Chapter Twelve
Climate

Purpose

The Climate Element is a required element of comprehensive plans under HB 1181. HB 1181 requires cities and counties to use their comprehensive plan to build resilience and reduce greenhouse gas emissions that contribute to climate change. The law integrates climate planning into the Growth Management Act (GMA) and requires the adoption of a greenhouse gas (GHG) emissions reduction sub-element with actions to reduce overall emissions and per capita vehicle miles traveled (VMT) and a resilience sub-element to avoid the adverse impacts of climate change. Washington's new planning law also directs jurisdictions to make changes to the Capital Facilities, Environment, Land Use, Recreation, Transportation, and Utilities chapters to incorporate climate goals and policies.

Environmental Justice and Health Disparities

The 2025 Whatcom County Environmental Justice and Health Disparities Report identified disproportionately burdened populations in the region due to climate impacts. The report identified variables that address a wide range of socioeconomic, occupational, and geographic factors that define people who are disproportionately burdened by climate impacts. The Environmental Justice and Health Disparities report can be found in the Appendix.

Chapter Organization

The Climate Element includes a set of broad goals for various aspects of climate action the county derived from public outreach summarized in the Appendix. The Element is organized into two sub-elements, the greenhouse gas reduction and resilience sub-elements. These sub-elements include a discussion of each sector, how climate change is projected to influence the sector, and a comprehensive set of policies to help achieve the goals. The Climate Element is also supplemented by a series of appendices that provide additional information that was used to develop this Element.

Goals and policies included in the element were evaluated for compliance with Growth Management Act requirements under HB 1181, 2023 Department of Commerce Climate Element Intermediate Planning Guidance, compatibility with existing local policies, and compatibility with the Whatcom County Climate Action and Hazard Mitigation Plans. Goals and policies were included in the greenhouse gas reduction sub-element if the goal or policy had a direct link to a greenhouse gas reduction mechanism. Goals and policies were included in the resilience sub-element if the goal or policy had a direct link to a hazard exacerbated by climate change. Other elements include climate goals and policies, which can be found in dedicated sections in those elements.

Conformity with State Laws and Regulations

The Climate Element conforms with the 2023 Department of Commerce Climate Element Intermediate Planning Guidance for local governments planning under the Growth Management Act. In 2025, the County will also review the Element for compliance with the full guidance that reflects the results of a rulemaking process for HB 1181.

Consistency with Whatcom County Comprehensive Plan

To ensure that the goals and policies included in the Climate Element are internally consistent with other elements of the County's Comprehensive Plan, a policy audit was conducted to identify any similar or overlapping goals and policies from other elements of the County's adopted Comprehensive Plan, and other plans the County has adopted that support implementation of the Comprehensive Plan. Based on this assessment, the County finds that the Climate Element is consistent with the other elements of the Comprehensive Plan and externally consistent with the countywide planning policies, regional transportation plan, and other adjacent city comprehensive plans.

Consistency with the Whatcom County Natural Hazard Mitigation Plan

The Natural Hazard Mitigation Plan was submitted to the WA Department of Emergency Management and Federal Emergency Management Agency (FEMA) for approval in 2021. By reviewing and updating the Hazard Mitigation Plan every five years, the County maintains eligibility for certain hazard mitigation funding from FEMA. The goals and policies of the Climate Element are complementary to and consistent with the recommended mitigation strategies of the 2021 Hazard Mitigation Plan and its identified hazards. To ensure that the goals and policies of the 2026 Hazard Mitigation Plan are consistent with recent FEMA climate guidance, a policy audit was conducted in advance of the update.

Consistency with the Whatcom County Climate Action Plan

In 2021, the County adopted the Whatcom County Climate Action Plan (CAP). The CAP established a goal to reduce countywide emissions by 45% from 1990 levels by 2030 and achieve net zero emissions by 2050. The Climate Action Plan also established an emissions reduction goal of 85% from 2000 levels by 2030 for County government operations. The CAP adopts sector-specific emissions goals and provides foundational actions to establish a trajectory towards achieving those goals. The Climate Element has been reviewed for consistency with both the Climate Action Plan and other local climate planning documents adopted by other partners, including the City of Bellingham, Port of Bellingham, Nooksack Tribe, Lummi Nation, Whatcom Transit Authority, and Whatcom Council of Governments.

Greenhouse Gas Emissions Reduction Sub-Element

Introduction

This sub-element provides an overview of greenhouse gas emissions sources in Whatcom County and includes a comprehensive set of goals and policies to reduce emissions associated with those sectors.

HB 1181 requires that a county's GHG reduction sub-element and its related development regulations result in reductions in overall greenhouse gas emissions generated by transportation and land use within the jurisdiction, reduce per capita vehicle miles traveled, and prioritize reductions that benefit overburdened communities. This greenhouse gas sub-element includes prioritized policies that have a demonstrated ability to reduce greenhouse gas emissions.

Background Summary

The 2022 Whatcom County Greenhouse Gas Emissions Inventory quantified emissions produced by activities across Whatcom County, including emissions from the built environment, transportation, solid waste and wastewater treatment, refrigerant usage, and land use. In 2022, Whatcom County produced an estimated 6,197,791 metric tons of carbon dioxide equivalent (MTCO2e), which equates to approximately 26.8 MTCO2e per capita. For a more detailed discussion of greenhouse gas emissions and emissions trends and projections, see the Appendix.

Issues, Goals, and Policies

The greenhouse gas reduction sub-element addresses all eleven sectors recommended in the 2023 Department of Commerce Climate Element Intermediate Planning Guidance in the greenhouse gas emissions reduction goals and policies listed below.

