DEPARTMENT OF ECOLOGY
State of Washington

Washington State Climate Resilience Strategy

Appendix B:
Recommended New Actions — Agency Details

Contents

Strategy 1: Coordinate how to best implement the strategy across state agencies.

Action 1A: Establish a group that coordinates and implements the state's resilience strategy and its associated funding requests.

Action 1A	Details
Summary	This action will form a governance structure to implement the climate resilience strategy collaboratively with the ten agencies involved in strategy development. It will consist of 1) an interagency climate resilience coordinating council comprised of agency leaders, 2) a staff-level climate resilience coordinating committee comprised of agency staff, 3) a dedicated set of core resilience state agency staff to support strategy implementation, tracking, and reporting, and 4) consultation and engagement mechanisms focused on Tribes, overburdened communities, and vulnerable populations, including funding to reduce barriers to engagement. This action will require new staffing and will consist of funding a dedicated core staff team at Ecology for tracking, reporting, and updating the climate resilience strategy, coordinating sub-cabinet and committee meetings, and performing communication, outreach, and engagement with Tribes, local governments, overburdened communities and vulnerable populations, non-governmental organizations, and other partners. As much as possible, agencies will work together to coordinate engagement and reduce burdens placed on communities. Engagement efforts will utilize ongoing assemblies and topic-based forums to facilitate dialogue between state agencies and partners. Engagement with Tribes will make use of existing forums and groups such as the Governor's Office of Indian Affairs Climate Roundtables and the Northwest Indian Fisheries Commission. The Department of Ecology will welcome individual meetings with Tribes, and Tribal governments are invited to request formal government-to-government consultation on the strategy at any time. This action will also include proposed climate resilience capacity at partner agencies, as needed.
Agency	Interagency action led by the Department of Ecology.
Improves our resiliency to withstand	 Multiple hazards.

Implementation and Future Considerations

Washington is expected to experience a wide range of climate imapcts and the highest priorty needs of communities in preparing for these impacts is equally varied. Accordingly, engagement efforts under the governance structure will prioritize the unique needs facing different communities and organizaitons. Some hazards, like marine and coastal changes are important in specific areas of the state. Others, like wildfire smoke and extreme heat, are more wide-reaching but present unique risks for different communities like those in rural or urban areas. Engagement efforts will be designed to reflect these and other considerations.

Additionally, engagement will also identify opportunities to work with organizations that represent specific communities as a way to expand the reach of engagement efforts. For example, engagement with agricultural growers and producers can be challenging given job demands and time constraints, therefore, working with agricultural support and advocacy organitzations can connect agencies with this community.

Similarly, engagement efforts will include specific outreach to groups that represent the interests of overburdened and vulnerable communities in the state. To support this, funding will be made available to support the participation of individuals from overburdened and vulnerable communities.

Under the governance sturcture, agencies will consider additional opportunities to support climate resilience beyond the actions presented in this strategy. Potential topics inlude increased support for Tribes and local governments, improved beaver management, solutions to reduced water availability, voluntary acquisition programs to support flood risk reduction, and economic recovery.

Strategy 2: Plan for, respond to, and recover from climate-driven hazards and emergencies.

Help communities prepare for and respond to extreme heat events and wildfire smoke

Action 2A	Saving lives from extreme heat in Washington state
Summary	This action will implement recommendations from the 2023 report "In the Hot Seat: Saving Lives from Extreme Heat in Washington State"[1]. Activities would include supporting weatherization and cooling for low-income individuals, enhance community outreach and early warning systems for extreme heat events, upgrade and install cooling infrastructure in facilities that serve vulnerable populations, and implement alternative efforts such as increased tree cover and shade structures.
Agency	Interagency action led by the Department of Health
Improves our resiliency to withstand	 Extreme heat
Implementation and future considerations	Resources will be used to support the installation of cooling infrastructure like heat pumps and air conditioning. The Department of Health will also investigate partnerships with local health jurisdictions. The Departments of Health and Commerce will explore engagement with existing state programs like Commerce's Weatherization and Low Income Energy Assistance programs to support implementation.

