to help update your hazard* mitigation *plan or such assets might warrant a unique comprehensive plan policy or detailed implementation action(s). See Appendices C and D for FEMA's requirements for updating local hazard* mitigation *plans.*

Resources:

- **Headwaters Economics'** Neighborhoods at Risk online spatial analysis tool shows census tract-level data for indicators including tree canopy cover and impervious surfaces, overlaid with socioeconomic data. The tool can help identify communities where people could experience unequal impacts from climate-exacerbated flooding and extreme heat.
- **PolicyMap's** online spatial analysis tool shows census tract-level data for a wide range of indicators within categories that include housing, lending, education, economy, and quality of life.
- The **White House Council on Environmental Quality's** Climate and Economic Justice Screening Tool can help with this and other tasks that follow. The tool's interactive map uses datasets that are indicators of burden in several categories, including: climate change; energy; health; housing; legacy pollution; transportation; water and wastewater; and, workforce development.
- The **U.S. Census Bureau** regularly updates online data profiles for all geographies, down to the city and town level. Users can access socioeconomic, housing, and business data via interactive maps and tables.

Task 3.2: Assess Adaptive Capacity

Adaptive capacity is the ability of an asset (individual assets as well as populations and systems) to adjust to a hazard, take advantage of new opportunities, or cope with change. For example, if a coastal transit hub could be raised or relocated as sea levels rise, the asset has adaptive capacity.

- Use indicators and rulesets, as your jurisdiction did with sensitivity, to assess adaptive capacity qualitatively (*low, medium, high*). Record this rating in the Climate Element Workbook.
- Your core question for each asset-hazard pair on your list could be: *"What is the ability of this asset to adjust to the hazard, take advantage of new opportunities, or cope with change?*
- Examples of indicators to assess adaptive capacity include: design flexibility, financial resources availability, planning staff capacity, and back-up power/generator capability.

Resources:

- **NOAA's** Implementing the Steps to Resilience: A Practitioner's Guide provides examples of how to assess sensitivity, adaptive capacity, and other pieces of a vulnerability and risk assessment.
- The **National Wildlife Federation** report, Incorporating Nature-based Solutions into Community Climate Adaptation Planning, provides useful examples and advice for assessing the adaptive capacity of forests, marshes, and other assets that provide nature-based solutions to climate change. NWF and EcoAdapt prepared the report in support of the U.S. Climate Resilience Toolkit's Steps to Resilience planning framework.
- **Headwaters Economics'** Rural Capacity Map assesses rural jurisdictions with low capacity and high risk of climate-related hazards, specifically wildfires and floods. The interactive map assesses a jurisdiction's adaptive capacity through several indicators, including poverty level, educational attainment, health insurance, and planning staff capacity.

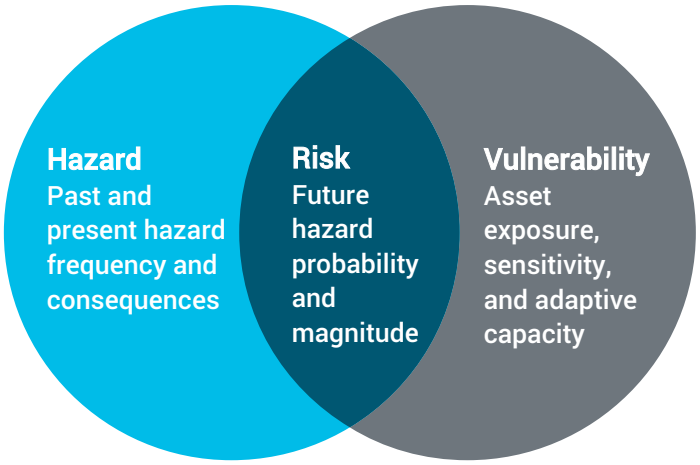
Task 3.3: Characterize Vulnerability

Now that your jurisdiction has assessed exposure, sensitivity, and adaptive capacity, use the Climate Element Workbook to characterize the vulnerability of each asset-hazard pair with a composite, qualitative rating (*low, medium, or high*). For example, your jurisdiction might determine that assets with high sensitivity and low adaptive capacity have high vulnerability. The U.S. Climate Resilience Toolkit defines vulnerability as "the propensity or predisposition of assets to be adversely affected by hazards."

Task 3.4: Characterize Risk

It is now time for your jurisdiction to narrow its focus and characterize risk for each asset-hazard pair with "medium" or "high" vulnerability. The U.S. Climate Resilience Toolkit explains that risk is a compound concept — encompassing a hazard's probability and magnitude of occurrence — which describes the chance of sustaining a substantial loss [*Figure* 8].

Figure 8: Relationship Between Hazard, Vulnerability, and Risk



Source: Washington Department of Commerce

- **Probability:** Consider how often a hazard occurred in the past (frequency) and how likely (likelihood) it is to occur in the future to characterize probability. Recognize that climate change may alter the frequency and likelihood of your identified hazards.

- Use the resources below to consider past frequency, and draw upon other information in your local hazard mitigation plan about past wildfires and other hazards in your jurisdiction.
- Use the resources below to consider future likelihood, and draw upon the climate projections your jurisdiction explored in Step 1. You may also wish to consult your local hazard mitigation plan for timeframes, probability, and risk information so that the climate information in your comprehensive plan corresponds to that in your hazard mitigation plan. You may even want to specifically cross-reference your hazard mitigation plan and your comprehensive plan.
- The U.S. Climate Resilience Toolkit recommends using a simple ruleset to characterize probability consistently. The following Toolkit example incorporates timeframes that are useful for comprehensive plans:
    - Characterize hazardous events that are likely to occur within 5 years as "high" probability.
    - Characterize events that are likely to occur just once in 5 to 20 years as "medium" probability.
    - Characterize events that are likely to occur less frequently than once in 20 years as "low" probability.

Resources:

- **NOAA's** U.S. Climate Resilience Toolkit includes a database of spatial analysis tools — searchable by topic (ecosystems, health, water, etc.) and function (for example, past conditions and applied forecasts).
- **FEMA**'s National Risk Index — searchable by county and census tract — provides annualized frequency figures for droughts, heat waves, and more than a dozen other natural hazards. The figures are derived from the number of recorded hazard occurrences over a given period or the modeled probability of a hazard occurrence each year.
- The **UW CIG** report, "How to Choose: A Primer For Selecting Sea Level Rise Projections for Washington State," can help local jurisdictions make three critical choices when using sea level rise data: choosing an emissions scenario, selecting a time frame, and weighing the probabilities of different sea level rise projections against the risk. Note that this general approach could be applied to other hazards and datasets.

- **Magnitude:** To characterize magnitude — which the U.S. Climate Resilience Toolkit also refers to as magnitude of impact or loss — your jurisdiction could draw upon its Step 1 work describing hazard consequences. The U.S. Environmental Protection Agency recommends thinking about hazard events comparatively. For example, your jurisdiction might deem a high-impact hazard event as a costly, major disruption and a low-impact event as comparatively less costly and disruptive.[48]
    - Indicators that can help your jurisdiction assess magnitude include the asset's redundancy (*for example, if a roadway's pavement buckles due to extreme heat, is there an alternative route?*), replacement cost (*for example, assessor's parcel value*), and criticality. Your jurisdiction could develop its own rulesets for these and other indicators (*for example, if an asset meets FEMA's critical facility definition, this indicator's rating could be "high"*) as well as use the resources that follow.

[48] U.S. Environmental Protection Agency workbook (2014), Being Prepared for Climate Change: A Workbook for Developing Risk-Based Adaptation Plans

Resources:

- **FEMA**'s National Risk Index provides qualitative ratings and dollar values (for building and agricultural assets and population fatalities and injuries) for a community's expected annual loss associated with a given natural hazard. The online mapping application also measures community resilience and social vulnerability.
- **FEMA**'s Hazus software — distributed as a GIS-based desktop application — identifies areas of high risk and estimates the physical, economic, and social impacts from floods and other hazards.
- Your local hazard mitigation plan can also help with this task.

Matrix Plot: After characterizing risk for your most vulnerable asset-hazard pairs, plot them on the 3x3 matrix in your Climate Element Workbook.

The value of a simple, qualitative rating

Using a qualitative rating is useful for several reasons when assessing climate risk:

- Future changes in the climate system cannot be projected with the exactness that is needed to precisely quantify the probability of a risk at any given future time.
- You might need to manage many distinct risks, and it would be prohibitively expensive to scientifically quantify the likelihood of each one.
- The general public has a limited ability to understand and process statistical probability.
- With participants in the process it likely will be easier to agree on a qualitative rating (for example, *low, medium, high*) than on whether mathematical calculations of likelihood or consequence were done correctly.

The key is not to overcomplicate the process. Define what you mean by your scale and communicate these definitions to your stakeholders and regulators.

— **U.S. Environmental Protection Agency**, Being Prepared for Climate Change: A Workbook for Developing Risk-Based Adaptation Plans

Task 3.5: Decide Course of Action

Based on your risk characterization matrix, decide which risks are more or less acceptable and categorize them as ones to address now or as ones to address later and monitor in the meantime. As with other tasks, it's important to engage your community stakeholders as part of this critical decision.

- **Decision Point:** Limit your course of action ruleset to either "Take Action" or "Accept Risk," and note your decision in the Climate Element Workbook:
  - **Take action** means deciding to address the risk's impacts now with comprehensive plan policies (and, if desired, detailed implementation actions for a hazard-specific strategy). For example, your jurisdiction might choose to take action for all risks of higher magnitude and probability.
  - **Accept risk** means deciding to not address the risk with a policy, strategy, or action now, but to instead monitor and reassess the risk periodically (for example, as part of your comprehensive plan's periodic update process). Your jurisdiction might decide this is the right path forward for risks of lower probability and magnitude.

Step 4 — Pursue Pathways

In this required step, your jurisdiction will pursue an individual pathway or a combination of pathways to select goals and policies that build climate resilience. Use the guidance below and the Climate Element Workbook to complete your work. Commerce encourages jurisdictional staff members developing measures as part of Step 4 to provide interim updates to their planning commission and city/county council, so they're prepared to efficiently integrate such measures into the comprehensive plan as part of Step 5.

Pursuing Pathways

Your jurisdiction could pursue one or a combination of pathways to meet HB1181's requirements. Alternatively, your jurisdiction could approach different hazards using different pathways and/or determine that a combination of pathways are needed to adequately address a single hazard. Commerce's goal is to provide wide flexibility to communities of varying climate planning experience and capacity.

Remember, all pathways lead to the same destination: a resilience sub-element with at least one resilience goal and supportive policy for each climate-exacerbated hazard that is relevant to your jurisdiction [*see Section 3 introduction*]. Your set of policies must meet this section's minimum requirements and prioritize actions that benefit overburdened communities that will suffer disproportionately from compounding environmental impacts and will be most impacted by natural hazards due to climate change; the Menu of Measures denotes highest-priority policies, based on their effectiveness, number of co-benefits, potential to promote equity and justice, and other criteria.

- See Task 4.3 below to evaluate your policies' co-benefits.
- See Section 5 to prioritize your policies for integration into the comprehensive plan.
- Use the Climate Element Workbook to list your climate resilience goals and policies.

Pathway 1 —Select and/or Adapt Existing Goals and Policies.

Pursuing this pathway means addressing your jurisdiction's climate hazards and impacts with existing goals and policies from your body of planning work.

- Based on Step 2's audit, list in the Climate Element Workbook the relevant comprehensive plan goals and policies you're retaining and the goals and policies from other existing local plans (climate action plan,

hazard mitigation plan, etc.) you're adding to your comprehensive plan. Note any edits you're making to adapt these existing goals or policies to better support climate resilience, either explicitly or implicitly.
- Follow Tasks 4.1 and 4.2 below only if your jurisdiction opts to develop new goals and policies to supplement your existing ones (for example, to address any remaining gaps and barriers identified by your audit).
- Follow Task 4.3 to identify your policies' co-benefits.

Pathway 2 – Develop New Goals and Policies.

Pursuing this pathway means developing new climate resilience goals and policies for your comprehensive plan (and other documents, if desired). If you conducted a vulnerability and risk assessment, you can use it to help prioritize and tailor your measures.

- Follow Tasks 4.1-4.3 below to create goals and policies, and list them in the Climate Element Workbook.
- Remember, you can supplement your list of new goals and policies with ones from existing local plans [*Pathway 1*], the Menu of Measures, or other sources. Such resilience goals and policies could go into a climate action plan and/or directly into your comprehensive plan.

Pathway 3 – Update Hazard Mitigation Plan

Pursing this pathway means updating your hazard mitigation plan to assess climate risks and adopting it, by reference, in your comprehensive plan. As noted previously, as of April 2023, FEMA requires that all updated local hazard mitigation plans must assess the effects of climate change and other future conditions in the plan's required risk assessment.

- Use Tasks 4.1-4.3 to help craft climate resilience measures for your hazard mitigation plan, and ensure that they meet FEMA Local Mitigation Planning Policy Guide requirements (for example, identify implementation lead, funding source, timeframe). Your jurisdiction should work with the Washington Emergency Management Division, FEMA, and other state and local partners while preparing and submitting a hazard mitigation plan for approval [*Appendix* C].
- Next, list in the Climate Element Workbook how your updated hazard mitigation plan's measures address each climate-exacerbated hazard that is relevant to your jurisdiction [*as determined by Step 1*]; this will help ensure you're meeting this guidance's minimum requirements for the resilience sub-element.

    - **Optional:** If your updated hazard mitigation plan does not include at least one climate resilience goal and supportive policy (which FEMA guidance identifies as an "action" such as a planning regulation, education program, or infrastructure project) within each of the 11 sectors used in this guidance (for example, Agriculture & Food Systems and Cultural Resources & Practices), you may choose to directly integrate the missing sector measures into your comprehensive plan. These supplemental goals and policies may be collected in a climate chapter or dispersed across several other chapters (for example, housing, land use, transportation).

Task 4.1: Develop Goals

If your jurisdiction created guiding principles [*Section 2*], revisit them to develop resilience goals that address the climate hazards and impacts identified in this section's Step 1 and supplement the goals audited in Step 2. Also be sure that your goals factor in your vulnerability and risk assessment, if you completed Step 3.

Remember, your set of resilience measures must address each climate-exacerbated hazard that is relevant to your jurisdiction. Commerce also encourages your jurisdiction to address each of the 11 sectors below in its set of measures [*see the Menu of Measures for examples*]:

- **Agriculture & Food Systems** (includes production and distribution);
- **Buildings & Energy** (includes energy generation, transmission, and consumption);
- **Cultural Resources & Practices** (includes historic sites and cultural resources and practices);
- **Economic Development** (includes business continuity, opportunities);
- **Emergency Management** (includes community preparedness, response, and recovery);
- **Health & Well-being** (includes community well-being, equity, and engagement);
- **Ecosystems** (includes land and water species and habitat);
- **Transportation** (includes multimodal travel and infrastructure);
- **Waste Management** (includes materials recycling and disposal);
- **Water Resources** (includes water quality and quantity);
- **Zoning & Development** (includes site use, design, and other development facets).

Resilience as Cohesion, Connectivity and Capacity

Whether your jurisdiction is revising existing goals and policies or crafting new ones, it's helpful to think about climate resilience holistically. Think about equitable ways to build your communities' connectivity, cohesion, and capacity to reduce, withstand, respond to, and recover from climate impacts. Look for policy solutions that provide multiple co-benefits and achieve multiple goals. For example, planting drought-tolerant street trees to adjust to hotter, drier summers in frontline communities has GHG reduction and adaptation co-benefits: Such trees store carbon (*reduce*), use less water (*respond*), and provide cooling shade (*withstand*). Supporting community-run resilience hubs in these neighborhoods provides places to gather, build relationships, and share resources (*connectivity and cohesion*) year-round — not just when climate hazards and impacts occur.

Task 4.2: Develop Policies

Develop at least one supportive policy for each goal, and list them in the Climate Element Workbook. Ensure your collective set of goals and supportive policies addresses: the climate hazards and impacts you identified in Step 1; the gaps, opportunities, and barriers identified in Step 2; and, if applicable, the vulnerabilities and risks identified in Step 3.

- Start by revising your existing policies to better support climate resilience.
- Supplement your initial list of policies with ones suggested by local tribes and stakeholders, who could have ideas in mind based on their knowledge of past hazardous events and their communities' unique needs and assets.
- Supplement your list with policies from the Menu of Measures and other jurisdictions' climate plans, if desired.
- Where appropriate, identify next action steps, such as revising development codes and design standards to implement policies.

Resources:

- Washington Department of Commerce's Climate Program website includes helpful resources for selecting and refining policies and developing and implementing projects and plans that build climate resilience. Resources include:
  - The Menu of Measures lists model policies and links to implementation and development tools. Such tools include: model ordinances (for example, Sustainable Development Code); guidance on protecting and enhancing and natural areas that support wildlife habitat and species migration (for example, Washington's Urban Forest Pest Readiness Plan and WDFW's Shrubsteppe and Grassland Restoration Manual for the Columbia River Basin); and, guidance on and identifying, designing, and investing in natural and traditional infrastructure that supports community resilience to climate impacts (for example, U.S. EPA's green infrastructure toolkit and FEMA's Building Community Resilience with Nature-Based Solutions guide).
  - Additional resources include: MRSC's interactive map of Washington local and tribal governments' climate plans; the federal government's green infrastructure and Climate Mapping for Resilience and Adaptation portal (modeling, design, maintenance, funding resources); and, Georgetown University's Adaptation Clearinghouse.

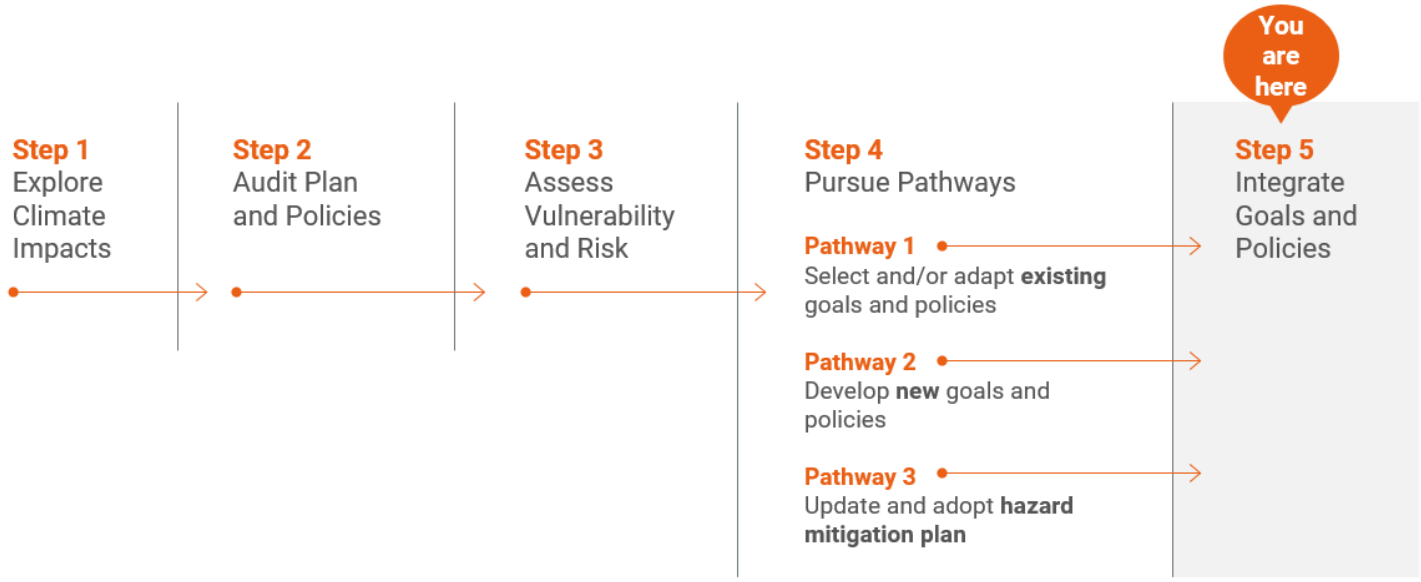
Task 4.3: Identify Policy Co-benefits

Commerce and its partners identified co-benefits associated with every Menu of Measures policy. The list of co-benefits assessed include:

- Reduces emissions
- Sequesters carbon
- Enhances resilience
- Improves salmon recovery
- Promotes economic development
- Promotes equity and justice
- Provides cost savings
- Provides ecosystem services
- Protects tribal treaty rights
- Improves public health and well-being
- Improves air quality
- Builds community knowledge
- Protects water quality
- Supports housing supply and diversity

In the Climate Element Workbook, note every co-benefit associated with each of your policies — including ones you've developed or selected from the Menu of Measures or other sources. The Workbook lists 13 co-benefit options from which to select.

Step 5 — Integrate Goals & Policies



In this required step, your jurisdiction will decide where it intends to integrate its climate resilience goals and policies in its comprehensive plan and SMP. Your jurisdiction could choose to list all its climate element goals and policies (GHG reduction and resilience) in one chapter or could choose to integrate them into several chapters/elements (Land Use, Housing, Transportation, etc.).

Task 5.1: Review and Finalize Resilience Goals and Policies

During Step 4, you built a list of climate resilience goals and policies. Review this list and note where you will place each goal and policy in your comprehensive plan and/or SMP. Enter your climate resilience goals and policies into the Climate Element Workbook [*Step 5 tab*].

- Note where you plan to place each measure in your comprehensive plan.
- Also note how your measures meet the resilience sub-element's minimum requirements.
- Use this list to develop an implementation plan and to complete the checklist your jurisdiction submits to Commerce. The checklist is available on Commerce's GMA Periodic Update website.

Section 4: GHG Emissions Reduction Sub-element

4.1: Overview

Washington's cities and counties should use this GHG emissions reduction (GHG reduction) sub-element planning guidance to measure, reduce, and eliminate local GHG emissions and per capita vehicle miles traveled (VMT) via comprehensive plan goals and policies. The sub-element should be developed with an overall target of reaching net-zero emissions by 2050.[49] When tracking progress, targets should be evaluated on a total and per capita basis so that progress is not masked by population growth.

Mitigation measures should, at a minimum, include goals and policies within the following sectors: Transportation; Buildings & Energy; and, Zoning & Development. These are the sectors where local action can make the biggest impact.

Defining greenhouse gas emissions reduction (mitigation)

Actions taken to reduce or eliminate the emissions of greenhouse gases (present and future) in order to reduce the rate and extent of climate change damage.

Commerce's Menu of Measures includes polices with a demonstrated ability to reduce emissions. Such mitigation measures — which are within local jurisdictions' authority to implement via development regulations and other actions — will help make Washington more resilient by reducing the rate and extent of climate change.

Cities and counties should select measureable policies with a clear path to local implementation. Progress on meeting GHG reduction sub-element requirements will be assessed on both how much emissions have declined over time, and on whether the policies were implemented.

4.2: GHG Reduction Guidance

Minimum Requirements for Developing a GHG Emissions Reduction Sub-element:

HB1181[50] requires that a city or county's GHG reduction sub-element and its related development regulations must identify the actions the jurisdiction will take during the planning cycle that will:

- **Requirement 1:** Result in reductions in overall greenhouse gas emissions generated by transportation and land use within the jurisdiction but without increasing emissions elsewhere in Washington;
- **Requirement 2:** Result in reductions in per capita vehicle miles traveled within the jurisdiction but without increasing greenhouse gas emissions elsewhere in Washington; and,
- **Requirement 3:** Prioritize reductions that benefit overburdened communities in order to maximize the co-benefits of reduced air pollution and environmental justice.

Your jurisdiction may develop its own goals and policies, as well as select ones from Commerce's Menu of Measures, to address these minimum requirements. Policies that are not specifically identified in the Menu of Measures will be considered consistent with this guidance if they are measureable and supported by

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[49] The state operating budget (ESSB 5092), which funded Commerce's initial development of this guidance (June 2023 "early" guidance), stipulated that the guidance must include a set of actions cities and counties may take — under existing statutory authority and through updates to comprehensive plans and development regulations — that have a demonstrated ability to reduce greenhouse gas emissions in order to achieve the statewide greenhouse gas emissions reductions set forth in RCW 70A.45.020(1).

[50] RCW 36.70A.070(9)(d)(i)(A-C)

scientifically credible projections and scenarios that indicate their adoption is likely to result in reductions of GHG emissions or per capita VMT.[51]

- Use the Association of Washington Cities' climate handbook, MRSC's climate website, Commerce's Menu of Measures, and other planning resources listed in this section of the guidance to help with this work.

Measuring and Reporting Implementation Progress

The GMA requires cities, counties, and Commerce to report progress toward implementing comprehensive plan commitments, including those in the climate element.[52]

Your reporting: When selecting goals and policies that reduce emissions and per capita VMT, your jurisdiction will need to report on its five-year progress implementing the measures. Choose measures for which you are able to track and report implementation progress to Commerce.

- Jurisdictions should use 2022[53] as their emissions baseline year and set incremental targets that lead to achieving net zero emissions in 2050, consistent with Washington's statewide target.
- Your report to Commerce should show your progress implementing policies to reduce emissions and per capita VMT to achieve local goals and targets [*HB1181, Sec. 15(9)(b)*]. While some policies may be difficult to measure quantitatively, you may still report progress on your jurisdiction's efforts to advance adopted policies (for example, updating development regulations, zoning, and engineering design and development standards).

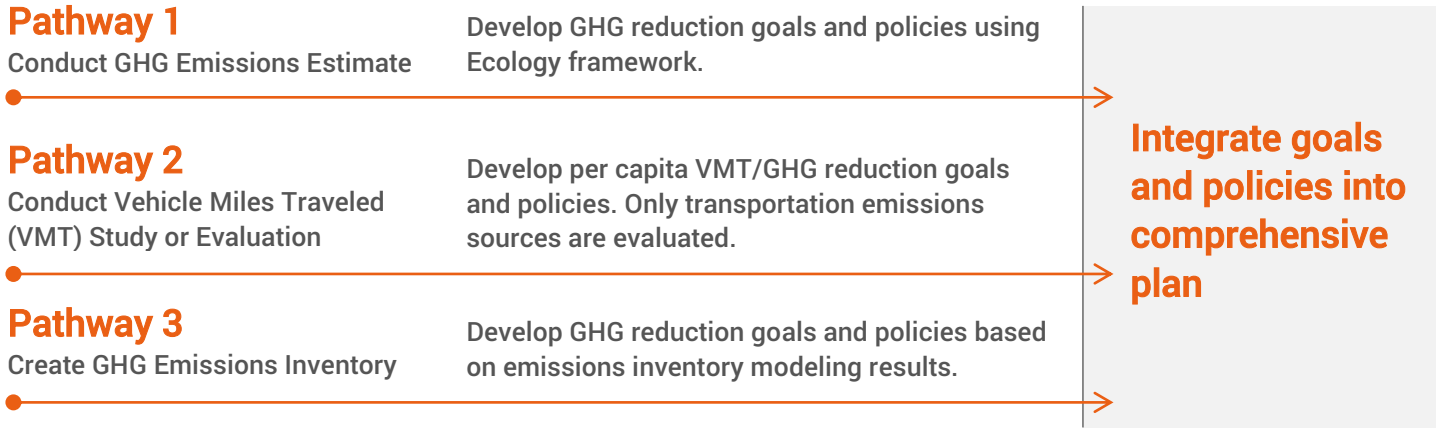
Commerce's reporting: Commerce must evaluate and report on the impact adopted climate elements have had on local GHG and VMT reduction goals and include this information in guidance published after 2025. The evaluation will reference information from the five-year progress reports and, at a minimum, include results from local emissions inventories and an index of climate elements with a correlation of impacts on local emissions.

[51] Per HB 1181, a jurisdiction may not restrict population growth or limit population allocation in order to reduce its emissions and per capita vehicle miles traveled.
[52] Per requirements in HB 1241 (2022) and 1181 (2023).
[53] Commerce and Ecology recommend that jurisdictions use 2022 as a baseline year because it reflects the new normal in terms of activity within the transportation sector and other sectors.

4.3: Choose Pathways

Commerce provides local jurisdictions three pathways [*Figure 9*] to set emissions-reduction targets and goals and to select policies to achieve them.

Figure 9: Pathway Summary



Jurisdictions may pursue one or a combination of pathways, depending on their regulatory requirements:

- **Voluntary jurisdictions:** Cities and counties that are not required to create a GHG reduction sub-element may pursue any one or a combination of the pathways, taking into account their planning capacity, budget, and other considerations. Commerce recommends pursuing Pathways 1 and 2 (combined) — or Pathway 3 (by itself) — to satisfy the minimum requirements.

- **Mandatory jurisdictions:** Cities and counties that are required to create a GHG reduction sub-element should pursue Pathway 3.

    - Counties voluntarily seeking Commerce's approval of the GHG reduction sub-element[54] should use a Commerce-provided emissions inventory[55] to select mitigation goals and policies to satisfy the minimum requirements.
    - Cities voluntarily seeking Commerce's approval of the GHG reduction sub-element should use their own emissions inventory and may utilize Pathway 3 guidance and planning grants.[56] Commerce encourages cities to first assess what's already been completed and then reach out to their regional metropolitan planning organizations and clean air agencies for available data.
    - All mandatory jurisdictions (cities and counties) voluntarily seeking Commerce's approval of their sub-element should — at a minimum — adopt Menu of Measures goals and policies within the Transportation, Buildings & Energy, and Zoning & Development sectors that are within the jurisdictions' authority to implement and that support achieving net-zero emissions by 2050. Such jurisdictions should also consider adopting goals and policies from the Menu's other sectors (Waste Management, Agriculture & Food Systems, etc.) based on the local emissions inventory.

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[54] See HB 1181 Sec. 6 for the GHG reduction sub-element approval process.
[55] Commerce is creating emissions inventories for the 11 counties that are required to include a GHG reduction sub-element in their comprehensive plan. The inventories use 2022 as a baseline year but do not disaggregate emissions to the city level.
[56] Cities may use an existing emissions inventory (for example, one that was created as part of a climate action plan), or they may develop a new inventory using Pathway 3's guidance and Commerce's planning grants.

All pathways depend on a multidisciplinary team [*see Section 2*], and sometimes a consultant, to gather and evaluate climate planning data. Figure 10 shows the advantages and limitations of each pathway.

Figure 10: GHG Emissions-Reduction Pathways — Advantages and Limitations

Pathway Options	Advantages	Limitations
Pathway 1 Conduct GHG Emissions Estimate	• Not as technically rigorous as a GHG emissions inventory (Pathway 3) • Might be able to perform analysis in-house and not need a consultant	• Baseline GHG emissions are harder to establish for all sources. • Difficult to monitor progress toward emission reduction goals • Some emission sources could be missed.
Pathway 2 Conduct VMT Summary or Study	• More accuracy in evaluating emissions from internal combustion vehicles • Could be done in conjunction with the other pathways. Results could enhance transportation data from other pathways. • Repeatable and provides a baseline to track VMT reduction progress	• Might require a consultant • Emissions information will be limited to transportation sources
Pathway 3 Create GHG Emissions Inventory	• Provides a comprehensive baseline of emissions • Repeatable process • Progress can be tracked toward goals • Accounts for all emissions sources	• Technically rigorous • A jurisdiction without in-house expertise might need to hire a consultant • Might be shortcomings with the level of the data

Engaging Stakeholders

With each pathway, your jurisdiction should refer to Section 2 to conduct early and ongoing engagement. This will help ensure that policymakers and the public support your process, recommendations, and implementation efforts.

- There might be internal staff members who could create technical graphics to help communicate emissions data in compelling ways; however, a jurisdiction might also consider hiring staff, even for a limited duration, to support engagement efforts.
- Community-based organizations, local non-profits focused on environmental issues, school districts, and local business networks can also be very effective partners in sharing out your jurisdiction's climate measures and supporting implementation efforts.
- Designing and convening workshops with vulnerable and disproportionately impacted residents will also help your jurisdiction develop and implement mitigation measures that support environmental justice and equity. Refer to Section 2 and the Washington Department of Health's Environmental Health Disparities Map for help identifying frontline communities and engagement best practices. ***NOTE:*** *The Environmental Health Disparities Map is not fully comprehensive with regard to tribal information, so the map should be complemented by consultation with tribes and guidance from the Environmental Justice Council.*

Pathway 1: Conduct GHG Emissions Estimate

Pathway 1 leads a city or county to develop an emissions estimate based primarily on a survey developed by the Washington Department of Ecology [*Figure 11*]. The survey is an "estimate" because it asks a jurisdiction to evaluate emissions from only a few sources, without the benefit of the specific GHG data that are required for a VMT study or emissions inventory [*Pathways 2 and 3*].

Figure 11: Pathway 1 Steps Summary

Step 1: Gather Information

Your climate policy advisory team [*see Section 2*] should start by gathering general planning data needed for this pathway. Most of the local planning data below should be collected as part of the broader comprehensive plan update process:

- Population forecasts
- Population distribution
- Urban Growth Area (UGA) boundaries
- Rural lands distribution
- Critical area lands distribution

Next, your team should gather general state, regional, or local emissions data. Assemble information from energy profiles and reference inventories [*see resources below*] and think through how it compares with local data you'll gather in Step 2. Also, review and evaluate existing local, state, and federal climate laws and targets. This will help you understand what emissions sources should already be reduced or eliminated by the target dates you choose for your goals and policies in subsequent steps.

Resources:

- The **National Renewable Energy Laboratory** maintains a database of state and local energy profiles.
- The **University of California, Berkeley's** CoolClimate Network features a free calculator and mapping tool that shows the average carbon footprint of households at the national, city, and zip code scale. A companion calculator shows average emissions for businesses within manufacturing, retail, and other sectors.
- The **Center for Climate & Energy Solutions** maintains a database of state climate targets, energy portfolio standards, and other information.
- The **U.S. Environmental Protection Agency** maintains a list of federal climate change regulatory actions and initiatives.

Step 2: Answer Questions to Guide an Emissions Estimate

Ecology crafted the questions below to assist with developing an emissions estimate in-house, following Washington state emissions inventory reporting categories. The eight questions and subsequent discussion also provide an approach that could be used to estimate emissions based on how local sources compare to a known dataset.

The advantage of this approach is that it is generally easier to assemble information from other established inventories and think through how those emissions sources in your jurisdiction might be comparable to — or different than — that inventory. The questionnaire is based on following five primary activity and emissions sources, plus sectors used in Ecology's statewide emissions inventory:

- Use of Electricity;
- Use of fuel in residential and commercial stationary combustion equipment;
- On-road passenger reduction, freight motor vehicle travel use, and marine vessel use;
- Use of energy in potable water and wastewater treatment and distribution; and,
- Generation of solid waste.

Use the "S4, Eight Questions Worksheet" tab of the companion Climate Element Workbook to organize your data and answer the questions that follow. The U.S. EPA's Greenhouse Gas Equivalencies Calculator and bullet points below can help you with measuring emissions.

Eight Questions to Guide a Greenhouse Gas Emissions Estimate [57]

1) What are your emissions associated with electricity use?

Electric utilities in Washington report annually the source of generation (for example, coal and wind) sold to their customers. Beginning in 2020, these reports were converted into CO2 emissions. The carbon content of your utility's electricity can be found via the Department of Commerce Fuel Mix Disclosure program, under "Annual Reports." Local utilities are required to provide this information and could be of assistance as well.

- Multiply your kilowatt-hours (kWh) of electricity consumption by the average emission rate for your utility.
- Options to reduce this include establishing a contract for Environmental Preferred Power (EPP) or investing in renewable self-generation. Remember to invest first in energy efficiency.

2) What is your local transportation profile?

A transportation profile details the modes of transportation utilized in a particular jurisdiction and estimates the amount of people who utilize each mode. A transportation profile could determine:

- Total VMTs per day, week, month, or year;
- The number of people who use mass transit vs. single-occupancy vehicles;
- The number of electric vehicles in use; and,
- The number of people who use bicycles and other forms of non-motorized transportation.

[57] The questions follow Washington State emissions inventory reporting categories and were provided by the Department of Ecology (2022).

Some jurisdictions might be able to obtain data for a transportation profile through existing transportation master plans, studies, and planning documents. If a jurisdiction lacks internal capacity to obtain such data, it could hire a consultant that specializes in transportation planning to obtain the data or perform a transportation study. Local planners can also contact the Washington Department of Transportation's Multimodal Planning & Data Division for more information on developing a transportation profile.

3) What are your emissions from natural gas use?

If your jurisdiction is served with natural gas, work with your service provider to determine the quantity of gas sold in your area by residential, commercial, and industrial customer sectors. If there are few customers in a sector, the information might be considered confidential.

- Convert NG therms to metric tons CO2: multiply therms by .00531 MT CO2/therm.
- Convert NG Mcf (metric cubic feet) to CO2: multiply Mcf by .548 MT CO2/Mcf.

4) What are your emissions from propane and home heating oil use?

Determining the amount of propane and heating oil used in your jurisdiction could require a survey of propane and heating oil providers. However, some providers are private companies that have no legal obligation to disclose information related to sales or use of their products. If local planners are unable to obtain this information, they can estimate the amount of propane and heating oil used by determining the number of households in the jurisdiction that do not receive heat from electric and natural gas utilities and multiplying that number by the amount of propane or heating oil needed to heat an average-sized home. The following formulas can help planners convert gallons of propane or heating oil used to metric tons of CO2 equivalent:

- Convert gallons of heating oil: Multiply gallons of oil by .0102 MT CO2/gallon.
- Convert gallons of propane: Multiply gallons of propane by .5574 MT CO2/gallon.

5) What are your emissions associated with waste generation and management?

Planners can work with waste-management providers in their jurisdictions to determine the total VMTs from trucks collecting waste and estimate the amount of greenhouse gas emissions that result from those trips. If your jurisdiction has an existing contract with a waste-management provider, the provider could be required to provide information on emissions. If not, the provider will likely be open to discussing the topic.

Some jurisdictions are also home to waste-management facilities, such as landfills and recycling centers, which emit greenhouse gases. If your jurisdiction owns and operates such a facility, emissions information should be available internally. If a private entity operates the facility, the entity might not have a legal obligation to disclose information about emissions. Local planners should inquire, nonetheless.

Once you have basic information about your jurisdiction's waste generation and management, you may use U.S. EPA's Waste Reduction Model (WARM) to create high-level estimates of potential greenhouse gas emissions reductions from different practices, including source reduction, landfilling, and recycling.

6) What are your emissions from wastewater treatment plants?

Most wastewater utilities are public entities and will likely provide emissions information upon request. Planners should contact these utilities directly to discuss the emissions they generate.

7) What are your emissions from industrial facilities?

Sources of emissions over 10,000 MTCO2 per year are legally obligated to report their emissions to Ecology, and those reports can be found here. However, industrial operations that generate smaller amounts of emissions do not have a public reporting requirement. To estimate emissions from these facilities, local planners can either contact these operations directly or ask electric or natural gas utilities that supply energy to the jurisdiction.

8) What are your emissions from agricultural activities?

Agricultural activities can also emit greenhouse gases, but quantifying the amount of emissions is complicated and not always possible. Using a reference inventory from a jurisdiction with a similar agricultural sector can help local planners estimate emissions from agriculture. However, your jurisdiction's agricultural emissions might be less or greater than the reference inventory depending on the intensity/scale of livestock farming versus other types of agriculture, manure-management practices, fertilizer applications, and carbon sequestration capacity of local agricultural operations.

Step 3: Evaluate Data from Emissions Sources

This step should be completed in collaboration with the climate policy advisory team assembled for the periodic update. Some of the activities of collecting and evaluating current emissions source data that could be involved in this step are:

- Contacting local utilities and/or energy providers to determine how much local energy is being consumed and/or what emissions come from wastewater treatment facilities;
- Contacting WSDOT to determine what relevant transportation data is available; and,
- Discussing with Ecology obtaining industrial and agricultural emissions information.

Jurisdictions may use the "S4, Emissions Worksheet" tab of the Climate Element Workbook to identify GHG emission sources and rank sectors, based on answers to the eight questions in Step 2. Remember, you may modify the worksheet, as needed, to record and evaluate the data you gather.

Step 4: Set Emissions-Reduction Targets

Based on your work in the first three steps, you may decide to set emissions-reduction targets for each source (transportation, energy, etc.) as well as an overall target for all sources you've assessed in your estimate. Enter the targets in the "S4, Emissions Worksheet" of the Climate Element Workbook.

As noted in the introduction to this section, local jurisdictions should use 2022 as their emissions baseline year and set incremental targets that lead to achieving net zero emissions in 2050, consistent with Washington's statewide target. Maintaining the initial results of your emissions estimate and updating the inputs every five years should provide a general determination of progress toward your targets.

Step 5: Select Goals and Policies to Achieve Targets

In this step, your jurisdiction should select goals and supportive policies that are proven to be effective at reducing emissions. Consider using the following resources to estimate potential GHG reductions from individual measures:

- The **California Air Pollution Control Officers Association's** Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities and advancing Health Equity provides a common

platform and tools for evaluating greenhouse gas reduction measures and promoting equitable land use planning and project design. While the CAPCOA resource was developed for California, most of the handbook's methods can be adapted for Washington. Jurisdictions should review the quantification methods for individual measures prior to use to ensure accurate calculations. A sample calculation is in Appendix J.

- The **U.S. Environmental Protection Agency's** Quantified Climate Action Measures Directory presents information on quantified emissions-reduction measures in state and local climate action plans published between January 2018 and August 2023. The EPA directory — which includes searchable tables — helps users understand how the example measures were quantified and locate the planning or analysis documents that formed the basis for the measure's directory entry.

A jurisdiction could select goals and policies from the Menu of Measures or other sources (for example, the EPA directory noted above) and modify them, as needed. Some of the Menu's sample measures include a placeholder for inserting the target percentage of GHG reduction for your jurisdiction, based on vetting among the climate policy advisory team and the public process.

Questions to consider when setting mitigation goals include:

- Are the goals consistent with your vision statement and guiding principles [*see Section 2*]?
- Is your jurisdiction trying to identify the largest sources of emissions so it can prioritize potential mitigation actions?
- Is the primary concern tracking whether the jurisdiction is meeting benchmarks for emissions reductions, or something else?
- Is the jurisdiction looking to inform residents about the relative sources of emissions and create a basis for public conversations around how members can reduce their carbon footprints?
- Do the goals drive how, where, and when the jurisdiction reduces GHG emissions and communicates results?

Step 6: Integrate Measures into Plan

Adopting emissions-reduction goals and policies into your comprehensive plan should turn planning into action through the local legislative process. The conclusion of a legislative process should result in the adoption of emissions-reduction goals and policies that meet this section's minimum requirements.

- Use the "S4, Emission Reduction Measures" tab in the Climate Element Workbook to list the goals and policies you're integrating into your comprehensive plan.
- Note your measures' co-benefits, sectors, and other information in the table.

Pathway 2: Conduct VMT Study or Evaluation

This pathway [*Figure 12*] helps cities and counties to define baseline VMT conditions and evaluate strategies and transportation projects that provide substantial progress toward reducing transportation-related emissions. This pathway leads jurisdictions toward developing per capita VMT reduction targets and adopting effective, measurable comprehensive plan policies.

Figure 12: Pathway 2 Steps Summary

Step 1: Determine Project Scope and Geographic Scale

Start by establishing an appropriate size and number of zones/areas in the jurisdiction for a VMT analysis:

- Geography usually means either city boundaries or cities plus unincorporated areas for a county.
- Define modeling purposes; what are the existing model traffic analysis zones?
- Special attention should be given to identifying which VMT is of concern, including people who live, work, and travel through the area.

Step 2: Acquire Relevant VMT Data

- Acquire from WSDOT relevant VMT data (vehicle miles of travel for the time period and geography of interest — for example, within a city for one year). The state agency produces VMT data disaggregated to the county and city level. Local governments should reach out to their regional transportation planning partners for assistance in developing VMT data analysis if they do not have capacity or expertise in-house.

Step 3: Determine Significant VMT Sources

Task 3.1: Conduct VMT Data Analysis

- Develop baseline data for current per capita VMT and the associated GHG emissions (if available). Local jurisdictions should use 2022 as the baseline year. Consider, at a minimum, the travel of people who live in the area and the travel generated by employers.

Task 3.2: Conduct Travel Market Assessment

- Identify large employers (already listed in the Commute Trip Reduction program), large residential areas, tourist activities, and other large trip generators. Consider which locations are well-served by transit and active transportation facilities to understand how strategies would affect different areas; for example, locations with poor or limited transit service options and minimal protected bicycle facilities may benefit from demand strategies such as carpooling, teleworking, and providing flexible work hours.

Step 4: Set Per Capita VMT Reduction Targets

Develop or choose per capita VMT reduction targets that can be achieved in the near term (five years) and longer term (10 years). The implementation timeframes should match the timeframes of the other

comprehensive plan goals of your jurisdiction. WSDOT has developed guidance to assist local jurisdictions in developing processes for establishing local VMT reduction targets and options for local jurisdictions to achieve the targets.

> ***NOTE:*** *The GMA requires that cities and counties plan for a 20-year horizon. GMA comprehensive plans are required to be updated every 10 years.*

Step 5: Develop Measures and Implementation Plans to Achieve Targets

Your advisory team should develop or choose specific per capita VMT reduction strategies to use that are sensitive to the locations identified in the travel market assessment. Develop goals, policies and an implementation plan to achieve your per capita VMT targets and additional GHG reduction targets [*see "minimum requirements" above*]. Consider adopting measures listed in the Menu of Measures or from Commerce's companion guidebook for developing a comprehensive plan transportation element.[58]

Your jurisdiction may modify the Menu of Measures' model goals and policies [*Section 5*], as needed. For example, some of the Menu's mitigation measures include a placeholder for inserting the target date.

- Use the "S4, Emission Reduction Measures" tab in the Climate Element Workbook to list your goals and policies and note how they meet this guidance's minimum requirements for a GHG reduction sub-element. Section 5 provides guidance to help you select, adapt, prioritize, and implement goals and policies from the Menu of Measures.
- Quantify the effectiveness of your policies to determine how well they will help your jurisdiction achieve its goals and meet its targets. The following resources, which are also listed in Pathways 1 and 3, can help with this work:

  Resources:

  - The **California Air Pollution Control Officers Association's** Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities and advancing Health Equity provides a common platform and tools for evaluating greenhouse gas reduction measures and promoting equitable land use planning and project design. While the CAPCOA resource was developed for California, most of the handbook's methods can be adapted for Washington. Jurisdictions should review the quantification methods for individual measures prior to use to ensure accurate calculations. A summary of calculation samples is in Appendix J.
  - The **U.S. Environmental Protection Agency's** Quantified Climate Action Measures Directory presents information on quantified emissions-reduction measures in state and local climate action plans published between January 2018 and August 2023. The EPA directory — which includes searchable tables — helps users understand how the example measures were quantified and locate the planning or analysis documents that formed the basis for the measure's directory entry.

United States, Bureau of Transportation Statistics, Local Area Transportation Characteristics for Households Data. https://www.bts.gov/latch/latch-data

[58] Washington State Department of Commerce. 2012. Your Community's Transportation System. Retrieved from https://deptofcommerce.app.box.com/s/erocgtpv3acyxv2m9bcb59c38s13qqjb

Step 6: Integrate Measures into Comprehensive Plan

Ensure that the per capita VMT reduction goals and policies are integrated into the comprehensive plan in this step. Your measures should be consistent with and reference each other across plan elements such as transportation, housing, and land use.

After selecting per capita VMT goals and policies, include them as part of your jurisdiction's comprehensive plan update process. This step should include your advisory team, lead staff, and planning commissioners, as appropriate. A jurisdiction might consider embedding an implementation or action plan into the comprehensive plan as an additional step. This would speed up subsequent implementation of adopted goals and policies.

The following are examples of actionable comprehensive plan policies to reduce VMTs:

- Improve the presence, quality, and capacity of the walking and bicycling networks, and work with local transit agencies to improve access to transit, transit speed and reliability, and transit frequency.
- Change zoning to encourage a greater diversity of housing, services, commercial, and institutional uses within easy walking or bicycling distance of each other.
- Develop programming to encourage use of multimodal facilities and services. Washington state law requires large employers (100 employees or more) to engage in commute trip reduction (CTR) activities.[59] Most large employers already have transportation coordinators that promote transit, active transportation, and other demand-management strategies to employees. Consider expanding this type of program elsewhere in the jurisdiction to provide information about available transportation options and facilitate events that could show the community the options available to them — for example, walking school buses, ride-to-work month, etc. If there are no large employers in the jurisdiction, large reduction CTR programs can be scaled down or reconfigured to fit different requirements.

Step 7: Evaluate Progress

A jurisdiction needs to consider how to measure progress toward its per capita VMT reduction targets. A jurisdiction could measure per capita VMT changes by developing a comparison between the jurisdiction's baseline per capita VMT data and present values.

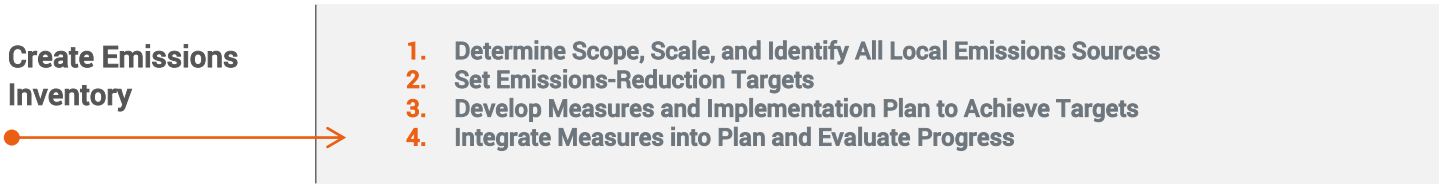
Revisit the per capita VMT data at regular intervals (at least every five years), and measure progress from the last review. If there are changes in data sources or methods, those changes should be documented and discussed to distinguish how much of the change in figures is attributable to data sources rather than behavior change. A jurisdiction might choose to report on progress annually or at some longer reduction interval that coincides with plan updates or other milestones. This would depend on which VMT data you choose and potential related costs.

[59] RCW 70A.15.4020

Pathway 3: Create Emissions Inventory

The emissions inventory pathway [*Figure 13*] begins with modeling to help determine all of the GHG emission sources within a city or county and the relative amounts of emissions from each source. This enables the jurisdiction to establish an emissions baseline in order to develop reduction targets and choose effective mitigation goals and policies. Developing an emissions inventory will also enable a jurisdiction to track progress.

Figure 13: Pathway 3 Steps Summary



Step 1: Determine Scope, Scale, and Identify All Local Emissions Sources

A city or county's ability to effectively mitigate climate change and monitor progress largely depends on having access to GHG emissions data. An emissions inventory provides the data and enables local jurisdictions to understand the sources of emissions and the effectiveness of different activities (measures) to remove or reduce emissions within a specific geography and time period. This is generally referred to as a "Geographic Analysis." There are other methodologies; however, this method is more commonly used.

The scope and detail of your emissions inventory should be driven by answering a core question: What information does my jurisdiction need to support its climate planning goals? Answering this question will help your jurisdiction make decisions about what emissions sectors (transportation, energy production, solid waste, etc.) should be included in the inventory, how frequently the inventory should be revised, and how emissions should be quantified.

Task 1.1: Identify Emissions Inventory's Scope and Plan

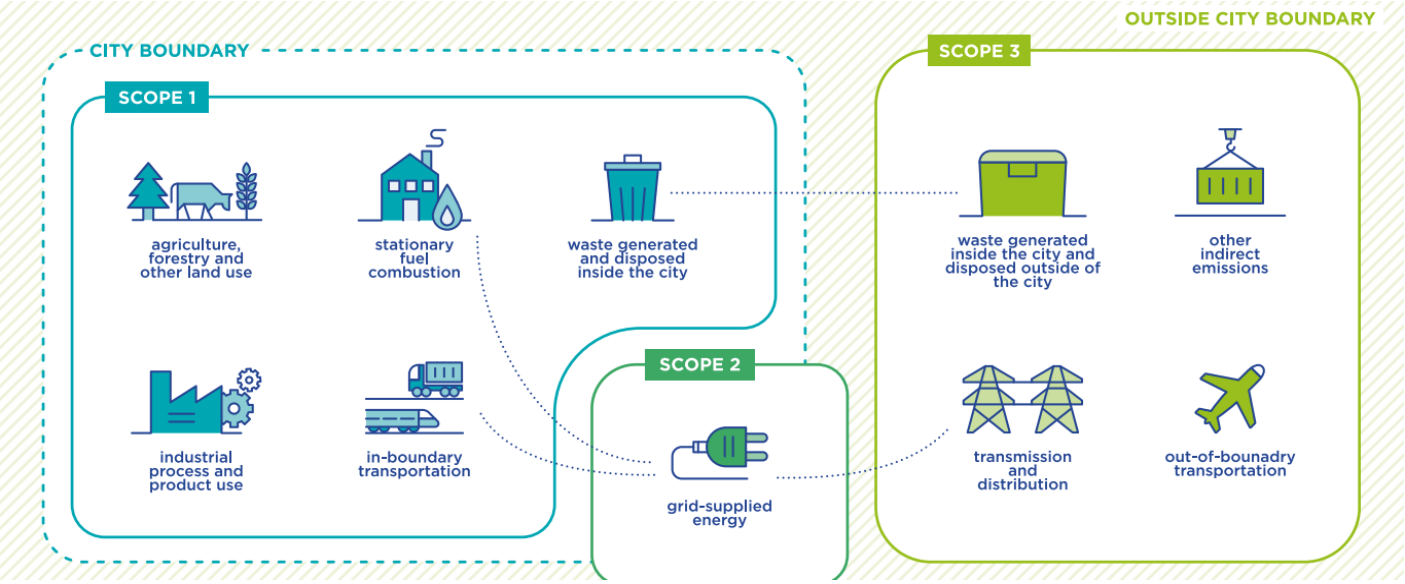
An emissions inventory starts by identifying a scope and plan as follows:

- Defining or identifying the geography (organizational and/or natural boundaries) that will be included and excluded from the inventory;
- Defining the scope(s) (extent of factors to be analyzed inside the geography/boundaries);
- Establishing the accounting standards and methods; and,
- Choosing an inventory base year.

Define the geography and scope: First, you must identify the geographic extent for the inventory and analysis. Will the inventory be based on the boundaries of the jurisdiction or other geographies?

You must also define the scope, the extent of factors or emissions sources to include in the inventory [*Figure 14*]. The scope could include: only the area fully within the boundary of the jurisdiction (Scope 1); the area of the jurisdiction, plus energy supplier (Scope 2); and, the area of the jurisdiction, plus indirect sources that a jurisdiction contributes to or is affected by (Scope 3). These scopes are described in more detail below, and a jurisdiction could choose to analyze one or more of these.

Figure 14: GHG Emissions Scopes for Determining the Extent of Inventory Analyses within Jurisdictional Geographies/Boundaries



Source: C40 Cities Climate Leadership Group

Scope 1: GHG emissions generated within the jurisdictional boundary include things such as industrial processes and stationary fuel combustion that emit greenhouse gases, transportation within the jurisdictional boundary, emissions associated with land uses such as forestry and agriculture, and waste and wastewater generated within the jurisdiction. Jurisdictions could choose to distinguish emissions sources according to what is directly under the control of the jurisdiction, and what emissions are generated from the community's residences and businesses, as follows:

- A municipal inventory that accounts for GHG emissions resulting from government operations. This can help the city or county understand emissions stemming from activities that are entirely within its control, such as fleet vehicle emissions and municipal building operations.
- A communitywide inventory that considers the activities outside of government activities but comprehensive of all the activities of community residents, businesses, and non-municipal organizations. This includes things such as fuels used by vehicles traveling within the community, solid waste generated by the community, and emissions due to energy to heat and power homes.

Scope 2: GHG emissions associated with grid-supplied energy. Most jurisdictions do not generate electricity within their jurisdictional boundary, but rather they purchase it from a utility that generates the electricity and associated GHG emissions elsewhere. These emissions are counted as part of a jurisdiction's Scope 2 emissions.

Scope 3: Emissions embedded in the goods and services that are consumed within the community but generated outside of it. This includes things such as food and other household purchases, and includes activities such as airline travel in which community members are engaged but that occurs outside the jurisdictional boundary.

The GHG emission scope(s) that a jurisdiction chooses to incorporate into its emissions inventory should be driven by the fundamental question laid out in the beginning of this guidance: What are the goals of the jurisdiction in creating this inventory? For example, if the jurisdiction is primarily interested in reducing

emissions from sources over which it has direct control, an inventory focused on Scope 1 and 2 municipal emissions could be the most appropriate. If a broad picture of community emissions is desired, then an inventory that considers all three scopes could be the right approach.

Task 1.2: Choose Accounting Standards and Methods

It is critical that your accounting methods are accurate, repeatable, and verifiable, regardless of the inventory's scale and scope. It is also helpful for your inventory to be comparable across multiple jurisdictions or regions.

GHG emissions are estimated by multiplying activity data by the fuel-specific emissions factors. Examples:

- Kilowatt-hours (kWh) of electricity use x CO2/kwh = CO2 from electricity use
- Gallons of gasoline consumed by vehicles x CO2 per gallon = CO2 from transportation
- Natural gas therms consumed by buildings x CO2 per therm = CO2 from natural gas use in building

The most typical and prominent greenhouse gases generated by human activities are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). These gases have different warming potentials in the atmosphere and are typically calculated and reported in units of metric tons of carbon dioxide equivalents (MT CO2e).

As noted in the introduction to this section, counties should use the Commerce-provided emissions inventory if they are required to develop a GHG reduction sub-element [*see "mandatory jurisdictions"*] and voluntarily seek Commerce's approval of the sub-element. Other jurisdictions should use an inventory tool or protocol that ensures emissions are reported in a consistent, verifiable, and credible way. Reputable tools and protocols include, but are not limited to:

- **U.S. EPA's** Local Greenhouse Gas Inventory Tool provides an interactive spreadsheet that calculates GHG emissions for sectors, including residential, commercial, transportation, and waste and water management. The tool is comprised of two separate modules: one for communitywide inventories, the other for local government operations inventories.
- The **World Resources Institute's** Greenhouse Gas Protocol applies widely used GHG emissions accounting standards to help cities and other levels of government design mitigation goals and policies and assess and report progress.
- **ICLEI's** U.S. Community Protocol for Accounting and Reporting Greenhouse Gas Emissions includes methodologies and best practices to help local governments measure and report the emissions associated with their communities.

Task 1.3: Choose GHG Emissions Inventory Baseline Year

It is important to select an emissions inventory baseline year as the benchmark against which current or future emissions are compared. Cities and counties should use a 2022 baseline year. It is likely easier to find more complete and accurate data to support an emissions inventory from a more recent timeframe, as methods of tracking data for common emissions sources such as energy and transportation have become increasingly digitized and available online in recent years.

Task 1.4: Collect Data and Quantify Emissions

The data that a jurisdiction collects will depend on the objectives and scoping determined in Task 1.1. There are primary emissions-generating activities that should be included in a communitywide inventory, and even in many smaller-scale municipal inventories [*Figure 15*]. A city or county should consult with local

stakeholders and tribes as it collects data, as well as document its data sources and process to help guide updates to its emissions inventory.

Figure 15: Five Primary Community GHG Emissions Sources, Associated Activities, and Examples of Data Sources

Activity Resulting in Emissions	Emissions Sources	Examples of Data Sources
Use of Electricity	Power generating facilities; utilities that supply the jurisdiction or community	Utility providing power to the community
Use of fuel in residential and commercial stationary combustion equipment	Boilers, furnaces, propane tanks, generators; refrigerant leakage	Propane supply companies; community survey of consumers or industries
On-road passenger and freight motor vehicle travel use; use of marine vessels	On-road passenger, transit, and freight vehicles operating within the inventory boundary; marine vessels operating within the inventory boundary	Downscaled state or regional VMT data study/modeling.
Use of energy in potable water and wastewater treatment and distribution	Operation of water delivery and wastewater infrastructure	Public works operations
Generation of solid waste	Solid waste disposal facility operations; solid waste transportation (or could be counted in motor vehicle category above)	Solid waste vendor

Jurisdictions also need to form and maintain relationships with key vendors and other partners for data collection and tracking. Obtaining data regarding electricity usage from public utilities could be easier than from private entities. Others might be more challenging, depending on the reporting requirements and accounting formats of vendors.

Other governmental or taxing entities in the jurisdiction might already be conducting their own emissions inventory or collecting the kinds of data that would be useful to a local emissions inventory. Entities such as school districts, park districts, fire districts, and utility districts might also already have a community greenhouse gas inventory.

There might be cases in which emissions inventory data specific to your community doesn't currently exist. Transportation data, for example, might only be available on a state or regional scale. If having community data for transportation-based emissions is important to your climate goals, it could be necessary to implement or contract for a study to generate the data.

The activity data collected for an emissions inventory might arrive in different units from its source. Electricity use is reported in kWh. Stationary fuel combustion will likely be expressed in gallons or another volumetric measure, and transportation is commonly expressed in terms of VMT. The protocols and links listed in Task 1.2 provide information on how to convert these different activity metrics into total emissions.

Jurisdictions have approached the development and on-going reporting of their emissions inventories in many different ways, including:

Examples of GHG Emissions Inventories

Washington jurisdictions have recently completed GHG Emission Inventories. Here are four examples:

King County (consultant-prepared)

Jefferson County (ICLEI-driven)

City of Spokane (consultant-prepared)

City of Bainbridge Island (consultant-prepared, ongoing ICLEI membership and in-house updates)

- Conducting and maintaining GHG emissions inventories primarily in-house;
- Joining an organization such as ICLEI to obtain relevant software and expertise for completing an inventory; and,
- Contracting with a consulting firm to complete the inventory and generate reporting for the jurisdiction.

Appendix F provides an example of an RFP that a jurisdiction might use to solicit bids for consultants to complete an emissions inventory.

Task 1.5: Develop GHG Emissions Inventory Management Plan

A primary reason for creating an emissions inventory is to provide a tool for benchmarking progress toward climate goals and targets. The inventory should be updated regularly, so progress can be measured and shared. Primary components of an emissions inventory management plan should include:

- Identifying an inventory update interval;
- Managing data quality;
- Reviewing and testing inventory assumptions and limitations; and,
- Sharing results with the broader community.

Task 1.6: Identify Update Interval

Emissions inventories are intended to be replicated in a consistent manner to report progress. The frequency of inventory updates should be driven by jurisdictional goals. The goals should include benchmarks for emissions reductions, which will be important for evaluating progress.

A jurisdiction should identify an interval of reporting that is informative, realistic given resources, and aligns with the climate action goals and targets. Shorter inventory intervals, such as every 3-5 years, are useful to obtain more regular input and information on the emissions over which the jurisdiction has the most control.

Many jurisdictions set ultimate and interim goals and targets regarding emissions reductions that inform the frequency with which inventories are conducted.

> ***NOTE:*** *Washington's Clean Energy Transformation Act (CETA) commits Washington to an electricity supply free of greenhouse gas emissions by 2045, and sets interim benchmarks for actions including transitioning away from coal by 2025 and GHG neutrality by 2030. Washington greenhouse gas reporting is required from state agencies on a biennial basis, but the reporting consists of a more limited set of data sources than might be needed for a comprehensive jurisdictional inventory.*

Task 1.7: Ensure Data Quality Management

Adherence to data quality standards including a data management plan is essential for transparency and accountability. This will also ensure the creation of an emissions inventory that accurately reflects emissions, and is repeatable in a manner that is consistent and valid for tracking emissions over time. The greenhouse gas inventory protocols referenced in Task 1.2 have a comprehensive set of guidelines regarding the integrity of inventory data.

Major components of a data collection and management plan

- **Data**: Information regarding activity levels and emissions factors is the foundation of an emissions inventory. The design of a jurisdiction's inventory should facilitate and support consistent data collection and maintenance procedures, including the methods and review processes described in the following three paragraphs.
- **Methods**: Jurisdictions should select and design methods for estimating emissions that accurately represent the characteristics of their emission sources. It is very possible that collection methods change over time.
- **Inventory Processes and Systems**: An inventory should have technical and managerial consistency in the ways in which data is collected and managed. The staff or team should be clearly identified and assigned responsibility for the baseline and ongoing updates to the inventory. It might make sense, based on jurisdictional operations, to house this data management with staff who already conduct similar functions for other data collected and processed within the organization.
- **Quality Assurance/Quality Control (QA/QC):** QC activities including regular checks on the consistency of the data being collected, whether from external sources or generated internally; and ensuring that widely accepted standardized procedures are being used for calculations, estimating uncertainties, and reporting. QA activities include the review of methods and results.

Task 1.8: Review and Test Inventory Assumptions and Limitations

Conducting regular reviews of the assumptions and limitations of an inventory will ensure its continued relevance and accuracy. Inventory data can change over time and have meaningful implications for changes to emissions. Some ways in which data can change over time include:

- Changes in vendors used for jurisdictional services;
- Changes in internal government operations; and,
- Changes in services offered to the community (for example, new public infrastructure or transit).

Building in a process for reviewing the scope and sources of the inventory is critical. It could be possible to embed this process in the QA/QC processes discussed above, including accessing independent technical expertise that can incorporate this type of thinking into their review.

Components such as emissions factors or regional emissions projections used in setting benchmarks and climate action goals are similarly subject to change as climate modeling and policy continues to develop. A regular review of protocols to ensure the inventory uses the most up-to-date science and methodology is important.

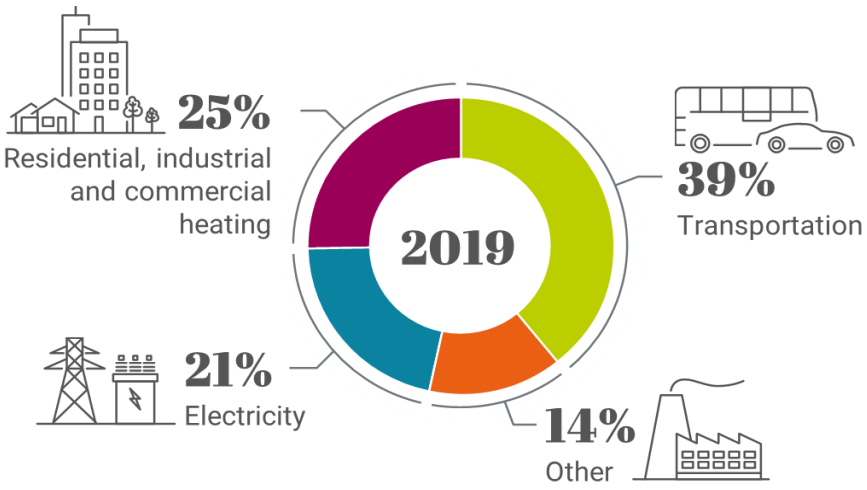
Step 2: Set Emissions-Reduction Targets

Use the Emissions Worksheet in the Climate Element Workbook to identify emissions sources and establish reduction targets.

Completing the Emissions Worksheet includes ranking the sectors from highest to lowest emissions. The ranking can be used to identify areas for priority action. Transportation is for many jurisdictions the highest source of GHG emissions.

Finally, identify targets – emission reductions from each source. Emissions inventory summaries should depict all GHG emissions [*Figure 16*] in specific percentages.

Figure 16: Statewide Emissions, by Sector



Washington greenhouse gases
Department of Ecology-Statewide Emission Inventory 2019

Local jurisdictions should use 2022 as their emissions baseline year and set incremental targets that lead to achieving net zero emissions in 2050, consistent with Washington's statewide target.

Step 3: Develop Measures and Implementation Plan to Achieve Targets

A jurisdiction could decide to develop its own goals and policies based on measures provided in Section 5 or its own research. Ensure that the internal departments responsible for measures are at the table when developing an implementation plan.

Presenting the data results with the broader community is an important component of translating data into climate planning and action. It is important to return to juxtapose the goals of the jurisdiction in completing this inventory.

The goals should drive how, where, and when you communicate results, and how they are integrated into climate action goals to reduce emissions. Data that are visually engaging and meaningful to a wide audience (written in a format that is broadly and easily understood by a variety of ages and demographics) and actionable (for example, now that you know 35% of the community carbon footprint is residential energy use, what can residents do about this?) are all important in communicating results.

- Use the "S4, Emission Reduction Measures" tab in the Climate Element Workbook to list your goals and policies and note how they meet this guidance's minimum requirements for a GHG reduction sub-element. Section 5 provides guidance to help you select, adapt, prioritize, and implement goals and policies from the Menu of Measures.
  NOTE: *Some of the sample measures include a placeholder for inserting the target percentage of GHG reduction for your jurisdiction that would be based on vetting from an internal sub-committee and the public process.*
- Consider how to communicate the initial analysis. Communication of the results should be considered from the beginning to ensure that the resources are in place.

- Quantify the effectiveness of your policies to determine how well they will help your jurisdiction achieve its goals. The following resources can help with this work:

  Resources:

  - The **California Air Pollution Control Officers Association's** Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities and advancing Health Equity provides a common platform and tools for evaluating greenhouse gas reduction measures and promoting equitable land use planning and project design. While the CAPCOA resource was developed for California, most of the handbook's methods can be adapted for Washington. Jurisdictions should review the quantification methods for individual measures prior to use to ensure accurate calculations. A summary of calculation samples is in Appendix J.
  - The **U.S. Environmental Protection Agency's** Quantified Climate Action Measures Directory presents information on quantified emissions-reduction measures in state and local climate action plans published between January 2018 and August 2023. The EPA directory — which includes searchable tables — helps users understand how the example measures were quantified and locate the planning or analysis documents that formed the basis for the measure's directory entry.

Step 4: Integrate Measures into Plan and Evaluate Progress

The task of integrating new GHG reduction goals and policies into a comprehensive plan should include a multidisciplinary sub-committee, lead staff, and planning commissioners.

The GHG emission reduction goals and policies selected for your comprehensive plans should turn research into action through the legislative process, particularly when these policies are implemented and GHG reduction goals are achieved.

- Commerce recommends that your jurisdiction update its emissions inventory every five years to evaluate progress toward your GHG reduction goals and targets.

Section 5: Climate Measures

Sections 3 and 4 provided guidance on developing resilience and GHG reduction sub-elements. This section describes the Menu of Measures in greater detail and provides additional information to support selecting, prioritizing, adopting, and implementing measures.

The Menu of Measures [*also see Appendix L*] contains examples of model climate goals and supportive policies. Your team will review the measures and select ones that will build resilience and mitigate emissions in your jurisdiction. Most measures will need to be adapted to reflect local conditions and priorities before adding them to your comprehensive plan. These measures are the core of the model element that the state team was charged to deliver.

The Menu of Measures is comprehensive but not exhaustive; there may be climate measures that your jurisdiction identifies that are essential to your climate element but are not on the Menu. No two jurisdictions will face the same vulnerabilities to climate change or have the same GHG reduction goals, so some measures will not apply to your jurisdiction.

> ***NOTE:*** *The Menu of Measures includes policies that have a demonstrated ability to reduce greenhouse gas emissions and are within the authority of a local government to implement. As noted in Section 4, your jurisdiction may develop its own mitigation policies as well as select ones from Commerce's Menu of Measures to meet the GHG reduction sub-element's minimum requirements. Policies that are not specifically identified in the Menu will be considered consistent with this guidance if they are measureable and supported by scientifically credible projections and scenarios that indicate their adoption is likely to result in reductions of GHG emissions and per capita VMT.*

Climate element nexus with SMPs: The sample measures are written for comprehensive plans. However, it will be important to consider your SMP when using the Menu of Measures to select goals and policies. There are several ways that the policies in the Menu could interact with your SMP. First, a measure may be primarily focused on the shoreline jurisdiction and will need to be incorporated directly into your SMP as a policy or regulation to be actionable (for example, coastal resilience policies). Developments, uses, or geographic areas solely within the shoreline jurisdiction can only be effectively managed with policies and regulations within your SMP. Second, if you are adding a goal or policy that is intended to apply throughout your jurisdiction, you may need to add or revise a complimentary goal or policy in your SMP to ensure that the new policy can be implemented within the shoreline jurisdiction. Finally, some climate adaptation actions may not be appropriate to apply within shoreline jurisdiction because they are not consistent with the SMA and the jurisdiction's SMP. As noted below, there is an SMP column in the Menu that indicates the climate resilience policies that will most likely need to be in your SMP. Policies that may have a nexus to your SMP depending on where and how they are intended to be implemented are not indicated in this column, as this will vary depending on the local government and their plans. SMP amendments for climate resilience require following the required amendment process (WAC 173-26-090) and must be reviewed for internal consistency. See Section 1.4 for more information on shoreline master programs.

