



Centering Community in Climate Resilience Planning

2024 Northwest Straights Conference

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We serve a diverse range of clients and audiences.
We empower our clients to confidently direct their own progress toward ambitious sustainability goals.

HISTORY

- **Founded in 1993**
- **Women-owned small business**
- **Offices in Oakland, Seattle, and remote locations**
- **Serve public, corporate, nonprofit, and tribal clients**

EXPERTISE

- **Comprehensive climate action planning**
- **Equity-driven community and stakeholder engagement**
- **Climate vulnerability and risk assessments**
- **Greenhouse gas emissions inventories and analyses**
- **Resiliency planning**
- **Energy, water, natural resource, and transportation planning**

Our Climate Team



Climate Planning Projects

Counties

- **Clallam County**
- **Jefferson County**
- King County
- **Kitsap County**
- Pierce County
- **San Juan County**
- **Skagit County**
- Snohomish County
- **Spokane County**
- **Thurston County**
- **Whatcom County**
- **City of Auburn**
- City of Bainbridge Island
- City of Bellevue
- City of Burien
- City of Edmonds
- City of Everett
- City of Federal Way
- **City of Gig Harbor**
- City of Issaquah
- **City of Kenmore**
- City of Kent/Kent Parks
- City of Kirkland
- **City of Lake Forest Park**
- City of Lake Stevens

Cities

Cities

- **City of Marysville**
- City of Mercer Island
- City of Port Angeles
- City of Puyallup
- City of Redmond
- **City of Renton**
- City of Seattle
- City of Shoreline
- **City of Spokane**
- City of Tacoma
- **City of Woodinville**
- Coeur D'Alene Tribe*
- Grand Ronde Tribe*
- Jamestown S'Klallam Tribe
- Lummi Nation
- Makah Tribe
- Port Gamble S'Klallam Tribe
- Puyallup Tribe
- Tulalip Tribes
- Yakama Nation

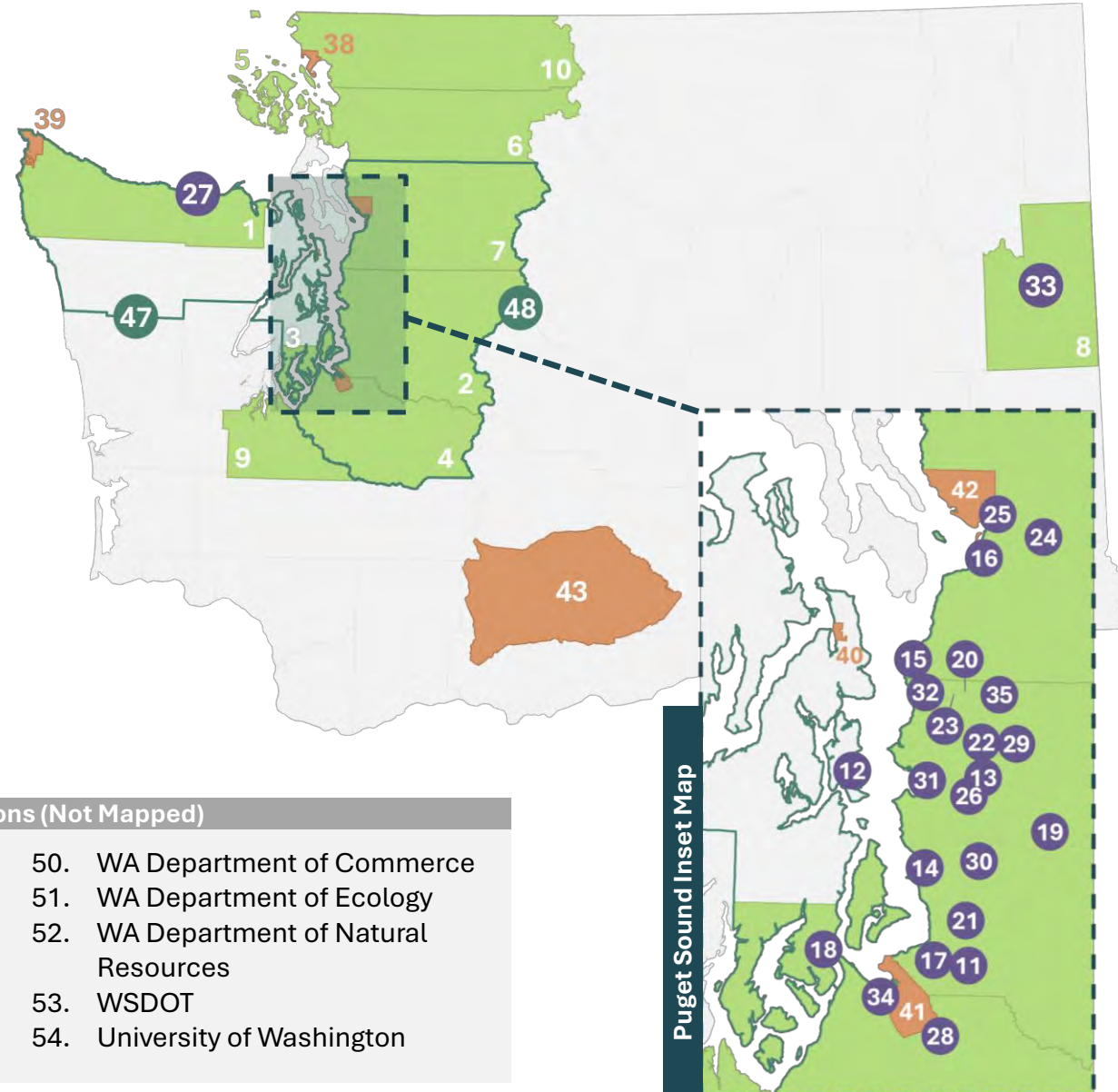
Tribes

*Outside of WA boundary

Bold text indicates Climate Element

Public Entities & Institutions (Not Mapped)

- | | |
|--|--|
| 44. King County-Cities Climate Collaborative | 50. WA Department of Commerce |
| King County Metro | 51. WA Department of Ecology |
| 45. North Olympic Development Council | 52. WA Department of Natural Resources |
| 46. Puget Sound Clean Air Agency | 53. WSDOT |
| 47. Puget Sound Regional Council | 54. University of Washington |
| 48. Sound Transit | |

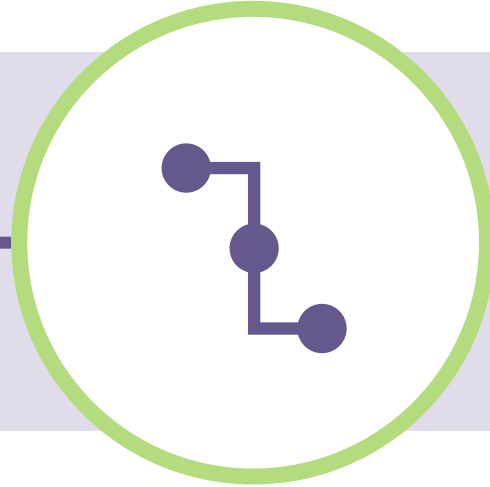


Puget Sound Inset Map

Goals & Objectives



Provide an overview
of climate resilience
planning



Share opportunities and policy pathways
for integrating
climate resilience



Discuss examples
from Washington
State



Identify elements of success for
fostering local
climate resilience

Why plan for climate change?

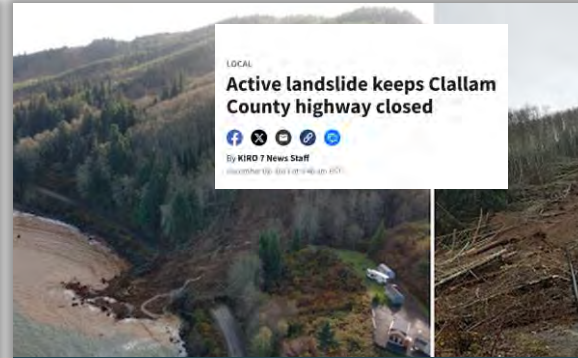
Global climate change is fueling extreme weather events



