

# **Building Community Resilience:**

## **Comprehensive Plan Recommendations for Climate Mitigation & Adaptation**

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Presenters: Dr. Tamara Laninga, AICP  
Urban Planning & Sustainable Development students  
October 12, 2022



# Session Outline

- Introductions around the Room
- Sustainable Communities Partnership
- UEPP/UPSD Program Overview
- Dept of Commerce – Pilot grant & Model Climate Change Chapter (adaptation vs mitigation)
- Comprehensive Plan Climate Change Project
- Case Studies
  - Whatcom County
  - Okanogan County
- Interactive Discussion with Audience
- Session Wrap Up

# Introductions



YOUR NAME



WHERE YOU ARE FROM



YOUR JOB



# Sustainable Communities Partnership

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Connecting student energy & faculty expertise  
with local community leadership & needs

WESTERN WASHINGTON UNIVERSITY | MAKE WAVES.



**Sustainable  
Communities  
Partnership**

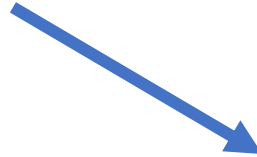


# Sustainability Engagement Institute

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Coming Together for Climate Action

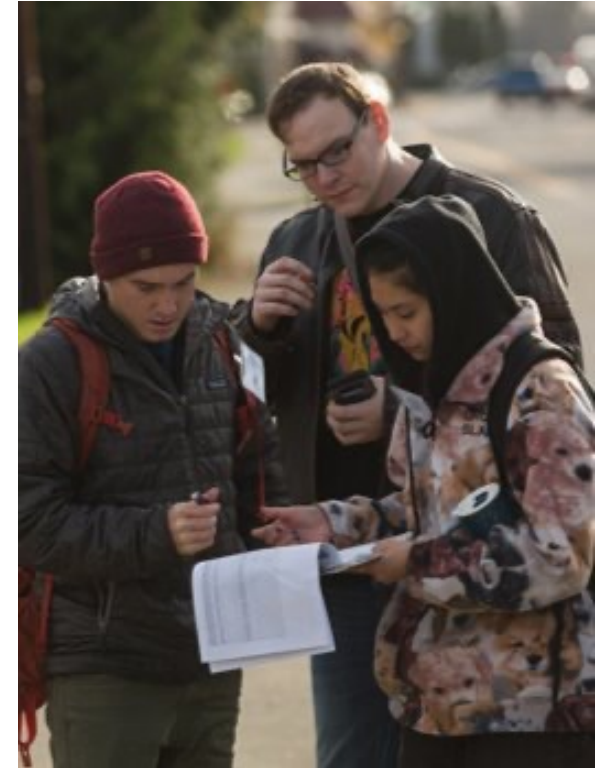
Developing educational opportunities and systems-change for a more sustainable, just future.