Agriculture & Food Systems

Agricultural producers can reduce emissions associated with production and distribution through adoption of renewables and reductions in fuel use, including decreasing distances travelled for distribution. Land based strategies to reduce emissions also include the implementation of practices that increase carbon stored in soil or vegetation. Other changes in production practices that result in reduced emissions of methane and nitrous oxide include improved manure management and reduced pesticide use.

Goal 12.1- Reduce greenhouse gas emissions from agriculture and food system activities that contribute to climate change.

Policy 12.1.1- Support and incentivize renewable energy projects, including

agrivoltaic systems, that integrate renewable energy production with ongoing agricultural activities.

Policy 12.1.2- Encourage agricultural producers to reduce fuel use and agricultural supplies, synthetic fertilizers, and pesticides derived from fossil fuels.

Policy 12.1.3- Build consumer demand for locally produced agricultural products by supporting retail, institutional, and community market opportunities for local producers and food businesses.

Policy 12.1.4- Facilitate the development of local distribution networks and processing infrastructure to reduce distances traveled to transport agricultural goods and inputs.

Policy 12.1.5- Provide financial incentives and technical support for the replacement of conventional refrigeration systems with appliances that use alternative refrigerants, reducing emissions from cooling systems.

Policy 12.1.6- Partner with livestock producers to implement best practices for manure management, including anaerobic digesters and manure application to reduce greenhouse gas emissions and improve soil health.

Policy 12.1.7- Promote the adoption of efficient irrigation technologies and practices that minimize water use, increase soil water holding capacity, and reduce energy consumption associated with water treatment and distribution.

Buildings & Energy

Building energy use, primarily for heating and cooling residential, commercial, and industrial buildings, is a significant source of greenhouse gas emissions in Whatcom County. Retrofits to existing building space through better insulation, improved heating and cooling equipment, and increased building efficiency drive emissions reduction. Other solutions, such as increasing adoption of renewable energy sources, distributed renewables, and green building construction standards identified in the policies below, can also reduce emissions in this sector.

Goal 12.2- Decarbonize buildings by promoting the transition to renewable energy sources, implementing green building standards, and retrofitting existing buildings to be more energy efficient.

Policy 12.2.1- Implement the Washington State Building Code’s requirements for residential and commercial construction, including space and water heating

guidelines for eligible new commercial construction and energy efficiency targets for residential construction.

Policy 12.2.2- Expand resources and incentives for the retrofitting of existing buildings to improve building operational efficiency.

Policy 12.2.3- Provide technical assistance to residential and commercial building owners to facilitate energy retrofits.

Policy 12.2.4- Encourage the development of single and networked microgrids and distributed energy storage with battery back-up to support energy security, resilience, and affordability.

Policy 12.2.5- Promote the development of wind, solar, and geothermal energy projects, including small-scale and community-owned renewable energy installations.

Policy 12.2.6- Advocate for utility investments in renewable energy development, energy efficiency incentives, and low-income energy assistance in Whatcom County to meet the Clean Energy Transformation Act compliance targets.

Policy 12.2.7- Encourage the design of highly energy-efficient new buildings that utilize on-site or off-site renewable energy, reduce refrigerant use, and include the use of low-carbon, recycled, or reused materials in building projects.

Policy 12.2.8- Update the Whatcom County code and development standards to incorporate best practices for minimizing renewable energy project permitting and siting conflicts.

Policy 12.2.9- Encourage the use of locally or regionally derived building materials, such as wood and mass timber products that store embodied carbon.

Cultural Resources

Siting of utility and infrastructure projects, such as energy, water, or transportation systems, that reduce greenhouse gas emissions can have a negative impact on cultural resources. As required by RCW 70A.65.305, Whatcom County consults with any affected federally recognized tribe on Climate Commitment Act funded programs or projects that may impact tribal resources.

Goal 12.3- Avoid, minimize, or mitigate impacts to cultural resources due to energy, transportation, and water infrastructure siting and operations.

Policy 12.3.1- During the review of large-scale renewable energy permitting applications, determine the potential impacts on affected cultural resources and initiate consultation, as appropriate.

Policy 12.3.2- Evaluate the potential impacts of proposed low-carbon transportation projects, energy transmission, and water utility infrastructure expansion on cultural resources.

Policy 12.3.3- Whatcom County will consult with all affected federally recognized tribes regarding funds received from Climate Commitment Act accounts, in accordance with HB 1753.

Economic Development

Whatcom County's primary economic development sectors include manufacturing, food and beverage, technology, recreation, health, maritime, and agriculture industries. Opportunities for emissions reduction within these sectors include decarbonizing business operations, evaluating supply chains, and adopting low carbon fuels.

Goal 12.4- Support the development of a local economic system that fosters business opportunities associated with climate action.

Policy 12.4.1- Assist property owners regulated under the Clean Buildings Performance Standard access incentives to reduce building energy use and meet early compliance deadlines for Tier 1 and 2 buildings.

Policy 12.4.2- Consistent with the Climate Commitment Act, support covered industries' participation in the Washington State cap-and-invest market.

Policy 12.4.3- Encourage the development of local carbon offset projects to reduce greenhouse gas emissions and generate industry investment in local carbon sequestration projects.

Policy 12.4.4- Support the decarbonization of the manufacturing sector by partnering to increase access to state and federal incentives for the adoption of less carbon-intensive equipment.