Hurricane Harvey 2017
\$158 billion



Western U.S. Wildfires 2020
\$30 billion lost, >260 fatalities



Clallam County Landslide 2022
\$



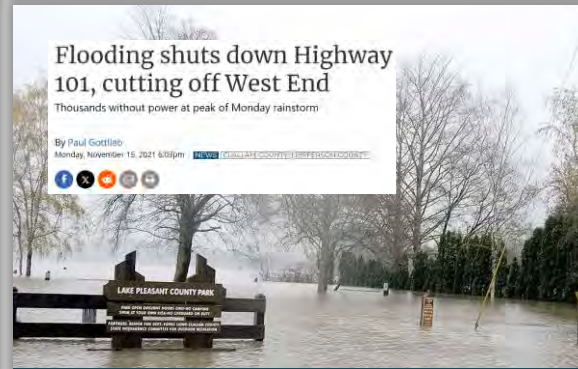
Southeast US Hurricanes 2024
\$



Northwest Heat Wave 2021
>1,400 lives lost



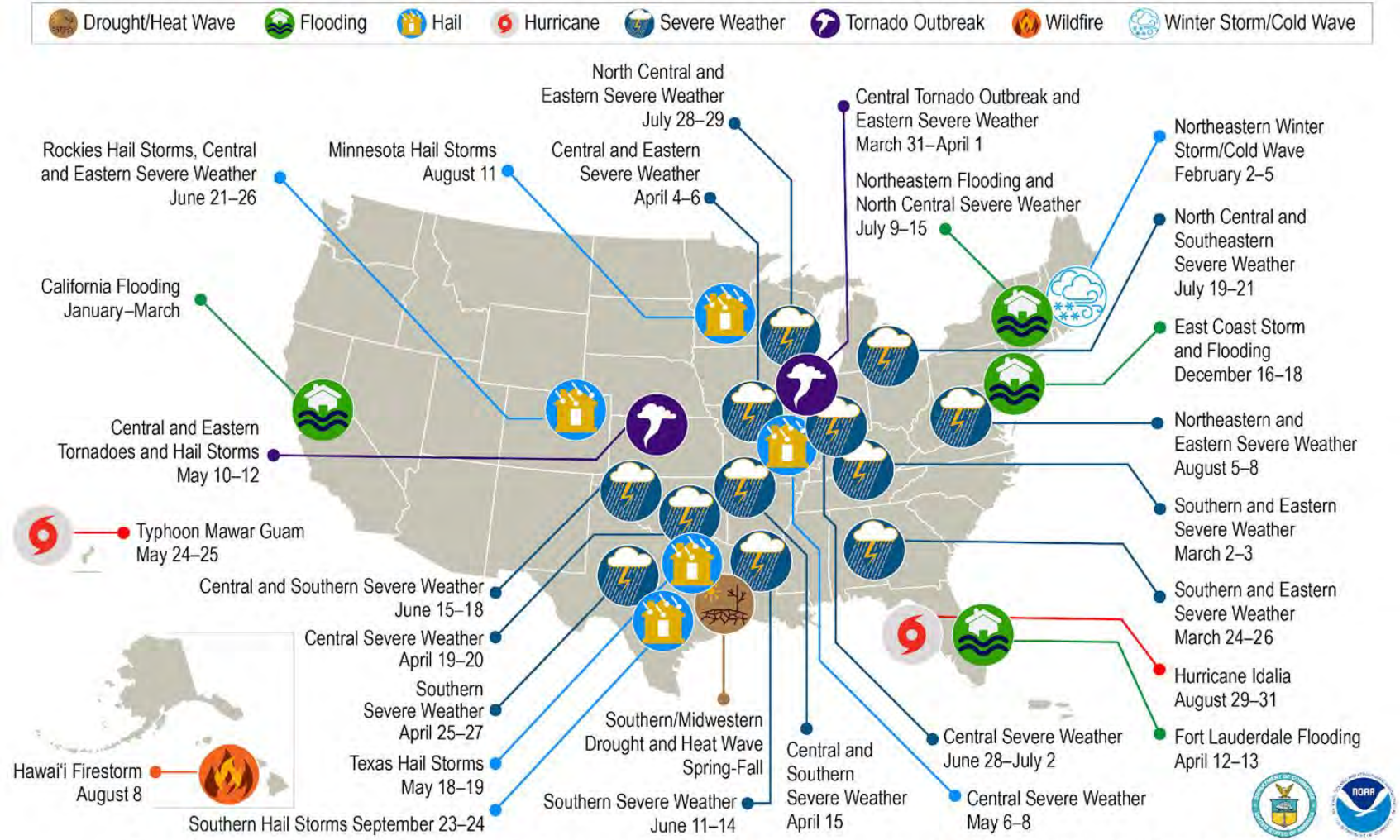
Winter Storm 2021
\$27 billion lost, >260 fatalities



Jefferson County Flooding 2021
\$

More frequent and severe extremes are contributing to higher damages

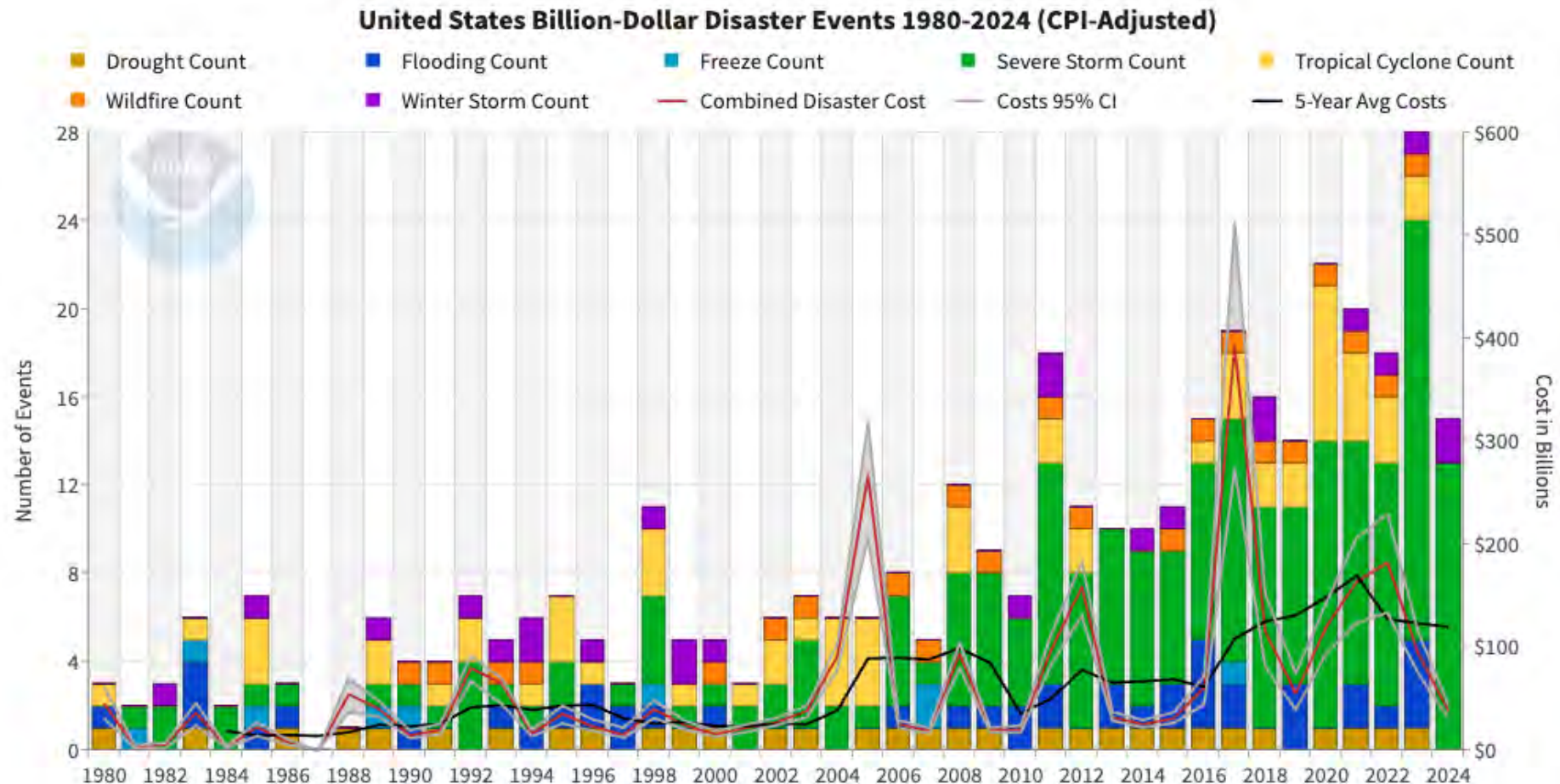
U.S. 2023 Billion-Dollar Weather and Climate Disasters