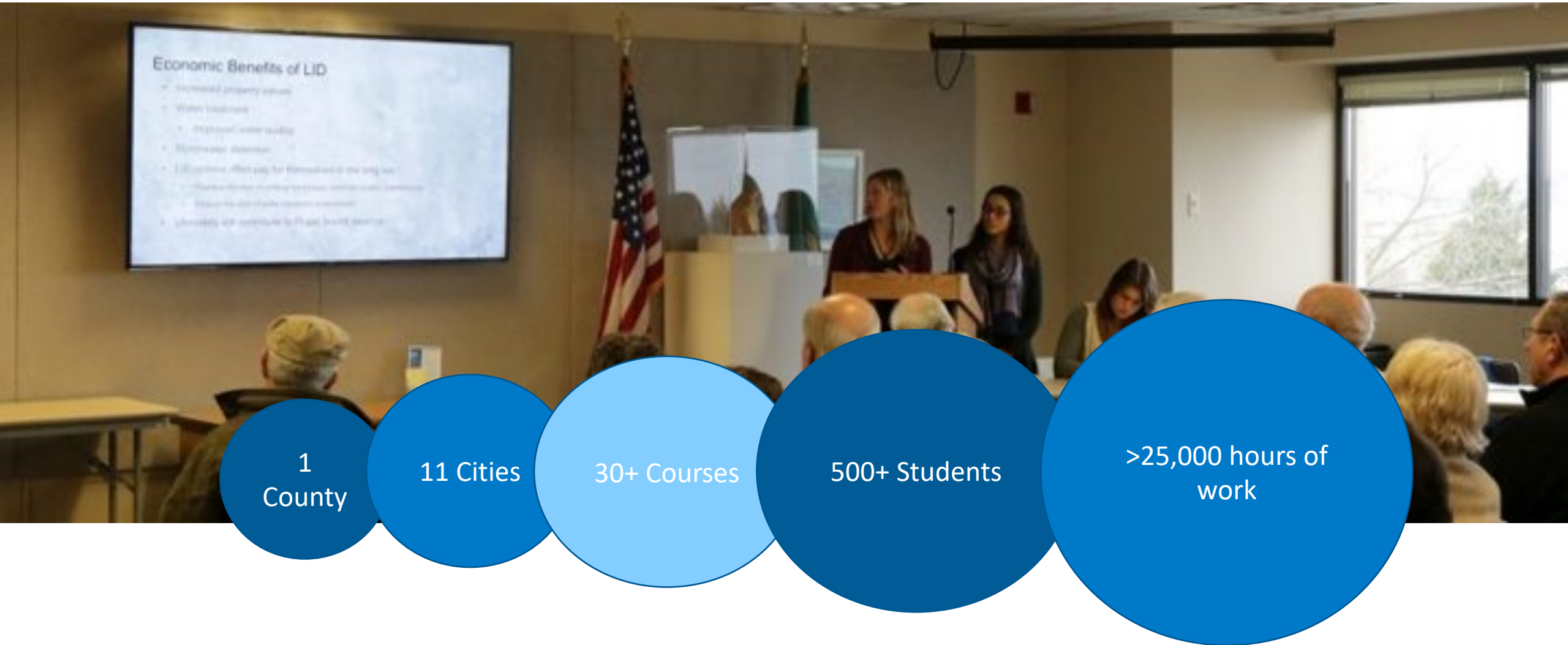
**Sustainable  
Communities  
Partnership**

# Community issues ↔ WWU courses

- ▶ **Match** community needs to courses
- ▶ **Engage** faculty/students on community issues
  - ▶ On site, in field, and in classroom/studio/lab
  - ▶ Cutting edge, “outside the box”
- ▶ **Produce** deliverables (reports, videos, software, GIS datasets, etc.)
- ▶ **Advance** community sustainability goals



# In the 7th year of partnerships





## Western Washington University



City of Blaine

Columbia Valley Parks & Recreation District

City of Lynden

City of Nooksack

City of Everson

○ City of Ferndale

○ City of Bellingham

○ Skagit County

○ City of Stanwood

○ City of Arlington

○ City of Monroe

○ City of Edmonds

○ Bainbridge Island



# Department of Urban & Environmental Planning & Policy (UEPP)

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Overview

# Department of Urban and Environmental Planning & Policy



## Degree Options

The new Urban Environmental Planning and Policy Department was established in July 2021, although the Urban Planning major was one of the original degrees offered at the College of the Environment:

## Undergraduate Majors, BA

- [Environmental Policy, BA](#)
- [Urban Planning and Sustainable Development, BA](#)
- [Urban Sustainability, BA](#)

## Undergraduate Minors

- [Sustainable Design Minor \(WWU Catalog page\)](#)  
[Additional SD Minor information \(Faculty page\)](#)
- [Sustainability Studies Minor](#)



# Urban Planning & Sustainable Development, BA



Planning  
Accreditation  
Board

## Foundation

Policy Option

Environmental Sciences Option

## Planning Core

Planning History, Theory & Knowledge

Planning Methods

Quantitative Analysis

Planning Skills (1-year studio sequence)

Planning & Diversity

- Settler Cities
- Indigenous Placemaking: Decolonizing Space & Place
- Spatial Knowledge
- Native American Planning & Natural Resource Policy
- Indigenous Resource Management in the Salish Sea

## Specializations

Urban Design

Tribal & Indigenous

Hazards Planning

Climate Action

Food Security

Business & Sustainability

- Community Solutions to Climate Change
- Climate Change Policy Tools
- Climate Change Politics & Policy
- Energy Efficient & Carbon Neutral Design
- Public & Stakeholder Engagement in Energy, Climate & Environmental Policymaking