5.1: How to Select Goals and Policies from the Menu of Measures

Jurisdictions may sort the Menu of Measures by any of the following attributes to select goals and policies:

- **Measure Type**: This identifies whether a measure fits best within the GHG reduction or resilience sub-element. ***NOTE:*** *The Menu's co-benefits column [see below] recognizes that many measures reduce emissions and build resilience.*

- **Climate Sector**: This includes the same 11 sectors used in UW CIG's Climate Mapping for a Resilient Washington webtool [*see Section 3*]. The climate sectors include: (1) Agriculture & Food Systems (includes production and distribution); (2) Buildings & Energy (includes generation, transmission, and consumption); (3) Cultural Resources & Practices (includes historic sites and cultural resources and practices); (4) Economic Development (includes business continuity, opportunities); (5) Emergency Management (includes preparedness, response, recovery); (6) Health & Well-being (includes community well-being, equity, and engagement); (7) Ecosystems (includes terrestrial and aquatic species, habitats, and services); (8) Transportation (includes multimodal travel and infrastructure); (9) Waste Management (includes materials recycling and disposal); (10) Water Resources (includes water quality and quantity); (11) Zoning & Development (includes site use, design, and other development facets).
- **Supplemental Description**: This explains why and how your jurisdiction might to implement each measure. For example, the supplemental description may describe how a policy could be part of a broader strategy or may include specific actions to implement a policy.
- **Comprehensive Plan Nexus**: This notes a climate measure's nexus with another comprehensive plan element (for example, housing or transportation). This information could aid jurisdictions that decide to integrate climate policies throughout their comprehensive plan.
- **Co-benefits.** Each measure on the Menu is associated with one or more of the following co-benefits: (1) supports housing supply and diversity; (2) reduces emissions; (3) sequesters carbon; (4) enhances resilience; (5) improves salmon recovery; (6) promotes economic development; (7) promotes equity and justice; (8) provides cost savings; (9) provides ecosystem services; (10) protects tribal treaty rights; (11) improves public health and well-being; (12) improves air quality; (13) protects water quality; and, (14) builds community knowledge.
- **EJ Potential with**: This attribute — developed by Front and Centered, based on its work with frontline communities — shows each measure's potential to support environmental justice [*see Appendix A for additional details*].
- **Policy Development and Implementation Tools**: Each policy on the Menu links to at least one resource (tool) that will help a local jurisdiction develop and/or implement the policy. Tools range from model development code provisions to project funding and design resources.
- **Hazards Addressed**: This includes climate-exacerbated hazards (for example, sea level rise and wildfires) that are addressed by measures. Every resilience measure addresses at least one hazard, and most resilience measures address several hazards. Selecting "search all" as a search attribute will pull up all the climate resilience goals and policies. Selecting specific hazards will pull up a narrower field of measures.
- **Impacts Addressed:** This lists climate impacts (for example, air and water pollution) that are addressed by the resilience measures. Selecting "search all" as a search attribute will pull up all the climate resilience goals and policies. Selecting specific impacts will pull up a narrower field of measures.
- **Tracking**: Each policy on the Menu lists one or more metrics that a jurisdiction could use to track implementation. Such metrics may be useful for reporting implementation progress at defined intervals.
- **Shoreline Master Program (SMP) Nexus**: This identifies measures that likely need to be incorporated into your SMP to allow for implementation. Adding these policies to your SMP would require consistency review and an SMP amendment.
- **Grouping**: This suggests measures that would complement one another, or that should be considered as a set of measures for ultimate effectiveness.

Customize based on local conditions

The climate measures as drafted include varying levels of authority. Some measures, for example, include terminology that is typically reflected in language describing initial steps, such as "study" or "consider," whereas other measures include language that is associated with implementation actions, with such terms as "implement" or "adopt." You will even notice that some measures include blanks with prompts such as "insert date" or "insert target." This combination of terminology was intentional to provide a wide range of options and to spark inspiration in your community. Notably, meeting your obligation to reduce GHG emissions will require implementation of tangible actions. A set of policies limited to "study" or "consideration" will not reduce GHG emissions.

Your climate policy advisory team should be invited to customize the measures as it reviews and selects them, to set targets that are relevant and appropriate for your jurisdiction. This aspect of customizing the measures is important to recognize as your climate policy advisory team selects and adapts measures, which must ultimately be appropriate for your local conditions, values, and climate goals and targets.

5.2: Multi-criteria Prioritization Analysis

Commerce and its partners evaluated Menu of Measures goals and policies using a multi-criteria prioritization framework. The highest-priority measures are marked with a red dot. The priority level indicates how well a measure met the attributes of the charge given to the state partners — meaning that this analysis does not include localized criteria that only your city or county would be able to assess. Given the subjective nature of the scoring, we suggest that the ranking be used as a starting point for conversation.

Below, we provide an explanation of the initial criteria and the basis for highest-priority measures. The score includes the sum of co-benefits and timeframe. The criteria for effectiveness and equity are not scored by the state team, as explained in the next section.

Initial Criteria

Your climate element must prioritize measures that are in alignment with your jurisdiction's vision and goals, and expressly prioritize overburdened communities, who will suffer disproportionately from compounding environmental impacts and will be most impacted by natural hazards due to climate change. Jurisdictions could adapt the prioritization framework by including additional local criteria to better align their climate element policies. Appendix I describes the development of the Menu of Measures' multi-criteria prioritization framework and provides examples of multi-criteria analyses that has been applied in other jurisdictions.

Commerce elicited input from state agency staff and used the initial criteria to prioritize policies in the Menu of Measures. The prioritization reflected in the Menu of Measures includes an evaluation of the first three criteria. The fourth criterion was developed by the Uplift Communities Project, led by Front and Centered [*see Appendix A for more details*].

1) **Effectiveness**: Measures within the Menu were considered to be effective at addressing GHG reduction and/or resilience after the state team affirmatively responded to the framing questions. The level of effectiveness will ultimately need to be assessed at the local level in combination with the set of measures that are selected to compliment your goals.
2) **Co-benefits:** Your jurisdiction could choose to utilize the co-benefits provided in this guidance or modify the list. The state team balanced the relative value of the multiple co-benefits of this criterion with the total criteria to ensure that this singular criterion did not outweigh the others. This ensured that the top possible score for this criterion should not exceed the top value of the other criteria.

3) **Timeframe of Benefit**: This criterion reflects whether the measure will provide benefits in the short or long term. This assumes shorter-term benefits may be policies that need to be replaced or revisited within five years — in contrast with something that is long-term and would typically include considerable investment.
4) **Equity**: It is difficult to determine at a state level if a measure itself is equitable. Cities and counties must identify the overburdened communities and vulnerable populations in their planning jurisdictions [*see Section 2*] and collaborate with those stakeholders to adequately determine if a measure would have disparate impacts. Commerce and its partners created the framing questions [*Figure 17*] for jurisdictions and community representatives to evaluate the potential for equity for any measure and to identify necessary alterations through a just transition and an environmental justice lens [*see Appendix A*].

Figure 17: Framing Questions for Prioritizing Policies

Criteria	Framing questions	
Effectiveness	For Resilience Measures: **Will the policy reduce the severity of the hazard's projected climate impacts?** For GHG Reduction Measures: **Does the policy have a demonstrated ability to reduce GHG emissions and/or per capita VMT?**	
Timeframe of Benefit (short or long)	**How long are the effects of this measure?** Short-term (1-4 years): Will the measure provide a benefit of less than five years? Examples of such measures are those that are dependent on a personal choice, such as incentives for transit users or installing a "smart" meter to conserve water on private property. Long-term (5 or more years): Is the policy a long-term response to the climate impact or reduction to GHG emissions? An example includes the considerable investment of replacing a fleet of combustion-engine vehicles with electric vehicles, or relocating essential facilities out of the floodway.	
Co-benefits	**Does the measure provide any of the following co-benefits?** • reduces emissions (GHG reduction) • sequesters carbon (GHG reduction) • enhances resilience • improves salmon recovery • promotes economic development • promotes equity and justice	• provides cost savings • provides ecosystem services • protects tribal treaty rights • improves public health & wellbeing • improves air quality • builds community knowledge • supports housing supply & diversity

Criteria	Framing questions	
Equity	• **Co-governance**: Does the measure show potential to build self-determination for frontline communities of color and/or low-income communities? • **Targeted Universalism:** Is the measure clear on rights to healthy communities, and explicit in targeting interventions to communities furthest from achieving those rights?	• **Accountability:** Does the measure show potential to directly limit harm and hold those responsible? Does it prioritize effectiveness? • **Community Wealth Building:** Does the measure show potential to invest in and sustain local livelihoods, starting with communities with the greatest barriers to meeting their needs, through sustainable resource use and cooperative work?

Additional Criteria for Local Governments

The state team evaluated the relative priority of measures using criteria that could be assessed at a state level. This initial prioritization does not account for the unique attributes of a particular jurisdiction, and as such a city or county should include additional criteria that better reflect its climate goals following sub-element development [*Sections 3 and 4*], along with readily available resources to accomplish near-term activities. Commerce recommends including the following criteria and framing questions:

- **Unintended Impacts**: Will implementing the policy result in unintended social, economic, or environmental impacts/externalities? *Example: population displacement*
- **Feasibility**: Is there administrative and other staff capacity to implement the policy?
- **Cost**: What is the estimated cost to implement the policy (consider whether implementation will require one-time or ongoing funding)? This criterion could provide more distinction to "feasibility" or it could stand alone.
- **Political or Public Support**: Is there community support for the policy? Is this an elected body priority, and do elected officials understand what it will take to implement the policy?
- **Authority**: Does the jurisdiction have the authority to implement the policy? Jurisdictions should generally exclude measures that are outside their span of control. However, there might be measures that a jurisdiction could influence or affect through a partnership as described in a particular measure.

Opportunity Cost Considerations

Your jurisdiction may wish to consider opportunity costs — what other activities or measures could produce more environmental benefit for a similar cost? Jurisdictions should attempt to maximize environmental benefits within available resources when planning to reduce or eliminate emissions. The effectiveness of emissions-reduction projects can be assessed based on the cost to reduce one MT of CO2.

There are two metrics jurisdictions could use to assess effectiveness using this approach. First, the Washington State Utilities and Transportation Commission set the "social cost of carbon" at $94 per metric ton of CO2 for 2025. Spending more than that to reduce CO2 means the jurisdiction is spending more than the global benefit they are providing. The social cost of carbon is an estimate of global impact, not local. The second metric that can be used is the cost of carbon offsets from the Climate Action Reserve and the American Carbon Registry, both of which have been approved by Ecology as having a track record of excellence. Both organizations offer opportunities to reduce the maximum amount of CO2 for any budget.

5.3: Organize Climate Element for Integration and Consistency

Each jurisdiction's development regulations, planning activities, and capital budget decisions must be consistent with and implement the comprehensive plan. The Growth Management Act requires that all comprehensive plans be internally and externally consistent.[60]

- **Internal consistency** means that all goals and or policies must be based on the same future land use map designations and population projections. Internal consistency also requires reviewing your plan and addressing goals and policies that conflict with or create barriers to implementing other measures. Internal consistency also typically encompasses your other adopted plans or development regulations.
- **External consistency** means that the local comprehensive plan must be consistent with countywide planning policies (CPPs)[61] and regional transportation plans (RTPs)[62] and be coordinated with comprehensive plans of adjacent cities and counties.

Visit MRSC for resources, and consider whether your climate element measures:

- align with your comprehensive plan's other measures;
- align with your comprehensive plan's vision;
- align with your countywide planning policies and regional transportation plan measures; and,
- align with GMA goals for climate, transportation, housing, and other applicable areas [*see Figure 5*].

Demonstrated Approach: Model Climate Element

As noted in Section 1, your climate element may take the form of a single chapter (new or existing), or your climate element may be a collection of climate goals and policies integrated into other chapters (for example, your land use, housing, and transportation elements). The following model climate element is intended to demonstrate how to integrate climate goals and policies into a single climate chapter.

The following GHG reduction and resilience goals and policies — which are from the Menu of Measures — focus on the transportation, buildings & energy, and zoning & development sectors. Commerce and its partners ranked several of these goals and policies as priority measures, factoring in their co-benefits, potential to support environmental justice, and other criteria [*see Figure 17*].

Your full climate element will likely include additional measures, based on your work in Sections 3 and 4 of this guidance and other regulatory requirements.[63] For example, several of the following climate resilience sub-element measures explicitly address sea level rise and wildfire hazards; your climate resilience sub-element may need to include goals and policies within the emergency management and health & well-being sectors to address extreme heat and other climate-exacerbated natural hazards that are relevant to your jurisdiction [*as determined by Section 3's steps*].

This guidance's companion Climate Element Workbook [*Appendix B*] includes tables to note how your climate measures produce co-benefits and intersect with other comprehensive plan elements and sectors. Use the workbook to organize your climate element and ensure it meets this guidance's minimum requirements.

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[60] RCW 36.70A.130(1)(d)
[61] RCW 36.70A.210
[62] Chapter 47.80 RCW
[63] The model climate element is a general example for all Washington jurisdictions and does not address many of the multicounty planning policies and countywide planning policies required for central Puget Sound jurisdictions.

Climate Resilience and GHG Emission Reduction

Purpose: In this section, describe how the climate element provides a consolidated climate policy framework that is essential to facilitating local planning and meeting Growth Management Act goals.

Background: In this section, draw from your Climate Element Workbook to summarize your jurisdiction's existing and expected climate hazards and impacts, as well as its largest emissions sources and reduction targets. Also note how the climate element's goals and policies meet Commerce's minimum requirements [*from Sections 2, 3 and 4*] and prioritize actions to benefit overburdened communities and support environmental justice [*from Section 5*].

GHG Reduction Sub-element

Climate Goal 1 (CG 1): Reduce vehicle miles traveled [64] to achieve greenhouse gas reduction goals. [*Priority measure #240*]

CG 1 Policies

1-1 Implement travel demand management (TDM) programs and strategies. [*Measure #54*]

1-2 Create a safe, well-connected, and attractive bicycle and pedestrian transportation network to encourage active transportation. [*Priority measure #246*]

1-3 Prioritize, develop, and maintain mobility hubs in transportation-efficient locations — especially in overburdened communities experiencing a scarcity of transportation alternatives. [*Priority measure #478*]

1-4 Facilitate the siting of complimentary destinations such as commercial-employment centers, schools or education centers, and residential developments. [*Priority measure #500*]

Climate Goal 2 (CG 2): Ensure that buildings use renewable energy, conservation, and efficiency technologies and practices to reduce greenhouse gas emissions. [*Measure #386*]

CG 2 Policies

2-1 Incentivize green building certification to improve energy and environmental performance. [*Priority measure #430*]

2-2 Maximize renewable energy sources for the supply of electricity and heat to new and existing buildings. [*Measure #230*]

2-3 Retrofit buildings for energy efficiency. [*Priority measure #160*]

2-4 Require all publicly owned buildings to be powered completely by renewable energy by [insert target date]. [*Measure #229*]

Climate Goal 3 (CG 3): Increase housing diversity and supply within urban growth areas to reduce greenhouse gas emissions and support environmental justice. [*Priority measure #254*]

CG 3 Policies

3-1 Increase or remove density limits in areas well-served by transit and other services within the urban growth area. [*Priority measure #253*]

3-2 Allow or encourage micro-housing units. [*Priority Measure #507*]

3-3 Develop and implement inclusionary zoning to support greater income diversity in housing types. [*Priority measure #508*]

[64] Vehicle miles traveled reductions would be limited to the boundaries of the jurisdiction.

Resilience Sub-element

Climate Goal 4 (CG 4): Ensure that the local transportation system — including infrastructure, routes, and travel modes — is able to withstand and recover quickly from the impacts of extreme weather events and other hazards exacerbated by climate change. [*Measure #393*]

CG 4 Policies:

4-1 Improve street connectivity and walkability, including sidewalks and street crossings, to serve as potential evacuation routes. [*Measure #86*]

4-2 Design and site new and expanded roads and railroads to have the least possible adverse effect on the shoreline, account for sea-level rise projections, not result in a net loss of shoreline ecological functions, or adversely impact existing or planned water-oriented uses, public access, and habitat restoration and enhancement projects. [*Priority measure #22*]

4-3 Enhance the resilience of parks and recreational trails by assessing and addressing climate hazards and impacts. [*Priority measure #318*]

Climate Goal 5 (CG 5): Ensure that energy infrastructure — including generation and transmission — is able to accommodate renewable energy opportunities and to withstand and recover quickly from the impacts of extreme weather and other natural hazards worsened by climate change. [*Measure #385*]

CG 5 Policies:

5-1 Install distributed renewable energy generation and battery infrastructure at public facilities to store renewable electricity generated on site and provide emergency power that ensures continuity of operations. [*Measure #381*]

5-2 Require new subdivisions to bury electricity transmission lines and associated infrastructure to reduce damage from storms and wildfire ignition risks. [*Measure #453*]

5-3 Work with energy utilities to improve the safety and reliability of infrastructure vulnerable to climate change. [*Measure #438*]

Climate Goal 6 (CG 6): Ensure that development and redevelopment projects are resilient to the impacts of climate change. [*Measure #8*]

CG 6 Policies:

6-1 In areas with significant vulnerability to climate hazards, facilitate and support long-term community visioning including consideration of managed retreat. [*Measure #465*]

6-2 Review required buffers and setbacks for steep slopes and shorelines vulnerable to erosion exacerbated by climate change, and establish new minimums, if necessary, so that improvements are not required to protect structures during their expected life. [*Measure #19*]

6-3 Consider future climate conditions during siting and design of capital facilities, including changes to temperature, rainfall, and sea level, to help ensure they function as intended over their planned life cycle. [*Measure #439*]

6-4 Identify and implement strategies for reducing residential development pressure in the wildland-urban interface. [*Priority measure #444*]

Resource:

- *Visit MRSC's climate portal for examples of comprehensive plans with climate measures.*

5.4: Take Legislative Action

The Growth Management Act requires that development regulations be consistent with and implement the comprehensive plan,[65] and the deadline for amending or adopting these development regulations is the periodic update deadline. [66] In addition to adopting a comprehensive plan climate element with goals and policies, your jurisdiction must adopt the necessary development regulations.

Given the scope and complexity of this task, it is very important to explain in a staff report each measure you intend to adopt and its development regulation implications. Consider including your completed Climate Element Workbook [*Appendix B*] as a companion to a staff report to support the recommended goals and policies and changes to development regulations.

Generally, the beginning of legislative action is when you are ready to present your set of comprehensive plan amendments to a planning commission. The planning commission will make recommendations that will be forwarded to the final approval authority, such as an elected council. You will want to plan time to incorporate feedback from your public-engagement process and other advisory bodies before presenting recommendations.

The conclusion of legislative action should result in your elected officials adopting the climate goals and policies into the jurisdiction's comprehensive plan and notifying state agencies. Be sure to notify Commerce at least 60 days before the final adoption of your comprehensive plan and/or development regulations, including all necessary details to comply with statutory notice requirements.

5.5: Measure Implementation Progress

The GMA requires cities, counties, and Commerce to report progress toward implementing comprehensive plan commitments and goals.[67] Cities and counties must provide Commerce an implementation report that details progress achieved five years after updating their comprehensive plan, including the climate element.

For jurisdictions that are required to create a GHG reduction sub-element as part of their climate element, the progress report must detail progress implementing GHG emissions and per capita VMT reduction policies to achieve local goals and targets [*HB1181, Sec. 15(9)(b)*]. The collective set of measures must meet HB 1181's minimum requirements, as noted in this guidance's Section 4. Cities and counties may utilize the companion Climate Element Workbook [*Appendix B*] to list their policies and track implementation progress.

Commerce must evaluate and report on the impact that locally adopted climate elements have had on local GHG emissions and per capita VMT reduction goals. Commerce must include this evaluation in guidance published after 2025. The evaluation will reference information from the five-year progress reports and, at a minimum, include results from local emission inventories and an index of climate elements with a correlation of impacts on local emissions.

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[65] RCW 36.70A.040(3), (4)
[66] RCW 36.70A.130(1)(a)
[67] 36.70A.130.

Appendices

A. Summary Report: Climate Justice in Growth Management:

Editor's note: *Commerce hired the nonprofit Front & Centered to lead a task force of frontline community members ("Uplift Communities" project) to help shape the state agency's climate planning guidance and Menu of Measures. Upon the completion of its work, Front & Centered wrote the summary report and policy recommendations below. Commerce used the recommendations to revise and add goals and policies to the Menu of Measures, where appropriate. Not all of the task force's recommendations that follow are within the span of control of local governments, and thus may not be suitable for comprehensive plans. In recognition of their expertise and respect for their engagement role, such recommendations are still included here to capture the broader conversations that occurred through this project.*

Summary

Front and Centered (FC) prepared this appendix report to document the work and lessons learned through its contract with the Washington State Department of Commerce (Commerce), through the "Prioritize Actions to Uplift Communities Disproportionately Impacted by Climate Change" (Uplift Communities) Project. The content of this report is drawn from an extensive community engagement process managed by FC, which involved a committee of community-based organizations representing overburdened and vulnerable communities [68] across Washington. Front and Centered provided the recommendations of this report in advance of the final draft of the "early" climate element planning guidance Commerce published in June 2023.

GHG reduction and resilience planning is fundamentally a matter of equity. In approaching climate element measures, it is essential to reject "one-size-fits-all" approaches to the selection and application of measures. Rather, processes must effectively engage impacted communities through models of engagement that center community voices and priorities, and adjust based on the needs, perspectives, and realities of community members and the organizations that represent them.

Findings with respect to this process:

- Frontline[69] communities are very interested in comprehensive planning processes, and jurisdictions engaged in planning must meet community members where they are at. Too often, planning and engagement processes are overly complicated, lack sufficient clarity on what influence engagement may have, and lead to frustration in impacted communities.
- Frontline communities choose to not engage when there is strong belief their engagement will have no impact. Poorly designed engagement strategies discourage participation — in the near term and long term. Frontline communities are interested in both the process and the outcome of their engagement.
- There are models that jurisdictions can use to center the perspectives and voices of frontline communities. These models can increase engagement, build trust, and create opportunities for co-governance.
- Frontline communities care deeply about the impacts of climate change on their families and their lives. Comprehensive planning community engagement processes must strive to make connections between near-term and long-term impacts of climate change and communicate the role of planning in that context.

[68] Throughout this report, "overburdened" communities and "vulnerable" populations will interchangeably be referred to as "frontline" communities and populations. Definitions for these terms are found within the glossary at Appendix J.
[69] Ibid (see notes above)

Jurisdictions must identify the overburdened communities and vulnerable populations in their scopes of work in order to determine if the proposed climate element measures are equitable. They must also collaborate with those stakeholders to adequately determine if a measure may enable or prevent disparate impacts.

This report serves as a tool to incorporate equity and environmental justice in the planning process.

- It summarizes important frameworks, beginning with a summary of the Just Transition Framework, including principles of co-governance, and recommends tools and resources.
- It provides a tool to examine — in in partnership with community members — how criteria can be used to assess the equity/harm potential of draft measures.
- It also includes community-recommended measures, with a description of what goals those measures might address and how they might be applied in the planning process.

Introduction: Climate Justice and Frontline Communities in Climate Planning

Commerce contracted with Front and Centered to provide guidance in the development of the climate element from the perspective of communities that disproportionately experience harm from climate change. Front and Centered is a statewide coalition of community-based organizations representing people of color and lower incomes.

Climate is fundamentally an issue of equity. Climate impacts hit us wherever we live, work, and play in Washington. Climate pollution threatens our health and the health of future generations — but the impacts are not distributed evenly. Who is at risk is a factor of both who is most exposed, and who has the ability to respond, adapt, and decide. Communities of color, Indigenous peoples, and communities with lower wealth and incomes tend to face the greatest climate risks and are therefore on the frontlines of climate and environmental threats and face greater social, economic, and health issues.

To date, comprehensive plans in Washington have lacked adequate consideration and planning to address the current, historical, and ongoing environmental racism that many communities around our state experience. These plans shape the future of communities in the state and are often a deciding factor in how heat, floods, fires, and other climate-related impacts communities will endure. The existing comprehensive planning process is not accessible or equitable for many people who reside in frontline communities and does not address the disproportionate impacts from climate change.

If jurisdictions want to undo and prevent further disparity, they must identify the overburdened communities and vulnerable populations in their jurisdictions and make intentional efforts to understand the cumulative threats these communities are facing. They must also understand how those issues may be alleviated through land use planning, and how the local communities want to be supported. These efforts should be shaped heavily through collaboration with the overburdened communities through building community capacity and meaningful public participation processes. For additional guidance, please see the public engagement resources and best practices in Commerce's draft climate planning guidance [*Section 2*].

The Front and Centered coalition envisions a future where our communities and the Earth are healed and thriving, our people have dignified work and the building blocks of opportunity and prosperity, and our government values, respects, and represents us. Getting to a place where that vision is reality, requires a Just Transition. This involves transitioning away from regulations and policies that allow for or depend on the exploitation of natural resources and labor, and that protect wealth and power through land ownership and

consumerism. Instead, local governments must move toward investment in the health and social well-being of all people and places through proper co-governance.

This report summarizes the approach of the Front and Centered coalition's Uplift Communities Project, led by a Community Leadership Committee (CLC), to developing guidance and reviewing draft measures for a comprehensive plan climate element. It focuses on equity strategies for how jurisdictions can minimize burdens and maximize benefits to overburdened communities. The goals, guidance, and recommendations are informed by outreach conducted by seven community-based organizations that were created by and for communities of color, and low-income communities across Washington.

The Just Transition Framework

The Front and Centered Coalition envisions climate justice as a transition away from an extraction-based economy to one centered on ecological restoration, community resilience, and social equity, fueled by regenerative resources and cooperative work, governed by deep democracy, and a culture of caring and sacredness. The report, "Accelerating a Just Transition in Washington State", is a primer on Front and Centered's application of the Just Transition framework to climate GHG reduction and resilience strategies.

Such a Just Transition will require interventions in four key areas that, while not historically the focus of climate work, are necessary conditions for achieving climate goals:

Center Those Disproportionately Impacted in Governance. The communities that experience climate impacts and fossil fuel pollution first and worst — or have the least ability to transition to a lower-carbon economy — can be active participants in identifying solutions that will work for them. New models of participatory governance — or "co-governance" between government leaders and agencies and impacted communities — will be necessary to truly address these gaps in community leadership and shared governance. Key cornerstones of co-governance include: a) establishing government commitment to the self-determination of communities; b) supporting communities to build their capacity to effectively participate (in government processes); c) developing shared governing power in principles and in process; and, d) demonstrating equitable processes and results.

Restore Community Connections to Place. Place-based communities that can practice self-determination, care for their social and economic well-being, and honor ecological stewardship and sustainability are at the heart of a Just Transition. A place-based approach focuses policy, programmatic interventions, and innovations in specific geographic areas that are suffering from environmental and social injustices. A place-based approach, where each community is valued, ensures that no community is sacrificed to climate impacts or to suffer emissions disproportionately. This creates pressure to eliminate, rather than move emissions from place to place. Jurisdictions can integrate this priority by placing greater value on and by centering in their public engagement processes the values, cultures, aspirations, hopes, and experiences of the communities impacted by their plans and actions.

Create Livelihoods within a Healthy Environment. A regenerative economy is one that prioritizes sustainable living and working within ecological limits. It would eradicate inequality, ensure all basic needs are met, and foster individual and community well-being and health. Rather than enabling economies rooted primarily in growth, the commodification of people and things, and the extraction of resources and labor, we must enable economies that are rooted in the dignity of people, their voice, and their work, where people can afford what they need, and where they benefit from clean and healthy air, land, and water. Jurisdictions can support movement toward a regenerative economy by prioritizing the needs of communities over the needs of corporations.

Transition to Renewable Resources and Energy. A key cornerstone of a Just Transition is enabling strategies to ensure energy is first conserved, and that energy generation is renewable and equitable. This means phasing out and rejecting extractive energy sources — for example, fossil fuels that harm the environment — and enabling adoption of healthier and environmentally sound energy sources and ensuring access to these energy sources to everyone, including impacted communities. This also means, including distributed ownership opportunities that can support self-determination, economic development, and direct benefits in overburdened and vulnerable communities. Jurisdictions can support this pillar by planning for the use of renewable energy sources in their planning jurisdiction. Transitioning away from fossil fuels or non-renewable sources can reduce social and environmental harms in frontline communities.

Some government entities may question the relevance of these pillars to land use planning. Others may place limitations on potential policy interventions by setting standards for "proven effectiveness" that may intentionally or inadvertently exclude these factors. Moving forward in the climate realm, experimentation is needed to mitigate the impacts of climate change and to ensure the resilience of communities. Approaches to planning and policy that rely solely on what is comfortable or proven replicate harmful dynamics and shift power away from disproportionately impacted and marginalized communities. Such approaches bias planning toward keeping things the way they are and favor incremental change that may limit what is possible, and this will certainly fall short with respect to equity.

Environmental Justice

Washington Gov. Jay Inslee signed a landmark environmental justice bill in 2021, the Healthy Environment for All Act (SB 5141), or the HEAL Act. The law grew out of a decades-long struggle by people of color and Indigenous peoples in Washington. And in more recent history, the HEAL Act emerged from the development of the Washington State Environmental Health Disparities Map, and the leadership of frontline communities seeking equitable treatment and outcomes, co-governance and self-determination, and just environmental policy.

The HEAL Act defines "Environmental Justice" as: "The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. Environmental justice includes addressing disproportionate environmental and health impacts in all laws, rules, and policies by prioritizing vulnerable populations and overburdened communities, striving for the equitable distribution of resources and benefits, and eliminating harm."

The HEAL Act creates requirements for state agencies. These requirements include:

- The creation of an Environmental Justice Council of majority frontline community representatives and an interdepartmental environmental work group;
- The development of community engagement plans that emphasize reaching vulnerable populations in overburdened communities;
- The use of the Environmental Health Disparities Map to identify Overburdened Communities [*see Section 2 of guidance*];
- Environmental Justice (EJ) implementation plans that shape agency strategic plans;
- EJ assessments of significant policies, budgets, projects and expenditures by agencies;
- Application of EJ principles to budgets and funding, including a 40% goal for agency environmental expenditures to benefit Overburdened Communities; and,
- Public reporting, including a dashboard to monitor progress.

These components provide a foundation for climate planning to reduce environmental health disparities that can be adopted at the local level. For example, jurisdictions could undertake an environmental justice assessment of their draft comprehensive plan. More information about the HEAL act, including links to agency community engagement plans and implementation plans, can be found at frontandcentered.org/heal-act.

Engaging Priority Communities in the Planning Process

Uplift Project Outreach as a Model

The outreach conducted for the Uplift Communities project may serve as a model for local governments and their constituents. Organizations participating in the Uplift Community Leadership Committee designed and implemented community outreach activities tailored for their respective communities. Each of the organizations in the Committee conducted outreach in ways that they determined were most efficient and effective for their communities. Front and Centered staff supported the organizations by helping them plan outreach activities, create surveys, and attend outreach events to co-facilitate or take notes. Each member organization received monetary stipends to use for outreach activities, such as providing refreshment, translation, room rental, participation stipends, and other tools to maximize community participation.

Activities included survey collection, in-person forums, virtual workshop sessions, and one-on-one outreach with identified community members. The various formats allowed for the CLC to customize outreach based on the preferences of their communities. Some members chose to host stand-alone events or meetings to consult their communities. Others set aside time in existing meetings with their community. This approach maximized how many people were able to participate comfortably and reflected the diversity of communities across Washington. It also made outreach easier for the CLC because they were able to assess their own capacity and integrate the project into their organizational work plans.

The focus of outreach efforts also shifted based on the communities that the organizations represented. Some organizations provided general environmental justice education and learned from attendees what barriers they face in their neighborhoods. Others discussed specific issue areas that are already priorities in their communities and connected them to the planning process. The CLC asked similar questions and discussed common topics but used different approaches and languages. This underscored how different communities need information to be delivered in different ways. Some preferred physical materials, presentations, and visuals. Others preferred surveys they could answer on their own time that led to facilitated discussions.

The CLC used various tools to advertise their outreach. Popular options were posting outreach on social media, listservs, and coalition network apps. Several of these advertisements were very general, focusing mostly on climate or environmental justice themes. Members chose to do this because they found that “comprehensive planning” and “the Growth Management Act” were not terms or phrases that many community members were familiar with or found enticing.

Lessons and Guidance for Jurisdictions

There are numerous findings from our process that are relevant to planning organizations that will engage in comprehensive planning, including but not limited to the climate element. Some of these findings emerged from the CLC’s outreach and others came from the CLC monthly meetings. The findings convey the raw lessons learned during this project. Recommendations are our suggested way forward based on the findings. Jurisdictions can use these findings and recommendations to better engage with community members and

community-based organizations (CBOs) representing vulnerable populations and overburdened communities.

First, there is significant interest in comprehensive planning among impacted communities, but there are real barriers to effective engagement. Community-based organizations and individuals in overburdened communities are interested in better understanding the comprehensive planning process and in the potential impact of a climate element on that process. For a range of reasons, people lack basic tools and information about the Growth Management Act (GMA) and the comprehensive planning process.

CBOs and community members conveyed feelings of exhaustion and frustration with the lack of access to educational resources needed to be involved in decision making. They also conveyed confusion over whether processes can provide for available assistance — financial or otherwise — to participate. They shared that it often takes too much effort to identify entry points into lengthy planning processes, and they stressed the importance of advertising and communicating what resources and assistance can be available. Participants also stated that there is not enough adequate notice on how and when to get involved in important meetings, such as those related to comprehensive planning.

CBOs are, therefore, often forced into untenable positions where they are providing education for community members, mobilizing to respond to notices, and engaging in activities that may detract from and drain their capacity to do other meaningful work. Community members and leaders also described the feeling of always having to play catch-up because they are not given the opportunity to be at the decision-making table. This is a problem because communities rely on CBOs to provide education on a range of topics, to connect community members to the resources they need, and to also meet basic needs. This places additional pressure on organizations attempting to respond to public planning processes that fail to consider the day-to-day realities of organizations and community members in overburdened and vulnerable communities.

The lack of basic necessities for community members who may be in crisis, and lack of action to help is another barrier to involvement for communities interested in comprehensive planning. Community members are often preoccupied with trying to meet their basic needs. Differences in priorities between community members and those in power, such as lack of focus on basic necessities like the price of food and stable housing, can generate cynicism in planning processes and create more barriers to community involvement in comprehensive planning.

Second, there is significant uncertainty regarding the efficacy of comprehensive planning. Organizations participating in the CLC expressed concern over the efficacy of community engagement in the comprehensive planning process. While they acknowledged the importance of community engagement in the process, they also expressed dissatisfaction over the lack of clear accountability or transparency in the process. Too often, feedback provided through community engagement processes appears to be ignored and sometimes misinterpreted.

These experiences contribute to exhaustion and cynicism about community engagement processes. If feedback appears to have minimal impact, this in turn raises questions about whether community organizations should focus their limited time and resources in these efforts.

Poor community engagement processes can undermine community trust. Respondents to one survey conducted in the CLC process shared that they believed that they were being impacted now by climate change. They shared concerns that their cities and counties will be unlivable or too expensive to live in within the next few years. But rather than engage with public planning processes that felt irrelevant to their experiences, they prioritized individual actions they could take to mitigate or adapt to climate change. For

example, attendees said they have taken to buying air conditioners and fans, or going to cooling areas, such as pools. This too is useful information for jurisdictions to consider.

Third, public participation in comprehensive planning processes should be more community-centered. Community members and leaders shared that local governments' outreach seems to vary across community demographics. There does not seem to be an equitable effort to include all stakeholders, regardless of their culture or language needs. Participants suggested that class and an intersection of identities are the root of this discrepancy and that it further harms their ability to access education or resources.

Communities that will be impacted by a particular plan or measure should have more decision-making power in what happens to their neighborhoods and how it is implemented. Communities, such as overburdened communities and vulnerable populations who bear greater systemic burdens, should have ample decision-making power to steward development in their areas. Indigenous tribes and Indigenous communities not recognized by the state or federal government should also be prioritized in decision making to empower their traditional knowledge and stewardship practices. The CLC emphasized the importance of prioritizing cultures that support the health of the environment.

Fourth, bridge short-term experiences and long-term priorities. Throughout the project, the CLC found that cities, and counties do not talk about the climate crisis in the present tense. More often, the impact of climate change is a somewhat theoretical issue. But participating organizations and leaders stressed that the climate crisis is happening now. Effectively engaging community members will require jurisdictions to both take into consideration the realities of people's lives, but it will also require them to communicate the relationship between current challenges, and how climate change may be shaping those experiences, not just in the future, but also in the present.

One of the biggest fears that came up in outreach efforts was the fear of displacement, including how climate change and climate-based disasters could force them to move from the communities they cherish. Community participants were eager to engage in discussions that considered the future in the context of present challenges facing communities.

The case for co-governance. Effective community engagement is difficult, but centering the perspectives and experiences of impacted communities can be transformational, in both shaping engagement processes, overcoming barriers, generating meaningful community input, and in building long-term support for priorities that reflect community priorities. Jurisdictions should be open to creative and novel solutions to overcome these obstacles.

Co-governance and education on the practice of co-governance should be integrated into the comprehensive planning process. Local governments should establish a commitment to the self-determination of communities, supporting communities to build their capacity to effectively participate in government processes, and in the process develop shared governing power in principles, processes, and results. Discussing weighty topics can be stressful on communities, especially when talking about policies or scenarios that directly affect a community when community members are not decision makers. Having space within communities to deliberate before interacting with government is critical. Community assemblies are one strategy to enable co-governance.

Community assemblies is a participatory democratic process that brings people together to articulate community needs with a focus on those furthest from economic well-being, assess solutions, and mobilize for action. Community assemblies bring together a group of people with a variety of life experiences that have been historically marginalized from decision making.

Evaluating Climate Measures for Justice

One of the charges of the Commerce Climate Program's budget proviso[70] was to prioritize measures for equity. There is no one way to determine if a measure itself is equitable. Jurisdictions must identify the overburdened communities and vulnerable populations in their planning jurisdictions and collaborate with those stakeholders to adequately determine if a measure would have disparate impacts. Front and Centered created the following matrix for jurisdictions and community representatives to evaluate the potential for equity for any measure and to identify necessary alterations to improve a measure through a just transition and an environmental justice lens.

[***Editor's note:*** *Each policy in Commerce's Menu of Measures is evaluated using the following criteria.*]

Equity Criterion Matrix: Scale of low, medium, high (low being least potential and high being greatest potential)

- **Co-governance:** Does the measure show potential to build self-determination for frontline communities of color and/or low-income communities?

  Sub-Considerations:
  - Are communities' most impacted identifying their needs and solutions?
  - Do they have the ability to meaningfully shape the decisions in implementation?

- **Targeted Benefits:** Is the measure clear on rights to healthy communities, and explicit in targeting interventions to communities furthest from achieving those rights?

  Sub-Considerations:
  - Do the goals and targets recognize our fundamental rights to healthy environments and communities?
  - Do the strategies prioritize those most facing highest cumulative impacts/risk?

- **Just Responsibility** (Accountability): Does the measure show potential to directly limit harm and holding those responsible? Does it prioritize effectiveness?

  Sub-Considerations:
  - Is the solution directly stopping the problem? Is it making anything worse?
  - Are those creating the greatest harm held most accountable?

- **Wealth Building:** Does the measure show potential to invest in and sustain local livelihoods, starting with communities with the greatest barriers to meeting their needs, through sustainable resource use and cooperative work?

  Sub Consideration:
  - Are we supporting production by local communities for local communities, based on a principle of using local resources and living wage labor?

Assessing Draft Climate Measures

At the previous section of this summary report, Section E: Engaging Priority Communities in the Planning Process, it describes how we gathered input on climate measures. The Community Leadership Committee

[70] A description of the full charge of the Climate Program is described at page 6, Introduction.

prepared a list of priority actions that were ranked at a statewide summit that was attended by over 100 community leaders from 60 CBOs. The Committee then finalized an order of prioritization of actions that are described in the section that follows. Staff used the Committee's prioritization to inform the supplemental description of measures and apply the criteria listed in the prior section to each of the measures gathered by the state, both of which appear in the Menu of Measures.

Recommended Actions for Climate Justice

The sections that follow share goals, guidance, and ranking for each category. The tables show the ranking of measures, the top being those that are the most priority for environmental and climate justice from the perspective of frontline communities. To create the rankings, FC staff first aggregated and translated the measures into common themes. Then the community leaders voted for the categories and measures that most aligned with their work, communities' needs, and overall coalition goals. Afterward, the CLC finalized the categories that are most urgent to the coalition, and the measures within those categories that are most impactful.

The top five categories of climate element measures prioritized by participants in the FC process are: Agriculture & Food Systems; Buildings & Energy; Economic Development; Health & Wellbeing; and, Cultural Resources & Practices The measures were inadequate in describing community priorities when narrowly focused on climate issues and not the broader community concerns.

The proposed climate element measures — though comprehensive in some ways — revealed major gaps that aren't necessarily addressed elsewhere in the GMA. Community partners requested more guidance, information, and context on the implications of measures on potential local choices. For example, in the case of infrastructure choices, community members requested that measures require greater clarity regarding how infrastructure investments impact climate. They also wanted more information about infrastructure decisions, including how they are paid for.

Agriculture & Food Systems

Farmworker health and safety should be taken into consideration for any measure in this category. Workers and those living and working in close proximity to agricultural processes, are more at risk to be impacted by the pollution and health impacts created by such processes.

Agroecology, or regenerative agriculture, is the relationship between nature and farming in an effort to create farming systems that prioritize long-term sustainability and traditional knowledge over short-term gains, and healthy food systems. Jurisdictions should consider how plans can enable cities, counties, and frontline communities in the development of systems that work with nature, without pesticides or fossil fuels, and that are resilient to climate impacts. These systems should be grown by farmworker owners, and be built to sustain difficult times. They should also aim to minimize carbon per nutritional value and cultural need, be distributed locally at low or no cost, and prioritize areas with least access and facing worse health outcomes currently.

Priority Actions
Regulate agricultural pollution and eliminate pesticides.

Use agroecology, agriculture land management and livestock practices for absorbing carbon, and resilience.
Preserve land for agriculture, recreation, open space, rural/wild.
Support and create structures to shift diets away from frequent, mass-produced meat and dairy toward local healthy foods.

Buildings & Energy

Plans should contemplate how to create fully weatherized, electrified homes built to manage energy demand and resilient to climate impacts in extreme heat or cold. Improvements to residential and non-residential buildings should be secured in trusts free from displacement, landlord decision-making, or rent increases based on climate improvements. And there should be guaranteed sufficient energy for home needs without excess, regardless of ability to pay. Conserve energy to reduce demand from generation sources. Meet resources needs through distributed solar covering every built environment surface, and remove damaging energy supplies and harmful proposals such as dams, nuclear, and other resources that cause other ecological or social harm. Consider how the plan can articulate these goals and support implementation with the measures without creating burdensome transition costs on consumers, especially low-income consumers.

Participants expressed curiosity and need for information on what it would mean or look like to transition away from fossil fuels and GHG emissions on the economy, on lifestyles, and on communities. Jurisdictions should prioritize energy conservation and then solar and renewable energy in communities where it's used to create more jobs and require these systems be sourced from lowest-impact materials. Additionally, this cost should not fall on the consumers, especially those who may already face economic disadvantages.

Jurisdictions should consider what hurdles renters may face in advocating with landlords or property owners to assist transition on residential buildings. Renters may fear retaliation from landlords or property owners for participating in jurisdictions' planning process. Jurisdictions should consider how renters can give feedback in ways that do not put them in jeopardy of retaliatory actions; feedback methods could include using anonymous surveys and caucusing at meetings so different audiences can share feedback in safe spaces.

Priority Actions
Buildings
Preserve people's ability to stay in their community and prevent displacement from gentrification and hazards exacerbated by climate change.
Design, build, change buildings for energy conservation, solar, and to withstand climate impacts.
Maximize use of existing buildings.

Provide energy assistance and prevent shut-offs based on income.
Phase out fossil fuels from heating and appliances and convert to high-efficiency electric.
Support conversion from "natural" gas (methane-producing) energy source.
Generation
Support the transition to renewable energy sources that can weather climate impacts.
Build solar energy in communities where it's used, avoid long transmission.
Create energy limits that cap high energy users where feasible and require use of renewable sources where high energy use is unavoidable.

Economy & Finance

Plans should enable a future where cities and counties have small community-owned and producer/consumer cooperative businesses that meet most local needs without the risks of dependence on the global supply chain. They should also reimagine plans to create local economies that prioritize businesses, especially those that reduce the racial wealth gap, provide livable wages, and phase out industries that harm human and environmental health while providing support and just transition for workers.

Comprehensive plans should reflect these needs and integrate frontline communities' vision into each element. Jurisdictions should avoid strategies that prevent bonuses for large businesses that are not environmentally friendly. Instead, they should prioritize support to essential businesses that are independently and locally owned, and serving local communities. Workers' well-being, both in and out of the workplace, should also be prioritized.

Priority Actions
Identify and enact social safety nets around housing and poverty that reduce economic inequalities to provide resilience to climate impacts.
Support essential local-serving, independently owned businesses' ability to operate through climate impacts.
Expand worker control and ownership and better distribute work opportunities and support locally owned businesses.
Support workforce to transition from climate-impacted jobs.

Using zoning and permit authority, limit siting of industries that pollute and do not provide incentives for expansion.

Cultural Resources & Practices

Jurisdictions should seek guidance from leaders indigenous to the land, inform and consult with tribal nations on issues affecting tribes and tribal lands, and seek wisdom of traditional cultural practices. This work must include perspectives from immigrant and refugee communities and those closest to the land.

Cultural and resource lands should be made into public trust or tribal stewardship. Jurisdictions should recognize and celebrate traditional practices and relationships between human cultures and ecologies. Indigenous populations should have access to natural lands and waters without substantial harm from polluting entities or interruption from jurisdictions.

Priority Actions
Preserve culturally important sites and foods from climate impacts.
Recognize and incorporate cultural forms of conservation and adaptation.
Establish Legal Rights of Nature for protection of natural resources whether ascribed value is attached.

Ecosystems

Plans should prioritize identification of frontline communities that lack ecosystems (forests, wetlands, and eelgrass meadows) that capture carbon in/or near them. This information should be met with provisions for public access to restored lands such as former Superfund sites. Jurisdictions should prioritize ecological restoration and equity that buffers climate impacts (including sea level rise, flooding, and extreme heat) in frontline communities.

Priority Actions
Build resilience to climate through ecological solutions, such as trees that prevent erosion and other co-benefits.
Use land and plants to absorb carbon pollution — and restore wetland, forest, and seagrass ecosystems and prioritize this work in frontline communities.

Emergency Management

Plans should contemplate how residents and workers can be fully prepared and informed about relevant cultural and language information and response systems for emergencies in their jurisdictions. Community-based organizations (CBOs) should be integral in the planning of resilience hubs, and building emergency plans for their local areas. An example of this would be collaboration between CBOs and emergency service providers so that there can be more efficient rescue and assistance in times of need.

There should be a prioritization of households and vulnerable communities with least mobility and information to receive support before, during, and after emergencies. BIPOC (Black, Indigenous, People of Color) and low-income communities often suffer the worst in emergencies, because they do not receive assistance first and do not have the same infrastructure as more affluent communities or those with more political and societal power. Jurisdictions should account for this by eliminating disparities in infrastructure and information and by working with community-based organizations in these neighborhoods.

Priority Actions
Create places in a community to go to in emergencies such as for shelter and resources when there is a natural disaster.
Provide government/first responder training, coordination to better prepare for natural disasters and to ensure that emergency response is equitable.

Materials & Waste Management

Reducing material waste requires a cultural shift by addressing consumer culture and power of markers and creation of need. Both consumer and producer waste reduction requires better product standards for durability and producer responsibility and creating shared-use models rather than private or individual ownership.

Plans should build on practices of Indigenous communities and traditional knowledge of immigrant and refugee communities. These can have many benefits such as the conservation of natural and built materials. Jurisdictions should also create plans that require reductions in material inputs and waste starting with wealthiest and most prolific.

Additionally, jurisdictions should also support entrepreneurs in a circular economy and provide public infrastructure for reuse. There should be plans to provide education targeted to overburdened communities and vulnerable populations for this. There should also be emphasis on circular production methods and bans on hazardous materials with research into alternatives that maintain accessible use.

Priority Actions
Reduce, reuse, and recycle materials and waste.
Reduce and limit material consumption and shift toward craft economies.

Governance & Health

Achieving equitable co-governance of frontline communities with government sector agencies can embed a worldview of care and sacredness over consumerism and shift to deeper participation.

Co-governance requires a commitment to the self-determination of communities, supporting communities to build their capacity to effectively participate (in government processes), developing shared governing power in principles and in process, Demonstrating equitable processes and results. Jurisdictions should adopt

provisions of the HEAL Act [*referenced in Section 2*] and develop equitable community engagement plans, environmental justice implementation plans, and integrate environmental justice into budgeting and spending, and conduct environmental justice assessments of major regulations and ordinances, capital projects, and other decisions.

Priority Actions
Advance community control of land and resources, to include participatory budgeting of public funds.
Create pathways for communities who are most impacted to shape decisions that affect them.
Advance environmental justice by prioritizing health first, assuming risk prior to action, and targeting solutions to the most impacted.
Prevent privatization and fencing-off of common spaces.
Build community capacity for climate and Environmental Justice.

Transportation

There should be reliable, accessible, and frequent public transportation that contemplates local use as well as cross-city and county use. Sidewalks, crosswalks, and bike paths should be commonplace and have a set quality standard such that anyone can use them without fear of injury or immobility.

Consider both cultural and practical implications of transportation projects. For example, electric vehicle (EV) chargers may signify displacement and harm to some communities or lack of chargers can mean exclusion for others — particularly in multifamily buildings. Measures that create limits or disincentives to driving or driving alone should require a diagnosis of who may be unfairly impacted by such plans. Telework may not be applicable or equitable based on other factors such as living space or internet access. Further, public transportation is not ideal for, workers with night shifts or with families. These populations may be negatively impacted by plans and policies that over prioritize carbon minimal options such as telework. Likewise, improving public transit service so that there is accessible transportation at all times of day would support non-drivers.

Priority Actions
Make it easier to not need a car by designing walkable neighborhoods and providing affordable public transportation.
Reduce fossil fuel vehicle miles by switching to electric and create EV charging stations near residences.

Create limits or disincentives to driving, or driving alone.

Water Resources

Plans should aim for jurisdictions where there is safe, accessible, and adequate drinking water for every household. Waters should also be clean for marine habitats. This can be achieved through intensive conservation, demand management, publicizing water rights, and thriving saltwater ecologies.

Plans should be attentive to local contexts and communities affected by interventions. These impacts may displace communities and/or make their lives substantially harder. Jurisdictions should contemplate how water resources can be maintained and improved without a disproportionate impact on any community — but especially frontline communities.

Priority Actions
Change water rights, from private into public trust.
Protect water from pollution by holding the polluting industry accountable.
Ensure water systems can withstand climate impacts.
Plan and fund water systems for droughts and to reduce water consumption.
Use reclaimed water.

Zoning & Development

Plans should have zoning and development built into land trusts for common use and removed from speculative markets that create perverse outcomes for communities and climate outcomes. Plans and policies should prioritize public mobility and space over roads. This will build connections for community resilience and reduce auto-dependency.

Priority Actions
Prevent climate-risky development; avoid hazardous areas, use climate appropriate design to reduce emissions, improve resilience, and be relocation ready.
Build dense, affordable communities around public transportation.
Create and preserve open space, tree and green space, restore green infrastructure.
Build low-impact developments that are solar-ready.

Plan for people to move and migrate.
Create climate and pollution safe areas.

Conclusion

How local governments approach climate change — and the pollution that is causing it — in their planning processes is a critical issue for all Washington residents. Through the Uplift Communities Project, Front and Centered was asked to provide a model and best practices for centering equity. It is only through centering vulnerable communities and the principles of Just Transition that jurisdictions engaged in comprehensive planning can effectively mitigate the impact of climate change and adapt to its impacts. There are tools available to jurisdictions and communities to meet the challenges facing our climate and our communities [*see Section 2*].

We offer these approaches as a model for innovating the comprehensive planning process, but more innovation is possible if jurisdictions center the needs, experience, and aspirations of impacted communities in their important work.

B. Climate Element Workbook

See Commerce Dashboard

C. Best Practices for Integrating Climate into Hazard Mitigation Plan

Hazard mitigation planning is the foundation of community resilience, FEMA explains, because it encourages the development of a long-term mitigation strategy.[71] The planning process spurs local jurisdictions to identify risks that hazards pose for assets and to develop policies before a disaster occurs. This potentially lessens the impacts to people and property and makes it easier to recover from hazard events.

Local governments must prepare a natural hazard mitigation plan (hazard mitigation plan) and update it every five years to be eligible for certain types of non-emergency disaster assistance, including grants to mitigate floods.[72] Such plans must undergo review by the Washington Military Department's Emergency Management Division and the Federal Emergency Management Agency (FEMA). FEMA will grant approval of a hazard mitigation plan if it meets minimum federal requirements. Once approved, the hazard mitigation plan provides eligibility for certain FEMA grants. The state of Washington also has a hazard mitigation plan, and that document could be a resource for local jurisdictions.

> "Acknowledging the risk of future incidents builds a risk-conscious culture that enables community leaders to routinely and systematically evaluate a wide variety of threats and hazards. However, future conditions are not necessarily reflective of past conditions, requiring a consideration of science-based data and expertise to help inform decisions. Community leaders can then prioritize strategies, resources, and efforts using a well-informed comprehensive approach to preparedness."
>
> — **FEMA,** National GHG reduction Framework

FEMA Planning Framework for Hazard Mitigation Plans

While there is no required format for a hazard mitigation plan, federal regulations require that it include: [73]

- Documentation of the planning process, which must include an opportunity for the public to comment on the plan during the drafting stage and prior to final approval;
- A risk assessment that provides the factual basis for activities proposed to reduce losses from hazards that can affect the jurisdiction. The assessment must describe the type, location, and extent of all natural hazards that can affect the jurisdiction, as well as include information regarding previous occurrences of hazard events and the probability of future hazard events;
- A mitigation strategy that provides the jurisdiction's blueprint — action plan — for reducing potential losses identified in the risk assessment;
- A plan maintenance process that includes: the method and schedule for updating the plan within a five-year cycle; a discussion of how the jurisdiction will be engaged in the plan's maintenance; a process by which local governments incorporate the plan's requirements into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate; and, documentation that the mitigation plan has been formally adopted.

FEMA Requirements for Assessing Climate in Hazard Mitigation Plans

Climate change affects the characteristics of hazards and severity of impacts. For example, rising sea levels associated with warmer temperatures and melting polar ice raise the risk of coastal flooding in Puget Sound jurisdictions and increase the vulnerability of low-lying roads and buildings (assets) to impacts.

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[71] FEMA circular (2017), Planning For a Resilient Jurisdiction: A 4-Hour Workshop For Planners
[72] FEMA website (2022), Hazard GHG reduction Plan Regulations & Guidance
[73] Title 44 Code of Federal Regulations (CFR) §201.6

As of April 2023, FEMA requires that all updated local hazard mitigation plans' risk assessments must include the effects of future conditions, including population, land use, development, and climate change. Section 4 of the FEMA's Local Mitigation Planning Policy Guide (Policy Guide) specifies FEMA's requirements (elements) for climate assessment, equity inclusion, policy prioritization (needs to consider costs, etc.), and plan implementation, which can include integrating policies into a comprehensive plan. FEMA's companion Local Mitigation Planning Handbook helps local governments meet the Policy Guide's requirements and provides useful approaches to reducing vulnerabilities and long-term risk from natural hazards and disasters. FEMA's Climate Adaption Planning Guidance for Emergency Managers can help local emergency managers incorporate climate adaptation into emergency management planning efforts.

To help Washington's cities and counties with this work, FEMA conducted a crosswalk of its Policy Guide with Commerce's climate resilience sub-element planning guidance [*see Appendix D*]. Commerce also summarized below HB 1181's requirements for integrating an updated hazard mitigation plan into a comprehensive plan.

Integrating a Hazard Mitigation Plan into a Comprehensive Plan

A city or county's comprehensive plan may adopt by reference [74] a local hazard mitigation plan that is guided by the new GMA climate and resiliency goal, prioritizes actions that benefit overburdened communities, and complies with the applicable requirements of RCW, Chapter 47.80. If the jurisdiction's hazard mitigation plan adequately addresses the climate resilience sub-element as specified in HB 1181 (Chapter 228, Laws of 2023), then it is compliant with meeting the requirement.

If the jurisdiction's hazard mitigation plan inadequately address HB 1181's climate resilience sub-element requirements [*See HB 1181, pg. 18*], then the city or county must supplement the hazard mitigation plan with additional goals and policies in its comprehensive plan [*See planning guidance's Section 3 for how to do this*].

Commerce may grant a time extension to a city or county that intends to adopt by reference a hazard mitigation plan that does not comply with the climate resilience sub-element requirements. HB 1181 stipulates the following:

- Eligibility for an extension prior to July 1, 2027, is limited to a city or county required to review and, if needed, revise its comprehensive plan on or before June 30, 2025, as provided in RCW 36.70A.130, or for a city or county with an existing, unexpired hazard mitigation plan scheduled to expire before Dec. 31, 2024.
- Extension requests after July 1, 2027, may be granted if requirements for the resilience sub-element are amended or added by the Washington Legislature or if Commerce finds other circumstances that may result in a potential finding of noncompliance with a jurisdiction's existing and approved hazard mitigation plan.
- A city or county that wishes to request an extension of time must submit a request in writing to Commerce no later than the date on which the city or county is required to review and, if needed, revise its comprehensive plan, as provided in RCW 36.70A.130.
- Upon the submission of such a request to Commerce, the city or county may have an additional 48 months from the date provided in RCW 36.70A.130 in which to either adopt by reference an updated hazard mitigation plan or adopt its own hazard mitigation plan, and to then submit that plan to Commerce.

[74] See pg. 18 of HB 1181

- The adoption of ordinances, amendments to comprehensive plans and development regulations, and other non-project actions taken by a city or county are not subject to administrative or judicial appeal under Chapter 43.21C RCW.

D. Crosswalk Comparison of FEMA and Commerce Guidance

(See Commerce Dashboard)

E. Climate Change Resources

(See Commerce Dashboard)

F. Sample RFP for Greenhouse Gas Inventory

Greenhouse Gas Emissions Inventory Request for Proposals (RFP)

Project Title: Greenhouse Gas Emissions Inventory

Proposals Due: X:XX PM MO/DD/YYYY

_____ is requesting proposals from qualified consultants to develop a baseline greenhouse gas emissions inventory (GHG Inventory) for _____.

Proposals should include:

- General statement of the Consultant's understanding of the scope of services;
- Project team, including proposed sub-consultants;
- Project team's experience in GHG inventories and related tasks;
- Experience of the proposed project manager education and individuals who will be working on the project;
- Proposed task list and level of effort for each task;
- Schedule for completing the project;
- Description of the Consultant's approach to managing and completing the project;
- Description of the Consultant's approach to communicating with the client(s).

Submission Instructions:

- The City will only accept proposals in _____ format. Submit the proposal to: email@city.gov
- Proposals must be presented as a single, combined file that contains all proposal materials and any supporting documents.
- Proposals are due no later than_____. Late proposals will not be accepted. Applicants are solely responsible for ensuring that proposals are submitted and received on time. Applicants will receive an email acknowledging _____'s receipt of their proposal.
- Questions related to this RFP should be submitted via email to: email@city.gov.

Any firm failing to submit information in accordance with the procedures set forth in the Request for Proposals may not be considered responsive and may therefore be subject to disqualification.

Introduction

_____ is seeking a consultant or team of consultants ("Consultant") to conduct a GHG inventory. This Request for Proposals ("RFP") outlines the information necessary to understand the Consultant selection process and the required documentation a Consultant must submit. After reviewing this RFP, any Consultant that determines it has the necessary expertise and experience and could successfully perform the required services may submit its Submittal, addressing the items set forth herein. A general overview of the selection process is as follows:

1.1. Submittals shall be emailed to _____ no later than X:XX on MM/DD/YYYY, after which time they will be reviewed and evaluated. The Submittal shall be emailed to: email@city.gov

1.2 _____may, at its option, contact a Consultant and ask clarifying questions concerning the Consultant's Submittal.

1.3 _____ may conduct interviews with consultants qualifying as finalists.

The purpose of this RFP is to obtain a qualified Consultant to provide professional services to develop a baseline GHG inventory for _____ [and/or] community emissions. A preliminary scope of services is provided as follows.

Project background

2.1 Scope of Services

_____ is seeking technical assistance in developing a baseline GHG inventory for _____ [and/or] community emissions.

2.2 Background

[Insert text describing your jurisdiction's goals for reducing greenhouse gas emissions, the role of the inventory in supporting those goals including tracking GHG emissions on an ongoing basis. Also describe the Scope of the GHG inventory requested, including whether it addresses both jurisdictional operations and community activities, or is limited to one or the other. If desired, add additional context: as to how this fits into your jurisdictional planning process, if there are advisory committees or task forces engaged to provide review of this inventory, and how your jurisdiction will work with the consultant in terms of providing data for the GHG inventory.]

2.3 Scope of Work

_____is seeking a consultant or team of consultants ("Consultant") to conduct a GHG inventory. The GHG inventory project will consist principally of [insert number] main tasks; Consultant and _____ responsibilities for these tasks are described below. In their proposals, Consultants are encouraged to provide a detailed technical and project management approach that incorporates and expands on these tasks.

Define Methods

The GHG inventory shall be developed in accordance with [protocol of your choosing or you may ask the consultant to define, for example, the ICLEI US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (Community Protocol)]. _____seeks a GHG inventory that is transparent, replicable year-over-year, and allows for future benchmarking to regional and other municipal inventories. Components of the GHG inventory that will be defined include, but are not limited, to:

- Selection of the base year;
- Confirmation of data sources, calculation methods, emissions factors, context data, and analytical tools; and
- Confirmation of categories for GHG tracking and reporting, including emission sources and activities that will be included and excluded. GHG emissions should be reported for major sectors (for example, residential, commercial, industrial, transportation, waste).

[Define the scopes or types of emissions to be included (for example, jurisdictional, community, or both)]

In consultation with _____, the Consultant will recommend a process for selecting which GHG emissions sources and activities to include in the GHG inventory beyond the five "Basic Emissions Generating Activities" prescribed by the Community Protocol. Additional components may include:

- Emissions from community air travel;
- Communitywide consumption-based emissions (including upstream GHG emissions associated with consumption of household goods, food, and services);
- Net emissions and/or sequestration from agriculture, forestry, and other land use activities.
- The Consultant should propose options (for example, identify possible methods and data sources) for including these components in the inventory, along with estimated time and cost associated with such options.

Data Collection

The Consultant will collect data necessary for developing the GHG inventory. _____ will review the Consultant's data needs and provide assistance in locating data owned by _____. The Consultant will lead collection of data from utilities and other entities; _____will assist where possible. The Consultant will identify and review any energy and/or GHG analysis conducted by entities that have a footprint in _____. _____ is open to considering the Consultant's use of innovative data collection approaches for community sectors, such as crowdsourcing or surveys, including for consumption-based emissions estimates.

Data Analysis

Based on the agreed upon methodology, the Consultant will calculate baseline energy usage and emissions for [municipal operations and/or the community]. Analysis must be done using non-proprietary methods and all assumptions, calculations, data sources, and key contacts must be made available to_____ at a minimum, the analysis will calculate emissions in each municipal operations and community category as well as combined emissions.

GHG Emissions Report

In consultation with_____, Consultant will recommend frameworks for presenting and reporting GHG emissions data in accordance with [Insert the Protocol you wish the consultant to follow, if you have a preference]. The Consultant will prepare a report that textually and graphically presents the GHG inventory and identifies emissions over which _____ may have significant influence [as well as additional communitywide emissions]. When possible, _____will provide content, such as photographs and quotations. The report will identify top-priority sources of GHG emissions for which reduction strategies could be developed in later phases of _____'s climate change planning process.

Training and Tracking

In addition to providing base year GHG emissions, this effort is intended to supply_____ with the means to update the GHG inventory on an ongoing basis. The Consultant will provide_____ with the information and materials necessary to replicate the GHG emissions calculations used for the base year GHG inventory, track progress, and generate reports. The Consultant will provide_____ with an electronic version of the base year analysis. The Consultant will hold training sessions (no less than [insert number]) for _____ staff to learn how to update the inventory.

Project Management

_____ [or the Office of_____] will oversee the work of the Consultant. [The Sustainability Task Force will serve in an advisory capacity, as its members are charged with providing advice and/or

recommendations to the city council or city staff, as appropriate, related to the City's GHG emission reduction targets]. During the project, the Consultant will be available for XX meetings to provide project status updates to and answer questions from_____ [and the Sustainability Task Force].

2.4 Specifications and Requirements

A. Consultant Capabilities

_____ is seeking a Consultant who has experience conducting similar GHG analyses for other municipalities. Consideration will be given to the Consultant's ability to demonstrate knowledge transfer to municipal clients in terms of their success in updating initial GHG inventories. _____ is seeking to capitalize on our community's great interest in climate by engaging stakeholders with a thoughtful, creative, and understandable GHG emissions report. The Consultant should be capable of producing both sound analysis and high-quality reporting materials. The scope of services for this RFP does not include the development of GHG reduction strategies, as this will be a principal activity in the upcoming climate change planning process; however, Consultants with experience in GHG reduction strategy are encouraged to demonstrate in their proposals how their approach to the baseline inventory and projections may provide advantages in future phases of the climate change planning process.

B. Existing Data

_____ will provide the Consultant with reports and data, including the following:

[Insert a list of the data sources expect to be made available for consultants. This could include things such as municipally owned vehicles and their fuel consumption, jurisdictional buildings and their square footage, and relevant land use and zoning data that might be relevant for a community-scale inventory]

3. PROCUREMENT PROCESS

General information: [Insert jurisdiction's legal requirements and expectations regarding costs borne by consultants, public disclosure, and other processes set by the contracting jurisdiction]

4. Schedule

Anticipated schedule. The selection process is anticipated to proceed as follows and is subject to change: [Insert your schedule for submittal review, interviews if necessary, and final selection]

Notification. _____will notify appropriate firms of changes in RFP and Notice of Selection

Addenda. [Insert a description of the process for informing consultants of changes to the RFP]

Negotiations [Insert the process for negotiating cost and pricing, billing process, and establishment of the SOW and project schedule]

Cost and Pricing Data [Insert requested information related to Consultant firm's salaries, overhead, markups and billing rates]

Insurance requirements of the selected Consultant [Insert insurance requirements]]

5. Evaluation and Selection Criteria

[Insert the jurisdiction's process for evaluating and interviewing applicants]

6. Documentation

[Insert the jurisdiction's requirements regarding the format, length, and components of the application required, including the letter of interest and statement of qualifications]

APPENDIX: AGREEMENT FOR PROFESSIONAL SERVICES

[Insert the jurisdiction's agreement language here, including insurance requirements]

G. Summary Report: Climate Resilience Pilot Program

(Prepared by Cascadia Consulting Group Inc. on April 28, 2023)

Executive Summary

Project Background

The Washington Department of Commerce (Commerce) contracted with Cascadia Consulting Group (Cascadia) and BERK Consulting (BERK) to test and evaluate the resilience sub-element guidance through a climate pilot program (pilot program). The pilot program was designed to guide three jurisdictions — Port Angeles, Pullman, and Woodland — through the resilience guidance to demonstrate proof-of-concept and identify ways to improve the resilience guidance and its companion tools. The consultant team used findings and key takeaways of the pilot program to develop recommendations for improving the usability and effectiveness of the resilience guidance and its companion tools, as well as the overall process of resilience sub-element integration. Commerce subsequently added bracketed and italicized "Editor's notes" throughout this summary report to indicate how the state agency addressed the consultant team's recommendations in the final climate element planning guidance published in 2023.

Evaluation Approach

The pilot program team (project team) — which consisted of Commerce, Cascadia, and BERK — developed and administered pre-pilot and post-pilot program surveys to each of the pilot jurisdictions to capture feedback about the usability of the resilience guidance and understand how each jurisdiction's capacity and staffing constraints impacted their ability to integrate the resilience sub-element during the pilot program. Following the pilot program, the project team conducted semi-structured interviews with each jurisdiction to dive deeper into survey responses and learn more about their reflections on the process and recommendations to improve the resilience guidance. The project team also utilized regular team check-in notes documenting real-time modifications for each jurisdiction's needs and lessons learned throughout the course of the pilot program to inform evaluation findings.

Key Takeaways

The project team identified a few key areas for improvements to the step-by-step resilience guidance and resilience sub-element integration process:

- Overall, the resilience guidance and its companion tools were clear, accessible, and user-friendly.
  - The resilience guidance workbook would benefit from inclusion of real pilot program examples throughout the step-specific tabs. [***Editor's note:*** *Commerce integrated pilot city examples into the workbook to show other jurisdictions how they could complete guidance tasks and fill in workbook tables.*]
- Jurisdictions should supplement county-level climate impact data collected via the University of Washington Climate Impacts Group's (CIG) web-based companion tool (webtool) with more granular, localized climate data. [***Editor's note:*** *Commerce revised Section 3, Task 1.2 of the planning guidance, instructing jurisdictions to start by reading summarized climate information from statewide or regional reports (linked above) and their local hazard mitigation plan to understand assets' current exposure and vulnerability. In addition to linking to UW CIG's how-to guide for using its CMRW webtool, this revised task links to other resources with localized climate data.*

- The model climate element should include a foundational project planning framework that includes an organizational assessment and instructions and templates for developing a project team and process, with suggested interim goals and timeframe considerations. [***Editor's note:*** *Commerce revised the planning guidance to have a standalone section (Section 2) that instructs jurisdictions how to form a project team and planning process for developing and adopting a climate element over roughly 18-24 months. The companion workbook (Tasks 2.1 and 2.2) provides template tables for listing project team members and community stakeholders.*]

- Integrating the resilience sub-element into comprehensive planning would be significantly more difficult for jurisdictions, if not impossible, without additional capacity and/or climate expertise and support. This is particularly the case for smaller, capacity-constrained jurisdictions, as well as jurisdictions that do not have a robust history of climate planning or are in the early stages of that process. [***Editor's note:*** *Commerce revised Section 3, Task 2.2 to better explain the tradeoffs of pursuing each of the planning and policy-development pathways, factoring in time, budget, and staff capacity. We underscore that a jurisdiction may want to seek outside funding and technical assistance (for example, from a consultant) to complete a vulnerability and risk assessment.*]
    - Commerce should consider additional support mechanisms for providing technical support to smaller, capacity-constrained jurisdictions, including development of training webinars and workshops, hotline support, and additional grant funding opportunities that allow for additional technical assistance. [***Editor's note:*** *This recommendation validates the purpose of the pilot program and supports Commerce's plans for providing future assistance, including grants and technical assistance.*]
- Additional resources that would be useful for successful resilience sub-element integration include:
    - Climate change and impact factsheets that are clear and accessible to the public and lay persons to increase community awareness, buy-in, and understanding around value and need for climate consideration integration into city and countywide planning processes. [***Editor's note:*** *In the full planning guidance and its companion online resources list, we link to such information (for example, Commerce and MRSC climate planning portals, APA climate planning guides). This recommendation also supports Commerce's plans for providing future assistance to local jurisdictions.*]
- Recorded tutorials that demonstrate the use of the resilience guidance, web-based companion tool, and workbook. [***Editor's note:*** *This recommendation echoes feedback we've received from Front and Centered. As Commerce and its partners (for example, UW CIG, MRSC) develop print and video tools, we will integrate them into this document's companion Resources list.*]

Pilot Program Overview and Goals

To test the integration of the resilience sub-element into comprehensive planning, Commerce contracted with Cascadia and BERK to evaluate the usability and effectiveness of its resilience guidance and companion tools and resources. Commerce and the consultant team strategically selected three pilot jurisdictions — Port Angeles, Pullman, and Woodland — to help demonstrate and evaluate the resilience guidance and process.

The resilience guidance and companion tools are designed to help jurisdictions identify and address natural hazards exacerbated by climate change, including floods, droughts, wildfires, and other impacts stemming from relevant climate change drivers (for example, changes to temperature, precipitation, and sea levels)

through policy and goal development. The companion tools include a county-level webtool[75] to help identify expected changes in the climate and related natural hazards, as well as the Climate Element Workbook (workbook) designed to help jurisdictions track and document findings and key decisions throughout the process.

The evaluation approach, objectives, and results are discussed in the subsequent sections of the report.

Pilot Jurisdiction Recruitment

The recruitment phase of the pilot program occurred in August and September of 2022. To select three Washington jurisdictions for the pilot program, cities were initially evaluated against a set of individual criteria. Individual criteria and rationale are presented in Table 1.

Table 1. Individual criteria for pilot jurisdiction selection

Criteria	Rationale
Not located within the ten most populous counties.	Evaluate ability of smaller, potentially resource-constrained jurisdictions to integrate the resilience sub-element
Comprehensive plan update deadline is near-term.	Prioritize support for jurisdictions with upcoming deadlines
Planning staff capacity is moderate or high.	Ensure sufficient capacity to effectively participate in the pilot program

Those jurisdictions that passed the initial set of criteria were then evaluated against a second set of group criteria. The project team selected group criteria to ensure pilot jurisdictions are geographically and demographically varied, with:

- Varied population representation of vulnerable groups including Black, Indigenous, and people of color (BIPOC) and low-income communities, elderly persons, and those with chronic health conditions or disabilities.
- Diversity of climate impacts and exposures including wildfire risk, sea level rise and coastal flooding, riverine flooding, extreme heat and drought, and/or reduced snowpack and streamflow.