[1] https://cig.uw.edu/wp-content/uploads/sites/2/2023/06/CIG-Report-Heat-202-pages.pdf

Action 2B	Coordinate agency efforts to reduce wildfire smoke risks
Summary	Wildfire smoke has impacted every community in Washington in the last several years and climate models predict an increase in wildfire activity in the coming years. Even without active fires in the state, Washington can experience wildfire smoke from neighboring states and British Columbia. This action proposes to address smoke risk through planning, intervention, and improved regulations. The Department of Health will work with the Emergency Management Division to include wildfire smoke and extreme heat into the Washington State Enhanced Hazard Mitigation Plan and subsequently into local hazard mitigation plans. The Department of Health will work with other agency partners to administer grants to facilities that serve vulnerable populations for infrastructure upgrades to improve indoor air quality and reduce smoke exposure. Other efforts include creating an indoor air curriculum for HVAC programs and improved coordination across agencies for prescribed burn events to reduce smoke impacts.
Agency	Interagency action led by the Department of Health
Improves our resiliency to withstand	 Wildfire and smoke
Implementation and future considerations	In implementing this action, the Department of Health will consider opportunities to partner with local public health jurisdictions.

Minimize wildfire risks in high-risk areas

Action 2C:	Wildfire risk reduction grants for the built environment in high fire risk jurisdictions
Summary	The Emergency Management Division will create a state-funded grant program that will provide grants to local jurisdictions for wildfire risk reduction specifically in the built environment. This will include areas identified as the wildland-urban interface (areas where human development meets unoccupied land). Projects funded under this program will include structural hardening to improve the resilience of homes and other buildings, improved water storage capacity, and wildfire risk assessments for communities and critical infrastructure.
Agency	Emergency Management Division
Improves our resiliency to withstand	 Wildfire and smoke

Implementation and future considerations	The Emergency Management Division will consider using funding to support the development of Community Wildfire Protection plans and other efforts like community evacuation routes.

Action 2D	Roadside wildfire hazard risk reduction
Summary	The Washington State Department of Transportation will prepare roadsides and slopes in fire-prone areas through the removal of at-risk trees, improved vegetation management, slope stabilization, planting of fire-resistant native plants, land stabilization of recently burned areas, and debris management.
Agency	Department of Transportation
Improves our resiliency to withstand	 Wildfire and smoke
Implementation and future considerations	The Department of Transportation will communicate and look for opportunities to coordinate efforts with adjacent jurisdictions and communities on roadside wildfire hazard risk reduction.

Action 2E	Post-fire recovery
Summary	The escalating threat of wildfires is presenting more communities with the task of post-fire recovery. Following wildfires, impacted communities face an increased risk from landslides, flooding, and runoff, as well as debris removal. The absence of effective coordination from state and federal agencies in supporting these recovery efforts leaves communities to fend for themselves, often having to start from scratch after each fire. This action will improve coordination between state and federal agencies, providing direct funding to communities to support recovery efforts and technical assistance throughout a holistic recovery process. Agencies will work to define roles and responsibilities and identify opportunities to close policy gaps, fund the highest priority work, and address the unmet needs of communities and landscapes recovering from severe fires.
Agency	Interagency action led by the Department of Natural Resources
Improves our resiliency to withstand	 Wildfire and smoke

Implementation and future considerations	Agencies will consider opportunities to produce guidance and technical information in support of the development of community-specific recovery plans.

Collaborate across agencies to address the increased risks to people, wildlife, and agriculture from emerging pests, pathogens, and disease

Action 2F	An integrated approach for enhancing climate resilience by improving cross-agency pathogen and pest surveillance and prevention, management, and mitigation
Summary	This action will coordinate efforts across the Washington Departments of Health, Agriculture, Fish and Wildlife, and Ecology to plan and prepare for the climate-driven spread of existing diseases and the emergence of new pests and disease-causing pathogens. Initial coordination will identify the highest priority needs and kick-start a collaborative, coordinated approach to minimize impacts on human, animal, and environmental health.
Agency	Interagency action led by the Departments of Health, Agriculture, Fish and Wildlife, and Ecology
Improves our resiliency to withstand	 Multiple hazards

Action 2G	Composting animal mortalities and waste to promote ecosystem resilience
Summary	Washington's animal agricultural industries face increasing risks associated with natural disasters and disease outbreaks, due in part to climate change, that can result in animal mortalities. Coupled with new requirements to reduce landfill emissions, this has increased the need to identify alternatives for animal carcass and offal disposal. Composting is a viable and environmentally responsible option to address both routine and mass animal mortality events in Washington. This action seeks opportunities to support a robust animal composting infrastructure in the state to provide a viable, alternative disposal method for animal mortality and organic waste management. This approach will ensure a more sustainable agricultural industry and protect against disease transmission following climate-driven mass mortality events.

