WHATCOM COUNTY
PUBLIC WORKS DEPARTMENT

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TO: Whatcom County Council Committee of the Whole

THROUGH: Mark Personius, Planning and Development Services Director
Elizabeth Kosa, Public Works Director EK

FROM: Lauren Clemens, Climate Action Manager

DATE: November 5th, 2025

RE: **Whatcom County Comprehensive Plan- Climate Element (Chapter 12)- Council Committee of the Whole- Staff Memo**

Climate Element (Chapter 12) Background- Preliminary Planning Commission Recommendation

Whatcom County Planning Commission voted 7-0 (2 absent) on September 30th to forward the Commission's preliminary recommendation on Comprehensive Plan Chapter 12 (Climate Element) to the County Council. Planning Commission approved 18 amendments to the draft Chapter 12 introduced for public hearing on August 14th.

This memo summarizes the Planning Commissions amendments, and outlines the technical approach to utilizing best available science to inform the comprehensive plan update and evaluation of areas vulnerable to sea level rise, flooding, wildfires, and drought.

Summary of Whatcom County Planning Commission Amendments

The amendments are summarized in the tables below and discussed in detail in the September 30th staff memo, which outlines the Planning Commission's deliberation and amendment process for Chapter 12 (meetings held on August 6th, August 14th, and September 30th). The tables are organized sequentially and include the amendment type, Planning Commission amendment number (see Planning Commission vote in element comments and discussion in staff memo), element page number, and policy topic. Proposed Planning Commission changes to Chapter 12 (Climate Element) include 18 Planning Commission amendments- six were amendments to section summaries. In the Greenhouse Gas Reduction Subelement, eight policies were amended, two policies removed, and one policy added. In the Resilience Subelement, 1 policy was amended.

- **Section Summaries (6)**- Consistency with the Whatcom County Climate Action Plan, GHG Reduction- Introduction & Background Summary, Resilience- Zoning & Development, Map Summary
- **Policies amended in GHG Reduction Subelement (8)**-
    - Agriculture & Food Systems-
        - Policy 12.1.5- Hydrofluorocarbons
    - Buildings and Energy-
        - Policy 12.1.1- State Energy Code

        - Policy 12.2.4- Renewable Energy
    - Cultural Resources-
        - Policy 12.3.1- Climate Commitment Act- Tribal Consultation
    - Economic Development-
        - Policy 12.2.5- C-PACER
    - Transportation-
        - Policy 12.8.7- Countywide Electric Vehicle Infrastructure Development
    - Waste Management-
        - Policy 12.9.3- Solid and Hazardous Waste Management Plan
        - Policy 12.9.5- Construction and Demolition Debris Recycling
- **Policies deleted in GHG Reduction Subelement (2)**-
    - Buildings and Energy-
        - Policy 12.2.9- State Energy Code Updates
    - Transportation-
        - Policy 12.8.9- County-Owned Electric Vehicle Infrastructure
- **Policies added in GHG Reduction Subelement (1)**-
    - Zoning and Development-
        - Policy 12.11.7- Wetland Mitigation Banks
- **Policies amended in Resilience Subelement (1)**-
    - Buildings & Energy-
        - Policy 12.13.5- Floodplain Development

Planning Commission Introductory Text Amendments- 2 Amendments

Amendment Type	**Section**	**Page, PC Amendment #**	**Topic**
Section Summary	Consistency with the Whatcom County Climate Action Plan	12-2, #1, #2	Emissions Targets

Planning Commission GHG Reduction Subelement Amendments- 13 Amendments

Amendment Type	**Section**	**Page #, PC Amendment #**	**Policy Number (Topic)**
Section Summary	Introduction Background Summary	12-3, #4, 7	Policy Implementation Global Emissions)
Policy Amendment	Agriculture and Food Systems	12-4, #6	12.1.5 (Hydrofluorocarbons)
	Buildings and Energy	12-5, #5, #15	12.2.1 (State Energy Code) 12.2.4 (Renewable Energy)
	Cultural Resources	12-6, #18	12.3.1 (Climate Commitment Act Tribal Consultation)
	Economic Development	12-8, #9	12.2.5 (C-PACER)
	Transportation	12-11, #11	12.8.7 (Countywide Electric Vehicle Infrastructure Development)