Policy 12.4.5- Increase participation of qualified commercial, industrial, and multifamily properties in Whatcom County's C-PACER (Commercial Property Assessed Clean Energy and Resilience Program) to finance energy efficiency, renewable energy, water conservation, and resilience projects.

Policy 12.4.6- Determine eligible uses of economic development incentives, such as consumption tax exemptions, property tax abatements, and tax increment financing, to support climate action projects.

Policy 12.4.7- Promote purchasing from local businesses to support economic development and reduce emissions associated with the production and distribution of goods.

Policy 12.4.8- Partner with Western Washington University, Whatcom Community College, Bellingham Technical College, Northwest Indian College, Northwest Workforce Council, the Port of Bellingham, the Whatcom Working Waterfront Coalition, cities, and local businesses to address workforce skill gaps in emerging sectors that support climate action.

Ecosystems

Ecosystems play a vital role in mitigating climate change by capturing and storing carbon. Protecting, enhancing, and restoring forests, wetlands, aquatic ecosystems, and green space contributes to a reduction in greenhouse gas emissions through carbon sequestration. These nature-based solutions to greenhouse gas reduction also protect biodiversity and improve water and air quality.

Goal 12.5- Protect, expand, and restore green space and tree canopy and adopt best management practices to promote aquatic and terrestrial carbon sequestration.

Policy 12.5.1- Identify, protect, and restore tidal wetlands and submerged aquatic vegetation, including seagrass, eelgrass, and kelp to enhance blue carbon sequestration.

Policy 12.5.2- Designate high-value greenspace and greenways for acquisition, conservation easements, or other preservation programs to enhance carbon sequestration and provide community benefits.

Policy 12.5.3- Increase and protect the urban tree canopy, particularly in areas with low canopy cover that are vulnerable to urban heat island effects.

Policy 12.5.4- Develop and implement forest management plans for County-owned forestland that address climate stressors and guide adaptive management practices.

Policy 12.5.5- Discourage the conversion of forests, grasslands, wetlands, and other high-carbon storage areas for uses that are incompatible with carbon sequestration goals.

Emergency Management

Extreme weather exacerbated by climate change poses significant risks to critical infrastructure and emergency response. In preparation for more frequent extreme weather, Whatcom County is evaluating improvements to emergency management systems in anticipation of service disruptions. By collaborating with utility providers and transit authorities, the County will focus on prioritizing the safety and well-being of community members most affected by climate impacts.

Goal 12.6- Update critical infrastructure for increased reliability during extreme weather events, with a particular focus on prioritizing areas and populations most vulnerable to climate change.

Policy 12.6.1- Encourage utility providers to enhance the resilience of energy infrastructure by preparing for disruptions in energy supply, electricity transmission, and power distribution.

Policy 12.6.2- Coordinate with Whatcom Transportation Authority to assess potential transit service disruptions and create plans to maintain transit reliability during extreme weather events.

Health

Addressing climate change represents a significant opportunity to improve public health and advance health equity. Greenhouse gas emissions reduction strategies that also improve health outcomes include increasing access to clean energy, low carbon transportation, and locally produced food. These strategies can improve the well-being of individuals and communities while reducing health disparities, particularly among groups most vulnerable to the impacts of climate change.

Goal 12.7- Improve public health outcomes and advance health equity by increasing access to sustainable transportation, renewable energy, and locally produced food.

Policy 12.7.1- Protect, maintain, and invest in transportation infrastructure that promotes access to sustainable transportation options, such as walking, cycling, transit services, and electric vehicles.

Policy 12.7.2- Prioritize investments to reduce vehicle emissions in neighborhoods disproportionately affected by air pollution.

Policy 12.7.3- Ensure equitable access to clean drinking water, wastewater, and energy services by identifying and addressing utility infrastructure gaps, particularly in rural and underserved communities.

Policy 12.7.4- Support programs that provide financial assistance or subsidies for low-income households to improve energy efficiency, reduce utility costs, and access renewable energy.

Policy 12.7.5- Strengthen support for community-based programs that promote access to locally produced, healthy, and culturally appropriate food, particularly for individuals experiencing food insecurity.

Transportation

Greenhouse gas emission reduction strategies for the transportation sector include electrification, switching to lower carbon fuels, and reducing travel demand. To lower transportation emissions, Whatcom County is evaluating land use planning practices that promote taking fewer trips and assessing regional investments in public transit and active transportation. Improving transportation options and multimodal connectivity for all residents reduces emissions and advances equity.

Goal 12.8- Support decarbonization of the transportation system by adopting new technologies, expanding infrastructure, improving connectivity, and increasing access to low-carbon transportation options.

Policy 12.8.1- Support efforts to reduce vehicle miles traveled (VMT), including compliance with the Commute Trip Reduction Act and other initiatives to increase carpooling, ridesharing, telecommuting, bicycling, and transit use.

Policy 12.8.2- Support initiatives that drive the adoption of fuel-efficient and low-emission freight technologies, including electric trucks and cleaner heavy-duty cargo-handling equipment.

Policy 12.8.3- Promote the adoption of electric vehicles (EVs) by increasing awareness of state and federal incentives for EV purchases and leases.

Policy 12.8.4- Invest in the development and installation of a countywide electric vehicle charging infrastructure network, prioritizing underserved and disadvantaged communities to ensure equitable access.

Policy 12.8.5- Collaborate with regional partners to facilitate the expansion of EV infrastructure across Whatcom County.

Policy 12.8.6- Implement the Regional Trails Plan and further expand an interconnected, regional multimodal network of pedestrian, bicycle, and transit facilities that enables more trips via walking, biking, and transit.