The project team used an Excel database to evaluate a total of 40 qualifying jurisdictions based on the selection criteria and arrive at five top-ranked jurisdictions. After inquiring with planning department leads, two of the top-ranked jurisdictions declined to participate due to limited staff capacity. The City of Port Angeles, City of Pullman, and City of Woodland elected to participate in the pilot program.

Table 2 illustrates selection criteria for each of the three jurisdictions. To learn more about the selection and recruitment process, refer to Jurisdiction Selection Memo found in the "**Pilot Project Materials** section of the report.

75 See University of Washington Climate Impacts Group's web-based companion tool, Climate Mapping For A Resilient Washington, available: https://cig-wa-climate.nkn.uidaho.edu/.

Table 2: Key criteria for selecting the three pilot jurisdictions

Pilot Jurisdiction Selection Criteria	Pullman	Port Angeles	Woodland
Population	32,827	20,134	6,540
Comprehensive plan periodic review deadline	2027	2025	2026
County	Whitman County	Clallam County	Cowlitz County
Geographic region	Southeast	Northwest	Southwest
Demographic notes[76]	Mid-size jurisdiction, 33.6% poverty rate 29.3% people of color	Mid-size jurisdiction, 11.5% poverty rate, 18.6% people of color	Small-mid-size, 7.4% poverty rate, 27.5% people of color
Potential climate impacts and vulnerabilities	Riverine flooding, wildfires and smoke, extreme heat	Sea level rise, wildfire smoke, extreme heat, water scarcity	Wildfires and smoke, extreme heat, water scarcity, riverine flooding

Pilot Program Process

In October of 2022, the project team began the resilience guidance implementation phase of the pilot program by holding project kick-off meetings with each of the three pilot jurisdictions. Key objectives of the kick-off meetings were as follows:

- Share overview and goals of the pilot program.
- Clarify jurisdiction roles in participating in the pilot program.
- Review steps in the resilience guidance and develop planning process for the pilot program.

Throughout the course of the resilience guidance implementation phase of the pilot project (October 2022 - February 2023), the project team worked with pilot jurisdictions to implement each step of the resilience guidance. The project team utilized the companion workbook to guide the implementation of each step. Each step and associated tasks of the resilience guidance have a corresponding tab with instructions and templates for capturing findings and decisions.

Table 3 gives an overview of the overall pilot program timeline, including timing of each resilience guidance step and a description of how it was implemented.

[76] US Census Bureau Quick Facts 2021

Table 3: Description and timeline of implementation for each step of resilience guidance

Steps	Timeline	Description of step implementation
Step 1: Develop planning process	October 2022	Step 1 guided the setup of the resilience guidance pilot process. Each jurisdiction selected up to two staff leads to partner with the project team in pilot program participation. The jurisdiction co-leads and project team established a program timeline, communication platforms, and bi-weekly check-ins meetings. The project team managed the project timeline, led agenda development, and provided meeting notes with actions items for each check-in. With project team guidance, jurisdiction co-leads developed goals and guiding principles to help define pilot project outcomes.
Step 2: Explore climate impacts	November-December 2022	Step 2 provided the pilot cities with time to explore anticipated changes in the climate and associated hazards by utilizing CIG's webtool for each jurisdiction at the county-level scale. The project team reviewed trends under the high emissions scenario for the early, mid, and late century and used their climate expertise to interpret the climate projections and findings. Jurisdiction co-leads helped contextualize climate impacts for their local jurisdictions, in terms of on-the-ground environmental conditions, lived experience of staff and community members regarding hazard and climate events, and prior planning efforts to address those impacts.
Step 3: Audit plans and policies	November-December 2022	Step 3 was used to identify existing plans with climate resilience goals and policies from each jurisdiction and determine whether to pursue a risk and vulnerability assessment (RVA) in step 4. The project team led the existing plan audit, with jurisdiction co-leads reviewing the audit results for gaps. Due to the ambitious timeline pursued for the purpose of this pilot, the consultant team and pilot jurisdictions were unable to seek additional funding and partners or develop a robust engagement strategy.
Step 4: Assess vulnerability and risk	December 2022 - January 2023	Jurisdictions that decided to pursue a vulnerability and risk assessment (VRA) in Step 3 focused on one climate hazard and a set of critical assets impacted by that hazard. Commerce, with support from the consultant team, led the VRAs by helping jurisdictional staff members characterize and assess the sensitivity, adaptive capacity, vulnerability, and risk of each asset-hazard pair. The VRA helped the jurisdictions to identify assets with the highest relative risks and to tailor climate policies for their comprehensive plan.
Step 5: Choose pathway to adapt and/or adopt goals and policies	January - February 2023	Step 5 was used to develop draft goals and policies for integration into comprehensive plans. Each jurisdiction's process differed depending on their history of climate planning and whether they had existing policies that address climate priorities. Overall, all three chose to integrate some existing policies from other city planning efforts and adopt policies from Commerce's Menu of Measures. The project team compiled a draft list of goals and policies and cross-walked each policy for potential co-benefits, such as air quality improvement, emissions reductions, and equity benefits. Jurisdiction co-leads reviewed and edited draft goals and policies. The project team assisted co-leads in presenting draft goals and policies forward to Planning Commissions and the public for initial feedback.

Steps	Timeline	Description of step implementation
Step 6: Integrate goals and policies	February 2023	In the final step, the project team integrated feedback from each jurisdiction's Planning Commission to revise draft goals and policies. Once finalized, each jurisdiction will decide where it intends to integrate its climate resilience goals and policies in its comprehensive plan. Based on City Council direction, each jurisdiction may choose to list all of its climate element goals and policies into one climate chapter or may choose to integrate them into several chapters/elements (Land Use, Housing, Transportation, etc.).

Pilot Program Evaluation Approach

Using the following objectives to guide evaluation, the project team assessed jurisdictions before, after, and throughout the course of the pilot program:

- Evaluation Objective 1: Demonstrate integration of the resilience sub-element into comprehensive plans within three small-medium sized cities that represent a diversity of climate, geographical, and planning contexts.
- Evaluation Objective 2: Improve the usability and effectiveness of the six steps of the resilience guidance.
- Evaluation Objective 3: Understand the impact (if any) of the pilot program process and project team support on improving the ability of the pilot cities to integrate climate into comprehensive planning.

The findings and key takeaways gleaned from assessment of objective outcomes were used to prepare recommendations to improve the (1) resilience guidance and its associated companion tools, and (2) the overall process for integrating the resilience sub-element into comprehensive planning.

Evaluation Sources

The project team elicited input and reflections from the jurisdiction co-leads during the initial stages of the pilot program, throughout each step of the resilience guidance implementation, and at the end of the pilot program. Feedback from jurisdictions was captured through the following efforts:

- Pre-pilot and post-pilot program survey administered to jurisdiction co-leads in the early stages of the pilot program (November 2022) and at the close of the pilot program (February-March 2023).
  - The objectives of the surveys were to (1) elicit feedback on usability of the resilience guidance and associated tools and opportunities for improvement and (2) understand the expertise and capacity of each jurisdiction to implement the resilience guidance.
- Bi-weekly check-ins throughout the pilot program with jurisdiction co-leads.
  - The consultant team took detailed check-in notes, flagging real-time process modifications for jurisdiction needs and ad-hoc input for future refinements.
- Semi-structured interviews with jurisdiction co-leads at program close-out (March 2023).
  - The objective of the interviews was to unpack post-pilot results through supplemental questions to better understand survey responses.

In addition to pilot jurisdiction feedback, the project team relied on detailed notes and reflections captured during bi-weekly project team check-ins to further inform the pilot program assessment and develop

recommendations for improvement. During bi-weekly check-ins, the consultant team logged notes on implementation of each resilience guidance step, detailing challenges, strengths, real-time modifications, and potential changes and refinements for future applications.

Survey results and program close-out interview guide can be viewed in the "**Pilot Project Materials**" section of the report.

Results

The outcomes and efficacy of the pilot program were evaluated using the three overarching goals of the program. Demonstrated outcomes, findings, and recommendations for each goal are discussed in the sections below.

Demonstrate Integration of the Resilience Sub-Element

To demonstrate the integration of the resilience sub-element into comprehensive planning, the project team worked with the three pilot jurisdictions in testing the planning framework laid out in the resilience guidance. The project team largely adhered to six steps outlined in Figure 2 but made key decisions to omit or curtail some sub-steps due timeframe and jurisdictional capacity constraints. Due to these constraints, the project team led the primary execution of resilience guidance steps and relied on jurisdiction co-leads to partially implement specific sub-steps, review outputs, and confirm key decisions. Implications of the expedited pilot program timeframe are discussed further in the "Study Limitations" section of the report.

Figure 2. Original resilience sub-element steps and pathways (as tested by the pilot cities)[77]

[77] Following in the pilot test, Commerce revised this graphic to reflect changes to the planning guidance. Such revisions include moving the first step of the resilience sub-element (Step 1: Develop Planning Process) to Section 2 of the broader guidance.

All three jurisdictions successfully applied the resilience guidance to develop draft resilience policies that address climate risks and impacts to their cities and are poised to integrate the resilience sub-element into their comprehensive plans, pending City Council approval. Key outcomes include identification of priority climate impacts and hazards, a light-touch assessment of vulnerability and risk, review of existing local plans and policies for climate resilience considerations and gaps in local planning, and draft climate resilience policies for comprehensive plan integration.

Table 4 shows a summary of the work completed with each pilot jurisdiction in each step of the resilience guidance.

Table 4: Resilience guidance outcomes and key decisions across pilot jurisdictions

Resilience Guidance Step	Pullman	Port Angeles	Woodland
Step 1: Develop planning process	Co-leads: RJ Lott, Community Development Director and Ariel Medeiros, Assistant Planner Additional representation: Mike Heston, Fire Chief Key Stakeholders[78]: Citizen Climate Lobby, Planning Commission, and WSU contacts Guiding principles: To be innovative, a champion of climate work, and incorporate a variety of City departments in climate work	Co-leads: Ben Braudrick, Senior Planner, Resilience Planning Lead and Zachary Trevino, Implementation Planning Lead Key stakeholders: North Olympic Development Council, Port Angeles and surrounding communities, Climate Action Planning Group, Wastewater Department, Stormwater Department, Solid Waste Department, Chamber of Commerce, private landowners, downtown businesses, sub-Committees for climate on the Planning Commission Guiding principles: Integrate climate resilience throughout the comprehensive plan, with a focus on hazard mitigation, demonstrate commitment to the pilot program, use the results of this work to update land-use maps and other City goals	Co-leads: Travis Goddard, Community Development Director, Deputy Clerk/Treasurer, Public Records Officer; David Lukaczer, Associate Planner Key stakeholders: Planning Commission, School District contacts, Port of Woodland, PacifiCorp, Cowlitz-Wahkiakum COG, Cowlitz Sheriff-Emergency Management, Clark-Cowlitz Fire Rescue, Cowlitz Consolidated Dike District Guiding principles: City staff and Council education on climate impacts, incorporate climate into local decision making

[78] Key stakeholders identified by jurisdiction co-leads for future involvement in the process.

Resilience Guidance Step	Pullman	Port Angeles	Woodland
Step 2: Explore climate impacts	Priority impacts: Extreme heat, extreme precipitation and flooding, drought, wildfire	Priority impacts: Extreme heat, extreme precipitation and flooding, drought, wildfire, sea level rise	Priority impacts: Extreme heat, extreme precipitation and flooding, drought, wildfire
Step 3: Audit plans and policies	Reviewed existing plans: City of Pullman Comprehensive Plan (2021), Whitman County Hazard mitigation Plan (2020), RTPO Regional Transit Plan (2019-2023), Public Works Stormwater (2022), Pullman Draft Bicycle Plan (2022)	Reviewed existing plans: City of Port Angeles Comprehensive Plan (2019), City of Port Angeles Climate Resiliency Plan (2022), Port Angeles Capital Facilities and Transportation Improvement Plan (2023-2028), Port Angeles Shoreline Master Plan (2021), NODC Disaster Resiliency Planning (2022)	Reviewed existing plans: City of Woodland Comprehensive Plan (2016), Cowlitz County Hazard mitigation Plan/Emergency Management (2019), Cowlitz Comprehensive Plan (2017), City of Woodland Shoreline Master Plan (2021), City of Woodland Sewer Plan (2017)
Step 4: Assess vulnerability and risk	Conducted VRA for extreme heat hazard	Conducted VRA for sea level rise on segment of downtown/waterfront area	Did not pursue VRA due to time constraints.
Step 5: Pursue pathways	Drafted 44 resilience policies Modified 18 existing policies to include climate and VRA considerations. Supplemented climate gaps with 26 new policies from Menu of Measures, project team expertise, and Planning Commission feedback.	Drafted 42 resilience policies. Modified 19 existing policies to include climate and VRA considerations. Supplemented gaps with 23 new policies from the Climate Resiliency Plan, Menu of Measures, project team expertise, and Planning Commission feedback.	Drafted 39 resilience policies. Modified three existing policies to include climate impact considerations. Supplemented gaps with 36 new policies from Menu of Measures, project team expertise, and Planning Commission feedback.
Step 6: Integrate goals and policies	Leads will complete this step after continued review of draft policies with Planning Commission and public and Council approval in 2023.	Leads will complete this step after continued review of draft policies with Planning Commission and public and Council approval in 2025.	Leads will complete this step after continued review of draft policies with Planning Commission and public and Council approval in 2023.

Takeaways

- Jurisdictions with more robust climate planning histories and dedicated climate and/or sustainability staff will be better equipped to use the resilience guidance to integrate climate into comprehensive planning.
- Port Angeles, which has an adopted Climate Resilience Plan, more in-house climate expertise, and a community that is generally supportive and well-versed on the topic of climate change required less support from the project team. The existing policy audit and draft policy development processes were significantly more streamlined, as the project team was able to utilize more of the City's existing, tailored climate policies and adapt policies in more a strategic manner.
- The other two pilot jurisdictions — Woodland and Pullman — have less robust local climate planning histories. As such, co-leads consistently indicated they had less capacity and expertise to integrate climate into comprehensive planning. These jurisdictions required more support from the project team throughout the pilot program, particularly in development of new draft policies and identification of climate priorities.

Jurisdictions with less support from city stakeholders and the community around addressing climate change will face added barriers in creating buy-in and will need to consider additional approaches, support, and resources for the engagement process.

Woodland co-leads indicated their community members were unfamiliar with climate change and somewhat unsupportive of addressing climate change issues. To facilitate buy-in from the community, co-leads identified the need for additional support around community engagement efforts, including the use of easily accessible collateral with messaging about the importance of climate change with a clear connection to climate impacts and lived experiences.

Co-leads for the City of Pullman, which has a community that is somewhat familiar and supportive of addressing climate change, also identified the need for engagement approaches that connect the goals of this process to real community experiences with recent climate events (heat dome events, recent wildfires, etc.).

Process Outcomes by Jurisdiction

Pullman

The City of Pullman is located within Whitman County in southeastern Washington. A mid-size city with a population of 32,827, Pullman is home to Washington State University (WSU) and is known as an agricultural center. Pullman's population is 71% non-Hispanic white and has a relatively high poverty rate (35.4%), which is partially due to its large student population.

The City is early in its climate planning efforts, but is seeing increased enthusiasm and interest for such efforts from the community. The City recently updated its Comprehensive Plan (2021) and plans to make updates to integrate climate resilience policies in 2023.

The project team needed to arrive at a draft list of climate resilience policies for comprehensive plan integration. They met with Pullman co-leads and Community Development and Fire Department staff for an initial kick-off planning meeting and then on a bi-weekly basis to implement each step of the resilience guidance to accomplish this. The kick-off meeting and the first several check-ins were dedicated to Step 1, developing the overall planning process of the pilot program. Tasks 1.3 (scope a budget and schedule first three steps) and 1.4 (develop a public-engagement strategy) were significantly reduced in scope due to the

expedited timeframe of the project. [***Editor's note:*** *Following the pilot testing of the resilience sub-element, Commerce moved what had been the resilience sub-element's Step 1 (Develop Planning Process) into the full planning guidance's Section 2. The revision makes forming a project team and engagement strategy precede the resilience and GHG reduction sub-elements (Sections 3 and 4) and provides additional guidance for jurisdictions.*]

To implement Step 2 (Explore Climate Impacts), the project team identified the following climate change drivers and associated impacts as the most relevant to the City using the webtool:

- Increased Heat: Warmer summers with longer and more intense heat waves.
- Heavy Rains, Flooding, and Landslides: More frequent and intense precipitation and storms that cause extreme flooding and increase landslide risk. Changes in timing and hydrologic conditions in rivers.
- Summer Drought, Reduced Snowpack, and Wildfire: Less rain in the summer and warmer winters with reduced snowpack may create drought conditions. Additional summer dry conditions may create more wildfire risk and smoke.

Pullman has already experienced impacts, and climate projections suggest that climate change drivers will continue to worsen these impacts. Table 4 presents mid- and late-century climate projections for Whitman County. These climate change impacts lead to negative effects on public health, agriculture, food supply, as well as infrastructure damage to transportation systems, homes, and buildings.

Table 5. Climate projections for Whitman County[79]

	Climate Impact	2040-50	2080
	Average summer temperature Jun-Aug	↑6.6°F increase	↑11.5°F increase
	Number of hot days (humidex over 90 degrees)	↑32.8 days	↑57.2 days
	Total late summer precipitation July-Sept	↑0.7% increase	↓1.6% decrease
	Total annual precipitation	↑10.2% increase	↑14.5% increase
	Intensity of extreme rain events (change in the magnitude of 2-year storms)	↑13% increase	↑20% increase
	Precipitation intensity projected change in a 25-year, 1 hour rain event	↑21% increase	↑29% increase
	Precipitation drought (likelihood of a year with summer precipitation below 75% of historical normal)	19%	27%
	Percent change in April 1 snowpack	↓100% decrease	↓100% decrease

79 Washington County Climate Projections (uidaho.edu)

	Climate Impact	2040-50	2080
	Peak streamflow	↑22.4% increase	↑47.5% increase
	Change in high fire danger days	↑11 days	N/A

These local climate hazards will affect the City's plans to adapt existing areas to be more resilient (for example, new buildings and street locations and designs, new or retrofitted tree and landscaping standards for drought resistance and shade) or how the City responds during or after extreme events (for example, public services and business continuity, transit availability, emergency services and evacuation, building and recovery). These hazards can also affect the health and wellbeing of sensitive populations (for example, older persons, young children, persons with pre-existing conditions).

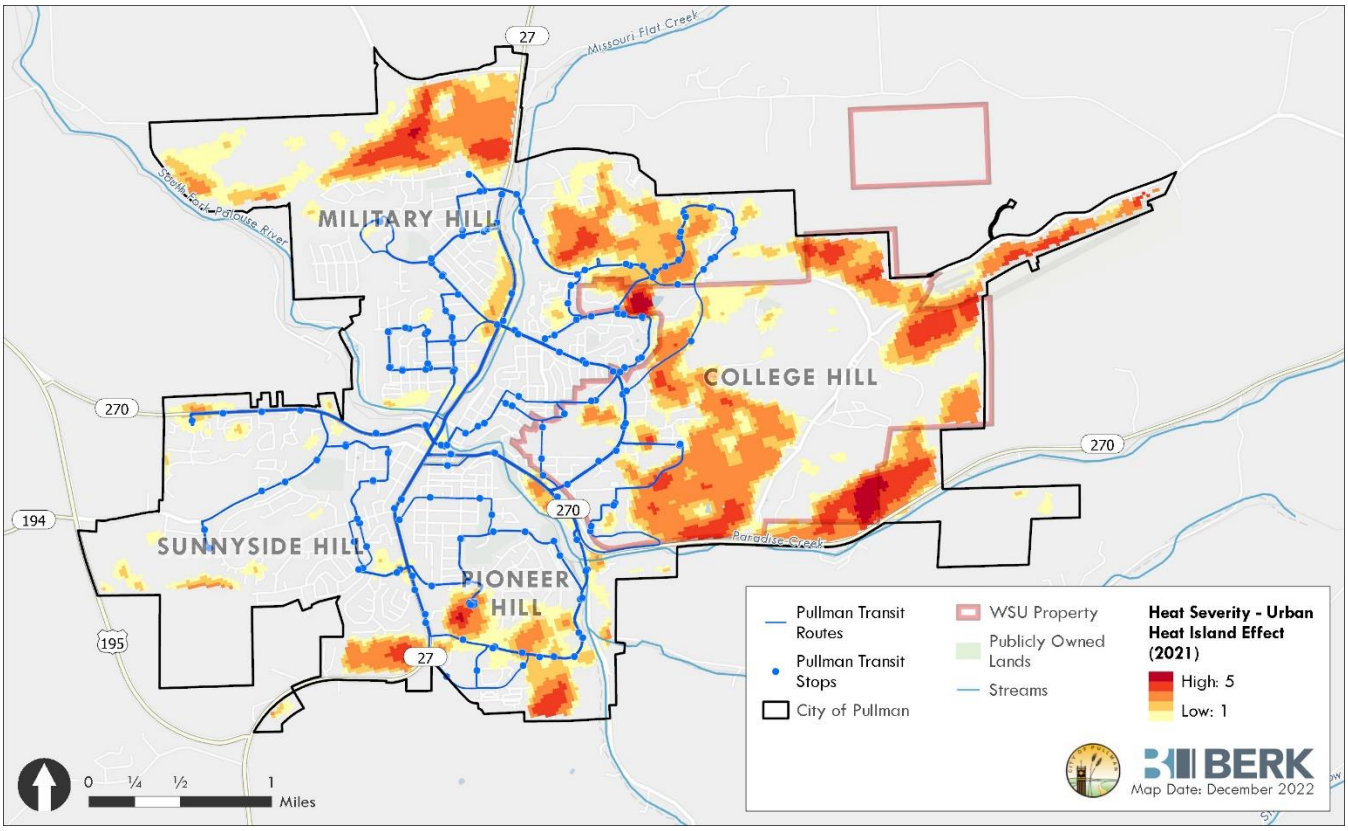
In Step 3 (Audit Plans & Policies), the project team and Pullman co-leads worked together to perform an audit of existing plans and policies to identify relevant goals, policies and strategies that support communitywide resilience across the 11 comprehensive planning sectors. The audit focused on the following plans:

- City of Pullman Stormwater Management Program Plan 2022
- City of Pullman Draft Bicycle and Pedestrian Master Plan 2022 (in progress)
- City of Pullman Comprehensive Plan 2021
- Whitman County Hazard Mitigation Plan 2020
- Palouse RTPO Coordinated Public Transit- Human Services Transportation Plan 2018

In Step 4 (Assess Vulnerability & Risk), Pullman co-leads worked closely with the project team to evaluate heat severity risk in Pullman and how increased temperatures may impact transportation access and need. Figure 3 shows where areas of Pullman are hotter than the average temperature for Pullman as a whole and considered information sources such as impervious areas and tree canopy coverage.

Figure 3 shows that neighborhoods east and north of Washington State University (WSU) experience more severe extreme heat, and are also not well served by transit, a mode that those with less mobility may require (for example, elderly, people without cars). The project team refined draft goals and policies to reflect the preliminary vulnerability and risk assessment findings and focus on urban forest management, building and site design for passive cooling, and other strategies.

Figure 3: Extreme Heat Risk and Transit Routes and Stops – Pullman



Sources: BERK, Pullman, Commerce.

In Step 5 (Pursue Pathways), the project team utilized the Menu of Measures, drafted by Commerce and its partners, to fill in any climate gaps that were revealed from the policy audit and drafted 44 preliminary climate resilience goals and policies, including amendments to existing goals and policies and new goals and policies. The policy recommendations consider the co-benefits of activities that would result in one or more of the following: enhances resilience; improves public health and well-being; promotes economic development; provides cost savings; provides ecosystem services; improves air quality; reduces emissions; sequesters carbon; improves salmon recovery; promotes equity and justice; protects tribal treaty rights; and builds knowledge. To review the full list of draft policies, refer to the Pullman Discussion Guide developed for the February 2023 Planning Commission meeting, which is found in the "**Pilot Project Materials**" section of the report.

The project team and Pullman co-leads presented the draft list of policies to the Pullman's Planning Commission for an initial review in February 2023 as an interim sub-step in Step 6 (Integrate Goals & Policies). The goal of the meeting was to provide an overview of the approach for integrating the climate model element, with specific focus on the resilience sub-element, into the city's comprehensive planning process and review the draft policy list. Using the feedback captured at the meeting, including identification of priority policies and proposed edits, the project team updated the draft list of policies.

Only a handful of policies were discussed at the meeting but, this meeting marked the first step in a lengthy process to refine the draft policy list. The City will take the following steps to integrate the final climate and resilience policies into the Comprehensive Plan Update in 2023:

- Policy amendments are discussed and refined at Planning Commission meetings as needed.

- Recommendations are presented to City Council by the Planning Commission.
- Amendments are presented to City Council for adoption.
- Amendments are integrated into the Comprehensive Plan, if adopted by Council.

The project team developed a concise factsheet about the City's participation in the pilot program and intended next steps for continued use throughout the comprehensive planning process.

Port Angeles

The City of Port Angeles-population of 20,134 is located in Clallam County in northwestern Washington. Port Angeles represents a mid-size and rapidly growing jurisdiction that has made significant progress in climate planning. The City is currently in the first phase of implementing its recently adopted Climate Resiliency Plan. Recognizing the importance of holistic climate integration across city and county planning, the City is eager to integrate climate resilience considerations into its comprehensive plan update in 2025.

The project team needed to arrive at a draft list of climate resilience policies for comprehensive plan integration. They met with Port Angeles co-leads for an initial kick-off planning meeting and then on a bi-weekly basis to implement each step of the resilience guidance. The kick-off meeting and the first several check-ins were dedicated to Step 1, developing the overall planning process of the pilot program. Due to the expedited timeframe of the project the Tasks 1.3 (scope a budget and schedule first three steps) and 1.4 (develop a public-engagement strategy) were significantly reduced in scope.

Using the webtool in Step 2 (Explore Climate Impacts), the project team identified following climate change drivers and associated impacts as the most relevant to the region and county:

- Increased Heat: Warmer summers with longer and more intense heat waves.
- Heavy Rains, Flooding, and Landslides: More frequent and intense precipitation and storms that cause extreme flooding and increase landslide risk. Changes in timing and hydrologic conditions in rivers.
- Summer Drought, Reduced Snowpack, and Wildfire: Less rain in the summer and warmer winters with reduced snowpack may create drought conditions. Additional summer dry conditions may create more wildfire risk and smoke.
- Rising Sea Level: Sea level rise increasing coastal flooding, erosion, and decreasing water quality.

Port Angeles has already experienced impacts, and climate projections suggest that climate change drivers will continue to worsen these impacts. Table 6 presents mid- and late-century climate projections for Clallam County. These climate change drivers lead to negative impacts on public health, agriculture, food supply, as well as infrastructure damage to transportation systems, homes, and buildings.

Table 6. Climate projections for Clallam County[80]

	Climate Impact	2040-50	2080
	Average summer temperature Jun-Aug	↑5.5°F increase	↑9.2°F increase
	Number of hot days (humidex over 90 degrees)	↑11.9 days	↑30.8 days

80 Washington County Climate Projections (uidaho.edu)

	Climate Impact	2040-50	2080
	Total late summer precipitation July-Sept	↓10.6% decrease	↓16.2% decrease
	Total annual precipitation	↑2.8% increase	↑2.9% increase
	Intensity of extreme rain events (change in the magnitude of 2-year storms)	↑8% increase	↑14% increase
	Precipitation intensity projected change in a 25-year, 1 hour rain event	↑9% increase	↑18% increase
	Precipitation drought (likelihood of a year with summer precipitation below 75% of historical normal)	25%	33%
	Percent change in April 1 snowpack	↓76% decrease	↓93% decrease
	Peak Streamflow	↑22.7% increase	↑18.8% increase
	Change in high fire danger days	↑10 days	N/A
	Likely sea level rise (50% likelihood)	0.5 feet	1.7ft

These local climate hazards will affect the City's plans to adapt existing areas to be more resilient (for example, new buildings and street locations and designs, new or retrofitted tree and landscaping standards for drought resistance and shade) or how the City responds during or after extreme events (for example, public services and business continuity, transit availability, emergency services and evacuation, building and recovery). These hazards can also affect the health and wellbeing of sensitive populations (for example, older persons, young children, persons with pre-existing conditions).

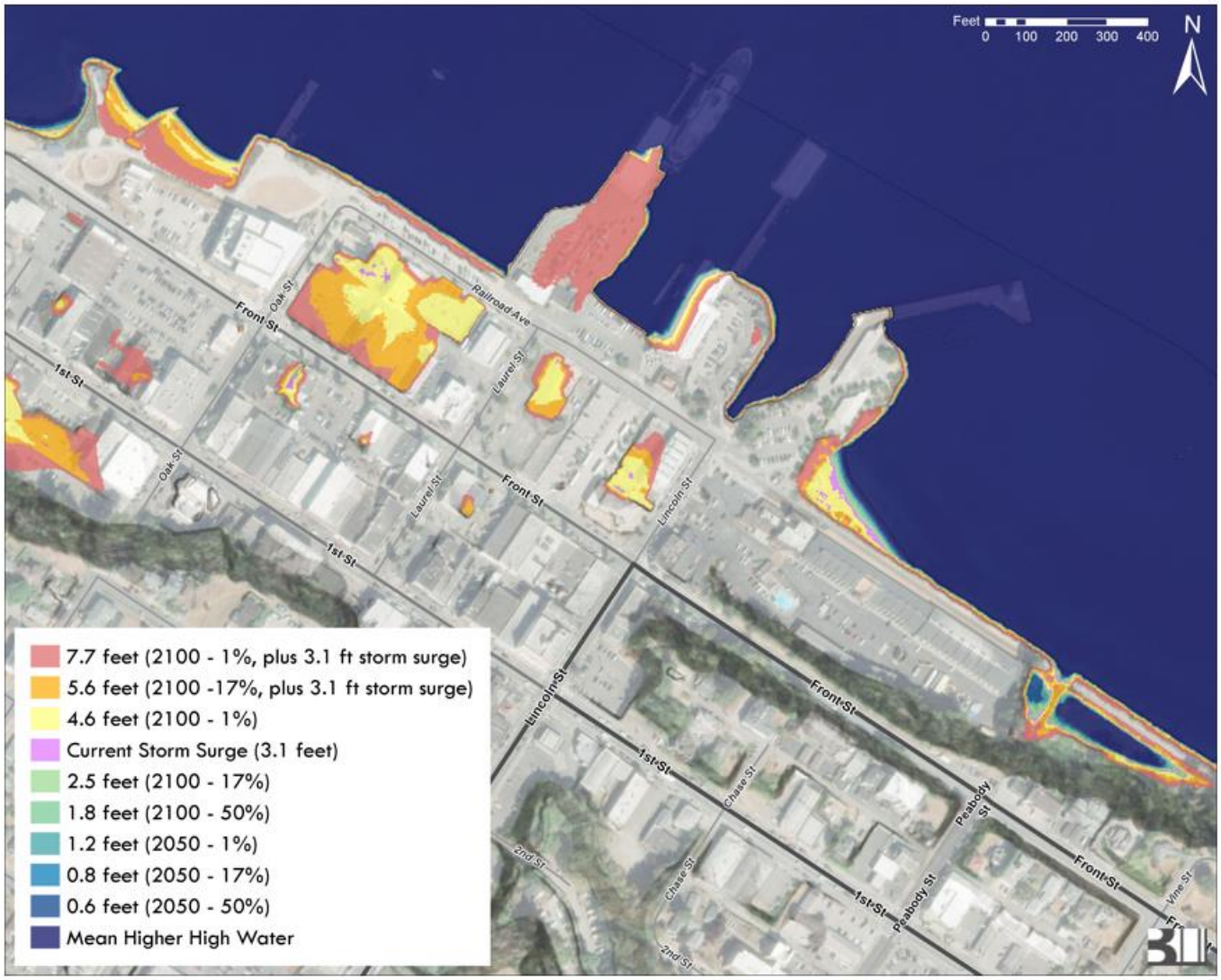
In Step 3 (Audit Plans & Policies), the project team and Port Angeles co-leads worked together to perform an audit of existing plans and policies to identify relevant goals, policies and strategies that support communitywide resilience across the 11 comprehensive planning sectors. The audit focused on these plans:

- North Olympic Peninsula Resource Conservations & Development Council (NODC): Natural Disaster Resiliency Planning
- City of Port Angeles Capital Facilities & Transportation Improvement Plan 2023-2028
- City of Port Angeles Climate Resiliency Plan 2022
- City of Port Angeles Comprehensive Plan 2019
- City of Port Angeles Shoreline Master Program 2021

In Step 4 (Assess Vulnerability & Risk), Port Angeles co-leads worked with the project team to evaluate and assess vulnerability and risk of a portion of the Port Angeles waterfront assets to sea level rise. The team assessed the potential for exposure, sensitivity, and the adaptive capacity of the city to climate change-exacerbated sea level rise.

The map below, which incorporates climate modeling used in the webtool, shows how rising sea levels could exacerbate the impacts of coastal flooding in downtown Port Angeles over the 21st century. This will increase risks for important, vulnerable assets such as the transit center, ferry terminal, wharf, and coastal parks. The project team recommended goals and policies that directly addressed these vulnerability and risk assessment findings, including retrofitting and protecting critical and high-risk facilities at the waterfront.

Figure 4: Projected Sea Level Rise – Downtown Port Angeles



Sources: BERK, Cascadia, Port Angeles, Clallam County.

In Step 5 (Pursue Pathways), the project team utilized Commerce's Menu of Measures to fill in any climate gaps that were revealed from the policy audit and drafted 42 preliminary climate resilience goals and policies, including amendments to existing goals and policies and new goals and policies. The policy recommendations consider the co-benefits of activities that would result in one or more of the following:

enhances resilience; improves public health and well-being; promotes economic development; provides cost savings; provides ecosystem services; improves air quality; reduces emissions; sequesters carbon; improves salmon recovery; promotes equity and justice; protects tribal treaty rights; and builds knowledge. To review the full list of draft policies, refer to the Port Angeles Discussion Guide developed for the February 2023 Planning Commission meeting, which is found in the "**Pilot Project Materials**" section of the report.

The project team and Port Angeles co-leads presented the draft list of policies to the Port Angeles Planning Commission and members of the community for an initial review in February 2023. This was an interim task in Step 6 (Integrate Goals & Policies). The goal of the meeting was to provide an overview of the approach for integrating the climate model element, with specific focus on the resilience sub-element, into the City's comprehensive planning process and review the draft policy list. Using the feedback captured at the meeting, including identification of priority policies and proposed edits, the project team updated the draft list of policies.

This was the first step in a lengthy process to refine the draft policy list. The City will take the following steps to integrate the final climate and resilience policies into the Comprehensive Plan Update in 2025:

- April 2023 – Submit notice to the WA State Department of Commerce of intent to adopt Comprehensive Plan & development regulation amendments.
- May 2023 – Bring proposal of Climate Resiliency Comprehensive Plan integration to the Planning Commission for consideration and follow with a public comment period.
- June 2023 – Bring proposal of Climate Resiliency Comprehensive Plan Integration to City Council following the Planning Commission's recommendations to consider adoption.
- 2023-2024 – Implement Comprehensive Plan policies incorporating climate resilience.
- 2025 – Update the Comprehensive Plan in accordance with the Growth Management Act.
- June 2025 – Adopt Comprehensive Plan update in accordance with the Growth Management Act Periodic Update schedule.

The project team developed a concise factsheet about the City's participation in the pilot program and intended next steps for continued use throughout the comprehensive planning process.

Woodland

The City of Woodland is located within Cowlitz County in southwestern Washington. With a population of 6,540, Woodland represents a small Washington jurisdiction. The City has a 74% poverty rate and 27.5% of the population identify as people of color. While continuing to focus on industrial and commercial development and growth, the City is committed to incorporating environmental considerations into communitywide planning efforts that reflect growing stakeholder and community interests.

To arrive at a draft list of climate resilience policies for comprehensive plan integration, the project team met with Woodland co-leads for an initial kick-off planning meeting and then on a bi-weekly basis to implement each step of the resilience guidance. The kick-off meeting and the first several check-ins were dedicated to Step 1, developing the overall planning process of the pilot program. Due to the expedited timeframe of the project the Tasks 1.3 (scope a budget and schedule first three steps) and 1.4 (develop a public-engagement strategy) were significantly reduced in scope.

Using the webtool in Step 2, the project team identified following climate change drivers and associated impacts as the most relevant to the region and county:

- Increased Heat: Warmer summers with longer and more intense heat waves.

- Heavy Rains, Flooding, and Landslides: More frequent and intense precipitation and storms that cause extreme flooding and increase landslide risk. Changes in timing and hydrologic conditions in rivers.
- Summer Drought, Reduced Snowpack, and Wildfire: Less rain in the summer and warmer winters with reduced snowpack may create drought conditions. Additional summer dry conditions may create more wildfire risk and smoke.

Woodland has already experienced impacts and climate projections suggest that climate change drivers will continue to worsen these impacts. Table 8 presents mid- and late-century climate projections for Cowlitz County. These climate change drivers lead to negative impacts on public health, agriculture, food supply, as well as infrastructure damage to transportation systems, homes, and buildings.

Table 7. Climate projections for Cowlitz County[81]

	Climate Impact	2040-50	2080
	Average Summer Temperature Jun-Aug	↑5.9°F increase	↑9.6°F increase
	Number of hot days (humidex over 90 degrees)	↑27.7 days	↑51.9 days
	Total Late Summer Precipitation July-Sept	↓10.6% decrease	↓16.2% decrease
	Total annual precipitation	↓25.4% decrease	↓24.6% decrease
	Intensity of extreme rain events (change in the magnitude of 2-year storms)	↑4.7% increase	↑4.5% increase
	Precipitation Intensity Projected change in a 25-year, 1 hour rain event	↑13% increase	↑13% increase
	Precipitation drought (likelihood of a year with summer precipitation below 75% of historical normal)	↑16% increase	↑14% increase
	Percent change in April 1 snowpack	↓95% decrease	↓100% decrease
	Peak Streamflow	↑35.7% increase	↑45.5% increase
	Change in high fire danger days	↑7 days	N/A

81 Washington County Climate Projections (uidaho.edu)

These local climate hazards will affect the City's plans to adapt existing areas to be more resilient (for example, new buildings and street locations and designs, new or retrofitted tree and landscaping standards for drought resistance and shade) or how the City responds during or after extreme events (for example, public services and business continuity, transit availability, emergency services and evacuation, building and recovery). These hazards can also affect the health and wellbeing of sensitive populations (for example, older persons, young children, persons with pre-existing conditions).

In Step 3, the project team and Woodland co-leads worked together to perform an audit of existing plans and policies to identify relevant goals, policies, and strategies that support communitywide resilience across the 11 comprehensive planning sectors. The audit focused on these plans:

- City of Woodland Comprehensive Plan 2016-2036 (last amended 2019)
- City of Woodland Shoreline Master Program 2021
- City of Woodland General Sewer Plan 2017
- Cowlitz County Comprehensive Emergency Management Plan 2019. Woodland is a partner in the Comprehensive Emergency Management Plan along with the other cities and the County.
- Cowlitz County Comprehensive Plan 2017. Affects lands, shorelines, and infrastructure around the city limits including the City's desired urban growth area.

Woodland co-leads decided to omit the vulnerability and risk assessment due to lack of capacity and adequate time (Step 4).

In Step 5 (Pursue Pathways), the project team utilized the Menu of Measures to fill in any climate gaps that were revealed from the existing policy audit and drafted 39 preliminary climate resilience goals and policies, including amendments to existing goals and policies and new goals and policies. The policy recommendations consider the co-benefits of activities that would result in one or more of the following: enhances resilience; improves public health and well-being; promotes economic development; provides cost savings; provides ecosystem services; improves air quality; reduces emissions; sequesters carbon; improves salmon recovery; promotes equity and justice; protects tribal treaty rights; and builds knowledge. To review the full list of draft policies, refer to the Woodland Discussion Guide developed for the February 2023 Planning Commission meeting, which is found in the "**Pilot Project Materials**" section of the report.

The project team and Woodland co-leads presented the draft list of policies to the Pullman's Planning Commission for an initial review in February 2023 as an interim task in Step 6 (Integrate Goals & Policies). The goal of the meeting was to provide an overview of the approach for integrating the climate model element, with specific focus on the resilience sub-element, into the city's comprehensive planning process and review the draft policy list. Using the feedback captured at the meeting, including identification of priority policies and proposed edits, the project team updated the draft list of policies.

The City will take the following steps to integrate the final climate and resilience policies into the Comprehensive Plan Update in 2023:

- April 2023 – host an open house and a public hearing to continue discussing incorporation of draft climate resilience element into the 2023 update.
- Identify and prioritize key goals and policies from the draft climate resilience element based on outreach with the community and elected officials.
- Pass the draft climate resilience element through the Planning Commission
- Advance the climate resilience element to the City Council as part of the City's 2023 Comprehensive Plan and undergo Commerce review.

- December 2023 – Bring the final version of the climate resilience amendment to City Council for adoption.

The project team also developed a concise factsheet about Woodland's participation in the pilot program for continued use throughout the city's comprehensive planning process. See Port Angeles Factsheet [*final section of Appendix G*].

Improve the Resilience Guidance

The project team evaluated the usability and effectiveness of the six steps of the resilience guidance by using pre- and post-pilot surveys, semi-structured interviews, and ongoing team check-in notes. The intention of this evaluation was to better understand accessibility, clarity, and efficacy of the resilience guidance steps and companion workbook and webtool. This evaluation informed the development of recommendations for improving the various components of the guidance.

Three key recommendations are summarized below, followed by a table of detailed findings and additional opportunities for improvement associated with each step of resilience guidance and companion tools.

Recommendation #1

Include guidance for jurisdictions to supplement use of CIG's webtool (step 2) with additional climate information that is more locally relevant, when available, adding an example of climate data points and projections to communicate magnitude of change beyond a general trend. Step 2 guidance should also include examples of hazard indicators to prioritize and provide a clear explanation around which climate scenario to use and why. Some potential resources that can supplement the webtool analysis are in Table 8. [***Editor's note:*** *See "Key Takeaways" section above for how Commerce addressed this recommendation in its revised planning guidance and companion resources. Additionally, the revised planning guidance links to the three resources listed in the table below; and the* Resources *at Appendix E includes additional ones.*]

Table 8. Additional climate change resources and tools.

Source	Description
Washington Tracking Network, Washington State Department of Health	This climate projection data includes projections for precipitation change, extreme heat days (days over the 99th percentile for temperature), cooling degree days, and heating degree days to the census tract level.
Washington State Sea Level Rise Visualization Tool	Sea level rise projections for 171 locations along Washington's coastline.
Climate and Economic Justice Screening Tool	Interactive map and data sets that indicate burden across multiple categories, including climate change burden, at the census tract level.

Recommendation #2

Create climate-focused engagement collateral, such as climate change 101 factsheets, that communicate how future climate change will impact local jurisdictions. Include messaging around how climate impacts – including wildfire and wildfire smoke, sea level rise, increased precipitation, extreme heat, and reduced snowpack – are expected to exacerbate existing hazards and the cascading implications for existing and new

city infrastructure, natural systems, and the health and safety of the community. Engagement collateral could include case studies and data points around recent regional and local climate-related extreme events. The project team developed factsheets for each pilot jurisdiction that can serve as a model for development of similar collateral. Factsheets for each pilot jurisdiction can be viewed in the "**Pilot Project Materials** section of the report. This recommendation is intended to help jurisdictions educate city staff, stakeholders, and the public about climate change impacts and create buy-in for integrating climate change into comprehensive planning (Steps 5 and 6). [***Editor's note:*** *See "Key Takeaways" section above for how Commerce addressed this recommendation in its revised planning guidance and companion resources.]*

Recommendation #3

Adjust the sequence of several tasks, so that the vulnerability and risk assessment (Step 4) is better integrated with the explore climate impacts step (Step 2). Although jurisdictions noted that the CMRW webtool was critical for initial identification and prioritization of climate change impacts, conducting a VRA after a policy audit (Step 3) was challenging. Conducting a policy audit (Step 3) may be more valuable after completing some of the VRA's initial tasks, such as assessing the exposure of local assets and the consequences of hazards. [***Editor's note:*** *Based on the consultants' recommendation and other stakeholder feedback, Commerce shifted several of the VRA's initial tasks to what was formerly Step 2 (Explore Climate Impacts). These tasks (now listed as Section 3, Tasks 1.1-1.3) include creating asset-hazard pairs and using the UW CIG's CMRW webtool. Commerce also added a new task (1.4: Identify Priority Climate Hazards), which asks jurisdictions to decide which climate hazards they might need to address in their comprehensive plan.*]

Other Opportunities for Improvement

Table 9 provides an overview of detailed findings and additional opportunities for improvement associated with each step of the resilience guidance.

Table 9: Summary of detailed findings and opportunities for improvements associated with each step of the resilience guidance

[***Editor's note:*** *Commerce incorporated recommendations from the table below into the revised planning guidance.*]

Step	Findings	Opportunities for Improvement
Step 1: Develop planning process	Co-leads rated this step clear and easy to use (4 or 5 out of 5 in a Likert scale[82]) on both pre- and post- pilot surveys. With two co-leads per jurisdiction, the pilot cities relied heavily on the project team for general program management, setting interim deadlines, meeting management, and tracking deliverables. Due to the condensed timeframe of the pilot program, the program lacked robust City staff and community engagement.	Add a detailed timeline template with suggested timeframes for each step. Prompt project leads to review the steps and workbook in full at this planning stage to gain a holistic understanding of how the steps build onto one another.

[82]For pre- and post-survey ranking questions, a Likert scale was used, with 1 being most difficult/unclear and 5 being easiest/most clear.

Step	Findings	Opportunities for Improvement
Step 2: Explore climate impacts	Co-leads rated this step clear and easy to use (4 or 5 out of 5) in both pre- and post- pilot surveys. Most co-leads rated this step easy (4 or 5 out of 5) to complete without consultant support in the post- pilot surveys. One co-lead ranked his ability to complete this step without consultant support as moderate (3 out of 5). The webtool was easy to use and effective for summarizing climate data into a general hazard trend at the county scale and presenting the data in different formats. However, the webtool does not account for nuance within the city and local observations. Jurisdiction co-leads found it very helpful to have the support of the project team in demonstrating the tool and applying the climate trends and findings to real world implications for their communities.	Include instructions to limit audit to five plans/documents. Provide links to resources and data tools that provide more granular and/or city-level climate data. Include link to webtool tutorial video or workshop that demonstrates how to use the tool and apply the findings to local contexts.
Step 3: Audit plans and policies	Co-leads rated this step clear and easy to use (4 or 5 out of 5) in both pre- and post- pilot surveys. The resilience guidance instructions were overall useful for this step but lacked clear guidance on how to prioritize plans and policies for the audit. This is both a critical and time-consuming step of the process. While only one co-lead ranked his ability to complete this step without consultant support as moderate (3 out of 5), with the rest indicting it would be easy (4 or 5), follow up interviews with co-leads revealed and this would have been challenging to execute without additional capacity and some climate expertise.	Include clearer direction on how to determine priorities to focus the policy audit and how many policies to audit (20-40). Provide examples of several audited policies from different types of planning documents. Clearly indicate in the guidance how this step feeds into step 5, choosing a pathway to adapt and/or adopt goals/policies. Emphasize that the audit results will lead to either retaining existing goals/policies, amending existing goals/policies, adding goals/policies, or a combination.

Step	Findings	Opportunities for Improvement
Step 4: Assess vulnerability and risk	Two co-leads who completed this step indicated it was clear and easy to use (4 or 5), while one indicated it was moderate (3). Two co-leads indicated it would have easy to complete this step with consultant support (4 or 5), while one indicated it would be moderate (3). Jurisdiction co-leads found the checklist in Tab 3.2 of the workbook to be useful for determining whether to proceed to the VRA step. Some jurisdiction co-leads indicated the VRA should follow the exploration of climate impacts step and precede the policy audit. Understanding city vulnerabilities would allow project leads to focus policy audit on relevant policies. Smaller jurisdictions would not have the in-house expertise to complete this step without substantial technical expertise, particularly conducting GIS analysis to assess vulnerability and risk of city assets.	Include additional guidance, instructions, and resources for selecting appropriate indicators and developing simple rulesets to qualitatively assess these components or vulnerability and risk should be made available. Using pilot jurisdictions as case studies, include examples of climate indicators used to assess asset-hazard pairs in VRA workbook tabs. The workbook tabs associated with the VRA step should be decoupled and live as stand-alone tabs for each task. Alternatively, include more instruction explaining grouped tabs.
Step 5: Choose pathway to adapt and/or adopt goals and policies	Co-leads rated this step clear and easy to use (4 or 5) on both pre- and post- pilot surveys. Jurisdiction co-leads found it challenging to understand the pros and cons associated with each integration approach -- integrating policies into a single climate element or across multiple elements. Co-leads indicated that this step would have been difficult to execute without the project team's support.	Include clearer guidance around each integration approach (single climate element vs. dispersed across multiple elements), with examples or a summary of pros and cons associated with approach.
Step 6: Integrate goals and policies	Co-leads rated this step clear and easy to use (4 or 5) on both pre- and post- pilot surveys. Two co-leads indicated it would have easy to complete this step with consultant support (4 or 5), while one indicated it would be moderate (3).	Include a "draft step 6 tab" within the workbook to capture the first iteration of the draft policies that will go to the Planning Commission and public for input. Once draft policies have been presented to the Planning Commission and public for feedback edits can be made to the goals and policies to reflect their feedback in the "final step 6 tab."

Understand Impact of Project Team and Process on Pilot Program Success

An important goal of the pilot program was to understand how the overall program structure and project team support impacted the success of the pilot jurisdictions in using the resilience guidance to integrate climate into their comprehensive planning.

Findings

The survey responses and follow-up interviews with jurisdiction co-leads revealed that both the resilience guidance and the support from the project team were critical to implementation of the resilience sub-element. While overall clear and useful, the resilience guidance alone would have made it challenging, if not impossible, for these jurisdiction co-leads to complete this process, especially within a condensed timeline. Staff time and capacity were the most significant limiting factors for jurisdictions to complete this process; however, insufficient in-house climate expertise posed another barrier to successful implementation for several of the steps in the process. According to post-pilot data, two of three pilot jurisdictions felt they had some current in-house expertise to complete this process, while the third indicated they had sufficient expertise.

Follow up interviews revealed greater insight into where project team capacity was most useful, key barriers to completing this process, and additional resources needed to bolster their ability to successfully complete this process. These insights were used to develop recommendations that address how best to provide support for jurisdictions that face barriers related to staff capacity and/or in-house climate expertise for integrating the model climate element. Recommendations are noted in the "Improve the Resilience Guidance" Section of the summary report.

Key successes of pilot:

“The TA team was critical – we would have floundered and be lost without the TA team.”

“Key to success of this guidance is educating the planner, so that person has a set of talking points in response to community skepticism.”

“Coming into the work with CAP work already being done made it a lot easier – already had the buy-in and engagement work done.”

“Project team support for Planning Commission meeting and use of Poll Everywhere [to solicit feedback] was great.”

“The support from the project team was huge — the clarity when talking to the planning commission and city council.”

“The TA was critical to make this happen. Not sure how many planners out here in their 40s and 50s would know how to approach this project. Maybe taught now, but not something he was trained in.”

The guidance puts it [ability to integrate climate into comprehensive planning] at a 6/10 in feasibility, with the TA it’s a 10. Without either the tool or TA, it’s a 0 or 1.

Barriers/Challenges:

"Community knowledge and attitude is mixed. There's a strong understanding of how climate affects people's daily lives, but also a strong sense of mistrust when we discuss the science and modeling."

"Gap is in the area of urgency and optimistic. Climate needs to be integrated holistically and that's what we're doing here [with this pilot program]."

"The accelerated timeline added to the challenge. Would have been less challenging with a longer timeline."

"Unsure if we could do the GIS component internally (mostly because of time)."

Additional resources needed for success:

"Technical support for data gathering and modelling may be useful. For data-driven actions, compiling adequate supporting information could get complex and time-consuming. Aid in identifying resources and data sources for use in developing justification for specific actions would be valuable when needed. This Pilot Program will certainly be a massive help in boosting staff capabilities."

"Having someone from Commerce come to talk about why having this integration is impactful and useful to our community."

"Climate Impacts 101 Factsheet, video tutorials [with digestible messaging climate hazards and how to plan for them], Commerce TA via email or mentor line."

"Resources for when you realize there's another layer of the work that you don't understand. Could look like a hotline or on-call resource/consultant that you can reach out."

Conclusion

Study Limitations

The expedited timeframe of the pilot program impacted the overall implementation and execution of the resilience sub-element integration process. Multiple sub-steps were intentionally omitted due to timing considerations, including planning a robust engagement process with city departments, stakeholders, and the communities of each pilot jurisdiction. This is a critical step in this process that requires 9-12 months to adequately execute. The project team included a significantly truncated version of this process to demonstrate a portion of this step.

The optional vulnerability and risk assessment (Step 4) is a technical, time-consuming, and capacity-intensive step. As such, the project team supported interested pilot jurisdictions in conducting a light-touch vulnerability and risk assessment, focusing on one specific climate hazard and a narrow list of assets. One pilot jurisdiction opted out of participating in the light-touch VRA due to internal capacity constraints. While limited in scope, the light-touch VRA conducted with two pilot jurisdictions demonstrated how this step may be implemented and revealed valuable takeaways for refinement.

Due to the expedited timeline of the pilot program, the pilot jurisdiction co-leads were not able to take on a significant leadership role in execution of steps, as originally intended. As a result, the project team led much of the work, while the jurisdiction co-leads provided review and direction where needed to ensure pilot program completion by the contracted deadline date (April 30, 2023). If jurisdiction co-leads were able to take

on a bigger leadership role in the execution of the resilience steps, this may have resulted in richer findings for resilience guidance and process improvements.

Pilot Project Materials

Climate Pilot Program Jurisdiction Selection Memo

Planning Commission Guidance Documents

- Pullman
- Port Angeles
- Woodland

Jurisdictional factsheets

- Pullman
- Port Angeles
- Woodland

Pilot Program surveys and interview guide

- Pre-pilot survey results
- Post-pilot survey results
- Program Close-out Interview Guide

H. Examples of Guiding Principles for Climate Planning

Example 1: Spokane Sustainability Action Plan guiding principles (2021)

- We seek to provide future generations with a quality of life equal to or better than the quality of life we now are experiencing.
- We seek to bring people and stakeholders together to co-create solutions and move our community towards resilience in the face of climate change.
- We believe climate strategies must address historic inequalities and environmental injustices. We will work to undo environmentally racist actions and systems.
- We believe that equitable inclusion is imperative in sustainability planning, therefore we will engage the community often and through diverse formats of communication.
- We believe that all people in Spokane should benefit from environmental programs and policies, not just a wealthy few.
- In a time of uncertainty, we seek to help prepare our community for the challenges to come. We seek to protect the right of all members of our community, human and other than human, to a healthy environment.
- We believe that every action we take must be evaluated for its impact on the climate.
- We believe urgent action is required!

Example 2: King County Strategic Climate Action Plan guiding principles (2020)

- Act with urgency and intention.
- Lead with racial justice and equity.
- Respond to community needs and priorities.
- Use and develop best available science.
- Seek systemic solutions.
- Build partnerships.
- Lead through local action.
- Prioritize health and co-benefits.
- Be transparent and accountable.

Example 3: Thurston Climate Adaptation Plan guiding principles (2018)

- Think in terms of multiple generations and connected built and natural systems, as well as view local and regional decisions through the lens of social, economic, and environmental sustainability.
- Increase resilience through achievable, flexible — and, where possible, measurable and replicable — adaptation strategies and actions that will help the region prepare for and cope with climate change impacts.
- Be responsive to immediate and long-term climate impacts — both emergencies and opportunities.
- Identify and leverage climate change adaptation strategies and actions with GHG reduction co-benefits, such as reducing, capturing, and storing greenhouse gas emissions.
- Utilize sound scientific research, scenarios modeling, economic analysis, and other tools to analyze regional and local climate change vulnerabilities, risks, and solutions.
- Incorporate and complement work produced by others, including the Natural Hazards Mitigation Plan for the Thurston Region, Sustainable Thurston, Thurston Thrives, and Olympia sea-level rise analyses.

- Consider the impacts of climate change adaptation recommendations on the region's economy, environment, and society; this includes all urban and rural communities — especially vulnerable residents — and the ecosystem benefits provided by natural systems.
- Recognize and strive to protect local indigenous tribes' community health and well-being, including natural resources security and self-determination.
- Seek broad community input, as well as educate residents about climate change and inspire them to take action.

I. Multi-criteria Analysis Examples

The following multi-criteria analysis methods are provided for comparison purposes and to provide further context for additional criteria that your jurisdiction could decide to include to prioritize the climate element goals and policies. These examples show a range of criteria that were utilized by the Stillaguamish Tribe, FEMA, Thurston Regional Planning Council, and the City of Vancouver.

Stillaguamish Tribe

The following set of criteria was included in the Stillaguamish Tribe Climate Adaptation Plan (2017), which was prepared in collaboration with the Stillaguamish Tribe, WA Department of Natural Resources, and the University of Washington Climate Impacts Group. Their plan included the following criteria for evaluating climate measures:

- **Effectiveness**. The expected ability of the action to help reduce the impacts of climate change on habitats and species;
- **Benefits to Priority Species**. The expected ability of the action to benefit one or more priority species;
- **Feasibility**. The Tribe's ability to carry out this work over the next five years, or to otherwise address barriers that could limit implementation (For example: organizational, technical, policy, legal, fiscal barriers);
- **Urgency**. The action's ability to address impacts that are already, or will soon be, affecting habitats and species important to the Stillaguamish Tribe;
- **Expected risk(s)**. This means the potential for negative consequences that are associated with an action; and
- **Readiness to implement**. The choices within this category included actionable, almost ready and not ready.

FEMA's STAPLEE Method

The STAPLEE method is a multi-criteria analysis framework developed by FEMA and enables users to apply a consistent analysis to the range of policy options they are considering adopting and implementing. STAPLEE refers to seven evaluation criteria: Social, Technical, Administrative, Political, Legal, Economic, and Environmental. The basic STAPLEE framework does not assign priority or weight to any of the criteria, but the framework could be adapted to do so.

The STAPLEE method assesses the feasibility of potential hazard mitigation and climate adaptation policies, and the framework leaves room for addressing equity. STAPLEE could also be adapted to provide quantitative values (and weighting) to the qualitative answers to its standard questions. The following example is adapted from a framework used by the city of Muscatine, Iowa:

- Social: The public must support the overall implementation strategy and specific mitigation actions and the mitigation actions are evaluated in terms of community acceptance. Considerations:
    - Community Acceptance: Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower-income people? Is the action compatible with present and future community values?
    - Effect on Segment of Population: Will the proposed action adversely affect one segment of the population? Could the benefits and burdens of the policy be distributed fairly?

- Technical: It is important to determine if the proposed action is technically feasible, will help to reduce losses in the long term, and has minimal secondary impacts. This category evaluates whether the alternative action is a whole or partial solution, or not a solution at all. Considerations:
    - Feasibility: How effective is the action in avoiding or reducing future losses (resilience) and mitigation? Does the action solve the problem or only a symptom? Will the action create more problems than it solves or other impacts?
- Administrative: This category examines the anticipated staffing, funding, and maintenance requirements for the mitigation actions to determine if the jurisdiction has the personnel and administrative capabilities to implement the actions or whether outside help will be necessary. Considerations:
    - Staffing: Does the jurisdiction have the capability (staff, technical experts, and training) to implement the action?
    - Funding allocated: Does the jurisdiction have the funding to implement the action, or can it readily be obtained? Can it be accomplished in a timely manner?
    - Maintenance/Operations: Can the community provide the necessary maintenance?
- Political: This considers the level of political support for the mitigation activities and programs. Considerations:
    - Political Support: Is there political support to implement and maintain this action? Have political leaders participated in the planning process so far?
    - Local Champion or Plan Proponent (respected community member): Is there a local champion willing to help see the action to completion?
    - Public Support (stakeholders): Is there enough public support to ensure the success of the action? Have all the stakeholders been offered an opportunity to participate in the planning process?
- Legal: Whether the jurisdiction has the legal authority to implement the actions, or whether the jurisdiction must pass new laws or regulations, is important in determining how the mitigation action can be best carried out. Considerations:
    - State Authority: Does the state have authority to implement the action?
    - Existing Local Authority: Are proper laws, ordinances, and resolutions in place to implement the actions?
    - Potential Legal Challenge: Is there a technical, scientific, or legal basis for the mitigation action (i.e. does the mitigation action “fit” the hazard setting)? Are there any potential legal consequences? Is the action likely to be challenged by stakeholders who might be negatively affected?
- Economic: Economic considerations must include evaluation of the present economic base and projected growth. Cost-effective mitigation actions that can be funded in current or up-coming budget cycles are more likely to be implemented than actions requiring general obligation bonds or other instruments that would incur long-term debt to a community. Considerations:
    - Benefit of Action: What benefits will the action provide?
    - Cost of Action: Does the cost seem reasonable for the size of the problem and the likely benefits? What burden will be placed on the tax base or local economy to implement this action?
    - Contributes to Economic Goals: Does the action contribute to other community economic goals, such as capital improvements or economic development?

- Outside Funding Required: Are there currently sources of funds that can be used to implement the action? What proposed actions should be considered by be "tabled" for implementation until outside sources of funding are available?

- Environmental: Impact on the environment is an important consideration because of public desire and need for sustainable and environmentally healthy communities. Also, statutory considerations, such as the National Environmental Policy Act (NEPA), need to be kept in mind when using federal funds. Considerations:

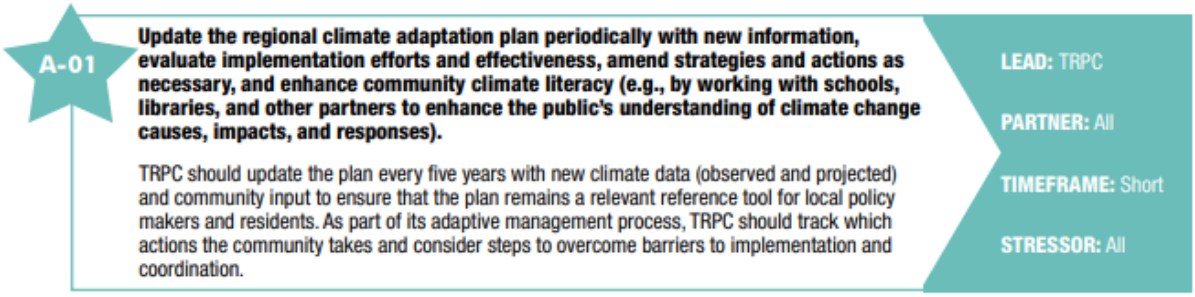
    - Affects Land/Water Bodies: How will this action affect land/water?
    - Affects Endangered Species: How will this action affect Endangered Species?
    - Affects Hazardous Materials and Waste Sites: How will this action affect Hazardous Materials and waste sites?
    - Consistent with Community's Environmental Goals: Is this action consistent with community environmental goals?
    - Consistent with Federal Laws: Is the action consistent with federal laws?

Thurston Regional Planning Council

In development of the Thurston Climate Adaption Plan, the project team and advisory board assigned negative and positive values to the criteria, although the final actions that were published in the report did not include the numerical scores. They evaluated each criterion within the range of high, medium, or low. Their criteria included:

- **Magnitude**: How many risks does this action take?
- **Effectiveness**: Is this action a long-term solution? To what degree would this action reduce the risks? Is this action already being taken?
- **Side Effects**: Would this action have negative effects on other goals? Would this action have positive effects on other goals?
- **Equity**: Would the costs and benefits of this action be shared fairly?

Excerpt from Thurston Climate Adaptation Plan (2018)



Vancouver, WA

In Vancouver's Climate Action Framework, they include strategies, actions, and metrics for tracking progress of their climate goals. Their project team and collaborators assigned numerical values to their initial list of measures, which, similar to Thurston County, was not included as a value in their final framework plan. Their framework will achieve 80% of the city's climate goals, with the hope that as technology evolves, they will be able to add more specific actions to fully achieve them. Their final evaluation criteria are based on estimated dollar values. Their criteria included:

- **Estimated emission reductions**: They modeled estimated emissions reductions for key actions in the buildings & energy, transportation & land use, and natural systems focus areas. The identified actions were selected because they were of interest to members of the stakeholder advisory group and were able to reliably be modeled with available data.
- **Timeframe**: Near term; Mid-term, Long term, and ongoing.
- **Costs to the city**: This refers to the estimated cost to the City of Vancouver.
- **Costs to the community**: This refers to estimated costs incurred by partners and stakeholders such as C-TRAN, Clark PUD, NW Natural, and others.
- **Costs of inaction**: This is an equity measurement, as it is an estimate of the social cost of carbon of $84 for the year 2025 (in 2020 dollars), which is midway between 2020 and the interim target of 2030, as based on the Washington Utilities & Transportation Commission (UTC).

To arrive at their priority rating, the measures were organized by the combined costs from highest to lowest per capita **net present value**[83] community costs.

Recommendations from University Capstone Project

Western Washington University urban planning students volunteered as part of a capstone project (term January to June 2022) to provide a recommendation to the Climate Team on a preferred prioritization method. The students considered the STAPLEE method and Vancouver's draft climate action plan, which has evolved since their review, and is now titled "Climate Action Framework (November 2022)". The metrics in the final framework have changed from the version that the students reviewed. With this in mind, the students recommended that Commerce adapt the Vancouver draft method, adding criteria and modifying the criteria weighting. The following is an excerpt from the WWU students' project:

Prioritization Method

In addition to modifying the weights, we recommend that the scores used to rate each of the criteria be expanded from a 1-5 scale to a 2-10 scale. The larger numbers [Table 3] help to show greater distinctions between the measures.

Gaps in Vancouver's Climate Roadmap

1. The Environmental Impact criterion does not include clear language specific to environmental impacts. We believe it is important to differentiate social impacts and impacts to the ecosystem when prioritizing measures to have a comprehensive judgement on human-nature pared systems as the framework for prioritization.

2. Additionally, it is unclear what "level of city control" means in the Feasibility criterion. We believe an unclear definition leaves room for political pressure in the subsequent policy process, and therefore needs to be explicitly defined and attributed.

[83] "Net present value" is calculated using a 3% discount rate. Negative numbers are cost savings.

Proposed Criteria Modifications

Heavily inspired by FEMA's STAPLEE method, we propose adding the following sub criteria to Vancouver's Feasibility criterion and splitting the Impact criterion into two:

Feasibility: Administrative Capabilities: Does the jurisdiction have the appropriate staffing and funding to implement the climate measure? Does it have appropriate funding for maintenance? With the following sub criteria (where very low is scored a 2 and very high is a 10):

Table 3. *Vancouver evaluation steps Summary*

Criteria	Original Weight	Revised Weight	Definition
*Environmental Impact	0.25	0.25	How does it improve the environment?
*Social Impact	Combined with above	0.1	How does it improve public services?
*Time		0.05	How fast can it be installed and how fast will results be seen? The faster the process the higher the number.
Cost	0.15	0.1	How much does it cost for the community and other resources?
Community support	0.1	0.05	How easy will it be to be accepted by the community?
Feasibility	0.1	0.15	How realistic is it for the city to implement these measures?
Equity	0.2	0.1	How does it help vulnerable and overburdened populations?

- Very low—inadequate staff and funding to implement and maintain climate measure. (2)
- Low—not enough staff, funding plausible but not likely, high maintenance cost. (4)
- Moderate—climate measure maintenance requires outside funding, but staffing is sufficient. (6)
- High—enough staff, funding possible through levy, little-to-no maintenance required. (8)
- Very High—appropriate and existing staff, funding liquidity and/or already allocated. (10)

Environmental Impact: long- and short-term impacts to land and water, endangered species, HAZMAT and waste sites. With the following sub criteria (where very low is a 10 and very high is 2):

- Very low—climate measure has no known short- or long-term impacts on the environment. (10)
- Low—climate measure has no known long-term impacts but some short-term impacts on the environment. (8)
- Moderate—climate measure's negative impacts on the environment are minimal and can be reversed with existing science and technology. (6)
- High—climate measure has short-term negative impacts on the environment. (4)
- Very high—climate measure has long term negative impacts on the environment. (2)

Social Impact: Long- and short-term impacts to social groups, with a focus on disadvantaged and vulnerable groups. With the following sub criteria (where very high is scored a 2 and very low is a 10):

- Very low—climate measure has no known short- or long-term impacts on social groups. (10)
- Low—climate measure has no known long-term impacts but some short-term impacts on social groups. (8)
- Moderate—climate measure's negative impacts on social groups are minimal and can be reversed with existing science and technology. (6)
- High—climate measure has short-term worsening of inequity and disproportionately affects vulnerable groups. (4)
- Very high—climate measure has long term worsening of inequity and disproportionately affects vulnerable groups. (2)

J. Summary: Handbook for Analyzing Greenhouse Gas Emission Reductions

The California Air Pollution Control Officers Association (CAPCOA) prepared the "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities and Advancing Health and Equity" to provide a common platform of information and tools for evaluating greenhouse gas reduction measures, assessing climate vulnerabilities, and promoting equity to support sustainable, resilient, and equitable land use planning and project design.

CAPCOA prepared the handbook in collaboration with academia, agencies, community organizations and leaders, local governments, non-governmental organizations, and technical experts. The quantification methods, tools, and recommendations provided in this handbook were developed based on the latest science and literature available at the time of publication.

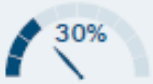
This (500+ page) handbook should be viewed as a planning resource. It provides strategies, tools, and analytical methods to facilitate integrated and resilient decision making, despite potential future planning uncertainty. The Handbook should be used to assist in the development of climate change public policy.

The following graphics from their handbook depict specific GHG reduction measures (from California) and provides instruction on how to evaluate/calculate their potential for reducing emissions.

The complete handbook is contained in this link: https://www.airquality.org/ClimateChange.

T-1. Increase Residential Density

GHG Mitigation Potential



Up to 30.0% of GHG emissions from project VMT in the study area

Co-Benefits (icon key on pg. 32)

Climate Resilience

Increased density can put people closer to resources they may need to access during an extreme weather event. Increased density can also shorten commutes, decreasing the amount of time people are on the road and exposed to hazards such as extreme heat or flooding.

Health and Equity Considerations

Neighborhoods should include different types of housing to support a variety of household sizes, age ranges, and incomes.

Measure Description

This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units (du) compared to the average residential density in the U.S. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in GHG emissions. This measure is best quantified when applied to larger developments and developments where the density is somewhat similar to the surrounding area due to the underlying research being founded in data from the neighborhood level.

Subsector

Land Use

Locational Context

Urban, suburban

Scale of Application

Project/Site

Implementation Requirements

This measure is most accurately quantified when applied to larger developments and/or developments where the density is somewhat similar to the surrounding neighborhood.

Cost Considerations

Depending on the location, increasing residential density may increase housing and development costs. However, the costs of providing public services, such as health care, education, policing, and transit, are generally lower in more dense areas where things are closer together. Infrastructure that provides drinking water and electricity also operates more efficiently when the service and transmission area is reduced. Local governments may provide approval streamlining benefits or financial incentives for infill and high-density residential projects.

Expanded Mitigation Options

When paired with Measure T-2, *Increase Job Density*, the cumulative densification from these measures can result in a highly walkable and bikeable area, yielding increased co-benefits in VMT reductions, improved public health, and social equity.

Subsector Maximum

($\sum A_{max_{T\text{-}1 \text{ through } T\text{-}3}} \leq 65\%$) This measure is in the Land Use subsector. This subcategory includes Measures T-1 through T-3. The VMT reduction from the combined implementation of all measures within this subsector is capped at 65 percent.

Example GHG Reduction Quantification

The user reduces VMT by increasing the residential density of the project study area. In this example, the project's residential density would be 15 du per acre (B), which would reduce GHG emissions from project VMT by 14.2 percent.

$$A = \frac{15 \frac{du}{ac} - 9.1 \frac{du}{ac}}{9.1 \frac{du}{ac}} \times -0.22 = -14.2\%$$

Quantified Co-Benefits

Improved Local Air Quality

The percent reduction in GHG emissions (A) would be the same as the percent reduction in NO_X, CO, NO_2, SO_2, and PM. Reductions in ROG emissions can be calculated by multiplying the percent reduction in GHG emissions (A) by an adjustment factor of 87 percent. See *Adjusting VMT Reductions to Emission Reductions* above for further discussion.

Energy and Fuel Savings

The percent reduction in vehicle fuel consumption would be the same as the percent reduction in GHG emissions (A).

VMT Reductions

The percent reduction in VMT would be the same as the percent reduction in GHG emissions (A).