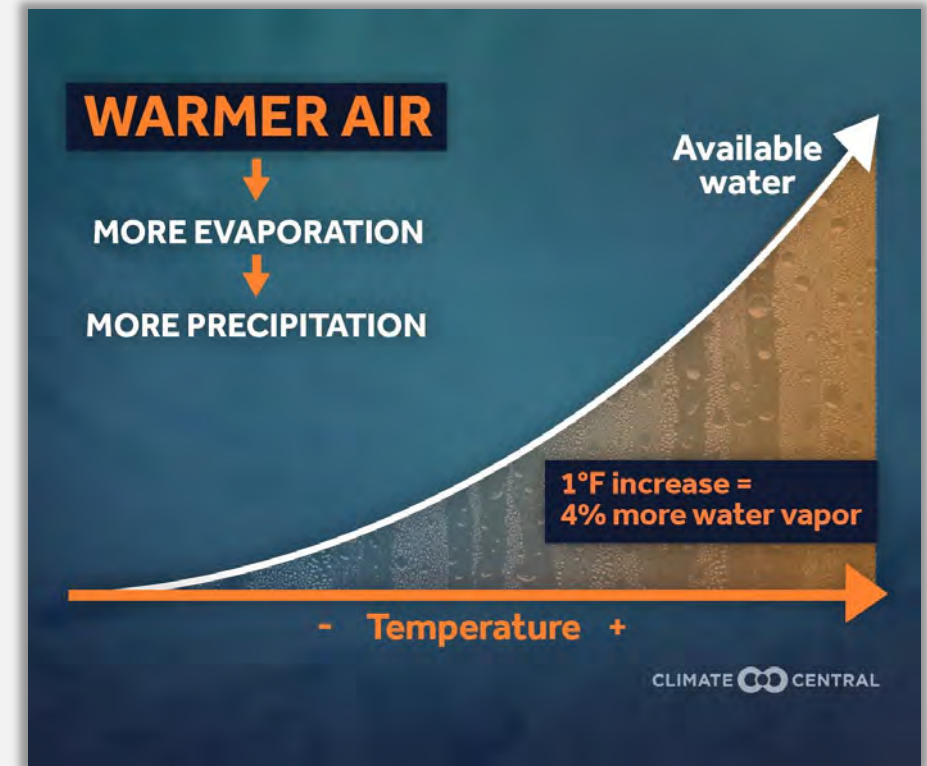
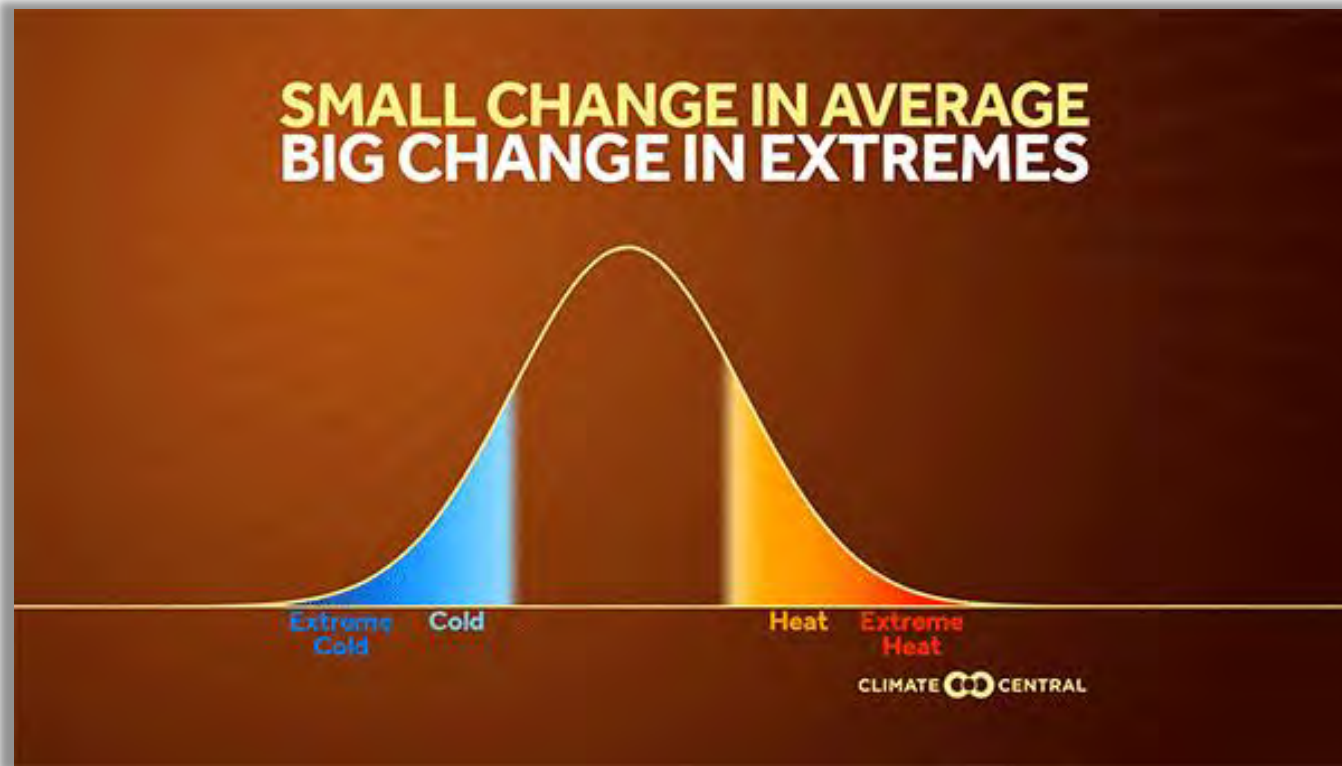
This map denotes the approximate location for each of the 28 separate billion-dollar weather and climate disasters that impacted the United States in 2023.

In 2022, US experienced 28 billion-dollar weather and climate disasters

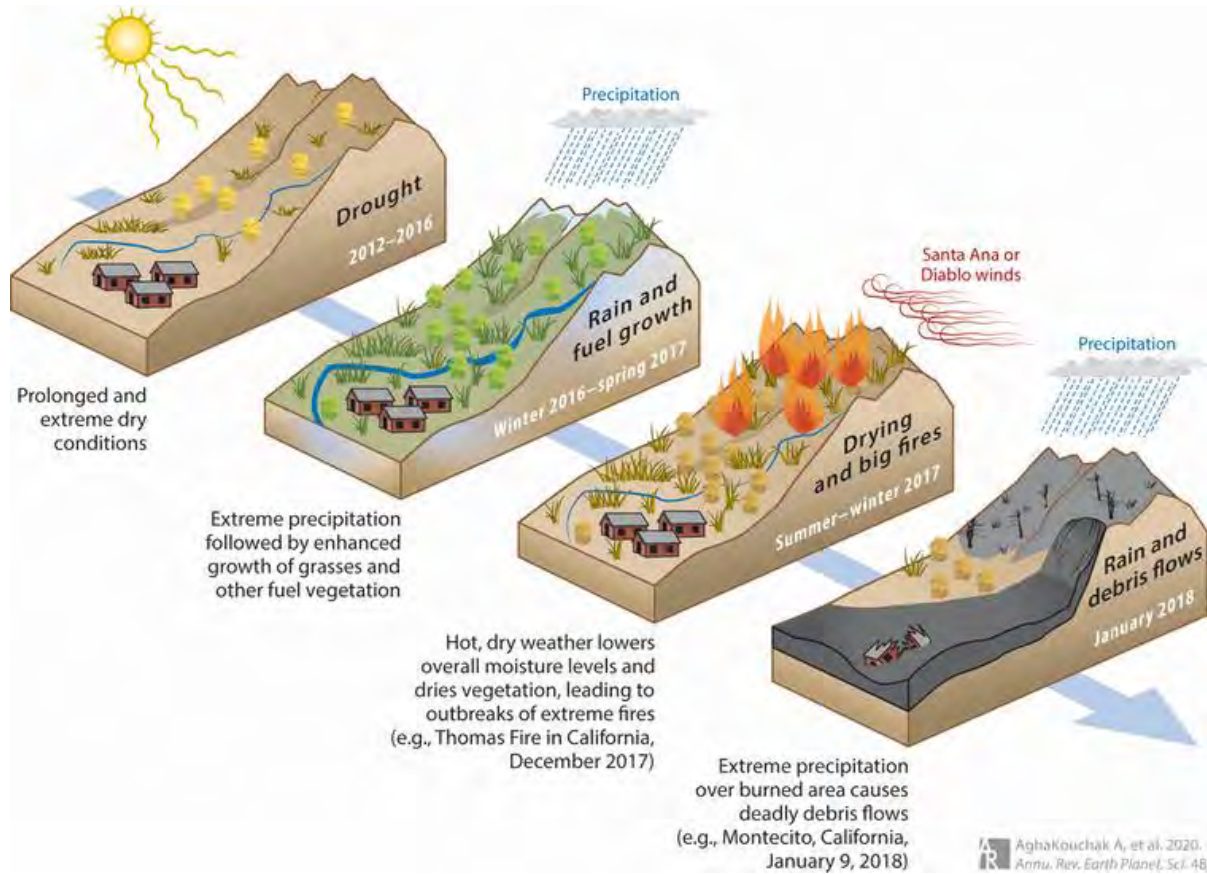
The US now experiences, on average, a billion-dollar weather or climate disaster every three weeks.