	Waste Management	12-12, #12, #14	12.9.3 (Solid and Hazardous Waste Management Plan) 12.9.5 (Construction and Demolition Debris Recycling)
Policy Deletion	Buildings and Energy	12-5, #16	12.2.9 (State Energy Code Updates)
	Transportation	12-10, #10	12.8.6 (County-owned Electric Vehicle Charging Infrastructure)
Policy Addition	Zoning and Development	12-13, #17	12.11.7 (Wetland Mitigation Banks)

Planning Commission Resilience Subelement Amendments- 3 amendments

Amendment Type	**Section**	**Page #, PC Amendment #**	**Section/ Policy Number (Topic)**
Section Summary	Zoning and Development	12-29, #8	Terminology
Policy Amendment	Buildings and Energy	12-18, #13	12.13.5 (Floodplain Development)
Section Summary-Maps	Countywide Forecasted Near-Term Climate Impacts	12-30, #3	Sea Level Rise

Best Available Science for Resilience Subelement- Discussion of Technical Approach

The following section outlines the technical approach to utilizing best available science to inform the comprehensive plan update and evaluation of areas vulnerable to sea level rise, flooding, wildfires, and drought.

State rulemaking is ongoing for updating the administrative climate rules under the Growth Management Act (GMA) in WAC 365-195 to define "best available science." for climate resilience. The draft definition states that, "Best available science is not the sole factor in making decisions related to climate resilience or critical areas… inclusion means that the resulting policies and regulations must substantively reflect the results of a valid weighing of scientific evidence and other factors consistent with the requirements in WAC 365-195-915 (draft WAC Chapter 365-195)." Draft rules in WAC 365-195-905(a) define "a valid scientific process is one that produces reliable information useful in understanding the consequence of a county's decisions developing climate resilience-related policies and regulations." These updates to the administrative rules have been considered alongside Whatcom County Council's request in Resolution 2025-022 for information regarding, "discouraging and/or mitigating potential risks from growth in vulnerable floodplains and coastal areas projected to experience sea level rise and to encourage growth in low flood or no flood zones."

Drought- The resolution to adopt the Coordinated Water Systems Plan (CWSP) was approved by the Council on September 23, 2025, and been submitted to WA Department of Health for review and approval. The 2023-2025 CWSP Update discusses the impact of climate change on water systems. Based on provisions included in HB 1181, Department of Health guidance requires that any Class A water system plan update initiated after June 2025 must include a resilience subelement. Department of Health guidance requires that each eligible Class A water system follow this resilience planning process: a) Determine which extreme weather events pose significant challenges to their system and build scenarios to identify potential impacts; b) Assess critical assets and the actions necessary to protect the system from the consequences

of extreme weather events on system operations, and c) Generate reports describing the costs and benefits of the system's risk reduction strategies and capital project needs.

There are currently nine Group A, Community Public Water Systems with 1,000 or more connections within the Whatcom County Critical Water Supply Service Area (CWSSA) that will be required to prepare this resilience subelement for water system plan updates initiated after June 30, 2025. The systems that must include a climate resilience subelement as part of the next update are: City of Bellingham, Birch Bay Water and Sewer District, City of Blaine, Columbia Valley Water District, City of Ferndale, Glacier Water District, Lake Whatcom Water and Sewer District - South Shore Water System, City of Lynden, Point Roberts Water District No. 4, Black Mountain Ranch, and Glen Community Association. Additional capital facilities planning may be required by each of these water systems to identify diversification of water sources, infrastructure maintenance, interconnection of systems with emergency or permanent interties, redundant water sources, and drought planning to reduce operating impacts affecting each Class A water system due to climate change.