Agency	Department of Agriculture
Improves our resiliency to withstand	 Multiple hazards

Provide communities with technical advice and guidance to support climate-driven hazard and emergency planning

Action 2H	Hazard analysis and planning program buildout
Summary	The Emergency Management Division will significantly expand its capacity to do statewide natural hazard analysis and planning. This would include multiple additional staff to improve climate-related hazard analysis, hazard mitigation planning, resilience, and local jurisdiction support. Additional staff would expand capacity for statewide climate-related hazard and vulnerability analyses, develop tools and resources for local hazard mitigation planning, develop long-lasting and effective partnerships with local emergency managers and planners, and improve the use of federal hazard mitigation grants for climate resilience. This action will support the ability of a city or county to address climate change in its hazard mitigation plan and adopt it, by reference, in its comprehensive plan. This is one of the options available to meet Department of Commerce's climate resilience requirements for comprehensive planning under the Growth Management Act.
Agency	Emergency Management Division
Improves our resiliency to withstand	 Multiple hazards
Implementation and future considerations	Implementation of this action will consider opportunities to align with related efforts by other agencies such as the Department of Natural Resource's recent efforts to map statewide wildfire hazards and develop county-level wildfire risk maps.

Action 2I	Data needs for community-level hazard mitigation
Summary	The responsibility to mitigate the risks of climate-related natural hazards is shared by nearly all state agencies. Effective hazard mitigation must be based on data-driven risk and vulnerability analyses that use best-available science and information. There is a need for cross-agency and collaborative natural hazard analyses that can be used by all state agencies. This action will develop a standardized method for cross-agency collaboration on natural hazard analysis using the Washington Geoportal 2.0 developed by WaTech in 2023.
Agency	Interagency action led by the Emergency Management Division
Improves our resiliency to withstand	 Multiple hazards

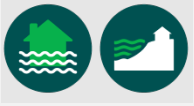
Action 2J	Emergency food security resilience and relief
Summary	This action will expand and establish a permanent funding pathway for measures launched during Washington's COVID-19 emergency food security response, including the ongoing state-driven procurement and management of emergency food reserves, and the strategic, transparent distribution of food and funding to enterprises and organizations deemed vital to emergency food security. This effort will ensure rapid emergency food distribution to communities impacted by fire, flood, extreme heat, drought, and other climate and public health emergencies.
Agency	Department of Agriculture
Improves our resiliency to withstand	 Multiple hazards

Examine agency rules, policies, and codes for vulnerabilities in how the state addresses projected climate-driven hazards.

Action 2K	Climate scenario stress test of agency rules, policies, and codes
Summary	As the impacts of climate change continue and accelerate, agency rules, policies, and codes may not adequately account for future conditions. For examples, during the heat dome event in 2021, agency shellfish regulations proved inadequate and did not account for the record temperatures observed. This action will use scenarios of climate-related natural hazards and table-top exercises to identify the multitude of relevant policies, rules, and codes susceptible to potential failure in the face of climate change. This effort will enable agencies to address potential failure points and better respond to climate impacts through rules, policies, and codes.
Agency	Interagency effort led by the Emergency Management Division
Improves our resiliency to withstand	 Multiple hazards

Strategy 3: Support Tribes, local governments, and communities with technical assistance, guidance, and best practices.

Support local planning and accelerate implementation of nature-based solutions for shorelines, floodplains, and coastal areas.

Action 3A	Accelerate nature-based climate adaptation by improving regulatory efficiency
Summary	Federal permitting and regulatory processes are necessary to ensure responsible development and the protection of natural resources but can often be time intensive and result in project delays. Federal regulations are focused exclusively on managing hazards within floodplains and do not distinguish between development projects and restoration work. As such, nature-based restoration projects are subject to extensive analyses that are needlessly costly and time-intensive, creating barriers for project implementation. Furthermore, these regulations are rooted in flood risk maps produced by the Federal Emergency Management Agency (FEMA); many of which are out of date and do not reflect current climate change projections nor the current level of protection afforded by levees and other flood protection infrastructure. The Department of Ecology will explore opportunities to improve regulatory efficiencies and address capacity and information needs to accelerate nature-based climate adaptation in floodplain management. Specifically, the Department of Ecology will expand staff support to build internal capacity to update flood maps in partnership with FEMA and support small communities with resources for survey work (a necessary precursor to flood mapping). Additionally, the Department will provide technical assistance to habitat recovery project sponsors to reduce permitting workloads and improve certainty of project costs and timelines.
Agency	Department of Ecology
Improves our resiliency to withstand	 Flooding, marine and coastal changes
Implementation and future considerations	To support implementation of this effort, the Department of Ecology will consider lessons learned from other efforts to improve permitting efficiency like the Multi-Agency Review Team.