Extreme events are becoming more intense and more frequent, including here in the Northwest

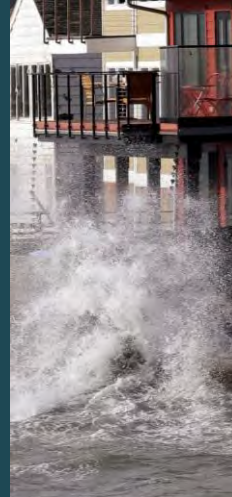
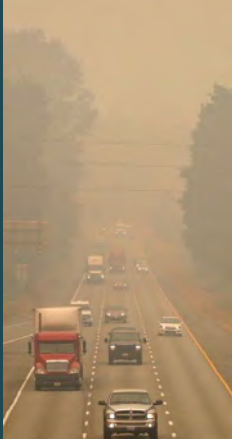
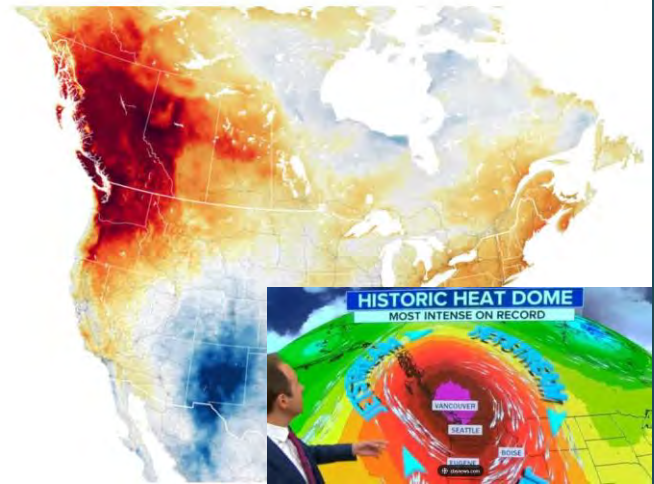


Hazards are compounding, interconnected and often driven by climate patterns



Human-driven climate change sent Pacific Northwest temperatures soaring

Temperatures soared by as much as 5 degrees Celsius above previous records



Pacific Northwest storm causes flooding and landslides and shuts roads

UPDATED JANUARY 7, 2022 · 11:11 PM ET

By The Associated Press



New research: 2021 Pacific Northwest heatwave had multiple causes, including climate change

Last summer, the jet stream became a "jet wave," which helped form a "heat dome" over the Pacific Northwest. The effect was a catastrophic heat wave that killed as many as 1,400 people.

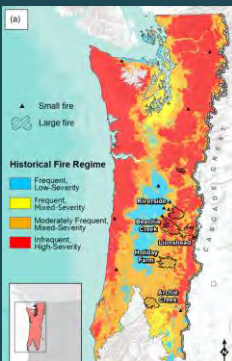
HILLEL ARON / November 26, 2022



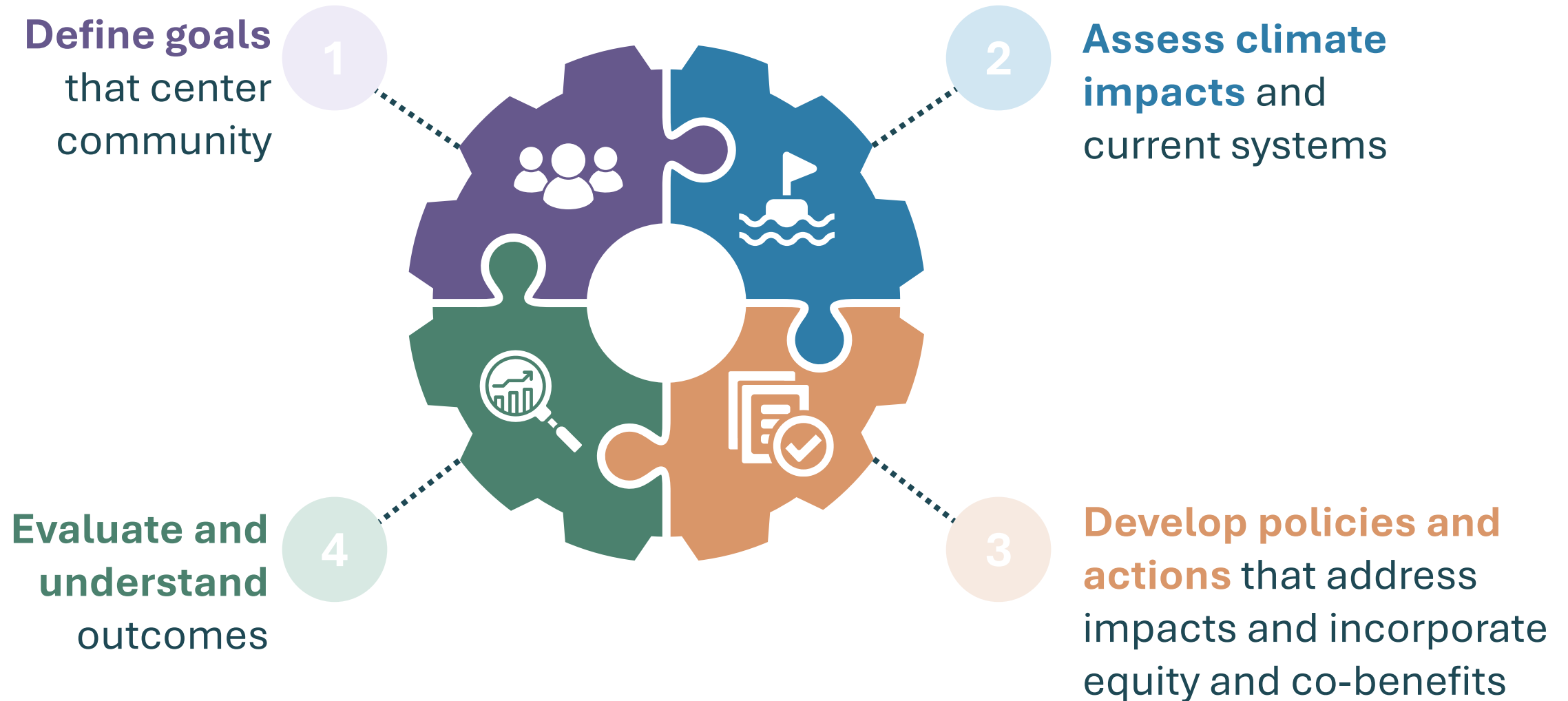
An "atmospheric river" brings the severe weather

Monday's severe weather was caused by an "atmospheric river" that had been pelting the Pacific Northwest with rain and heavy winds for days, according to the AP.

Atmospheric rivers are long, narrow bands of water vapor in the sky that often release rain or snow when they make landfall, NOAA says.



Planning for Climate Resilience



**What opportunities and policy levers
exist to plan for climate resilience?**

State and Federal Policy Levers

- **Comprehensive Plan**

- The GMA requires each Comprehensive Plan be reviewed and revised if needed on a 10-year schedule established by the Legislature
- Mandatory Elements: Land Use, Housing, Capital Facilities, Utilities, Rural, Transportation, Economic Development, Parks & Recreation

- **New Climate Element**

- HB 1181 requirement that cities and counties integrate climate mitigation and resilience policies into comprehensive plan updates.
- Consider co-benefits and integration with other planning documents around capital facilities, parks, recreation, open space, public utilities, transportation, and land use.

- **Multi-Jurisdiction Hazard Mitigation Plan**

- Update every 5 years
- Focuses on mitigation strategies (making the future safer)
- Must meet FEMA requirements
- Includes sustained actions taken to reduce or eliminate long-term risk to life and property from hazards

- **Other**

- Community Pollution Reduction Grants (CPRG)
- Shoreline Master Program (HB 1181 Rulemaking on Sea Level Rise)
- Community Wildfire Protection Plans
- Project implementation and beyond!



■ 2024 Due December 31st ■ 2025 Due December 31st ■ 2026 Due June 30th ■ 2027 Due June 30th

★ Starred counties are partially planning under the Growth Management Act

Climate Element Requirements

HB 1181 requirement that cities and counties to integrate climate mitigation and resilience policies into comprehensive plan updates

- ✓ Jurisdictions must adopt climate policies consistent with Commerce’s Climate Planning Guidance, which will result in reduced GHG emissions and VMT.
- ✓ Policies may be adopted through a standalone “Climate Element”, integrated into other comprehensive planning elements, or a combination of both.
- ✓ Policies must also consider and prioritize actions that benefit vulnerable communities and promote environmental justice.

Requirement 1:

Address natural hazards created or aggravated by climate change (SLR, landslides, flooding, drought, heat, smoke, wildfire, etc.)

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, consistent with environmental justice.