Wildfire- GMA changes due to HB 1181 require reducing and mitigating the risk to lives and property posed by wildfires by using land use planning tools. WA Department of Natural Resources (DNR) is in the early stages of a process to map wildfire risks and hazards and to guide new codes for fire-resistant construction. This process addresses issues with prior mapping that classified the majority of the state as a wildland-urban interface and was based largely on the location of existing structures rather than wildland fire hazard and risk. RCW 19.27.560 was amended in the 2024 legislative session to develop a new wildfire hazard map and a base-level wildfire risk map for each county of the state, per RCW 43.30.580. The hazard map will be made available on DNR's website and will designate areas as low, moderate, high, and very high wildfire hazard and designate vulnerable resources or assets based on their exposure and susceptibility to a wildfire hazard. DNR is also responsible for establishing a method by which local governments may update the wildfire hazard map and wildfire risk map based on local assessments and approved by the jurisdiction's fire marshal. Throughout the risk analysis process DNR will make publicly available the criteria and analysis utilized in assessing the wildfire hazard and risk. Whatcom County is tracking the development of the risk map, which is not scheduled to be completed by the periodic due date. For more information- see: dnr.wa.gov/wildfire-resources/wildfire-prevention/wildfire-hazard-and-risk-mapping

Sea Level Rise and Flooding- Forecasted sea level rise and flood risks in floodplains and coastal areas are mapped in the climate element resilience subelement on page 12-30 to 12-34. The maps illustrate projected exposure by 2040 due to 0.8 feet of sea level rise and 20-year coastal storm and a 20 percent increase in peak river flows (1.2x the current 100-year flood event). Initial analysis from this modelling forecasts 6,652 buildings, 63 critical facilities, and 150 miles of public and private roads at risk across Whatcom County due to riverine and sea level rise impacts. Mapping in the element in is not intended to provide site-specific analysis, but an approximation of potential future risk to public assets. The three maps included in the chapter illustrate Near-Term Forecasted Coastal Hazard Exposure by 2040, Near-Term Forecasted Riverine Hazard Exposure by 2040 and Whatcom County Roads Forecasted Impacts.

Projected future coastal flood risks were assessed with the Puget Sound Coastal Storm Modeling System (PS-CoSMoS) developed by the United States Geological Survey (USGS). PS-CoSMoS simulations account for the combined effects of tides, sea level rise, coastal storms, seasonal and interannual sea level rise anomalies (e.g., El Niño years), and simultaneous stream runoff into coastal areas. Coastal flood exposure areas span the full range of plausible sea level rise and storm surge conditions, aligned with the latest projections from the National Oceanic and Atmospheric Administration (NOAA) and the University of Washington Climate Impacts Group (UW-CIG).

The 2025 Whatcom County Final Environmental Impact Statement (FEIS) included mapping of regulatory, draft, and forecasted flood and sea level rise exposure on pages 3-58 to 3-70 for each jurisdiction and Urban Growth Area (UGA) with existing and studied land use designations. The maps in the FEIS include the Federal Emergency Management Agency (FEMA) draft maps as available at the time of FEIS issuance in August 2025. Since the FEIS was published, FEMA issued a Preliminary Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) in September 2025. There are multiple steps remaining in the FIRM map process before the maps become regulatory, including a public meeting/ workshop, appeal period and letter of final determination from FEMA. The Planning Commission, Whatcom County, and each city, have been discussing their respective UGA proposals, including areas in the effective floodplain outlined in section IX, "UGA Expansion in the Floodplain (if applicable)" of each jurisdiction's submitted UGA proposal. The Planning Commission held public hearings on September 11th and September 25th for a majority of the jurisdictions and there are additional work sessions scheduled for October 30th and November 6th.