Action 3B	Support local governments in assessing vulnerability and planning for resilience
Summary	Through its efforts to support local governments in managing shorelines and floodplains, the Department of Ecology provides critical capacity and resources in preparing for climate-driven hazards, like increased storm severity and sea level rise, through technical assistance and regulatory review. As the impacts of climate change accelerate and intensify, existing local capacity to manage these risks and identify solutions will be limited and support from the Department of Ecology will be increasingly necessary. The Department of Ecology will expand the agency's capacity to better support local governments in planning and preparing for climate hazards before they occur through increased technical assistance, permitting capacity, updating mapping and geospatial tools, and guidance. For example, updated channel migration zone mapping is critical to understanding vulnerability at a local level and managing riparian habitat. This work will also prioritize emerging needs such as guidance on how to integrate riparian management best practices, such as vegetation buffers, into shoreline planning. Ecology will also establish a local Coastal Resilience Grant and Capacity Building Program to support community-based resilience planning, effective project design, and proposal development within communities and Tribes currently lacking sufficient staff capacity.
Agency	Department of Ecology
Improves our resiliency to withstand	 Flooding, marine and coastal changes

Build local-level resilience capacity in overburdened and underserved communities.

Action 3C	Support local match for small impoverished communities
Summary	Many communities in Washington struggle to secure federal disaster recovery and mitigation grants because they cannot meet grant funding match requirements. This financial barrier means that these communities, typically small and rural ones, cannot pursue federal grant funding despite being impacted by disasters and having grant-eligible proposals to address climate-driven hazards. The Emergency Management Division will provide state funding to cover a portion of local match requirements for Washington jurisdictions, federally recognized tribes, and special-purpose districts that meet federal criteria for small, impoverished communities. This investment will ensure more equitable access to federal grant resources and build the resilience of small, rural communities in Washington.
Agency	Emergency Management Division
Improves our resiliency to withstand	 Multiple hazards

Action 3D	Community resilience to a changing climate
Summary	Across Washington, conservation districts provide information, technical assistance, and financial support for communities to increase their resilience to climate-driven hazards. Much of this work is multi-benefit in nature and supports both communities and natural and working lands. As climate impacts increase and intensify, there is greater demand placed on conservation districts to advance this work. The State Conservation Commission seeks to increase investments in the programs and initiatives led by conservation districts including Forest Health and Community Wildfire Resiliency Program, and Wildfire Recovery Program. Additional resources will enable conservation districts to better serve ranchers and farmers at risk of climate driven hazards, advance habitat restoration initiatives, and support communities in preparing for risk of wildfires and other disasters.
Agency	State Conservation Commission

Improves our resiliency to withstand	 Multiple hazards

Action 3E	Catalyzing community climate resilience hubs
Summary	Climate resilience hubs are public spaces that provide local communities, vulnerable populations, and individuals a place to go to during a range of climate-driven hazards such as extreme heat and wildfire smoke. These spaces can be upgraded with sufficient infrastructure to provide cooling, air purification, backup power, and other resources during emergency events. Many communities in Washington have identified these spaces as a priority in their climate resilience planning efforts. This interagency action would connect communities interested in pursuing climate resilience hubs with available state and federal funding opportunities, data and technical information, and policy guidance to enable facilities like schools and community centers to serve as climate resiliency hubs through infrastructure and other upgrades. Other privately owned facilities that are open to the public like places of worship, museums, and cultural institutions may be included in this work. State efforts and support will be flexible to meet the unique needs of different communities across the state. This effort will consider a broad range of community resilience needs including HVAC improvements for clean and cool air, broadband and energy resilience, food security, hazard reduction, and other essential services communities depend upon.
Agency	Interagency effort led by the Departments of Ecology, Commerce, and Health, Puget Sound Partnership, and Emergency Management Division.
Improves our resiliency to withstand	 Multiple hazards
Implementation and future considerations	In implementing this action, agencies will research similar efforts led by other states and territories. Agencies will also consider opportunities to leverage federal grant sources in support of infrastrcuture upgrades.

Strategy 4: Support the vitality and viability of working lands through research, technical assistance, and incentives.