Sources

- Ewing, R., K. Bartholomew, S. Winkelman, J. Walters, and D. Chen. 2007. *Growing Cooler: The Evidence on Urban Development and Climate Change*. October. Available: https://www.nrdc.org/sites/default/files/cit_07092401a.pdf. Accessed: January 2021.
- Stevens, M. 2016. Does Compact Development Make People Drive Less? *Journal of the American Planning Association* 83:1(7–18), DOI: 10.1080/01944363.2016.1240044. November. Available: https://www.researchgate.net/publication/309890412_Does_Compact_Development_Make_People_Drive_Less. Accessed: January 2021.

K. Glossary of Terms

The following terms are found throughout the guidance and within the Menu of Measures.

Term	Definition	Source
Acidification	Ocean acidification refers to a reduction in the pH of the ocean over an extended period of time, caused primarily by uptake of carbon dioxide (CO2) from the atmosphere.	National Oceanic and Atmospheric Administration (NOAA)
Active Transportation	Active transportation means forms of pedestrian mobility including walking or running, the use of a mobility assistive device such as a wheelchair, bicycling, and cycling, irrespective of the number of wheels, and the use of small personal devices such as foot scooters and skateboards. Active transportation includes both traditional and electric assist bicycles and other devices. Planning for active transportation must consider and address accommodation pursuant to the Americans with Disabilities Act and the distinct needs of each form of active transportation.	HB 1181
Active Transportation Facilities	Facilities provided for the safety and mobility of active transportation users, including but not limited to, trails, as defined by RCW 47.30.005, sidewalks, bike lanes, shared-use paths, and other facilities in the public right-of-way.	HB 1181
Adaptation	The process of adjusting to new (climate) conditions in order to reduce risks to valued assets.	U.S. Climate Resilience Toolkit
Adaptive capacity	The ability of a person, asset, or system to adjust to a hazard, take advantage of new opportunities, or cope with change.	U.S. Climate Resilience Toolkit
Agroecology	Agroecology seeks to optimize the interactions between plants, animals, humans and the environment while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced.	Food and Agriculture Organization of the United Nations
Assets	People, resources, ecosystems, infrastructure, and the services they provide. Assets are the tangible and intangible things people or communities value.	U.S. Climate Resilience Toolkit
Biofuel Infrastructure	The term biofuels usually applies to liquid fuels and blending components produced from biomass materials. Infrastructure includes facilities that generate, transport, and distribute energy.	U.S Energy Information Administration
Carbon footprint	A carbon footprint is the total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions.	The Nature Conservancy

Term	Definition	Source
Carbon sequestration	Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide. Biologic carbon sequestration refers to storage of atmospheric carbon in vegetation, soils, woody products, and aquatic environments. Geologic carbon sequestration is the process of storing carbon dioxide (CO2) in underground geologic formations.	U.S. Geological Survey
Centers for Disease Control and Prevention (CDC)	Centers for Disease and Control (CDC) is tasked with protecting the nation from health, safety and security threats, both foreign and within the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.	Centers for Disease Control and Prevention
Climate	Climate in the usual weather of a place.	National Aeronautics and Space Administration (NASA)
Climate resilience	The ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities	RCW 70A.65.010
Climate stressor	A condition, event, or trend related to climate variability and change that can exacerbate hazards.	U.S. Climate Resilience Toolkit
Co-benefits	The ancillary or additional benefits of policies that are implemented with a primary goal, such as climate change mitigation — acknowledging that most policies designed to reduce greenhouse gas emissions also have other, often at least equally important, benefits (for example, energy savings, economic benefits, air quality benefits, public health benefits). Also referred to as "multiple benefits."	U.S. Environmental Protection Agency (EPA)
Community Wildfire Protection (Plan)	A Community Wildfire Protection Plan (CWPP) is a comprehensive wildfire safety plan developed by the local citizens and state and federal agencies.	Washington Department of Natural Resources
Commute-trip-reduction (CTR)	Washington state's laws relating to commute trip reduction (CTR law) were adopted in 1991 and incorporated into the Washington Clean Air Act as RCW 70.94.521 through 70.94.551. The intent of the CTR law is to reduce automobile-related air pollution, traffic congestion, and energy use through employer based programs that encourage the use of alternatives to the single occupant vehicle traveling during peak traffic periods for the commute trip.	Washington State Legislature

Term	Definition	Source
Concurrency (Regulatory)	(Regulatory) Concurrency requires jurisdictions or a developer to provide any transportation improvements or programs required to reduce demand and meet an established transportation level-of-service within six years of the completion of a development.	RCW 36.70A.070 (6)(b)
Consequence	A subsequent result (usually negative) that follows from damage to or loss of an asset. Quantifying potential consequences is an important part of determining risk.	U.S. Climate Resilience Toolkit
Criteria pollutant	Criteria pollutant means a pollutant for which there is established a National Ambient Air Quality Standard at 40 C.F.R. Part 50. The criteria pollutants are carbon monoxide (CO), particulate matter, ozone (O3) sulfur dioxide (SO2), lead (Pb), and nitrogen dioxide (NO2).	WAC 173-400-030
Critical infrastructure	Systems and assets, whether physical or virtual, so vital that the incapacity or destruction of such may have a debilitating impact on the security, economy, public health or safety, environment, or any combination of these matters, across any local, state, tribal and federal jurisdiction.	FEMA
Defensible space	Defensible space is the area around a building in which vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire to and from the building.	Federal Emergency Management Agency
Drawdown	The vertical distance groundwater elevation is lowered, due to the removal of groundwater. The distance between the static water level and the surface of the cone of depression.	Michigan State University
Ecosystem services	Ecosystem services are the benefits that humans receive from nature. These benefits underpin almost every aspect of human well-being, including our food and water, security, health, and economy.	U.S. Environmental Protection Agency
Electric vehicle (EV)	An EV is defined as a vehicle that can be powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source.	U.S. Department of Energy
Embodied carbon	Embodied carbon refers to the greenhouse gas emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building materials.	Carbon Leadership Forum
Environmental equity	Describes a country, or world, in which no single group or community faces disadvantages in dealing with environmental hazards, disasters, or pollution. No one should need extreme wealth or political connections to protect the well-being of their families and communities. Environmental equity is considered a basic human right.	Mobilize Green

Term	Definition	Source
Environmental justice	The fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies.	Washington State's Environmental Justice Task Force
Environmental Protection Agency (EPA)	The mission of EPA is to protect human health and the environment. EPA works to ensure that Americans have clean air, land and water; that chemicals in the marketplace are reviewed for safety, and to reduce other environmental risks. They are responsible for ensuring that contaminated lands and toxic sites are cleaned up by potentially responsible parties and revitalized. Environmental stewardship is integral to U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy. The EPA attempts to make information sufficient to effectively participate in managing human health and environmental risks readily available to the public.	U.S. Environmental Protection Agency
Exposure	The presence of people, assets, and ecosystems in places where they could be adversely affected by hazards	U.S. Climate Resilience Toolkit
Externalities	A side effect or consequence of an industrial or commercial activity that affects other parties without this being reflected in the cost of the goods or services involved, such as the pollination of surrounding crops by bees kept for honey.	Oxford Languages Dictionary
Extreme heat	Extreme heat is defined as summertime temperatures that are much hotter and/or humid than average.	Centers for Disease Control and Prevention (CDC)
Federal Emergency Management Agency (FEMA)	The Federal Emergency Management Agency (FEMA) has 10 regional offices located across the country and work to ensure that America is equipped to prepare for and respond to disasters. FEMA's mission is helping people before, during and after disasters.	FEMA
Frontline community	Frontline community members are people who experience the first and worst consequences of climate change. Such residents' health and livelihoods are often highly vulnerable to climate-exacerbated hazards and economic disruptions, and their communities often lack basic support infrastructure and suffer disproportionately from the compounding impacts of pollution, discrimination, racism, and poverty.	Washington State Department of Commerce
Geographic Information System (GIS)	A Geographic Information System (GIS) is a computer system that analyzes and displays geographically referenced information. It uses data that is attached to a unique location.	U.S. Geological Survey (USGS)

Term	Definition	Source
Gray infrastructure	Gray infrastructure is traditional stormwater infrastructure in the built environment such as gutters, drains, pipes, and retention basins.	U.S. Environmental Protection Agency
Green infrastructure	Green infrastructure means a wide array of natural assets and built structures within an urban growth area boundary, including parks and other areas with protected tree canopy, and management practices at multiple scales that manage wet weather and that maintain and restore natural hydrology by storing, infiltrating, evapotranspiring, and harvesting and using stormwater.	HB 1181
Green space	An area of land, vegetated by natural features such as grass, trees, or shrubs, within an urban context and less than one acre in size that creates public value through one or more of the following attributes: is accessible to the public; promotes physical and mental health of residents; provides relief from the urban heat island effects; promotes recreational and aesthetic values; promotes streams or water supply; or, preserves visual quality along highway, road, or street corridors.	HB 1181
Greenhouse gas (GHG)	Greenhouse gases, such as carbon dioxide, methane, nitrous oxide, and certain synthetic chemicals, trap some of the Earth's outgoing energy, thus retaining heat in the atmosphere.	U.S. Environmental Protection Agency
GHG emission reduction (climate GHG reduction)	Actions taken to reduce or eliminate the emissions of greenhouse gases (present and future) in order to reduce the rate and extent of climate change damage. It may also be referred to as greenhouse gas emissions GHG reduction.	Washington Department of Commerce
Growth Management Act (GMA)	The Growth Management Act (Chapter 36.70A RCW) is a series of state statutes, first adopted in 1990, that requires fast-growing cities and counties to develop a comprehensive plan to manage their population growth.	Municipal Research and Services Center
Hazard	An event or condition that may cause injury, illness, or death to people or damage to assets	U.S. Climate Resilience Toolkit
Hazard mitigation	Any sustainable action that reduces or eliminates long-term risk to people and property from future disasters.	FEMA
Impacts	In the context of this guidance document, impacts means the effects on natural and human systems that result from hazards. Evaluating potential impacts is a critical step in assessing vulnerability.	U.S. Climate Resilience Toolkit
Indicator	A sign that shows you what something is like or how a situation is changing.	Oxford Leaners Dictionaries

Term	Definition	Source
Intergovernmental Panel on Climate Change (IPCC)	The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.	The Intergovernmental Panel on Climate Change
Inundation	Inundation is the total water level that occurs on normally dry ground as a result of the storm tide, and is expressed in terms of height of water, in feet, above ground level.	National Oceanic and Atmospheric Administration (NOAA)
Low Impact Development (LID)	The term low-impact development (LID) refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat.	U.S. Environmental Protection Agency
Magnitude	The measure of consequences — for example, high, medium, or low — for an asset that is impacted by a climate-exacerbated hazard.	U.S. Climate Resilience Toolkit
Managed retreat	Voluntary movement and transition of people and ecosystems away from vulnerable coastal areas.	Georgetown Climate Center
Mobility hub	A mobility hub is a recognizable place with options for different and connected transport modes, such as scooters, e-bikes, and electric car charging stations, supplemented with enhanced facilities to both attract and benefit the traveler.	WA Department of Commerce
Multimodal	Multimodal transportation includes public transportation, rail and waterways, bicycle and pedestrian. Multimodal access supports the needs of all users whether they choose to walk, bike, use transit or drive. It means more connections and more choices.	WA Department of Transportation
Multimodal concurrency	Multimodal concurrency considers all modes of transportation — including automobile, transit, bicycle, and pedestrian — as well as the benefits of transportation demand management.	WA Department of Commerce
Municipal Research and Services Center (MRSC)	The Municipal Research and Services Center (MRSC) is a nonprofit organization that helps local governments across Washington better serve their communities by providing legal and policy guidance on any topic.	Municipal Research and Services Center
National Fire Protection Association (NFPA)	The National Fire Protection Association (NFPA) is a nonprofit organization, devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards.	National Fire Protection Association (NFPA)
National Oceanic and Atmospheric Administration (NOAA)	National Oceanic and Atmospheric Administration (NOAA) is an agency that enriches life through science. Their reach goes from the surface of the sun to the depths of the ocean floor.	National Oceanic and Atmospheric Administration (NOAA)

Term	Definition	Source
Net-Zero	Refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere.	Net Zero Climate
Non-climate stressor	A change or trend unrelated to climate that can exacerbate hazards.	U.S. Climate Resilience Toolkit
Onsite Non-potable Water System (ONWA)	Non-potable water is water that does not meet the standards for drinking purposes of the State or local authority having jurisdiction, or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency's National Primary Drinking Water Regulations. Onsite non-potable water systems (ONWS) capture and treat water sources generated from within or surrounding a building, such as wastewater, greywater, stormwater, or roof collected rainwater. The treated water is then reused onsite or locally.	Washington State Department of Health United States Environmental Protection Agency
Overburdened community	A geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in RCW 19.405.020.	HB 1181
Passive survivability	A building ability to maintain critical life-support conditions in the event of extended loss of power or water; or in the event of extraordinary heat spells, storms, or other extreme events.	University of California at Berkeley Center for the Built Environment
Per capita vehicle miles traveled (VMT)	This means the number of miles traveled using cars and light trucks in a calendar year divided by the number of residents in Washington. The calculation of this value excludes vehicle miles driven conveying freight.	HB 1181
Probability	The likelihood of hazard events occurring. Probabilities have traditionally been determined from the historic frequency of events. With changing climate and the introduction of non-climate stressors, the probability of hazard events also changes.	U.S. Climate Resilience Toolkit
Projections	Potential future climate conditions calculated by computer-based models of the Earth system. Projections are based on sets of assumptions about the future (scenarios) that may or may not be realized.	U.S. Climate Resilience Toolkit
Recreation and Conservation Office (ROC)	The Recreation and Conservation Office (RCO) is a small state agency that manages grant programs to create outdoor recreation opportunities, protect the best of the state's wildlife habitat and working farms and forests, and help return salmon and orcas from near extinction.	Washington State Recreation and Conservation Office

Term	Definition	Source
Regenerative agriculture	A land management philosophy that involves farming and ranching in harmony with nature. Regenerative agriculture prioritizes climate, ecosystems, water quality, people's health, and relationships within and across ecosystems, and fair pay and racial equity for farmers. The idea includes networks of entities who grow, enhance, exchange, distribute, and consume goods and services—instead of a linear supply chain.	Natural Resources Defense Council
Risk	The potential for negative consequences where something of value is at stake. In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard. Risk can be assessed by multiplying the probability of a hazard by the magnitude of the negative consequence or loss.	U.S. Climate Resilience Toolkit
Sensitivity	The degree to which a system, population, or resource is or might be affected by hazards.	U.S. Climate Resilience Toolkit
Shoreline Management Act (SMA)	The Shoreline Management Act (SMA) requires all counties and most towns and cities with shorelines to develop and implement Shoreline Master Programs. The law also defines our role in reviewing and approving local programs. The SMA was passed by the Washington Legislature in 1971 and adopted by voters in 1972. Its overarching goal is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines."	WA Department of Ecology
Shrubsteppe	The shrubsteppe is an arid ecosystem found in Eastern Washington and other western states.	WA Department of Fish and Wildlife
Single Occupancy Vehicle (SOV)	A single occupancy vehicle commute is a trip to or from a daily destination (usually work) by an individual alone in a car, truck or van.	NWA Regional Planning Commission
Snowpack	A mass of snow on the ground (commonly in mountainous areas) that is compressed and hardened by its own weight.	U.S. Environmental Protection Agency (EPA)
State Environmental Policy Act (SEPA)	The State Environmental Policy Act (SEPA) process identifies and analyzes environmental impacts associated with governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies, and plans.	WA Department of Ecology
Transfer of Development Rights (TDR)	Transfer of Development Rights (TDR) is a market-based mechanism that encourages the voluntary transfer of growth from places where a community would like to see less development (referred to a sending areas) to places where a community would like to see more development (referred to as receiving areas.)	WA Department of Commerce

Term	Definition	Source
Transportation System	Transportation system means all infrastructure and services for all forms of transportation within a geographical area, irrespective of the responsible jurisdiction or transportation provider.	HB 1181
Travel Demand Management (TDM)	Transportation demand management (TDM), or simply demand management, is defined a set of strategies aimed at maximizing traveler choices. Managing demand is about providing travelers, regardless of whether they drive alone, with travel choices, such as work location, route, time of travel and mode. In the broadest sense, demand management is defined as providing travelers with effective choices to improve travel reliability.	U.S. Department of Transportation: Federal Highway Administration
Tribal sovereignty	Sovereignty is a legal term meaning the right of a people to self-govern within jurisdictional borders. Tribal sovereignty recognizes that American Indian tribes have the political status of nations and that Indian nations are located within the territorial boundaries of the United States. As sovereigns, tribal nations have a government-to-government relationship with the two other sovereign governing bodies in the U.S. — the federal and state governments.	washingtontribes.org
Uncertainty	A state of incomplete knowledge. Uncertainty about future climate arises from the complexity of the climate system and the ability of models to represent it, as well as the inability to predict the decisions that society will make.	U.S. Climate Resilience Toolkit
United States Department of Agriculture (USDA)	The USDA provides leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on public policy, the best available science, and effective management.	U.S Department of Agriculture
United States Forest Service (USFS)	The US Forest Service leads in the protection, use, research, and stewardship of natural and cultural resources within our federal forests and grasslands. Their mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.	U.S Department of Agriculture Forest Service

Term	Definition	Source
Urban Growth Area (UGA)	Each county that is required or chooses to plan under RCW 36.70A.040 shall designate an urban growth area or areas within which urban growth shall be encouraged and outside of which growth can occur only if it is not urban in nature. Each city that is located in such a county shall be included within an urban growth area. An urban growth area may include more than a single city. An urban growth area may include territory that is located outside of a city only if such territory already is characterized by urban growth whether or not the urban growth area includes a city, or is adjacent to territory already characterized by urban growth, or is a designated new fully contained community as defined by RCW 36.70A.350.	RCW 36.70A.110
Vulnerability	The propensity or predisposition of assets to be adversely affected by hazards. Vulnerability encompasses exposure, sensitivity, potential impacts, and adaptive capacity.	U.S. Climate Resilience Toolkit
Vulnerable populations	Vulnerable populations are groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: adverse socioeconomic factors such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and, sensitivity factors, such as low birth weight and higher rates of hospitalization. Vulnerable populations include, but are not limited to: racial and ethnic minorities; low-income populations; and, populations disproportionately impacted by environmental harms.	HB 1181
Washington Department of Ecology (ECY)	The Department of Ecology (ECY) works to protect, preserve, and enhance Washington's environment for current and future generations. They strive to protect and sustain healthy land, air, water, and climate in harmony with a strong economy.	HB 1181
Washington Department of Fish and Wildlife (WDFW)	The Washington Department of Fish and Wildlife is dedicated to preserving, protecting, and perpetuating the state's fish, wildlife, and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities.	HB 1181
Washington Department of Health (DOH)	The Department of Health works to protect and improve the health of all people in Washington state.	HB 1181

Term	Definition	Source
Washington Department of Natural Resources (DNR)	Washington State Department of Natural Resources (DNR) protects our state's heritage of natural resources by sustainably managing millions of acres of state lands in forests, under the sea and across agricultural plains. Manage, sustain, and protect the health and productivity of Washington's lands and waters to meet the needs of present and future generations.	HB 1181
Washington Department of Fish and Wildlife (WDFW)	The Washington Department of Fish and Wildlife is dedicated to preserving, protecting, and perpetuating the state's fish, wildlife, and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities.	WA Department of Fish and Wildlife
Washington Department of Transportation (WSDOT)	WSDOT provides safe, reliable and cost-effective transportation options to improve communities and economic vitality for people and businesses.	WA Department of Transportation
Washington Environmental Health Disparities (WA EHD)	The Washington Environmental Health Disparities Map is an interactive mapping tool that compares communities across our state for environmental health disparities.	WA Department of Health
Weather	Weather is the changes we see and feel outside from day to day.	National Aeronautics and Space Administration (NASA)
Wildland-Urban Interface (WUI)	Wildland-urban interface means the geographical area where structures and other human development meets or intermingles with wildland vegetative fuels.	HB 1181
World Climate Research Programme (WCRP)	The World Climate Research Programme (WCRP) coordinates and facilitates international climate research to develop, share, and apply the climate knowledge that contributes to societal well-being	World Climate Research Programme

L. Menu of Measures

The Menu of Measures is a library of climate goals and policies that Commerce will continue to curate. Click here to see the current version of the Menu.

TO: City Council

FROM: Brian Hurley, Fire Chief

DATE: July 9, 2024

SUBJECT: Fire Department Strategic Plan Briefing

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1) Recommended Action:

This item is informational only.

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2) Background:

At the end of 2023 the City contracted with Emergency Services Consulting International (ESCI) to undertake an update of the Fire Department 5-year strategic plan. The process also included an assessment of agency capabilities and performance metrics as compared to national consensus standards. The strategic plan process included interviews with city staff, agency partners, fire department personnel, union leadership, and community members. The plan update includes update mission, vision, and values for the Department as well as six strategic goals and associated objectives. The agency evaluation also includes an assessment of current capabilities and recommendations associated with the findings.

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3) Policy Support:

Provide and Sustain Quality Public Safety Services

- Complete and begin implementation of the Fire Department Strategic Plan.
- Ensure timely, efficient, and effective public safety response in our community.
- Explore and implement partnerships to improve efficiency of service delivery.
- Evaluate and promote City programs to reduce risk to life and property throughout our community.
- Develop innovative initiatives and programs to address growing service demands.

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4) Alternatives:

❑ N/A

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5) Fiscal Notes:

Items identified in this planning process are being included in the 2025-26 Fire Department budget request for consideration.

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6) Attachments:

A. 2024 Tumwater Fire Department Strategic Plan
B. 2024 Tumwater Fire Department Agency Evaluation

A

2024 STRATEGIC PLAN

City of Tumwater Fire Department
Tumwater, Washington

Emergency Services Consulting International

Helping Change the World, One Community at a Time

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STRATEGIC PLANNING

Process Overview

Change is inevitable, but growth is intentional. It begins when we set goals. Yet, having goals is not synonymous with success. An organization must craft a comprehensive plan—a roadmap replete with clear objectives, defined timelines, specific roles, and measurable milestones. This strategic planning is pivotal for any organization, public or private, aspiring to reach its full potential.

Such a plan outlines a well-defined direction, takes stock of the operational environment, and devises strategies to progress toward goals. These components position an organization to serve its community and achieve its overarching vision adeptly. In renewing its commitment to professionalism, the organization sets itself on a trajectory toward enduring success.

The strategic implementation planning process culminates in a three-to-five-year work plan, guiding the collective endeavors of the organization towards shared goals and objectives. It is an inclusive method, engaging key stakeholder representatives to ensure that the interests of the entire community are considered throughout the planning stages.

During the planning sessions, the team re-examined the agency's vision, mission, and values. These elements served as the cornerstones for identifying service improvement areas. From these discussions emerged the strategic themes that now underpin the goals of the implementation plan.

The strategic goals, once established, were then broken down into specific objectives. Through robust dialogue and brainstorming, ideas were adopted or discarded based on group consensus. The resulting goals and objectives were designed to be flexible, allowing for adjustments to align with the agency's broader aspirations.

In summary, carefully formulating a strategic plan involving inclusive participation and flexible goal setting equips an organization with the agility to adapt and the direction to thrive amidst change.

"Agility will be the new capital for organizations."

- 21st Century Fire & Emergency Services White Paper

Community-Centered Strategic Planning Process

ESCI's Community Centered Strategic Planning Process (CCSPP) methodology has been adopted and utilized by the International Association of Fire Chiefs, numerous other national, regional, and state fire service agencies and associations, and hundreds of local fire departments across the United States and Canada. The CCSPP has proven remarkably effective with all types and sizes of organizations, from large metropolitan fire departments to small, rural all-volunteer Fire Rescues and everything in between. This process was utilized in the development of Tumwater Fire Department's strategic planning framework and will include, but not necessarily be limited to:

- Reviewing organizational background.
- Defining services provided to the community.
- Identifying aspects of the organization the community views positively.
- Developing a vision for the future.
- Establishing the organization's guiding principles.
- Identifying performance gaps.
- Establishing the organization's strategic goals.
- Identifying the objectives that support the strategic goals.
- Determining critical implementation tasks for each objective.
- Defining service outcomes in the form of performance measures and targets.

ACKNOWLEDGMENTS

Tumwater Fire Department

Brian Hurley | Fire Chief

Shawn Crimmins | Assistant Fire Chief

James Osberg | Battalion Chief

Donovan Cathey | Battalion Chief

Brad Ridgeway | Battalion Chief

Josh Stewart | Battalion Chief

Jon Kalar | Training Lieutenant

Mark Armstrong | Fire Prevention Officer

Jarrod Simmons | Fire Lieutenant

Andrew Fink | Fire Lieutenant

Will Flagg | Fire Lieutenant

Monti Sorem | Paramedic Lieutenant

Alex Bates | Medical Services Officer

Doug Stankavich | Paramedic Lieutenant

Evan Hagen | Firefighter

Jennifer Lindstrom | Firefighter

Joe Williamson | Paramedic Firefighter

Travis Levya | Firefighter

Eli Fox | Paramedic Firefighter

Emergency Services Consulting International

Richard Curtis | Project Manager

Sterling Folden | Associate Consultant

Dwayne Bonnette | Associate Consultant

Turan Koroglu | Industrial/Organizational Psychology

Shauna Murrell | Branding & Document Support

MESSAGE FROM THE CHIEF

The Tumwater Fire Department is pleased to present our 2024 Strategic Plan update. The Strategic Plan defines our Vision, Mission, and Values and outlines a strategic work plan for the Department. The City of Tumwater is a vibrant, growing community, and the Fire Department must be positioned to address growing demands for service. The Strategic Plan helps identify necessary steps to ensure a high level of service to our community and increased safety for our members.

The Fire Department Strategic Plan sets out goals, objectives, and tasks as we look to the future. Department priorities are evaluated to ensure that they are in alignment with the City of Tumwater's strategic priorities. All areas of the Department were evaluated, including response operations and deployment, community risk reduction programs, community engagement, cooperative partnerships, training, emergency management, and employee safety and wellness. Out of this planning process will come specific recommendations to the Mayor and City Council relating to staffing levels, service enhancements, and identified facility/equipment needs.

The Department utilized a consultant to facilitate the planning process. The process began with an "agency evaluation" to determine how the Department measures up to nationally recognized standards. Areas evaluated included response operations, facilities, equipment, and all programs, such as fire prevention, community education, and training. The consultant also facilitated meetings with both internal and external stakeholders to help ensure all voices were heard. Members of the Department participated in an anonymous survey to help evaluate Department culture. Community members were invited to participate and provide input on what they consider important with regard to Fire Department services. Finally, members of the department participated in several sessions to help identify what the department does well and what we could do better.

The Tumwater Fire Department has a proud tradition of service to the community. The success of the department has been driven by the hard work and dedication of our members and the support of our community. This plan will help ensure that our community receives the highest level of emergency services response possible going into the future.

The Tumwater Fire Department motto, "It's the water… and a lot more" says it all. Our dedicated staff strives to provide the highest level of service no matter what situation may present itself. We welcome your feedback. Feel free to stop by one of our stations to visit in person. Thank you for your support as we strive to provide excellent service to our growing community.

Sincerely,

Brian Hurley, Fire Chief

ENVIRONMENTAL SCAN

External Stakeholder Feedback

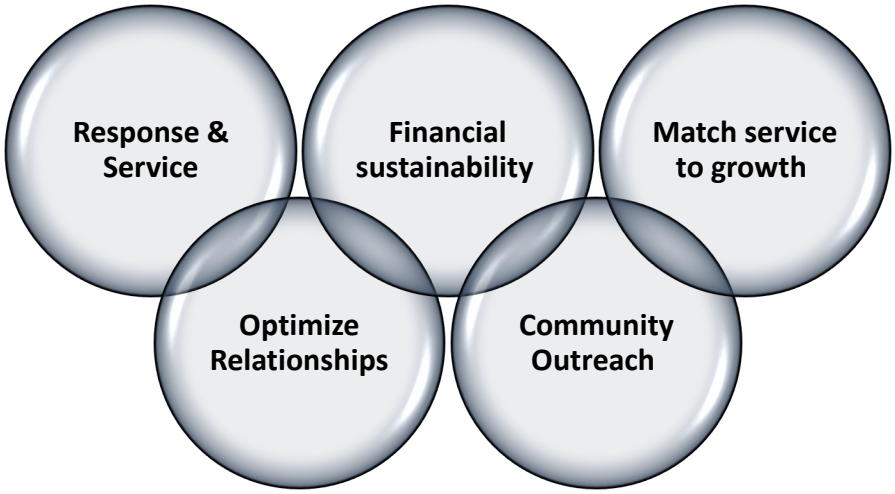
On February 7, 2024, ESCI facilitated a community stakeholder feedback session at the Tumwater Fire Station #1. Invitations were sent to thirty community members/businesses. Both external stakeholders attended the session. The seven representatives in attendance included:

- Stephen Derout – Tumwater School District
- Cheryl Sullivan-Colglazier – Deschutes Ridge Homeowners Association
- Cindy Swanberg – Deschutes Ridge Homeowners Association
- Chris Lester – Lobbyist for the Association of Realtors
- Pete Kmet – Community Member, former Mayor
- Dave Nicandri – Community Member, form Councilmember

As part of the discussions, ESCI asked the attendees to help define "good service" and what a fire department should provide for their community. The group identified the following assets that a generic Fire Department should provide:

- Data-Driven Response
- Make good use of Intergovernmental Agreements
- Financial sustainability
- Community Outreach
- Providing Support Services
- Match service to growth
- Emergency Preparedness

After defining good service, the group worked together to determine the community's expectations of the Tumwater Fire Department from the group's perspective. These expectations included:



1. **Response and Service**
   - Rapid Response with expectations between 4-6 Minutes
   - Base deployment on data
     - Efficiency Metrics should also be applied (Best Bang for the Buck)
   - Concerns about Ladder Truck coming from Olympia.
   - Utilize Alternative Response Models
     - Crisis Intervention Teams
     - CARES Programs
     - Efficient Use of Apparatus *(Do we need expensive Fire Engines to respond to all incidents?)*
   - Ensure staff are well trained and skilled.
     - Electric Vehicles, etc.
2. **Optimize Relationships**
   - Establish Intergovernmental Agreements to maximize services.
     - Shared Services with other FDs
   - Building relationships with other partners
     - Schools
     - City Departments
     - Community Agencies

3. **Financial Sustainability**
   - Sufficient funding sources for services
   - Ensure support services are properly supported.
     - Human Resources, Finance, Logistics, Administrative, etc.
   - Provide funding for facilities and equipment allocated to growth in the south of the city.
4. **Community Outreach**
   - Want to know our fire department better?
     - An expectation that Firefighters are engaged in the community.
     - Interactive web page showing locations and categories of responses on a map.
   - Public outreach training
     - CPR, Fire Extinguisher, Emergency Preparedness, Fall Safety, Defensive Space, Smoke Detectors, FD Open House, etc.
   - Cross-department Communication – Reporting Issues
     - Broken Stop Signs, Pot-Holes, Clogged Storm Drains

   Training for Middle and High School Staff
5. **Match Service to Growth**
   - Develop plans for service delivery for the city and population and demographic changes.
   - Apparatus and Equipment should be modern and well-maintained.
   - Ensure FD capacity is in place before growth occurs, rather than services being overrun.

Internal Stakeholder Feedback

Member Survey

Tumwater Fire Department (TFD) collaborated with Emergency Services Consulting International (ESCI) to formulate, implement, and assess a survey targeting its members. As the consulting firm for the International Association of Fire Chiefs, we worked closely with TFD stakeholders to create and deploy a member survey to inform the development of the strategic plan.

On January 17, 2024, TFD administered the member survey, keeping it open for responses until January 30, 2024. Forty-two (42) of the 53 full-time members participated in the study, constituting over 79 % of TFD's personnel.

The survey primarily captures the viewpoints of full-time staff. Among the respondents, 100% (42) were full-time employees, and no on-call employees or volunteers participated in the survey. The largest segment of respondents, constituting 33%, reported having worked with the Department for 11-25 years. Additionally, 31% indicated a tenure of 0-5 years, and 29% reported 6-10 years of service with the Department.

The following summarizes the survey results and common themes discovered through analyzing overall results and free-text responses.

Health, Safety, & Wellness

Sixty-nine percent of respondents agreed or strongly agreed that the Department supports them with useful physical health and wellness resources, and 79% of survey participants agreed or strongly agreed. Sixty-four percent of TFD members believe that fellow team members have an adequate level of physical fitness to perform their duties. However, nearly a quarter (24%) remained neutral.

Trust Within the Department

TFD members hold the Chief in high regard to make sound decisions and keep them safe. 86% of survey participants agreed or strongly agreed. Almost all the respondents, 95%, agreed or strongly agreed that the Department trusts them to do their assigned job.

Regarding the statement, "I trust the department to do the right thing for my coworkers and me," 74% of TFD members agreed or strongly agreed.

Organizational Culture

The members of the Tumwater Fire Department hold the Department and its leadership in high regard for fostering a very healthy and positive culture within the Department. Many of the free-text responses commented that they feel very "close-knit" and uplifted by the Department's culture. Many of these feelings seem to be stemming from the leadership's consistency with communication and transparency. Many of the members commented on being "heard" as a result of being able to have open communication with the leadership.

Personnel Development

Though TFD members believe that the training provided by the Department is sufficient, there is a call for more training opportunities. Many of the free-text comments in response to the question "From your perspective, what should Tumwater Fire Department start doing immediately?" were regarding developing more training programs. However, it is important to note that there was no common topic of training mentioned in the comments; rather, there was a general call for more training.

City Leadership Strategic Priorities and Goals

The City of Tumwater department directors and senior management developed six overarching strategic priorities and goals for 2025 and 2026. One strategic priority of the city that directly applies to public safety states the following: ***"Provide and Sustain Quality Public Safety Services."*** The strategic goals that serve that priority are:

1. Law Enforcement Master Plan
2. Ensure timely, efficient, and effective public safety response in our community.
3. Explore and implement partnerships to improve the efficiency of service delivery.
4. Evaluate and promote City programs to reduce risk to life and property throughout our community.
5. Develop innovative initiatives and programs to address growing service demands.

These strategic goals will correlate to each fire department's goals and objectives.

STRATEGIC PLANNING WORK SESSIONS

Vision | Mission | Values

An organization's vision will clearly define and establish what the Department wants to become. It becomes a target and guiding beacon as the strategic plan and goals are completed. At the plan's end, the adopted vision should be a reality and an accurate portrayal of the Tumwater Fire Department.

VISION:
For what do we want to be known?

MISSION:
What do we do?

The organization's mission statement should clearly define the primary purpose of the organization's existence. It focuses Tumwater Fire Department members on what is profoundly important to the organization and community. The mission statement should be understood by all members and posted prominently throughout the organization's facilities. Each member should commit the mission to memory.

A department's core values are a collection of the most important beliefs and ingrained principles that guide the Department's actions. Establishing core values aims to connect the members, clarify the Department's mission, and define their brand for the community they serve.

VALUES:
What are the rules?

The in-house planning team worked together to review and craft the mission, vision, and values statements:

Our Vision:

We will lead through innovation, education, and integrity while serving the evolving needs of our diverse community.

Our Mission:

"Providing excellent public service through compassion and dedication."

Our Values: C-I-T-E

Compassion: *Serve others with respect, empathy, and humility.*

Innovation: *Fostering an environment with professional and personal development opportunities encompassing physical and mental wellness.*

Trust: *We recognize an inherent trust from our community and peers built upon integrity, individually and as a team. High-functioning and successful teams are dependent on trust.*

Empowerment: *Empowerment promotes accountability and responsibility. Together, these values create a framework for fostering autonomy, integrity, and effectiveness within individuals and the organization.*

Our Motto:

"It's the water…and a lot more."

GOOD | BETTER | DIFFERENT

Tumwater Fire Department members participated in a two-day internal workshop and partook in a "Good – Better – Different" exercise. The process was meant to eliminate group thinking and enable all participants to provide open feedback. Using four different colored sticky notes, Tumwater Fire Department members took part in the following process:

> **GOOD | Green Sticky Notes:** Write three things that TFD should continue to do and make plans to maintain in the future.
>
> **BETTER | Yellow Sticky Notes:** Write three things TFD should improve upon.
>
> **DIFFERENT | Red Sticky Notes:** Write three things TFD should stop doing.
>
> **DIFFERENT | Blue Sticky Notes:** Write three things TFD should start doing.

Facilitators collected each color sticky note and posted them on the board. Small groups organized each sticky note in color into common thoughts and themes and then discussed the common themes. The following is a list of common themes derived from exercise.

TFD should continue these activities and make plans to maintain their importance in the future.

- Creating a great culture
- Listening to individuals
- Deliver good customer service
- Excellent labor/management relationship
- Four platoon schedule
- Maintain quality equipment
- Partnerships

TFD should strive towards improvement in the following aspects of the organization.

- Training
- Communication with the public
- Leadership development
- Special Teams
- Data collection
- Prevention activities
- Recruitment
- Employee health

TFD should cease its attention on the following aspects.

- Responding to other city departments' areas of responsibility
- Using old alerting technology
- Saying yes to all requests
- Doing more with less
- Allowing uninformed decisions to occur
- Inconsistent employee standards

TFD should refocus its attention on the following aspects.

- Employee wellness
- Alternate response models
- Increase support staffing
- Community risk reduction
- More secure facilities
- Leadership development

STRATEGIC WORK PLAN

Definition of Terms

The main components of a strategic plan: Goals, Objectives, and Tasks are defined as follows:

GOAL:

The largest overarching element of a strategic plan is a goal. These are broad enterprises where the organization may have multiple areas of focus.

OBJECTIVE:

A smaller component of and subordinate to a goal, an objective is focused on one area but is still general. If all the objectives under a goal have been accomplished, the goal will have been achieved.

TASK:

A smaller component of and subordinate to an objective, a task is usually defined as specific, measurable, action-oriented, realistic, and time-sensitive. If all tasks under an objective are accomplished, the objective will have been accomplished.

Tumwater Fire Department and ESCI worked to develop eight goals to focus this strategic plan on obtainable results. Members collaborated to narrow the goals and objectives to a workable list assigned to a member. There was a spirit of friendliness and respect within the room, which lent itself to an environment for open and honest discussion with the goal of helping continue to move the organization forward.

Strategic goals, objectives, and tasks become essential to the organization's efforts. By following these components carefully, the organization will be guided into the future and should benefit from reduced obstacles and distractions. Each goal, objective, and task were identified in a two-day planning work session facilitated by ESCI with the TFD team.

The following list defines each goal with its subordinate objectives and each goal with its subordinate tasks. The following goals are actionable items determined through feedback to create the basis of the recommended strategic plan. Details for each goal are provided below.

Applicable City Strategy and Goal(s):

Build a Community Recognized for Quality, Compassion, and Humanity

Provide and Sustain Quality Public Safety Services

- Ensure timely, efficient, and effective public safety response in our community
- Develop innovative initiatives and programs to address growing service demands

GOAL #1 – Fire Department Deployment (Response)

The Tumwater Fire Department will provide a safe, timely, adequate, and effective response to calls for service.

OBJECTIVE #1: Develop a Standard of Cover document with benchmarks to meet the approved level of service.

1. Assess the WSRB coverage factors.
2. Assess performance against NFPA standards and best practices.
3. Determine alternative deployment models to achieve performance standards.
4. Compare and contrast various models and related costs.
5. Select the optimum deployment model.

OBJECTIVE #2: Dispatch and respond with the most appropriate resources to each risk profile.

1. Identify the categories of risk profiles: Fire, EMS, and Others.
2. Identify the gaps/capabilities.
3. Evaluate incident types that present an impact on safety and the concurrent level of service that may need revision of policy or procedure, including recommending suspension of response to certain types of incidents.
4. Evaluate Medic One ALS and BLS contracts and suggest modifications to maximize response effectiveness and performance.
5. Review and update mutual aid response procedures to maximize the level of service to citizens.
6. Through potential collaboration, address non-emergency medical calls and provide community members with appropriate care and resources through an FD Cares program or other resource.

OBJECTIVE #3: Improve communications and collaboration with law enforcement partners.

1. Explore and clarify responsibilities for Tumwater Fire and Police departments on various incident types.
2. Evaluate alternative response resources for specific call types that typically don't require a Medic Unit resource.
3. Explore and evaluate TCOMM's responsibility concerning specific call types.

OBJECTIVE #4: Review how data is collected and formulated to inform stakeholders about the fire department.

1. Identify valuable data both internally and externally and how to collect it.
2. Identify, determine, and train staff on data entry factors that are essential to measure the critical performance outcomes needed to evaluate performance.
3. Assign responsibility to QA/QI data entry.
4. Create a schedule to collect data regularly.
5. Build a template to present data in a sharable place.

Applicable City Strategy and Goal(s):

Provide and Sustain Quality Public Safety Services

- Explore and implement partnerships to improve the efficiency of service delivery
- Develop innovative initiatives and programs to address growing service demands

GOAL #2 –Improve service levels through strengthening cooperative services.

Actively develop a regional strategy to coordinate and consolidate efforts to improve support services between the City of Tumwater, the City of Olympia, Lacey Fire District #3, other surrounding fire districts, Medic One, TCOMM911, and other partner agencies and organizations.

OBJECTIVE #1: Establish work groups with representatives having expertise in the following areas to review, consider, and develop recommendations for improving services.

1. Working with area partners, develop an **Emergency Management** study group to consolidate the programs, plans, and procedures to mitigate manmade and natural disaster incidents.
    a. Involve the Thurston County Department of Emergency Management.
2. Working with area partners, develop a **Training Program** study group.
3. Working with area partners, develop a regional **Community Risk Reduction** study group to consider the IGA consolidation of code enforcement and public education.
    a. Involve the Building Officials of the City agencies.
4. Consider collaborating with the City of Olympia on the implementation and funding of a regional **FD Cares Program** intended to address non-emergency medical calls and provide community members with appropriate care and resources.
5. Review and establish common goals among the agencies.
6. Recommend specific structures, responsibilities, and financial requirements that could improve service, provide greater efficiency, and develop greater expertise.

Applicable City Strategy and Goal(s):

Provide and Sustain Quality Public Safety Services

- Explore and implement partnerships to improve the efficiency of service delivery
- Develop innovative initiatives and programs to address growing service demands

Refine and Sustain a Great Organization

- Create a continuous learning organization

GOAL #3 – Enhance Training Programs

Implement a career-long comprehensive professional development training plan starting with onboarding new personnel and continuing through retirement that includes developing a program that empowers employees to achieve their full potential and advance in their careers.

OBJECTIVE #1: Ensure a consistent and measurable EMS training program and evaluation system.

1. Review and evaluate current practices.
2. Collaborate with Medic One to identify the partnership's existing strengths and weaknesses.
3. Solicit feedback from internal and external stakeholders.
4. Explore additional and outside educational opportunities.

OBJECTIVE #2: Confirm that the JATC (Joint Apprenticeship Training Council) program is being utilized meaningfully and meets onboarding and training needs.

1. Evaluate the current strengths and weaknesses of the current JATC program and its requirements.
2. Overhaul the current three-year program.
3. Submit findings and proposals to the JATC subcommittee.

OBJECTIVE #3: Examine regional partnerships to optimize and maximize training opportunities.

1. Evaluate the development of a singular joint training staff and program through an interlocal Government Agreement (IGA) between the City of Olympia and Lacey Fire District #3.
2. Establish a stakeholder group to define needs and resources.
3. Perform a cost-benefit analysis of existing training programs and evaluate the results.

OBJECTIVE #4: Determine if the training program meets current and future service types and demands.

1. Establish the Knowledge, Skills, and Abilities (KSAs)required for each position.
2. Develop a Gap Analysis of current training programs against the KSAs.
3. Evaluate current vulnerabilities and demands.
4. Evaluate potential future needs and plan for those demands.
5. Compare current and future demands with laws and standards and ensure compliance.
6. Build recommended programs to satisfy the identified gaps.

OBJECTIVE #5: Analyze current professional development practices to determine agency gaps.

1. Survey and conduct focus groups to obtain feedback where gaps may exist.
2. Solicit input from agency partners through a leadership lens.
3. Research other FD leadership programs.
4. Evaluate weaknesses of the current promotional practices and develop strategies to make improvements.

OBJECTIVE #6: Update and modify the employee evaluation programs to better guide professional growth.

1. Research alternative evaluation programs.
2. Solicit employee input to improve the system.
3. Meet with the City Human Resources department to suggest modifications.
4. Redesign and update the employee evaluation program.
5. Train users on the new program.
6. Identify/revise employee evaluation policies.

OBJECTIVE #7: Work with the Thurston County Fire Chief's Association to create an annual regional leadership conference.

1. Identify funding and sponsorships.
2. Identify speakers and topics.
3. Determine the venue, time, and audience.

Applicable City Strategies:

Build a Community Recognized for Quality, Compassion, and Humanity

Refine and Sustain a Great Organization

GOAL #4 – Communications

Implement a comprehensive communication strategy to include internal and external stakeholders.

OBJECTIVE #1: Create a communications engagement position for the Tumwater Fire Department to provide greater external communication concerning community risk reduction and operational activities.

1. Define the needs and the hours required to meet the organizational needs.
2. Create a Job Description
3. Secure Funding
4. Recruit and hire a person(s).

OBJECTIVE #2: Review, revise, and update the Department's communications policy.

1. Identify current related policies.
2. Identify new policy needs.
3. Draft/Update new policy.
4. Labor and operations shall review and recommend approval by the Chief.

OBJECTIVE #3: Enhance department visibility through web-based platforms.

1. Obtain approval to modify and update fire department web-based platforms.
2. Expand the use of all social media platforms (Podcast, YouTube, X, etc.)
3. Develop a strategy and procedures to analyze feedback data.

OBJECTIVE #4: Develop a community outreach program.

1. Identify and form relationships with community stakeholder groups.
2. Evaluate other community outreach programs.
3. Provide and identify training to key members.
4. Develop strategies to reach out to the community.
5. Implement elements of the plan to meet the strategic goals.

OBJECTIVE #5: Identify and communicate organizational behaviors that support or detract from our desired culture.

1. Identify tools to assess organizational culture.
2. Memorialize the identified behaviors in an easily accessible place.
3. Provide accountability to redirect unhealthy behaviors that fall short of the desired culture.
4. Educate and train staff on our vision, mission, and values.
5. Display vision, mission, and values in appropriate places.
6. Celebrate employees who embody the vision, mission, values, and desired culture.

Applicable City Strategy and Goal(s):

Refine and Sustain a Great Organization

- Ensure a safe and healthy workforce
- Update Employee Compensation Plan
- Promote a talented DEI workforce
- Create a continuous learning organization (including the Council)

GOAL #5 – Review Recruitment, Hiring, and Retention Practices

Ensure recruitment, hiring, and retention practices and outcomes to meet or exceed current fire department needs and expectations.

OBJECTIVE #1: Confirm the current recruitment practices are meeting and producing quality and diverse applicants.

1. Review and evaluate current practices.
2. Investigate alternate recruitment options and determine feasibility.
3. Create a proposal and present it to the administration.
4. Implement changes in conjunction with human resources and communications.

OBJECTIVE #2: Ensure the current testing and hiring practices yield top-quality candidates.

1. Review and evaluate current practices in collaboration with human resources.
2. Perform a comparative analysis of neighboring agencies' application rates.
3. Evaluate alternate testing products and processes.
4. Recommend and implement changes in conjunction with human resources.

OBJECTIVE #3: Identify practices that maintain a high rate of retention.

1. Review and determine current retention rates.
2. Identify practices that have created the current retention rates.
3. Determine any reasons personnel are leaving before retirement.
4. Investigate best practices for positive retention.
5. Create recommendations based on findings.

Applicable City Strategy and Goal(s):

Refine and Sustain a Great Organization

- Ensure a safe and healthy workforce

GOAL #6 – Improve Employee Wellness

Create a comprehensive wellness program that addresses employees' physical and mental health.

OBJECTIVE #1: Identify contributing factors to employee mental health.

1. Evaluate current data sets.
2. Utilize data to identify best practices.
3. Review and revise existing policies.
4. Implement revised policies and create a revision cycle.

OBJECTIVE #2: Evaluate facilities' SOPs/SOGs with respect to physical and mental wellness.

1. Identify emerging industry trends for best practices.
2. Prioritize these trends and practices for implementation.
3. Review, revise, and implement policies.

OBJECTIVE #3: Identify contributing factors to employee physical health.

1. Evaluate current data sets.
2. Utilize data to identify best practices.
3. Review and revise existing policies.
4. Implement revised policies and create a revision cycle.

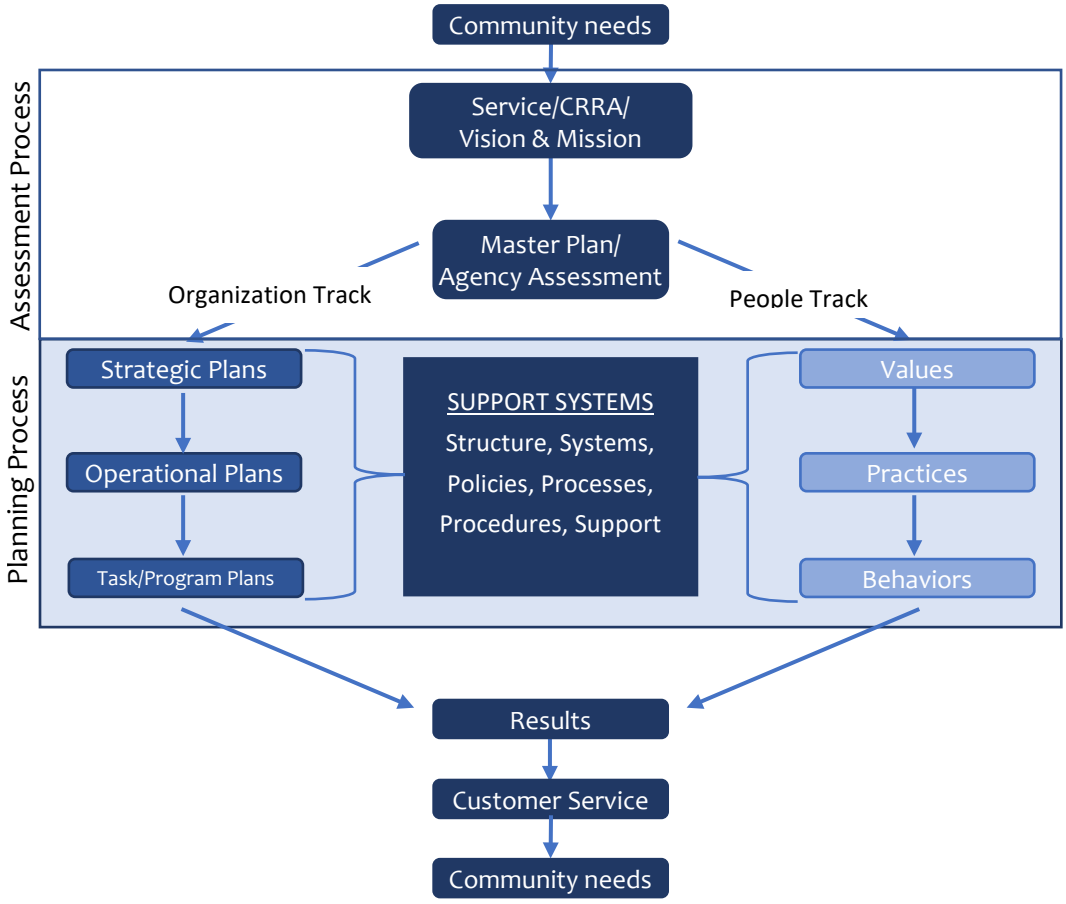
OBJECTIVE #4: Mitigate environmental issues that may cause cancer for firefighters.

1. Reduce exposure to diesel exhaust by installing separate heating/air conditioning and air handling systems and installing an airtight physical barrier from apparatus bay spaces.
2. Adopt the recommended practices developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network – Healthy In – Healthy Out initiatives.
    a. Review decontamination procedures at the scene and in the station.
    b. Storage of PPE Equipment
    c. Isolate furniture, ice machines, and other equipment in apparatus bays.

IMPLEMENTATION METHODOLOGY

Emergency services continually contend with a rapidly changing environment. Improved tools, technologies, increased regulation of activities, and changing risk profiles are all challenges that, if not planned for, create a reactionary decision-making methodology instead of a proactive organization. Fire departments can avoid organizational obstacles through continuous evaluations of the internal and external environment and aligning themselves around the needs of these environments. An organization will stay agile and on the leading edge of service delivery by analyzing data and trends and implementing course corrections.

Organizational Alignment



To remain highly effective and improve service delivery, an organization must identify programs and activities that may no longer serve the community's changing needs. The abovementioned process is called organizational alignment, adapted from the Vector Group to meet the fire service's needs. This process aligns the entire organization by examining the community needs and cascading those needs down through the service delivery plan, community risk reduction assessment plan (CRRA), and mission. This service delivery plan outlines the services provided by the organization and creates a foundation for the organization's mission. There are separate processes that mirror each other for organization and people planning.

The organizational track examines strategic, operational, and tactical/program plans. The people track details of the individuals' values, practices, and behaviors. Both pathways come back together to measure results. Keep in mind that these processes are not exclusive of each other. Many times, these processes are documented in combined plans. These results are compared to the provided customer service, and this service is measured to the community's needs. The executive team is the champion of the strategic plan. However, for the strategic plan to be successful, every organization member must own it, embrace it, and help hold the organization accountable to it.

Role of Goal Managers

Each goal within the organization should be assigned to a designated manager responsible for coordinating their respective goals. Once assigned, these goal managers must clarify their roles and responsibilities and form inclusive and capable task teams for each objective within the goal. Once the task teams are established, the manager needs to identify necessary funding, stay vigilant about the status and progress of each task team, troubleshoot and remove obstacles hindering the task teams, and consistently report on goal status, progress, barriers, strategies to address obstacles, successes, and achievements. Goal managers play a crucial role in communicating the status of their plan element to the organization.

Role of Task/Program Teams

Each objective is assigned a task/program team with capable members, emphasizing those who desire to achieve the objective or have expertise or job assignments that align with the objective. Each task team should convene for an initial meeting to select a chairperson, become familiar with the objective as a team, seek clarification from the goal manager where there are questions, identify the need for funding appropriations, and begin outlining a work plan. This will help the task team achieve the objective within the assigned timeline(s).

Once a work plan has been created, the task team chair should coordinate a meeting schedule that works for the team and minimizes organizational conflicts (e.g., training, vacations, etc.). Significant actions of the task teams and issues they face should be recorded for status updates to the goal managers.

Role of Tumwater Fire Department Member

Tip:

Every effective presentation message is a call to action, feeling, or thought.

Every Member of the Tumwater Fire Department is responsible for understanding the strategic plan, internalizing its vision, mission, values, goals, and objectives, and helping the organization achieve it, whether a part of the various teams or not. By being aware of the multiple efforts being expended to make the organization more successful, members can be on the lookout for opportunities the different task teams may be able to take advantage of to achieve their objectives. Members must also help by holding the organization accountable to its stated timelines and outcomes. While there should be room for unforeseen circumstances that require adjustment of timelines or unexpected opportunities that may necessitate a shift in a specific approach, they should not be a routine excuse for not achieving what was committed to from the outset.

It is also essential to be reasonable in the organization's expectations of the strategic plan. In some cases, some challenges have taken years to manifest themselves in their current form. They will not be corrected overnight. Each member must see themselves as part of the solution. Sometimes, despite the strongest desires and best efforts of all involved, resolving some issues requires more effort than is available to the organization in the near term. Therefore, every effort should be made to manage this effort with a focus on efficiency and effectiveness.

Communication Strategies and Mechanisms

The strategic plan must be communicated often and through many mechanisms. The internal planning team must discuss numerous communication strategies. They include:

- Chief officers meet with all crews over time to review the strategic plan.
- Incorporation of vision, mission, and values discussions within training sessions.
- Highlight a single element of the plan during training sessions (e.g., six minutes for strategic planning).
- Upload the strategic plan electronically to make it accessible to all members and post a hard copy at each station or to TWFD's Vector/Target Solutions.
- Communicate status updates quarterly, celebrate successes, and identify struggles transparently.
- The internal planning team meets with goal managers at least semi-annually to share lessons learned, brainstorm resolutions to barriers, and provide status updates.
- Convene the internal planning team annually to update the plan and ensure accountability.
- The Fire Chief should provide quarterly reports to the city manager as a standing agenda item for the life of the plan.

These strategies and mechanisms have advantages and disadvantages, but the primary theme is to use what works and communicate regularly and transparently to the organization. By keeping the plan front and center in the organization, the plan is alive in the minds and hearts of its members. Celebrating successes as they occur increases the level of excitement by the members for the following elements to be accomplished.

The plan can be used for each task team to keep track of their work performance and can also be used to provide regular updates to the goal managers. This helps keep the process standardized and on track and can be the basis for communicating progress to the Department. Whether the provided planning sheet, an internally developed spreadsheet, or another tracking device created by the organization is used, the critical takeaway is maintaining granular tracking at the task team level and the big picture department-wide.

Tip:

Deliver a conclusion that is not just a summary but a look into the future.

APPENDIX A: IMPLEMENTATION TEMPLATE GUIDE

GOAL #1 – Fire Department Deployment (Response)		
The Tumwater Fire Department will provide a safe, timely, adequate, and effective response to calls for service.		
	Timeline	Goal Manager/Task Program Team
OBJECTIVE #1: Develop a Standard of Cover document with benchmarks to meet the approved level of service.		
1. Assess the WSRB coverage factors.		
2. Assess performance against NFPA standards and best practices.		
3. Determine alternative deployment models to achieve performance standards.		
4. Compare and contrast various models and related costs.		
5. Select the optimum deployment model.		
OBJECTIVE #2: Dispatch and respond with the most appropriate resources to each risk profile.		
1. Identify the categories of risk profiles: Fire, EMS, and Others.		
2. Identify the gaps/capabilities.		
3. Evaluate incident types that present an impact on safety and the concurrent level of service that may need revision of policy or procedure, including recommending suspension of response to certain types of incidents.		
4. Evaluate Medic One ALS and BLS contracts and suggest modifications to maximize response effectiveness and performance.		
5. Review and update mutual aid response procedures to maximize the level of service to citizens.		
6. Through potential collaboration, address non-emergency medical calls and provide community members with appropriate care and resources through an FD Cares program or other resource.		
OBJECTIVE #3: Improve communications and collaboration with law enforcement partners.		
1. Explore and clarify responsibilities for Tumwater Fire and Police departments on various incident types.		
2. Evaluate alternative response resources for specific call types that typically don't require a Medic Unit resource.		
3. Explore and evaluate TCOMM's responsibility concerning specific call types.		
OBJECTIVE #4: Review how data is collected and formulated to inform stakeholders about the fire department.		
1. Identify valuable data both internally and externally and how to collect it.		
2. Identify, determine, and train staff on data entry factors that are essential to measure the critical performance outcomes needed to evaluate performance.		
3. Assign responsibility to QA/QI data entry.		
4. Create a schedule to collect data regularly.		
5. Build a template to present data in a sharable place.		

GOAL #2 –Improve service levels through strengthening cooperative services.		
Actively develop a regional strategy to coordinate and consolidate efforts to improve support services between the City of Tumwater, the City of Olympia, Lacey Fire District #3, other surrounding fire districts, Medic One, TCOMM911, and other partner agencies and organizations.		
	Timeline	Goal Manager/Task Program Team
OBJECTIVE #1: Establish work groups with representatives having expertise in the following areas to review, consider, and develop recommendations for improving services.		
1. Working with area partners, develop an Emergency Management study group to consolidate the programs, plans, and procedures to mitigate manmade and natural disaster incidents.		
a. Involve the Thurston County Department of Emergency Management.		
2. Working with area partners, develop a Training Program study group.		
3. Working with area partners, develop a regional Community Risk Reduction study group to consider the IGA consolidation of code enforcement and public education.		
a. Involve the Building Officials of the City agencies.		
4. Consider collaborating with the City of Olympia on the implementation and funding of a regional FD Cares Program intended to address non-emergency medical calls and provide community members with appropriate care and resources.		
5. Review and establish common goals among the agencies.		
6. Recommend specific structures, responsibilities, and financial requirements that could improve service, provide greater efficiency, and develop greater expertise.		

GOAL #3 – Enhance Training Programs		
Implement a career-long comprehensive professional development training plan starting with onboarding new personnel and continuing through retirement that includes developing a program that empowers employees to achieve their full potential and advance in their careers.		
	Timeline	Goal Manager/Task Program Team
OBJECTIVE #1: Ensure a consistent and measurable EMS training program and evaluation system.		
1. Review and evaluate current practices.		
2. Collaborate with Medic One to identify the partnership's existing strengths and weaknesses.		
3. Solicit feedback from internal and external stakeholders.		
4. Explore additional and outside educational opportunities.		
OBJECTIVE #2: Confirm that the JATC (Joint Apprenticeship Training Council) program is being utilized meaningfully and meets onboarding and training needs.		
1. Evaluate the current strengths and weaknesses of the current JATC program and its requirements.		
2. Overhaul the current three-year program.		
3. Submit findings and proposals to the JATC subcommittee.		
OBJECTIVE #3: Examine regional partnerships to optimize and maximize training opportunities.		
1. Evaluate the development of a singular joint training staff and program through an interlocal Government Agreement (IGA) between the City of Olympia and Lacey Fire District #3.		
2. Establish a stakeholder group to define needs and resources.		
3. Perform a cost-benefit analysis of existing training programs and evaluate the results.		
OBJECTIVE #4: Determine if the training program meets current and future service types and demands.		
1. Establish the Knowledge, Skills, and Abilities (KSAs)required for each position.		
2. Develop a Gap Analysis of current training programs against the KSAs.		
3. Evaluate current vulnerabilities and demands.		
4. Evaluate potential future needs and plan for those demands.		
5. Compare current and future demands with laws and standards and ensure compliance.		
6. Build recommended programs to satisfy the identified gaps.		
OBJECTIVE #5: Analyze current professional development practices to determine agency gaps.		
1. Survey and conduct focus groups to obtain feedback where gaps may exist.		
2. Solicit input from agency partners through a leadership lens.		
3. Research other FD leadership programs.		
4. Evaluate weaknesses of the current promotional practices and develop strategies to make improvements.		

	Timeline	Goal Manager/Task Program Team
OBJECTIVE #6: Update and modify the employee evaluation programs to better guide professional growth.		
1. Research alternative evaluation programs.		
2. Solicit employee input to improve the system.		
3. Meet with the City Human Resources department to suggest modifications.		
4. Redesign and update the employee evaluation program.		
5. Train users on the new program.		
6. Identify/revise employee evaluation policies.		
OBJECTIVE #7: Work with the Thurston County Fire Chief's Association to create an annual regional leadership conference.		
1. Identify funding and sponsorships.		
2. Identify speakers and topics.		
3. Determine the venue, time, and audience.		

GOAL #4 – Communications		
Implement a comprehensive communication strategy to include internal and external stakeholders.		
	Timeline	Goal Manager/Task Program Team
OBJECTIVE #1: Create a communications engagement position for the Tumwater Fire Department to provide greater external communication concerning community risk reduction and operational activities.		
1. Define the needs and the hours required to meet the organizational needs.		
2. Create a Job Description		
3. Secure Funding		
4. Recruit and hire a person(s).		
OBJECTIVE #2: Review, revise, and update the Department's communications policy.		
1. Identify current related policies.		
2. Identify new policy needs.		
3. Draft/Update new policy.		
4. Labor and operations shall review and recommend approval by the Chief.		
OBJECTIVE #3: Enhance department visibility through web-based platforms.		
1. Obtain approval to modify and update fire department web-based platforms.		
2. Expand the use of all social media platforms (Podcast, YouTube, X, etc.)		
3. Develop a strategy and procedures to analyze feedback data.		
OBJECTIVE #4: Develop a community outreach program.		
1. Identify and form relationships with community stakeholder groups.		
2. Evaluate other community outreach programs.		
3. Provide and identify training to key members.		
4. Develop strategies to reach out to the community.		
5. Implement elements of the plan to meet the strategic goals.		
OBJECTIVE #5: Identify and communicate organizational behaviors that support or detract from our desired culture.		
1. Identify tools to assess organizational culture.		
2. Memorialize the identified behaviors in an easily accessible place.		
3. Provide accountability to redirect unhealthy behaviors that fall short of the desired culture.		
4. Educate and train staff on our vision, mission, and values.		
5. Display vision, mission, and values in appropriate places.		
6. Celebrate employees who embody the vision, mission, values, and desired culture.		

GOAL #5 – Review Recruitment, Hiring, and Retention Practices		
Ensure recruitment, hiring, and retention practices and outcomes to meet or exceed current fire department needs and expectations.		
	Timeline	Goal Manager/Task Program Team
OBJECTIVE #1: Confirm the current recruitment practices are meeting and producing quality and diverse applicants.		
1. Review and evaluate current practices.		
2. Investigate alternate recruitment options and determine feasibility.		
3. Create a proposal and present it to the administration.		
4. Implement changes in conjunction with human resources and communications.		
OBJECTIVE #2: Ensure the current testing and hiring practices yield top-quality candidates.		
1. Review and evaluate current practices in collaboration with human resources.		
2. Perform a comparative analysis of neighboring agencies' application rates.		
3. Evaluate alternate testing products and processes.		
4. Recommend and implement changes in conjunction with human resources.		
OBJECTIVE #3: Identify practices that maintain a high rate of retention.		
1. Review and determine current retention rates.		
2. Identify practices that have created the current retention rates.		
3. Determine any reasons personnel are leaving before retirement.		
4. Investigate best practices for positive retention.		
5. Create recommendations based on findings.		

GOAL #6 – Improve Employee Wellness		
Create a comprehensive wellness program that addresses employees' physical and mental health.		
	Timeline	Goal Manager/Task Program Team
OBJECTIVE #1: Identify contributing factors to employee mental health.		
1. Evaluate current data sets.		
2. Utilize data to identify best practices.		
3. Review and revise existing policies.		
4. Implement revised policies and create a revision cycle.		
OBJECTIVE #2: Evaluate facilities' SOPs/SOGs with respect to physical and mental wellness.		
1. Identify emerging industry trends for best practices.		
2. Prioritize these trends and practices for implementation.		
3. Review, revise, and implement policies.		
OBJECTIVE #3: Identify contributing factors to employee physical health.		
1. Evaluate current data sets.		
2. Utilize data to identify best practices.		
3. Review and revise existing policies.		
4. Implement revised policies and create a revision cycle.		
OBJECTIVE #4: Mitigate environmental issues that may cause cancer for firefighters.		
1. Reduce exposure to diesel exhaust by installing separate heating/air conditioning and air handling systems and installing an airtight physical barrier from apparatus bay spaces.		
2. Adopt the recommended practices developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network – Healthy In – Healthy Out initiatives.		
a. Review decontamination procedures at the scene and in the station.		
b. Storage of PPE Equipment		
c. Isolate furniture, ice machines, and other equipment in apparatus bays.		

APPENDIX B: INTERNAL SURVEY

Tumwater Fire Department

Strategic Plan - Member Survey

Tumwater Fire Department (TFD) collaborated with Emergency Services Consulting International (ESCI) to formulate, implement, and assess a survey targeting its members. As the consulting firm for the International Association of Fire Chiefs, we worked closely with TFD stakeholders to create and deploy a member survey to inform the development of the strategic plan.

On January 17, 2024, TFD administered the member survey, keeping it open for responses until January 30, 2024. A total of forty-two (42) individuals participated in the study, constituting over 62% of TFD's personnel.

The survey primarily captures the viewpoints of full-time staff. Among the respondents, 100% (42) were full-time employees, and there were not any on-call employees or volunteers who participated in the survey. The largest segment of respondents, constituting 33%, reported having worked with the Department for 11-25 years. Additionally, 31% indicated a tenure of 0-5 years, and 29% reported 6-10 years of service with the Department.

The following summarizes the survey results and common themes discovered through analyzing overall results and free-text responses.

Health, Safety, & Wellness

Mental Health Support

Members of the Tumwater Fire Department hold the belief that the Department offers valuable mental health support, with 79% of survey participants expressing agreement or strong agreement on this matter.

Physical Health

69% of respondents agreed or strongly agreed that the Department supports them with useful physical health and wellness resources.

Physical Fitness

64% of TFD members believe that fellow team members have adequate physical fitness to perform their duties. However, nearly a quarter (24%) remained neutral on the matter.

Trust Within the Department

Trust in Leadership

TUMWATER FIRE DEPARTMENT members hold the Chief in high regard for making sound decisions and keeping them safe. 86% of survey participants agreed or strongly agreed, 10% were neutral, and the remaining disagreed. None of the respondents strongly disagreed.

Trust in the Members

Almost all of the respondents, 95%, agreed or strongly agreed that the Department trusts them to do their assigned job. The remaining 5% chose to remain neutral on the matter. It is important to note that none (0%) of the respondents disagreed or strongly disagreed.

Trust in the Department

Regarding the statement, "I trust the department to do the right thing for my coworkers and me," 74% of TFD members agreed or strongly agreed. Approximately 19% remained in a neutral stance.

Organizational Culture

Healthy Culture

Almost all TFD members (93%) agree or strongly agree that the culture among department employees is generally healthy. The remaining respondents held a neutral stance on the matter, and none of the participants disagreed or strongly disagreed.

Personal Attitudes

Once again, almost all TFD members (91%) believe that they are able to maintain a positive attitude while at work and that they enjoy their jobs. Only 1 (2%) respondent disagreed, and the remaining 3 (7%) remained neutral.

Coworker Attitudes

Similarly, 90% of TFD members agree or strongly agree that their coworkers generally maintain positive attitudes and enjoy their jobs. The remaining 10% stood neutral, and none disagreed.

Ability to Influence Attitudes

TFD members (85%) agree or strongly agree with the statement, "I can influence my coworker's attitudes and improve the culture at my department." Approximately 12% remained neutral.

Common Theme

The members of the Tumwater Fire Department hold the Department and its leadership in high regard for fostering a very healthy and positive culture within the Department. Many of the free-text responses commented that they feel very "close-knit" and uplifted by the culture of the Department. Many of these feelings seem to be stemming from the leadership's consistency with communication and transparency. Many of the members commented on being "heard" as a result of being able to have open communication with the leadership.

Feelings of Value

Member value

Eighty-one percent (81%) of TFD members believe that the Tumwater Fire Department values them as employees.

Input on Important Issues

The majority of TFD members feel that the Department values their input on important issues. Approximately 62% of respondents agreed or disagreed, 29% were neutral, and the remainder disagreed.

Personnel Development

Training Effectiveness

Regarding the statement, "I have an adequate amount of training to do my job effectively," 64% agreed or strongly agreed. Additionally, 29% remained neutral.

Professional Growth

The majority of TFD members (57%) believe that there are professional growth opportunities within the organization. However, over a quarter (26%) of respondents were neutral on the matter.

Common Theme

Though TFD members believe that the provided training by the Department is sufficient, there seems to be a call for more training opportunities. Many of the free-text comments in response to the question "From your perspective, what should Tumwater Fire Department start doing immediately?" were regarding developing more training programs. However, it is important to note that there was not a common topic of training mentioned between the comments; rather, there was a general call for more training.

Work Environment

Safe Workplace

An overwhelming consensus among TFD members (93%) is that they feel they are safe in their workplace. Only about 5% disagreed, and 2% held a neutral stance.

Tools and Equipment

Nearly three-fourths (74%) of TFD members agree or strongly agree that the tools and equipment provided to them are adequate for their job. However, approximately 19% remained neutral on the matter.

Apparatus and Vehicles

Over three-fourths (76%) of TFD members agree or strongly agree that the apparatus or vehicles they operate or ride in are safe and well-maintained. Roughly 17% remained neutral, and 7% disagreed or strongly disagreed.

Communication

Receiving Information

Most TFD members (57%) believe that they receive timely and accurate information regarding the Department's direction. Over a quarter (26%) held a neutral stance on the matter, whereas 17% disagreed or strongly disagreed.

Access to Information

Roughly 83% of respondents agreed or strongly agreed with the statement, "I have access to the right amount of information to do my job." Additionally, 14% of respondents were neutral.

Recruitment, Retention, & Sustainability

Recruitment

Approximately 60% of TFD members believe that the Department recruits quality people to fill open positions. However, nearly a quarter (24%) were neutral, and 16% of participants disagreed or strongly disagreed.

Retention

There is strong consensus from the members of TFD that the Department retains quality personnel to maintain its mission, with 83% agreeing or strongly agreeing. About 12% remained neutral, and only 5% felt otherwise.

Organizational Sustainability

Eighty-six percent (86%) of TFD members agree or strongly agree that the Department is a stable organization for which they can build their future. However, 12% remained neutral on the matter.