Policy 12.8.7- Encourage the adoption of battery-electric and low-carbon technology alternatives for off-road equipment used in construction, agriculture, and industrial activities.

Policy 12.8.8- Collaborate with Whatcom Transportation Authority (WTA) to ensure the operation of a reliable and efficient transit network that reduces emissions by promoting transit use over internal combustion engine vehicles.

Policy 12.8.9- Support Whatcom Transportation Authority's goal to transition to a zero-emission fleet by 2040.

Policy 12.8.10- Support regional and industrial efforts to reduce emissions in the aviation sector through investments in sustainable aviation fuel and advancements in fuel efficiency and aircraft technologies.

Policy 12.8.11- Support Port of Bellingham's initiatives to electrify shipping terminals and promote the transition to cleaner marine engines and equipment.

Policy 12.8.12- Support state and federal incentives to increase efficiency and replace diesel-powered passenger and freight trains with lower carbon alternatives.

Policy 12.8.13- Review bidding and procurement policies to prioritize lower-carbon alternatives to portland cement in County funded transportation projects.

Waste Management

Waste diversion strategies can reduce the amount of waste transferred to landfills outside Whatcom County. Decreasing waste production lowers greenhouse gas emissions emitted due to waste transport, processing, and disposal. Updating existing wastewater treatment infrastructure and replacing septic tanks and water systems further reduces methane emissions.

Goal 12.9- Reduce emissions associated with material consumption and waste in Whatcom County through source reduction, reuse, and diversion.

Policy 12.9.1- Support reductions in waste hauler emissions by promoting efficiency in collection routes, reducing idle times, and transitioning fleets from diesel to low- or zero-carbon fuels.

Policy 12.9.2- Advocate for waste processors to adhere strictly to the Environmental Protection Agency (EPA) and manufacturer guidelines for proper refrigerant decommissioning to reduce emissions during disposal.

Policy 12.9.3- Oversee the alignment of private waste haulers with the Whatcom County Comprehensive Solid and Hazardous Waste Management Plan to minimize waste generation and disposal emissions.

Policy 12.9.4- Support the expansion of organic material collection services to increase the diversion of waste from landfills.

Policy 12.9.5- Revise Whatcom County's Flow Control Ordinance (No. 91-041) to include the recycling of construction and demolition debris, promoting the reuse and recovery of building materials to reduce waste and associated emissions.

Policy 12.9.6- Support the adoption of cogeneration engines and other technology that reduces methane emissions in public wastewater treatment systems.

Policy 12.9.7- Expand septic tank replacement rebate programs to incentivize the installation of more efficient systems.

Water Resources

Increasing water demand in industrial, commercial, and residential buildings and for irrigation results in more greenhouse gas emissions associated with water treatment and transport. Reducing demand for water through water conservation and improvements in wastewater treatment efficiency reduces the energy use necessary to produce and transport treated water.

Goal 12.10- Work with water utilities to reduce emissions associated with water treatment through the adoption of new technologies and implementation of water conservation and efficiency practices.

Policy 12.10.1- Support efforts to improve energy efficiency in wastewater treatment through investment in advanced monitoring and control technologies that optimize energy use.

Policy 12.10.2- Support incentive programs to promote water conservation practices that reduce overall water demand and the energy required for water treatment.

Policy 12.10.3- Encourage the use of smart irrigation systems, stormwater management strategies, and preventative maintenance by water users to improve water efficiency.

Policy 12.10.4- Promote wastewater reuse and water conservation by water users to lower energy and water treatment emissions.

Zoning & Development

Facilitating land use patterns to promote dense, mixed-use, and transit-oriented development in Urban Growth Areas (UGAs) and preservation of rural lands, limits increases in greenhouse gas emissions. Continued efforts to incentivize infill, adapt development regulations, and preserve wetlands, forests, and open space can reduce emissions associated with land use.

Goal 12.11- Implement dense, mixed-use, and transit-oriented development in UGAs, where appropriate, and land preservation policies in rural areas to reduce greenhouse emissions.

Policy 12.11.1- Advocate for updates to the Washington State Building Code to increase the energy efficiency of homes and buildings consistent with SB 5854.

Policy 12.11.2- Adopt incentive programs, such as density bonuses and tax deferrals in Urban Growth Areas (UGAs) to promote compact, transit-oriented, and infill development, reducing vehicle miles traveled and associated transportation emissions.

Policy 12.11.3- Strengthen collaboration between the Density Credit Program, Conservation Easement Program, and Transfer of Development Rights Program to promote higher-density developments and preservation of open spaces and rural lands for carbon sequestration.

Policy 12.11.4- Discourage forest conversion for non-forestry uses by providing clear incentives for climate-adaptive forest management and conversion.

Policy 12.11.5- Strongly discourage development that would degrade wetlands to support carbon sequestration goals.

Resilience Sub-Element

Introduction

This sub-element provides an overview of climate hazards in Whatcom County and includes a comprehensive set of goals and policies to increase resilience to climate change.

HB 1181 requires that a county's resilience sub-element and its related development regulations address natural hazards created or aggravated by climate change, protect and enhance natural areas to foster climate resilience, and protect and enhance community resilience to climate change. The resilience sub-element includes prioritized measures that reduce the severity of the projected climate impacts from sea level rise, landslides, flooding, drought, heat, smoke, wildfire and changing temperature and precipitation patterns.