Promote agricultural viability

Action 4A	Agricultural viability and farmland preservation
Summary	Climate change poses increasing threats to the long-term viability of agriculture. Recent data has shown that Washington has lost 6% of its farmland and 10% of its farm businesses between 2017 and 2022, outpacing the rest of the nation[2]. Beyond agricultural products, farms provide other benefits for climate resilience such as water storage and filtration, aquifer recharge, habitat, and open space. The State Conservation Commission will advance agricultural viability work through increased resources and staff capacity under its Office of Farmland Preservation and its Disaster Assistance Program. The Office of Farmland Preservation works to address the loss of agricultural land in Washington state through agricultural conservation easements, providing farmland transition resources, data and analysis on trends impacting farmland, and assisting local governments and organizations to develop and implement measures to preserve farmland. The Disaster Assistance Program provides prioritized assistance to farmers and ranchers impacted by natural disasters to help keep their operations viable.
Agency	State Conservation Commission
Improves our resiliency to withstand	 Multiple hazards
Implementation and future considerations	The State Conservation Commission, along with partners at the Departments of Agriculture and Commerce, will examine additional opportunities to provide local governments guidance to support protection of agricultural lands through land use management and comprehensive planning.

[2] https://www.nass.usda.gov/Publications/AgCensus/2022/

Action 4B	Supporting private landowners to provide public benefit.
Summary	In 2021, the Washington State Department of Agriculture published a survey that revealed Washington producers are overwhelmingly interested in implementing practices that increase climate resilience. The survey identified the associated costs of advancing this work as a major barrier. To ensure that the cost of conservation and environmental protection does not fall to the grower alone, the Department of Agriculture proposes to expand funding for direct-to-producer incentive payments that support climate resilience and the provision of public benefits. Eligible types of work include livestock infrastructure improvements, soil health, equipment and technology upgrades, and habitat enhancement projects. The State Conservation Commission is working to incorporate additional climate resilience components and better resource existing voluntary incentive programs that provide climate resilience benefits and public benefits such as Riparian Grants Program, Riparian Plant Propagation Program, Conservation Reserve Enhancement Program, Sustainable Farms and Fields Program, Natural Resource Investments Program, Regional Conservation Partnership Program, Shellfish Program, and the Voluntary Stewardship Program.
Agency	Department of Agriculture, State Conservation Commission
Improves our resiliency to withstand	 Multiple hazards

Action 4C	Climate resilience research, tools, and on the ground support for Washington agriculture.
Summary	To support the adaptation and resilience of Washington's agricultural industry, the Washington State Department of Agriculture and State Conservation Commission will continue to create comprehensive, science-based resources and opportunities for Washington producers. The Department of Agriculture will increase the quantity and quality of data-driven tools available to decision makers, industry, and producers. These will include predictive models for water demand and tools to mitigate the impacts of extreme weather on agricultural systems. The Department will also partner with Washington State University and the State Conservation Commission and others to provide place- and context-based solutions to climate resilience problems for growers through technical support networks embedded within the agricultural sector. This work will include efforts to permanently fund the Department's agricultural workforce program to foster a skilled workforce with expertise in climate resilient agriculture. The State Conservation Commission will similarly use its Science Hub, Conservation Technical Assistance program, and the Center for Technical Development to connect producers with the latest science and knowledge for implementing climate resilient on-farm conservation practices.
Agency	Department of Agriculture and State Conservation Commission
Improves our resiliency to withstand	 Multiple hazards

Explore novel market opportunities to support climate risk reduction efforts

Action 4D	Economically viable uses for biomass generated by forest and rangeland wildfire mitigation projects
Summary	During vegetation management, trees and parts of trees, including branches and treetops, that are not used for commercial purposes can be left behind on the landscape which can exacerbate wildfire intensity if a fire occurs. Disposal strategies, like controlled burning, result in pollution and degraded air quality. Alternative approaches to dealing with these materials is necessary to reduce wildfire risks, limit pollution, and improve the viability of vegetation management efforts in forests and rangeland. Through this action, the Department of Commerce will expand state resources and seek federal support to advance research of economically viable uses for biomass generated from forest and rangeland projects. The wood processing industry, including firewood producers, pallet mills, and sawmills, have potential to utilize this material in their operations. Ultimately, this research will boost commercial demand and utilization for otherwise low-value byproducts that could help improve the overall viability of forest and rangeland projects.
Agency	Department of Commerce
Improves our resiliency to withstand	 Wildfire and smoke
Implementation and future considerations	The Department of Commerce will engage with interested partners during implementation of this action. The Department will also consider opportunities for research partnerships with forestry and agricultural sectors.

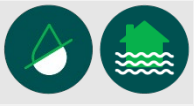
Strategy 5: Reduce existing sources of pollution that exacerbate climate impacts.