2024 AGENCY EVALUATION

TUMWATER FIRE DEPARTMENT

Tumwater, Washington

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Emergency Services Consulting International

Helping Change the World, One Community at a Time

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Background & Process

The City of Tumwater Fire Department, Washington, retained Emergency Services Consulting International (ESCI) to conduct an agency evaluation. ESCI is an international firm providing specialized, high-quality, and professional fire, EMS, police, and communications consulting services to organizations throughout the United States. ESCI, the trusted consulting arm of the International Association of Fire Chiefs (IAFC), has been meeting emergency service providers' needs since 1976. Consistently, ESCI provides innovative and sustainable recommendations that are readily understood by the public and valuable to elected officials for setting sound public safety policies. Utilizing consultants nationwide who are leaders in their respective fields, ESCI provides consulting services to municipalities, districts, non-profit organizations, and the industrial and commercial community.

ESCI's agency evaluation takes a "snapshot in time" of the emergency service delivery providers, reviews its structure, programs, processes, service delivery, and response performance in detail, and compares the current service to national standards, best practices, and the experience of ESCI's consultants. This process provides a gap analysis and can be used as the basis for a follow-up strategic planning process. The project involved a site visit, interviews with key elected and appointed officials, volunteer and career personnel, and evaluation of fire stations and apparatus, with findings summarized and key recommendations offered.

ESCI evaluated and reported on this project in two phases. Phase I includes the acquisition of background information, site visits with various stakeholders, organizational overview and planning processes, capital improvement program, management components, staffing, personnel management, service delivery and performance, training program, and final draft report and presentation. Phase 2 included a community-centered strategic planning process that sought feedback from organizational members and community stakeholders.

Executive Summary

Emergency Services Consulting International (ESCI) is pleased to present the findings and recommendations from our comprehensive Agency Evaluation of the Tumwater Fire Department (TFD). This project aimed to enhance the effectiveness and readiness of TFD by addressing key aspects of their emergency response services, community risk reduction programs, and specialized rescue programs. Below is a summary of the key project components and outcomes.

The project began with the foundational review of the critical data on community risk, demographics, incident response, department deployment, and emergency response system performance. The analysis provides TFD with insights into evolving risks, enabling them to allocate resources more efficiently and respond effectively to emerging challenges.

ESCI has compared industry standards and best practices against TFDs performance, covering a wide range of emergency response services, including fire suppression, code enforcement, and emergency management. These standards serve as a foundation for optimizing TFDs operational strategies and allocation of resources.

ESCI has projected anticipated population increase and service demand impacts expected in the City. In addition, increased service demands are expected from the natural growth of the population and with the addition of annexation into urban growth boundaries. This report provides actionable recommendations to enhance TFDs operational efficiency and service delivery.

TFD and ESCI have worked collaboratively throughout this project to gain a deep understanding of their unique challenges and needs. Our recommendations are tailored to align with TFDs mission to safeguard the City of Tumwater residents and visitors' emergency service deployment and risk reduction services. In addition, TFD has a companion document, the Customer Centered Strategic Plan, which guides the efforts of the organization to successfully implement many of the initiatives identified through the staff retreat and many of the recommendations in this report.

We are proud to have partnered with the City of Tumwater in this endeavor, and we believe that the outcomes of this project will empower TFD to continue providing the highest level of service to the community in a cost-effective manner.

The recommendations from our analysis begin on page 85 and outline several short-, mid- and long-term considerations. Recommendations range from adding staff positions in Community Risk Reduction, engine companies, and emergency management, as well as studying, planning, and constructing a third fire station to adequately provide distribution coverage for the community and potential urban growth boundaries.

Acknowledgments

Tumwater Fire Department Staff

Fire Chief | Brian Hurley

Assistant Fire Chief | Shawn Crimmins

Administrative Assistant | Erika Stone

Fire Training Lieutenant | Jon Kalar

Fire Prevention Officer | Mark Armstrong

City of Tumwater Governing Body

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Organizational Overview

History, Formation, & General Description

Tumwater is the oldest permanent American settlement on Puget Sound, founded in 1845, first named New Market, and renamed Tumwater in 1863[1]. In 1869, Tumwater was incorporated as a town.

The Tumwater Fire Department provides fire and emergency medical services from two stations that operate twenty-four hours per day. The Tumwater Fire Department was formed in 1928. Fire protection was first provided by the Olympia Brewery, which organized the Olympia Brewery Fire Department in 1903. In 1967, Munn Lake Fire District began contracting fire service through Tumwater. The Tumwater Fire Department participates in a mutual and automatic aid system, providing and receiving fire and emergency services in cooperation with surrounding jurisdictions and fire districts.

The Tumwater Fire Department provides Advanced Life Support (ALS) services to the city and surrounding jurisdictions and fire districts as a contract provider within the Thurston County Medic One system. Basic Life Support transport services are provided through private ambulance companies.

Accreditation & ISO

The Commission on Fire Accreditation International (CFAI) offers an accreditation program that is designed to assist fire and emergency service agencies around the world in achieving excellence through self-assessment and accreditation. This accreditation process includes:

- **Self-Assessment:** Enables agencies to critically review their performance and services against internationally accepted benchmarks.
- **Quality Improvement:** Emphasizes a continuous improvement model that ensures that fire departments remain up to date with the evolving challenges and maintain the highest quality of service to their communities.
- **Peer Review:** As a part of the accreditation process, peer assessors review the department's self-assessment and conduct an on-site visit to validate the department's practices and performance.

The Tumwater Fire Department is not accredited by the Commission on Fire Accreditation International (CFAI).

The Insurance Services Office (ISO) Public Protection Classification (PPC) Rating is a system used to reflect a community's local fire protection for property insurance rating purposes. Washington State subscribes to a separate not-for-profit independent public protection

[1] ci.tumwater.wa.us

classification company called the Washington Survey and Rating Bureau (WSRB), which closely follows the ISO Fire Protection Rating Schedule. TFDs rating this year improved from a PPC 4 to a PPC 3, which will be effective July 1, 2024.

- The PPC rating is on a scale from 1 to 10, with 1 being the best and representing superior property fire protection, and 10 indicating that the area's fire-suppression program does not meet ISO's minimum criteria.
- Evaluation Criteria: The rating assesses various factors, including fire department capabilities (equipment, staffing, training, and geographical distribution of firehouses), water supply (availability and distribution), emergency communication systems (911 systems, equipment, and operator training), and fire safety control (fire code and building code enforcement, fire investigation, and public education programs).
- Insurance Impact: Insurance companies use PPC ratings as part of their decision-making when deciding coverages and rates for personal or commercial property insurance. A better PPC rating often translates to lower premiums, given that a superior rating indicates a more effective fire response and, potentially, reduced fire damage.
- Community Value: Beyond insurance, a good PPC rating can be a point of pride for a community and fire department, reflecting the effectiveness and efficiency of its fire protection services.

Service Area Population & Demographics[2]

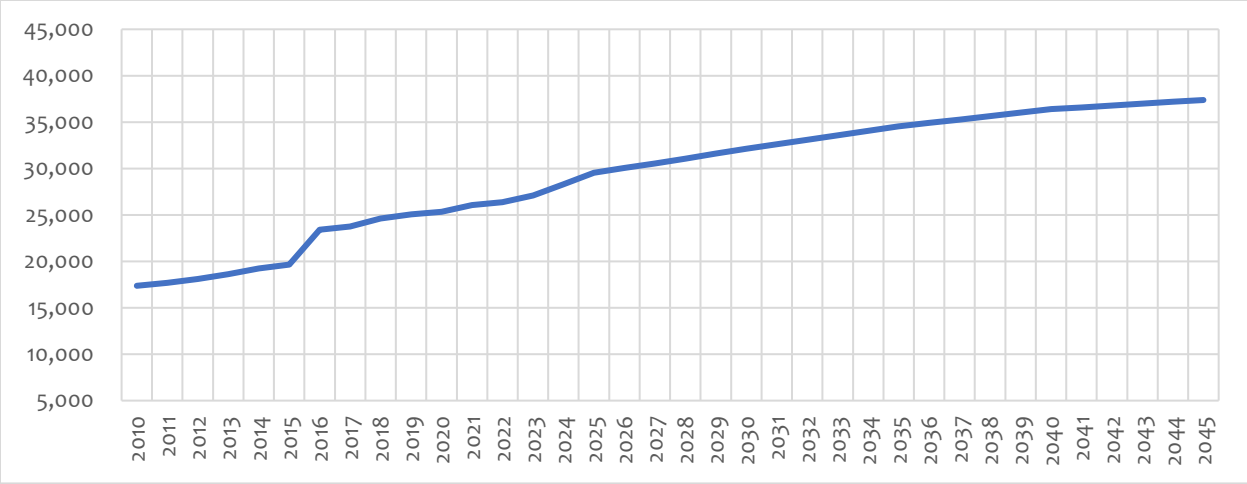
The Tumwater Fire Department community has been through a fairly rapid transformation over the last thirteen years (2010 to 2023). The average annual population growth rate has been 3.57% over that period, beginning in 2010 with 17,371 and ending with 27,100 residents in 2023.[3] This growth is also reflected in a relatively high population density of 1,524 people per square mile, suggesting a dense, vibrant community.

The Thurston County Regional Planning Council, whose purpose is to carry out regionally focused plans and studies on topics such as transportation, growth management, and environmental quality, has produced Population projections for the City of Tumwater that are estimated through 2045 and provide a variable range of growth projections. The Following figure demonstrates the average growth at 1.48% year over year from 2023 to 2045. The estimated City of Tumwater population in 2045 is 37,381 persons.

[2] ArcGIS Community Profile Tool

[3] Thurston Regional Planning Council: Population, Housing, and Employment Data

Figure 1: TCRPC Population Estimates for the City of Tumwater



The median household income stands at a robust $81,369, which suggests a predominantly middle to upper-middle-class demographic. The community's preference for homeownership is evident, with 11,970 homes in the city limits, with 58% single-family residences, 35% multi-family, and 7% manufactured homes.[4] An additional 1,210 homes are located within the City of Tumwater's Urban Growth Area (UGA).

In the context of ArcGIS and its community profile tools, the diversity index is a measure designed to reflect the racial and ethnic diversity within a given area. This index is based on the premise that in a highly diverse area, there's a greater chance that two randomly selected individuals will belong to different racial or ethnic groups. The diversity index used in ArcGIS Community Profiles typically ranges from 0 to 100, where a higher number indicates greater diversity. The City of Tumwater's diversity is modest, with an index of 51.5, which may reflect a community that is somewhat diverse but likely has a dominant cultural or ethnic group.

A concerning community demographic that has shown to impact emergency services is that Tumwater has 899 households falling below the poverty level and 316 households relying on public assistance income, highlighting areas where social services could be focused.

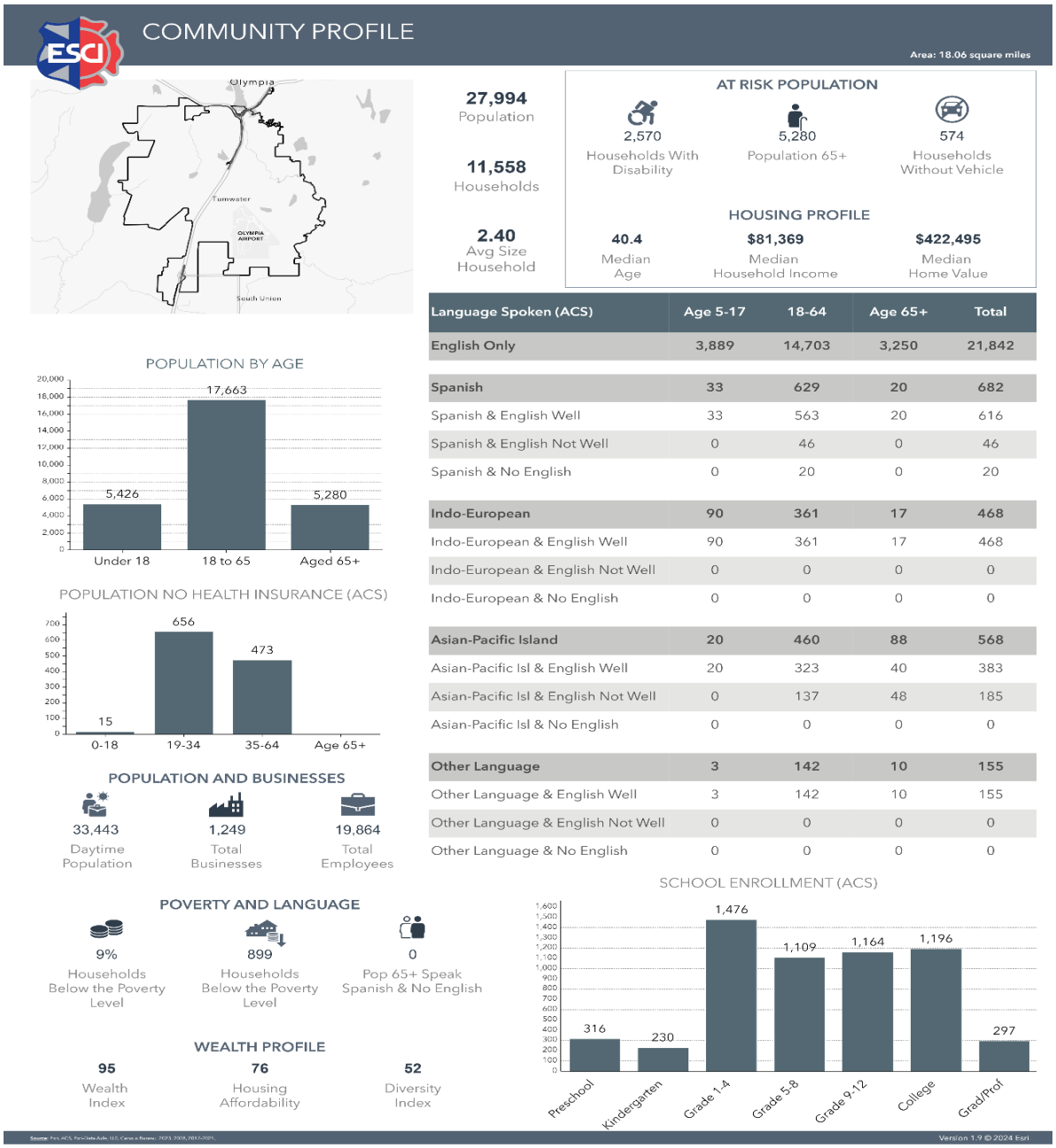
The educational attainment is commendable, with 3,108 individuals holding graduate or professional degrees and 5,472 with bachelor's degrees. These figures could point to a well-educated workforce, which is further evidenced by a daytime population of 33,443 — significantly higher than the resident population — suggesting that this community is a hub for employment and commerce.

The number of households with one or more persons with a disability stands at 2,570, indicating a significant portion of the population that may require additional support and accessible infrastructure. Interestingly, there is a negligible non-English-speaking

[4] Thurston Regional Planning Council: Population, Housing, and Employment Data

population, which can have implications for the community's language services and integration policies. This diversity in housing can attract a wide range of demographics, from young professionals to seniors — of which there are 5,282, indicating a notable senior presence in the community. Educational enrollment is well-distributed across all educational levels, indicating a healthy, functioning school system.

Figure 2: Tumwater Community Profile



Language Spoken (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	**3,889**	**14,703**	**3,250**	**21,842**
Spanish	**33**	**629**	**20**	**682**
Spanish & English Well	33	563	20	616
Spanish & English Not Well	0	46	0	46
Spanish & No English	0	20	0	20
Indo-European	**90**	**361**	**17**	**468**
Indo-European & English Well	90	361	17	468
Indo-European & English Not Well	0	0	0	0
Indo-European & No English	0	0	0	0
Asian-Pacific Island	**20**	**460**	**88**	**568**
Asian-Pacific Isl & English Well	20	323	40	383
Asian-Pacific Isl & English Not Well	0	137	48	185
Asian-Pacific Isl & No English	0	0	0	0
Other Language	**3**	**142**	**10**	**155**
Other Language & English Well	3	142	10	155
Other Language & English Not Well	0	0	0	0
Other Language & No English	0	0	0	0

The Tumwater community showcases several distinctive characteristics when compared to Thurston County. These features highlight the community's unique demographic, economic, and social landscape. The community demonstrates a robust engagement with homeownership, a strong education profile among its adult population, and a significant daily population shift, indicating a dynamic local economy with a substantial influx of non-residents during the day. Despite these strengths, it faces challenges with a higher percentage of households below the poverty level and a considerable segment of the population with disabilities. The overall picture is one of a community that is economically active and relatively well-off but not without its share of social challenges that require targeted interventions.

Key Comparisons from the Bureau of Labor of Statistics 2020 Census:

- Lower Percentage of Households with a Disability: 22% (City of Tumwater) vs. 26% (Thurston County)
- Larger Daily Population Shift: 119% (City of Tumwater) vs. 94% (Thurston County)
- Equal Percentage of Households with Public Assistance.
- Slightly lower Percentage of Households Below Poverty Level: 8% (City of Tumwater) vs. 9% (Thurston County)
- Higher Percentage of Renter Occupied Units: 40% (City of Tumwater) vs. 31% (Thurston County)
- Lower Percentage of Owner Occupied Units: 60% (City of Tumwater) vs. 69% (Thurston County)
- A slightly lower Percentage of Homes Using Gas Appliances needing CO Alarm: 32% (City of Tumwater) vs. 34% (Thurston County)
- Slightly higher Percentage of Households without a Vehicle: 2% (City of Tumwater) vs. 1% (Thurston County)
- Comparable Percentage of School-aged Population (Grades 1-8): 9% (City of Tumwater) vs. 9% (Thurston County)
- Slightly lower Percentage of High School Age Population: 4% (City of Tumwater) vs. 5% (Thurston County)
- Higher Percentage of Population with College Degree: 31% (City of Tumwater) vs. 28% (Thurston County)

Description of the Current Service Delivery Infrastructure

The Tumwater Fire Department operates from two fire stations and staffs an additional ALS Medic Unit 14 located in a West Thurston Regional Fire Authority Station, 16 miles south of the City of Tumwater. The department responds to a variety of emergency and non-emergency incidents utilizing two engine companies, three transport units, and some specialized equipment. Four shift supervisor positions were recently upgraded from Captain to Battalion Chief in order to provide an enhanced level of supervision. This has resulted in coordinated expectations of leadership and management across each shift while mitigating performance issues.

Emergency Medical Services

The Department responds to Advanced Life Support (ALS) and Basic Life Support (BLS) incidents in the city and through mutual aid in the surrounding communities in Thurston County. The EMS system is managed by a component unit of Thurston County government known as Medic One, which provides financial support and oversees the performance of the provision of paramedic and EMT ambulance services. Fire departments and fire districts throughout Thurston County deliver the services for which they are contracted to provide. Tumwater FD staffs one ALS transport unit in station T1 and one ALS transport unit located in the West Thurston Regional Fire Authority Station. A private ambulance service responds and manages BLS transports.

Medic One provides 80% of the cost of 9.5 paramedic personnel for Medic 5 and one Medical Services Officer (Battalion Chief). Medic One provides 89% of the cost of 9.5 paramedic personnel for Medic 14. Medic One also provides 100% of the costs of the transport units and associated equipment, including stretchers, AEDs, etc., as well as all EMS supplies, funded through an EMS levy approved by the voters.

Special Operations

All TFD personnel are trained at the Hazardous Materials Operations level to manage routine fuel leaks, other minor releases, etc. More serious incidents require a Level A hazardous materials response, which Joint Base Lewis-McChord (JBLM) provides. The readiness of the hazmat response can be delayed due to the mobilization and travel distance (approximately a 30-minute travel time) of JBLM resources.

TFD does not have its own internally organized special operations team. Various TFD personnel are trained at basic levels in disciplines that include technical rescue, water rescue, and vehicle rescue. Advanced technical rescue services such as swift water, high and low angle, trench, confined space, and structural collapse are provided through an Interlocal Agreement of Thurston County agencies in a county-wide effort to produce the Special Operations Rescue Team (SORT). Various agencies and personnel will simultaneously deploy

to the scene, while others will meet at an assembly point to access equipment and apparatus and respond to the incident site.

Wildland Firefighting

In recent years, many people across the nation have understood the dangers and damaging effects that wildland fires cause across the Midwest and the West Coast of the United States, and those dangers are no different in Washington. Wildland fires are becoming increasingly common as development creates increasing urban interface areas. The definition of wildland–urban interface is changing and is now a risk for most communities. NFPA 1710 states that when dispatched to a wildland incident, a minimum of two personnel shall be dispatched, and any additional units responsible for delivering and pumping water shall be staffed with a minimum of four personnel.[5]

The city of Tumwater has a wildland–urban interface risk and responds to mutual aid wildland incidents. It also sends Rapid Extrication Module Support (REMS) personnel on state and regional wildland deployments. However, the department has limited wildland firefighting capabilities. Slightly more than 50% of the personnel are certified to the level of National Wildfire Coordinating Group firefighter I (Red Card) certified. The department is currently undergoing training and expects to have all its personnel Red Card certified by the end of 2024. The department generally issues wildland shirts, helmets, and shelters. Still, it lacks the full complement of personal protective equipment for personnel to fully engage in wildland incidents beyond the initial attack phase (1 Hour).

Fire Inspections

The TFD has one Fire Prevention Officer (FPO), who is supported by the Department Assistant. The FPO is primarily responsible for the department's fire prevention and risk reduction program. The FPO conducts fire code inspections in the City of Tumwater but has limited capacity and is unable to complete all required annual inspections. Shift staff assist with limited types of inspections but still fall short of meeting the fire inspection impacts.

The Building Official in the Community Development office serves as the City's Fire Life Safety Official. This position fulfills many of the city's traditional fire marshal duties, performing all the plan reviews for fire and life safety provisions, sprinkler and fire alarm design, and specialty systems. The involvement of the fire department, either through the FPO or Fire Chief, has been intermittent, resulting in less than fully coordinated response to identifying issues related to fire protection components. Although the fire department is consulted on plan reviews when requested, the department does not have any responsibility in this area of service. TFD charges for inspections on the first (Initial) inspection of a business when performed but does not invoke a comprehensive fire code fee schedule.

[5] NFPA 1710: Organization and Deployment of Fire Suppression Operations by Career Fire Departments, Section 5.7.2.3

Fire Investigations

The TFD utilizes shift officers and mutual aid partners who are certified in fire investigations to conduct investigations of fires. A fire resulting in minimal damage or property loss is the responsibility of the shift officers to investigate, referencing NFPA 921 and 1033. Shift officers typically investigate approximately 23 fires annually.

Currently, mutual aid resources of certified fire investigators are utilized in instances where significant damage, property loss, or fatality occurs or suspicion of arson. Two TFD personnel are currently in training to become certified fire investigators.

Office of Emergency Management (OEM)

The Fire Chief serves as the Emergency Manager for the city according to the city's code. The city's Emergency Management Group is made up of various city agency directors. The Chief meets regularly with other emergency managers in surrounding communities. Based on a cursory assessment of the emergency management program, it appears that the city is unable to meet the demands to adequately achieve the four phases of emergency management: preparedness, mitigation, response, and recovery.

The Emergency Operations Center (EOC) for the city is located at TFDs Station T1, situated in a small conference room that cannot support the staff and personnel needed in the event of an EOC activation in response to an event. A larger training/meeting room in Station 1 might afford the capacity to operate the EOC. However, it is not equipped with all the necessary technologies to support a modern EOC properly. To effectively meet the emergency management expectations, additional staff and resources should be considered.

City employees who are assigned to staff the City's EOC should obtain the following certifications to be compliant with NIMS certifications standards and best practices:

- ICS 100 – Introduction to the Incident Command System
- ICS 200 – ICS for Single Resources and Initial Action Incidents
- ICS 700 – National Incident Management System, An Introduction
- ICS 800 – National Response Framework
- ICS 300 – Intermediate ICS for Expanding Incidents (management and personnel reporting to the EOC)
- ICS 400 – Advanced ICS for Command and General Staff (management and personnel reporting to the EOC)

The City's goal is to evaluate the training and qualifications of the city staff, identify the gaps, and implement a thorough NIMS training program that includes tracking progress.

In addition, all the fire department personnel within the Tumwater Fire Department are trained and certified to the ICS 100 and 200 level. Ninety-five percent of fire personnel have obtained the ICS 700 level, and 30% have obtained ICS 800 certification. The Chief Officers and a few other personnel are certified at the ICS 300 and 400 level. A future goal is to require all fire officers to obtain ICS 300 and 400 in the next few years.

The City of Tumwater was party to an Interlocal Cooperative Agreement with Thurston County Emergency Management Council for the purpose of advising each other in the emergency management functions of preparation, mitigation, response, and recovery. The agreement outlines that participants are to meet regularly, with meetings held monthly. The agreement has expired; however, the county is working on an updated agreement that the City of Tumwater intends to consider in June 2024.

Community Risk Reduction (CRR)

The TFD lacks a robust CRR program. The Fire Prevention Officer (FPO) is assigned to lead and manage the department's CRR activities supported by a Department Assistant but is primarily focused on managing the fire inspection program, leaving little time to dedicate to public education. The department conducts Fire Extinguisher and Hands-Only CPR classes for eighth-grade students annually. Engine company crews conduct preplanning activities, and the shift Battalion Chiefs coordinate smoke detector installations. The Chief is hopeful of hiring an Assistant Fire Chief to lead and manage the CRR program, providing greater importance and focus to the mitigation of community risks. The Chief expects to have the new position begin by conducting a community risk assessment and fully developing a robust set of targeted prevention programs.

Governance And Lines of Authority

The City of Tumwater operates in a Mayor-Council form of government. Seven elected Council members serve as the legislative body, providing the mayor with policy guidelines and performance objectives. The city government is led by a city administrator who is responsible for implementing policies and procedures and daily operations.

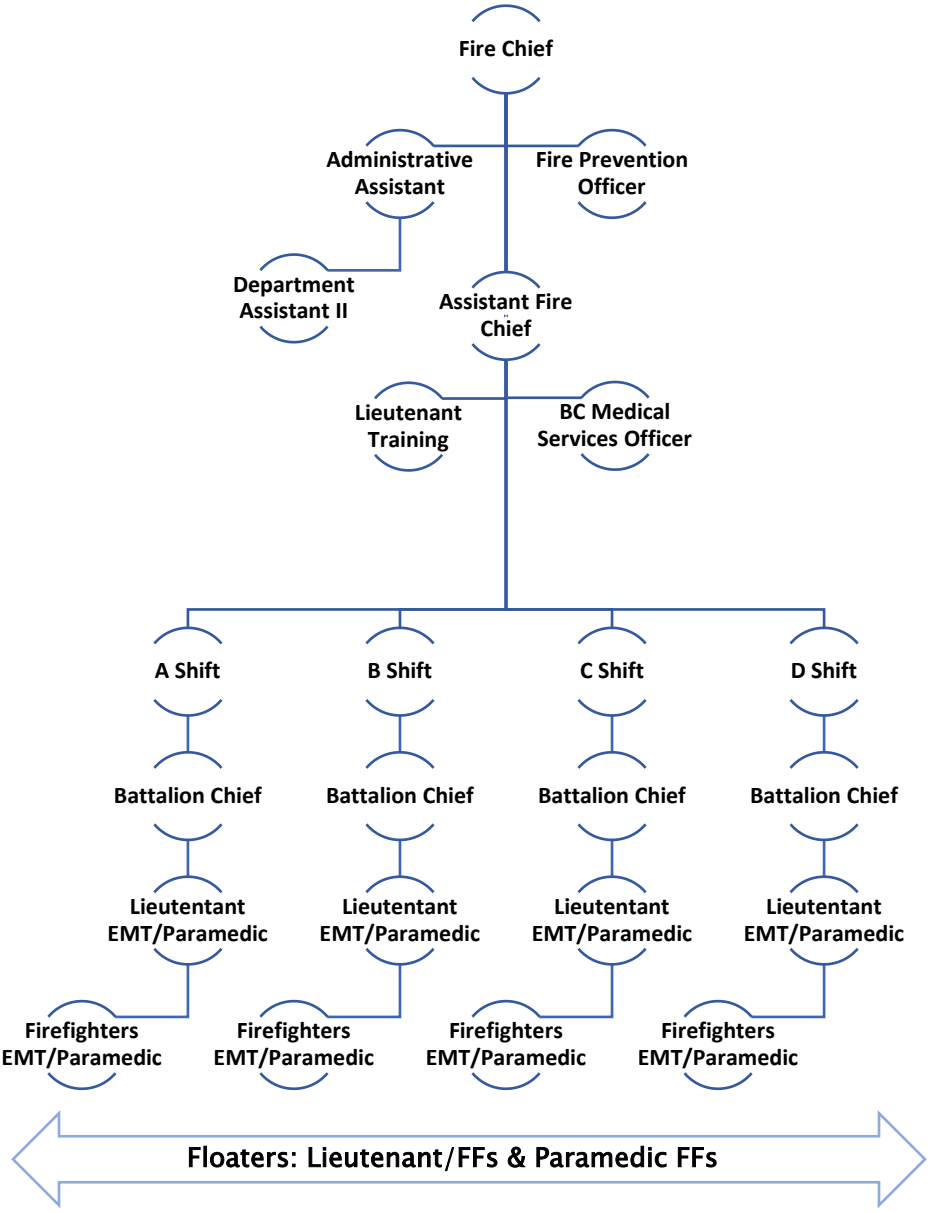
Foundational Policy Documents

The department utilizes Lexipol to assist in developing and managing the department's policies and procedures. The Assistant Chief is tasked with reviewing, revising, and issuing the updated policies and procedures. The process of integrating Lexipol policies is a significant undertaking and requires enormous staff hours to draft, review, and redraft. Administrative support for this endeavor will be required to support the Assistant Chief of Operations with the effective implementation of this program.

Organizational Design

The Tumwater Fire Department is designed much like many other fire service organizations of this size and scope. It is reasonably developed to both maintain the span of control and unity of command.

Figure 3: Tumwater Fire Department Organizational Structure



Operating Budget, Funding, Fees, Taxation, & Financial Resources.

The City of Tumwater uses a biennial budget process where a budget is adopted for the following two years in an even number of years. The Council and Mayor provide the budget goals with insight from the City's department directors. The 2023–2024 biennial overall general fund budget for the City is $80,421,748, while the fire department's budget is $20,399,539, comprising 25% of the City's overall general fund. Meanwhile, TFD expenses have increased by 7.7% per year for the last 20 years. (According to the Finance Director)

The City's General Fund budget relies largely on taxes (property, sales, utilities, etc.) for income. A Levy Local Improvement District (LID), bonds, and fees are additional possible sources of revenue. The city, in general, is operating on a constrained budget that requires that goals be prioritized across all city departments. Currently, the residential and industrial construction in the city is strong, increasing revenues from permits and new construction property tax.

The City's 2022–2027 Capital Improvement Plan has a total projected funding of $68,526,000 over the five years. This plan allows for $900,000 in 2025 for a fire engine, a total of $130,000 for station T1 improvements in 2026 and 2027, and $122,000 in 2026 for a new digital alerting system. Three of the four planned fire engine purchases were funded through a levy LID lift in 2011.

TFD has an Interagency Agreement with the Washington State Patrol, which allows TFD to be reimbursed for allowable costs incurred during a mobilization to a disaster or wildfire. The Washington State Fire Services mobilization plan establishes a structured policy and organization for statewide resource mobilization in large-scale emergencies. This plan grants specific powers to the chief of fire services, allowing for the coordination of resources across the state. Key provisions include financial compensation for state and local fire jurisdictions mobilized under this plan, as well as for host fire departments that have depleted their resources and local mutual aid.

Management Components

Effective department management is a complicated challenge for service leaders as they must effectively address management complexities that include setting and measuring service levels, staying in front of new technologies and best practices, evaluating and maintaining a qualified workforce, developing staff for effective promotion, and ensuring financial sustainability for the community.

To be effective, the management of a department needs to be based on several components. These include a clearly stated *mission* (the fundamental purpose of an agency), a *vision* for the future (where the organization is going), and the *values* or *guiding principles* (how the organization will treat its members as it navigates from its current state to its desired state). From these fundamental elements, the organization evaluates the environment it operates within and establishes a series of strategic initiatives, goals, and objectives. These elements combine to form a strategic plan.

Mission, Vision, Strategic Planning, Goals, & Objectives

In February 2024, ESCI team members facilitated a two-day strategic planning session with personnel from the Tumwater Fire Department, including the Fire Chief and fire personnel representing various levels of the organization. Participants were asked to provide input in the following areas: what is the department currently doing well that the department should continue; what is the department doing that it should improve upon; what is the department doing that it should stop doing; and what should the department start doing. This information was used to guide the participants in developing elements of the strategic plan. Revised Mission and Vision Statements and organizational Values were updated.

Mission Statement:

"Providing excellent public service through compassion and dedication."

Vision Statement:

We will lead through innovation, education, and integrity while serving the evolving needs of our diverse community.

Values: C-I-T-E

Compassion: Serve others with respect, empathy, and humility.

Innovation: Fostering an environment with professional and personal development opportunities encompassing physical and mental wellness.

Trust: We recognize an inherent trust from our community and peers built upon integrity, individually and as a team. High-functioning and successful teams are dependent on trust.

Empowerment: Empowerment promotes accountability and responsibility. Together, these values create a framework for fostering autonomy, integrity, and effectiveness within individuals and the organization.

From this session, six goals were developed with objectives and tasks for each goal. The goals are communications, fire department deployment (response), enhanced training programs, review of recruitment, hiring, and retention practices, improved employee wellness, and improved service levels through strengthening cooperative services.

External Communications Processes

The Fire Chief takes the lead on external communications with the community, and the department utilizes the city's communications staff when needed. The department has a Facebook page that is used to promote safety and share important information about the department. One thousand eight hundred people follow the Tumwater Fire Department's page, while the City of Tumwater's Facebook page has 11,000 followers.

Document Control & Security

All the department's documents are stored electronically. Passwords are required to access the network where the documents are stored. Paper copies of personnel files (Disciplinary records, Annual Evaluations, Employment documents, etc...) are kept with the Human Resource Department, under lock and key.

Reporting & Recordkeeping

The Tumwater Fire Department employs various records management systems for record-keeping and reporting.

- Policies and Procedures: Lexipol
- Incident Response: ESO
- Fire Training: Fire-Rescue-1 Academy Learning Management System (LMS)
- EMT and Paramedic Training: EMS Academy LMS
- Pre-fire Plans: First Due

ESO is used to capture and maintain records on incident responses and for capturing fire inspections. The FireRescue1 Academy online learning management system (LMS) is utilized to capture and provide reports on the department's fire training. The EMS1 Academy online LMS is used to deliver and capture EMT and paramedic training for the department's providers. TFD uses Lexipol to store and provide access to all internal policies and procedures. First Due is the department's pre-fire platform.

Financial Controls

Tumwater Fire Department staff follow the City's system of internal controls for finance. Assigned personnel review invoices for reasonableness and authorization limits, determine the ledger codes, and enter them into the system for payment. Through an automated function, the invoice is routed to the next level for approval. The Fire Chief is notified and must approve any expenditure over $1000. Once approved, the invoice is routed to the City's Finance Department for approval. If the documentation is accurate and acceptable and the coding is correct, the invoice is processed for payment. Larger payments may require review from the Finance Director or City Administrator prior to making the purchase.

Tumwater Fire Department staff have the latitude to purchase day-to-day things such as fuel, small tools, and other operating items. Larger purchases that invoke bidding requirements or require a contract to be signed follow a different procedure: Fifty Thousand dollars or less can be approved by the Fire Chief, while the mayor must sign any purchases greater than $50,000 after Council approval.

The city is audited regularly by the Washington State Auditor's Office, which focuses on internal controls, compliance, and risks of fraud and abuse.

Security

The security of the department's facilities and equipment is an important element of a fire and emergency services agency. A significant investment of public dollars is provided for the delivery of these services; therefore, precautions must be taken to protect those investments from loss, vandalism, or protection from weather.

TFDs stations both have CCTV and are secured by a key lock. Station T2 also utilizes a keypad for entry. Neither station has security fencing allowing uninhibited access to the parking lots and exterior areas. Computers are secured inside the buildings or vehicles, and personnel must have keys to access them. Personnel at station T2 report that unhoused individuals have been found charging their cell phones using the outside outlet at the station's front entrance.

Emergency apparatus are typically stored inside the stations when not responding to incidents or handling other daily tasks. Some vehicles not used for responses to incidents are also stored inside a station. A few staff vehicles are assigned as take-home vehicles, and some older units are stored outside of the station when not in use, making them vulnerable to vandalism and environmental wear.

Information Technology Systems

Tumwater Fire Department uses the City's Information Technology (IT) department for its IT support. TFD has a close working relationship with the City's IT department, and as reported, the department is understaffed, but it is still responsive to TFDs needs. Support for TFDs apparatus modems is handled by Thurston County Medic One's IT department. Below is a list of software systems currently in use. Most of them operate independently from each other.

Figure 4: Tumwater Fire Department Software Systems

Solution/Program	Use	Usage	ESCI Perspective
ESO	EMS/NFIRS Reporting	Daily	Appropriate
FireRescue1	Fire Training	Daily	Appropriate
EMS1	EMS Training	Daily	Appropriate
First Due	Fire Pre-Plans/Call Dispatch	Daily	
Active 911	Call Dispatch	Daily	Appropriate
Crewsense	Shift Scheduling	Daily	Appropriate
Lexipol	Department Policies	Weekly	Appropriate
MS365	Memos/Projects	Daily	Appropriate
MS Teams	Virtual Meetings	Daily	Appropriate
Zoom	Virtual Meetings	Daily	Appropriate

Organizational Planning Processes

Review & Evaluate the Adequacy of the Current Planning Process

Nationally, the fire service creates and gathers large volumes of data in the performance of duties, both from emergency response activities and in preparation for and anticipation of large-scale disasters. However, many of these same organizations do not analyze the data sufficiently to evaluate the effectiveness and adjust as necessary to become more effective and efficient.

Internal Assessment of Critical Issues

Financial

The Fire Department is approximately 25% of the City's general fund budget. The city will continue to face growing expenditures with limited revenue sources. Consideration may need to be given to additional revenue for public safety through a levy lid lift. The last public safety lid lift was passed in 2011.

Crisis Response and CARES Program

TFD is not unique in that many of our responses are for community members who do not have medical emergencies but are in crisis and need support resources that are not currently available for immediate response. Thurston County, Olympia, and Lacey all have some form of crisis response team. A crisis response program would support both police and fire response in Tumwater. The Fire Department also sees several individuals who have chronic medical or other issues that, in some cases, lead to frequent calls for service from the department. A Community Assistance, Referrals, and Education Services (CARES) program could provide a mechanism for response crews to refer non-emergency patients to qualified support staff who could assist with their needs. The CARES program was developed to help departments aid community members who have non-emergency issues managed and mitigated prior to becoming an emergency. This could include sending a nurse and a social service worker to a community member who may be experiencing an issue that doesn't rise to the level of an emergency. The Olympia Fire Department is establishing a CARES program, and Tumwater has indicated a desire to partner with that program.

Wildland Firefighting

The changing climate has led to an increase in the potential of significant wildfires in Tumwater and Thurston County, as well as the State. Wildfire risk has been recognized in local hazard mitigation plans and recently proposed building code updates. For the last several years, Tumwater Fire has worked to train staff in wildland firefighting with Red Card certification. Not all staff members have been trained. TFD is working to purchase appropriate wildland PPE and equipment. Discussions have identified the desire and need to purchase a brush unit and water tender. Tumwater Fire units are dispatched throughout the fire season to incidents throughout the County. Personnel need to be properly trained

and equipped. Currently, TFD does not participate in State mobilizations other than REMS deployment of single personnel.

Community Risk Reduction

Currently, TFD has one fire prevention officer (FPO), who is supported by a Department Assistant, to support fire prevention and risk reduction. The FPO is a certified code inspector and Fire Life Safety educator. The FPO does code inspections in the city but cannot inspect all businesses annually. The FPO also coordinates fire extinguisher training. Shift Battalion Chiefs generally coordinate smoke detector installations. Currently, the City Fire Life Safety Official is the Building Official in Community Development. The building official reviews all the plans and fulfills many of the city's traditional "Fire Marshal" duties. The FD wants to build a more robust community risk reduction program with an Assistant Chief of CRR who would manage the duties of the Fire Marshal as outlined in the International Fire Code.

Health and Safety

Staff are perpetually facing threats to both physical and emotional well-being. The Department needs to ensure that proper training and equipment are being provided to staff to mitigate threats. Annual physicals have been implemented. Although the TFD and its union fully support PEER support efforts in the county, the department should consider the utilization of various resources, such as employee assistance programs, IAFF behavioral health awareness training, regional training, etc. Post-traumatic stress has been recognized as a presumptive illness under the State Worker's Compensation statute.

Internal Assessment of Future Challenges

Staffing

The City continues to grow, and with that comes increased call volume. Response times have been increasing, and around 1/3 of the time, the department has multiple calls. Consideration will need to be given to future resource needs. This may include an additional station or units. As staffing levels increase, additional units, such as an EMS unit, could be staffed. Personnel could be used to cross-staff a brush unit or tender. The goal would be to eventually hire enough staff for full-time staffing of a 3rd engine with that unit sited in a new station.

Emergency Management

Currently, the Fire Chief is the Emergency Management Director for the City. Support is needed for this program to be effective. Consideration should be given to providing support staff for this position to enhance planning development support, deliver required and necessary training, and assist with researching and applying for grants to support overall emergency management activities and needs.

Review Elements of Organizational Planning

Operational Planning

Operational planning involves the development of pre-fire plans for hazards within the community or regional response plans such as mass-casualty incident plans, hazardous materials plans, active shooter plans, etc. TFD utilizes the pre-incident planning function of its record management software. This function creates a user-friendly document that identifies a variety of information regarding the reported location:

- Responsible party name and contact information
- Occupancy type, history, and future uses
- Information on the size and construction of the building
- Relevant firefighting information

However, pre-incident planning within the TFD operational footprint could use improvement. The TFD operational staff's capacity to conduct pre-incident planning with their companies is directly related to the notably limited fire prevention staff capacity. Company officers conduct pre-incident planning, although not scheduled regularly due to operational workload.

In the cursory review of the TFDs policy manual, it was noted that Policy 301 – Emergency Response provides general directions for the department to respond to all emergency calls and discusses the manner in which personnel will respond and their general responsibilities. Also, only three policies provide direction on specific incidents; however, there are a number of other types of incidents that require guidance.

Tactical Planning:

Developing strategies for potential emergency incident response and internal projects is known as Tactical planning, which includes preventative maintenance and inspection programs, mass casualty, snow removal, and active shooter plans. These tactical plans support the broader operational and strategic goals and the department's mission.

Emergency incident response policies are currently being drafted. Once developed and approved, they will be issued to the department personnel through the Lexipol platform.

There are no specific regional response policies or procedures, but Thurston County fire departments subscribe to the Blue Card Incident Command system. In addition, TFD utilizes C3 Pathways for regular active shooter training, and Thurston County has a county-wide Mass Casualty Incident plan that includes active shooter. The dispatch center will implement a High Incident Response Load plan when they are inundated with calls, and TFD will self-dispatch to respond to non-priority incidents.

Administrative Planning

Administrative planning consists of forecasting the organization's needs through the lens of people, equipment, and community organization. Administrative planning comprises succession planning, capital equipment planning, and community development plans.

Succession Planning

This process begins with identifying the critical positions within your organization and developing action plans for individuals to assume those positions in the future.

Tumwater Fire Department is challenged with providing succession planning as the administrative time between the fire department and human resources is limited. The Fire Chief has identified the positions of Fire Prevention Officer, Fire Training Lieutenant, and Emergency Manager as critical positions that need enhanced support to meet the short-term and long-term needs as well as provide an opportunity for more comprehensive overall planning, including succession planning.

Community Development Planning

These plans are typically called comprehensive or general plans and are performed by the city's Community Development Department, which the City Administrator oversees. The Comprehensive Plan guides long-term physical development and planning for the city. This plan influences the department's service area through the zoning and development approval process.

The city has been working on a habitat conservation plan for the last 10 years and needs to complete this project. The Community Development Office updated the Hazard Mitigation Plan for Tumwater, which is an annex of Thurston County's plan.

Organizational Planning

Organizational planning is also essential and is often overshadowed by emergency response planning efforts. Organizational planning involves two primary types of plans: Master and Strategic.

Master Planning

A comprehensive analysis of the fire department's programs and processes is looking forward 10–15 years so that the department is able to manage and anticipate community growth and service demands. In 2019, ESCI conducted a regional fire and emergency services study for the City of Tumwater, reviewing service delivery from the departments in Thurston County. Findings from this study can be utilized in future planning efforts. Recently, a Regional Fire Authority plan was considered and developed to consolidate regional partners, predominately the City of Olympia. The residents did not approve of the ballot measure, so the effort is being reserved for future consideration.

Strategic Planning

Tumwater Fire Department developed a strategic plan for 2016–2021 and engaged ESCI to update its strategic plan. The updated plan will provide an internal and external evaluation of the current conditions, develop initiatives, goals, and tasks, as well as organize and obtain commitment from the members in advancing the department for the next 3 to 5 years.

A planning team made up of personnel from within a fire service organization works to complete the following:

- Develop or update the agency's mission, vision, and core values.
- Identify the department's most important goals for the next three to five years.
- Definition of objectives and action steps to achieve goals.
- Establishment of means by which to measure accomplishment of goals and objectives.

Financial Planning

A standard and common short-term planning tool is the budgetary process, which provides the framework and financial means to accomplish annual or biannual objectives.

The proposed biennium FY2023–2024 budget for the fire department is $20,399,539, representing 25% of the city's overall General Fund Budget of $80,421,748. Revenues are primarily derived from various taxes and fees.

Preparation for purchasing capital equipment, apparatus, and facilities is essential to ensure sufficient revenues exist when the capital needs upgrading or replacement.

The replacement schedule for front-line engines and ladders historically has been every seven years, although this is due to the timing of the levy lid lift. In 2011, a levy LID was approved, allowing the department to purchase four new engines. Three of the engines have been replaced, but there will not be sufficient funds to purchase the fourth engine in the schedule. The department is working with the city to determine adequate funding for the engine. The reserve fleet will naturally rotate out of the system as the front-line apparatus is replaced. The staff vehicles, including the Battalion Chief, are scheduled to be replaced about every ten years and purchased with city funds.

The department's funding priorities, as outlined in the FY 2023–2024 budget, are:

- Staff Battalion T1 24/7.
- Update the Fire Department's five-year strategic plan.
- Improve Fire Prevention and Community Risk Reduction Programs.
- A complete study of potential staffing of the BLS Aid Unit with transport capability to address increasing call volumes and ambulance delays.
- Prepare for the 2023 Washington Survey and Rating Bureau re-evaluation of the City's rating.

- Prepare to replace the 2013 Pierce Engine T1 in 2025 through the Levy Lid Lift.
- Seek a partnership with local tribe(s) to fund equipment for wildland fire response.
- Seek a partnership with the Port of Olympia to help fund Aircraft Rescue Firefighting training and equipment purchases.
- In partnership with Thurston County Medic One, explore opportunities to support opioid response in Tumwater and Thurston County.
- Work to improve Emergency Management planning efforts through a partnership with the City of Olympia.

  (As of this document, priorities 1, 5, and 6 have been completed.)

Facility upgrades are currently planned for and budgeted during the budget process. Currently, there is no capital improvement funding plan for the next 10–15 years to ensure sufficient funding is available to purchase equipment, apparatus, and facility upgrades on a pre-determined life cycle.

Staffing

Admin & Support Staffing Levels

Administrative and support personnel are considered primarily to manage, plan, and support the agency's and its programs' activities. Tumwater Fire Department is organized into five divisions: Fire Prevention, Medical Services, Training, Operations, and Administration, with seven people to manage, plan, or support the district-wide activities.

ESCIs experience shows that administrative staffing totals for municipal fire departments supported by city administrative staff range between 10% and 15% of department personnel totals depending on the programs and complexity of the department. Tumwater Fire Department operates with seven administrative staff, and their administrative support is within the average range threshold for efficient administrative and support staff at 13%. The more complex the organization is, however, the higher the ratio of administrative and support to operational personnel required. This percentage of personnel should not replace the need to ensure that time on tasks is appropriate or that the section efficiently completes required functions and tasks. However, interviews with staff revealed they felt over-tasked to perform their required work and that some functions were not occurring due to lack of time. They acknowledged that this feeling was familiar throughout all divisions. These staff members felt there were additional functions or tasks they would like to be able to perform but often could not because the staff was limited.

Operational Staffing Levels

A baseline overview of the staffing model, staffing levels, and relief factors provides an opportunity to review and analyze the current staffing patterns, shifts, and options to increase efficiency, effectiveness, and capabilities. While the scope of this project does not include that analysis, each organization should conduct a staffing relief factor analysis for each classification across the shifts to maximize efficiency and effectiveness.

The total operational personnel assigned to shifts include Battalion Chiefs (4 FTEs), Lieutenants (13 FTEs), Master Drivers (4 FTEs), Fire Medics (13 FTEs), Firefighters (12 FTEs), and Uniformed Administration (5 FTEs).

However, approximately 9 FTEs of Firefighters and Fire Medics are assigned to Medic 14 located at the West Thurston Regional Fire Authority Station, located too far south of the City of Tumwater to reasonably draw upon for supplemental firefighters under national standards and best practices.

The *US Fire Department Profile* 2020, issued in September of 2022 by NFPA, compares career firefighters per 1,000 people protected.[6] This study indicates the national median rate of

[6] US Fire Department Profile 2020, https://www.nfpa.org/education-and-research/research/nfpa-research/fire-statistical-reports/us-fire-department-profile?l=0

firefighters per 1,000 people in the population of mostly-career or all-career fire departments ranges from 1.54 to 1.81 per 1,000 people. Career firefighters include full-time uniformed firefighters regardless of assignment (e.g., suppression, prevention/inspection, administrative, etc.)

Using TRPC population estimates, the City of Tumwater's population is 27,100 residents and a total of 42[7] uniformed career firefighters; the City of Tumwater's ratio is 1.55 firefighters per 1000 people.

This benchmark only serves as a single point of reference for analysis of current operational activities and is a broad comparison. Other factors that play a significant role in the number of personnel that communities deploy include the type of shift schedule, geography of the community, the community risks, and unique services a department might provide, such as hazardous materials teams, ambulance services, wildland strike teams, etc. In the case of the Tumwater Fire Department, higher ratios of firefighters to population would be expected in systems that provide ALS ambulance services inside the city in order to cover the staffing needed for medic units.

Review Staff Allocation to Various Functions

TFD allocates most of its staff to Station T1 based on the area's service level needs. A 24-hour ALS medic unit is also located at West Regional Fire Authorities Station 1-1. This crew primarily responds to calls outside the City of Tumwater under contract with Thurston County Medic One.

Six personnel are assigned to Station T1 on each shift. They operate and staff an engine, a medic unit, and a command vehicle. The station is also equipped with a mass casualty incident response trailer. If required, personnel will respond with the trailer and a pickup truck to the scene county-wide. The on-duty Battalion Chief is also located at Station T1 to provide necessary command during incidents and manage the administrative duties of the shift during the daytime.

Three personnel staff Station T2 24 hours a day. The minimum city staffing available in the department is nine personnel. Each shift has additional duties assigned, such as training, facilities maintenance, health and wellness, minor apparatus and facility repair and maintenance, public education, pre-fire planning, etc.

Review Staff Scheduling Methodology

Tumwater Fire Department employs a four-platoon system operating on a 24/48-24/96-hour shift rotation; a "debit day" is used once every 24 days to add a work shift to make up the average hours outlined in the collective bargaining agreement. This debit day provides

[7] Uniformed FFs in City of Tumwater: Total staff of 51 minus 9 assigned to Medic 14.

for a 48.9 average-hour work week. This work rotation is used to achieve the daily minimum staffing of personnel.

Tumwater Fire Department also establishes the number of employees needed above the minimum to allow for vacancies due to vacation, sickness, and other types of leave, known as the staffing coefficient or relief factor.

This staffing requirement above the minimum staffing yields the total number of full-time employees required to maintain the minimum daily staffing. The minimum staffing for TFD is three firefighters for engine companies, two personnel for Medic units, and one person to fill the Battalion Chief position.

The following table shows the minimum daily staffing for the City of Tumwater for emergency response capability. The staffing of Medic 14, as mentioned above, is located too far south to be utilized for developing an Effective Response Force (ERF) for the deployment of personnel under NFPA 1710. Therefore, Medic 14 is set apart in the table from the minimum staffing for the City of Tumwater.

Figure 5: Tumwater Fire Department Minimum Station/Unit Staffing

Station	Resource	Daily Staffing
Station 1	Engine T1	3
Station 1	Medic 5	2
Station 1	Battalion T1	1
Station 2	Engine T2	3
	Minimum Staff	**9**
WTRFA	Medic 14	2

The best practice for optimal staffing and efficiency is determining the appropriate minimum staffing and relief factors. Tumwater Fire Department uses personnel who return to work on their debit day to fill vacancies, allowing a reduction in overtime costs and creating a better work-life balance.

Deployment Methods and Staffing Performance

Trained emergency responders use specialized equipment to handle various incidents, such as fires, accidents, and medical calls. Deploying the correct number of personnel is crucial because inadequate staffing reduces response effectiveness and raises the risk of injury for everyone involved. Sufficient personnel ensures that emergency apparatus and equipment are utilized effectively, mitigating incidents more efficiently and enhancing overall safety outcomes.

Emergency Fire Incidents

Tasks performed at a fire can be broken down into three key components: life safety, incident stabilization, and property conservation. Responders determine life safety tasks based on the number of building occupants, location, status, and ability to take self-preservation action. Life safety-related tasks involve search, rescue, and evacuation of victims. The incident stabilization element involves delivering enough water to extinguish the fire and create an environment within the building that allows firefighters to enter. Property conservation comes from efficient confinement and extinguishment or, generally, mitigation of incident damage.

NFPA 1710: *Standard for Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* specifies the number of firefighters assigned to a particular response apparatus, time frames for first due and second due. Also, the standard establishes the number of firefighters assembled to each category of risk in a specified time frame to simultaneously perform the tasks based on the particular risks, referred to as the "Effective Response Force (ERF)." Tumwater Fire Department should set staffing levels based on risk, capability, and citizen expectations, ultimately becoming a policy decision determined by the governing body. The NFPA 1710 level of staffing is described in the figures below for three different categories of risks.[8]

The following figure shows the ERF staffing needed to mitigate safely and effectively a single-family, 2,000-square-foot, two-story residential structure without a basement without exposures.

[8] NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (National Fire Protection Association 2020 ed.) Article 5.2.4 Deployment.

Figure 6: Task Analysis – Single Family Dwelling

Critical Tasks	No. FFs
Incident Commander	1
Water Supply Operator	1
2 Application Hose Lines	4
1 Support Member per line	2
Victim Search and Rescue Team	2
Ground Ladder Deployment	2
Aerial Device Operator	1
Incident Rapid Intervention Crew (4 FF)	4
Total	**17**

The following figure describes the tasks required to extinguish an Open-Air Strip Mall or Multi-Family Apartment building fire.

Figure 7: Task Analysis – Open Air Strip Mall or Multi-Family Apartment

Critical Tasks	No. FFs
Incident Commander	2
Water Supply Operators	2
3 Application Hose Lines	6
1 Support Member per line	3
Victim Search and Rescue team	4
Ground Ladder Deployment	4
Aerial Device Operator	1
Rapid Intervention Crew (4 FF)	4
EMS Care (1 crew)	2
Total:	**28**

The following demonstrates the number of firefighters to develop the ERF for a multi-story building, three floors and greater, or a large expansive building, such as an industrial complex or distribution center.

Figure 8: Task Analysis – Multi-story or Large Expansive Structure

Critical Tasks	No. FFs
Command	2
Apparatus Operator	2
Handlines [2 FF's each]	4
Support members	8
Search and Rescue	4
Ground Ladders/Ventilation	1
Aerial Operator (If Deployed)	(1)
Initial Rapid Intervention Crew	4
Initial Medical Care Component	4
Building Fire Pump (If Equipped)	1
Hoseline – Floor Above Fire	2
Elevator Operations Manager	1
Incident Safety Officer	1
Interior Staging Manager	2
Member Rehabilitation	2
Vertical Ventilation Crew	4
Lobby Control	1
	42 (43)

Tumwater Fire Department's daily operational staffing can deploy nine individuals, assuming no other incidents are occurring. Tumwater Fire Department has established three-person staffing for fire engines and two-person staffing for medic units. The current staffing model does not allow the department to effectively respond with enough firefighters to accomplish the simultaneous tasks required in the lowest risk category, single-family residence fire. Later, ESCI will develop a prospective model of the ERF capability, considering TFD and mutual aid resources.

The following figure depicts the emergency staffing employed for incidents by TFD.

Figure 9: Task Analysis – Single Family Dwelling

Response Comparison	NFPA	TFD	Differential
Residential Structure Fire	17	9	8
Apartment building or Strip Mall	28	9	19
Multi-story or Large Expansive Structure	43	9	34

TFD does not meet the recommended initial response for commercial and three-story apartment-type incidents. It should be noted that TFD must rely on outside agencies to meet the recommended response to meet critical tasks. Through these aid relationships, TFD should increase the response depth and weight to the commercial and apartment incidents.

Emergency Medical Incidents

Emergency medical calls are the most frequent reason for activating the 911 system. NFPA 1710 states that personnel deployed to advanced life support (ALS) emergency responses shall include a minimum of two members trained at the EMT-Paramedic level and two at the EMT-Basic level. The first unit, providing initial care, should arrive within 4 minutes of each fire station, followed by ALS care within 8 minutes. It is recognized that Thurston County Medic One has adopted different performance benchmarks for ALS response (as prescribed by the Department of Health), which are to arrive within 10 minutes in Urban zones, within 20 minutes within suburban zones, and 30 minutes in rural zones.

Wildland Firefighting

NFPA 1710, subsection 5.7.2, states, "The number of on-duty wildland fire-fighting personnel shall be sufficient to perform the necessary firefighting operations given the expected wildland fire-fighting conditions."

Further, subsection 5.7.4.3.1 states, "The fire department providing wildland fire suppression operations shall have the capability to deploy an indirect attack, including the application of water to the fire, engagement in search and rescue and preservation of property, accountability for personnel, and provision of support activities for those situations that are beyond the capability of the direct attack."

TFD has limited wildland firefighting capabilities, with no wildland apparatus in the fleet. Occasionally, TFD deploys wildland-trained personnel to staff rapid extrication modules (REMS) for medical emergencies during wildland fires across the nation. This program brings the experience back to the department. Wildland fires pose challenges, including their expense, extensive periods to mitigate and bring under control, and sometimes require

outside support. NFPA 1140 is the standard for wildfire protection and contains many elements for assessments and planning.

Special Operations Incidents

Tumwater Fire Department maintains an operational level of response to manage routine fuel leaks, etc. Technical rescue services such as swift water rescue, high and low angle, trench, confined space, and structural collapse are provided through a county-wide joint effort that creates the Special Operations Rescue Team (SORT). TFD supplies some personnel who participate in the SORT team. Through the Strategic Planning process, staff members expressed a desire to develop members' training and participation in the regional team.

Responsibilities & Activity Levels of Personnel

Personnel responsibilities & activity levels of personnel have been a focus of recent internal organizational issues. The Battalion Chief of EMS has been vacant but was recently filled. Also, the single Fire Prevention Officer is affected by an overwhelming number of occupancies and inspection activities that require significantly more staff time. The Emergency Manager functions are assigned to the Fire Chief, who is predominantly focused on leading and managing the fire department. The saturation of tasks can lead to work fragmentation, communication challenges, and inconsistent work effort across all divisions. These observations present TFD with a valuable opportunity to refine role definitions within the command staff and enhance overall organizational efficiency.

In every fire department, many activities are accomplished outside the "regular" duties of responding to emergency incidents. These typically involve managing the self-contained breathing apparatus (SCBA), hose testing, air monitor calibration, EMS quality assurance, and various committees. TFD relies upon individuals on various shifts who are interested in these additional areas to accomplish the tasks.

This approach can work well as long the primary duty of operations staff has sufficient time to ensure operational readiness for emergency incidents. In addition, a benefit of completing and assigning these tasks to shift members is that it provides an opportunity to adopt an important function and develop further knowledge, skills, and abilities of participating individuals. These individuals can learn project management, time management, and budgeting skills that prepare them for future promotional opportunities.

Personnel Management

Policies, Rules, Regulations, Manuals, & Handbooks

Tumwater Fire Department has personnel policies and procedures guiding both administrative and personnel behavior. The City of Tumwater's employee policies and the TFD policies are available to all employees.

The TFD policies are maintained in Lexipol and focus on specific fire department policies. The use of a third-party vendor allows for regular updating and assistance with policy development and maintenance. It was noted during the on-site interviews the updating of the TFD policies had been intentionally delayed during the RFA discussion to avoid duplication of policy work, resulting in some policies being delayed in their intended update. The TFD staff has recently begun to work on updating the policies.

Labor-Management Relationships & Issues

Tumwater Fire Department and its union, the Tumwater Firefighters IAFF Local 2409 (local), work together to improve the health and safety of the Tumwater community and the TFD firefighters. Over the past years, despite a failed RFA attempt, relationships have been strong, and there is an overall sense of collaboration between the local and the administration. When discussing this relationship, union leadership emphasized the need for training and career advancement improvement. Key issues include a clear direction of where the fire department is headed after the failed RFA. The union members have a great sense of pride in TFD and desire a larger role in contributing more to regional partners.

Because of the department's efforts to move forward after the RFA attempt, there is a renewed sense of progress and improved morale. The union members have a strong sense of culture and enjoy working with the administration toward an optimistic future. ESCI notes that the local and administration's relationships and attitudes were excellent, and they truly look for opportunities to collaborate.

Disciplinary Process

Tumwater Fire Department relies on the City of Tumwater personnel policies to address general conduct, discipline, and separation. These policies are available to the employees and were published in July 2011. There is also a firefighter code of ethics within TFD policies.

The City of Tumwater's disciplinary policy aims to maintain high standards of conduct among its employees, emphasizing the importance of following directions for safe service delivery and public trust. The direct supervisor can take some corrective actions, including issuing a written reprimand and lower-level actions. The Fire Chief has the authority to recommend discipline, including demotion, suspension, and termination, with the final approval of the Mayor. The policy offers fair means to address legitimate concerns against employees, protecting them from false misconduct charges and ensuring due process. Disciplinary

actions, ranging from coaching to dismissal, are applied based on the severity of infractions. The policy also applies to at-will employees. Those who are under the provision of the civil service cannot be demoted, suspended, or terminated except for cause under the rules of the civil commission rules. Both the policy and the Civil Service Commission's rules outline procedures for a pre-disciplinary meeting; they also detail the levels of discipline, appeal processes, and post-termination guidelines, emphasizing confidentiality, fairness, and consistency in maintaining discipline and addressing employee misconduct.

Counseling Services

TFD provides counseling guidance documents and a peer support group within the department. These documents include IAFF resources, EAP, and local and regional nonprofit resources.

Application & Recruitment Processes

Applicants for entry-level, lateral, and promotional positions in TFD are subject to the Civil Service Commission's qualification and examination procedures. One of the commission's tenets is always assuring all civil service employees of fair and impartial treatment. Prospective candidates are required to pass all required background standards and medical/physical standards approved by the commission. The city Administrative Services Department supports hiring processes.

Testing, Measuring, & Promotion Processes

The Civil Service Commission (as required by the Civil Service Rules) tests all promotional ranks within the department. The Civil Service Commission is comprised of three members appointed by the mayor. Commissioners are appointed to six-year terms.

The intent is to inspire public confidence in the promotional system and give employees an opportunity for promotion within uniformed Fire Department positions. The Civil Service Commission has extensive rules governing hiring, promotion, and discipline for fire department personnel. These rules were last modified in February 2023.

The Civil Service Commission governs the testing methods, which include written, oral, and physical tests, interviews, assessment centers, and evaluations of experience and education.

From these processes, an eligibility list is created for one year from the date of announcement as determined by the Commission or for eighteen months for all promotional eligibility lists within the Fire Department or for an indefinite period for eligibility lists subject to continuous recruitment as determined by the Commission. Before the expiration of an eligibility list, the Commission may extend the period of eligibility for candidates who still meet the announced qualifications for one year at a time.

Health And Wellness Programs

Tumwater Fire Department's health, safety, and risk management programs are administered and managed by a collective effort within the department. During interviews, it was noted that health and wellness programs were a priority, and there were opportunities for improvement.

The fire service is currently facing several aspects of health and wellness, and Tumwater is no exception. Issues from mental health to cancer prevention are at the forefront of departments across the country. Several opportunities are outlined in the strategic plan and will be reflected in the final recommendations in this evaluation.

Tumwater has already identified tasks to improve firefighter health and wellness. The transition to a four-platoon schedule was made to assist with sleep and burnout prevention. During ESCI's station tours, exercise areas were in the apparatus bays without separate ventilation and wall barriers.

Training Program

General Training Competencies

The TFD Training Lieutenant, along with the command staff members, work together to identify, plan, and develop training. The Training Lieutenant and Medical Services Officer (MSO) are responsible for the development of the training program. Both positions report directly to the Assistant Fire Chief.

The delivery of training is accomplished utilizing various instructors and methods and by partnering with other jurisdictions, primarily the Olympia Fire Department and Lacey Fire Department. Meeting federal and state competency requirements is the priority of the department, followed by identifying training needs outside of mandated competencies.

Certifications & Licensing

Tumwater Fire Department has adopted the Washington State Apprenticeship Program Standards (WSAPS) for firefighters, officers, and fire apparatus operators. These standards are reviewed and adopted by the Washington State Fire Fighters Joint Apprenticeship and Training Committee (JATC). WSAPS integrates on-the-job training, academic studies, and certifications such as Pro Board. Pro Board® accredits public sector organizations that certify emergency services responders against the National Professional Qualifications System Standards requirements. The National Fire Protection Association creates those Standards in which minimum levels of required training are identified for all positions and aligned with certification standards, including the WSAPS.

All personnel are trained to maintain Washington EMS standards, which vary based on their level of certification and the scope of practice allowed by the Medical Program Director. Recertification is accomplished through the Ongoing Education and Training Program (OTEP).

Newly hired firefighters must participate in probationary firefighting recruit training. This training includes a fire academy that meets the National Fire Protection Association standard of NFPA 1001 (Firefighter I and II) and EMS training to meet Washington standards.

Training Administration

The Commission on Fire Accreditation International (CFAI) addresses “Training and Competency” and lists several performance indicators. Some of these competencies include the following:

- The organization has a process in place to identify training needs.
- The agency's training program is consistent with the mission statement, goals, and objectives and meets its needs.
- The training program is consistent with legal requirements for performing mandatory training.

- The agency identifies the minimum levels of training required for all positions in the organization.
- A process is in place to ensure that personnel are appropriately trained.
- The agency provides a training schedule that meets the organization's needs.
- The agency evaluates individual and crew performance through validated and documented performance-based measurements.
- The agency maintains a training records management system that meets recognized standards.
- Facilities and apparatus are provided to support the agency's all-hazards training needs.
- The agency has instructional personnel with teaching qualifications and expertise to meet its needs.
- Instructional materials are current, support the training program, and are easily accessible.
- The agency has a process for purchasing, developing, or modifying the existing curriculum to meet its needs.
- Equipment utilized for training is maintained correctly, following the agency's operational procedures.
- The agency maintains a current inventory of all training equipment and resources.
- A selection process is in place for training and educational resource materials.
- Training materials are evaluated at least annually to reflect current practices and meet the needs of the agency.

Furthermore, the Insurance Service Organization (ISO) requires detailed hours of specific training as part of their fire department ranking. The following is a summary of each firefighter's annual ISO-required training hours.

- Facilities Training: 18 Hours
- Company Training: 192 Hours
- Officer Development Training: 12 Hours
- New Driver Training: 60 Hours
- Driver Continuing Education: 12 Hours
- Hazardous Materials Training: 6 Hours
- Recruit Training: 240 Hours

- Pre-fire Planning: Annual Review

The department appears to be challenged to deliver training with the current staff structure. During the Strategic Planning process, several key issues were identified to improve the overall training program. Additional staff will be required to restructure and design a more effective training program to accomplish these goals. Some of the goals identified include identifying future skills and training needs, evaluating the professional development programs, improving leadership promotion and training programs, and potentially incorporating regional partners.

The Training Lieutenant oversees the fire training, and the MSO oversees EMS training assisted by various Paramedic Lieutenants. The department has several instructors trained to deliver the Blue Card Command Training and Emergency Vehicle Incident Prevention (EVIP) program.

Tumwater does incorporate its training activities with mutual aid partners but often will require on-duty crews to travel outside their primary response zone, extending response times and delaying service to the community.

Training Schedule

Training topics vary from mandatory classes required to meet State minimum standards to training necessary to meet department and certification or re-certification requirements.

The Assistant Fire Chief, Battalion Chiefs, and Training Lieutenant meet before the calendar year to discuss needed training outside of mandatory training and provide a quarterly and yearly training schedule based on a four-year training strategy.

The minimum training, education, and competency standards for newly hired firefighters and company officers receive additional training to become eligible for promotion to Battalion Chief. On-duty shift personnel assist new firefighters in achieving the competencies outlined in their apprenticeship program.

Training Facilities

Tumwater Fire Department does not own or have access to a training facility within city limits. However, TFD has an Interlocal Agreement with the City of Olympia, allowing the TFD to utilize the training facility located at 1305 Fones Road in Olympia. The agreement requires TFD to pay an annual fee for its use. Again, TFD units, typically while on duty, travel outside of the city to utilize the facility. The facility provides a broad range of critical training needed to maintain and enhance the personnel's knowledge, skills, and abilities. The keystone training prop on the property is a commercial tower that spans 8,500 square feet across six floors, offering multiple entry points, complex room search areas, and a live fire training (LFT) prop. Available training options include live fire training, ventilation, hose deployment, search and rescue, ground ladder training, aerial positioning, and rope rescue.

The LFT Burn Prop utilizes propane for flames and theatrical smoke to simulate a live fire training environment for firefighters. In the event of an emergency, powerful fans are capable of immediately exhausting the heat and smoke, ensuring an unparalleled level of training safety in live fire scenarios.

Training Program Goals & Objectives

Qualified members must manage an effectively functioning training program, requiring the development of training planning, clear goals, and defined objectives. Tumwater Fire Department does not have a written multiyear training plan as well as the necessary staff to support that effort. Tumwater is compelled to focus on mandatory training and include additional training as needed.

Training Procedures & Manuals

Tumwater Fire Department utilizes task books through the Joint Apprenticeship and Training Committee (JATC) for newly hired firefighters, fire apparatus driver/operators, and newly promoted lieutenants. TFD does not have additional written training manuals. TFD would benefit from developing training manuals outlining procedures, schedules, competencies, and expectations. Doing so can provide more consistent expectations and a platform for succession planning for future training officers. To the greatest extent possible, the procedures must be coordinated with mutual aid partners to ensure consistency across jurisdictions.

Recordkeeping

The TFD utilizes FireRescue1 Academy and EMS1 Academy for their training record management. FireRescue1 Academy meets the department's needs for re-occurring online course material and training. Good record-keeping is essential for capturing and archiving the training and certifications of the department’s personnel and in supporting the accreditation and ISO processes. Battalion Chiefs and company officers are responsible for entering drills into the records management system. The training officers primarily handle clerical support for training; however, the administrative personnel assist when needed.

Service Delivery & Performance

Responding to calls for service (incidents) is the primary role of the fire department within the Tumwater community, even though they provide many other types of services beyond that primary mission. This response to incidents is encompassed within the industry term "service delivery," and the following components of service delivery will be considered in the analysis of service delivery.

- Service demand.
- Resource distribution.
- Resource concentration.

Service Demand Study

The primary mission of TFD is to respond to calls for service that citizens or visitors make of the community, and leadership and elected officials need to have an in-depth understanding of service demand. This knowledge helps leadership in the planning process when determining staffing, resource types, resource location, and more.

Incident Type Analysis

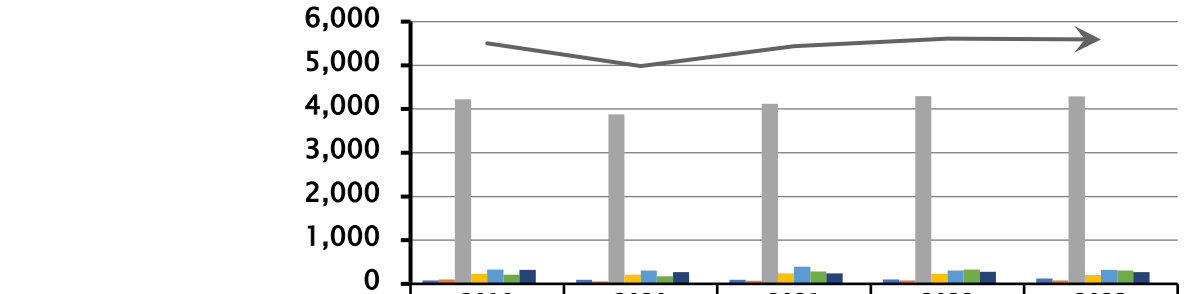
Tumwater Fire Department, like many fire departments throughout the nation, was originally founded to respond to emergency incidents involving fires. As the modern fire service has evolved, the types of incidents to which fire departments respond have become much more varied, and departments should quantify and qualify responses via records management software that meets the requirements outlined by the National Fire Incident Reporting System (NFIRS). This system provides a standardized method of data collection that enables fire departments to understand their responses better and provides an opportunity to compare data to other departments within the region and across the nation. Within the NFIRS system, each incident type (currently 178 incident types) is assigned a three-digit code. These three-digit codes are then organized into a series, as illustrated in the following figure, based on the first digit of each code.

