

**WHATCOM COUNTY
PUBLIC WORKS DEPARTMENT**

**ELIZABETH KOSA
DIRECTOR**



NATURAL RESOURCES

Lauren Clemens
Climate Action Manager
322 N Commercial, 2nd Floor
Bellingham, WA 98225
Phone # (360) 778-6241
Fax # (360) 778-6231

MEMORANDUM

TO: The Honorable Members of the Whatcom County Council of the Whole

THROUGH: Elizabeth Kosa, Public Works Director *ek*

FROM: Gary Stoyka, Natural Resources Manager *GS*
Lauren Clemens, Climate Action Manager

DATE: June 10th, 2025

RE: 2025 Comprehensive Plan- Climate Element- Greenhouse Gas Emissions and Resilience Subelement Technical Reports

Summary: The Whatcom County climate planning consultant team (Cascadia Consulting Group) will provide a briefing to the County Council regarding technical reports developed to meet state requirements for the climate element of the Comprehensive Plan.

Technical Deliverable Background

HB 1181 updates the Growth Management Act to require that fully planning jurisdictions update Comprehensive Plans, development regulations, and regional policies, plans, and strategies under RCW 36.70A.210 and chapter 47.80 RCW to achieve the following objectives:

- 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 resilience to climate impacts and natural hazards,
- protect and enhance environmental, economic, and human health and safety; and
- advance environmental justice

The climate element, a new required chapter in the Comprehensive Plan, includes two “subelements” or sections with new Comprehensive Plan policies to meet the requirements of HB 1181: the greenhouse gas reduction subelement and the resilience subelement. The state guidance provides Whatcom County with the flexibility to develop locally specific, scientifically supported goals and policies to reduce greenhouse gas emissions and build resilience to climate impacts.

Cascadia Consulting Group has been working with Whatcom County staff to produce technical modelling and reports to inform the planning process and meet state requirements. These climate element requirements are outlined in the climate planning intermediate guidance and include a recommended process for identifying approaches to advance environmental justice, assess natural hazards exacerbated by climate change, and develop scientifically credible projections and scenarios to reduce greenhouse gas emissions.

Greenhouse Gas Emission Sub-element- Greenhouse Gas Emissions Modelling

For the greenhouse gas emissions sub-element, guidance directs jurisdictions to develop goals and policies with an overall target of reaching net-zero emissions by 2050, the statewide greenhouse gas emissions reduction target in RCW 70A.45.020(1). Greenhouse gas emissions reduction actions are defined in the guidance as, “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.”

The greenhouse gas emissions inventory, trends, and projections reports developed by Cascadia will help the County model the projected impact of implementing priority actions, state and federal policy compliance, and forecasts of different scenarios to achieve climate targets. Whatcom County is encouraged to utilize the greenhouse gas emissions inventory to evaluate goals and policies included in the greenhouse gas emissions sub-element due to the inventory’s comprehensive evaluation of emissions sources. To account for changes in measurable emissions sources over time, Whatcom County emissions in 2017 were compared to 2022 and summarized in the trends report. Based on greenhouse gas accounting protocols and best practices around emissions forecasting, Cascadia also developed a methodology to forecast possible future emission trends.

These reports provide technical documentation for Whatcom County and partner jurisdictions to:

- 1) Identify and determine the scope and scale of emissions sources countywide
- 2) Determine appropriate emissions targets or reductions from each emissions source
- 3) Provide a basis for benchmarking countywide emissions reductions and progress towards supporting achievement of the statewide net zero target

During the legislative process for adoption of the greenhouse gas reduction subelement, these technical reports will provide supporting documentation for policymakers to prioritize goals and policies that mitigate emissions sources specific to Whatcom County. While the technical analysis provides examples of strategies considered to be generally effective at reducing emissions, individual goals and policies included in the greenhouse gas emissions subelement may prove to be more or less effective at reducing greenhouse emissions and/or per capita vehicle miles travelled within Whatcom County’s planning context. Policymakers can utilize these technical reports when evaluating the climate element and determining appropriate policies to address the County’s emissions sources and achievement of emissions goals.

Resilience Sub-element- Climate Hazard & Impact Assessment

Commerce directs jurisdictions to utilize best available science and scientifically credible projections to evaluate expected changes in the climate in the near-term (20 years) and long-term (more than 20 years). To inform the resilience sub-element of the climate element, the consultant team conducted a climate hazard and impact assessment. This assessment identified the type, location, and projected future extent of climate hazards that affect the County and cities. The analysis predominantly focused on hazards with available data that allowed for mapping of the spatial distribution of climate vulnerability at the parcel scale analysis, with a particular focus on sea level rise, erosion, landslides, flooding, and alluvial fans hazard exposure.

The report provides technical documentation for Whatcom County and partner jurisdictions to:

- 1) Identify vulnerable populations and their spatial distribution across the county,
- 2) Assess hotspots or presence of both between climate hazard exposure and sensitive populations; and
- 3) Determine specific tax parcels that may experience exposure to multiple climate hazards

To analyze vulnerable populations, the consultant team also utilized available demographic Census data and Washington Environmental Health Disparities data for Whatcom County.

“Vulnerable populations” in the context of the climate planning law are populations 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.”

During the legislative process for adoption of the resilience subelement, this technical report will provide supporting documentation for policymakers to prioritize goals and policies that benefit identified communities that may suffer disproportionately from compounding environmental impacts and may be most impacted by natural hazards due to climate change. The report also provides an evaluation of the exposure and geographic extent of key hazards across Whatcom County to provide policymakers with a characterization of projected events or conditions that could injure people or damage assets countywide. This geospatial analysis seeks to provide a better understanding of risk by supporting documentation, including maps, modelling and other literature review to demonstrate who and what are impacted by high priority climate risks.