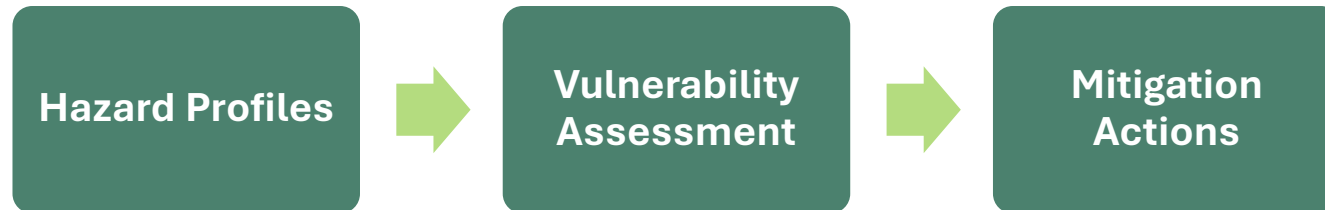
Additional Requirement:

Include at least one climate resilience goal and supportive policy:

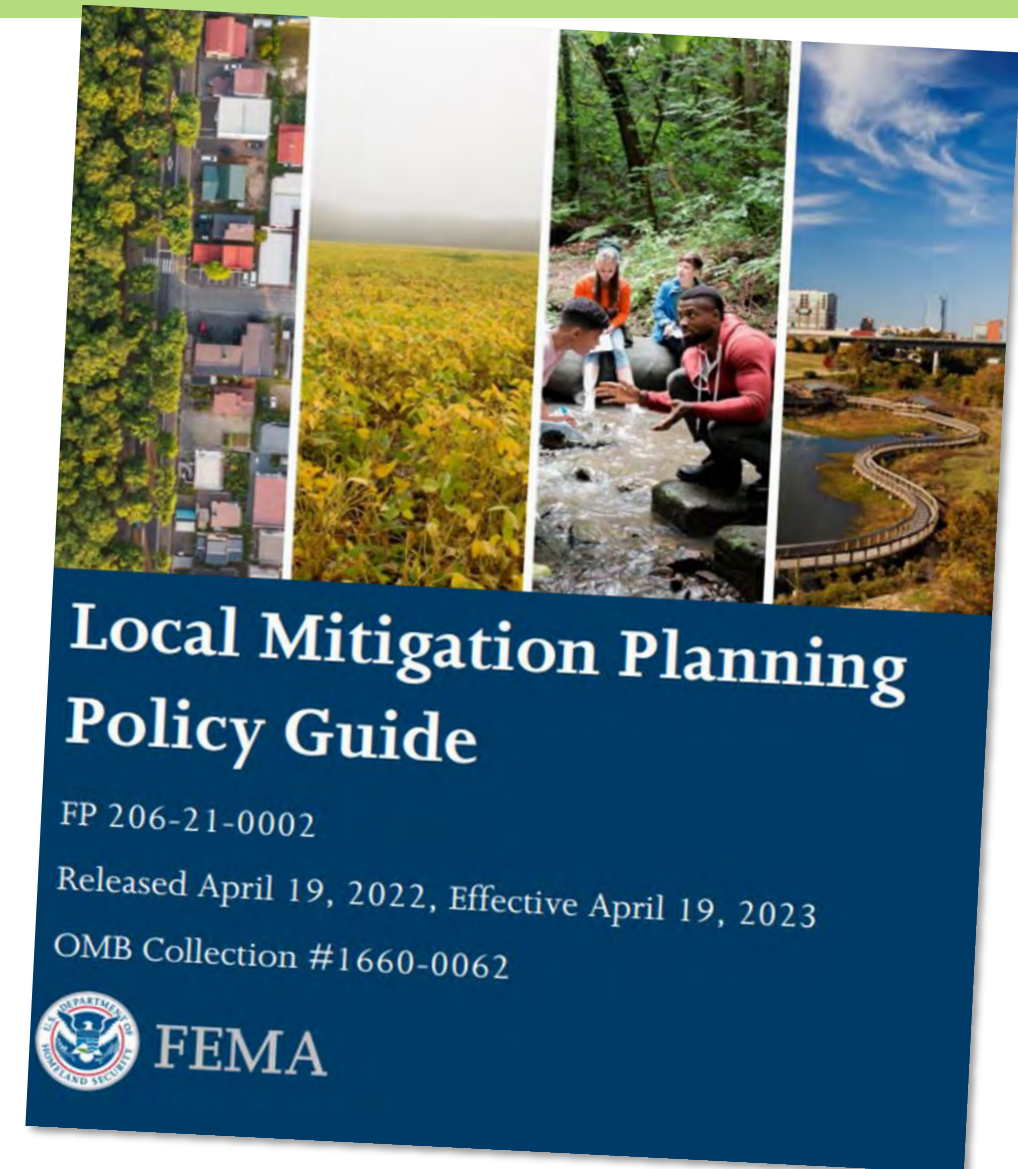
- For each **Climate-exacerbated hazard** that is relevant to Clallam County
- Within each of the 11 of **Commerce-identified priority sectors**:
Agriculture, Buildings & Energy, Cultural Resources & Practices, Economic Development, Emergency Management, Human Health, Ecosystems, Transportation, Waste Management, Water Resources, Zoning & Development

Hazard Mitigation Plan Requirements

HMP Development Process

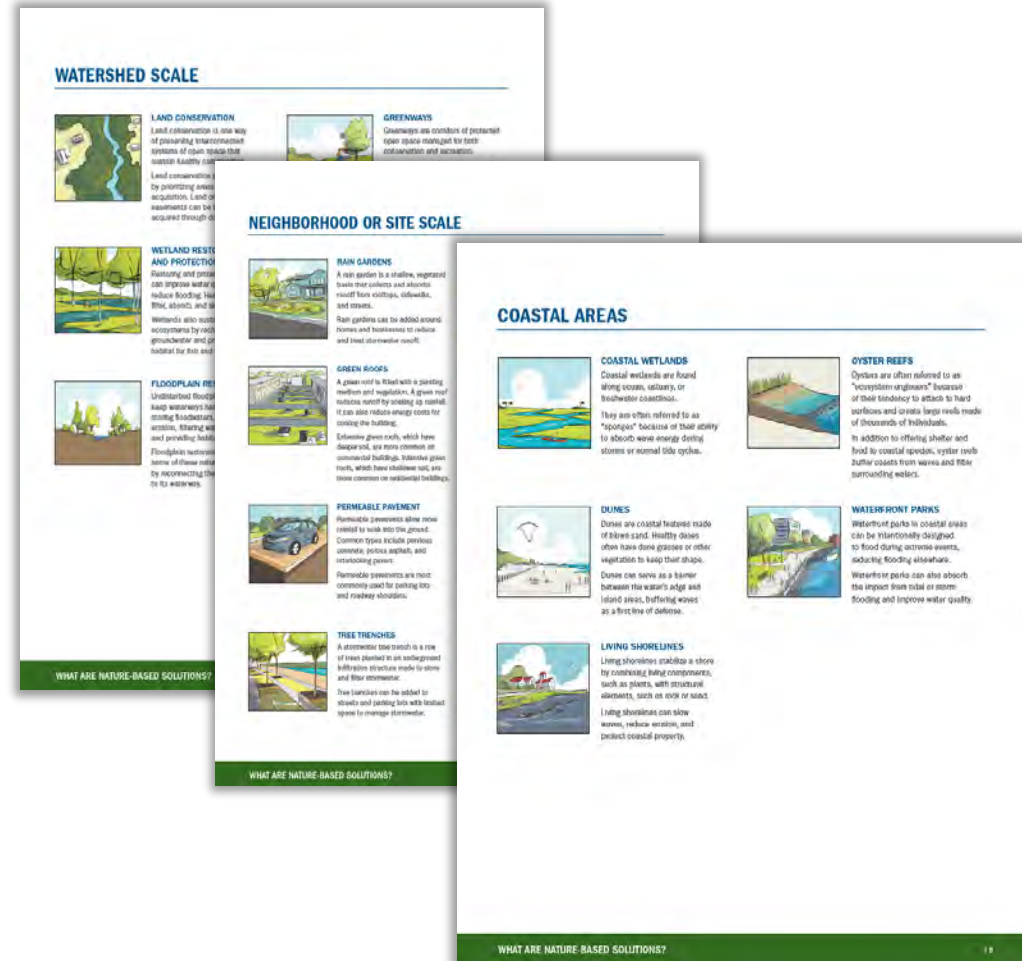


Mitigation Action Type	Examples
Local Plans and Regulations	<ul style="list-style-type: none">• Building codes• Open space preservation• Capital improvement plan
Structure and Infrastructure Projects	<ul style="list-style-type: none">• Floodwalls• Utility undergrounding• Safe rooms
Natural Systems Protection and Nature-Based Solutions	<ul style="list-style-type: none">• Watershed restoration• Living shorelines• Forest management
Education and Awareness Programs	<ul style="list-style-type: none">• Real estate disclosures



Tools for Climate Integration

- Climate Mapping for a Resilient Washington ([link](#))
- Commerce Resilience Guidance ([link](#))
- Commerce Climate Policy Explorer ([link](#))
- Interim Climate Resilience Planning Guidance for Shoreline Master Programs ([link](#))
- Puget Sound National Estuary Program Sound Choices Implementation Checklist ([link](#))
- Building Community Resilience with Nature-Based Solutions ([link](#))
- Washington Coastal Hazards Resilience Network ([link](#))



Building Community Resilience with Nature-Based Solutions – Guide for Local Communities. FEMA – Risk Map

Climate resilience examples from Washington State

Regional Climate Action in the North Olympic Peninsula (WA)

NODC builds a collaborative culture around climate strategy implementation

North Olympic Peninsula CAP Implementation Tools

In 2020, NODC began to build on its 2015 Climate Preparedness Plan by moving toward implementation of key climate adaptation and mitigation strategies

This multi-jurisdictional project focused on identifying regional priorities and strategies that required coordination across different jurisdictions (including regional transit agencies, county and municipal governments, state agencies, federal agencies, and Tribal Nations).