Figure 10: NFIRS Incident Schema

Incident Series	Incident Type
100-Series	Fires
200-Series	Overpressure Rupture, Explosion, Overheat (No Fire)
300-Series	Rescue and Emergency Medical Service (EMS) Incidents
400-Series	Hazardous Condition (No Fire)
500-Series	Service Call
600-Series	Canceled, Good Intent
700-Series	False Alarm, False Call
800-Series	Severe Weather, Natural Disaster
900-Series	Special Incident Type

As illustrated in the following figure, TFD service demand has increased by 1.7% from 2019 to 2023. This overall increase includes decreases of 9.4% in 2020 and 0.3% in 2023, as well as increases of 9.2% in 2021 and 3.1% in 2022. The significant decrease in 2020, followed by a similar increase in 2021, was the result of the COVID-19 pandemic.

Figure 11: TFD Service Demand by NFIRS Incident Series, 2019-2023



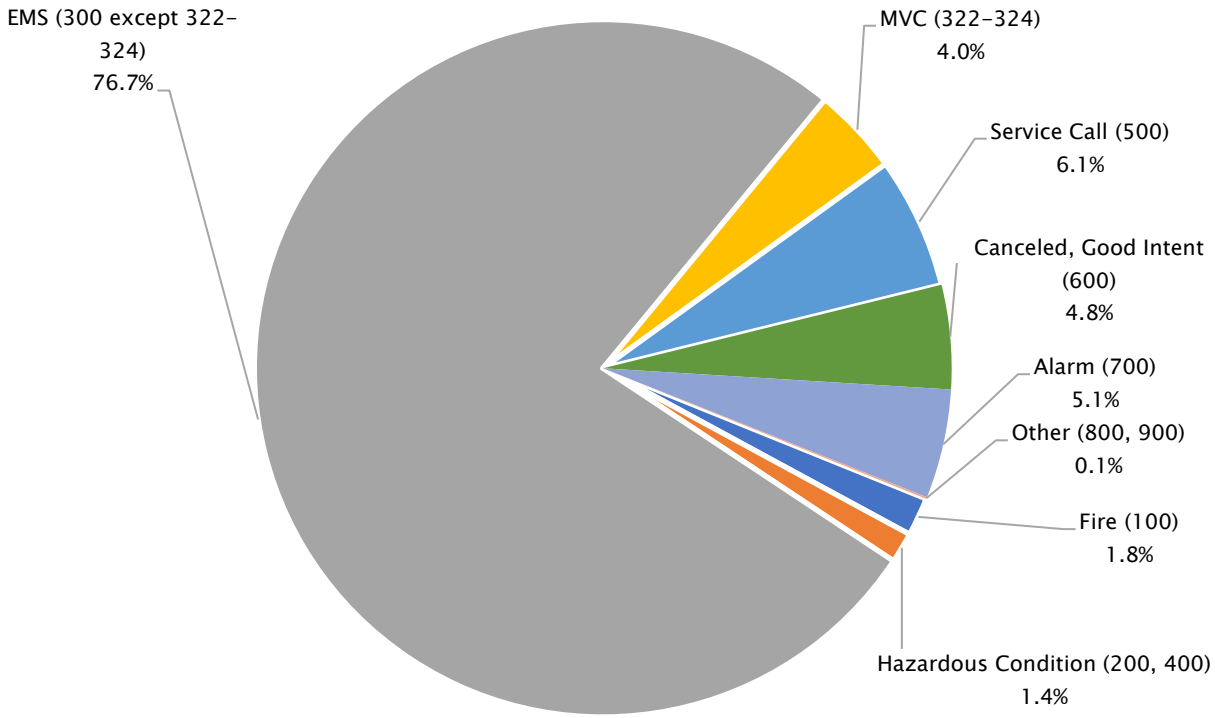
	2019	2020	2021	2022	2023
Fire (100)	81	90	90	103	122
Hazardous Condition (200, 400)	101	54	71	79	80
EMS (300 except 322-324)	4,224	3,878	4,117	4,294	4,287
MVC (322-324)	226	207	236	225	204
Service Call (500)	329	308	391	307	323
Canceled, Good Intent (600)	213	175	287	324	309
Alarm (700)	322	270	239	275	267
Other (800, 900)	5	1	9	4	3
Total	5,501	4,983	5,440	5,611	5,595

The preceding figure illustrates very well the changes that have occurred in service demand within the community from year to year. However, there is also value in understanding the

same dataset from the perspective of how each NFIRS incident series compares to the total service demand, expressed as a percentage.

As illustrated in the following figure, the greatest service demand is for incidents involving emergency medical services, and the lowest service demand is for other incidents. Emergency medical service incidents, as the highest service demand, are consistent for most communities within the United States.

Figure 12: TFD Service Demand by NFIRS Incident Series, 2019–2023.



Future Service Demand

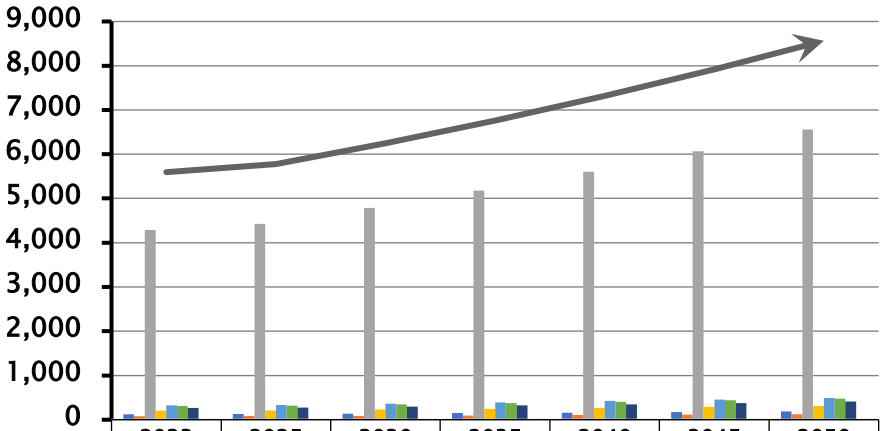
With the knowledge of service demand that has occurred within the near past, it is possible to project theoretical service demand that may occur in the future. This is a critical consideration as leadership and elected officials strive to ensure quality services that arrive in a timely manner within the community. There are two primary methods used to project future service demand—projection based on changes in population and projection based on historical service demand.

Future Service Demand by Population

This method of projecting future service demand analyzes the number of incidents per 1,000 population within the community. Then, through analysis of the historical population changes within the community obtained from the United States Census Bureau, a projection of future population is extrapolated, the incidents/1,000 population is applied to achieve the total number of incidents each year, which is then distributed based on the incident frequency percentages.

The following figure illustrates the projected TFD service demand based on changes in population and provides the upper estimate.

Figure 13: TFD Projected Service Demand by Population Changes, 2025–2050.

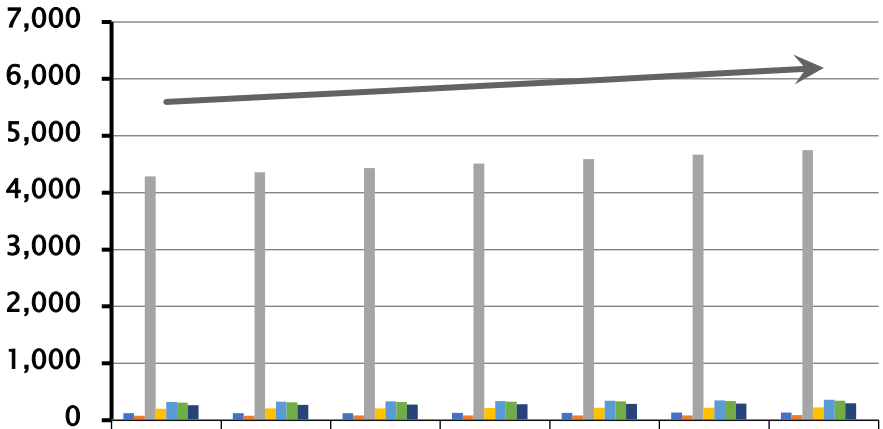


	2023	2025	2030	2035	2040	2045	2050
Fire (100)	122	126	136	147	159	173	187
Hazardous Condition (200, 400)	80	83	89	97	105	113	122
EMS (300 except 322–324)	4,287	4,424	4,787	5,180	5,605	6,064	6,562
MVC (322–324)	204	211	228	246	267	289	312
Service Call (500)	323	333	361	390	422	457	494
Canceled, Good Intent (600)	309	319	345	373	404	437	473
Alarm (700)	267	276	298	323	349	378	409
Other (800, 900)	3	3	3	4	4	4	5
Total	5,595	5,774	6,248	6,760	7,315	7,914	8,564

Future Service Demand by Historical Service Demand

This method of projecting future service demand analyzes the historical percentage of change during the study period to determine the average increase or decrease per year. This figure is then extrapolated over time to provide the total number of incidents each year, which is then distributed based on the incident frequency percentages. The following figure illustrates the projected TFD service demand based on historical changes in service demand and provides a lower estimate.

Figure 14: TFD Projected Service Demand by Service Demand Changes, 2025–2050.



	2022	2025	2030	2035	2040	2045	2050
Fire (100)	122	124	126	128	131	133	135
Hazardous Condition (200, 400)	80	81	83	84	86	87	89
EMS (300 except 322–324)	4,287	4,360	4,435	4,511	4,588	4,666	4,746
MVC (322–324)	204	207	211	215	218	222	226
Service Call (500)	323	329	334	340	346	352	358
Canceled, Good Intent (600)	309	314	320	325	331	336	342
Alarm (700)	267	272	276	281	286	291	296
Other (800, 900)	3	3	3	3	3	3	3
Total	5,595	5,691	5,788	5,887	5,987	6,090	6,194

Temporal Analysis

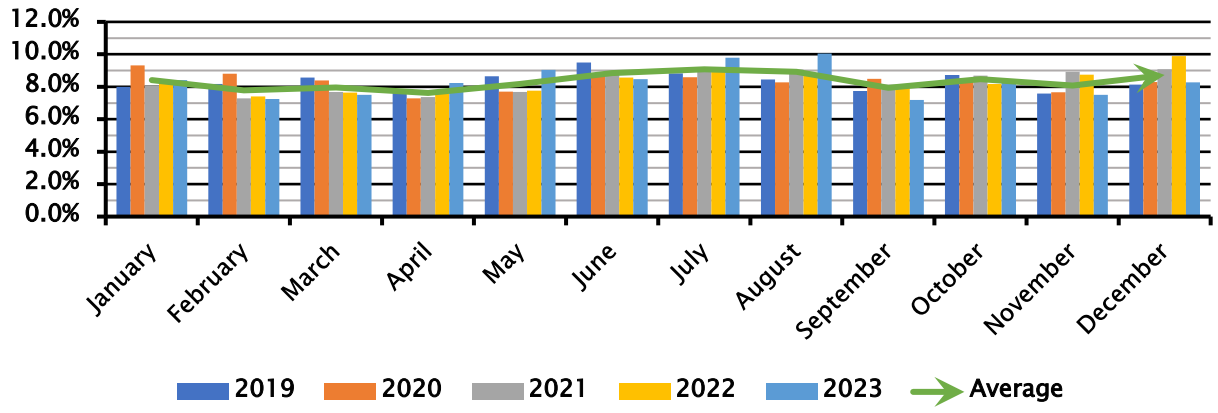
Temporal analysis—when incidents occur–is an important factor for leadership to consider when determining staffing levels of on-duty units, as well as when scheduling non-incident activities such as the following and working to schedule during periods of lower service demand.

- Pre-incident planning.
- Training.
- Station maintenance.
- Apparatus maintenance.

- Fire hose testing.
- Fire hydrant testing.
- Public education.

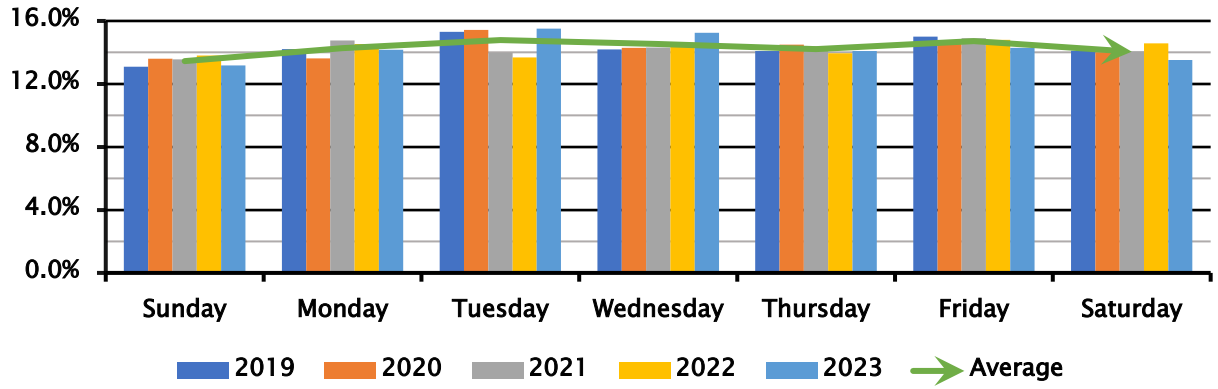
Analysis of when incidents occur first focuses on the months of the year. As illustrated in the following figure, the greatest service demand within Tumwater occurs in July, and the lowest service demand occurs in April.

Figure 15: TFD Service Demand by Month, 2019–2023.



Analysis of when incidents occur then focuses on the days of the week. As illustrated in the following figure, the greatest service demand within Tumwater occurs on Tuesday, and the lowest service demand occurs on Sunday.

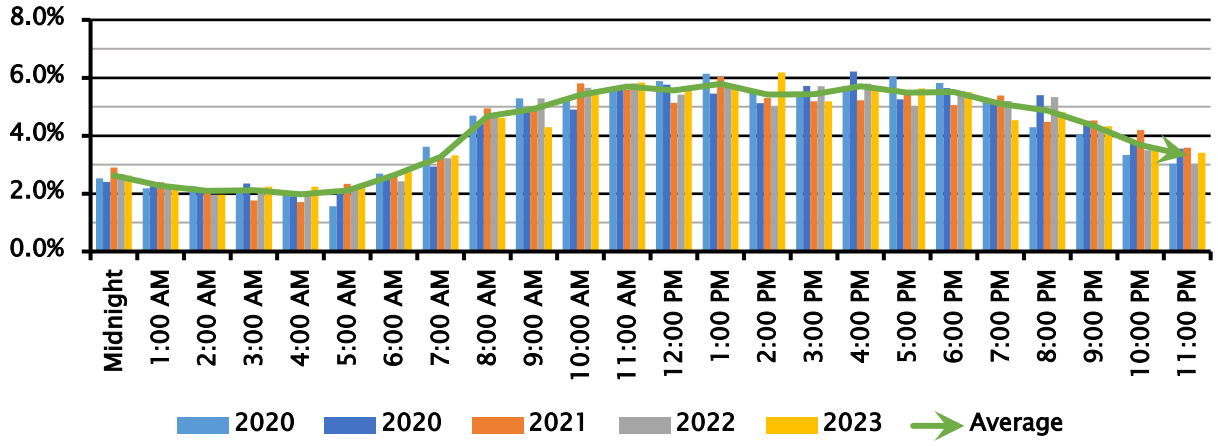
Figure 16: TFD Service Demand by Day, 2019–2023.



Analysis of when incidents occur finally focuses on the hours of the day. As illustrated in the following figure, the lowest demand for service occurs at 4 AM, followed by slight increases over the next three hours. This increase then steepens at 9 AM and continues to increase until reaching the greatest demand at 1 PM. Throughout the afternoon, service demand fluctuates slightly before beginning a general decrease starting at 7 PM. This decline

continues throughout the evening and into the night until returning to the lowest point. The pattern described above is very common within communities that have minimal 24-hour workplaces and follows the movement of the population arising in the morning, leaving their homes, going about their daily activities such as work or recreation, moving into evening activities such as dining out and sports, and finally returning to their residences for the night.

Figure 17: TFD Service Demand by Hour, 2019–2023.



While the preceding figure illustrates that demand for service is at its lowest during the late night and early hours, leadership should ensure adequate staffing is still in place to respond and mitigate structure fire incidents quickly. Based on a national study recently published, from 2018 to 2020, the occurrence of residential structure fires with fatalities was highest between midnight and 1:00 AM. The 8-hour peak period (11:00 PM to 7:00 AM) accounted for 45% of residential fatal fires[9].

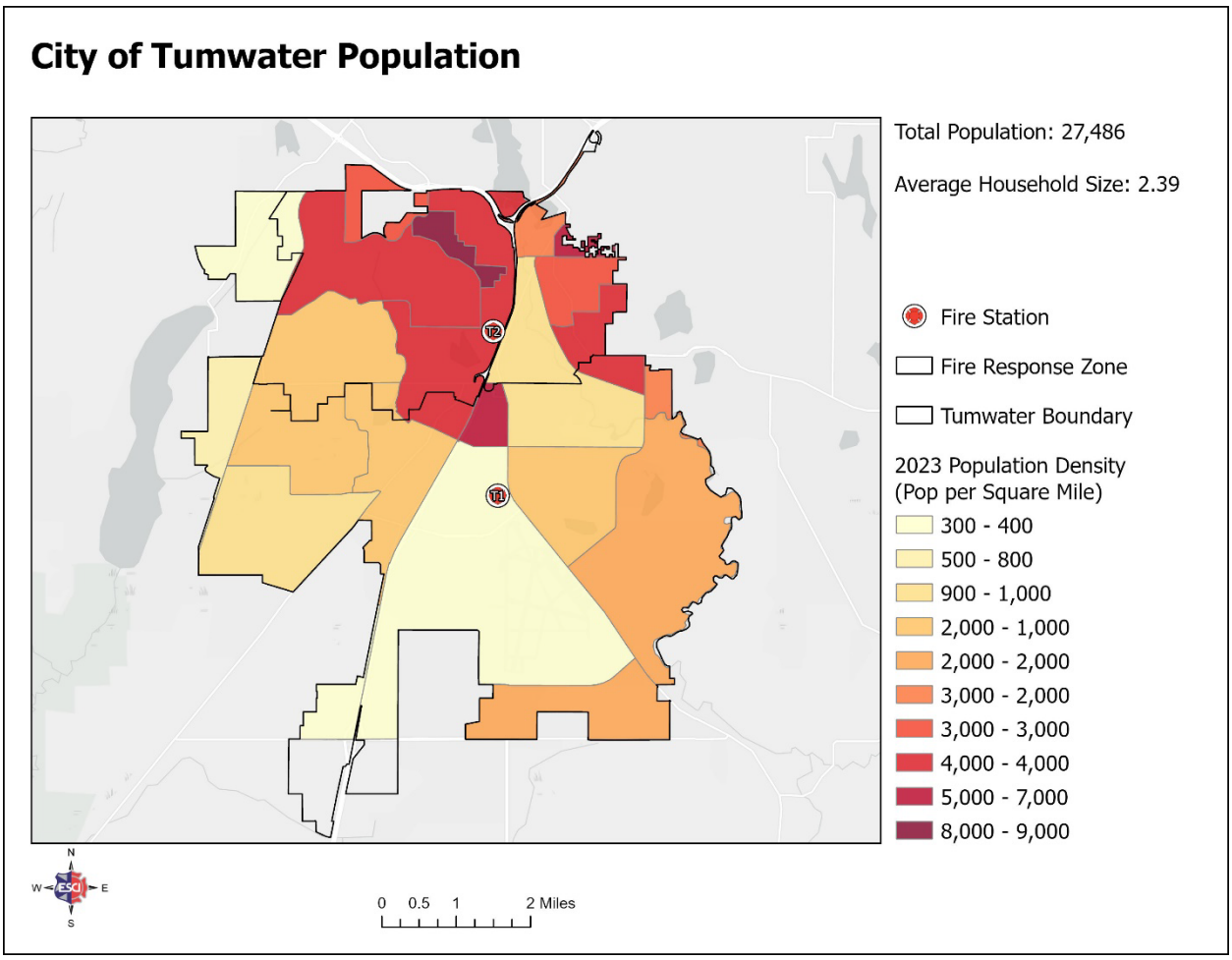
Geographic Analysis

Where incidents occur within the community—geographic analysis—provides leadership knowledge to then associate with the deployment of current and future resources for response to calls for service. With such a large percentage of service demand related to emergency medical service incidents, it is logical to consider that there is a correlation between the location of people and the location of incidents. There are areas of higher population density within the community, and there are also areas of higher incident density.

Through analysis of population density obtained from the U.S. Census Bureau, the following figure illustrates the population density within Tumwater, WA. As illustrated in the following figure, the greatest density is located in the northern portion of the city, near Station T2.

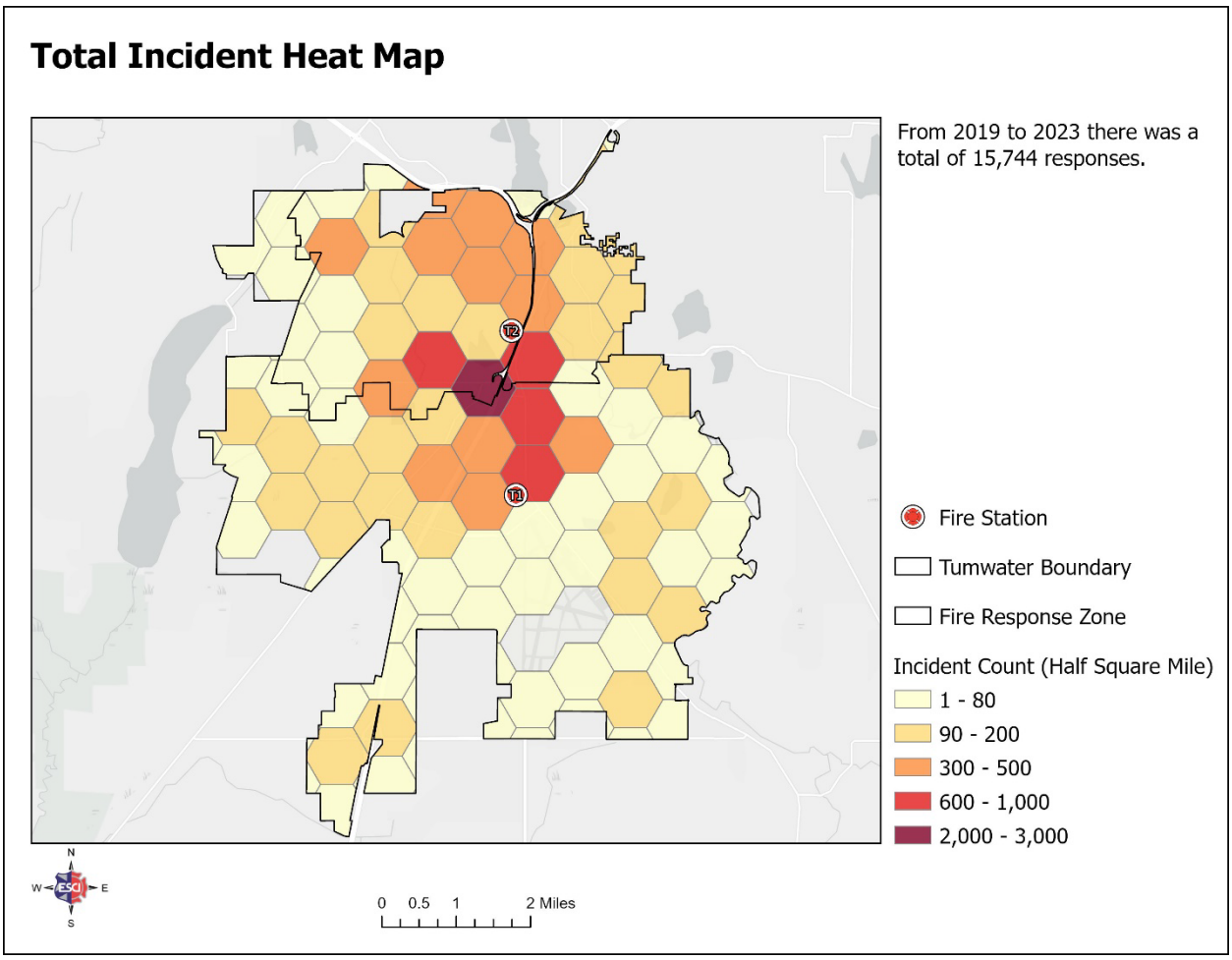
[9] *Fatal Fires in Residential Buildings (2018–2020), Topical Fire Report Series Volume 22, Issue 2 /June 2022, U.S. Department of Homeland Security, U.S. Fire Administration, National Fire Data Center.*

Figure 18: Tumwater Population Density, 2023.



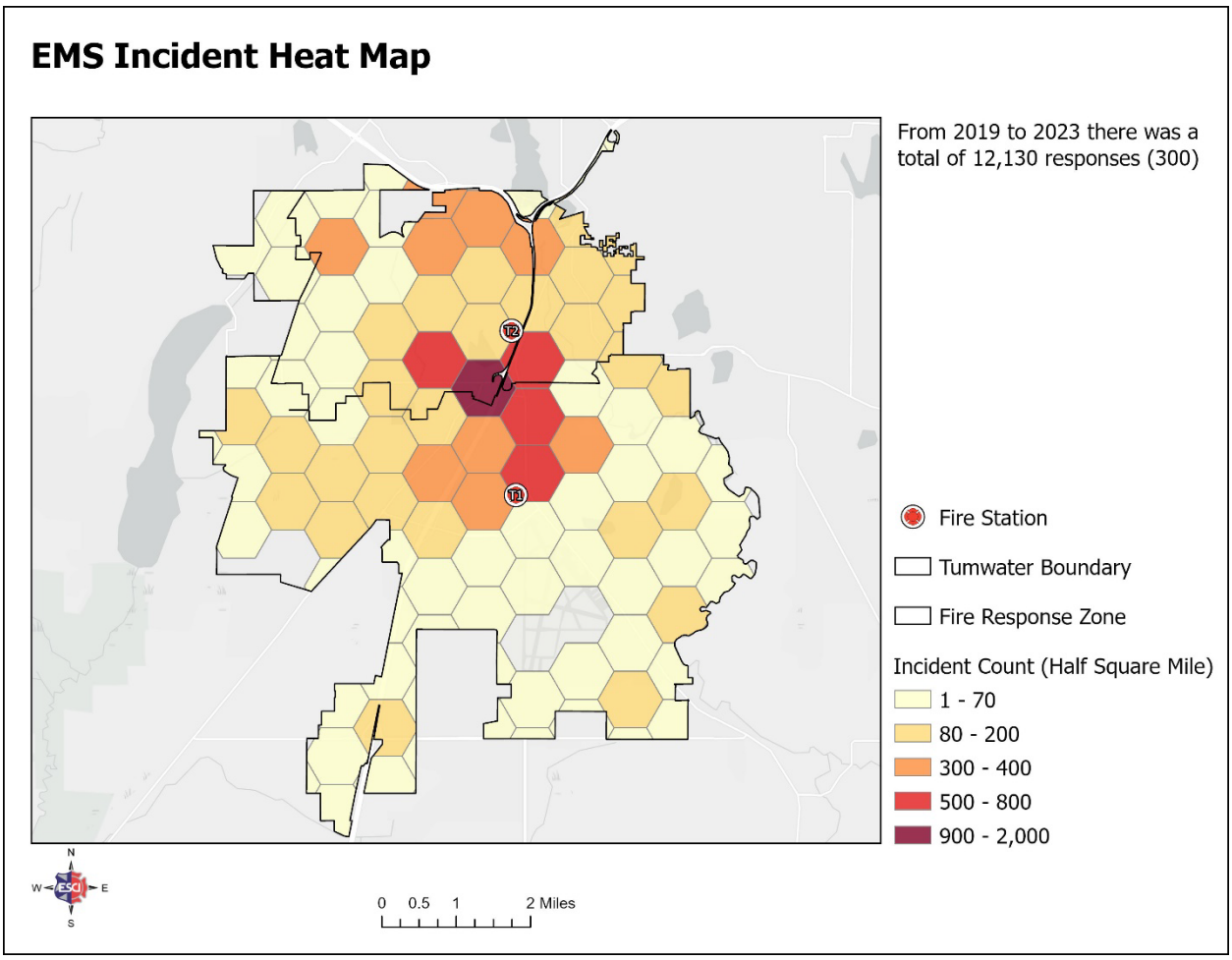
Using the tools provided by geographic information system (GIS) software, ESCI plotted the geographic location of each incident and then determined the mathematical density of incidents per half-square mile. As illustrated in the following figure, the greater density of incidents is located in the area near Station 12, corresponding with the greater density of the population.

Figure 19: TFD Incident Density (All Incidents), 2019–2023.



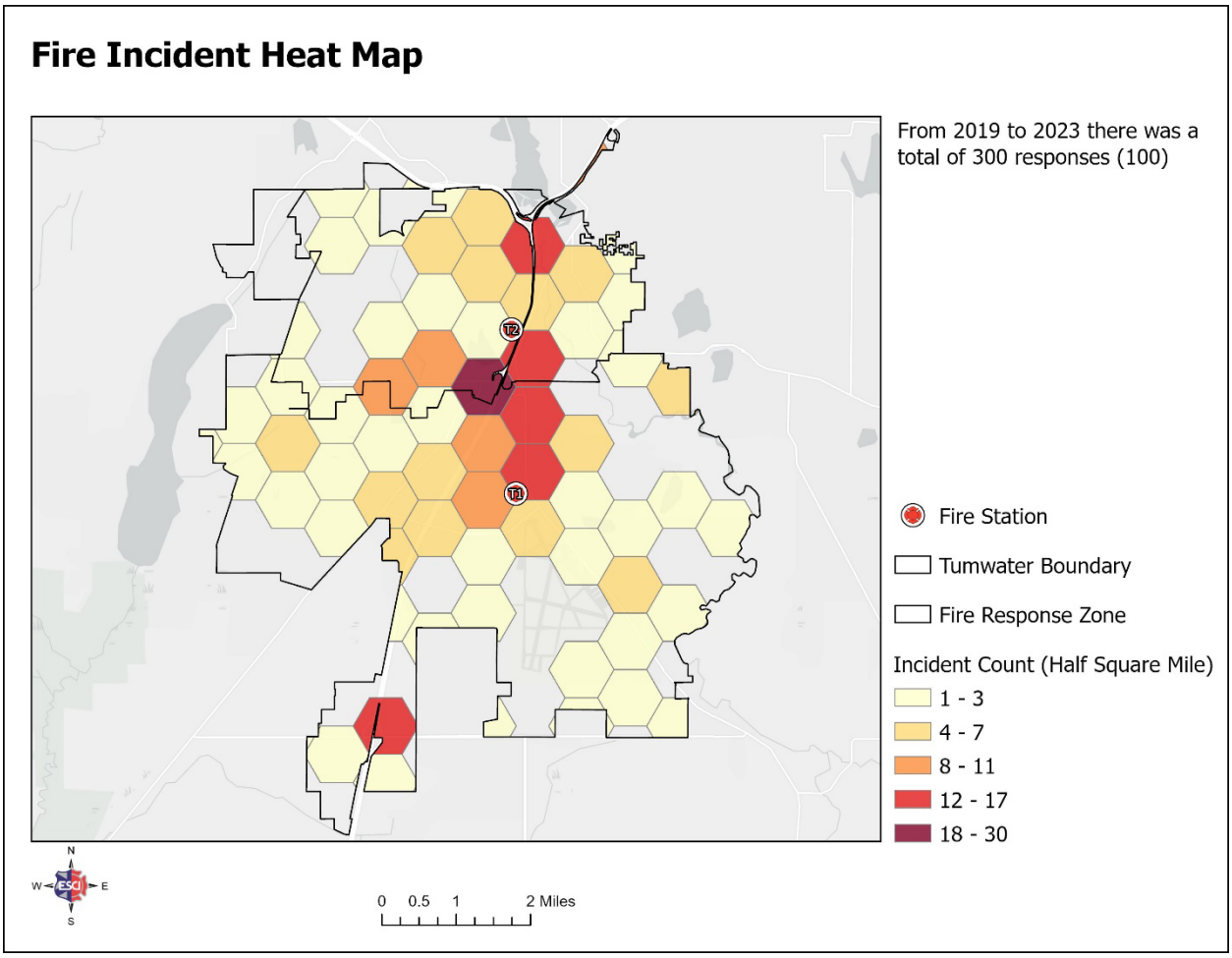
While the preceding figure provides a view of the incident density of all service demands, those directly related to emergency medical service incidents (NFIRS 300–Series) should be considered as a separate subset due to being the category of greatest service demand, as illustrated in the following figure, the density of EMS incidents follows a pattern similar to that of the overall incident density.

Figure 20. TFD Incident Density (EMS), 2019–2023.



Finally, responses to incidents involving fires (NFIRS 100-Series) generally require more resources than other incidents. Thus, this group should also be considered as a separate subset of the overall incident data. As illustrated in the following figure, the density of fire incidents also follows a pattern similar to that of the overall incident density.

Figure 21: TFD Incident Density (Fire), 2019–2023.



Resource Distribution Study

As TFD has continued to grow in order to provide appropriate services within the community, resources have been placed based on different factors available at the time. This section will provide a view of current resource locations as compared to industry standards and best practices. Leadership should also then consider how the geographic analysis in the preceding section compares to resource distribution. The Washington Survey and Rating Bureau (WSRB) for Washington State manages the ISO standards discussed below. WSRB utilizes the same or similar standards for the following analysis.

ISO Distribution

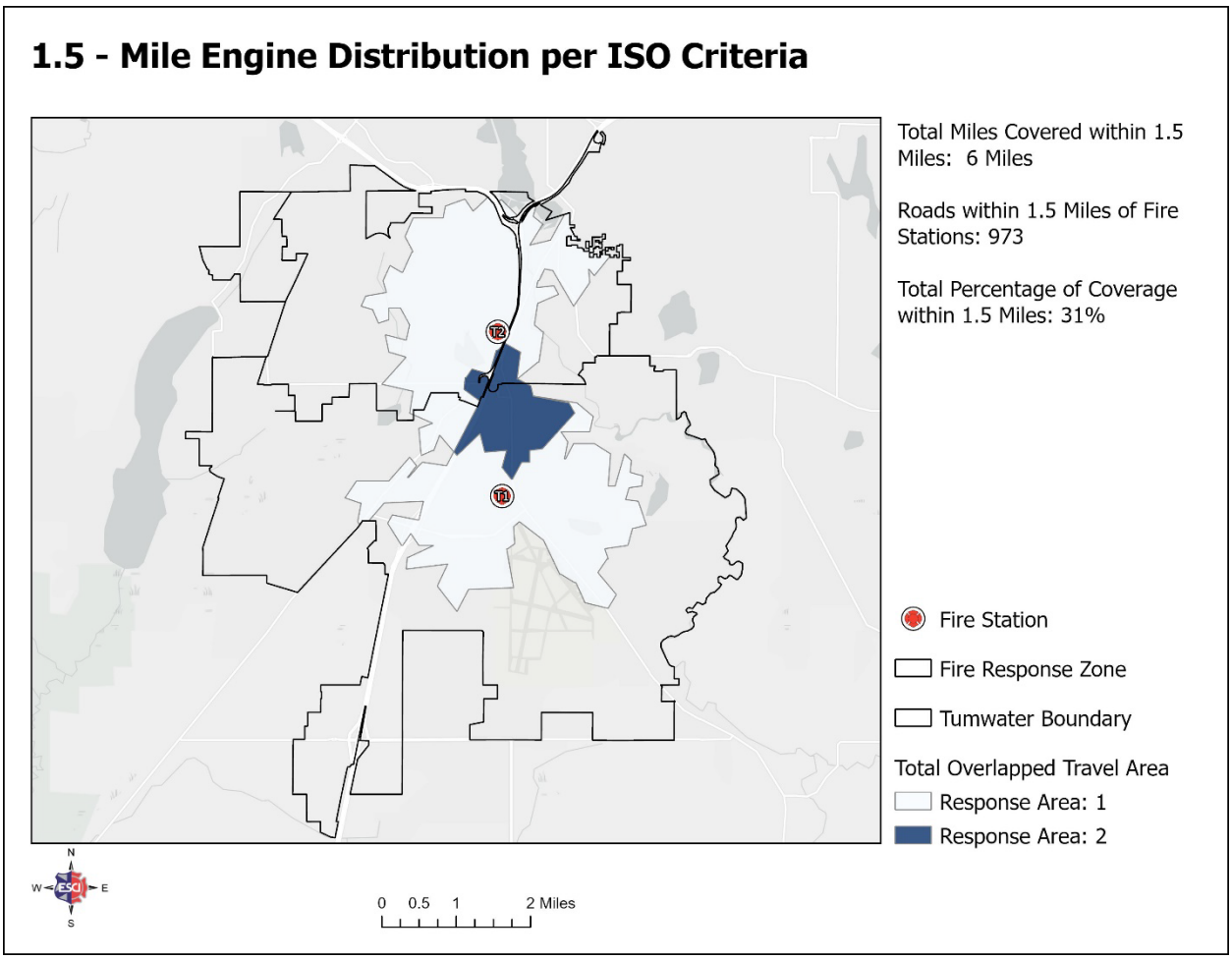
The Insurance Services Office (ISO) is a national insurance industry organization that evaluates fire protection for communities across the country. ISO assesses all areas of fire protection and categorizes them into four major areas: emergency communications, fire department, water supply, and community risk reduction. Following an on-site evaluation, an ISO rating, or specifically, a Public Protection Classification (PPC®) number, is assigned to the community ranging from 1 (best protection) to 10 (no protection). The PPC® score is developed using the Fire Suppression Rating Schedule (FSRS), which outlines sub-categories of each of the major four, detailing the specific requirements for each area of evaluation.

A community's ISO rating is an important factor when considering fire station and apparatus concentration, distribution, and deployment due to its effect on the cost of fire insurance for the residents and businesses. To receive maximum credit for station and apparatus distribution, ISO evaluates the percentage of the community (contiguously built upon area) that is within specific distances of fire stations, central water supply access (fire hydrants), engine/pumper companies, and aerial/ladder apparatus.

ISO Engine Distribution

Consideration by ISO for purposes of developing the PPC® score within the community includes an evaluation to determine the percentage of the service area (and associated structures) that fall within a 1.5-mile travel distance of a staffed fire engine. This distance is equivalent to the 4-minute travel time recommendation for first-unit arrival, which will be discussed in a subsequent section. As illustrated in the following figure, 31% of the TFD service area is within the 1.5-mile travel distance from a staffed fire engine.

Figure 22: TFD Engine Distribution per ISO Criteria.

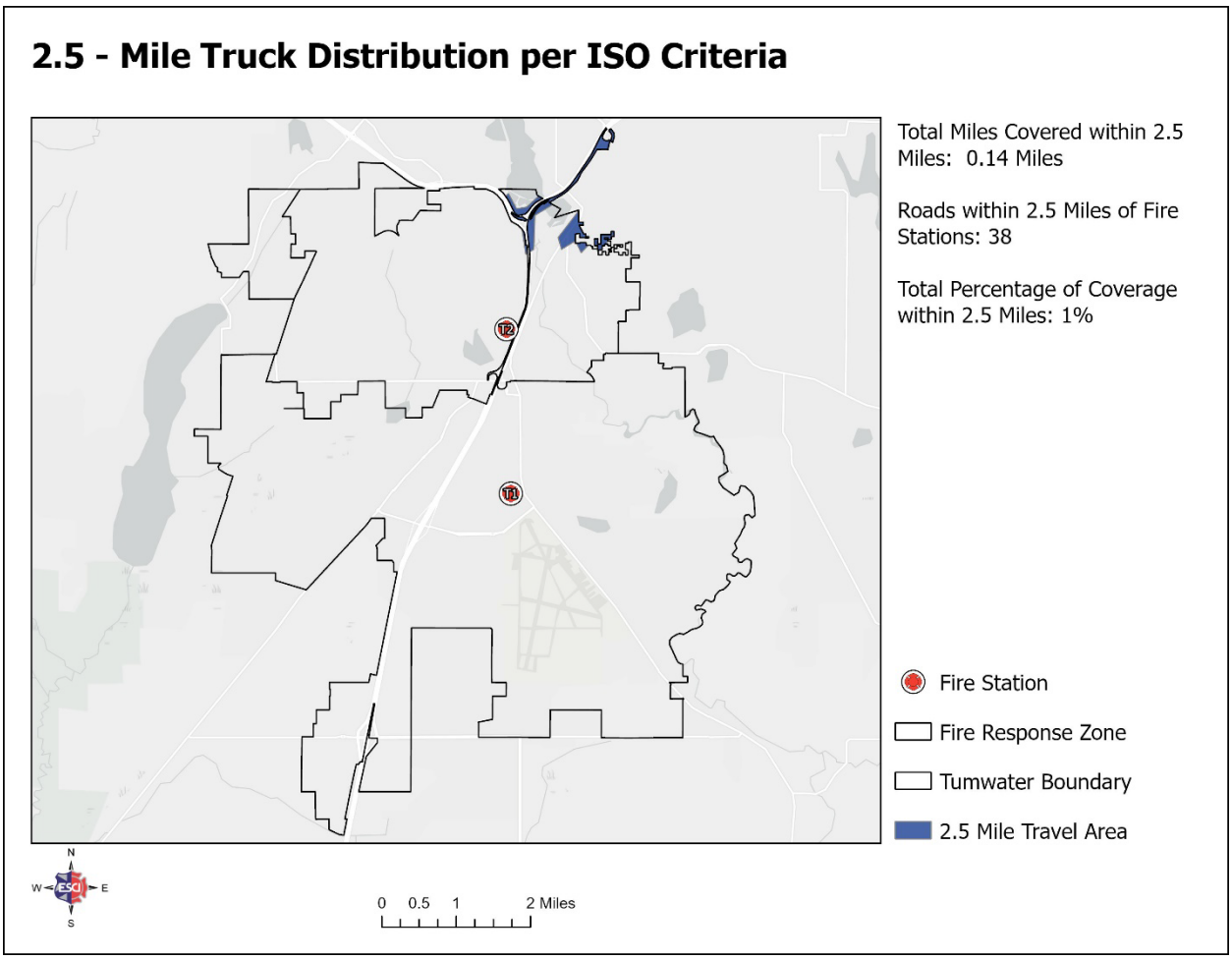


ISO Aerial Distribution

The use of aerial apparatus is more specifically needed in areas of the community where there are five or more buildings of three stories (or 32 feet) or more in height or with five or more buildings requiring a needed fire flow of greater than 3,500 gallons per minute, or five or more buildings meetings any combination of these requirements.

Consideration by ISO for purposes of developing the PPC® score within the community includes an evaluation to determine the percentage of the service area (and associated structures) that fall within a 2.5-mile travel distance of a staffed aerial apparatus (ladder truck, platform truck, etc.). This distance is equivalent to the 8-minute travel time recommendation for full assignment arrival, which will be discussed in a subsequent section. As illustrated in the following figure, 1% of the TFD service area is within the 2.5-mile travel distance from a staffed aerial apparatus, as TFD does not currently operate any aerial apparatus.

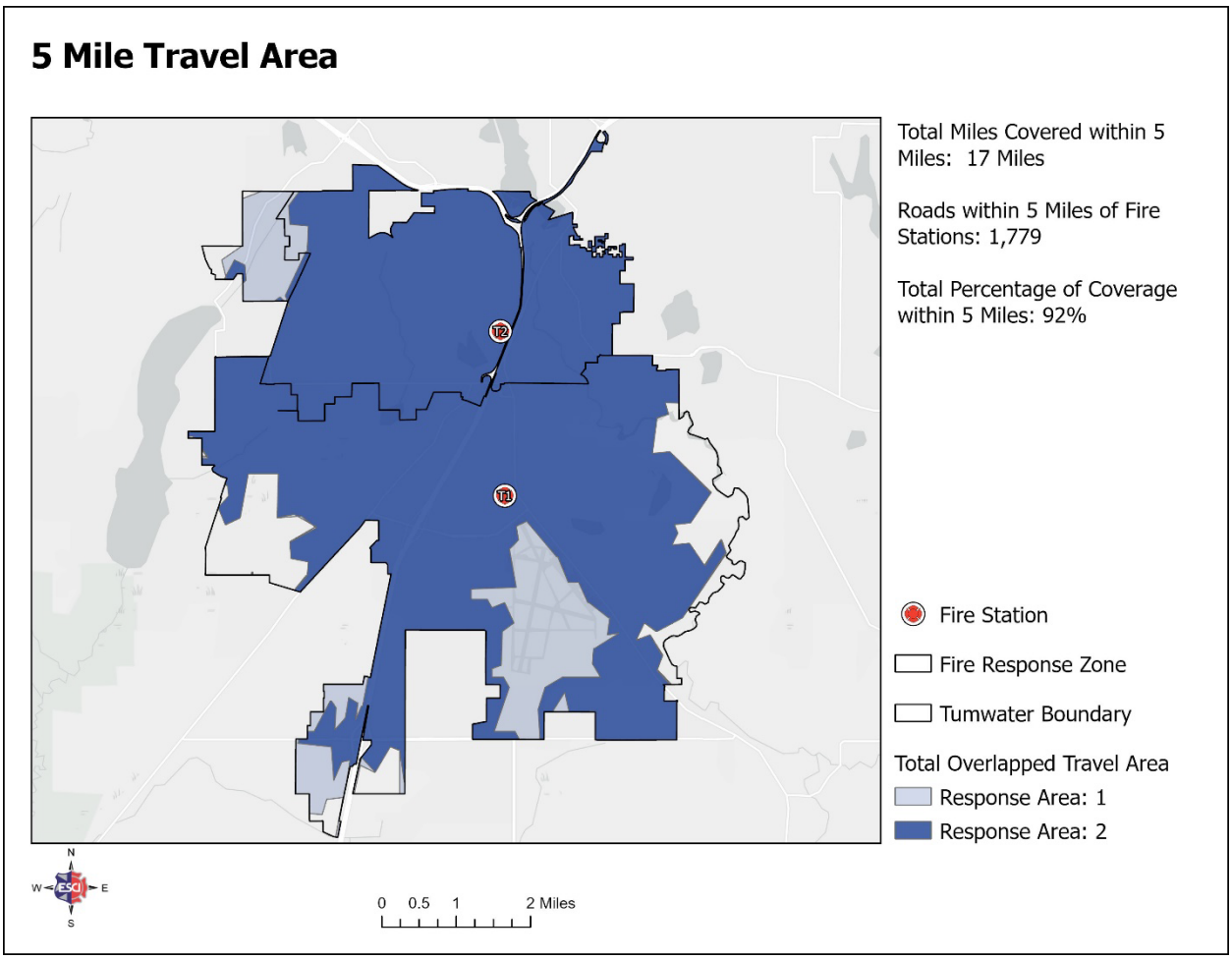
Figure 23: TFD Truck Distribution per ISO Criteria.



ISO Station Distribution

Consideration by ISO for purposes of developing the PPC® score within the community includes an evaluation to determine the percentage of the service area (and associated structures) that fall within a 5-mile travel distance of a staffed fire station. As illustrated in the following figure, 92% of the TFD service area is within the 5-mile travel distance from a staffed fire station.

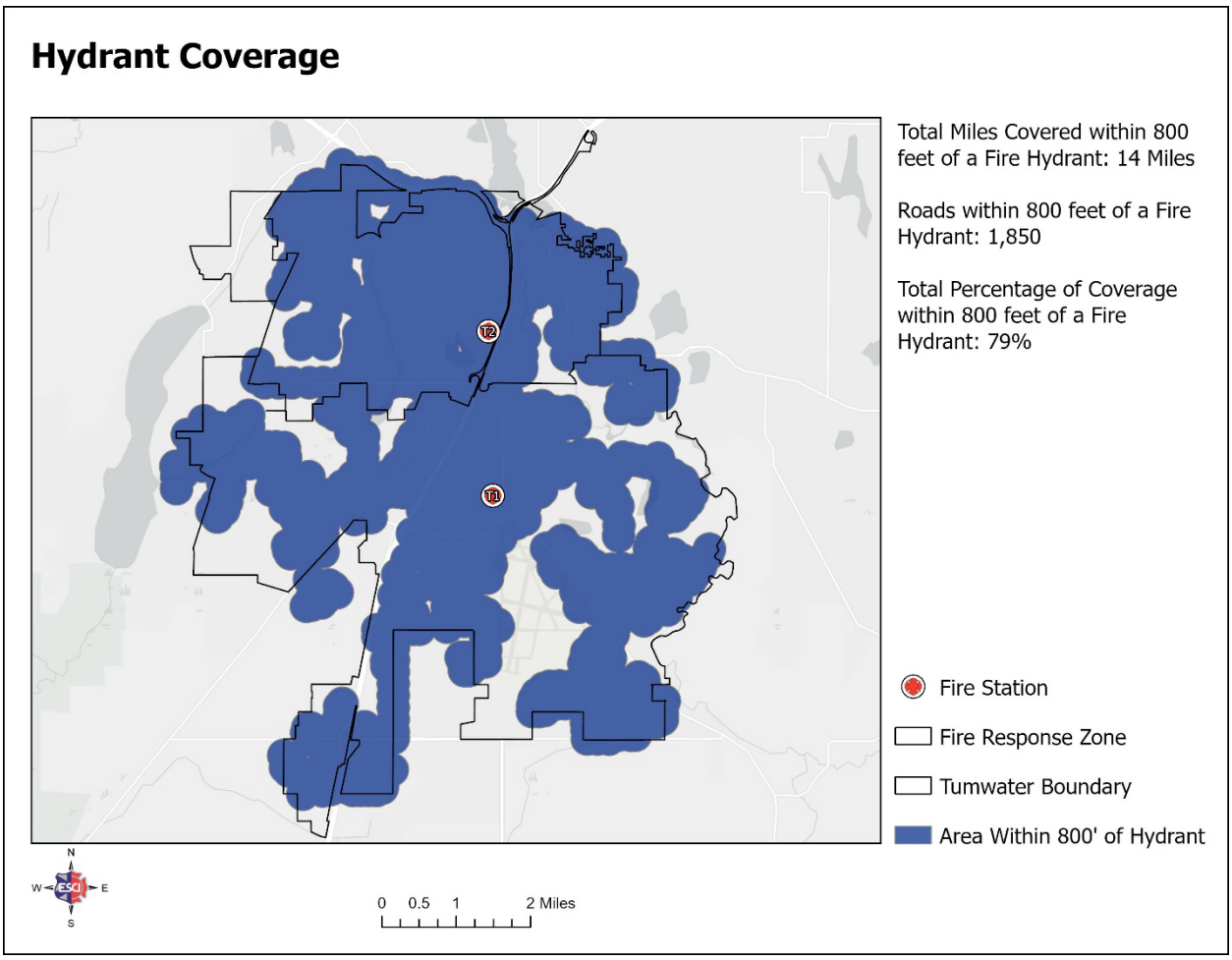
Figure 24. TFD Station Distribution per ISO Criteria.



ISO Water Supply Distribution

Consideration by ISO for purposes of developing the PPC® score within the community includes an evaluation to determine the community's availability of a sufficient water supply, which is critical for the extinguishment of fires. Included in this evaluation is the geographic location and distribution of fire hydrants. Structures outside a 1,000-foot radius of a fire hydrant are subject to a lower Public Protection Classification® rating than areas with adequate hydrant coverage, thus signifying limited fire protection. Exceptions are made when a fire department can show that either a dry hydrant or a suitable water tanker operation is possible to provide the needed volume of water for fire suppression activities for a specific period. However, TFD has established a performance measure to determine the amount of service area within 800 feet of a fire hydrant. As illustrated in the following figure, 79% of the TFD service area is within 800 feet of a fire hydrant.

Figure 25: TFD Hydrant Coverage.

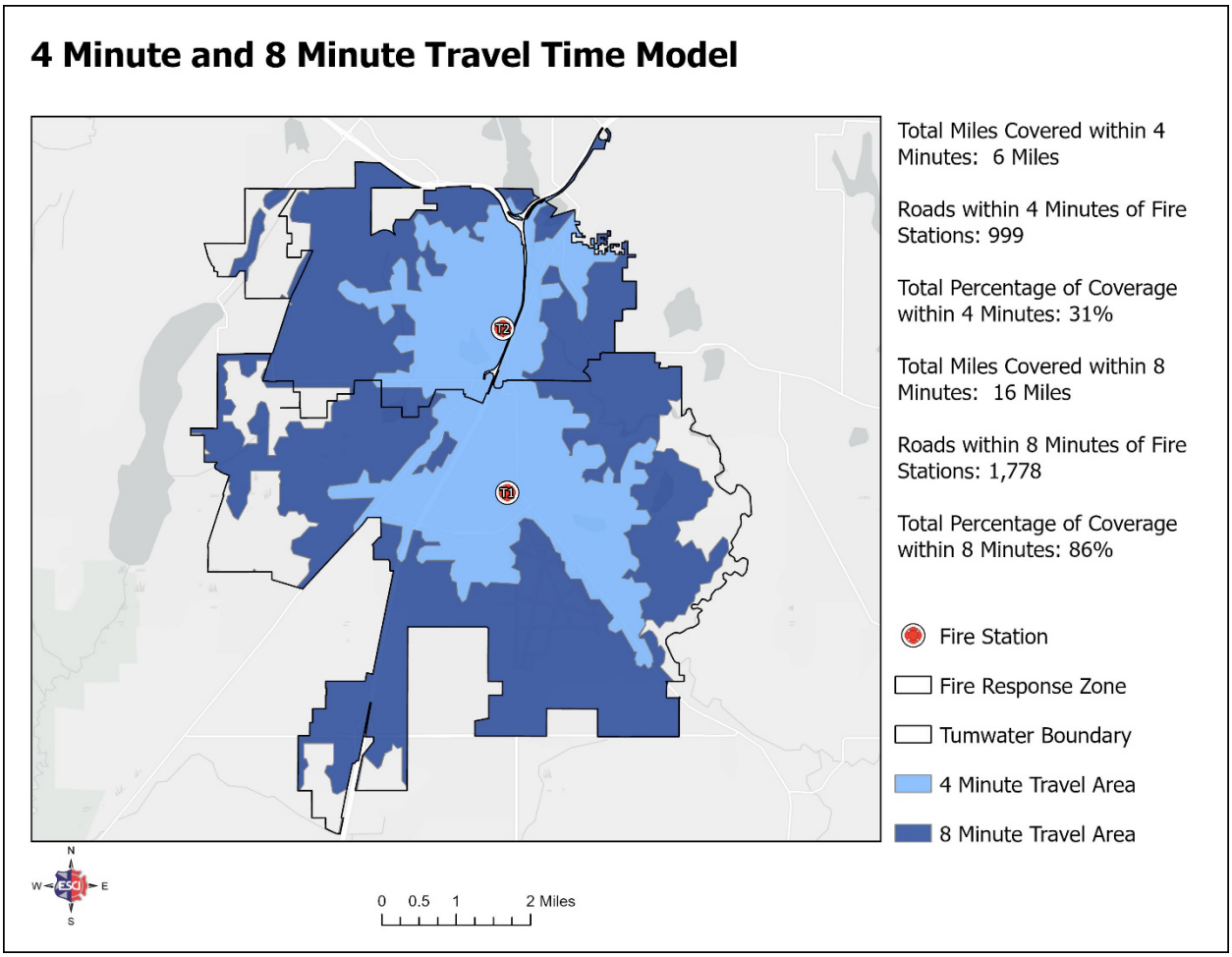


NFPA Distribution

The National Fire Protection Association (NFPA) is an industry trade association that develops and provides standards and codes for fire departments and emergency medical services for use by local governments. One of these standards, NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, serves as a national consensus standard for career fire department performance, operations, and safety. Within this standard, a travel time of 240 seconds, or 4 minutes, is identified as the benchmark for career departments to reach emergency incidents within their jurisdiction with the first arriving unit. Additionally, the balance of the response (called the effective response force or ERF) is required to arrive at the incident within 480 seconds or 8 minutes.

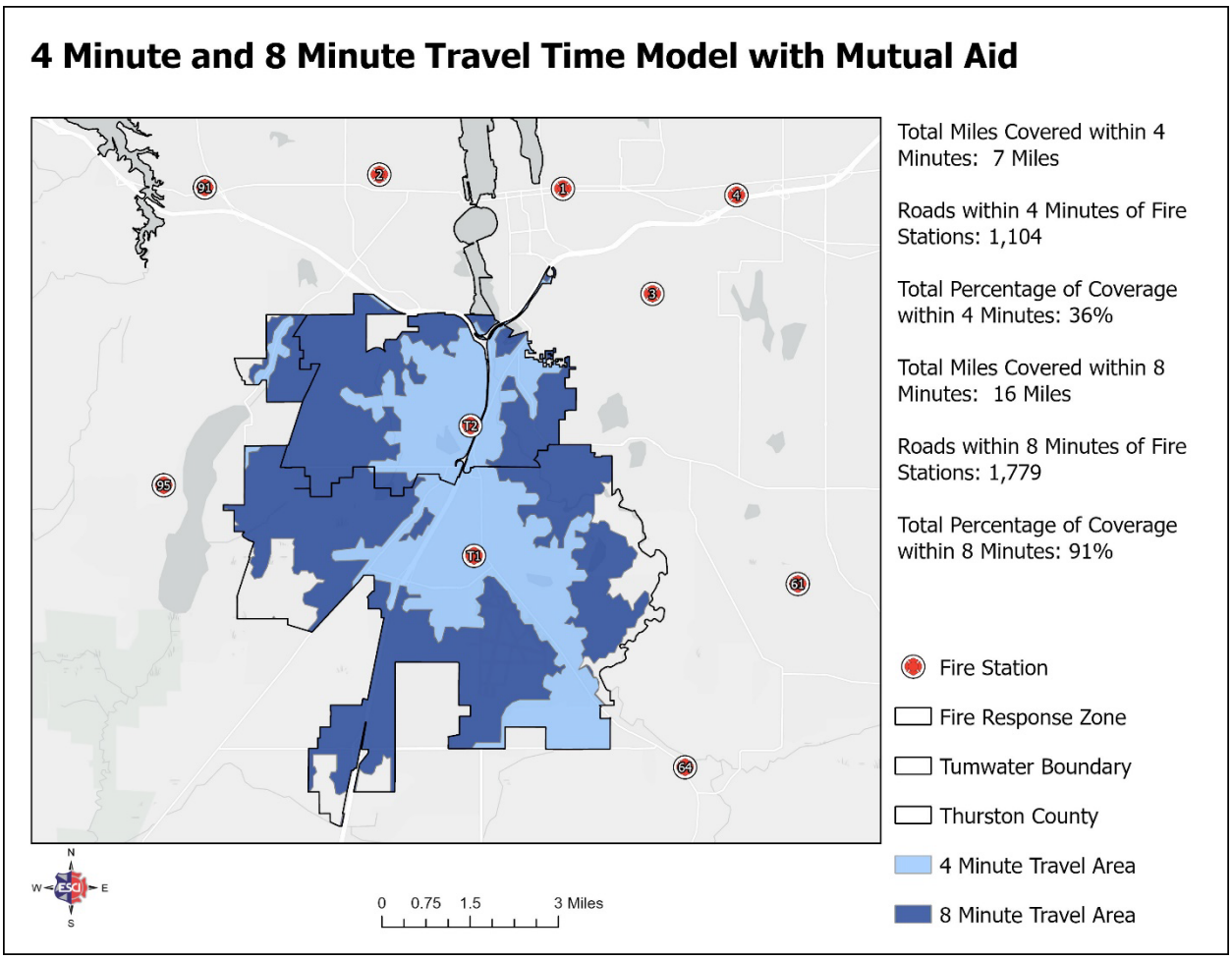
When analyzing this measure, travel time is calculated using the posted speed limits and adjusted for negotiating turns, intersections, and one-way streets. Unshaded pockets indicate that the area falls outside of the model's maximum extension from the road network. Note that other impedance factors, such as traffic congestion, road closures, or weather conditions, are not factored into this analysis. Rarely are conditions perfect. As illustrated in the following figure, 31% of the TFD service area falls within the 4-minute travel time of a fire station, and 86% falls within the 8-minute travel time of a fire station.

Figure 26: TFD 4/8-Minute Travel Time per NFPA Criteria.



Automatic aid and mutual aid will be discussed in a section further within the report. As illustrated in the following figure, 4-minute coverage increases from 31% to 36%, and 8-minute coverage increases from 86% to 91%

Figure 27: TFD Travel Time per NFPA Criteria (With Mutual Aid Resources).



Often, there is value in comparison of actual performance to the theoretical models produced by the GIS software. When analyzing this, ESCI considered the location of the incident (either within the city limits or within the county but outside the city limits). The following figure illustrates TFDs overall travel time performance.

Figure 28. TFD Travel Time Performance, 2019–2023.

Travel Time	City	County
Less Than 4 Minutes	48.44%	10.83%
4 – 8 Minutes	45.32%	33.57%
8 – 12 Minutes	4.67%	26.95%
Greater Than 12 Minutes	1.57%	28.66%

To assist leadership further in the evaluation of travel time, the following figures illustrate the location of incidents with a travel time greater than 4 minutes and less than 8-minutes.

Figure 29: TFD Travel Time 4-8 Minutes.

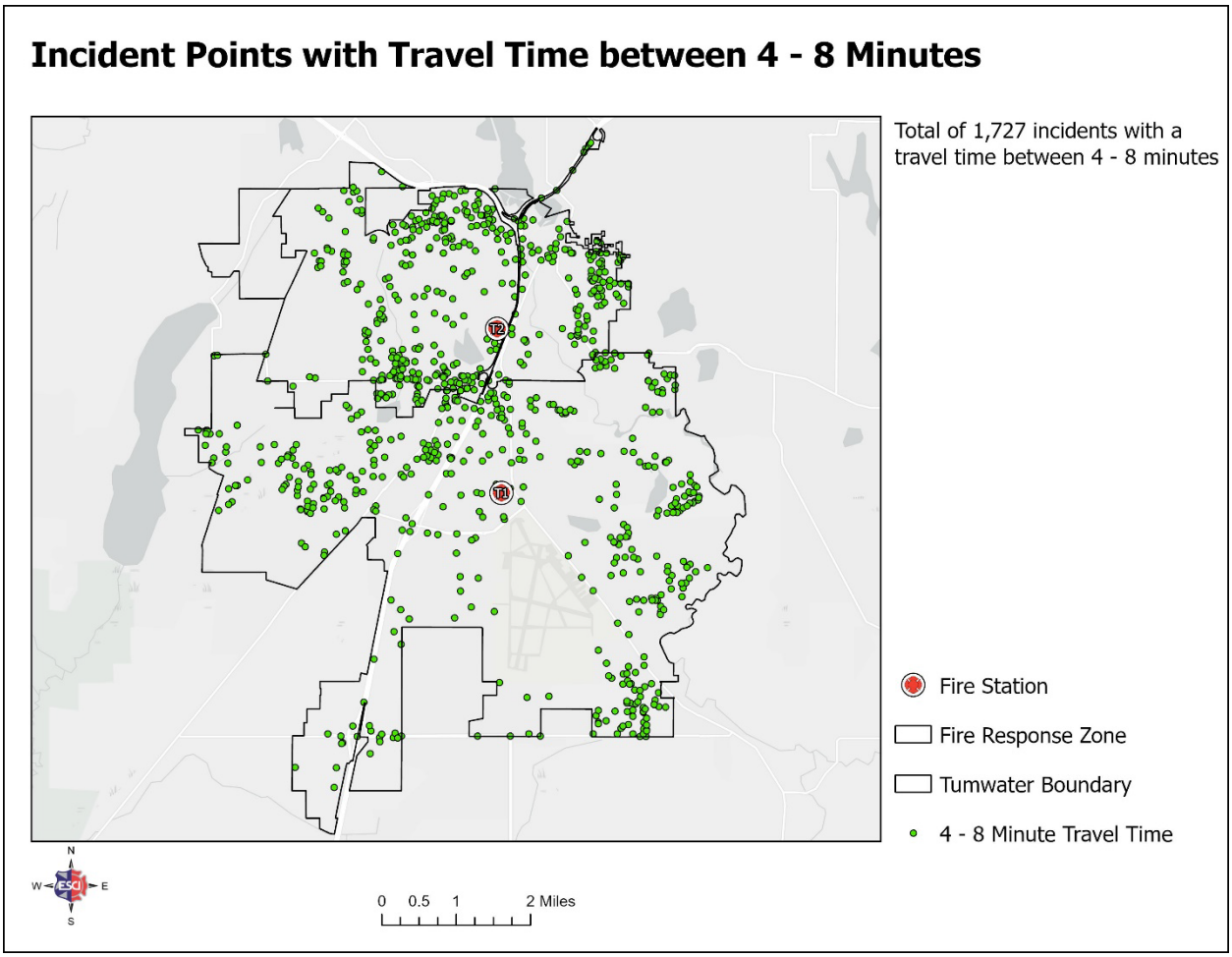


Figure 30: TFD Travel Time 8–12 Minutes.

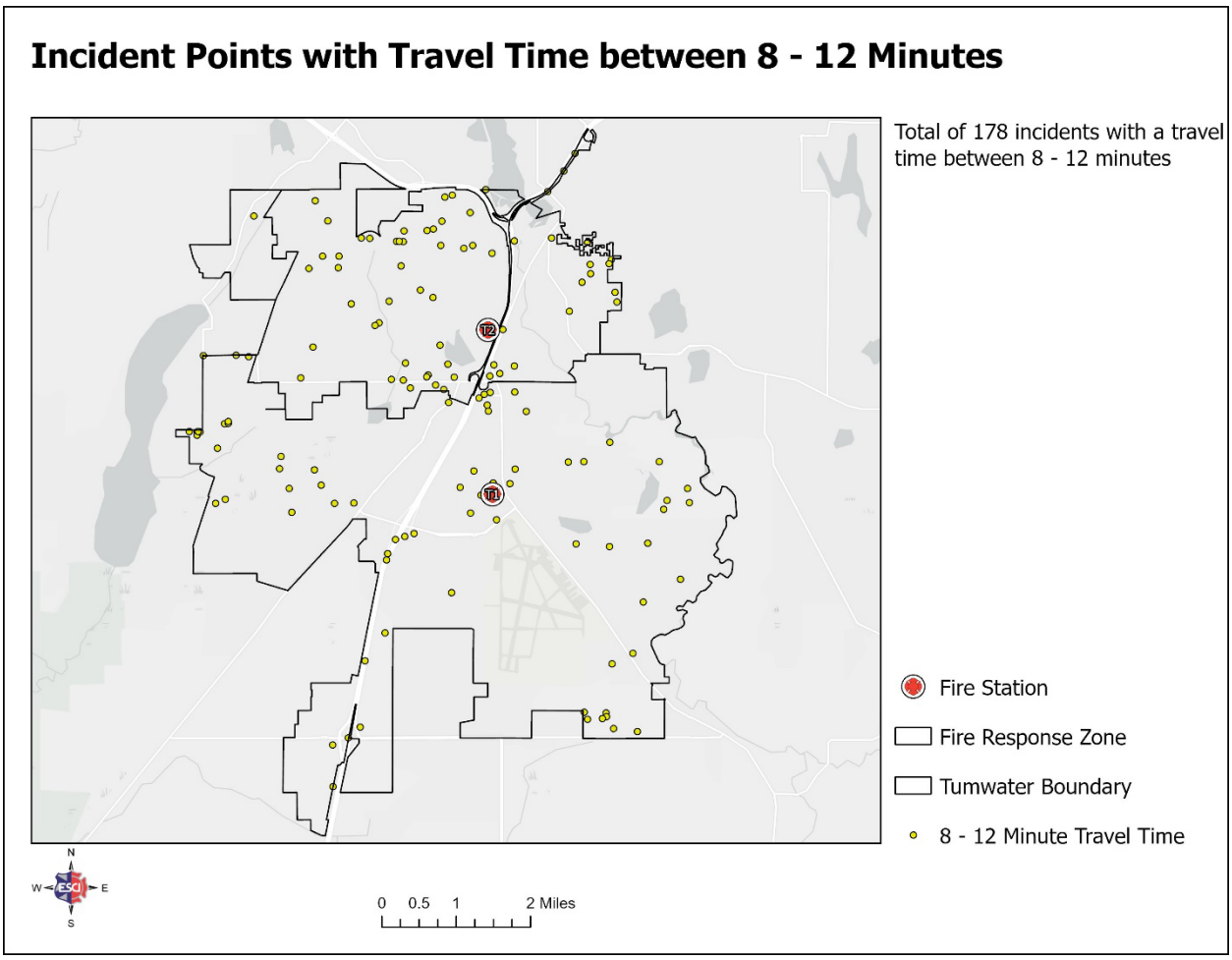
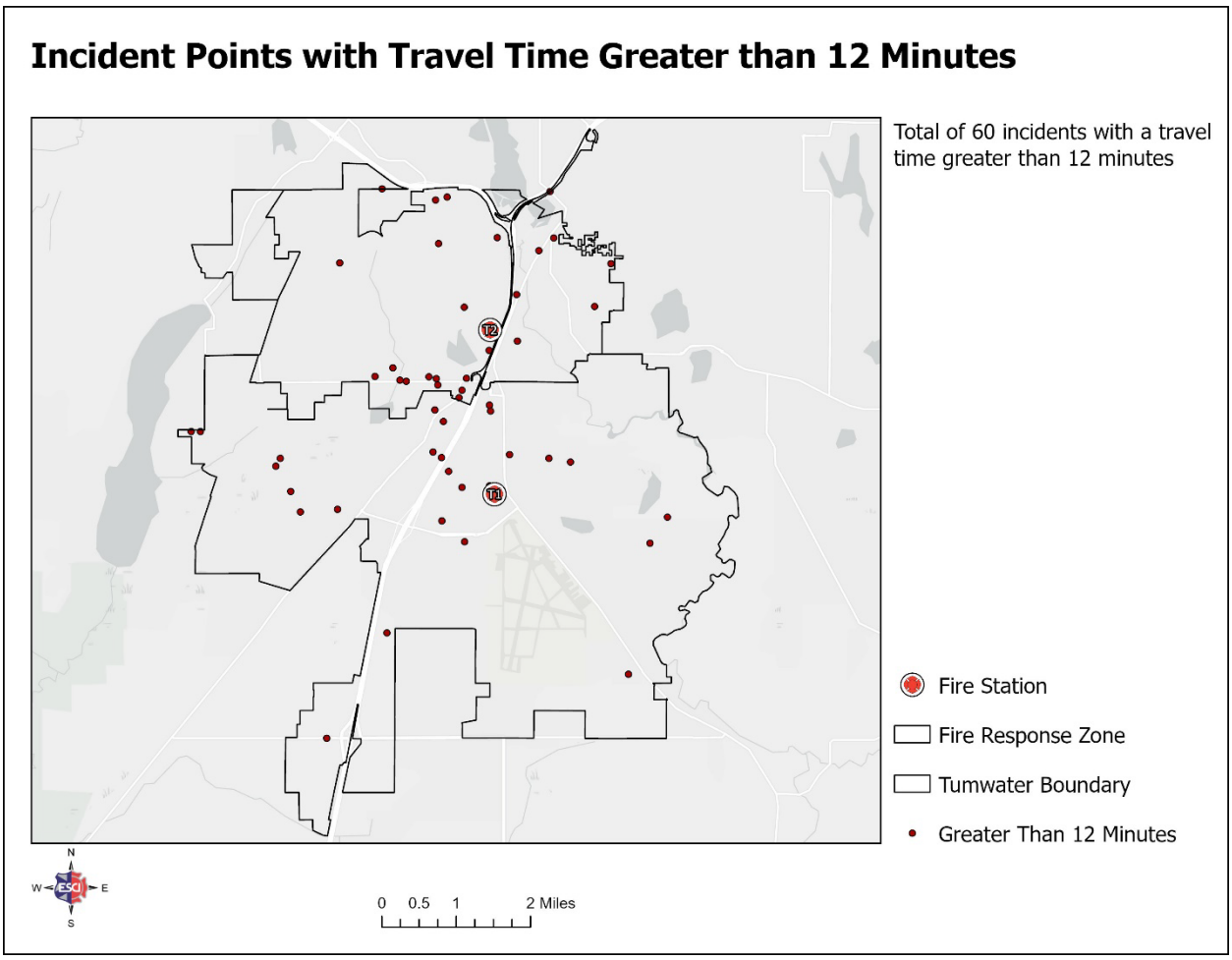


Figure 31: TFD Travel Time Greater than 12 Minutes.