Background Summary

The 2025 Whatcom County Climate Hazard & Impact Assessment Report analyzes the social, economic, and physical vulnerability of Whatcom County communities and infrastructure to climate change. The analysis evaluates key infrastructure assets and natural systems are vulnerable to climate change and identifies priority climate resilience areas adversely impacted by climate change. For a more detailed discussion of current and projected climate hazards, see the Appendix.

Issues, Goals, and Policies

The resilience sub-element addresses all eleven sectors recommended in the 2023 Department of Commerce Climate Element Intermediate Planning Guidance in the resilience goals and policies listed below.

Agriculture and Food Systems

Warmer air temperatures, more extreme heat days, and drought can result in reduced water availability and increase crop and livestock stress, negatively impacting yield. As the suitable seasonal windows for planting and cultivation shift, agricultural producers may need to establish new crop rotations and adopt new practices. More extreme precipitation and shifts in snowpack and stream flows will change the seasonal availability of water for irrigation and affect agricultural operations.

Goal 12.12 Adapt agricultural production systems and practices to a changing climate and fortify the food system against climate disruptions.

Policy 12.12.1- Support agricultural producers in diversifying crops resilient to climate change, promoting variety in crop types to improve food security, and reducing risks associated with climate variability.

Policy 12.12.2- Promote the adoption of climate-friendly agricultural practices, such as regenerative agriculture, agroforestry, tree intercropping, and aquaculture to increase carbon sequestration and improve soil health.

Policy 12.12.3- Evaluate the risks posed by climate hazards (e.g. drought, flooding, heat waves) to agricultural production, and develop strategies to mitigate these risks.

Policy 12.12.4- Encourage agricultural producers to diversify their product offerings, where feasible, to increase the resilience of the local food system to climate-related disruptions.

Policy 12.12.5- Develop and implement strategies to conserve water resources for agricultural use, including incentives for water-efficient irrigation systems and practices.

Policy 12.12.6- Prepare for potential saltwater intrusion into aquifers and drainage systems by adopting measures such as monitoring salinity levels, improving drainage infrastructure, and evaluating alternative water sources.

Policy 12.12.7- Coordinate with local, regional, and state partners to monitor and project drought conditions, ensuring timely planning for water storage needs to support agricultural production during periods of water scarcity.

Policy 12.12.8- Explore opportunities to expand water storage capacity and improve streamflow management for agricultural purposes, particularly in areas vulnerable to seasonal water shortages.

Policy 12.12.9- Increase agricultural resilience to climate impacts such as sea level rise, shoreline erosion, and riverine flooding by adapting drainage management systems and restoring riparian estuary and wetland habitats.

Policy 12.12.10- Promote best practices in soil conservation to minimize erosion, particularly in areas at high-risk of riverine flooding or sea level rise.

Buildings & Energy

Warmer air temperatures due to climate change may lower energy demand for heating buildings. Increased temperatures also have the potential to increase cooling demand in the summer, particularly in areas where tree cover is lower and there are more heat islands. Climate hazards, like sea level rise and flooding, may

also cause displacement, in addition to damaging or destroying of existing structures. Increased prevalence of wildfire is also expected to increase displacement, increase exposure of vulnerable populations to heat and smoke, reduce insurability, and increase building retrofit costs that improve weatherization and cooling.

Goal 12.13- Design and update building and energy infrastructure for increased reliability and recovery during extreme weather events and other hazards worsened by climate change.

Policy 12.13.1- Encourage utility providers to upgrade and improve energy infrastructure to reduce vulnerability to climate-related hazards.

Policy 12.13.2- Promote participation in utility energy efficiency and demand response programs to reduce energy consumption during peak periods, especially during extreme weather events.

Policy 12.13.3- Promote building design for passive survivability to ensure safe indoor conditions in the event of an extended energy outage.

Policy 12.13.4- Promote the development of distributed generation systems, such as solar panels and microgrids, particularly in critical facilities (e.g., hospitals, emergency shelters) to ensure energy availability during power outages.

Policy 12.13.5- Implement development regulations that discourage buildings and infrastructure in flood-prone areas, and if they are allowed, ensure buildings are adapted to withstand flooding, through strategies like elevation, floodproofing, and improved drainage systems.

Policy 12.13.6- Support relocation or retrofitting of critical infrastructure and at-risk buildings in areas subject to frequent flooding to reduce long-term risks and recovery costs.

Policy 12.13.7- Implement development regulations to mitigate wildfire risks and partner with agencies to create defensible spaces around structures in wildfire-prone areas.

Policy 12.13.8- Support relocation or retrofitting of essential infrastructure and vulnerable buildings in high-risk wildfire zones to enhance safety and recovery capabilities.

Policy 12.13.9- Maintain land-use policies that reduce exposure to landslide risks by restricting development in high-risk areas.

Policy 12.13.10- Promote relocation or reinforcement of infrastructure and homes in areas vulnerable to landslides to mitigate the impact of this hazard.

Policy 12.13.11- Prepare for sea level rise by developing and implementing land use regulations that restrict development and encourage relocation of essential infrastructure and residential structures in coastal areas at risk of inundation and repeated flooding.

Policy 12.13.12- Support adaptation measures such as habitat restoration, shoreline protection devices, and elevation of structures and infrastructure to protect coastal communities from rising sea levels.

Policy 12.13.13- Partner with organizations to ensure the availability of adequate emergency sheltering facilities for vulnerable populations during extreme cold events.

Policy 12.13.14- Increase public access to community-serving facilities to provide relief during extreme heat events and periods of poor air quality due to wildfire smoke.