This project also helped reduce implementation barriers for jurisdictions by creating a toolkit focused on actionable strategies and providing direct technical assistance to support four local governments in producing climate action and implementation.

Climate Action Toolkit: <https://www.noprpd.org/climate-action-toolkit>



BACKGROUND

The North Olympic Peninsula Resource Conservation and Development Council (NODC) is the federally-designated Economic Development District for Clallam and Jefferson counties in Washington State, a geographically isolated rural area that includes Olympic National Park and is home to 7 Tribal Nations. In 2020, NODC began a process to build on its 2015 Climate Preparedness Plan by moving toward implementation of key climate adaptation and greenhouse gas mitigation strategies. Multiple barriers, including lack of staff capacity, lack of funding and the need for multi-jurisdictional coordination limited implementation of many of the recommended actions from

the 2015 Plan. Because of its multi-jurisdictional purview, this project focused on identifying regional priorities and strategies that required coordination across different jurisdictions (including regional transit agencies, county and municipal governments, state agencies, federal agencies, and Tribal Nations) such as transportation, energy grid efficiency and resiliency, water supply and quality, flooding and coastal hazards. This project also helped reduce implementation barriers for governments by creating a toolkit focused on actionable strategies—such as land use code updates and educational collateral—and providing direct technical assistance to support four local governments in producing climate action and implementation plans.

APPROACH

Regional Meetings and Objectives:

- Meeting 1**
2.18.22
Identify climate change priorities for the North Peninsula (NOP)
- Meeting 2**
4.1.22
Build capacity for jurisdictions to coordinate re climate change adaptation and mitigation strategies. Refine and finalize regional climate priorities. Identify coordination details, capacity needs, and long-term implementation considerations
- Meeting 3**
5.25.22
Confirm final climate change priorities, goals, and objectives for the NOP. Refine coordination details, capacity needs, and long-term implementation considerations

CLIMATE ACTION TOOLKIT

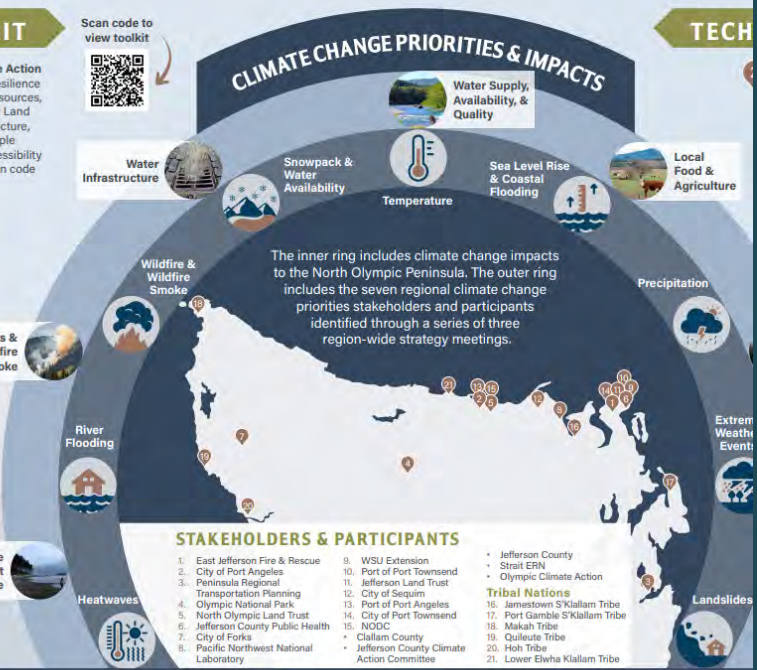
A major output of this project was the **NODC Climate Action Toolkit**, a tool intended to make climate action and resilience achievable for rural governments of differing sizes, resources, and capacity. The toolkit focuses on Transportation & Land Use, Energy & Housing, and Water Supply & Infrastructure, and includes top actions, decision-making tools, sample codes, and other resources for each. To increase accessibility and usability, the toolkit is available as a website (scan code to the right) and as a static PDF.

Scan code to view toolkit



LESSONS LEARNED

- Building capacity:**
- By building relationships and shared experiences with representatives at different scales
 - By creating a toolkit so any jurisdiction can implement climate action strategies without the front-end investment of a climate action plan
 - By providing technical assistance directly to four local governments to jump-start their work.
- Next steps we've seen from participants:**
- Directly connected with funding agencies
 - Multiple associated plans, including:
 - Jamestown Comprehensive Energy Plan
 - Port Gamble adaptation plan update
 - Port Angeles comprehensive planning
 - Clallam County CAP and GHG Inventory and considering Wildfire Protection Plan and updating Hazard Mitigation Plan
 - NOP Disaster Preparedness Plan
 - Port Townsend's EV Plan



OUTPUTS

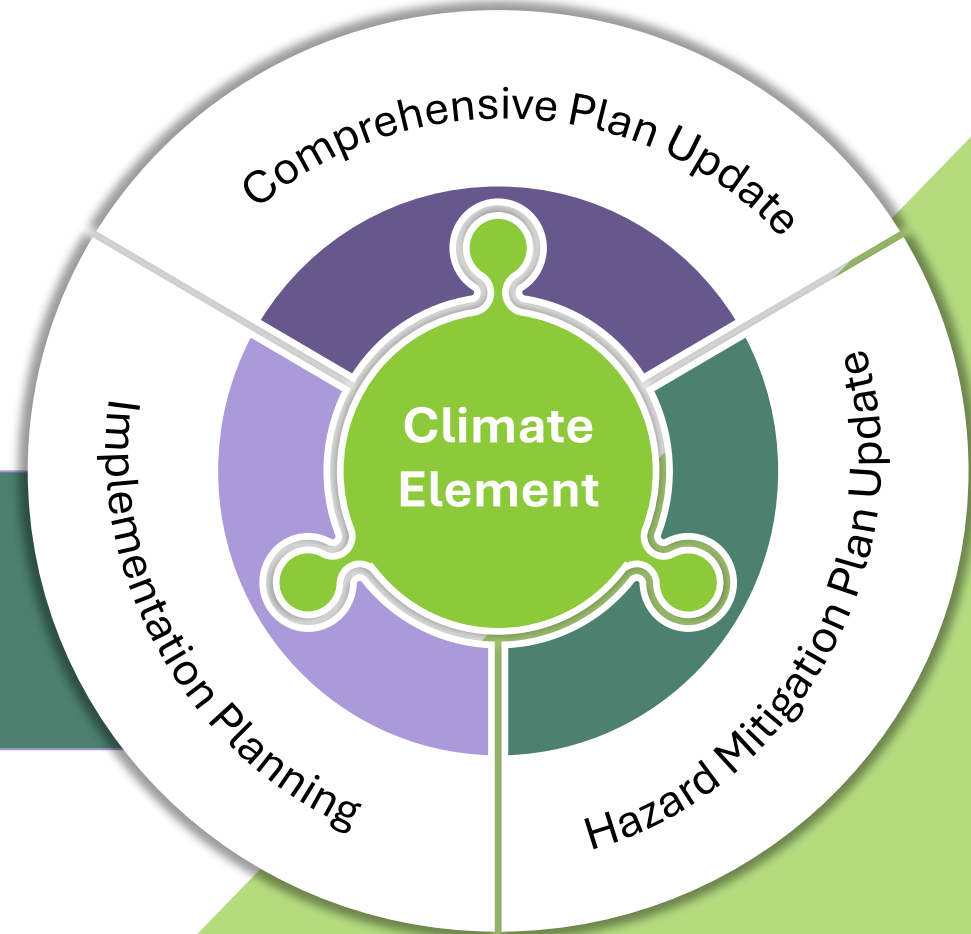
- Partners & Reports
- Climate oriented

Work with multi-jurisdiction partnerships

Clallam County: Climate and Hazard Planning

- County is updating the **Multi Jurisdiction Hazard Mitigation Plan** in collaboration with the same 2019 participating jurisdictions, agencies, and Tribes.
- Concurrently developing a Comprehensive Plan **Climate Element**.