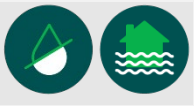
Reduce smoke pollution through regulations and community outreach

Action 5A	Expand wood stove replacement grants.
Summary	Climate change is expected to result in increased wildfire smoke and degraded air quality for communities across Washington, particularly those near areas with heightened wildfire risk. In order to reduce burdens on communities presented by wildfire smoke and associated poor air quality, efforts are needed to limit more readily controlled sources of air pollution. The Department of Ecology's Wood Smoke Reduction Grant Program provides funding to individuals to replace uncertified wood-burning home heating devices with cleaner-burning heating options to reduce emissions and improve community air quality. This program prioritizes communities at high risk of violating ambient air quality standards. The Department of Ecology will increase funding for this program to help communities improve local air quality. Better overall air quality will improve health outcomes and make communities more resilient to wildfire smoke.
Agency	Department of Ecology
Improves our resiliency to withstand	 Wildfire and smoke

Reduce water pollution

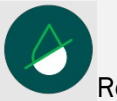
Action 5B	Puget Sound nutrient reduction grant program.
Summary	In 2019, a modeling analysis from the Puget Sound Nutrient Source Reduction Project confirmed municipal wastewater facilities are contributing to dissolved oxygen impairments. The Puget Sound nutrient general permit focuses on establishing nutrient discharge limits for wastewater treatment facilities, optimizing operations of the facilities as they exist, and planning for future improvements. This proposal would fund the implementation of a second phase of pass-through grants to provide local municipalities with funding to help address general permit requirements focusing on planning and implementation of direct actions to meet nutrient reduction targets.

Agency	Department of Ecology
Improves our resiliency to withstand	 Reduced water availability and drought, flooding

Action 5C	Riparian buffer incentive program.
Summary	Healthy riparian buffers are a key tool Ecology uses to protect and clean up waters with high levels of pollution. Plants in riparian buffers help control erosion, filter runoff, and improve water quality. Ecology provides financial support and incentives to private landowners that plant native plants and trees on their property. This action would increase resources for this work to help Ecology meet its clean water goals and requirements. This work will also complement other clean water funding programs by Ecology. Grant awards through this program will prioritize riparian enhancement in watersheds with identified water quality impairments where riparian buffers could improve water quality. Ranking criteria will include a water quality improvement evaluation.
Agency	Department of Ecology
Improves our resiliency to withstand	 Reduced water availability and drought, flooding

Strategy 6: Implement innovative water conservation and management initiatives to ensure reliable and sufficient water for people, farms, ecosystems, wildlife, and fish.

Prepare for water availability changes and implement projects in multi-benefit, large-scale water plans

Action 6A	Local drought preparedness planning
Summary	Ecology will establish a permanent funding pathway for its newly created drought planning and preparedness grant program. This funding will help communities proactively prepare for drought impacts before they happen by financing local drought planning initiatives and drought resilience projects throughout Washington.
Agency	Department of Ecology
Improves our resiliency to withstand	 Reduced water availability and drought

Action 6B	Walla Walla Water 2050 strategic plan implementation
Summary	The Walla Walla Water 2050 Strategic Plan lays out a 30-year effort to improve streamflows and water supplies in the Walla Walla watershed. The plan was created in partnership between the states of Washington and Oregon, the Confederated Tribes of the Umatilla Indian Reservation and community members. Employing an integrated water resource management approach, the plan integrates goals and solutions from the basin's diverse stakeholders in both Washington and Oregon to achieve a holistic and viable long-term plan for water use in the basin. The Department of Ecology will implement prioritized long term and short-term recommendations from the Walla Walla 2050 Strategic Plan to provide improved water supply reliability and streamflows.
Agency	Department of Ecology
Improves our resiliency to withstand	 Reduced water availability and drought

Action 6C	Increasing WDFW's drought coordination capacity
Summary	Drought conditions and insufficient water resources present challenges for the Washington State Department of Fish and Wildlife to meet its goals and objectives. This action will increase staff capacity in the Energy and Major Projects Division to ensure on-going, year-round drought coordination capacity, including in years without drought declaration.
Agency	Department of Fish and Wildlife
Improves our resiliency to withstand	 Reduced water availabiltiy and drought

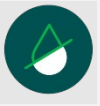
Improve the resilience and efficiency of water use and infrastructure.