Policy 12.13.15- Retrofit public buildings and other critical facilities to incorporate air filtration systems and cooling technologies to protect vulnerable populations from heat stress and smoke-related health impacts.

Cultural Resources

Cultural resources are at increased risk to climate change due to warmer air temperatures, more extreme heat days, drought, and flooding. Climate change can result in increased stress to and loss of habitat for culturally significant species, increase storms and flooding, shift habitat distribution, damage historic and cultural sites, and limit access to gathering sites in coastal areas.

Goal 12.14- Ensure that cultural resources and practices, including historic sites and culturally important traditional foods and natural resources, are resilient to the impacts of extreme weather and other natural hazards worsened by climate change.

Policy 12.14.1- Protect archaeological sites and artifacts from damage, deterioration, or loss of integrity caused by climate-related hazards.

Policy 12.14.2- Identify culturally significant buildings and structures at risk of destabilization, submersion, or collapse due to flooding and consider relocation or elevation, if appropriate.

Policy 12.14.3- Evaluate the vulnerability and sensitivity of culturally significant roads, trails, and landscape features to damage or alteration from climate change.

Policy 12.14.4- Protect culturally significant species and habitats that are threatened by climate change.

Policy 12.14.5- Strengthen partnerships with the Lummi Nation and Nooksack Tribe to advance the adaptation and preservation of cultural resources at risk due to climate change, as identified in tribal cultural resource codes.

Economic Development

Due to climate change, the regional economy risks accelerated job loss, decreased productivity in key sectors such as the maritime, tourism, agriculture, and forestry sectors, and reduced recreation and tourism. Whatcom County is expected to experience increasing costs related to relocation and damage to property and infrastructure due to coastal and riverine flooding, in addition to losses due to extreme heat, drought, wildfire, and ocean acidification. There is expected to be increasing price volatility for business inputs, loss of operations continuity, shipping disruptions, and a possibility of increased insurance premiums.

Goal 12.15- Foster and enhance the resilience of key economic sectors against the risks of extreme heat, drought, wildfires, flooding, coastal inundation, and ocean acidification.

Policy 12.15.1- Promote financial and technical assistance programs to help agricultural producers introduce diversified intercropping, crop and livestock selection, and climate-adaptive agricultural practices in response to climate change.

Policy 12.15.2- Encourage the Port of Bellingham to adapt port-owned facilities and infrastructure to coastal flooding and sea level rise impacts.

Policy 12.15.3- Monitor the impacts of warming ocean temperatures and ocean acidification on the seafood industry and promote diversification to reduce vulnerability to climate-related disruption.

Policy 12.15.4- Promote climate-adaptive forest management practices, such as increasing age distribution, rotation period, and stand structure to improve forest resilience to climate impacts.

Policy 12.15.5- Identify commercial and industrial facilities in shoreline and floodplain areas at risk of flooding and coastal inundation.

Policy 12.15.6- Encourage energy infrastructure modernization, such as underground transmission lines, to improve safety and reduce vulnerability to climate-related disruptions.

Policy 12.15.7- Develop economic innovation strategies to minimize workforce displacement caused by climate-related impacts on key industries.

Ecosystems

Risks to ecosystems from climate change include increased temperatures, extreme precipitation, drought, and ocean acidification. These climate impacts are expected to increase insect outbreak, result in loss of near-shore habitat and coastal wetlands to sea-level rise and erosion, and change species diversity and distribution. Based on climate projections, there is expected to be species loss, increased competition from invasive species, and a decline in ecosystem health. Increased ocean acidification and temperature and increased stress on species in lakes and rivers is expected to result in a loss of ecological function and biodiversity.

Goal 12.16- Protect and restore priority critical areas and natural habitats in areas that experience floods, sea level rise, landslides, wildfires, drought, or other events exacerbated by climate change.

Policy 12.16.1- Protect and restore coastal ecosystems, including estuaries and marine habitats vulnerable to sea level rise and coastal flooding.

Policy 12.16.2- Promote reforestation initiatives that increase forest cover and build resilience to wildfires, drought, and pest outbreaks.

Policy 12.16.3- Encourage climate-resilient forest management practices, such as selective thinning and controlled burns, to improve forest health and reduce wildfire risks.

Policy 12.16.4- Protect and restore riparian buffers to improve water retention and reduce flood risk.

Policy 12.16.5- Enhance partnerships with state agencies, tribal nations, and conservation organizations to implement watershed-scale restoration initiatives to increase resilience to climate impacts.

Policy 12.16.6- Prioritize alpine habitats for active management, restoration, and protection across jurisdictional boundaries.

Policy 12.16.7- Coordinate ecosystem planning efforts across jurisdictional boundaries to address climate impacts on priority habitats.

Policy 12.16.8- Promote ecosystem restoration projects that prioritize the recovery of habitats critical endangered, threatened, and priority species and support climate adaptation goals.

Emergency Management

Climate hazards such as drought, temperature fluctuations, and flooding are expected to increase costs and demands for emergency preparedness, response, and recovery services, could strain local emergency response capacity. These climate risks include increased demand for shelter, additional pressure on energy grids, and disruption to emergency management facilities, medical services, and critical supplies due to unsafe travel conditions.

Goal 12.17- Factor climate risks and impacts into critical infrastructure siting, emergency operations planning, and the coordination of preparedness, response, and recovery activities.

Policy 12.17.1- Incorporate climate risk assessments into hazard mitigation plans, including hazards such as extreme heat, wildfires, flooding, and coastal inundation.

