

City of Centralia Climate Resilience Element

City Council and Planning Commission Review

March 11, 2025



PERTEET

Better communities, by design

EK Consulting



Today's meeting

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Climate Element Overview



Climate Element requirement

In May 2023, new legislation (HB 1181) added climate planning as a new goal of the Growth Management Act. This required cities like Centralia to add a resiliency element under RCW 36.70A.040 to its 2025 Comprehensive Plan update.

This resilience sub-element aims accomplish the following, consistent with state law

Equitably enhance the resilience of communities and ecological systems to climate change.

Be consistent with the best available science and scientifically credible climate projections and impact scenarios.

Prioritize and benefit communities that will suffer disproportionately from environmental impacts and climate-exacerbated natural hazards.

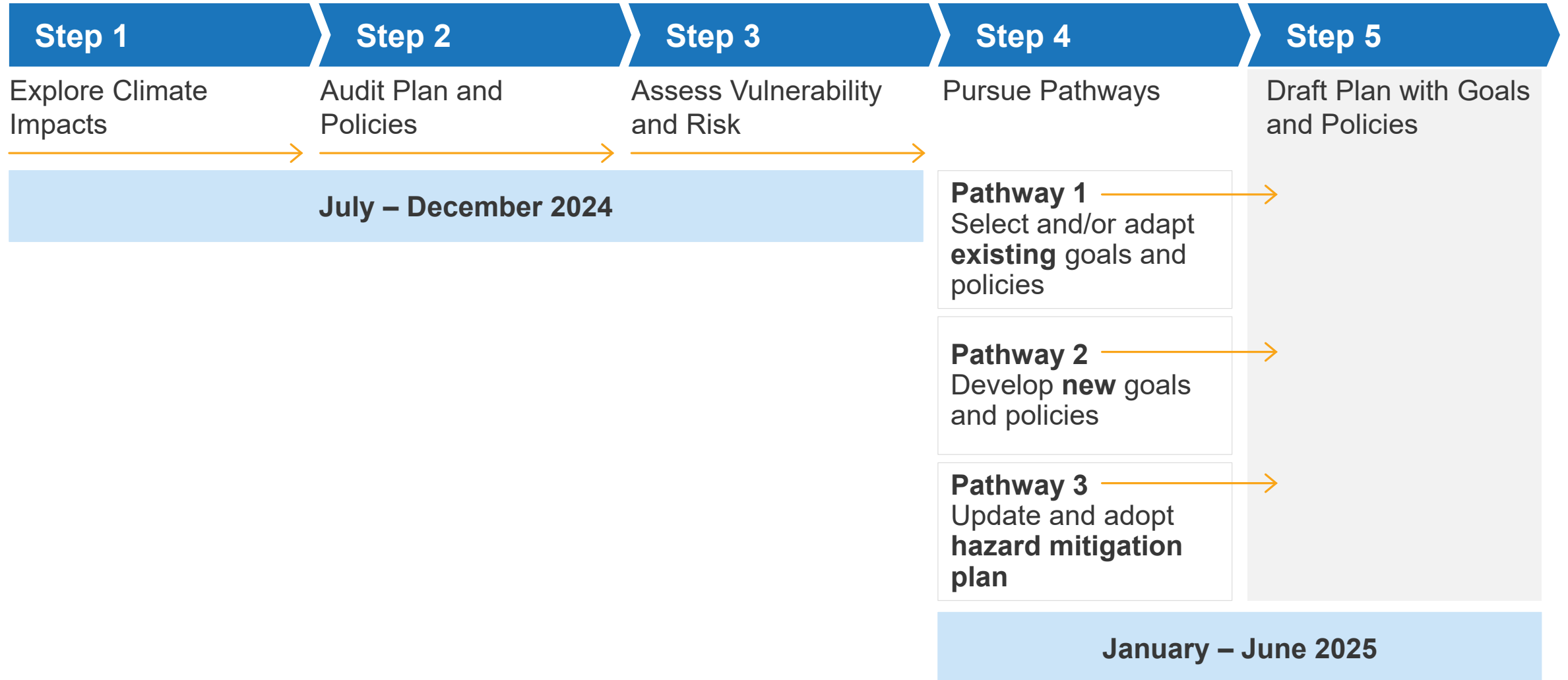


This effort is financially supported with funding from Washington's Climate Commitment Act.