Resource Concentration Study

As presented in the preceding section, industry standards and best practices such as NFPA 1710 recommend the arrival of the effective response force within an 8-minute travel time to provide the opportunity for the fire department to mitigate the incident safely. The effective response force recommendation is based on sufficient apparatus and personnel to accomplish the various tasks needed to safely mitigate the incident, as illustrated in the following figure.

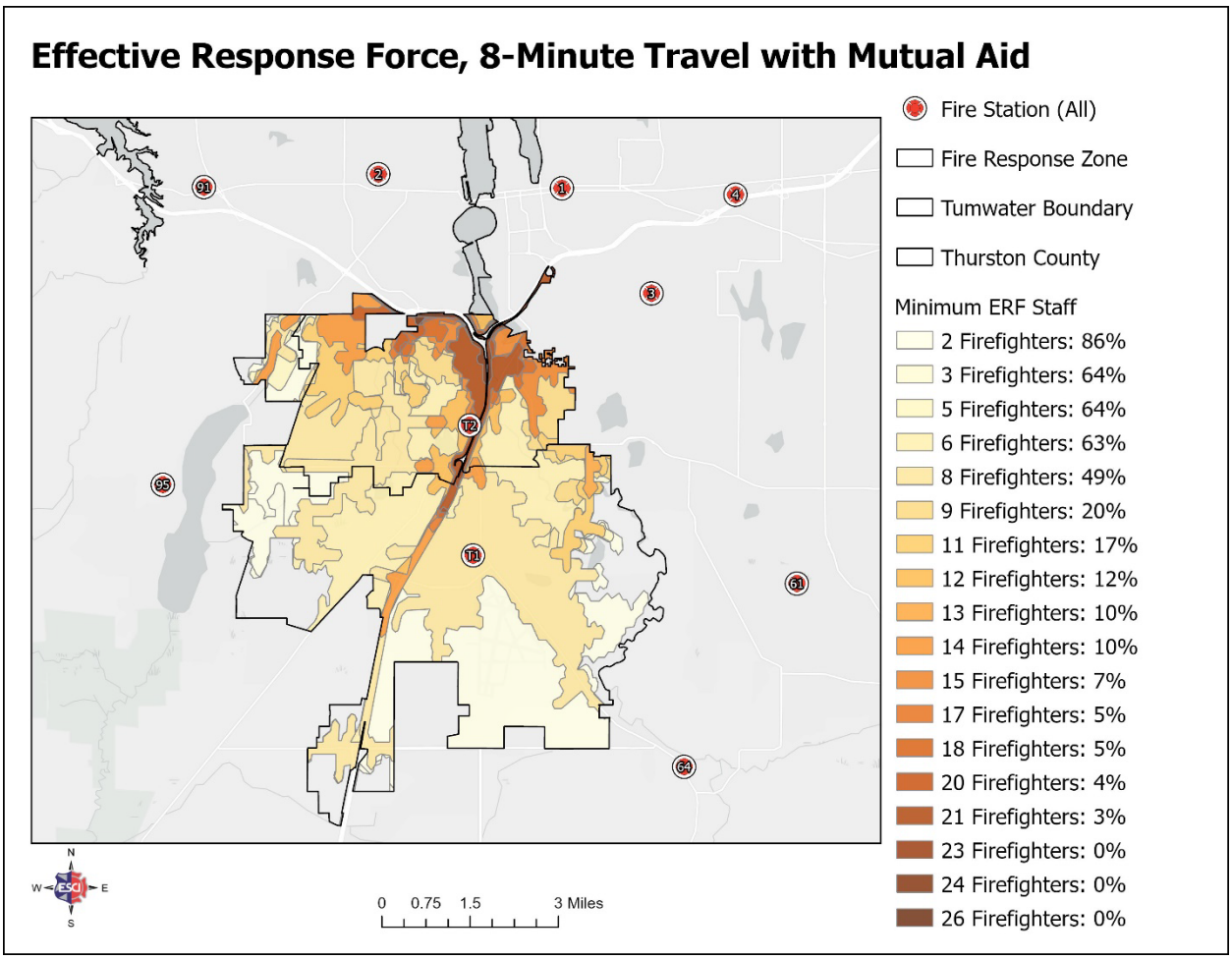
Figure 32: Firefighter Task Analysis – Building Risks

Task	Single Family Residence	Strip Mall or Apartment Building	Multi-Story and Large Expansive Building
Command	1	2	2
Apparatus Operator	1	2	2
Handlines [2 FF's each]	4	6	4
Support members	2	3	8
Search and Rescue	2	4	4
Ground Ladders/Ventilation	2	4	
Aerial Operator (If Deployed)	1	1	2
Initial Rapid Intervention Crew	4	4	4
Initial Medical Care Component		2	4
Building Pump (If Equipped)			1
Hoseline - Floor Above Fire			2
Elevator Operations Manager			1
Incident Safety Officer			1
Interior Staging Manager			2
Member Rehabilitation			2
Vertical Ventilation Crew			4
Lobby Control			1
	16 (17)	27 (28)	42 (43)

NFPA 1710: Deployment of Fire Suppression and EMS to Public Career Fire Departments (2020)

Within the GIS software, ESCI programmed the staffing levels for each station as provided by TFD leadership. Then, through the creation of 8-minute travel time polygons within the software, the analysis was able to determine the number of firefighters (including mutual aid resources) able to arrive within the specific percentages of the TFD service area, as illustrated in the following figure.

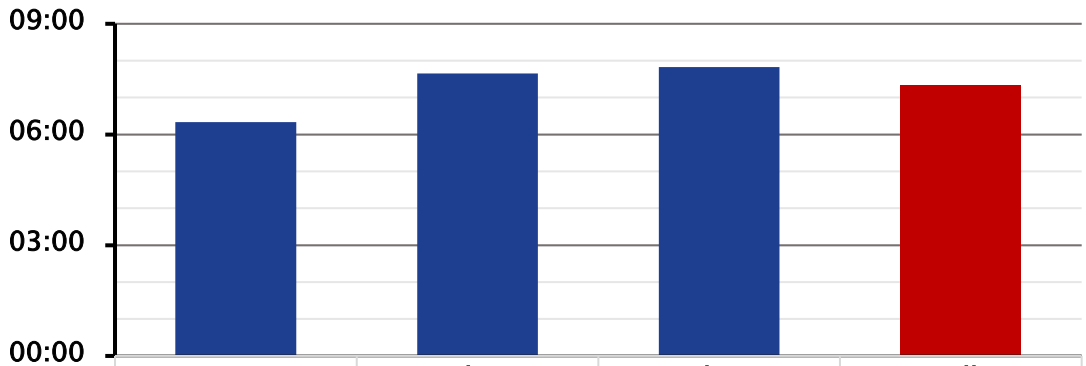
Figure 33. TFD Effective Response Force.



As the theoretical model in the preceding figure assumes that all units are within their assigned stations at the time of dispatch, there is value for TFD leadership to understand the times associated with the arrival of multiple units at the scene of a structure fire incident.

For this analysis, only those incidents coded as NFIRS 111 and 112, where three or more units arrived, were included—and only those units responding to lights and sirens. The following figure illustrates actual response time performance at the 90th percentile based on those criteria.

Figure 34. TFD Structure Fire Order of Arrival, 2019–2023.



	1st Unit	2nd Unit	3rd Unit	All
90th Percentile	06:20	07:39	07:50	07:20

Resource Reliability

The workload of the various units within the department may also impact the ability to provide timely responses to calls for service. An effective method of measuring the workload of units is to consider the total amount of time assigned to calls as compared to the total amount of time the unit is in service, expressed as a percentage. While there are limited formal performance measures to use as a target measure, in May 2016, Henrico County (VA) Division of Fire published an article after studying their department's EMS workload. As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for their department. The next figure is a summary of the findings related to commitment factors that may be utilized by TFD leadership as a base for developing internal workload measures.

Figure 35: Commitment Factors as Developed by Henrico County (VA) Division, 2016.

Factor	Indication	Description
16%–24%	Ideal Commitment Range	Personnel can maintain training requirements and physical fitness and can consistently achieve response time benchmarks. Units are available to the community more than 75% of the day.
25%	System Stress	Community availability and unit sustainability are not questioned. First-due units respond to their assigned community 75% of the time, and response benchmarks are rarely missed.
26%–29%	Evaluation Range	The community served will experience delayed incident responses. Just under 30% of the day, first-due ambulances are unavailable; thus, neighboring responders will likely exceed goals.
30%	"Line in the Sand"	Not Sustainable: Commitment Threshold—the community has less than a 70% chance of timely emergency service, and immediate relief is vital. Personnel assigned to units at or exceeding 0.3 may show signs of fatigue and burnout and may be at increased risk of errors. Required training and physical fitness sessions are not consistently completed.

As illustrated in the following figure, none of the TFD units are at a concerning level of excessive commitment factors.

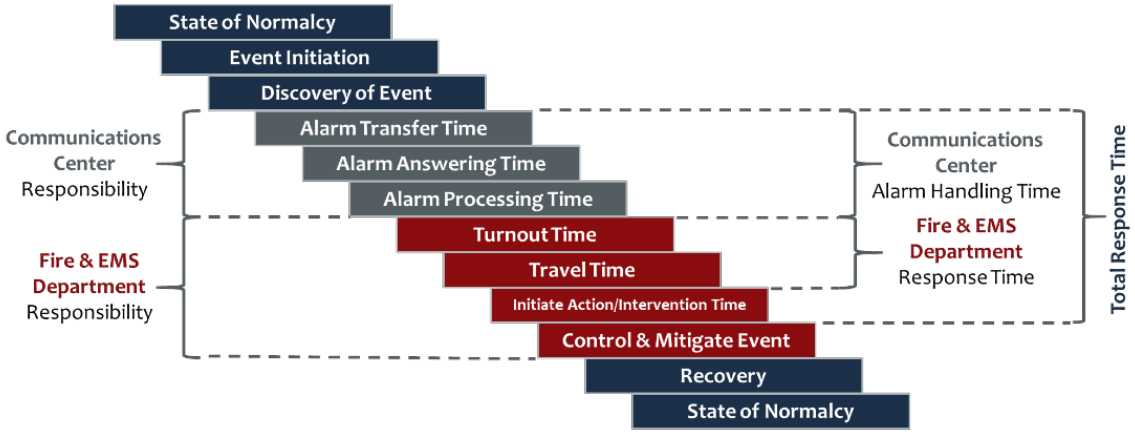
Figure 36. TFD Unit Hour Utilization, 2019–2023.

Unit	2019	2020	2021	2022	2023	Change Over Study Period
ET1	11.52%	10.39%	12.44%	13.70%	13.27%	1.76%
ET12	0.00%	0.10%	0.00%	0.03%	0.06%	0.06%
ET2	11.89%	11.25%	12.38%	12.93%	13.77%	1.88%
ET22	0.00%	0.07%	0.00%	0.00%	0.07%	0.07%
M14	7.27%	6.64%	7.22%	7.17%	7.60%	0.33%
M5	12.27%	11.49%	12.18%	13.54%	13.25%	0.98%

Response Performance Analysis

With the primary mission of responding to calls for service, response performance is often the most visible facet of the fire department. The public and elected officials view this performance as one measure of time between the 911 call and the arrival of the fire department. However, this full measure is but one aspect of response time performance, as illustrated in the following figure.

Figure 37: Response Time Continuum.



To provide further information on these measures, the following lists each measure and defines how it is calculated.

- **Alarm Handling Time:** The amount of time between when a call is answered by the 911 Primary Public Safety Answering Point (PSAP) or dispatch center and when resources are dispatched.
- **Turnout Time:** The time interval between when response units are notified of the incident and when the apparatus begins to respond.
- **Travel Time:** The time the responding unit spends on the road traveling to the incident until arrival at the scene. This is a function of speed and distance.
- **Response Time:** The time from initial alerting of an incident until arrival on the scene. Response Time equals the sum of "Turnout Time" and "Travel Time."
- **Total Response Time:** This is the most apparent time for the caller to request emergency services, from when the emergency call is placed until units arrive on the scene.

In analyzing response performance, ESCI generates percentile measurements of time performance. The use of percentile measurement using the components of response time follows the recommendations of industry best practices. The best practices are derived from the Center for Public Safety Excellence (CPSE) Standard of Cover document and the National Fire Protection Association (NFPA) 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*.

The "average" measure is a commonly used descriptive statistic, also called the mean of a data set. The most important reason for not using the average for performance standards is

that it may not accurately reflect the performance for the entire data set and may be skewed by outliers, especially in small data sets. One extremely good or bad value can skew the average for the entire data set.

The "median" measure is another acceptable method of analyzing performance. This method identifies the value at the middle of a data set and thus tends not to be as strongly influenced by data outliers.

Percentile measurements are a better measure of performance because they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 10% of the values are greater than the value stated, and all other data are at or below this level. This can be compared to the desired performance objective to determine the degree of success in achieving the goal.

Tracking the individual components of response time can help TFD leadership identify impediments to timely response and make operational adjustments to improve, including developing response time goals and standards that are both relevant and achievable. Fire service best practices recommend that fire service organizations monitor and report the components of total response time.

As this report progresses through the performance analysis, it is important to keep in mind that each component of response performance is not cumulative. Each is analyzed as an individual component, and the point at which the percentile is calculated exists in a set of data unto itself. Each of the following analyses only included those incidents where the response was coded as an "emergency" or "priority" and evaluated the first unit to arrive within the City of Tumwater. The EMS units' responses outside the City of Tumwater are measured separately by the Thurston County EMS system and under a different standard.

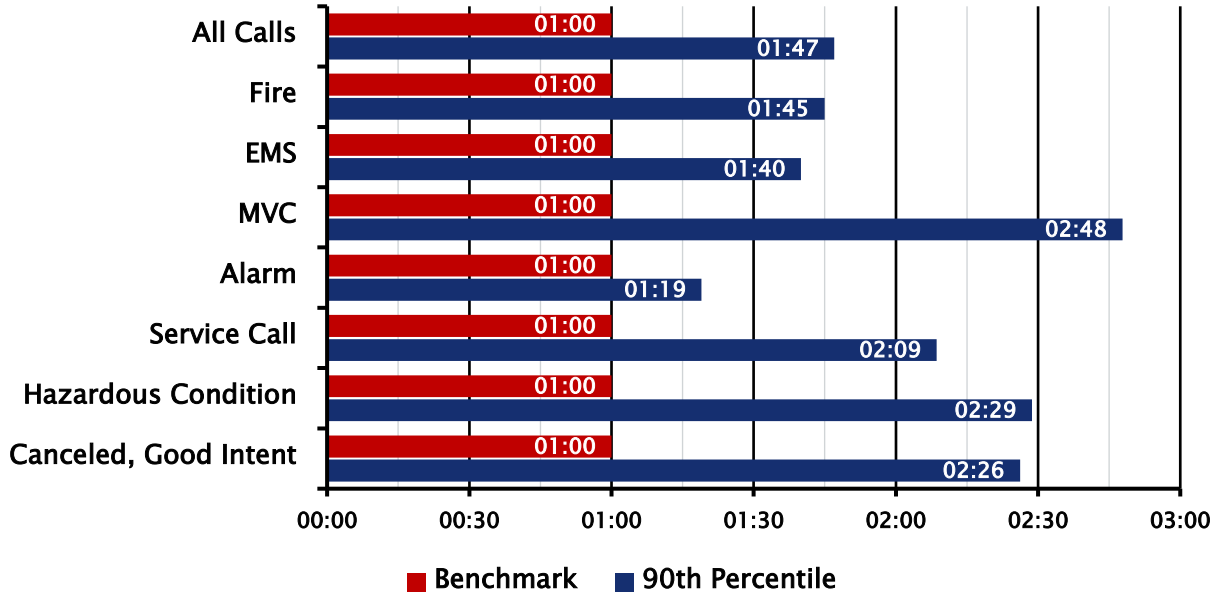
Alarm Handling Time

Alarm handling time is the time between a dispatcher getting the call and the resources being dispatched. For this measure, there is one applicable standard, as illustrated in the following figure.

Standard	Performance
NFPA 1225: *Standard for Emergency Services Communications* (2022 Edition)	60 seconds at the 90th percentile

As illustrated in the following figure, the TFD alarm handling time performance is 2 minutes and 23 seconds. When analyzed by incident series, performance ranges from 1 minute and 21 seconds for alarm incidents to 4 minutes and 12 seconds for motor vehicle collision incidents. As this is not under the direct control of the fire department, TFD leadership should work with communications center leadership to monitor performance and identify any areas of improvement needed.

Figure 38: TFD Alarm Handling Time Performance, 2019–2023.



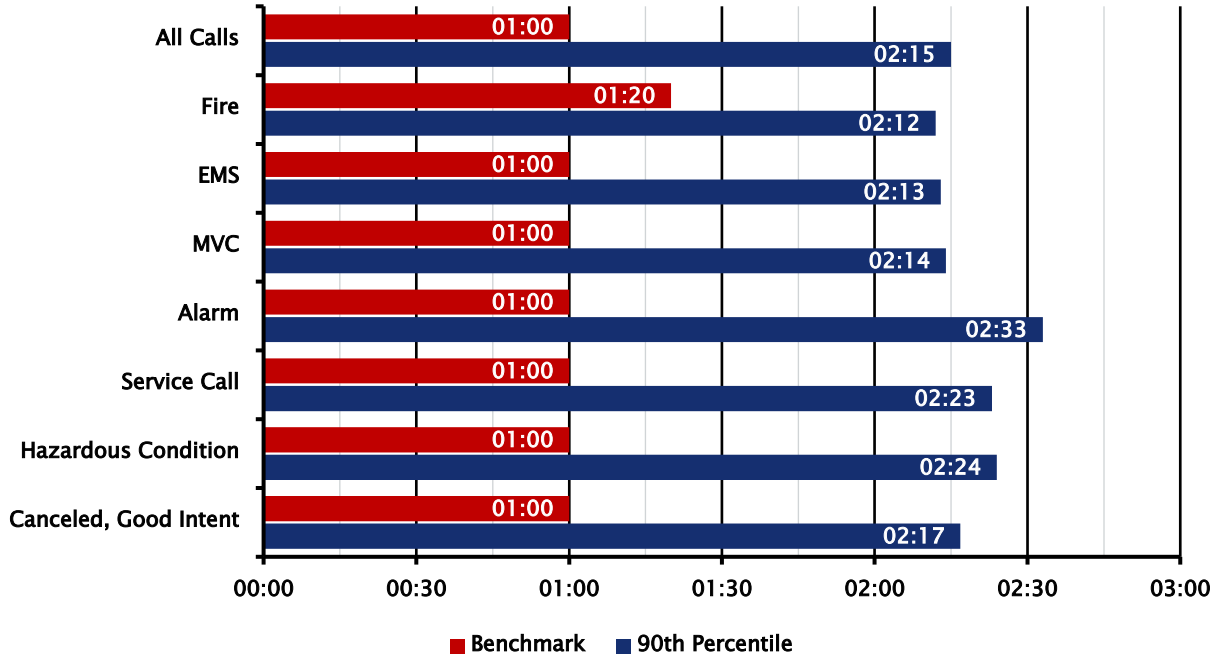
Turnout Time

Turnout performance is measured by turnout time, which is the length of time between dispatch time and when a unit begins responding to the call. For this measure, there is one applicable standard, as illustrated below.

Standard	Performance
NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments recommends*	Fire and Special Operations Incidents 80 seconds at the 90th percentile All Other Incidents 60 seconds at the 90th percentile

As illustrated in the following figure, TFD turnout time performance is 2 minutes and 17 seconds. When analyzed by incident series, performance ranges from 2 minutes and 13 seconds for motor vehicle collision incidents to 2 minutes and 33 seconds for alarm incidents.

Figure 39: TFD Turnout Time Performance, 2019–2023.



As this is the first measure under the direct control of the fire department, TFD leadership may consider the various actions that occur within this measure and determine if there are areas where process changes could improve performance. These factors may include:

- Systems are used to notify personnel of an incident.
- Station design relates to the movement of personnel from living quarters to the apparatus bay.
- Personnel adherence to department policies and acting with appropriate speed towards the apparatus.
- Time required to don protective equipment prior to responding.
- Moving equipment between apparatus when units are cross-staffed.
- Time from starting apparatus until radio system is capable of transmitting.

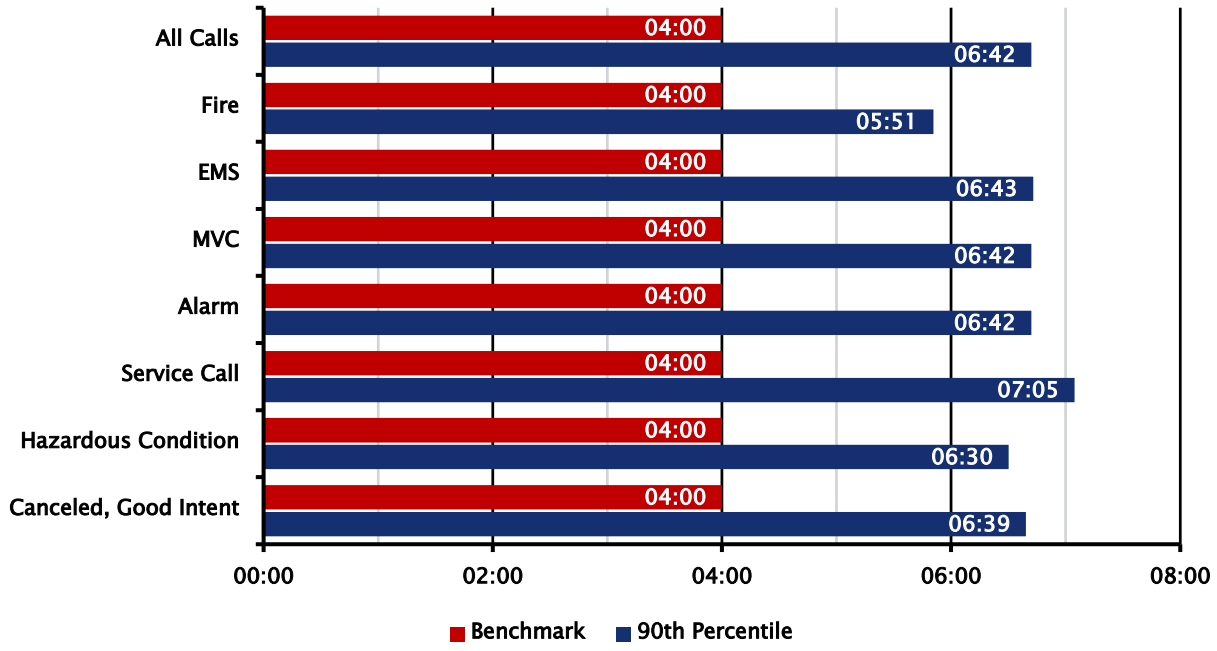
Travel Time

Travel performance is measured by travel time, which is the length of time between when a unit begins to respond and when it arrives on the scene. For this measure, there is one applicable standard, as illustrated below.

Standard	Performance
NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*	4 minutes at the 90th percentile

As illustrated in the following figure, TFD travel time performance is 6 minutes and 42 seconds. When analyzed by incident series, performance ranges from 5 minutes and 51 seconds for Fire incidents to 7 minutes and 5 seconds for Service Call incidents.

Figure 40: TFD Travel Time Performance, 2019–2023.



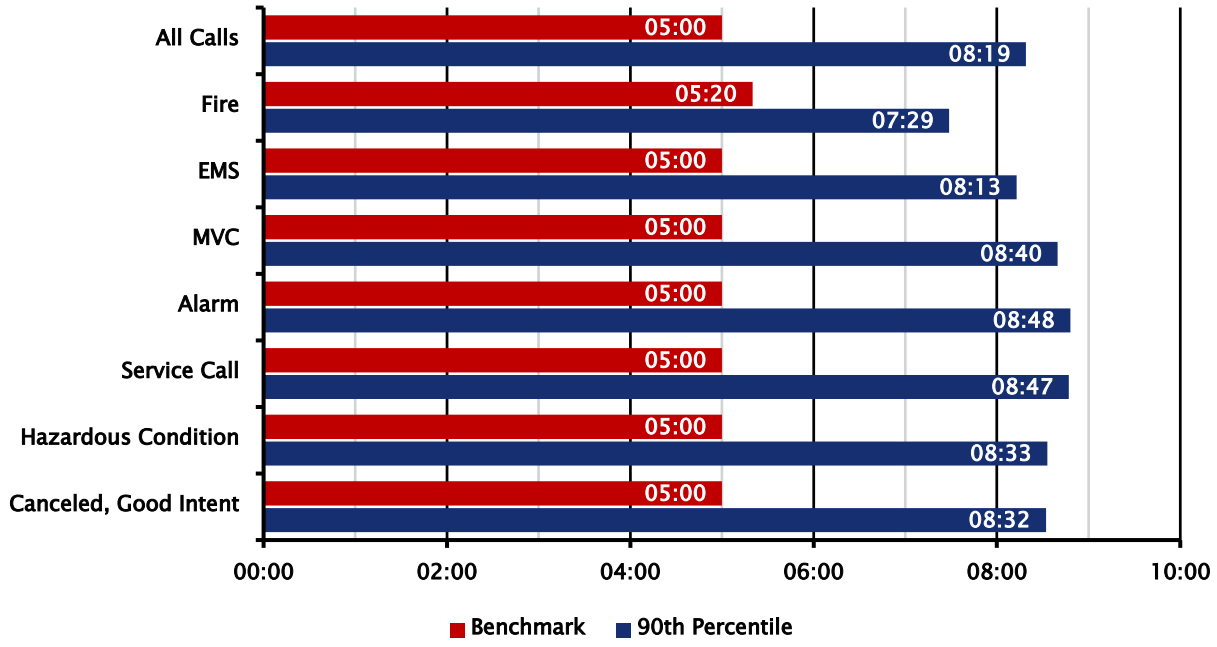
Response Time

Response time is defined as the length of time between dispatch time and arrival at scene time. For this measure, there is not a specific applicable standard. However, by combining the individual component standards, the following figure illustrates expected performance.

Standard	Performance
Turnout Time	Fire and Special Operations Incidents 80 seconds at the 90th percentile All Other Incidents 60 seconds at the 90th percentile
Travel Time	4 minutes at the 90th percentile
Combined	Fire and Special Operations Incidents 5 minutes, 20 seconds at the 90th percentile All Other Incidents 5 Minutes at the 90th percentile

As illustrated in the following figure, TFD response time performance is 8 minutes and 19 seconds. When analyzed by incident series, performance ranges from 7 minutes and 29 seconds for Fire incidents to 8 minutes and 48 seconds for Alarm incidents.

Figure 41: TFD Response Time Performance, 2019–2023.



Total Response Time

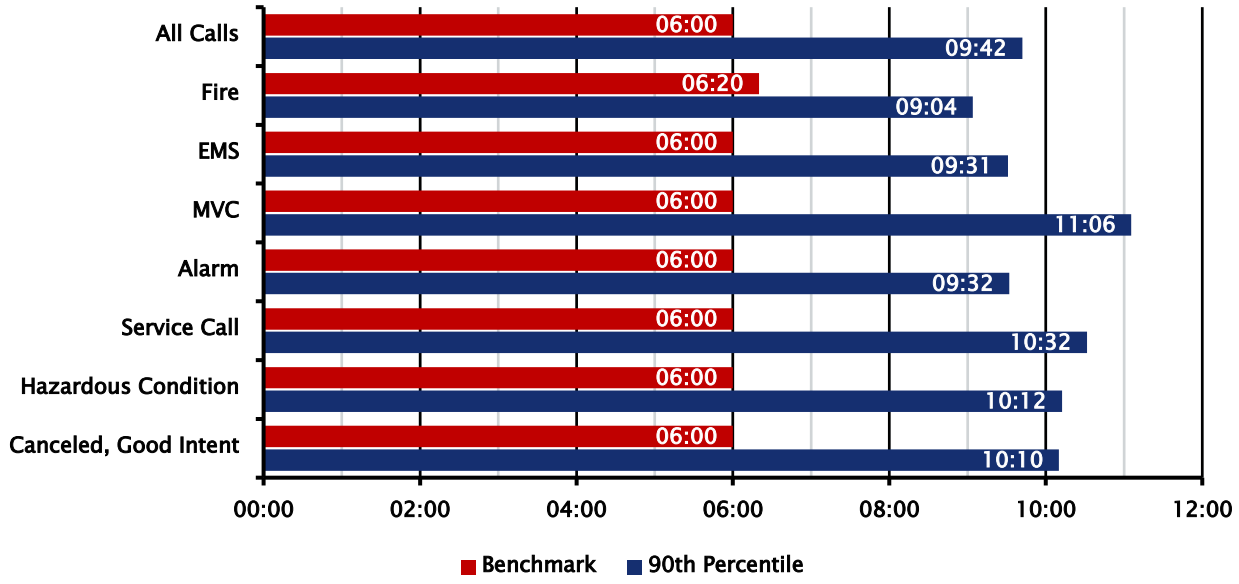
Total response time is defined as the length of time between when the 911 call is answered, and the dispatched unit arrives on the scene. For this measure, there is not a specific

applicable standard. However, by combining the individual component standards, the following figure illustrates expected performance.

Component	Performance
Alarm Handling Time	60 seconds at the 90th percentile
Turnout Time	Fire and Special Operations Incidents 80 seconds at the 90th percentile All Other Incidents 60 seconds at the 90th percentile
Travel Time	4 minutes at the 90th percentile
Combined	Fire and Special Operations Incidents 6 minutes, 20 seconds at the 90th percentile All Other Incidents 6 Minutes at the 90th percentile

As illustrated in the following figure, TFDs total response time performance is 9 minutes and 42 seconds. When analyzed by incident series, performance ranges from 9 minutes and 4 seconds for Fire incidents to 11 minutes and 6 seconds for Motor Vehicle Accident (MVA) incidents.

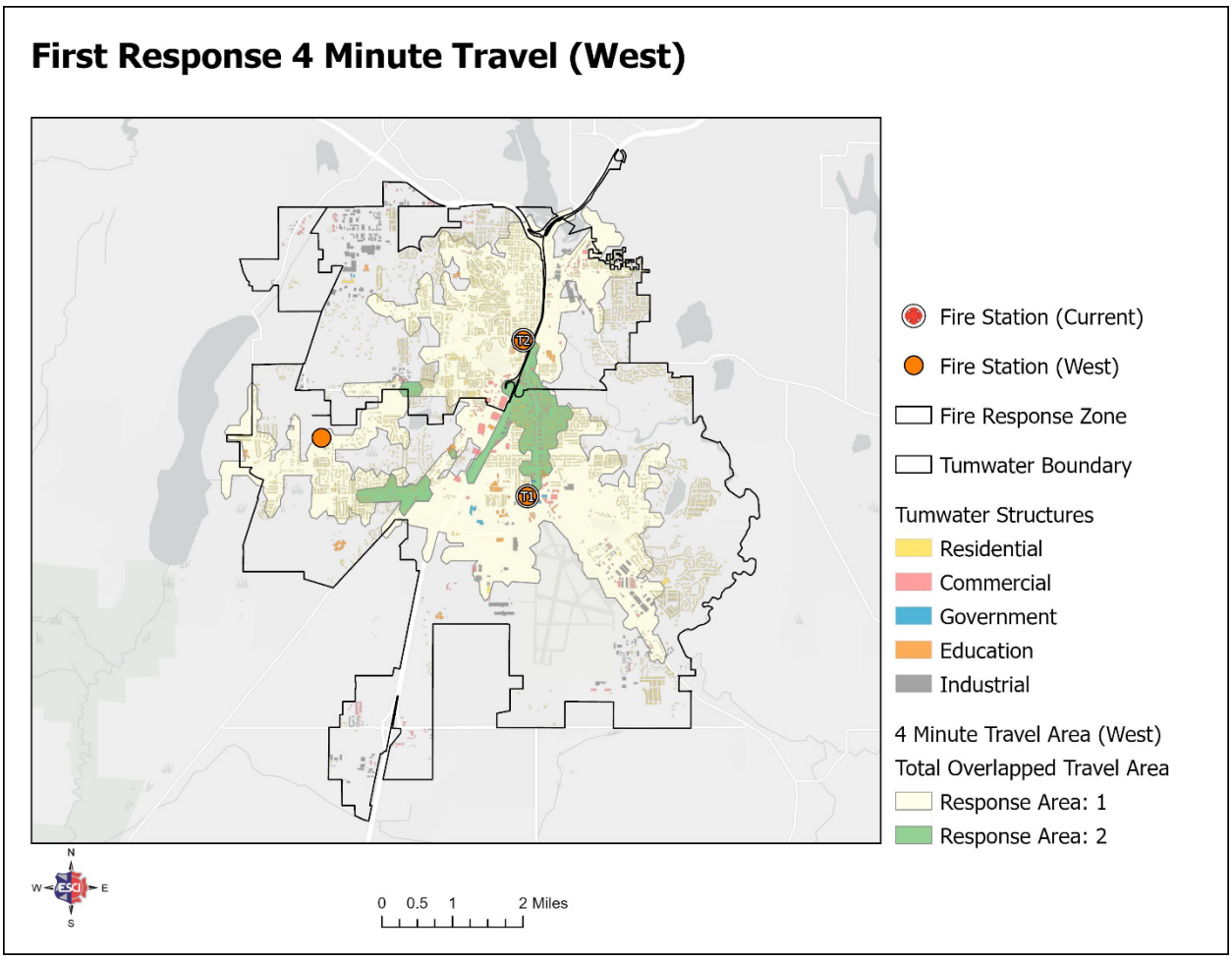
Figure 42: TFD Total Response Time Performance, 2019–2023.



Preliminary Fire Station Site Assessment

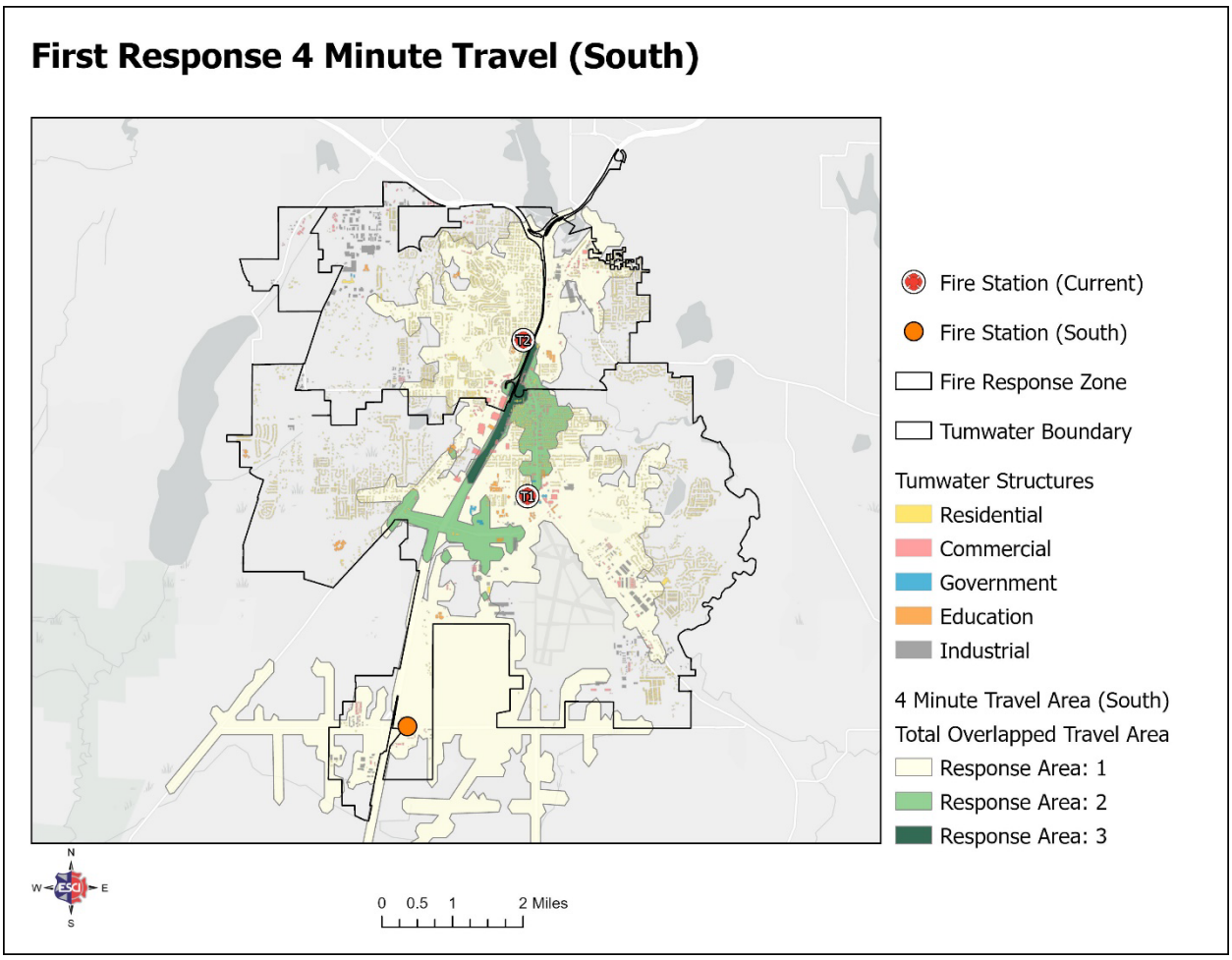
The recommendations will outline that ESCI recommends a full fire station location study be conducted to provide an in-depth analysis of what will be required for the City as it continues to grow. During the fire department evaluation, it became apparent that the City lacks station distribution and the ability to concentrate sufficient numbers of firefighters to combat a standard residential structure fire. The following maps provide a quick assessment of two potential fire station sites and what distribution coverage they might provide.

Figure 43: City West Location



The City West Location's first due area with Station T1 and Station T2 encompasses 6,011 structures, equivalent to 61% of the City's total of 9,854 structures.

Figure 44: City West Location



The City South Location first due area with Station T1 and Station T2 encompasses 5,083 structures, equivalent to 52% of the City's total structure count. Based on this cursory analysis, the City West Station would capture 9% more city structures, given the current building inventory.

Facilities

Locations of Facilities

TFD operates from two fire stations: Station T1 is located at 311 Israel Road SW and primarily serves the southern area of the city. Station T2 is located at 405 Linwood Avenue SW and primarily serves the northern area of the city. TFD utilizes a maintenance facility in Lacey, WA, and the Mark Noble Regional Fire Training Center in Olympia, WA.

Facilities Review

During the site visit, the ESCI team, along with personnel from the TFD, visited both fire stations, the administrative offices located at Fire Station 1, the maintenance facility located in Lacey, and the Mark Noble Regional Training Center located in Olympia. The visits included a walk-around of each building with a focus on building conditions, building amenities, any apparent safety issues, and other visual problems or issues. Personnel were welcoming and encouraged to provide comments.

Overall, the stations were in fair/good condition. The department has an internal facilities inspection program to identify issues in the stations. Issues that the TFD cannot address are forwarded to the City's facilities department. Physical fitness equipment is located in the bays of both stations without physical barriers and separate ventilation systems. There is no security fencing around the property of either station.

The 2022-2027 Capital Improvement Plan calls for the installation of a new digital station alerting system in Stations T1 and T2. The current alerting system uses manual VHF toning to alert crews for a response, turn on lights, and shut off power/gas in the kitchen. It has little flexibility in broadcasting throughout the station. Digital alerting will provide multiple alerts, including voice, LED lighting, and visual information display. Alerting can be controlled in each dorm room, so staff are only alerted to calls for their unit, not all calls, reducing the stress for responders. Most regional departments are installing this technology, which has been shown to reduce turnout time.

The following table provides a rating platform for staff to evaluate their facilities.

Figure 45: ESCI Facility Rating System

Excellent	• Like new condition. • No visible structural defects. • The facility is clean and well-maintained. • The interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. • No significant defect history. • Building design and construction match the building's purposes. • Age is typically less than ten years.
Good	• The exterior has a good appearance with minor or no defects. • Clean lines, good workflow design, and only minor wear on the building interior. • The roof and apparatus apron are in good working order, absent any significant full-thickness cracks or crumbling of the apron surface or visible roof patches or leaks. • Building design and construction match the building's purposes. • Age is typically less than 20 years.
Fair	• The building is structurally sound, with a weathered appearance and minor non-structural defects. • The interior condition shows normal wear and tear but flows effectively to the apparatus bay or offices. • Mechanical systems are in working order. • Building design and construction may not match the building's purposes well. • Shows increasing age-related maintenance but with no critical defects. • Age is typically 30 years or more.
Marginal	• The building is structurally sound, with a weathered appearance and moderate non-structural defects. • Full-thickness cracks and crumbling concrete on the apron may exist. • The roof has evidence of leaking and/or multiple repairs. • The interior is poorly maintained or showing signs of deterioration with moderate non-structural defects. • Problematic age-related maintenance and/or defects are evident. • It may not be well suited to its intended purpose. • Age is typically greater than 40 years.
Poor	• The building is cosmetically weathered and worn with potential structural defects, although not imminently dangerous or unsafe. • Large, multiple full-thickness cracks and crumbling concrete on the apron may exist. • The roof has evidence of leaking and/or multiple repairs. • The interior is poorly maintained or showing signs of advanced deterioration with moderate to significant non-structural defects. • Problematic age-related maintenance and/or major defects are evident. • It may not be well suited to its intended purpose. • Age is typically greater than 50 years.

General Condition of Fire Stations

Fire Station T1:

311 Israel Rd SW, Tumwater, WA 98501

- Collocated with the administrative offices and EOC
- Constructed in 2000, using Type V construction
- 2 story building
- Fair condition
- Code compliant
- Staffing capacity: 8 bedrooms for a max staffing of 8 FFs
- 5 back in bays
- Has an apparatus exhaust system
- Has CCTV, Keyed lock
- No washer/extractor for PPE
- Diesel fuel tank for emergency power
- Has a decontamination area

Fire Station T2:

405 Linwood Ave. SW, Tumwater, WA 98501

- Constructed in 1995, using type V construction
- 1 story building
- Fair condition
- Code compliant
- Staffing capacity: 3 bedrooms for a staffing of 4 FFs
- 2 back in bays
- Has an apparatus exhaust system
- Has CCTV, Keypad, Keyed lock
- No washer/extractor for PPE
- Diesel fuel tank for emergency power
- Has a decontamination area

Apparatus

Maintaining fire service apparatus and equipment is crucial for ensuring operational readiness, safety, and longevity of service life. Essential elements of this maintenance include regular inspections and preventative maintenance schedules, which should be strictly adhered to according to manufacturer recommendations and NFPA standards.

Checking and servicing all mechanical components, such as engines, pumps, and aerial ladders, as well as testing electrical systems and communication devices. Regular cleaning of equipment and apparatus is also vital to prevent corrosion and prolong life expectancy.

Additionally, thorough documentation of all maintenance activities is necessary to track the condition and service history of each piece of equipment, enabling timely repairs and replacements as needed. Training for personnel on proper operation and maintenance techniques is equally important to minimize wear and tear and ensure the equipment performs effectively during emergencies.

The preventative maintenance provided by interlocal agreement with the City of Olympia provides a significant benefit in maintaining the serviceability of the apparatus and increasing its longevity. The maintenance facility, located in the City of Lacey, has modern facilities and is currently adding more facilities to accommodate larger apparatus.

The mechanics are at various levels of EVT certification and possess other mechanic certifications. The staff have a long history and experience working on fire apparatus and are well qualified.

Age, Condition, & Serviceability

ESCI offers agencies a matrix to evaluate their apparatus condition and use based on experience using the following scheme.

Figure 46: Vehicle Condition Grade Criteria

Evaluation Components	Points Assignment Criteria	
Age	One point for every year of chronological age, based on in-service date.	
Miles/Hours	One point for each 10,000 miles or 1,000 hours of operation.	
Service	1,3, or 5 points are assigned based on the type of service unit. For instance, fire pumpers would be given a 5 because they are classified as severe duty service.	
Condition	This category takes into consideration body condition, rust, interior condition, accident history, anticipated repairs, etc. The better the condition, the lower the points assigned.	
Reliability	Points are assigned as 1,3, or 5 depending on the frequency that a vehicle is in the shop for repair. For example, a 5 would be assigned to a vehicle in the shop two or more times per month on average, while 1 would be assigned to a vehicle in the shop an average of once every three months or less.	
Point Ranges	**Condition Rating**	**Condition Description**
Under 18 points	Condition 1	Excellent
18–22 points	Condition 2	Good
23–27 points	Condition 3	Fair
28 points or higher	Condition 4	Poor

In general, the TFD frontline apparatus is in good or fair condition and appears to be well maintained. The reserve apparatus is in fair condition and also appears to be well maintained. One of the frontline engines is five years old (2019), and the other is twelve years old (2012). The reserve engines are both over twenty years old (2000).

In April 2023, the City of Tumwater signed an agreement to purchase a new engine with expected delivery in 2026. The new engine will replace the 2012 frontline engine, which will be placed in reserve status. The other frontline engine (2019) is slated to be replaced in 2031 through the City's capital facilities plan. The TFD does not have a ladder truck or any ancillary apparatus such as tenders or brush trucks.

The frontline medic units are scheduled for replacement in 2025. Thurston County Medic One provides funding for the purchase of the Medic units. The following table provides the scoring of the units during this engagement.

Figure 47: TFD Apparatus Evaluation Scores

Location	Unit ID	Manufacturer	Year	Radio ID No.	Condition	Condition
Station T1	3104-51	Pierce	2012	ET1	34	Poor
Station T1	3104-48	KME	2000	ET1-2	46	Poor
Station T1	4819	Ford F150	2014	BNT1	23	Fair
Station T1	3031	Ford	2018	M5	21	Good
Station T1	3024	GMC	2014	M5-2	30	Poor
Chief	4989	Ford Explorer	2018	CHT1	6	Excellent
Asst. Chief	4809	Ford Explorer	2014	CHT2	23	Fair
MSO	4633	Ford Explorer	2011	MSO	28	Poor
Prevention	3828	Ford Maverick	2023	PREV1	3	Excellent
Training	4816	Ford F150	2014	TRNT1	20	Good
Station T2	3105	Pierce	2019	ET2	13	Excellent
Station T2	3100-47	KME	2000	ET2-2	42	Poor
Grand Mound	3032	Ford	2018	M14	18	Good
Grand Mound	3018	Ford	2017	M14-2	18	Good

Future Needs

Tumwater FD has been approved and has begun purchasing a replacement fire engine. This vehicle isn't expected to arrive until 2026/2027. TFD is scheduled to replace another engine in approximately seven years, 2031. These two purchases will address the replacement of reserve engines that are deemed in poor condition and beyond their useful life cycle.

Recommendations

Facilitating the adoption and implementation of these recommendations will take commitment, time, and resources (including finances). The suggested timeframes are intended to introduce a realistic "blueprint" for implementation. However, financial and governmental priorities may provide challenges or opportunities to address a recommendation(s) outside of the timeframes identified here. These recommendations should be interlaced into the work plan from the Strategic Plan developed earlier this year.

ESCI has grouped the recommendations into three implementation timeline categories: Short-Term (6 months–1 year), Mid-Term (1–3 years), and Long-Term (3–5 years).

Lastly, these recommendations are just that—recommendations. They are ESCI's best efforts to guide the addressing of issues and deficiencies identified during the study period. City leaders and residents hold the ultimate authority in embracing, revising, or discounting the following guidance.

Organizational Planning

Capital Improvement Plan

Assessment: The Tumwater Fire Department is nearing the end of an apparatus replacement program, and it appears that insufficient funds are available to complete the final engine purchase. Other capital costs are not anticipated in a long-term funding plan, leaving the competitive budget process to address needs when they become more urgent.

Recommendation: Develop a 20-year Capital Improvement Plan (CIP) that incorporates apparatus, equipment, and facility upgrades to determine the expected future costs, annual restricted reserves, and general replacement cycles in partnership with the city's finance department. The CIP must also incorporate capital apparatus and equipment not currently owned but required for the delivery of future services, including the addition of a wildland/brush unit, ladder truck, and future engine to equip future fire station 3.

Time Frame: Short

Wildland Urban Interface Planning

Assessment: The intermingling of undeveloped wildland vegetation adjacent to urbanized infrastructure poses significant challenges for fire management and community safety. As residential developments encroach further into forested areas, the potential for catastrophic wildfires increases, heightened by climate change and periods of drought that exacerbate fire conditions. Effective mitigation strategies, including land use planning, community awareness programs, and robust emergency response planning, are critical to reducing the inherent risks associated with living near wildland areas.

Recommendation: After implementing the recommendation to add the Assistant Chief–Risk Reduction, conduct an all-hazard risk assessment, specifically focused on wildland risks in the community, in contrast to a fire protection task analysis so that response plans, mitigation efforts, and general risk reduction activities are based on a current understanding of the community risks. Developing a Wildland Protection Plan under the guidance provided by the Washington State Department of Natural Resources will provide greater benefits in risk reduction for the City's Wildland Urban Interface Areas.

Time Frame: Mid

Support Service Staffing

Administrative

Assessment: Multiple support service and administrative duties are managed by staff members, and it appears that insufficient staff resources may be inadequate to properly address the community's needs and expected level of services.

Recommendation: Perform a time-on-task analysis and identify program deficiencies and the time spent on different tasks to see where additional staff are needed, e.g., public affairs, administrative support, policy development, etc.

Time Frame: Mid

Emergency Management

Assessment: The emergency management program appears not to be as fully developed as you would expect for a city the size and complexity of Tumwater. The Emergency Manager functions are assigned to the Fire Chief, who is predominantly focused on leading and managing the fire department. The saturation of tasks can lead to work fragmentation, communication challenges, and inconsistent work effort across all divisions.

Recommendation: Develop a contract for service with Thurston County Emergency Management that outlines primary outputs such as developing a local emergency management plan for the City of Tumwater, conducting position-specific training for City of Tumwater staff, ensuring the City of Tumwater is included in the Hazard Mitigation Plan development update cycle, as well as, consult with the City of the design, technology, and operations readiness for the city of Tumwater's primary and backup EOCs. ALTERNATIVELY: The City of Tumwater may consider contracting with a third party that specializes in emergency management services or hiring a position to fulfill the duties.

Time Frame: Mid

Community Risk Reduction Positions

Assessment: Excluding home occupation type businesses, nearly 1200 individual businesses of all sizes and complexity are registered with the City of Tumwater. With fire prevention education and other related tasks, the Fire Prevention Officer reported that 638 initial and follow-up inspections of businesses were conducted, falling short of best practice to inspect each business annually, and wherein hazardous occupancies need two inspections annually. This position and responsibility carry an important role in the community's risk reduction program. This Fire Prevention Officer position is currently slotted in the City's salary schedule as equivalent to a first-line supervisor (Lieutenant). It is also noted that the caliber of experience, training, and professional skills and judgment necessary for a Code Enforcement (Fire Marshal) position demands that a Chief Officer rank and associated salary be assigned.

Recommendation: Establish a new position of Assistant Chief – Risk Reduction to oversee all the elements of a community risk reduction program, and the Fire Prevention officer, who will be assigned the responsibilities delegated by the Fire Chief within the scope of the International Fire Code.

Time Frame: Short

Training Program

Assessment: While the organization is working on developing the training and certification of personnel in wildland firefighting, there is more to be accomplished. Over half of the staff are certified Firefighter 2, leaving a minority without the certification. The department has issued wildland shirts, helmets, and shelters but has not provided the full complement of standard wildland personal protective equipment: slacks, boots, helmet lights, etc.

Recommendation: Personnel should be trained and certified to meet the requirements of NFPA 1051 and the National Wildfire Coordinating Group (NWCG) within Washington State guidelines. Further, personnel should be fully equipped with wildland personal protective equipment that meets the requirements of NFPA 1977.

Time Frame: Short

Assessment: While the department has a dedicated Lieutenant Training Officer and has developed and improved the department's training profile, there are benefits to collaborating and consolidating with adjacent organizations to ensure the programs are consistent across mutual aid partners. Efficiencies can be realized through the scale of the economy, and the specialization of staff within a training division can be developed.

Recommendation: Develop an interlocal agreement with the City of Olympia to consolidate training personnel and programs to provide comprehensive training across both jurisdictions seamlessly.

Time Frame: Mid

Safety Program

Assessment: Researchers from the University of Cincinnati have found that firefighters face a higher risk of developing certain cancers compared to other workers, likely due to inadequate protection from cancer-causing agents encountered in their line of work. The study revealed that firefighters are twice as likely to develop testicular cancer and have higher incidences of non-Hodgkin's lymphoma, prostate cancer, and multiple myeloma. Exposure to carcinogens like benzene, diesel exhaust, and formaldehyde, both at fire scenes and within firehouses, has been identified as a contributing factor. The findings, led by Grace LeMasters and her team, underscore the urgent need for improved protective measures to shield firefighters from these harmful exposures.[10]

Some of the notable changes in the current facilities should be how and where PPE is stored, isolating furniture, ice machines, and other equipment in apparatus bays, and installing separate heating/air conditioning and air handling systems and an airtight physical barrier for exercise facilities from apparatus bay spaces where diesel exhaust may be present.

Recommendation: Adopt and implement the recommended practices developed by the International Association of Fire Fighters and the Firefighter Cancer Support Network. This will include some infrastructure upgrades to existing facilities, such as barrier separation of spaces, installation of separate HVAC, etc.

Time Frame: Short

Service Deployment

Assessment: The Tumwater Fire Department is challenged with the current level of staffing and available facilities to adequately respond to the current boundaries of the City and concentrate enough firefighters for the risk profile, not including its Urban Growth Areas. Stations T1 and T2 provide only 31% of the city within a 4-minute travel time. It appears that the current station deployment underserves the City boundaries, and a third fire station is needed.

Recommendation: Conduct a full fire station location analysis to determine the number of stations that will be required to serve the City's current boundaries and the expected expansion of its urban growth area.

Time Frame: Mid

[10] Firefighters Face Increased Risk for Certain Cancers: https://assets.website-files.com/64b9346df4252df1681cba3e/64c5f53b45a4c36fcf2dd159_firefighters_face_increased_risk_for_certain_cancers.pdf

Assessment: The City of 27,100 residents typically expect a level of emergency services, and the ability to generate enough firefighters to fight a residential structure fire is expected. National standards based on task analysis require 16 firefighters to conduct simultaneous tasks to fight a fire in a 2500$^{sq.ft.}$ Residential structure within 8 minutes of responding from the fire station. The City of Tumwater, with the use of mutual aid, can assemble 16 firefighters to only 5% of the City. It is understood that two additional firefighters per shift may be added, and in that case, the City could improve its coverage of 16 firefighters to approximately 9% of the City.

Recommendation: Increase the engine company staffing to come closer to meeting the standard to assemble firefighters for a residential structure fire by adding a fourth firefighter to each engine company at both stations, coupled with the addition of the staff from a second Medic Unit, and Battalion Chief, the minimum daily staffing would increase from nine (9) to (13) firefighters.

An alternative approach that might provide flexible deployment for EMS incidents could be to staff an aid unit with two firefighters and maintain the engine company staffing with 3 firefighters, still achieving greater compliance in meeting the 16-firefighter threshold for a residential fire identified in NFPA 1710.

Time Frame: Mid

Recommendation: After completing the fire station location analysis, fund and construct a third fire station to cover either the west or south portion of the city with adequate staffing for an engine company.

Time Frame: Long

Assessment: The City's dispatch provider is showing dispatch processing times exceeding national standards. Once the 911 call is answered, NFPA 1710 recommends that the call should be dispatched via radio or other means within 60 seconds. The performance for all incidents shows a 2-minute and 23-second dispatch processing time.

Recommendation: Collaborate and investigate what might be mitigated to enhance the dispatch processing time to meet the national standard.

Time Frame: Mid

Assessment: Tumwater Fire Department's turnout time (time from notification to responding to the incident) exceeds national standards. Once the 911 call is answered, NFPA 1710 recommends that the turnout time for EMS calls be 60 seconds, while fire incidents are 80 seconds. The turnout time performance for EMS incidents is 2 minutes and 13 seconds, and 2 minutes and 17 seconds for fire incidents. Typical issues departments face are adequacy of internal paging systems, station design relative to the movement of personnel from living quarters to the apparatus bays, adherence to department policies, and acting with appropriate speed to the apparatus. We understand that the station's paging systems are outdated, and both are planned for upgrades in the future, which would improve turnout times.

Recommendation: Determine the primary cause of the performance delay and implement ways to mitigate and enhance the turnout performance to meet the national standard.

Time Frame: Short

Assessment: The City of Tumwater possesses multiple buildings which, under Washington Survey and Rating Bureau standards, provide deficiency points for agencies that do not have ladder truck coverage when there are five or more buildings of three stories (or 32 feet) or more in height or with five or more buildings requiring a needed fire flow of greater than 3,500 gallons per minute, or five or more buildings meetings any combination of these requirements. Along I-5 and south of the City are large industrial and distribution centers that also need ladder services. The closest mutual aid ladder service reaches only the very northern portion of the City, approximately 1%.

Recommendation: Purchase and place in-service a Quint apparatus in Station 1 serving, which can serve both fire engine and aerial operations.

Time Frame: Mid

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TO: City Council

FROM: Lisa Parks, City Administrator

DATE: July 9, 2024

SUBJECT: Intergovernmental Agreement Between the City of Tumwater and the Confederated Tribes of the Chehalis Reservation

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1) Recommended Action:

Place the Intergovernmental Agreement Between the City of Tumwater and the Confederated Tribes of the Chehalis Reservation on the July 16, 2024, City Council consent calendar with a recommendation to approve and authorize the Mayor to sign.

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2) Background:

The Chehalis Tribe is purchasing property at Exit 99 of I-5 located on 93rd Avenue SW. The property is currently owned by the Kaufman Real Estate, LLC and was platted in 2022 as the "I-5 Commerce Place". The property is just shy of 38 acres, consisting of 12 lots varying in size from 1 to 4 acres, and including 4 separate "Tracts" that cover approximately 6.5 acres to accommodate required stormwater facilities, open space and tree preservation areas. A copy of the recorded plat is included as Exhibit B to the Interlocal Agreement, which is attached to this staff report.

The Tribe intends to place the property into trust and assume jurisdiction, and in so doing, has a preference to vacate the plat, the public road right of way (although the road itself will remain), and to terminate the Covenants, Conditions and Restrictions that were required of, and recorded with, the final plat. Over the past several months, a city staff team has been meeting with the Tribe to identify the necessary steps to accomplish the Tribe's goals and intentions, and this Intergovernmental Agreement is the result of that collaboration. It sets forth the obligations and expectations of the City and the Tribe related to purchase and development of the property by the Tribe. Below is a summary of each party's obligations and responsibilities currently proposed in the agreement.

In the agreement, the City's obligations include:

- Facilitating a plat vacation process;
- Review and cooperate with the Tribe regarding relocation of the road and any/all utilities and easements;
- To plan for and address transportation infrastructure deficiencies and solutions, and to include the Tribe in the Interchange Study. Both parties also recognize there may need to be separate agreements for projects to address deficiencies, including to identify funding and construction of improvements prior to generation of new traffic associated with future development of the property; and
- To cooperate in modifying or extinguishing the stormwater maintenance agreement, keeping in mind whether or not there may be continuing public use of the stormwater facilities.

The Tribe's obligations include:

- Taking the necessary steps to initiate and conclude the plat vacation process;

- Acknowledging their ownership and responsibility for maintaining the existing road;
- To cooperate with the City and State agencies in deciding if relocation of the road and/or utilities may be necessary, and to pay the cost of such a move if needed;
- Acknowledging the easements that currently exist;
- Recognizing that, in vacating the public right of way, State law requires 50% of the value of that right of way be paid to the City, which may be satisfied through potential future property dedications;
- Acknowledging the effects of vacating the plat and the care that needs to be taken in doing so; and
- Acknowledging and agreeing to address roadway safety and concurrency issues related to their development that are above and beyond those projected from the original Kaufman project.

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3) Policy Support:

Build a Community Recognized for Quality, Compassion, and Humanity:
Continue to maintain and advance positive Tribal Relations.
Create and Maintain a Transportation System Safe for All Modes of Travel

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4) Alternatives:

Do not approve the agreement.

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5) Fiscal Notes:

None at this time.

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6) Attachments:

A. Interlocal Agreement, including Exhibits A through D

"A"

INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY OF TUMWATER AND THE CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION RELATED TO PROPERTY LOCATED ON 93rd AVENUE SW IN TUMWATER, WASHINGTON

THIS AGREEMENT is made and entered into by the CITY OF TUMWATER, a municipal corporation of the State of Washington, ("City") and the CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION, a federally recognized Indian tribe ("Tribe").

WHEREAS, Tribe is purchasing Property at Exit 99 of I-5 located on 93rd Avenue SW in Tumwater (the Legal Description of the Property is attached hereto and made a part hereof as Exhibit A).

WHEREAS, Property is subject to a recorded Plat #4952603, I-5 Commerce Place Plat, which Plat is attached hereto and made a part hereof as Exhibit B (the "Plat").

WHEREAS, as part of the platting process, the plat proponent established a road, Legacy Court SW, which road is now owned by the City.

WHEREAS, at the closing for the Property, Seller intends to terminate the previously approved Commercial Association Covenants, Conditions and Restrictions recorded with the Property.

WHEREAS, simultaneously with the closing of the purchase of the Property, the Tribe intends to seek a plat vacation.

WHEREAS, it is the intention of the Tribe to place the Property in trust and assume jurisdiction.

WHEREAS, the parties hereto wish to enter into an agreement protecting the interests of the Tribe and the City with respect to the issues addressed in this Agreement.

WHEREAS, RCW 39.34.010 permits local governmental units to make the most efficient use of their powers by enabling them to cooperate with other localities on a basis of mutual advantage and thereby to provide services and

facilities in a manner and pursuant to forms of governmental organization that will accord best with geographic, economic, population and other factors influencing the needs and development of local communities; and

WHEREAS, pursuant to RCW 39.34.080, each party is authorized to contract with any one or more other public agencies to perform any governmental service, activity, or undertaking which each public agency entering into the contract is authorized by law to perform: provided, that such contract shall be authorized by the governing body of each party to the contract and shall set forth its purposes, powers, rights, objectives and responsibilities of the contracting parties;

NOW, THEREFORE, in consideration of the mutual terms, provisions, and obligations contained herein, it is agreed by and between the City and Tribe as follows:

1. Purpose/Objective

The purpose of this Agreement is to set forth the obligations and expectations of the parties related to purchase and development of the Property by the Tribe.

2. Responsibilities

The parties shall cooperate with each other and take all steps necessary and reasonable to accomplish their respective responsibilities under this Agreement in a timely manner.

A. Responsibilities of the City shall be as follows:

i. Upon receipt of a complete application for a Plat Vacation, including all required submittal documents and payment of all fees, the City will promptly begin its review of the application and schedule the hearing examiner meeting. Application submittal requirements are addressed in TMC Title 17, The plat vacation process is more specifically addressed in TMC 17.26.

ii. The City agrees to cooperate with the Tribe in reviewing requests for relocation of Legacy Court SW and any and all utilities and easements.

iii. The City agrees to cooperate with the Tribe to identify transportation infrastructure level of service (LOS) deficiencies and solutions within the area related to and concurrent with future development by the Tribe, particularly along 93rd Avenue. The City agrees to conduct an Interchange Study in which the Tribe will participate as a stakeholder, and the City will review and evaluate traffic impact assessments prepared by the Tribe as a component of any proposed development. The City agrees to cooperate with the Tribe to enter into separate agreements for administration and funding of the projects needed to address transportation infrastructure LOS deficiencies prior to generation of new traffic associated with development by the Tribe on the Property.

iv. The City agrees to cooperate with the Tribe to modify or extinguish the Stormwater Maintenance Agreement, attached hereto as Exhibit C and incorporated herein. Based on whether there continues to be a need for public use of the facilities after purchase of the Property, the parties shall consult to determine if a new agreement is necessary.

B. Responsibilities of the Tribe shall be as follows:

The Tribe shall take all necessary steps to vacate the Plat and road within the Plat commencing by filing a complete Application for Vacation with City in accordance with TMC 17.26.060 and RCW 58.17.212 including submitting all required submittal documents and fees. The Tribe shall participate in all hearings required as a part of the vacation process and shall be responsible for all costs associated with plat vacation review and document recording.

i. Upon vacation of the Plat, the Tribe shall own Legacy Court SW. The Tribe shall have sole responsibility for ownership and maintenance of Legacy Court SW and shall hold the City harmless from all cost, loss, expense and damage arising out of or in connection with the Tribe's ownership of Legacy Court SW.

ii. After consultation with and approval by the City, the Tribe may move the location of Legacy Court SW and any attendant sewer, water or other utility facilities within or adjacent to Legacy Court SW provided the Tribe moves the road in such a manner as will not result in an approach closer to the I-5 interchange or cut off the ability of adjacent landowners, upon the payment by customer to City of any applicable fees, to access the sewer and water infrastructure at the boundary of the Property. Relocation of the road and any utility facilities shall be coordinated with the City and appropriate State agencies, as necessary for approval of any water system modification, and shall be at the Tribe's sole expense.

iii. The Tribe acknowledges the easements recorded as part of the Plat are binding upon the Tribe and run with the land. The Tribe will consult with the City should it intend to move any of the easements from their current location to an alternate location on the Property. If the appurtenances are relocated, they shall be relocated in such manner as to allow adjacent property owners the ability to extend utilities to their properties. Any relocation of utilities shall be at the sole expense of the Tribe and new easements shall be granted for the benefit of the City and recorded on the property with Thurston County. The Tribe shall grant the City one or more new utility easements, in a form approved by the City, to access, inspect, design, construct, reconstruct, operate, maintain, repair, replace, remove, grade, excavate, and enlarge all utility facilities including water main and sanitary sewer lines and all appurtenances thereto.

iv. Notwithstanding anything herein to the contrary, the Tribe acknowledges that, in order to vacate Legacy Court SW, City ordinances require the property owner to pay the City fifty percent (50%) of the appraised value of the road. The City and Tribe shall mutually agree upon an MAI appraiser to appraise the value of Legacy Court SW. All costs of the appraisal shall be the responsibility of the Tribe.

In lieu of monetary compensation, the parties agree that the Tribe may satisfy this obligation by dedicating to the City for street or other municipal purposes real property useful for

the intended purpose where the property has a fair market value at least equal to the amount of monetary compensation that would otherwise be required.

v. Upon vacation of the Plat, the Tribe acknowledges and agrees to the following:

   a. The Tribe will permanently maintain the current wetland buffer which exists on the Property. Notwithstanding the foregoing, treed areas outside of the wetland buffer are not guaranteed to remain intact.

   b. The Tribe will consult with the City prior to any development proposed to encroach on the City's Wellhead Protection Areas, depicted on Exhibit D attached hereto and made a part hereof, and the Tribe will not permit any land uses prohibited by the City within the applicable Wellhead Protection Areas.

   c. Upon purchase of the Property, the Tribe shall own all stormwater facilities on the Property. The Tribe shall have sole responsibility for ownership and maintenance of all stormwater facilities and shall hold the City harmless from all cost, loss, expense and damage arising out of or in connection with the Tribe's ownership and maintenance of the stormwater facilities. The parties acknowledge that the stormwater retention features of the Plat may be changed by the Tribe to meet with any of the Tribe's development plans. Notwithstanding the foregoing, the parties shall cooperate to determine if the Stormwater Maintenance Agreement should be modified or extinguished.

vi. The Tribe agrees to address public roadway safety and concurrency issues that arise from the Tribe's development of the Property if it creates traffic levels greater than those from the originally planned Kaufman development. The Tribe agrees to cooperate with the City to identify and address transportation infrastructure level of service (LOS) deficiencies within the area related to and concurrent with

future development by the Tribe, particularly along 93rd Avenue. The Tribe will participate as a stakeholder in an Interchange Study conducted by the City. The Tribe will complete a traffic impact assessment as a component of any proposed development and provide to the City for review. The Tribe agrees to enter into separate agreements for administration and funding of the projects needed to address transportation infrastructure LOS deficiencies prior to generation of new traffic associated with development by the Tribe on the Property.

3. Future Agreements.

The parties agree to cooperate with each other and use best efforts to reach agreement on the matters contained within this Agreement including negotiating future agreements, taking the necessary steps to accomplish the matters addressed herein, and executing documents necessary to effectuate this Agreement.

Emergency services is outside the scope of this Agreement. The Parties may mutually address emergency services separately at such time as the Property is developed.

4. Public Records Requests

Each party shall be responsible for maintaining its own records and shall respond to records requests received by it directly. Each party to this Agreement recognizes that the agency receiving a public records request is responsible for determining the manner in which it deems appropriate to respond to a public records request. Additionally, each party agrees to cooperate to the fullest extent possible in providing records related to this Agreement requested by the other party in order to respond to records requests.

5. Indemnification

Each party, and its successors and assigns, shall release, indemnify, defend, and hold the other party, and its successors and assigns, harmless from and against any and all loss, costs, claims, suits, liabilities, causes of action, and expenses of any kind or nature (including reasonable attorneys' fees) arising out of, related to, or incurred by reason of its own negligence in carrying out the rights and obligations of this Agreement.

6. Joint Board

This Agreement creates no separate legal entity and no joint board. Disposition of any property owned by the Parties under this Agreement shall be as provided for in this Agreement.

7. Duration of Agreement

This Agreement shall be effective on the date of the last authorizing signature affixed hereto until July 31, 2029, unless otherwise amended or terminated in the manner described under section 12 or 8 of this Agreement.

8. Termination of Agreement

This Agreement may be terminated only by mutual written agreement of the Parties.

9. Dispute Resolution

If a dispute arises, the Party making the claim will provide the other Party written notice within thirty (30) days. The notice shall detail the matter in question. Authorized representatives of each Party shall attempt to resolve the dispute by negotiation within thirty (30) days of notification. If such negotiation is unsuccessful, the parties mutually agree to a formal dispute resolution process such as mediation, through an agreed-upon mediator experienced in Indian Law. If they cannot reach an agreement with respect to a mediator, then the Parties shall apply to Judicial Arbitration and Mediation Service (JAMS) for the appointment of a mediator. All costs for mediation services shall be divided equally between the Parties. Each Party will bear their owns costs and legal fees, unless otherwise determined in mediation.

10. Interpretation and Venue

This Agreement shall be governed by the laws of the State of Washington as to interpretation and performance. Venue for any action that cannot be resolved through mediation may be brought only in the Superior Court of Thurston County, Washington.

11. CONSENT TO JURISDICTION AND EXPRESS LIMITED WAIVER OF SOVEREIGN IMMUNITY

THE TRIBE DOES HEREBY EXPRESSLY CONSENT TO A LIMITED WAIVER OF SOVEREIGN IMMUNITY AND CONSENTS TO JURISDICTION IN THE COURTS OF THE STATE OF WASHINGTON AS HAVING EXCLUSIVE JURISDICTION TO HEAR, RESOLVE AND ENTER FINAL JUDGMENT ON ANY LEGAL DISPUTE BY AND BETWEEN THE PARTIES WITH RESPECT ONLY TO THIS AGREEMENT CONCERNING THE INTERPRETATION OF THIS AGREEMENT, ENFORCEMENT OF ANY OF ITS PROVISIONS, AND/OR FOR EQUITABLE RELIEF FOR ANY ALLEGED OR ACTUAL BREACH OF ANY PROVISION OF THIS AGREEMENT AND/OR FOR THE ENFORCEMENT OF ANY SUCH FINAL JUDGMENT ENTERED BY ANY COURT OF THE STATE OF WASHINGTON REGARDING SUCH MATTERS. THIS LIMITED WAIVER IS FOR THE BENEFIT OF THE CITY AND NOT FOR THE BENEFIT OF ANY THIRD PARTY.

12. Entire Agreement

This Agreement sets forth all terms and conditions agreed upon by the City and the Tribe, and supersedes any and all prior agreements oral or otherwise with respect to the subject matter addressed herein.

Any addition, deletion, or change to the terms and conditions of this Agreement shall be in the form of a written amendment approved by each of the parties.

13. Filing

Prior to its entry into force, this Agreement shall be filed with the Thurston County Auditor's Office or posted upon the websites or other electronically retrievable public source as required by RCW 39.34.040.

14. Notice

Any notice required under this Agreement shall be to the party at the address listed below and shall become effective three (3) days after the date of deposit in the United States Postal Service.

CITY OF TUMWATER	CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION
Attn: City Clerk 555 Israel Road SW Tumwater, WA 98501	Chairman Chehalis Tribe 420 Howanut Road Oakville, WA 98568

15. Authority

The parties represent that they have taken all steps necessary and have the authority to enter into this Agreement, to be bound by the Agreement, and to execute the terms of this Agreement.