## Culminating Experience

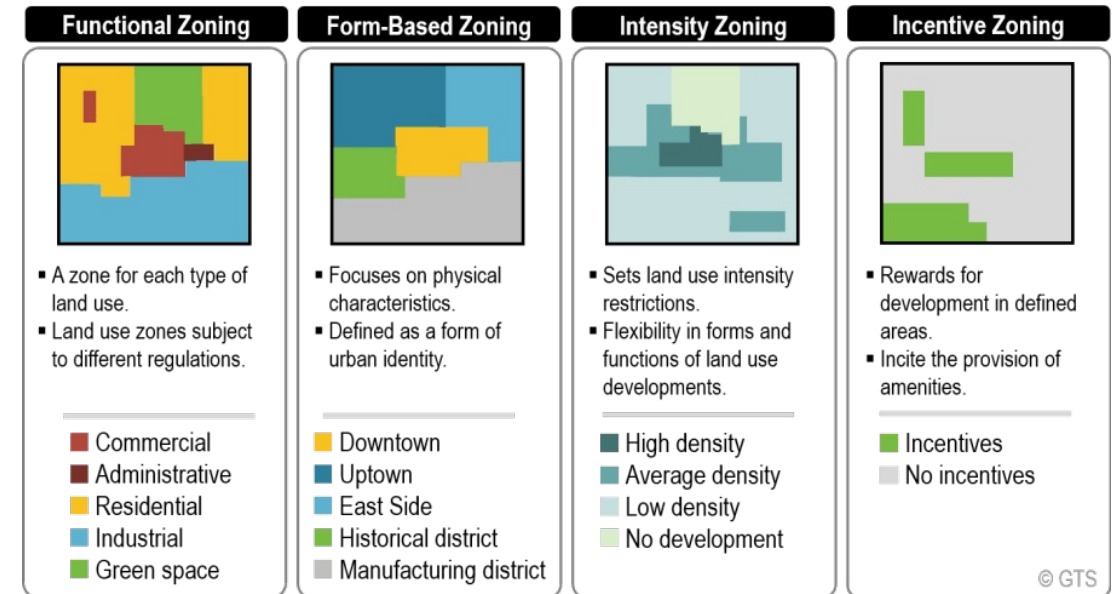
Capstone Course (e.g., Environmental Impact Assessment)

Experiential – Internship, Senior Project or Thesis, International Study

# Land Use Regulations & Technical Writing

Three Course Themes:

- 1. Implementing Planning:** GMA/Comp Plans, Land Use Regs, Budgets & Capital Facilities
- 2. Being a Planner:** current vs long range planning, development review process, site planning and Code of Ethics
- 3. Technical Writing:** memos, staff reports, ordinances



# Department of Commerce

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Model Climate Change Project

Presenters: Jasmine Fast, Gil Gepte, Julian Medina-Schroeder, Shannon Vincent

# Building Resilient Communities Pilot Program Grants



Washington State  
Department of  
**Commerce**

Funding aimed at integrating climate change planning and actions into comprehensive plans.