Planning process

Adapted from the U.S. Climate Resilience Framework and Washington best practices





Major Findings for Centralia



Summary of climate impacts

The extent to which future conditions will impact natural hazards



Drought

- More frequent and severe droughts
- Up to 25% decrease in summer precipitation
- Up to 9% decrease in streamflow during warm months
- 1-2x more streamflow in winter due to mountain precipitation falling as rain



Extreme Heat

- Average summer temperatures 3.4 degrees warmer
- 20+ more days over 90 degrees
- More days requiring air conditioning



Summary of climate impacts

The extent to which future conditions will impact natural hazards



Extreme precipitation

- 11% increase in average storm precipitation
- More days with 1 inch of precipitation or more



Flooding

- Major floods occurring 2x as often
- Typical peak streamflow increased by 4-6%
- 15% increase in peak streamflow by 2050, 40% increase by 2080



Summary of climate impacts

The extent to which future conditions will impact natural hazards



Snowpack Loss

- 68% loss of April 1st mountain snowpack
- 5% Decrease in late summer precipitation
- Longer duration of low streamflow



Wildfire & Smoke

- 3% chance that any year will have climate and fuel conditions that are favorable to wildfire
- Up to 30% wildfire likelihood after 2050
- More days where 100-hour fuel moisture is less than the 20th percentile



Summary of climate risk across assets

Asset category	Drought	Heat	Precip.	Floods	Snowpack	Wildfire
Aquatic & Terrestrial Habitat, Tree Canopy	Moderate or Amplified Risk	Major and Amplified Risk	Minimal or Isolated Risk	Major and Amplified Risk	Moderate or Amplified Risk	Minimal or Isolated Risk
City Parks & Recreation facilities	Minimal or Isolated Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Major and Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
City Roads, Bridges, Railways, Structures	Minimal or Isolated Risk	Moderate or Amplified Risk	Moderate or Amplified Risk	Major and Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
Commercial, Residential, Public Buildings	Minimal or Isolated Risk	Moderate or Amplified Risk	Minimal or Isolated Risk	Major and Amplified Risk	Minimal or Isolated Risk	Moderate or Amplified Risk
Community Members & Visitors	Minimal or Isolated Risk	Major and Amplified Risk	Minimal or Isolated Risk	Major and Amplified Risk	Minimal or Isolated Risk	Moderate or Amplified Risk
Fire Stations, Police Stations, EMS	Minimal or Isolated Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Major and Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
Radio Communications, Public Safety Radio	Minimal or Isolated Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
Sewer infrastructure, Wastewater treatment	Minimal or Isolated Risk	Minimal or Isolated Risk	Major and Amplified Risk	Major and Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
Stormwater Infrastructure	Minimal or Isolated Risk	Minimal or Isolated Risk	Major and Amplified Risk	Major and Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
Transmission Lines, Utility Substations	Moderate or Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Moderate or Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk
Wells, Reservoirs, Pump Stations	Moderate or Amplified Risk	Minimal or Isolated Risk	Minimal or Isolated Risk	Major and Amplified Risk	Moderate or Amplified Risk	Minimal or Isolated Risk

Minimal or Isolated Risk Moderate or Amplified Risk Major and Amplified Risk



Centralia's vision for climate resilience

The City aims to foster a resilient community by taking actions to address climate change risk. We will create an adaptive environment that preserves natural resources, promotes sustainable growth, and protects the built environment and entire community—ensuring a secure and flourishing city for current and future generations.



What climate resilience looks like

Utilities are optimized to minimize outages and meet community needs during and after climate-driven events.

The **impacts of flooding on people and property are reduced**, and the ability to recover after flooding events is enhanced.

Connectivity is enhanced with alternative transportation options like the Hub City Greenways and West Side Connector.