16. Effective date

This Agreement is hereby entered into between the City of Tumwater and the Confederated Tribes of the Chehalis Reservation and shall take effect on the date of the last authorizing signature affixed hereto:

CITY OF TUMWATER	CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION
_____	_____
Debbie Sullivan, Mayor	Dustin Klatush, Chairman
Dated:_____	Dated:_____
ATTEST:	ATTEST:
_____	_____
Melody Valiant, City Clerk	Charlotte Lopez, Tribe Secretary
APPROVED AS TO FORM:	APPROVED AS TO FORM:
_____	_____
Karen Kirkpatrick, City Attorney	Harold Chesnin, Tribal Attorney

EXHIBIT A

PARCEL A:
THAT PORTION OF THE SOUTH 375 FEET OF THE EAST 100 FEET OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., LYING NORTHERLY AND WESTERLY OF THE FOLLOWING DESCRIBED LINE:
BEGINNING AT A POINT OPPOSITE HIGHWAY ENGINEER STATION AD 10+53.77 P.C., AS SHOWN ON SHEET 2 OF 3 SHEETS OF HIGHWAY ENGINEERS MAP, DATED DECEMBER 21, 1965 AND 60 FEET DISTANT NORTHERWESTERLY, WHEN MEASURED AT RIGHT ANGLES FROM THE AD CENTERLINE OF PRIMARY STATE NO. 1 (SR-5) MAYTOWN TO TUMWTER, LATHROP ROAD INTERCHNAGE, THENCE IN A STRAIGHT LINE SOUTH 28° 41' 30" WEST TO THE EAST LINE OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16; THENCE SOUTHERLY ALONG SAID EAST LINE TO A POINT OPPOSITE HIGHWAY ENGINEERS STATION DB 4+85, AS SHOWN ON SAID MAP, AND 40 FEET DISTANT NORTHERLY THEREFROM; THENCE CONTINUING WESTERLY PARALLEL WITH SAID DB CENTERLINE TO A POINT OPPOSITE HIGHWAY ENGINEER STATION DB 2+50 AND THE END OF THIS LINE DESCRIPTION. EXCEPT COUNTY ROAD KNOWN AS LATHROP ROAD; ALSO EXCEPT THAT PORTION CONVEYED TO THURSTON COUNTY BY DEED RECORDED JULY 16, 2010 UNDER AUDITOR'S FILE NO. 4160513; ALSO EXCEPT THAT PORTION CONVEYED TO CITY OF TUMWATER BY DEED RECORDED JANUARY 28, 2021 UNDER AUDITOR'S FILE NO. 4821155.

PARCEL B:
THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION; THENCE WEST ALONG THE SOUTH LINE OF SAID SOUTHEAST QUARTER OF SOUTHWEST QUARTER 100 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING WEST 140 FEET, MORE OR LESS, TO THE EAST LINE OF THE WEST 2,387.73 FEET OF THE SOUTHWEST QUARTER OF SAID SECTION 16; THENCE NORTH 375 FEET; THENCE EAST 140 FEET, MORE OR LESS, TO A POINT 100 FEET WEST OF THE EAST LINE OF SAID SOUTHEAST QUARTER OF SOUTHWEST QUARTER; THENCE SOUTH 375 FEET TO THE TRUE POINT OF BEGINNING. EXCEPT PORTION THEREOF LYING WITHIN LATHROP ROAD; ALSO EXCEPT THAT PORTION CONVEYED TO THURSTON COUNTY BY DEED RECORDED JULY 16, 2010 UNDER AUDITOR'S FILE NO. 4160513; ALSO EXCEPTING THAT PORTION CONVEYED TO CITY OF TUMWATER BY DEED RECORDED JANUARY 28, 2021 UNDER AUDITOR'S FILE NO. 4821153.

PARCEL C:
THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., LYING WESTERLY OF TRACTS CONVEYED TO THE STATE OF WASHINGTON, BY DEEDS RECORDED MARCH 2, 1953, AUGUST 15, 1957 AND JULY 19, 1966 UNDER AUDITOR'S FILE NOS. 516498, 587782, AND 743347, RESPECTIVELY.

PARCEL D:
THAT PART OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS: BEGINNING AT A POINT OF THE SOUTH LINE OF SAID SECTION 16, 2,299.3 FEET EAST OF ITS SOUTHWEST CORNDER; RUNNING THENCE EAST ALONG SAID SOUTH LINE 88.43 FEET; THENCE NORTH 375 FEET; THENCE EAST 240 FEET, MORE OR LESS, TO THE EAST LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE WESTERLY ALONG SAID NORTH LINE 328 FEET, MORE OR LESS TO A POINT NORTH OF THE POINT OF BEGINNING; THENCE SOUTH 1,320 FEET, MORE OR LESS; TO THE POINT OF BEGINNING. EXCEPTING THEREFROM THE SOUTH 30 FEET FOR COUNTY ROAD KNOWN AS LATHROP ROAD; ALSO EXCEPT THAT PORTION CONVEYED TO THURSTON COUNTY BY DEED RECORDED JULY 16, 2010 UNDER AUDITOR'S FILE NO. 4160513; ALSO EXCEPTING THAT PORTION CONVEYED TO CITY OF TUMWATER BY DEED RECORDED JANUARY 28, 2021 UNDER AUDITOR'S FILE NO. 4821154. IN THURSTON COUNTY, WASHINGTON.

EXHIBIT B

4952603
09/27/2022 10:54 AM PLAT
Thurston County, Washington
Pages: 5

AUDITOR OF THURSTON COUNTY ★ WASHINGTON ★

1 of 5

PLAT 4952603

PLAT OF I-5 COMMERCE PLACE

A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND A PORTION OF THE NORTHWEST AND SOUTHWEST QUARTERS OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.

DEDICATION

KNOWN TO ALL PEOPLE PRESENT THAT KAUFMAN REAL ESTATE, LLC, A WASHINGTON LIMITED LIABILITY COMPANY, THE UNDERSIGNED OWNER, IN FEE SIMPLE OF THE LAND HEREBY PLATTED, HEREBY DECLARE THIS LAND DIVISION AND DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS, AVENUES, PLACES, STORM DRAINAGE EASEMENTS, SANITARY SEWER EASEMENTS AND WATERMAIN EASEMENTS OR WHATEVER PUBLIC PROPERTY THERE IS SHOWN ON THE DIVISION AND THE USE THEREOF FOR ANY AND ALL PUBLIC PURPOSES NOT INCONSISTENT WITH THE USE THEREOF. ALSO, THE RIGHT TO MAKE ALL NECESSARY SLOPES FOR CUTS AND FILLS UPON LOTS, TRACTS, ETC. SHOWN ON THIS PLAT IN THE REASONABLE ORIGINAL GRADING OF ALL THE STREETS, AVENUES, PLACES, ETC. SHOWN HEREON. ALSO THE RIGHT TO DRAIN ALL STREETS OVER AND ACROSS ANY LOT OR LOTS WHERE WATER MIGHT TAKE A NATURAL COURSE AFTER THE STREET OR STREETS ARE GRADED. ALSO, ALL CLAIMS FOR DAMAGE AGAINST ANY GOVERNMENTAL AUTHORITY ARE WAIVED WHICH MAY BE OCCASIONED TO THE ADJACENT LAND BY THE ESTABLISHED CONSTRUCTION, DRAINAGE AND MAINTENANCE OF SAID ROADS.

VEHICULAR ACCESS TO 93rd AVENUE SE; EXCEPT AS SHOWN, IS HEREBY WAIVED. DEDICATION TO THE PUBLIC SHALL IN NO WAY BE CONSTRUED TO PERMIT A RIGHT OF DIRECT VEHICULAR ACCESS TO 93rd AVENUE SE, NOR SHALL THE CITY OF TUMWATER OR ANY OTHER LOCAL GOVERNMENT AGENCY WITHIN WHICH THE PROPERTY IS OR MAY BECOME LOCATED EVER BE REQUIRED TO GRANT A PERMIT TO BUILD OR CONSTRUCT AN ACCESS OF APPROACH TO 93rd AVENUE SE FROM THE LOTS OR TRACTS WITHIN THIS PLAT.

FOR VALUABLE CONSIDERATION, RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, THE UNDERSIGNED OWNER, DOES HEREBY GIVE AND GRANT TO THE CITY OF TUMWATER, A MUNICIPAL CORPORATION, PERPETUAL EASEMENTS, AS SHOWN ON THE FACE OF THIS PLAT TO RUN WITH THE LAND, FOR USE FOR WATER MAIN AND ITS APPURTENANCES AND SEWER MAIN AND ITS APPURTENANCES AND THE RIGHT TO REPAIR, CONSTRUCT, OPERATE, MAINTAIN, INSPECT, ALTER, MODIFY, REPLACE, REMOVE AND UPDATE TO PRESENT AND FUTURE TECHNOLOGICAL STANDARDS SAID WATER MAIN AND SEWER MAIN AND RELATED APPURTENANCES OVER, ACROSS AND UNDER THE AREAS DESIGNATED ON THE FACE OF THE PLAT.

TOGETHER WITH THE ACKNOWLEDGMENT THAT THE GRANTOR SHALL NOT PLACE OR HAVE PLACED ANY UTILITY, BUILDING OR OTHER STRUCTURE WITHIN THE WATER MAIN AND SEWER MAIN EASEMENTS SHOWN ON THE FACE OF THE PLAT.

TRACTS "A", "B", "C" & "D" ARE HEREBY DEDICATED TO THE I-5 COMMERCE PLACE LOT OWNERS ASSOCIATION

IN WITNESS WHEREOF WE HAVE SET OUR HANDS AND SEALS THIS 6th DAY OF September, 2022.

(NAME & TITLE) John Kaufman
Vice President

ACKNOWLEDGMENTS

STATE OF WASHINGTON
COUNTY OF THURSTON } S.S.

THIS IS TO CERTIFY THAT ON THIS 6th DAY OF September 2022, BEFORE ME PERSONALLY APPEARED John Kaufman TO ME TO BE THE Vice President, OF **KAUFMAN REAL ESTATE, LLC**, A WASHINGTON LIMITED LIABILITY COMPANY THAT EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID LIMITED LIABILITY COMPANY, FOR THE USES AND PURPOSES THEREON MENTIONED, AND ON OATH STATED THAT ARE AUTHORIZED TO EXECUTE SAID INSTRUMENT.

CHAD STEINBRECHER NOTARY PUBLIC STATE OF WASHINGTON COMM # 120038 MY COMMISSION EXPIRES JULY 05, 2026

(SEAL)

For Clarity expiration date July 5, 2026,
Commission #120038

NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON,
RESIDING AT Tumwater,
MY COMMISSION EXPIRES 7-5-2026.

RESTRICTIONS AND PLAT NOTES

1. PURSUANT TO CHAPTER 17.22 OF THE TUMWATER MUNICIPAL CODE, LOTS 1 THROUGH 12 ARE SUBJECT TO ALL SERVICE FEES AND CHARGES WHICH MAY BE LEVIED BY THE OWNERS ASSOCIATION FOR THE MAINTENANCE, OPERATION AND IMPROVEMENT OF COMMUNITY FACILITIES AND FOR LIENS FOR ANY UNPAID SERVICE FEES OR CHARGES.
2. TRACTS A, B, C, & D SHALL BE OWNED AND MAINTAINED BY THE I-5 COMMERCE PLACE LOT OWNERS ASSOCIATION.
3. TRACTS A & B ARE DESIGNATED STORM WATER MANAGEMENT AREAS FOR THIS PLAT. THE STORM WATER SYSTEMS SHALL BE MAINTAINED BY THE LOT OWNERS ASSOCIATION IN ACCORDANCE WITH THE STORM WATER MAINTENANCE PLAN RECORDED WITH THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR THIS PLAT.
4. TRACT C IS DESIGNATED AS OPEN SPACE.
5. ALL LANDSCAPED AREAS IN PUBLIC RIGHTS-OF-WAY SHALL BE MAINTAINED BY THE LOT OWNERS ASSOCIATION AND MAY BE REDUCED OR ELIMINATED IF DEEMED NECESSARY FOR OR DETRIMENTAL TO CITY ROAD PURPOSES AND SHALL BE SUFFICIENT FOR THE FRONT YARD LANDSCAPING REQUIREMENTS FOR LOTS 1-9 & LOT 11 INCLUSIVE. ADDITIONALLY, THE 25.5 FEET OF LANDSCAPING ADJACENT TO LOT 1 FRONTING ON 93rd AVENUE SE SHALL COUNT TOWARD THE 15% LANDSCAPE REQUIREMENT FOR DEVELOPMENT OF LOTS 1-12.
6. THE COST OF CONSTRUCTION AND MAINTAINING ALL STREETS OR DRIVEWAYS NOT HEREIN DEDICATED AS PUBLIC STREETS SHALL BE THE OBLIGATION OF ALL OF THE OWNERS AND THE OBLIGATION OF ANY CORPORATION IN WHICH TITLE OF THE STREETS MAY BE HELD.
7. VEHICULAR ACCESS TO 93rd AVENUE SE FROM LOT 1 IS RESTRICTED, THE APPROVED ACCESS POINTS ARE FROM LEGACY COURT SW.
8. EACH LOT IN THE SUBDIVISION SHALL PROVIDE A STORM WATER MANAGEMENT PLAN, IN ACCORDANCE WITH ANY OF TUMWATER STANDARDS AT THE TIME OF DEVELOPMENT OF EACH LOT.
9. THE KAUFMAN HABITAT CONSERVATION PLAN WAS PREPARED AND SUBSEQUENTLY APPROVED BY U.S. FISH & WILDLIFE SERVICE (USFWS) FOR THIS PLAT TO MITIGATE POTENTIAL IMPACTS TO THE OLYMPIA POCKET GOPHER, TAYLOR'S CHECKERSPOT BUTTERFLY AND STREAKED HORNED LARK (FEDERAL FISH AND WILDLIFE PERMIT NUMBER TE91853B-0). THE MITIGATION MEASURES INCLUDED IN THE APPROVED PLAN HAVE BEEN IMPLEMENTED AND NO FURTHER MITIGATION WILL BE REQUIRED FOR THE DEVELOPMENT OF EACH LOT WITHIN THIS PLAT.
10. THE PROPERTY OWNER AND THE CITY OF TUMWATER WISH TO RECORD THIS FINAL PLAT WITHOUT DELAY AND WHEREAS IT IS UNDETERMINED HOW LOTS 9, 10, 11 AND 12 WILL DEVELOP, EITHER SEPARATELY OR CONSOLIDATED INTO FEWER PARCELS. IT IS HEREBY AGREED BETWEEN THE CITY OF TUMWATER AND KAUFMAN REAL ESTATE LLC AND ITS SUCCESSOR AND ASSIGNS TO DELAY THE CONSTRUCTION OF THE WATER MAIN AND THE SEWER MAIN AND THE GRANTING OF THE EASEMENTS TO THE NORTH PROPERTY LINE OF THE I-5 COMMERCE PLAT UNTIL SUCH TIME AS THE LOTS DEVELOP, WHETHER AS ONE CONSOLIDATED PARCEL OR INDIVIDUAL PARCELS.

   THE GRANTING OF THE WATER MAIN AND SEWER MAIN EASEMENTS IN ADDITION TO THE CONSTRUCTION OF THE UTILITIES WILL BE CONDITIONED UPON FUTURE SITE DEVELOPMENT/GRADING PERMITS AND/OR BUILDING PERMITS FOR THE LOTS 9, 10, 11,AND 12.

EASEMENT PROVISIONS

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF TUMWATER, A MUNICIPAL CORPORATION, PUGET SOUND ENERGY, INC., A GAS AND ELECTRIC COMPANY, CENTURYLINK, INC, ANY TELECOMMUNICATIONS COMPANY, ANY CABLE TELEVISION COMPANY, THE LOT OWNERS ASSOCIATION AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS UNDER AND UPON THE EXTERIOR TEN FEET PARALLEL WITH AND ADJOINING THE PUBLIC STREET FRONTAGES OF ALL LOTS AND TRACTS TOGETHER WITH THOSE EASEMENTS DEPICTED ON SHEETS 4 & 5 IN WHICH TO INSTALL, LAY, CONSTRUCT, RENEW, OPERATE AND MAINTAIN ANY PRIVATE OR PUBLIC UTILITIES, INCLUDING UNDERGROUND PIPE, CONDUIT, CABLES AND WIRES WITH NECESSARY FACILITIES AND OTHER EQUIPMENT FOR THE PURPOSE OF SERVING THIS SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC, TELEPHONE, GAS, SEWER, WATER, STREET LIGHTING AND UTILITY SERVICE; TOGETHER WITH THE RIGHT TO ENTER UPON THE LOTS AND TRACTS AT ALL TIMES FOR THE PURPOSES HEREIN STATED. THESE EASEMENTS ENTERED UPON FOR THESE PURPOSES SHALL BE RESTORED AS NEAR AS POSSIBLE TO THEIR ORIGINAL CONDITION. NO LINES OR WIRES FOR THE TRANSMISSION OF ELECTRIC CURRENT OR FOR TELEPHONE USE OR CABLE TELEVISION SHALL BE PLACED OR PERMITTED TO BE PLACED UPON ANY LOT UNLESS THE SAME SHALL BE UNDERGROUND OR IN CONDUIT ATTACHED TO A BUILDING.

SHEET INDEX

SHEET 1..... DEDICATION, EASEMENT PROVISIONS, APPROVALS AND LAND SURVEYOR'S CERTIFICATE
SHEET 2..... SECTION SUBDIVISION, LEGAL DESCRIPTION, PLAT NOTES, SURVEY NOTES, LINE AND CURVE TABLES
SHEET 3..... PLAT BOUNDARY, SURVEY REFERENCES, SURVEY NOTES
SHEET 4..... LOTS 1-8 & TRACTS A & B
SHEET 5..... LOTS 9-12 & TRACTS C & D

APPROVALS

EXAMINED AND APPROVED THIS 21st DAY OF September A.D., 2022.

TUMWATER TRANSPORTATION & ENGINEERING DIRECTOR

EXAMINED AND APPROVED THIS 14th DAY OF September A.D., 2022.

TUMWATER COMMUNITY DEVELOPMENT DIRECTOR

I HEREBY CERTIFY THAT ALL LOCAL IMPROVEMENT DISTRICT ASSESSMENTS ON THE LAND DESCRIBED HEREON HAVE BEEN FULLY PAID.

FINANCE DIRECTOR, CITY OF TUMWATER

I HEREBY CERTIFY THAT ALL TAXES ON THE LAND DESCRIBED HEREON HAVE BEEN FULLY PAID.

Alicia Gleason 9-9-22
THURSTON COUNTY TREASURER

EXAMINED AND APPROVED THIS 9th DAY OF SEPTEMBER A.D., 2022

Vanessa Baird
THURSTON COUNTY ASSESSOR

COVENANTS/AGREEMENTS

1. COVENANTS, CONDITIONS AND RESTRICTIONS ARE RECORDED UNDER AUDITOR'S FILE NO. 4952602
2. STORM WATER MAINTENANCE AGREEMENT RECORDED UNDER AUDITOR'S FILE NO. 4952601

AUDITOR'S CERTIFICATE

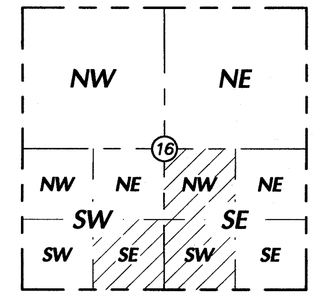
FILED FOR RECORD THIS 27 DAY OF Sept, 2022 AT 10:54 A M. IN BOOK — OF — AT PAGE — AT THE REQUEST OF HATTON GODAT PANTIER

Mary Hall
THURSTON COUNTY AUDITOR

BY
DEPUTY

AUDITOR'S FILE NO. 4952603

APPROVED FOR RECORDING
City of Tumwater



AUDITOR'S INDEX INFORMATION
SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.

LAND SURVEYOR'S CERTIFICATE

JEFF S. PANTIER STATE OF WASHINGTON 28073 REGISTERED PROFESSIONAL LAND SURVEYOR

I, JEFF S. PANTIER, HEREBY CERTIFY THAT THIS NON-RESIDENTIAL PLAT OF I-5 COMMERCE PLACE IS BASED ON AN ACTUAL SURVEY AND SUBDIVISION OF A PORTION OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., THAT THE DISTANCES AND COURSES SHOWN HEREON ARE CORRECT, THAT THE MONUMENTS ARE SET AS SHOWN AND THAT THE LOT AND TRACT CORNERS HAVE BEEN STAKED ON THE GROUND WITH 5/8" REBAR WITH PLASTIC CAPS STAMPED "JSP 28073".

JEFF S. PANTIER PROF. REGISTERED LAND SURVEYOR CERTIFICATE NO. 28073 — DATE August 31, 2022

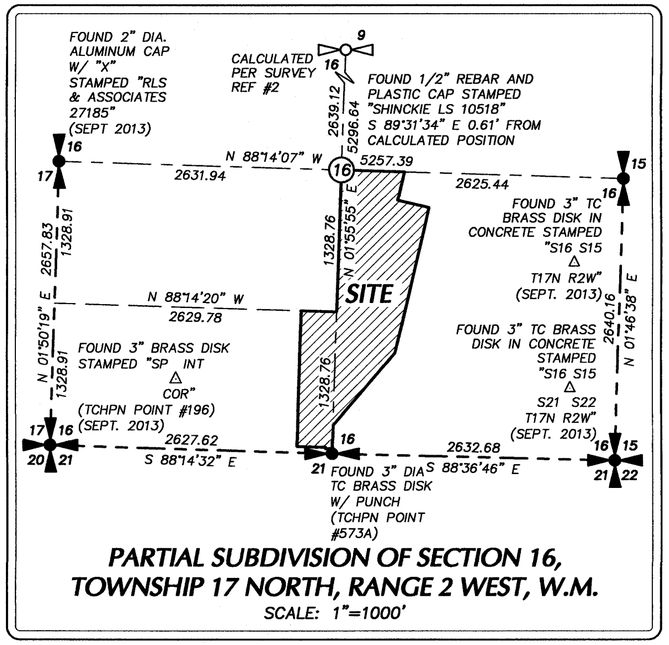
HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

EEP
13-051

EXHIBIT B

PLAT OF I-5 COMMERCE PLACE

A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND A PORTION OF THE NORTHWEST AND SOUTHWEST QUARTERS OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.



PARTIAL SUBDIVISION OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.

SCALE: 1"=1000'

LINE TABLE		
NO.	BEARING	DISTANCE
L1	S 86°13'49" W	61.42
L2	S 01°45'28" W	14.63
L3	S 88°04'05" E	11.67
L4	N 88°14'32" W	25.00
L5	N 88°14'32" W	16.00
L6	N 87°55'30" W	73.48
L7	S 87°55'30" E	23.32
L8	N 01°55'55" E	16.50
L9	S 87°55'30" E	24.75
L10	S 76°06'40" E	71.57

CURVE TABLE			
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH
C1	38°35'44"	121.44	81.80
C2	38°31'16"	150.00	100.85
C3	90°00'00"	100.00	157.08
C4	38°36'52"	69.00	46.50
C5	24°37'10"	181.00	77.77
C6	9°37'29"	181.00	30.41
C7	4°16'36"	181.00	13.51
C8	38°31'16"	119.00	80.01
C9	46°27'52"	69.00	55.96
C10	75°11'04"	25.00	32.81
C11	166°10'01"	55.00	159.51
C12	15°49'36"	55.00	15.19
C13	15°49'36"	55.00	15.19
C14	68°12'44"	55.00	65.48
C15	34°22'47"	25.00	15.00
C16	46°54'00"	131.00	107.23

DESCRIPTIONS:

PARCEL A:
THAT PORTION OF THE SOUTH 375 FEET OF THE EAST 100 FEET OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., LYING NORTHERLY AND WESTERLY OF THE FOLLOWING DESCRIBED LINE:
BEGINNING AT A POINT OPPOSITE HIGHWAY ENGINEER STATION AD 10+53.77 P.C., AS SHOWN ON SHEET 2 OF 3 SHEETS OF HIGHWAY ENGINEERS MAP, DATED DECEMBER 21, 1965 AND 60 FEET DISTANT NORTHWESTERLY, WHEN MEASURED AT RIGHT ANGLES FROM THE AD CENTERLINE OF PRIMARY STATE NO. 1 (SR-5) MAYTOWN TO TUMWATER, LATHROP ROAD INTERCHANGE, THENCE IN A STRAIGHT LINE SOUTH 28° 41' 30" WEST TO THE EAST LINE OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16; THENCE SOUTHERLY ALONG SAID EAST LINE TO A POINT OPPOSITE HIGHWAY ENGINEERS STATION DB 4+85, AS SHOWN ON SAID MAP, AND 40 FEET DISTANT NORTHERLY THEREFROM; THENCE CONTINUING WESTERLY PARALLEL WITH SAID DB CENTERLINE TO A POINT OPPOSITE HIGHWAY ENGINEER STATION DB 2+50 AND THE END OF THIS LINE DESCRIPTION. EXCEPT COUNTY ROAD KNOWN AS LATHROP ROAD; ALSO EXCEPT THAT PORTION CONVEYED TO THURSTON COUNTY BY DEED RECORDED JULY 16, 2010 UNDER AUDITOR'S FILE NO. 4160513; ALSO EXCEPT THAT PORTION CONVEYED TO CITY OF TUMWATER BY DEED RECORDED JANUARY 28, 2021 UNDER AUDITOR'S FILE NO. 4821155.

PARCEL B:
THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION; THENCE WEST ALONG THE SOUTH LINE OF SAID SOUTHEAST QUARTER OF SOUTHWEST QUARTER 100 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING WEST 140 FEET, MORE OR LESS, TO THE EAST LINE OF THE WEST 2,387.73 FEET OF THE SOUTHWEST QUARTER OF SAID SECTION 16; THENCE NORTH 375 FEET; THENCE EAST 140 FEET, MORE OR LESS, TO A POINT 100 FEET WEST OF THE EAST LINE OF SAID SOUTHEAST QUARTER OF SOUTHWEST QUARTER; THENCE SOUTH 375 FEET TO THE TRUE POINT OF BEGINNING. EXCEPT PORTION THEREOF LYING WITHIN LATHROP ROAD; ALSO EXCEPT THAT PORTION CONVEYED TO THURSTON COUNTY BY DEED RECORDED JULY 16, 2010 UNDER AUDITOR'S FILE NO. 4160513; ALSO EXCEPTING THAT PORTION CONVEYED TO CITY OF TUMWATER BY DEED RECORDED JANUARY 28, 2021 UNDER AUDITOR'S FILE NO. 4821153.

PARCEL C:
THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., LYING WESTERLY OF TRACTS CONVEYED TO THE STATE OF WASHINGTON, BY DEEDS RECORDED MARCH 2, 1953, AUGUST 15, 1957 AND JULY 19, 1966 UNDER AUDITOR'S FILE NOS. 516498, 587782, AND 743347, RESPECTIVELY.

PARCEL D:
THAT PART OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT OF THE SOUTH LINE OF SAID SECTION 16, 2,299.3 FEET EAST OF ITS SOUTHWEST CORNER; RUNNING THENCE EAST ALONG SAID SOUTH LINE 88.43 FEET; THENCE NORTH 375 FEET; THENCE EAST 240 FEET, MORE OR LESS, TO THE EAST LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE NORTHERLY ALONG SAID EAST LINE 945 FEET, MORE OR LESS, TO THE NORTH LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE WESTERLY ALONG SAID NORTH LINE 328 FEET, MORE OR LESS TO A POINT NORTH OF THE POINT OF BEGINNING; THENCE SOUTH 1,320 FEET, MORE OR LESS; TO THE POINT OF BEGINNING. EXCEPTING THEREFROM THE SOUTH 30 FEET FOR COUNTY ROAD KNOWN AS LATHROP ROAD; ALSO EXCEPT THAT PORTION CONVEYED TO THURSTON COUNTY BY DEED RECORDED JULY 16, 2010 UNDER AUDITOR'S FILE NO. 4160513; ALSO EXCEPTING THAT PORTION CONVEYED TO CITY OF TUMWATER BY DEED RECORDED JANUARY 28, 2021 UNDER AUDITOR'S FILE NO. 4821154.
IN THURSTON COUNTY, WASHINGTON.

LAND SURVEYORS NOTES:

1. A TYPOGRAPHICAL ERROR APPEARS IN THE PARCEL "A" LEGAL DESCRIPTION, WHICH IS A RESULT OF AN ERROR IN THE VESTING DEED RECORDED UNDER AUDITOR'S FILE NO. 4223491. THE INCORRECT PORTION IS THE BEARING OF SOUTH 28° 41' 30" WEST. BASED ON DEED FROM THE STATE OF WASHINGTON, RECORDED UNDER AUDITOR'S FILE NO. 743346, SAID BEARING SHOULD BE SOUTH 38° 41' 30" WEST SURVEY.
2. THIS SURVEY WAS CONDUCTED BY FIELD TRAVERSE METHODS USING A LEICA THREE SECOND TOTAL STATION SURVEY INSTRUMENT. THE RESULTS OF THIS SURVEY EXCEED THE STANDARDS CONTAINED IN WAC 332.130.090.
3. ALL CORNERS NOTED AS FOUND WERE VISITED IN AUGUST OF 2013.

SURVEY REFERENCES

1. SUBDIVISION GUARANTEE ISSUED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, THROUGH THEIR AGENT, THURSTON COUNTY TITLE COMPANY DATED MAY 6, 2022 UNDER FILE NO. TH37370
2. THURSTON COUNTY HIGH PRECISION SURVEY CONTROL NETWORK
3. SR5 RIGHT OF WAY PLANS, MAYTOWN TO TUMWATER, SHEETS 6-12 DATED MAY 1952
4. SR5 RIGHT OF WAY PLAN, MAYTOWN TO TUMWATER, LATHROP ROAD INTERCHANGE, SHEET 2 DATED DECEMBER 21, 1965
5. SURVEY RECORDED UNDER AUDITOR'S FILE NO. 4178427
6. SURVEY RECORDED UNDER AUDITOR'S FILE NO. 3848391
7. SURVEY RECORDED UNDER AUDITOR'S FILE NO. 3705330
8. SURVEY RECORDED UNDER AUDITOR'S FILE NO. 3161359
9. SURVEY RECORDED UNDER AUDITOR'S FILE NO. 3161358
10. SURVEY RECORDED UNDER AUDITOR'S FILE NO. 9008090011

TITLE NOTES:

1. TITLE INFORMATION DEPICTED/NOTED ON THIS PLAT IS BASED ON SUBDIVISION GUARANTEE ISSUED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, THROUGH THEIR AGENT, THURSTON COUNTY TITLE COMPANY DATED MAY 6, 2022 UNDER FILE NO. TH37370.
2. THE LAND DESCRIBED HEREON HAS BEEN ASSIGNED PROPERTY TAX ACCOUNT NOS. 12716420000, 12716340100, 12716340102 AND 12716340101 BY THURSTON COUNTY.
3. INTENTIONALLY OMITTED
4. THE LAND DESCRIBED HEREON IS SUBJECT TO AGREEMENT BETWEEN KAUFMAN REAL ESTATE, LLC AND PUGET WESTERN, INC. FOR COST SHARING ASSOCIATED WITH TRAFFIC SIGNAL IMPROVEMENTS, AS DISCLOSED BY INSTRUMENT RECORDED UNDER AUDITOR'S FILE NO. 4303640.
5. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM THE STATE OF WASHINGTON FOR ALL OILS, COAL ORES, MINERALS, FOSSILS, ETC., AS RECORDED UNDER VOLUME 174 OF DEEDS PAGE 128. SAID DEED ALSO SUBJECT TO UNLOCATABLE EASEMENT FOR RIGHT OF WAY GRANTED TO THURSTON COUNTY AUGUST 24, 1932 UNDER APPLICATION NO. 1430; ALSO SUBJECT TO AN UN-LOCATABLE EASEMENT FOR RIGHT OF WAY FOR RAILROAD PURPOSES GRANTED TO THE OLYMPIA TERMINAL RAILWAY COMPANY UNDER APPLICATION NO. 8821 THROUGH CERTIFICATE NO. 307, ISSUED JANUARY 8, 1913.
6. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM THE STATE OF WASHINGTON FOR ALL OILS, COAL, ORES MINERALS, FOSSILS, ETC., AS RECORDED UNDER AUDITOR'S FILE NO. 383226. SAID DEED ALSO SUBJECT TO UNLOCATABLE EASEMENT FOR RIGHT OF WAY GRANTED TO THURSTON COUNTY AUGUST 24, 1932 UNDER APPLICATION NO. 1430; ALSO SUBJECT TO AN UN-LOCATABLE EASEMENT FOR RIGHT OF WAY FOR RAILROAD PURPOSES GRANTED TO THE OLYMPIA TERMINAL RAILWAY COMPANY UNDER APPLICATION NO. 8821 THROUGH CERTIFICATE NO. 307, ISSUED JANUARY 8, 1913.
7. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED FROM THE STATE OF WASHINGTON FOR ALL OILS, COAL, ORES MINERALS, FOSSILS, ETC., AS RECORDED UNDER AUDITOR'S FILE NO. 462790. SAID DEED ALSO SUBJECT TO UNLOCATABLE EASEMENT FOR RIGHT OF WAY GRANTED TO THURSTON COUNTY AUGUST 24, 1932 UNDER APPLICATION NO. 1430; ALSO SUBJECT TO AN EASEMENT FOR RIGHT OF WAY FOR RAILROAD PURPOSES GRANTED TO THE OLYMPIA TERMINAL RAILWAY COMPANY UNDER APPLICATION NO. 8821 THROUGH CERTIFICATE NO. 307, ISSUED JANUARY 8, 1913.
8. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO RELINQUISHMENT OF CERTAIN RIGHTS; INCLUDING EASEMENTS FOR ACCESS, LIGHT AND AIR AND ALL RIGHTS OF INGRESS AND EGRESS TO, FROM AND BETWEEN SAID LAND AND INTERSTATE HIGHWAY 5 (SR5), AS DISCLOSED BY DEEDS RECORDED UNDER AUDITOR'S FILE NO.'S 587782, 743346 AND 743347.
9. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO RIGHTS GRANTED TO THE STATE OF WASHINGTON FOR A DRAINAGE DITCH 30 FEET WIDE BY 170 FEET LONG, AS DISCLOSED BY INSTRUMENT RECORDED UNDER AUDITOR'S FILE NO. 516498.
10. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO RIGHTS GRANTED TO PACIFIC NORTHWEST PIPELINE CORPORATION IN RIGHT OF WAY CONTRACTS RECORDED UNDER AUDITOR'S FILE NOS. 585288 AND 587077 AND AS AMENDED BY INSTRUMENT RECORDED UNDER AUDITOR'S FILE NO. 757510. SAID EASEMENT ALSO INCLUDES PROVISIONS FROM TEMPORARY CONSTRUCTION AREAS THAT EXCEED THE LIMITS OF THE PERMANENT EASEMENT. THE EASEMENT NOTED ABOVE CONTAINS AN AMBIGUOUS LEGAL DESCRIPTION; HOWEVER PACIFIC NORTHWEST PIPELINE CORPORATION REPRESENTATIVES ACKNOWLEDGE THE EASEMENT LOCATION SHOWN HEREON DURING SITE CONSTRUCTION AND POT HOLING TO TO CONFIRM ITS LOCATION.
11. A PORTION OF THE LAND OF DESCRIBED HEREON IS SUBJECT TO EASEMENT GRANTED TO PUGET SOUND ENERGY RECORDED UNDER AUDITOR'S FILE NO. 4827283.
12. A PORTION OF THE LAND OF DESCRIBED HEREON IS SUBJECT TO EASEMENT GRANTED TO PUGET SOUND ENERGY RECORDED UNDER AUDITOR'S FILE NO. 4827352.

August 31, 2022

JEFF S. PANTIER
STATE OF WASHINGTON
28073
REGISTERED
PROFESSIONAL LAND SURVEYOR

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

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13-051

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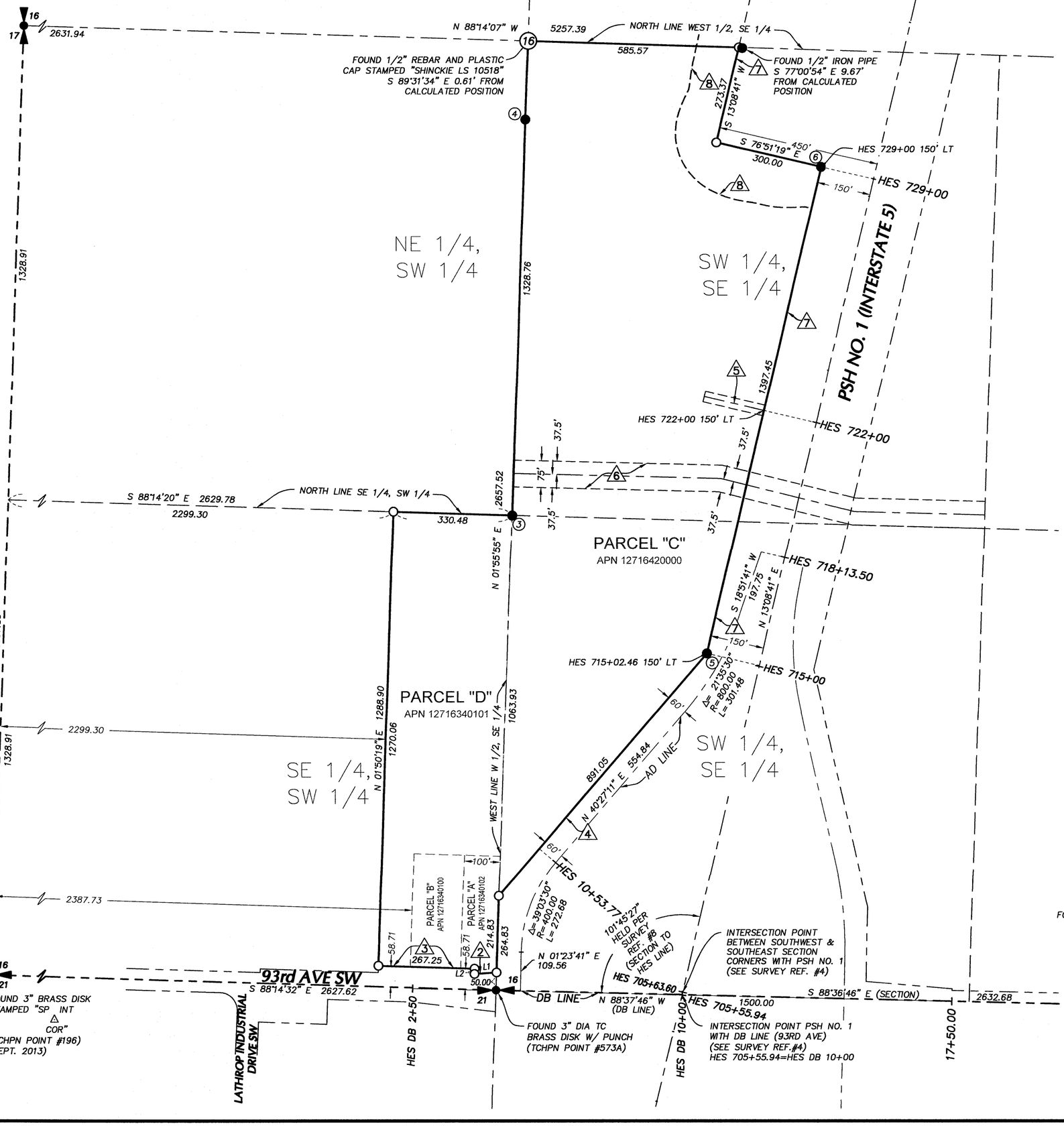
EXHIBIT B

PLAT OF I-5 COMMERCE PLACE

A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND A PORTION OF THE NORTHWEST AND SOUTHWEST QUARTERS OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.



LEGEND

- ● FOUND AS NOTED
- ○ SET 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- ③ FOUND 1/2" IRON PIPE S 26°30'9" W 0.52' FROM CALCULATED POSITION
- ④ FOUND 5/8" REBAR AND PLASTIC CAP STAMPED "TUMWATER LS 19626" ON CALCULATED LINE
- ⑤ FOUND 1/2" REBAR & PLASTIC CAP STAMPED "SCINCKE LS 13518" S 31°18'54" W 0.34' FROM CALCULATED POSITION
- ⑥ FOUND 4"X4" CONCRETE MONUMENT S 48°53'1" W 0.78 FROM CALCULATED POSITION
- △1 10' WIDE UTILITY EASEMENT (SEE EASEMENT PROVISIONS SHEET 1 OF 5)
- △2 NORTH LINE RIGHT OF WAY CONVEYED TO THURSTON COUNTY AS DESCRIBED IN DEED RECORDED UNDER AUDITOR'S FILE NO. 4160513
- △3 NORTH LINE RIGHT OF WAY CONVEYED TO THURSTON COUNTY AS DESCRIBED IN DEEDS RECORDED UNDER AUDITOR'S FILE NO.'S 4821153, 4821154 & 4821155
- △4 RIGHT OF WAY LINE DESCRIBED IN DEED TO THE STATE OF WASHINGTON DESCRIBED IN DEED RECORDED UNDER AUDITOR'S FILE NO. 743347 (SEE TITLE NOTE NO. 8)
- △5 30' WIDE DRAINAGE EASEMENT DESCRIBED IN DEED TO THE STATE OF WASHINGTON RECORDED UNDER AUDITOR'S FILE NO. 516498 (ALSO SEE TITLE NOTE NO. 9)
- △6 APPROXIMATE LOCATION 75' WIDE EASEMENT GRANTED TO PACIFIC NOTHWEST PIPELINE, AS DESCRIBED UNDER AUDITOR'S FILE NO. 757510 (SEE TITLE NOTE NO. 10)
- △7 RIGHT OF WAY LINE DESCRIBED IN DEED RECORDED UNDER AUDITOR'S FILE NO.'S 516498 & 743347 (SEE TITLE NOTE NO. 9)
- △8 150' WETLAND BUFFER BASED ON REPORT BY KRIPPNER CONSULTING, LLC DATED JANUARY 30, 2020

LINE TABLE		
NO.	BEARING	DISTANCE
L1	S 86°13'49" W	61.42
L2	S 01°45'28" W	14.63

BASIS OF BEARINGS: THURSTON COUNTY HIGH PRECISION NETWORK BASED ON CONTROL POINTS #196 AND #573A EQUALS SOUTH 88 14' 32" EAST

SCALE: 1"=200 FEET

0 100 200 400

August 31, 2022

JEFF S. PANTIER — STATE OF WASHINGTON — 28073 — REGISTERED PROFESSIONAL LAND SURVEYOR

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PLAT 4952603 3 of 5

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EXHIBIT B

PLAT OF I-5 COMMERCE PLACE

A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND A PORTION OF THE NORTHWEST AND SOUTHWEST QUARTERS OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.

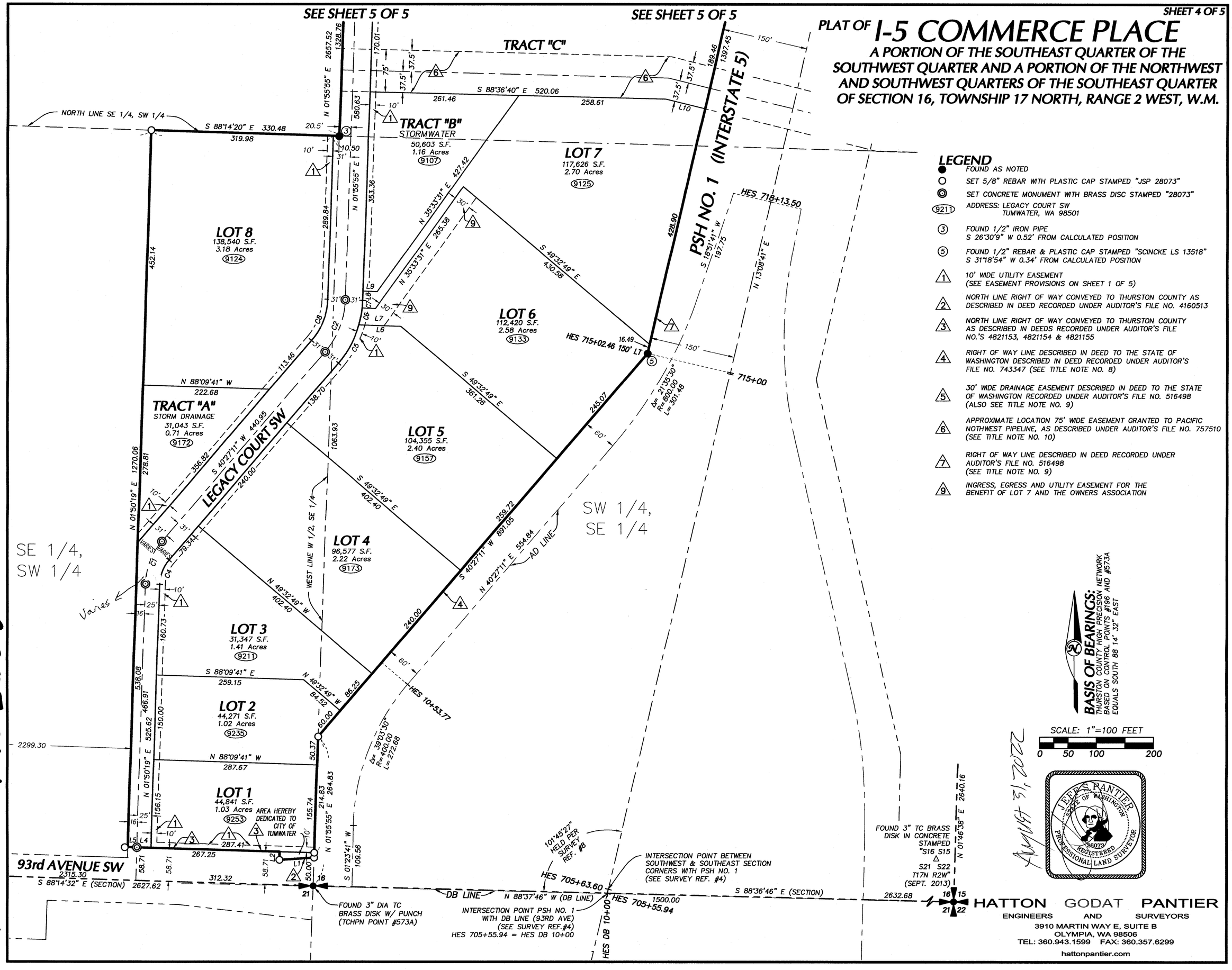
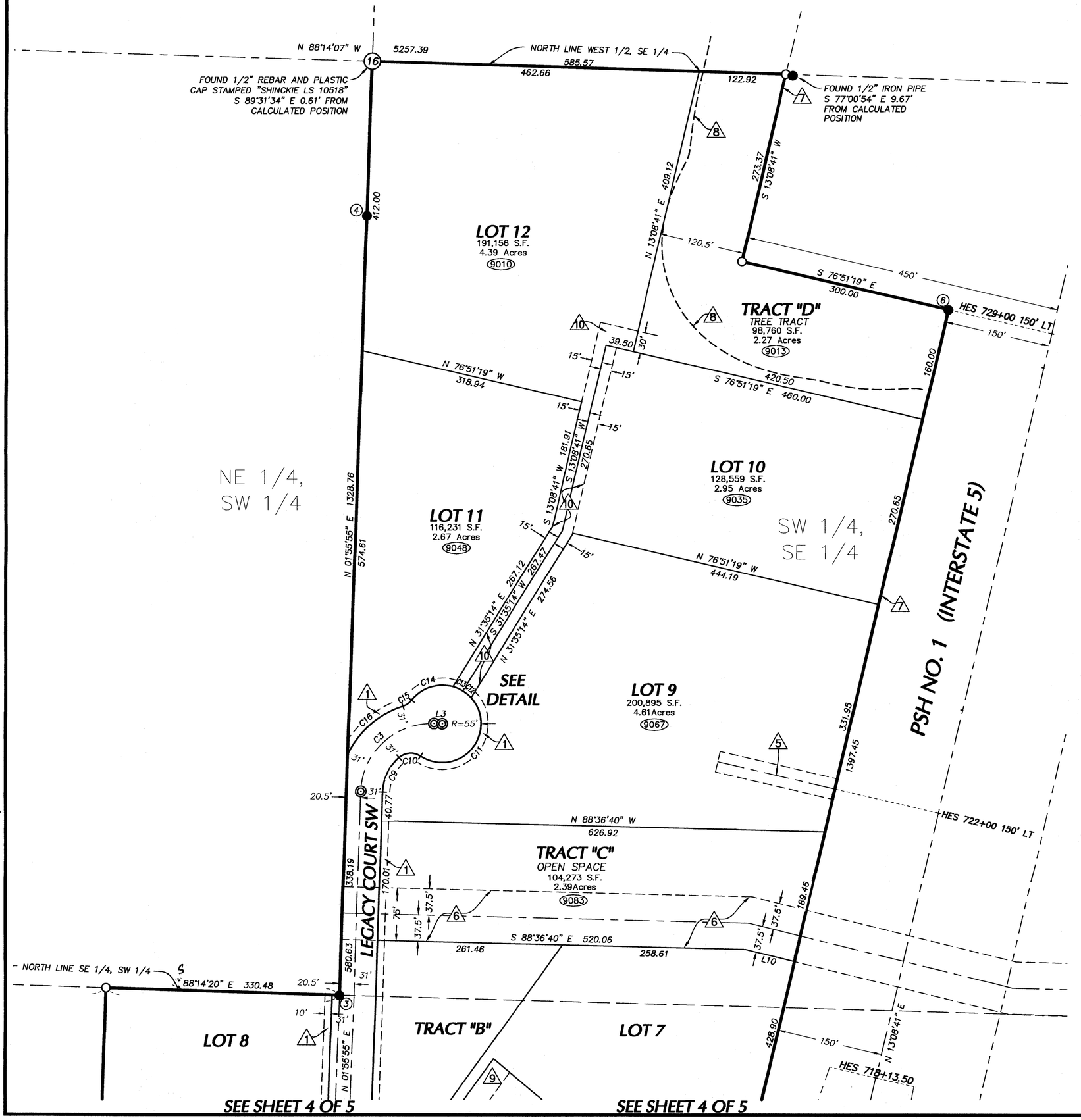

SEE SHEET 5 OF 5
SEE SHEET 5 OF 5
TRACT "C"
TRACT "B"
STORMWATER
50,603 S.F.
1.16 Acres
9107
LOT 7
117,626 S.F.
2.70 Acres
9125
LOT 8
138,540 S.F.
3.18 Acres
9124
LOT 6
112,420 S.F.
2.58 Acres
9133
LOT 5
104,355 S.F.
2.40 Acres
9157
LOT 4
96,577 S.F.
2.22 Acres
9173
LOT 3
31,347 S.F.
1.41 Acres
9211
LOT 2
44,271 S.F.
1.02 Acres
9235
LOT 1
44,841 S.F.
1.03 Acres
9253
TRACT "A"
STORM DRAINAGE
31,043 S.F.
0.71 Acres
9172
AREA HEREBY DEDICATED TO CITY OF TUMWATER
PSH NO. 1 (INTERSTATE 5)
LEGACY COURT SW
93rd AVENUE SW
NORTH LINE SE 1/4, SW 1/4
S 88°14'20" E 330.48
319.98
S 88°36'40" E 520.06
261.46
258.61
N 01°55'55" E 2657.52
1328.76
N 01°55'55" E 1270.06
N 01°50'19" E
N 01°55'55" E
353.36
289.84
452.14
N 35°33'31" E 427.42
N 35°33'31" E 265.38
S 49°32'49" E 430.58
S 18°51'41" W 197.75
N 13°08'41" E
428.90
HES 718+13.50
HES 715+02.46 150' LT
715+00
16.49
150'
Δ= 21°35'30"
R= 860.00
L= 301.48
245.07
60'
N 88°09'41" W
222.68
113.46
138.70
S 40°27'11" W 440.95
356.82
1063.93
S 49°32'49" E 361.26
S 49°32'49" E 402.40
259.72
S 40°27'11" W 891.05
N 40°27'11" E 554.84
AD LINE
WEST LINE W 1/2, SE 1/4
N 49°32'49" W 402.40
240.00
HES 10+53.77
Δ= 39°03'30"
R= 400.00
L= 272.68
S 88°09'41" E
259.15
N 49°32'49" W
84.52
86.25
60.00
50.37
N 88°09'41" W
287.67
2299.30
538.08
466.91
525.62
150.00
160.73
156.15
214.83
264.83
155.74
287.41
267.25
58.71
312.32
2315.30
S 88°14'32" E (SECTION)
2627.62
109.56
S 01°23'41" W
101°45'27" HELD PER SURVEY REF. #8
HES 705+63.60
HES 705+55.94
1500.00
S 88°36'46" E (SECTION)
2632.68
N 88°37'46" W (DB LINE)
DB LINE
HES DB 10+00
FOUND 3" DIA TC BRASS DISK W/ PUNCH (TCHPN POINT #573A)
INTERSECTION POINT PSH NO. 1 WITH DB LINE (93RD AVE) (SEE SURVEY REF.#4) HES 705+55.94 = HES DB 10+00
INTERSECTION POINT BETWEEN SOUTHWEST & SOUTHEAST SECTION CORNERS WITH PSH NO. 1 (SEE SURVEY REF. #4)
FOUND 3" TC BRASS DISK IN CONCRETE STAMPED "S16 S15 △ S21 S22 T17N R2W" (SEPT. 2013)
N 01°46'38" E 2640.16
SE 1/4, SW 1/4
SW 1/4, SE 1/4
Varies
Varies
Varies

EXHIBIT B

PLAT OF I-5 COMMERCE PLACE

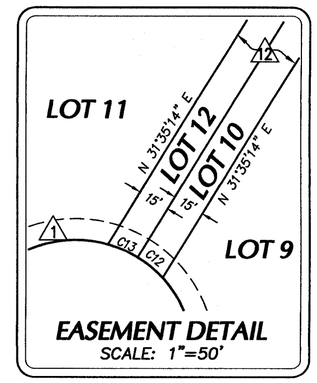
A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND A PORTION OF THE NORTHWEST AND SOUTHWEST QUARTERS OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.

PLAT 4952603 5 of 5



LEGEND

- FOUND AS NOTED
- SET 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- SET CONCRETE MONUMENT WITH BRASS DISC STAMPED "28073"
- (9010) ADDRESS: LEGACY COURT SW TUMWATER, WA 98501
- (3) FOUND 1/2" IRON PIPE S 26°30'9" W 0.52' FROM CALCULATED POSITION
- (4) FOUND 5/8" REBAR AND PLASTIC CAP STAMPED "TUMWATER LS 19626" ON CALCULATED LINE
- (5) FOUND 1/2" REBAR & PLASTIC CAP STAMPED "SCINCKE LS 13518" S 31°18'54" W 0.34' FROM CALCULATED POSITION
- (6) FOUND 4"X4" CONCRETE MONUMENT S 48°53'1" W 0.78 FROM CALCULATED POSITION
- 1 10' WIDE UTILITY EASEMENT (SEE EASEMENT PROVISIONS)
- 5 30' WIDE DRAINAGE EASEMENT DESCRIBED IN DEED TO THE STATE OF WASHINGTON RECORDED UNDER AUDITOR'S FILE NO. 516498 (ALSO SEE TITLE NOTE NO. 9)
- 6 APPROXIMATE LOCATION 75' WIDE EASEMENT GRANTED TO PACIFIC NOTHWEST PIPELINE, AS DESCRIBED UNDER AUDITOR'S FILE NO. 757510 (SEE TITLE NOTE NO. 10)
- 7 RIGHT OF WAY LINE DESCRIBED IN DEED RECORDED UNDER AUDITOR'S FILE NO. 516498 (SEE TITLE NOTE NO. 9)
- 8 150' WETLAND BUFFER BASED ON REPORT BY KRIPPNER CONSULTING, LLC DATED JANUARY 30, 2020
- 10 INGRESS, EGRESS AND UTILITY EASEMENT FOR THE BENEFIT OF LOTS 9, 10, 11, 12 AND TRACT "D"



BASIS OF BEARINGS: THURSTON COUNTY HIGH PRECISION NETWORK BASED ON CONTROL POINTS #196 AND #573A=SOUTH 88 14' 32" EAST

SCALE: 1"=100 FEET

0 50 100 200

August 3, 2022

JEFF S. PANTIER — STATE OF WASHINGTON — 28073 — REGISTERED PROFESSIONAL LAND SURVEYOR

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EXHIBIT C

CITY OF TUMWATER
PUBLIC WORKS DEPARTMENT
555 ISRAEL ROAD SW
TUMWATER, WA 98501

DOCUMENT TITLE(S)
Storm Water Maintenance Agreement

REFERENCE NUMBERS(S) OF RELATED DOCUMENTS

GRANTOR(S) (LAST, FIRST, MIDDLE INITIAL)

Kaufman Real Estate, LLC

GRANTEE(S) (LAST, FIRST, MIDDLE INITIAL)

City of Tumwater

LEGAL DESCRIPTION
Parcel Number 12716340102: Section 16 Township 17 Range 2W Quarter SE SW THE E 100 FT OF THE S 375 FT OF THE SE QTR OF THE SW QTR; EXC THEREFROM THAT PTN CONVEYED TO THE SOW FOR LATHROP RD INTERCHANGE BY INSTRUMENT REC
Parcel Number 12716340100: Section 16 Township 17 Range 2W Quarter SE SW THAT PTN DAF: BEG AT THE SE COR OF SD SUBDIV; TH W ALG THE S LN OF SD SE QTR OF THE SW QTR 100 FT TO THE TPOB; TH CONT W 140 FT, M/L, TO THE E LN
Parcel Number 12716420000:
16-17-2W NW-SE/W2 SW-SE LESS 21.44A H&W LESS 2.20A
Parcel Number 12716340101: Section 16 Township 17 Range 2W Quarter SE SW THAT PTN DAF: BAAP ON THE S LN OF SD SEC 16, 2299.3 FT E OF IT SW COR; RUNN TH E ALG SD S LN 88.43 FT; TH N 375 FT; TH E 240 FT, M/L, TO THE E LN OF SD

ASSESSOR'S PROPERTY TAX PARCEL/ACCOUNT NUMBER
12716340102, 12716340100, 12716420000, 12716340101

4952601 **Pages: 7**
09/27/2022 10:54 AM Agreement
Thurston County Washington
CITY OF TUMWATER

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EXHIBIT C

AGREEMENT TO MAINTAIN STORM WATER FACILITIES AND TO IMPLEMENT A POLLUTION SOURCE CONTROL PLAN BY AND BETWEEN THE CITY OF TUMWATER AND Kaufman Real Estate, LLC, AND IT'S HEIRS, SUCCESSORS, OR ASSIGNS (HEREINAFTER "OWNER")

The upkeep and maintenance of storm water facilities and the implementation of pollution source control best management practices (BMPs) are essential to the protection of water resources in the CITY OF TUMWATER. All property owners are expected to conduct business in a manner that promotes environmental protection. This Agreement contains specific provisions with respect to maintenance of storm water facilities and use of pollution source control BMPs. The authority to require maintenance and pollution source control is provided by Tumwater Municipal Code.

LEGAL DESCRIPTION:

SEE ATTACHED EXHIBIT "A"

RECITALS:

WHEREAS, OWNER is the owner of certain real property in Thurston County, Washington, described as set forth in the legal description contained herein and referred to in this agreement as the "PROPERTY"; and

WHEREAS, in connection with the OWNER'S proposed development of the PROPERTY, the CITY OF TUMWATER has required and OWNER has agreed to construct storm water facilities and to implement a pollution source control plan. The storm water facilities and pollution source control plan were prepared by Hatton Godat Pantier, Inc. for the OWNER'S PROPERTY and is on file with CITY OF TUMWATER; and

WHEREAS, OWNER has constructed improvements, including but not limited to, buildings, pavement, and storm water facilities on the PROPERTY, in order to further the goals of the CITY OF TUMWATER to ensure the protection and enhancement of Tumwater's water resources, CITY OF TUMWATER and OWNER hereby enter into this Agreement. The responsibilities of each party to this Agreement are identified below.

OWNER SHALL:

(1) Implement the storm water facility maintenance program located in the Stormwater Facilities Maintenance Guide of Volume V of the City's 2018 Drainage Design and Erosion Control Manual.

(2) Comply with Pollution Source Control Requirements located in Volume IV of the City's 2018 Drainage Design and Erosion Control Manual.

EXHIBIT C

(3) Maintain a record (in the form of a log book) of steps taken to implement the programs referenced in (1) and (2) above. The log book shall be available for inspection by CITY OF TUMWATER at 7711 Martin Way E. during normal business hours. The log book shall catalog the action taken, who took it, when it was done, how it was done, and any problems encountered or follow-up actions recommended. Maintenance items ("problems") listed in Item (1) above shall be inspected as specified in the instructions or more frequently if necessary. OWNER is encouraged to photocopy the individual checklists in Item (2) above and use them to complete its monthly inspections. These completed checklists would then, in combination, comprise the log book.

(4) Submit an annual report to CITY OF TUMWATER regarding implementation of the programs referenced in (1) and (2) above. The report must be submitted on or before May 15th of each calendar year and shall contain, at a minimum, the following:

(a) Name, address, and telephone number of the business, the person, or the firm responsible for plan implementation, and the person completing the report.

(b) Time period covered by the report.

(c) A chronological summary of activities conducted to implement the programs referenced in (1) and (2) above. A photocopy of the applicable sections of the log book with any additional explanation needed shall normally suffice. For any activities conducted by paid parties not affiliated with OWNER, include a copy of the invoice for services.

(d) An outline of planned activities for the next year.

(5) Prevent any unauthorized modifications to the drainage system and prevent it from being dismantled, revised, altered or removed except as necessary for maintenance, repair or replacement. Any such actions will be covered under item (4) above and shall be approved by the CITY OF TUMWATER. Modifications to the storm water quantity control and storm water quality system must be approved in advance by CITY OF TUMWATER and may require the submittal of revised design drawings, supporting calculations, modifications to maintenance requirements, and applications for permits.

CITY OF TUMWATER WILL, AS RESOURCES ALLOW:

(1) Provide technical assistance to OWNER in support of its operation and maintenance activities conducted pursuant to its maintenance and source control programs. Said assistance shall be provided upon request, as CITY OF TUMWATER time and resources permit and at no charge to OWNER.

EXHIBIT C

(2) Review the annual report and conduct occasional site visits to discuss performance and problems with OWNER.

(3) Review this agreement with OWNER and modify it as necessary.

REMEDIES:

(1) If the CITY OF TUMWATER determines that maintenance or repair work is required to be done to the storm water facility existing on the OWNER'S PROPERTY, CITY OF TUMWATER shall give OWNER, and the person or agent in control of said PROPERTY if different, notice of the specific maintenance and/or repair required. CITY OF TUMWATER shall set a reasonable time in which such work is to be completed by the persons who were given notice. If the above required maintenance and/or repair is not completed within the time set by CITY OF TUMWATER, written notice will be sent to the persons who were given notice stating CITY OF TUMWATER'S intention to perform such maintenance and bill the OWNER for all incurred expenses. CITY OF TUMWATER may also adjust storm water utility charges if required maintenance is not performed.

(2) If at any time CITY OF TUMWATER determines that the existing system creates any imminent threat to public health, welfare or water quality CITY OF TUMWATER may take immediate measures to remedy said threat. No notice to the persons listed in Remedies (1), above, shall be required under such circumstances. All other responsibilities shall remain in effect.

(3) OWNER grants unrestricted authority to CITY OF TUMWATER for access to any and all storm water system features for the purpose of routine inspections and/or performing maintenance, repair and/or retrofit as may become necessary under Remedies (1) and/or (2).

(4) OWNER shall assume all responsibility for the cost of any maintenance and for repairs to the storm water facility. Such responsibility shall include reimbursement to CITY OF TUMWATER within 30 days of the receipt of the invoice for any such work performed. Overdue payments will require payment of interest at the current legal rate for liquidated judgments. If legal action ensues, any costs or fees incurred by CITY OF TUMWATER will be borne by the OWNER.

(5) OWNER hereby grants to the CITY OF TUMWATER a lien against the above-described PROPERTY in an amount equal to the cost incurred by CITY OF TUMWATER to perform the maintenance or repair work described herein, including interest and fees described in Remedies (4), above.

This Agreement is intended to protect the value and desirability of the real PROPERTY described above and to benefit all the citizens of the CITY OF TUMWATER. It shall run with the land, and touch and concern the land, and be binding on all parties having or acquiring from OWNER or their successors any right, title, or interest in the

EXHIBIT C

PROPERTY or any part thereof, as well as their title, or interest in the PROPERTY or any part thereof, as well as their heirs, successors, and assigns. They shall inure to the benefit of each present or future successor in interest of said PROPERTY or any part thereof, or interest therein, and to the benefit of all citizens of the CITY OF TUMWATER.

Dated at Tumwater, Washington, this 6th day of September, 2022.

OWNER:

Signature

Name: John Kaufman

Title: Vice President

Address: 7903 Sweet Track Tumwater WA 98501

State of Washington)
)ss
County of Thurston)

I certify that I know or have satisfactory evidence that John Kaufman is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the Vice President of Kaufman Real Estate, LLC to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 9-6-2022

(Seal or stamp)

CHAD STEINBRECHER
APPOINTMENT EXPIRES July 05, 2026
NOTARY PUBLIC
COMM # 120038
STATE OF WASHINGTON

(Signature)
Notary Public in and for the State of Washington.
My appointment expires 7-5-2026.

For Clarity expiration date July 5, 2026, Commission # 120038

CITY OF TUMWATER:

APPROVED as to form only:

DocuSigned by:
karen kirkpatrick
9C2747F30AD6419...
City Attorney

ACCEPTED BY:

Water Resources & Sustainability Director

For Clarity:
9C2747F30AD6419

EXHIBIT C

EXHIBIT A
I-5 COMMERCE PLACE
13-051
LEGAL DESCRIPTION

PARCEL A:

THAT PORTION OF THE SOUTH 375 FEET OF THE EAST 100 FEET OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., LYING NORTHERLY AND WESTERLY OF THE FOLLOWING DESCRIBED LINE:
BEGINNING AT A POINT OPPOSITE HIGHWAY ENGINEER STATION AD 10+53.77 P.C., AS SHOWN ON SHEET 2 OF 3 SHEETS OF HIGHWAY ENGINEERS MAP, DATED DECEMBER 21, 1965 AND 60 FEET DISTANT NORTHWESTERLY, WHEN MEASURED AT RIGHT ANGLES FROM THE AD CENTERLINE OF PRIMARY STATE NO. 1 (SR-5) MAYTOWN TO TUMWATER, LATHROP ROAD INTERCHANGE, THENCE IN A STRAIGHT LINE SOUTH 28° 41' 30" WEST TO THE EAST LINE OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16; THENCE SOUTHERLY ALONG SAID EAST LINE TO A POINT OPPOSITE HIGHWAY ENGINEERS STATION DB 4+85, AS SHOWN ON SAID MAP, AND 40 FEET DISTANT NORTHERLY THEREFROM; THENCE CONTINUING WESTERLY PARALLEL WITH SAID DB CENTERLINE TO A POINT OPPOSITE HIGHWAY ENGINEER STATION DB 2+50 AND THE END OF THIS LINE DESCRIPTION. EXCEPT COUNTY ROAD KNOWN AS LATHROP ROAD.

PARCEL B:

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION;
THENCE WEST ALONG THE SOUTH LINE OF SAID SOUTHEAST QUARTER OF SOUTHWEST QUARTER 100 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING WEST 140 FEET, MORE OR LESS, TO THE EAST LINE OF THE WEST 2,387.73 FEET OF THE SOUTHWEST QUARTER OF SAID SECTION 16; THENCE NORTH 375 FEET; THENCE EAST 140 FEET, MORE OR LESS, TO A POINT 100 FEET WEST OF THE EAST LINE OF SAID SOUTHEAST QUARTER OF SOUTHWEST QUARTER; THENCE SOUTH 375 FEET TO THE TRUE POINT OF BEGINNING. EXCEPT PORTION THEREOF LYING WITHIN LATHROP ROAD.

PARCEL C:

THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., LYING WESTERLY OF TRACTS CONVEYED TO THE STATE OF WASHINGTON, BY

EXHIBIT C

DEEDS RECORDED MARCH 2, 1953, AUGUST 15, 1957 AND JULY 19, 1966 UNDER AUDITOR'S FILE NOS. 516498, 587782, AND 743347, RESPECTIVELY.

PARCEL D:

THAT PART OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT OF THE SOUTH LINE OF SAID SECTION 16, 2,299.3 FEET EAST OF ITS SOUTHWEST CORNER; RUNNING THENCE EAST ALONG SAID SOUTH LINE 88.43 FEET; THENCE NORTH 375 FEET, THENCE EAST 240 FEET, MORE OR LESS, TO THE EAST LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE NORTHERLY ALONG SAID EAST LINE 945 FEET, MORE OR LESS, TO THE NORTH LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE WESTERLY ALONG SAID NORTH LINE 328 FEET, MORE OR LESS TO A POINT NORTH OF THE POINT OF BEGINNING; THENCE SOUTH 1,320 FEET, MORE OR LESS; TO THE POINT OF BEGINNING. EXCEPTING THEREFROM THE SOUTH 30 FEET FOR COUNTY ROAD KNOW AS LATHROP ROAD, IN THURSTON COUNTY, WASHINGTON.

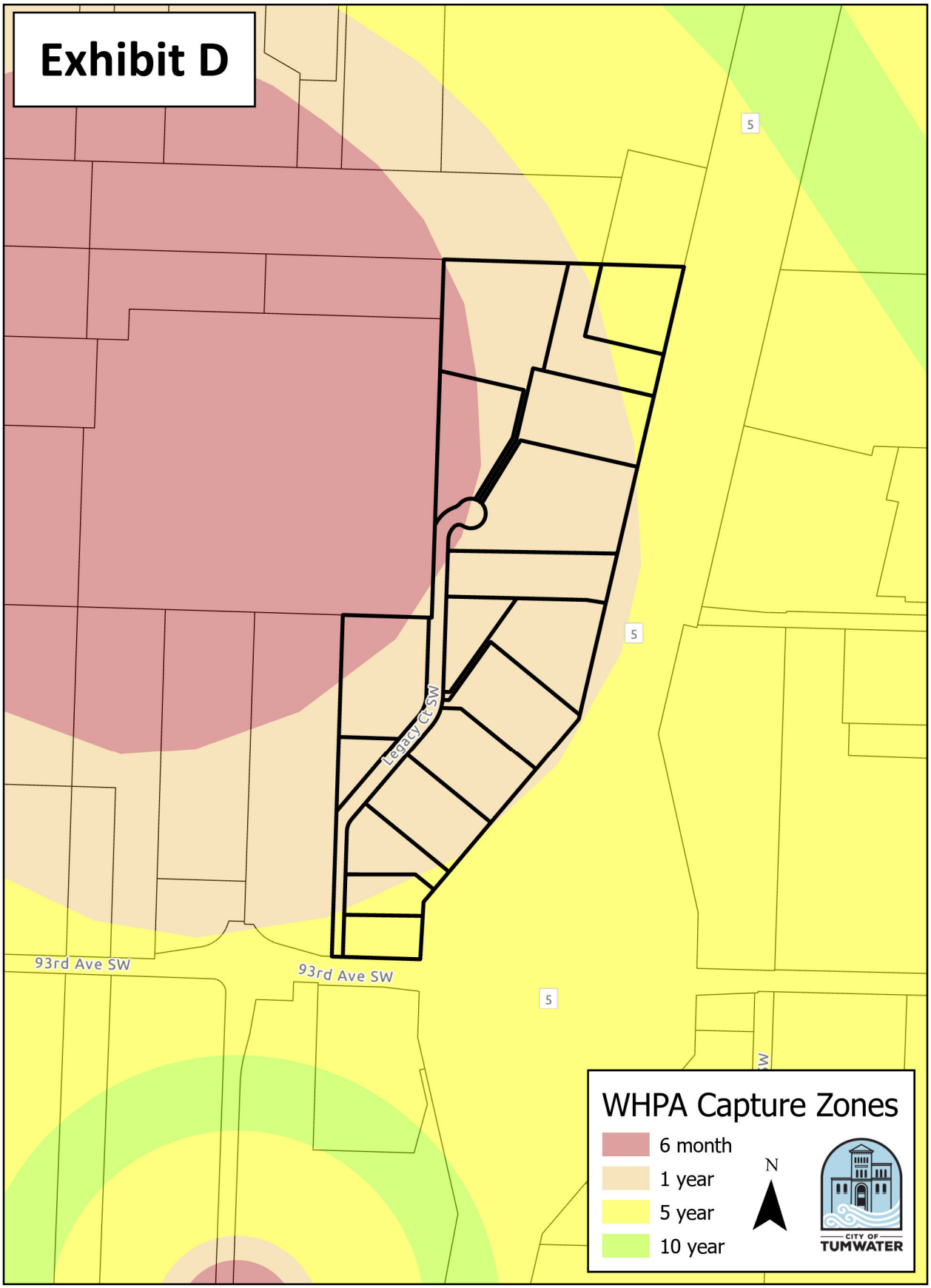
Exhibit D
5
5
5
Legacy Ct SW
93rd Ave SW
93rd Ave SW
WHPA Capture Zones
6 month
1 year
5 year
10 year
N
CITY OF TUMWATER