Policy 12.17.2- Update emergency management plans to improve Whatcom County's capacity to respond to and recover from climate hazards, ensuring that plans are regularly reviewed and updated to include new climate projections.

Policy 12.17.3- Strengthen partnerships with federal, state, tribal, and local agencies to coordinate emergency preparedness and response efforts across jurisdictional boundaries.

Policy 12.17.4- Ensure that vulnerable communities are prioritized in emergency management planning, including residents in floodplains, coastal zones, wildfire-prone areas, and other areas at high risk of climate hazards.

Policy 12.17.5- Develop and implement climate-resilient evacuation plans, with a focus on areas most vulnerable to wildfires and flooding.

Policy 12.17.6- Ensure that evacuation routes are regularly assessed, maintained, and accessible to all residents, including those with limited access to transportation.

Policy 12.17.7- Increase community awareness and preparedness for climate-related emergencies by conducting regular evacuation drills and providing accessible public information.

Policy 12.17.8- Support the modernization of utility, transportation, and communication infrastructure to ensure continued operations during extreme weather events and other climate-related disruptions.

Policy 12.17.9- Collaborate with local organizations and community groups to expand access to extreme weather shelters for vulnerable populations, including low-income, medically fragile, elderly, and homeless individuals.

Policy 12.17.10- Factor climate risks, such as flooding, sea-level rise, wildfire, and landslides, into the siting of new critical infrastructure, including roads, schools, hospitals, utilities, and emergency services facilities.

Policy 12.17.11- Prioritize the relocation or retrofitting of existing critical infrastructure that is highly vulnerable to climate hazards, ensuring continued functionality during extreme events.

Health

Climate change is adversely impacting public health by increasing cases of infectious and vector-borne diseases and reducing food security and water quality. Floods, droughts, wildfires, extreme temperatures, and storms may also contribute to increased chronic disease and hospitalization. Overburdened communities, particularly those with preexisting health conditions, socioeconomic vulnerabilities, residence in a climate impact zone, or occupational risk are more likely to experience health impacts due to climate change.

Goal 12.18- Prioritize equitable access to resources and services for frontline and disadvantaged communities experiencing adverse health impacts due to climate change.

Policy 12.18.1- Integrate climate-related health risks into public health planning to address the needs of frontline and disadvantaged communities disproportionately affected by climate hazards.

Policy 12.18.2- Develop community-based health programs that focus on preventing and mitigating the adverse health impacts of climate change, such as heat stress, respiratory illnesses, and waterborne diseases.

Policy 12.18.3- Collaborate with healthcare providers, community organizations, and tribal governments to ensure that healthcare services are accessible and responsive to the needs of vulnerable populations.

Policy 12.18.4- Prioritize investments in health infrastructure and services in communities most affected by climate-related health impacts, including low-income neighborhoods, rural areas, and other frontline communities.

Policy 12.18.5- Strengthen public health monitoring systems to assess the long-term impacts of climate change on vulnerable populations, with a focus on emerging health threats.

Policy 12.18.6- Establish contingency plans with community partners for maintaining critical health services, including mobile health units and telemedicine, during extreme weather events and infrastructure failures.

Policy 12.18.7- Collaborate with emergency management responders to develop strategies for rapidly restoring essential services in the wake of climate-related disasters, particularly in disadvantaged communities.

Transportation

Transportation infrastructure is expected to be adversely impacted by climate change, including increased road surface damage from higher temperatures, additional maintenance requirements for roadside and strip vegetation and infrastructure damage from rain, freeze, and thaw cycles. Increasing temperatures and flooding may lead to road closures, ferry and transit delays, and risks to routes, roads, bridges, sidewalks, trails, and rail infrastructure.

Goal 12.19- Ensure the resilience of the transportation system by considering climate risks in siting and planning, incorporating redundancies, preparing for disasters and other impacts, and conducting coordinated planning for system recovery.

Policy 12.19.1- Integrate climate risk assessments in transportation planning efforts to ensure that transportation networks remain functional in the face of flooding, wildfire, sea-level rise, and other climate impacts.

Policy 12.19.2- Collaborate with regional, state, and local partners to develop comprehensive transportation plans that incorporate climate adaptation strategies, focusing on vulnerable populations and critical access routes.

Policy 12.19.3- Prioritize climate-resilient transportation options, such as public transit, cycling, and pedestrian infrastructure to increase system flexibility during disruptions.

Policy 12.19.4- Invest in resilient transportation infrastructure, such as green infrastructure, stormwater management systems, and natural buffers to mitigate the risks of climate-related hazards like flooding and landslides.

Policy 12.19.5- Identify and reinforce critical transportation corridors that serve as lifelines for emergency response and recovery, ensuring that these routes remain operational during disasters.

Policy 12.19.6- Develop contingency plans to minimize transportation service disruptions due to extreme weather events, focusing on the rapid restoration of public transit, emergency evacuation routes, and freight corridors.

Policy 12.19.7- Implement real-time monitoring and communication systems to provide timely updates to the public on transportation service disruptions, including low-income and rural populations.

Policy 12.19.8- Prioritize equitable access to alternative transportation options for communities disproportionately impacted by service disruptions, including low-income and rural populations.

Policy 12.19.9- Factor climate risks, such as sea level rise, flooding, extreme heat, and landslides, into the siting and design of new transportation infrastructure to minimize future vulnerabilities.

Policy 12.19.10- Support the strategic closure, rerouting, or elevation of critical transportation infrastructure that is at high risk of climate impacts, such as roads in areas at risk of wildfire and flooding.