Greenspaces and tree coverage are expanded and enhanced to protect natural ecosystems, improve air quality, be resilient to drought and wildfire, and provide natural cooling.

Infrastructure is resilient, protects natural resources like groundwater, and can adapt to the risks of climate change.

The **entire community is well-informed and engaged** in mitigating and adapting to the risks of climate change.

Safe spaces are available during extreme weather events, ensuring well-being through proactive preparation and communication.

Structures are sustainably retrofitted or designed to minimize environmental impacts, mitigate wildfire risk, and improve human health and safety.



Goals and Policies



Department of Commerce requirements

In drafting or revising goals and policies to support climate resilience, there are three requirements of the Department of Commerce:

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.



Land Use resilience themes

Proactive approach to guiding development and land use in a manner that minimizes risks from natural and climate-exacerbated hazards.



- ▶ Consider climate hazards and natural hazards when identifying areas where future development may occur
- ▶ Prioritize the development of land with a lower risk of natural hazards
- ▶ Consider how climate change impacts the safety, health, and well-being of community members
- ▶ Encourage annexations of areas that will not require disproportionate response and recovery efforts
- ▶ Ensure UGA development meets city standards



Housing resilience themes

Encourage neighborhoods that are resilient to climate impacts and integrated into multi-functional urban landscapes.



- ▶ Support programs that mitigate and protect existing homes from flooding, air pollution, and extreme temperatures
- ▶ Expand bicycle and pedestrian routes through neighborhoods
- ▶ Support innovative development that protects natural resources and open spaces
- ▶ Maintain neighborhood character by enhancing and preserving existing housing
- ▶ Promote higher-density and mixed-use housing near services, transit, and employment centers



Utilities resilience themes

Maintain sustainable and resilient utility systems for future generations to benefit from.



- ▶ Consider future conditions when designing and planning for utilities and flood control facilities
- ▶ Protect and preserve water quality and quantity of the city's critical aquifer from drought, extreme heat, and other climate hazards
- ▶ Encourage water conservation and discourage water waste
- ▶ Promote low impact development and green infrastructure
- ▶ Improve the safety and reliability of the city's power infrastructure
- ▶ Place all electrical and communication lines underground when possible



Capital Facilities resilience themes

Enhance urban greening and sustainability for equitable community spaces.



- ▶ Protect new public facilities from the 2080 climate change floodplain
- ▶ Continue to provide firefighting staff with wildland fire training
- ▶ Consider developing a comprehensive tree plan that helps increase the city's Tree Equity Score



Environmental resilience themes

Advance environmental stewardship and resilience for sustainable ecosystems.



- ▶ Protect natural areas that provide vital habitat for safe passage and species migration
- ▶ Limit development in areas where hazards may be exacerbated by climate change
- ▶ Protect and improve the water quality and biological health of lakes, wetlands, rivers, and streams
- ▶ Minimize public and private losses in frequently flooded areas
- ▶ Encourage the use of native and drought-resistant vegetation in landscaping
- ▶ Increase aquatic and terrestrial habitat resilience to climate impacts like drought and low streamflow
- ▶ Consider becoming a Smoke Ready Community



Economic Development resilience themes

**Foster a diversified
and resilient
economy for
sustainable growth.**



- ▶ Encourage diverse economic development with an emphasis on sustainable and resilient development



Parks and Recreation resilience themes

Cultivate accessible, sustainable, and vibrant community spaces.



- ▶ Partner to preserve land in the UGA that provides parks and open spaces, especially along the rivers
- ▶ Apply sustainable standards and future considerations in park planning and upgrades
- ▶ Prepare for and adapt to extreme weather events that could affect the park system in the future
- ▶ Ensure overburdened populations in the city have equitable access to parks and open spaces



Historic Preservation resilience themes

Ensure historic sites and structures are around for future generations.



- ▶ Incorporate resilient design into historic structures undergoing substantial improvements to protect from current and future flood risks



Getting to Completion



Next steps

01

Finalizing Climate Resilience Plan for review and adoption

02

Completing public outreach