Goal: Elevate key climate and hazard issues facing the community and ensure that there is alignment between the plans while addressing state and federal requirements.



Break down silos and have inclusive project team representation with connections to implementation

Establishing a joint committee which we called the **Hazard Mitigation and Climate Resilience Steering Committee** is an opportunity to create cross jurisdiction and sector engagement for a more integrated approach to both plans. It is also a large coordinating effort

Participating Jurisdictions

Clallam County [lead jurisdiction]
City of Forks
City of Sequim
City of Port Angeles
Jamestown S’Klallam Tribe
Lower Elwha S’Klallam Tribe
Peninsula Community College
Clallam County Public Utilities District
No. 1
Port of Port Angeles

Nonprofit/NGO Partners

North Olympic Resource Conservation
and Development Council (NODC)
Climate Action Committee
Peninsula Housing Authority
Serenity House of Clallam County
Olympic Medical
Forks Community Hospital
Washington Sea Grant
North Olympic Land Trust
Local 20/20

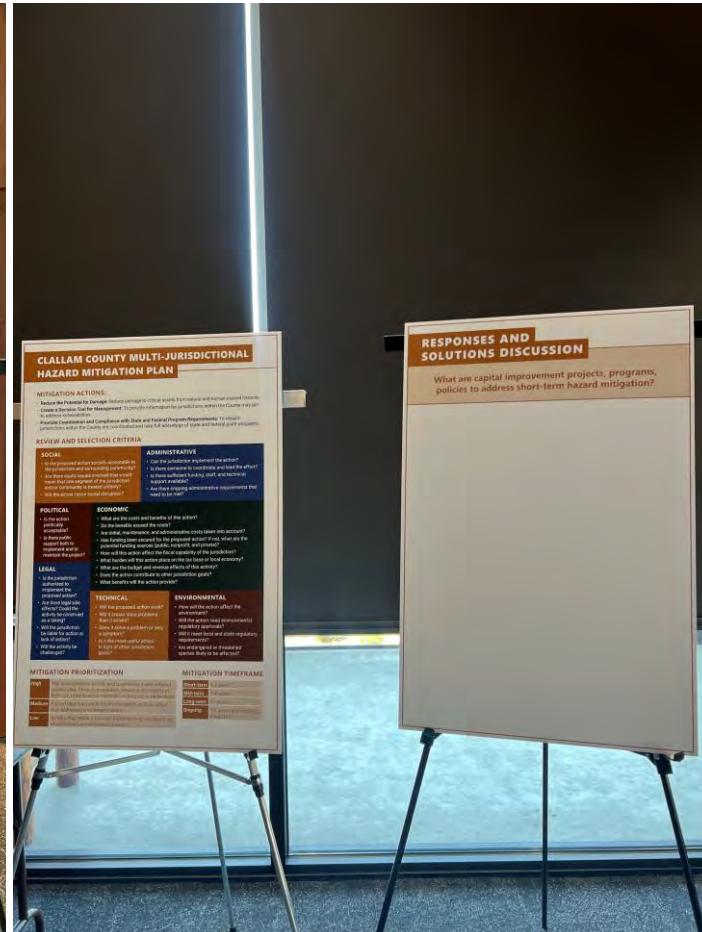
Tribe Partners

Makah Tribe
Quileute Tribe
Hoh Tribe

Public Agency Partners

Clallam County Fire Districts
Cascadia Water
North Olympic Library System
Washington Emergency
Management Division
Clallam Transit

Create opportunities for inclusive and integrated engagement.



City of Port Angeles – Example Goal and Policies

GOAL: To protect and enhance the area's unique physical features, its natural, historical, archaeological, and cultural amenities, and the overall environment.

Policy #1: Protect infrastructure along waterfronts, including roads, pedestrian paths, bikeways, and structures.

Policy #2: Evaluate risks of future building on coastal bluffs for sea level rise impacts.

Policy #3: Review all new development for climate change impacts and adaptation to sea level rise through the SEPA process.



Building capacity to reduce stormwater pollution

Low Impact Development Code Implementation

Low-impact development (LID) is a key tool to clean stormwater and slow its flow before it goes into nearby waterways. Cities in King County have been required to treat their stormwater since 2007, but a major hurdle to implementing LID was related to code language, such as parking requirements.

Completed a needs assessment and then brought together thought leaders to develop an interactive training program to translate technical information and make it more accessible, ultimately helping staff across jurisdictions update their codes to make LID easier to put into practice.

Worked with industry partners to understand additional barriers to and opportunities for LID—and co-develop solutions including a marketing campaign and additional workshops.

Identifying multi-benefit solutions

Working closely with communities to develop tailored climate change solutions

Puget Sound Resilience Hubs

Resilience Hubs are gathering spaces that also serve as resource centers during hazardous or catastrophic events like earthquakes, volcanic eruptions, extreme heat, and landslides.

Working with communities in Seattle and Tacoma—with a focus on frontline communities—to identify Resilience Hub goals, needs, and potential sites.

Developing workshops, tabling events, listening sessions, site visits, and outreach materials—including storymaps—with community leaders to co-create and inform our public engagement approach. At the end of this project, we will have Resilience Hubs plan and the strong community relationships needed to implement.



Co-creating community resilience



WHAT CAN A RESILIENCE HUB OFFER?

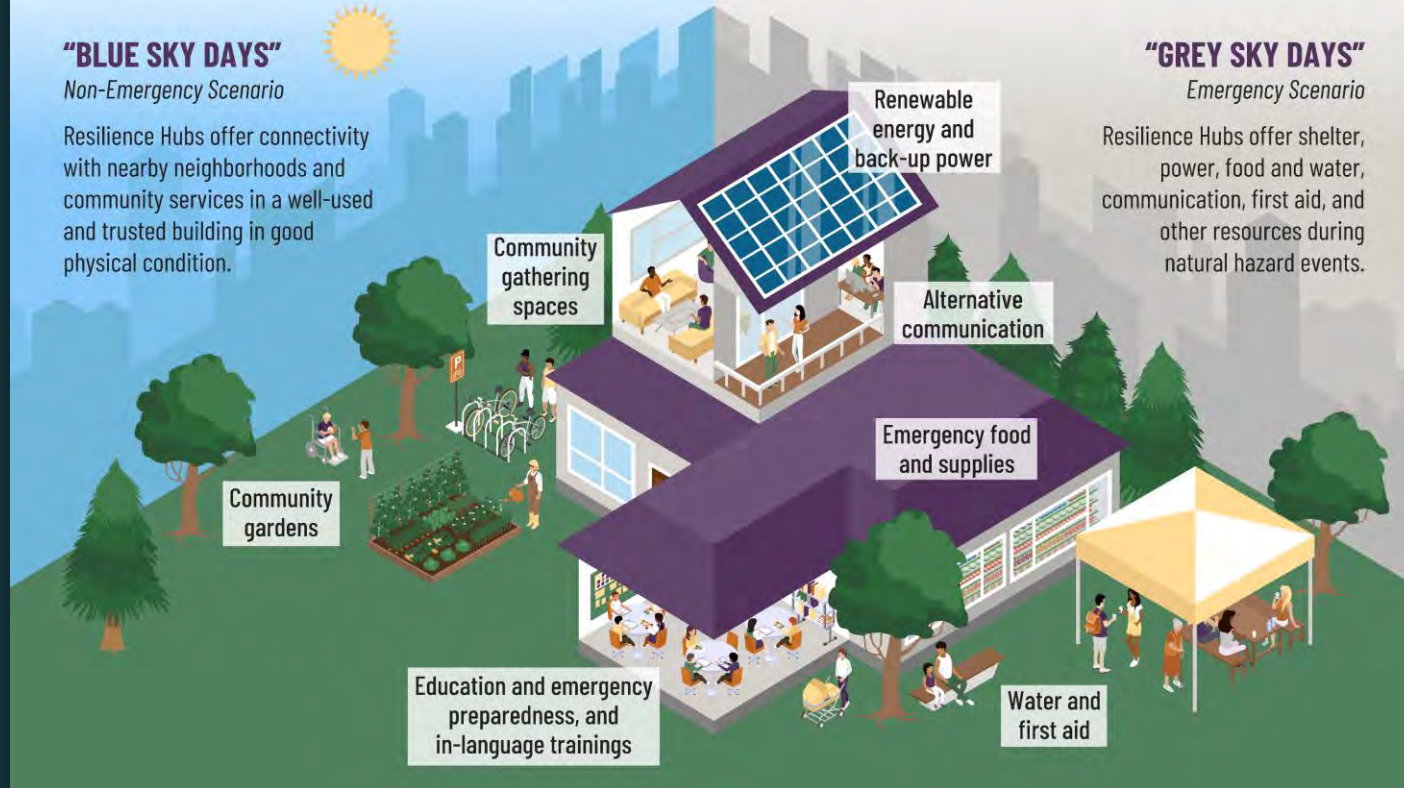
Resilience hubs are community-led, trusted gathering spaces that connect people to place-based, culturally informed resources and services. Hubs provide refuge and access to resources year-round, during non-emergency and emergency scenarios.