Action 6D	Reclaimed water rule amendment to address streamflow impacts
Summary	Current water resources law states that reclaimed water cannot impair any existing water rights downstream of freshwater discharge points unless compensation or mitigation is agreed to by the holder of affected water rights. Compensation is undefined in law. This lack of definition has been a barrier to entities reclaiming and consumptively reusing water if their discharge is to freshwater with established instream flows as this may result in impairment to instream flows. Under existing rules, reclaimed water is considered a new water supply, and the owner of a reclaimed water facility receives an exclusive right to use the reclaimed water. This makes reclaimed water a valuable resource to help meet increasing demands for water resources, particularly in the face of climate-driven changes to water availability. Through this action, the Department of Ecology will amend the reclaimed water rule to define standards for compensation of impairment to state administered instream flows. This effort will provide a permitting pathway for new reclaimed water facilities that discharge to freshwater.
Agency	Department of Ecology
Improves our resiliency to withstand	 Reduced water availability and drought

Action 6E	Drinking water system resilience
Summary	In conjunction with the Department of Ecology, Ruckelshaus Center, and the Governor's office, the Department of Health will work to implement actions identified in the required legislative report on the Water Use Efficiency Program (due June 2025). In addition to supporting increased data collection and enforcement of water use efficiency, the Office of Drinking Water will work to gather both static groundwater level measurements and pumping levels to integrate with new interagency water resources data to identify trends. The Department of Health will update both water system planning regulations and create a new guidebook to include climate resilience planning, assessing climate hazards, and emergency response planning. The Water System Design Manual will include engineering guidance on project descriptions, analysis of alternatives and design criteria integrating climate constraints, contingency planning, and guidance on funding avenues. Improved analytics, anticipatory climate scenarios and proactive technical assistance would support preparedness of public water systems.
Agency	Department of Health
Improves our resiliency to withstand	 Reduced water availability and drought

Action 6F	Irrigation efficiencies, improved monitoring and management of water use
Summary	The agricultural sector in Washington is a significant user of water resources and water conservation is an important tool to ensure continued agricultural productivity under climate change. The State Conservation Commission will expand the capacity and reach of the Irrigation Efficiencies Grant Program and other voluntary incentive conservation programs to support the implementation of climate resilience practices and planning considerations. Irrigation efficiency technology will be eligible under the Department of Agriculture's direct-to-producer incentive program. Additional research by the Department will include a drought economic modeling project to help producers make irrigation decisions under drought scenarios. The Department of Ecology will identify and pursue incentives for irrigators that convert gravity irrigation water supply delivery systems to a downstream electrical pump station or system. Advancing this type of modern, more efficient irrigation infrastructure can improve instream flow benefits for salmon and reduce water loss. These systems provide reliable and sustainable water supply when and where it may be needed. However, these systems present added costs to irrigators from the power required for operation. The Department of Ecology will engage with a range of stakeholders and governmental entities to identify ways to incentivize conversion and offset increased operating costs for irrigators that implement these systems. The Department of Ecology will expand its capacity to actively manage and monitor existing water rights of agricultural water users to promote compliance and a broader understanding of resource use. This effort will compliment similar efforts related to municipal water conservation.
Agency	Departments of Agriculture, Ecology, the State Conservation Commission
Improves our resiliency to withstand	 Reduced water availbility and drought

Improve water management by collecting, using, and standardizing shared water data across agencies.

Action 6G	Aggregate and analyze water data and communicate information on water supply, managed aquifer recharge projects, and groundwater
Summary	The Department of Ecology will fund new data collection and analysis of the water supply changes projected because of climate change, focusing on Puget Sound and Western Washington watersheds. Efforts will align with similar analyses conducted by the Department of Ecology in the Columbia Basin (as part of the Columbia River Supply and Demand Forecast legislative requirement). The proposal includes the development of compelling communication and outreach resources to support a broad public and legislative engagement strategy intended to improve awareness and understanding of significant predicted future impacts on water supplies. This will result in a broader awareness of projected impacts that will lead to informed dialogue and broader public support for potential actions. Additionally, agencies will expand efforts to improve understanding of groundwater and surface water including studies to evaluate the effectiveness of managed aquifer recharge (MAR) projects as well as groundwater modeling. These efforts will be supported by the Department of Ecology and the Department of Fish and Wildlife.
Agency	Department of Ecology and Department of Fish and Wildlife
Improves our resiliency to withstand	 Reduced water availabiltiy and drought

Action 6H	Data sharing to support water management
Summary	As climate change leads to changes in water availability, a coordinated approach to data will be necessary for effective water management across agencies. This action will convene an interagency technical advisory team to develop a long-term statewide strategy for water resource data. To inform the strategy, the team would identify and describe groundwater and surface water resource data repositories as well as data gaps that limit our ability to manage water resources. The Department of Ecology will draft a report that describes available water resources data, identifies uses for the data, including barriers to data sharing, outlines options for improving data accessibility and usability, addresses data aggregation and access solutions, and makes specific recommendations on next steps, including potential tool development.
Agency	Interagency action led by the Department of Ecology
Improves our resiliency to withstand	 Reduced water availabiltiy and drought

Strategy 7: Plan and invest in infrastructure and state assets to minimize vulnerability to climate impacts, maintain levels of service, improve performance and condition, increase equity, and promote nature-based solutions.