## Awardees:

Chelan County

Pierce County

**\*Whatcom County**

**(for Blaine, Ferndale, Lynden,  
Nooksack & Everson)**

City of Morton

City of Lakewood

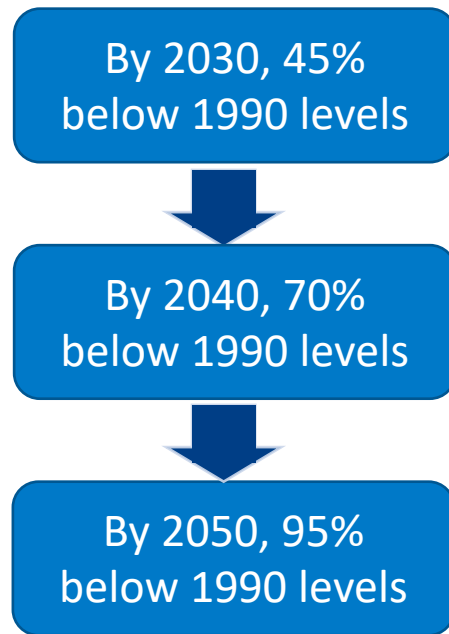
City of Vancouver

City of Tumwater



# Why now?

Greenhouse gas emission targets: RCW 70A.45.020

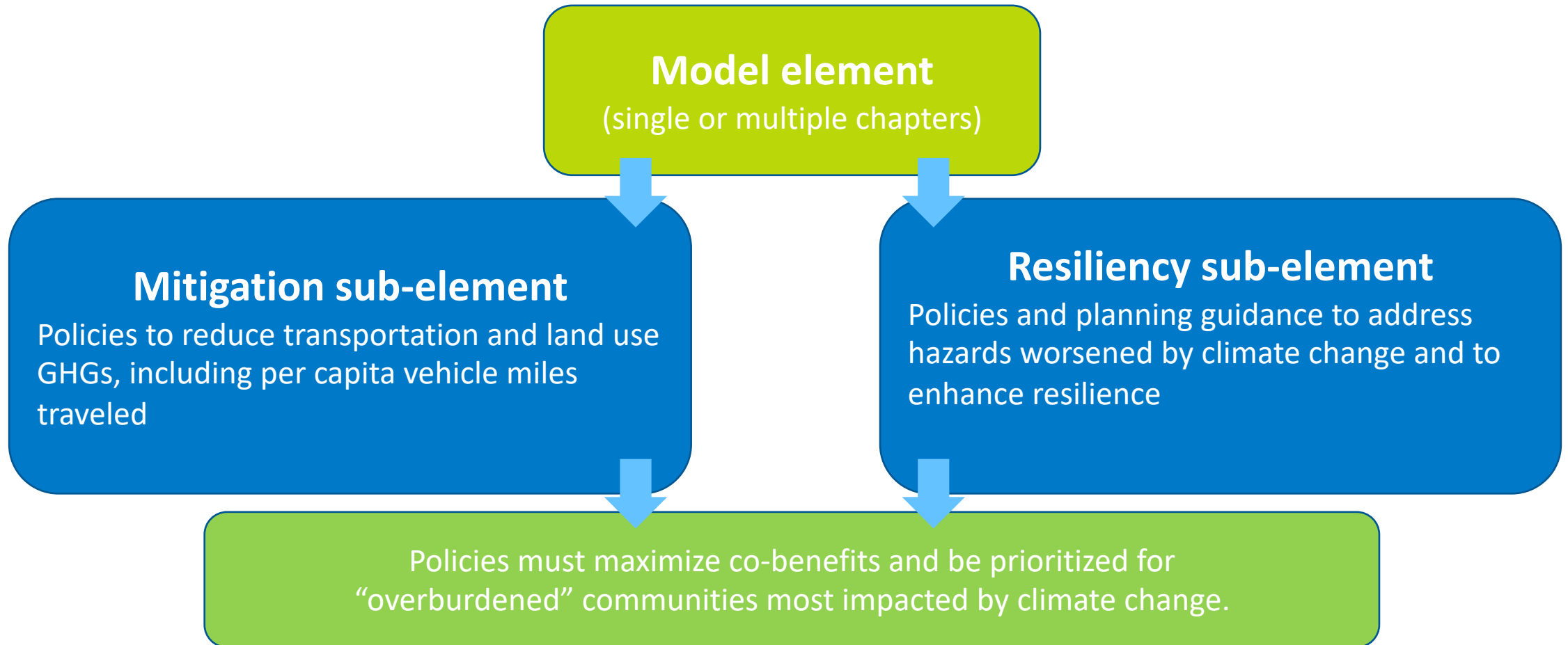


## Support for HB 1099

- **New** climate change goal added to GMA.
- **New** climate change and resiliency element added to comprehensive plans.
- **Require** GHG and VMT reduction plans added to transportation and land use plans



# DOC Model Climate Change Chapter



# Process for Chapter Development

- January - April 2022 planners and other stakeholders contributed climate measures (goals, policies, actions) in the areas of
  - **Mitigation**
  - **Resilience/Adaptation**
- Hundreds of draft measures were submitted

# WWU – Student Team



Reviewed the submitted policies









Developed a **policy prioritization method**



Conducted a **gap analysis** of climate policies submitted by planners and other stakeholders.

# City of Vancouver, WA Prioritization Model

Criterion		Weight	Definition/Subcriteria
Impact		0.25	<p>What is the scope and likelihood that the strategy will reduce GHG emissions or enhance resiliency? By when? Can impact be measured and tracked?</p> <p>Does the strategy address a major need (i.e., high GHG emissions source or climate risk)?</p>
Cost		0.15	<p>What are the lifecycle costs of the strategy by the target date?</p> <p>How costly is this type of strategy?</p> <p>What are the costs of inaction for this strategy?</p>
Community Support		0.1	<p>Do residents support/agree with the strategy?</p> <p>Do community stakeholders/partners support/agree with the strategy?</p>
Feasibility		0.1	<p>What is the City's level of control over implementation?</p> <p>Are there regulatory, political, or technological constraints related to strategy implementation? Is the strategy adaptable to new technologies?</p>
Equity		0.2	<p>Does the strategy address the needs of overburdened populations?</p> <p>Does the strategy reduce vulnerability for all populations? Is it fair?</p> <p>Are benefits distributed equitably across the community? Do they redress historic inequities?</p>
Co-benefits or synergies		0.2	<p>Does the strategy support the green economy, public health, and other City priorities? Does it present an opportunity for City leadership? Does it have an adaptation or mitigation co-benefit?</p>