Policy 12.19.11- Ensure that transportation design guidelines incorporate climate adaptation and resilience standards, particularly for infrastructure located in floodplains, coastal areas, and wildfire-prone regions.

Waste Management

More extreme precipitation, storms, and flooding increases strain on wastewater systems and increases the risk of flooding to waste management facilities and landfills. Flooding can have an adverse impact on waste pickup and delivery operations and increase service needs for disposal following storms due to the accumulation of debris that risks public safety.

Goal 12.20- Encourage solid waste collection servicers to plan for the impact of climate hazards on waste facility siting and operations.

Policy 12.20.1- Evaluate the siting of new waste management facilities against climate risk assessments to minimize long-term vulnerabilities.

Policy 12.20.2- Update the Debris Management Plan to incorporate climate hazards and plan for continued operations during and after climate-related disruptions, such as extreme storms, wildfires, or heatwaves.

Policy 12.20.3- Encourage upgrades of waste facility infrastructure, such as stormwater management systems, to mitigate risks from flooding and erosion.

Policy 12.20.4- Establish protocols for safe and efficient waste collection and disposal of debris during and after emergencies, ensuring that waste services respond to extreme weather events.

Water Resources

Climate hazards, including drought and flooding, are shifting the timing of snowmelt and causing variable streamflow levels. Drought is expected to also increase aquifer drawdown and may increase saltwater intrusion into aquifers. Flooding is likely to increase demands on stormwater management systems and cause adverse impacts to drinking water which negatively impacts water supply and storage.

Goal 12.21- Enhance the resilience of Whatcom County's water sources and systems to climate impacts through partnerships to advance watershed protection, habitat enhancement, and water infrastructure improvements.

Policy 12.21.1- Consider climate change, including changes in groundwater, sea level rise, and compound flooding in the floodplain management planning process.

Policy 12.21.2- Collaborate with local, regional, and tribal partners to ensure water resource planning through the WRIA 1 Watershed Management Project integrates climate projections, with a focus on evaluating the impacts of climate change on water availability, quality, and infrastructure.

Policy 12.21.3- Prioritize the restoration of riparian management zones (RMZs) to mitigate temperature increases in streams and restore streamflow, protecting aquatic species that are vulnerable to warmer water conditions and providing connected habitat for terrestrial species.

Policy 12.21.4- Invest in green infrastructure solutions, such as bioswales and permeable pavements, to manage increased stormwater runoff caused by increased precipitation.

Policy 12.21.5- Update stormwater treatment systems to handle larger volumes of runoff, reducing the risk of flooding and water contamination during storms.

Policy 12.21.6- Strengthen regulatory requirements for stormwater management in new developments to ensure that climate impacts are incorporated in design and construction.

Policy 12.21.7- Expand efforts to protect and restore critical watersheds, particularly those that provide essential water supplies and habitat for priority species vulnerable to climate change.

Policy 12.21.8- Incorporate wetland riparian area and headwater restoration and protection as a key component of climate adaptation strategies, recognizing their role in mitigating storm impacts and supporting biodiversity.

Policy 12.21.9- Promote investments in infrastructure upgrades that enhance the capacity and flexibility of water storage systems to handle shifting water demands and supply variability.

Policy 12.21.10- Implement natural water storage solutions, such as floodplain reconnection, beaver dam analogs and beaver relocation, wetland enhancement, and headwater and critical aquifer recharge area restoration.

Policy 12.21.11- Implement water conservation and water use efficiency programs to reduce overall demand, especially during periods of drought or limited water availability.

Policy 12.21.12- Encourage investments in water treatment infrastructure that improve the capacity to provide clean drinking water in the face of increased contamination risks due to climate change.

Zoning & Development

Zoning and development changes can build resilience to climate impacts by limiting new development in areas at risk of flooding, wildfire, sea level rise, and other climate hazards. Development regulations and zoning also affect availability and uses of developable land in hazard zones, reduce risk to shoreline properties, and reduce infrastructure damage and displacement. Coastal and riverine infrastructure

is particularly at risk to sea level rise and flooding, which can be mitigated through natural and built infrastructure solutions.

Goal 12.22- Update zoning and development regulations that incorporate best practices for reducing the risk of extreme heat, sea level rise, flooding, wildfire, and other climate hazards.

Policy 12.22.1- Expand protections for critical areas and shorelines that are vulnerable to sea level rise, ensuring that development is restricted in high-risk zones.

Policy 12.22.2- Promote the use of conservation easements and other land preservation tools to advance carbon sequestration tools.

Policy 12.22.3- Prioritize the transfer of development rights from high-risk areas, including shorelines and flood-prone zones to urban growth areas or other areas less susceptible to climate impacts.

Policy 12.22.4- Incorporate climate migration considerations into zoning and land use policies to ensure that new development occurs in areas that are safe from climate hazards, such as sea level rise, flooding, and wildfires.

Policy 12.22.5- Work with neighboring jurisdictions and regional planners to address the cross-border impacts of climate migration and ensure that zoning policies support sustainable growth in lower-risk areas.

Policy 12.22.6- Require that applicants conduct climate risk assessments to inform rezoning requests in rural study areas and ensure that future development is restricted in areas vulnerable to extreme heat, flooding, and other climate hazards.

Policy 12.22.7- Rezone high-risk areas to discourage new development in zones susceptible to wildfires, landslides, flooding, and sea level rise.

Policy 12.22.8- Evaluate the rezoning of low climate hazard risk areas for higher-density development, focusing on multi-modal and transit-oriented communities to reduce greenhouse gas emissions.