Projected future riverine flood risks illustrated in the maps in the climate element utilized data modelled as part of the Floodplain Integration Planning process and included in the Future Shorelines project. The Nooksack Floodplain Integrated Planning (FLIP) project has completed hydraulic modeling work for past, present, and future Nooksack River flooding. This hydraulic modelling completed by Whatcom County River and Flood for past, present, and future Nooksack River flooding greatly improves the accuracy of predicted flood extents and depths across the mainstem river and key flood pathways, including the Everson–Sumas overflow corridor and Sumas River floodplain. To account for climate change, the FLIP hydraulic model was slightly expanded to cover a larger portion of the Sumas River and incorporated flood modeling completed by Northwest Hydraulic Consultants (NHC) for Lummi Nation's Coastal Resilience Plan, which accounts for future sea level rise in the delta. That model utilized for Lummi Nation's Coastal Resilience Plan is based on the same data as FLIP modeling, uses flow inputs from the USGS Ferndale stream gauge, and assumes two infrastructure improvement projects will be constructed in the near term (Ferndale Levee improvements and the elevation of Slater Road amid the river's floodplain). Future climate scenarios for river flows are based on projections from the University of Washington Climate Impacts Group (UW-CIG) applied in Whatcom County's FLIP project work to scale existing 100-year recurrence flood flows in the lower Nooksack River to account for anticipated future increase in flood magnitudes. While the maps in the climate element are static, the information on the following StoryMap illustrates projected changes between current and mid-term risk.

Overburdened Communities and Vulnerable Populations-

To support identification of overburdened communities and vulnerable communities, the Climate Hazard and Impact Assessment included geospatial mapping to determine climate hazard exposure and sensitive population groups. These types of analyses can help prioritize implementation of adaptation projects in areas at high risk, improve disaster preparedness, and support identification land use strategies to mitigate risks. This Climate Hazard and Impact Assessment serves as a technical supporting document for the climate element and was initially presented on June 10th and sent to Council as part of the report provided to Council on August 6th for the joint Planning Commission- Council work session- see AB2025-551. This report provides additional details regarding countywide social and economic characteristics and populations with health considerations and access needs. By analyzing natural hazard incidences and population groups, this information can be incorporated into County programs, initiatives, and projects.

The report analyzes areas that have a higher proportion of residents with a disability, limited English proficiency, seniors, children, and low-income residents and provides the statewide Environmental Health Disparities score for that census block area. The analysis indicated that areas in central and eastern Whatcom County, such as Kendall, Maple Falls, Deming, Welcome, and West Peaceful Valley have higher

proportions of people with a disability as reflected by Census data. The Marietta- Alderwood area has the highest proportion of residents with limited English proficiency with 9.9%. Areas in Bellingham around East Cornwall Park, Bellingham Technical College, and South Bellingham have the highest proportion of seniors countywide with over 60% of those Census blocks with residents above 65. The Census blocks with the highest proportion of youth under 5 include the Brennan and Marietta-Alderwood area, South Birch Bay, and the Clearbrook area in Everson. The highest proportions of residents below the poverty line are in East Whatcom County, Marietta-Alderwood and the Bellingham Happy Valley neighborhood. When the overburdened community and vulnerable population data was mapped with sea level rise and coastal flooding risk, the highest concentration of severe coastal flood risk occurs in a sensitive population block group located within the Lummi Nation. Given that the current floodplain is forecasted to increase by 24% in the next 50 years, areas around Everson, Ferndale, Lummi Nation, Nooksack, Nooksack Tribe, Sumas, and unincorporated Whatcom County that have higher rates of sensitive population groups are expected to be exposed to increasing flood risk.

Council Discussion- Climate Element- November 5th-

The initial draft of the climate element was drafted by the Whatcom County Climate Action Manager in response to WA State Department of Commerce intermediate climate planning guidance. The draft was then reviewed with PDS staff and the City-County Planner Group in December 2024 and the committee draft was released for comment in January 2025. Modifications to Chapter 12 were recommended by the Climate Impact Advisory Committee in March 2025 and additional revisions were made due to Tribal staff comments and interdepartmental review before Council and Planning Commission discussion on August 6th. The Whatcom County Planning Commission issued preliminary recommendations on Chapter 12 on September 30th, following the public hearing held on August 14th.

Full revisions to Chapter 12 from January to August can be found as part of the Council packet for August 6th at: Comments and Revisions. Preliminary recommendations from Planning Commission are outlined in the, “Summary of Whatcom County Planning Commission Amendments” section above and in the staff memo associated with the September 30th Planning Commission meeting included in the Council packet.