- Scores range from 1 (low) to 5 (high)
- Based on input from:
  - City Staff
  - City Council
  - Community Roundtables
  - Public Survey
  - Best Practices
  - Experience and Expertise

## *Table: Revised Vancouver weight system*

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?
Synergies	0.2	0.2	How many issues does this impact?

\*Additional criteria added by our team



***Feasibility Criteria—Administrative Capabilities:*** does the jurisdiction have the appropriate staffing and funding to implement the climate measure? Does it have appropriate funding for maintenance?

## Sub criteria:

- **Very low**—inadequate staff and funding to implement and maintain climate measure. (1)
- **Low**—not enough staff, funding plausible but not likely, high maintenance cost. (2)
- **Moderate**—climate measure maintenance requires outside funding, but staffing is sufficient. (3)
- **High**—enough staff, funding possible through levy, little-to-no maintenance required. (4)
- **Very High**—appropriate and existing staff, funding available and/or already allocated. (5)

# Policy Analysis & Gaps

## Policy # 2 - Climate Education

- **Policy:** Increase climate change education and outreach.
- **Gap:** Explicitly include tribal nations in content creation for climate change outreach and education to inform communities.

## Policy #135 – Stormwater Management & Water Quality

- **Policy:** Conserve valuable water resources by promoting water efficiency and reuse and improving stormwater management.
- **Gap:** Incentivize Low Impact Development (LID).

Add how measurements will be assessed and the ongoing performance of this policy. Using a geospatial tool, such as 2NDNATURE, would streamline stormwater program tracking and evaluation.

## BETWEEN TWO WORLDS

### INDIGENOUS SCIENCE PROGRAM

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# Additional Policies

1. Alleyways – underutilized, evacuation routes
2. Climate Terminology – disasters vs natural disaster
3. Awnings – mitigate weather, generate energy
4. Affordable Housing – near transit & jobs



# Comp Plan Reviews Student Project

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## Overview

# Comp Plan Review Project

**Goal:** Build community preparedness and resilience by supporting coordinated climate and natural hazard planning among jurisdictions.

**How:** Students in **Land Use Regulations** developed recommended policies and goals for jurisdictions to consider adopting into their existing Comprehensive Plans.

# A word about Framing

## Alternative Terminology:

- Stronger Storms
- More Severe Droughts/Floods
- Higher Intensity Wildfires
- Shorter/Longer Growing Seasons





# Case Studies

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Comp Plan Climate Change Policy Recommendations

Presenters: Jennifer Gonzalez, Ashton Timour, and Emily Salcedo

# Whatcom County (2021)

- Blaine
- Ferndale
- Lynden
- Nooksack
- Everson



# Blaine, WA

Comp Plan Elements Revised or Amended:

- Vision Statement
- Housing
- **Economic Development**
- Land Use
- Parks & Recreation
- Environment

## **Economic Development Element Example:**

GOAL 2: To encourage the development and expansion of pedestrian-oriented retail shops, offices, services and tourism businesses in the Central Business zoning districts. Add the following new policy:

Policy 2.6: The City intentionally promotes density in the Central Business zoning districts and includes good multimodal connections among mixed-use commercial, low-impact employment, and diverse housing areas. (Angus et al, 2020, 24).