Resilience hubs are intended to be designed, customized, and operated by the communities in which they serve. Each hub will be different, reflecting the needs and priorities of the community. The below graphic outlines what a resilience hub could look like.

“BLUE SKY DAYS”

Non-Emergency Scenario

Resilience Hubs offer connectivity with nearby neighborhoods and community services in a well-used and trusted building in good physical condition.

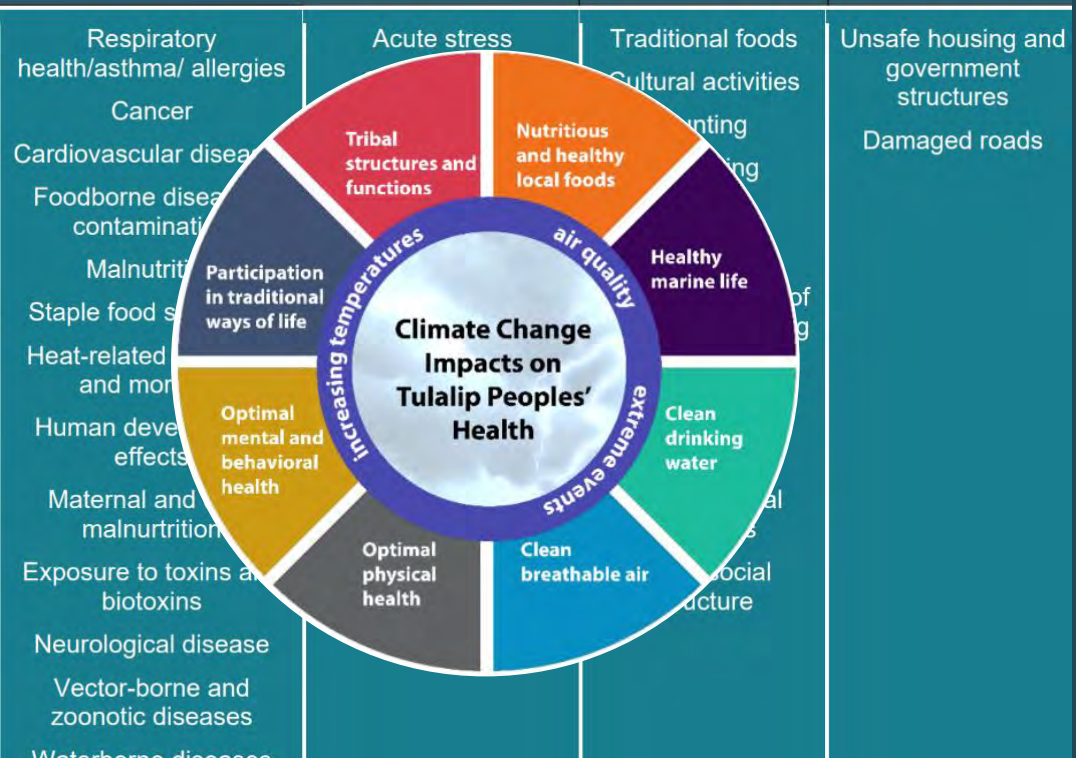


“GREY SKY DAYS”

Emergency Scenario

Resilience Hubs offer shelter, power, food and water, communication, first aid, and other resources during natural hazard events.

CLIMATE IMPACTS ON HUMAN HEALTH



Developing solutions at the intersection of climate and health

Tulalip Tribes Climate Health and Resilience Plan

Climate change impacts every sector—including tribal health systems. The Tulalip Tribes explored how the Tulalip health system can be a tool for climate resilience.

Facilitated workshops with various tribal departments, youth, and tribal elders to identify key risks and vulnerabilities, develop a resilience strategy, and identify indicators to monitor progress—ensuring buy-in from knowledge holders and the future generation.

The final plan outlines a framework for building community resilience to climate impacts. We are building on this work with a project to provide landscape modeling of climate impacts in the Snohomish Basin.

Co-creating solutions to meet unique community needs



Elements of Success

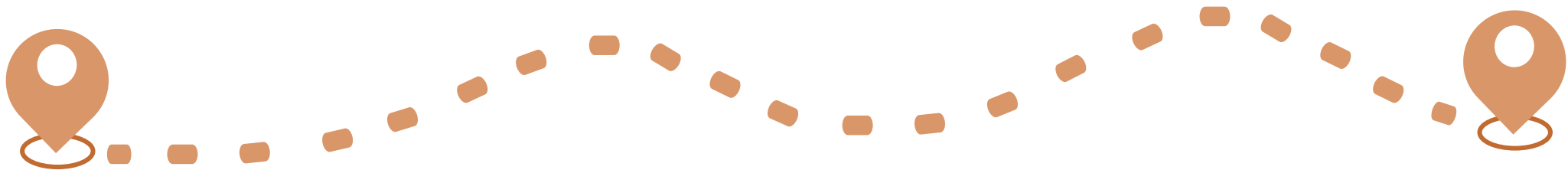
Consultant Notes from the Field

Early Policy Development

- Meet the community where its at
- Build from regional collaboration and other efforts
- Determine capacity and needs
- Foster a shared understanding of climate mitigation and adaptation policy and community priorities
- Identify partners (both internal and external) to engage throughout the planning process

During Policy Development

- Establish connections and break down silos that need to be connected and haven't been
- Tailor messaging to fit each community's unique characteristics and needs
- Ensure inclusive and equitable engagement to build shared understanding
- Emphasize the importance of a long-term vision to create resilient communities



Consultant Notes from the Field

Looking Forward

- Continued public engagement
- Collaboration across departments
- Budget considerations, financial planning, and capacity building
- Adaptive management



Lakewood Youth Summit, 2023



Lakewood Climate and Comp Plan Steering Committee, 2023

Meeting the Community Where It's At



- Hazard Planning
- Some Community Interest Groups

- Some Assessments (Climate Vulnerability or GHG)
- Some Engagement

- Climate & Resiliency Element
- Climate Action Plan or Sustainability Plan
- Program Staff & Resources

Unsure about Climate Change

...but agree there's a need to do something about it.

Woodland, a Pilot City

“Where does the data come from?”

Concern about basis and scale of data.



Productive Discussions and Questions

“Why we need to evacuate irrelevant...is the City prepared?”

Community members agreed city is not prepared.

Risks of Flooding: “There was a flood, and the wall didn’t work. ...52% of population live on the other side of that flood wall.”

Ideas: “Scott Hill Road – that can be a good example of connectivity issue. Can walk that road or drive on that road to evacuate.”

Unsure about Climate Change

...what will be required?

Woodland, Planning Commission Audience

Question: What does "encourage and promote" mean? Is there pressure? Incentives?

Staff Response: City can incentivize ... like make some permits free or half off. Reduce bureaucracy to make things more feasible.

Woodland, Planning Commission Audience

Concern: ...we're seeing green energy fail. If we are going to have a backup, we should have something that is reliable.

Staff Response: Will see good proof of concept with the new library being built.

Policy Approach

- Build on existing 2016 Comp Plan policies.
- Target changes to amend or add 2-4 goals and policies per sector – not a “big city” approach.
- Align with other City planning efforts, e.g. housing, flooding, etc.

Climate Change is happening

...and we are not moving fast enough.

City of Kenmore

“Can we accelerate the [greenhouse gas emissions reduction] timeline?” -
Commissioner

“50% Greenhouse Gas reduction by 2030, with Net Zero by 2050 is too little, too late.”
- *Community Member.*

Many Commissioners agreed targets are not aggressive enough.

Policy Approach

- Incorporated commissioner recommendations that achieving net zero emissions should be **accelerated** and reflected in a future Climate Action Plan.
- Recommended policies that seek to reduce greenhouse gas (GHG) emissions "as soon as feasible".
- Prioritized policies that would have the **biggest impact** on community GHG emissions.
- Included policies that seek to equitably distribute the benefits of GHG reduction.

Climate Change is happening

...and community engagement and environmental justice are policy priorities.

City of Kenmore

“Education [related to climate action] is key for engaging future generations” - *Commissioner*

“I love bringing our community in, and giving meaningful opportunities to dialogue and be involved in important decisions” - *Commissioner*

Response

- Included policies that prioritize community engagement and create equitable opportunities for all community members to learn about climate impacts, influence policy decisions, and take action.
- Conducted an Equity Assessment on policies included in the draft Climate Action Element that examined the intended and unintended impacts on people in overburdened communities.
- Arrived at a list of equity considerations for the City’s review and incorporated into the final policies.

Thank you!



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