# Everson, WA

## Primary concerns

- Flooding along the Nooksack River and into floodplains
- Future growth: Housing and Industrial space

## Comp Plan Elements Revised or Amended:

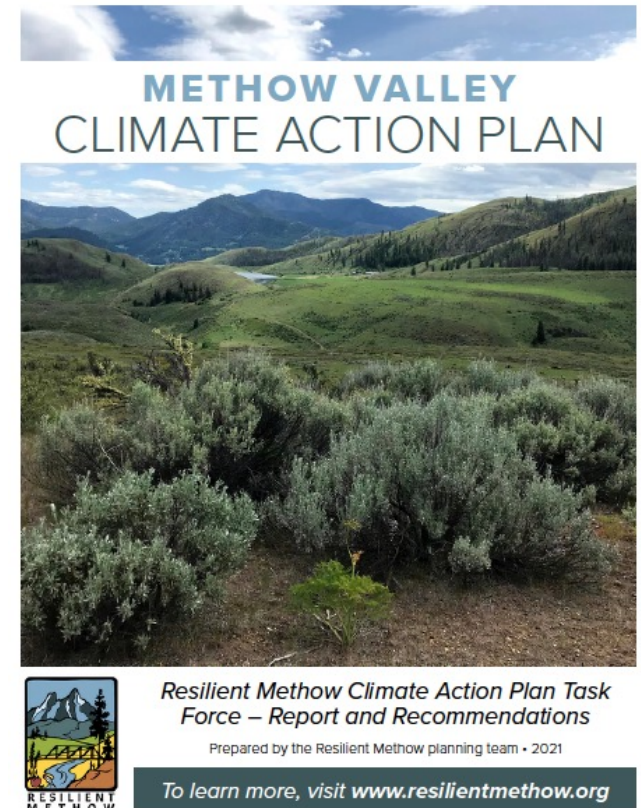
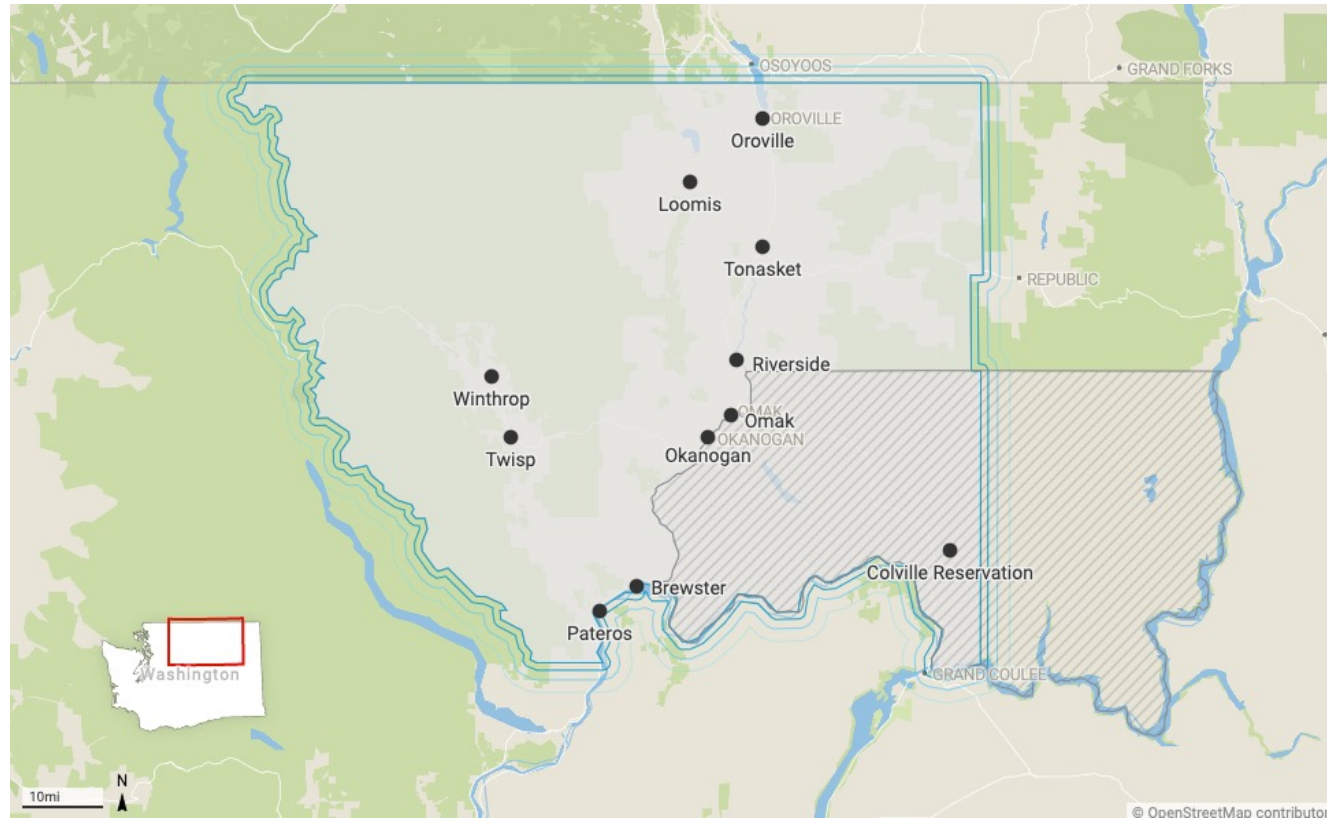
- Land Use
- Capital Facilities
- **Housing**
- Transportation
- Utilities

**Housing goal 3:** New and existing housing should withstand environmental weathering or disaster impacts and not contribute additional health risks.

**Policy 4.2.7** Conduct housing surveys in anticipation of future maintenance and restoration needs. Should the need arise, take action. (Everett, 2015)

# Okanogan County (2022)

- Okanogan County
- Winthrop
- Twisp
- Pateros



# Okanogan County Plan

- Comp Plan Elements Revised or Amended:
- Vision Statement
- Water Availability and Quality
- Wildfire Goals & Objectives
- Forest Lands Goals & Objectives
- Circulation
- **Capital Facilities**

## Capital Facilities Element Example:

- Additional objectives are recommended to ensure capital facilitates sufficiently mitigate against applicable natural hazards and support the reduction of greenhouse gas emissions.
- **Suggested Policies:**
  - **TC-7.5:** Support the expansion of renewable energy infrastructure through capital facilities.
  - **TC-7.8:** Determine natural hazard risks for existing and new capital facilities and implement sufficient science-based mitigation measures.

# Winthrop, WA

## Primary Concerns:

- Increasing carbon emissions
- Increasing Housing Density
- Wildfire risk

## Comp Plan Elements Revised or Amended:

- Land Use
- Transportation
- Capital Facilities
- **Housing**
- Economic Development

## Housing Element Example:

- Goal 3 - Encourages a diverse mix of housing types and densities that is responsive to Winthrop's demographic trends, climate change, and all income levels.
- Goal 4 - Encourage housing development and housing retrofits that support the local economy and consider changing climate conditions.

## Suggested Policy Examples (Transportation Focus):

- Policy T1.5 Form and develop a Winthrop bicycle plan to determine locations for safe bike lanes and collaborate and assist the county in forming a master bicycle plan for the Methow Valley (Resilient Methow, 2021).
- Policy T2.3 Support, collaborate, and participate in the implementation of voter approved transit service through the Okanogan County Transit Authority (OCTA) to access funding for multiregional transportation projects and ensure Winthrop's regional connectivity.
- Policy T2.4 Support the development of electric vehicle charging facilities and support education and marketing about the benefits of electric vehicles.

# Pateros, WA

## Primary Concerns:

- Increasing Housing Density
- Wildfire risk
- Lack of public transportation infrastructure

## Comp Plan Elements Revised or Amended:

- Transportation
- Circulation
- Land Use
- **Residential Development**
- Public Sector Development
- Utilities
- Environment

## Housing Density Policy Example:

- Residential Goal 5: Encourage mixed-use development in the downtown to create more housing in the city center.
- RU Policy 8: Within all single-family residential zones allow for multi-family residential developments such as duplexes and triplexes.

## Residential Development Policy Examples (Wildfire Prevention Focus):

- RU Policy 9: Require all new residential construction to adhere to wildfire-related building codes and construction standards including the use of fire-resistant building materials such as cement board siding, dual-pane windows, boxing in eaves, and metal screening (WA DONR).
- RU Policy 10: Create Firewise buffer zones around neighborhoods that consist of noncombustible materials and fire resilient plants to reduce likelihood of fire engulfment (WA DONR pg 10).
- RU Policy 12: Increase community-wide coordination by providing educational resources for homeowners in wildfire risk areas that inform about fire reduction techniques listed in RU policy 9, 10, and 11. (Methow 2021).

# Interactive Session

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Time to hear from you!

# What's your experience?

- What is the general sentiment about climate change in your community?
- What are the big concerns in your community that climate change is exacerbating?
- What is your community doing?
- What policies could your community adopt to mitigate or adapt to these changes?



# Thank You!

Questions?

Comments?



Dr. Tammi Laninga, AICP  
Western Washington University  
360-650-2814  
[Tammi.Laninga@wwu.edu](mailto:Tammi.Laninga@wwu.edu)