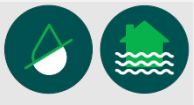
Improve the resilience of state assets

Action 7A	Interagency coordination on improving the resilience of state-owned physical assets
Summary	Under this work, agencies will update asset management plans and assess physical asset inventories to address expected future climate impacts on a wide range of state-owned facilities and other assets. This effort will identify opportunities to reduce risks and increase the resilience of these assets against future climate impacts. As one example, the Washington State Department of Transportation will develop risk-based asset management plans to address current and future climate impacts and identify where asset-specific vulnerability assessments are needed. The Department of Corrections will advance work to mitigate heat impacts in select correctional facilities and conduct a system-wide resilience planning effort to identify climate resilience needs and infrastructure upgrade opportunities.
Agency	Interagency action and Department of Corrections
Improves our resiliency to withstand	 Multiple hazards

Maintain energy security and reliability under changing climate conditions

Action 7B	Energy climate resilience and infrastructure security.
Summary	The Department of Commerce, in partnership with electric and natural gas utilities and statewide energy sectors, will develop a State Energy Security and Climate Resilience Framework that will identify vulnerabilities in the state's energy system and potential disruptions including those resulting from climate-driven hazards. This framework will identify energy sources especially vulnerable to climate-driven impacts and name specific actions to take in response to supply disruptions for different energy sources. Overall, this effort will seek to build energy-resilient communities across the state and ensure the reliable restoration of energy services when they are needed most following disaster events.
Agency	Department of Commerce
Improves our resiliency to withstand	 Multiple hazards
Implementation and future considerations	In implementing this action, the Department of Commerce will consider a range of climate-driven hazards such as weather extremes (including cold weather), wildfires, heatwaves, and flooding. The Department will engage with local governments and utility providers in development of this framework and consider a variety of energy resilience approaches including but not limited to distributed energy resources.

Use climate projections to inform infrastructure funding and management

Action 7C	Incorporating climate projections into stormwater modeling.
Summary	Modeling data is used by stormwater managers to plan, analyze, and evaluate stormwater infrastructure and assess water quality and runoff quantities under various environmental conditions. Currently, stormwater models rely on past precipitation data. The Department of Ecology will create a version of the Western Washington Hydrology Model that incorporates projected future precipitation patterns. Ecology will also continue to evaluate and consider updates to the Eastern Washington models in the future. The Department of Ecology recently updated its Stormwater Management Manuals for eastern and western Washington. These manuals are used by local jurisdictions, developers, and other partners to establish stormwater management engineering design guidelines. The update process included new information on climate change and how to mitigate climate impacts through stormwater management techniques like nature-based solutions, upsizing facilities and conveyance pipes, and reducing impervious surfaces. Additional updates include new guidance for nutrient runoff and emerging toxics of concern like 6PPD-q, and PFAS. This action will build upon these additions to the stormwater manuals and ensure that stormwater infrastructure is designed to meet future needs under a changing climate.
Agency	Department of Ecology
Improves our resiliency to withstand	 Reduced water availability and drought, flooding

Action 7D	Climate resilient guidance for state capital and transportation programs
Summary	State agencies fund a variety of critical infrastructure projects that provide public benefits. It is critical that these projects consider climate impacts in their design and construction to ensure they are resilient and provide expected public benefits. Several state capital and transportation programs already require climate change as a consideration, but requirements are inconsistent across programs and agencies which leads to added challenges for tribes and local partners that apply for these funding sources. The Departments of Ecology and Commerce, in partnership with other agencies, will leverage work of the System Improvement Team (SYNC) staffed by the Department of Commerce to develop guidance and resources for incorporating climate considerations in state capital and transportation programs. This effort would ensure that local infrastructure projects funded by state dollars will consider climate change in their planning, design, and construction.
Agency	Departments of Commerce, Ecology, Transportation, and Health
Improves our resiliency to withstand	 Multiple hazards
Implementation and future considerations	In implementing this action, agency efforts will focus on a range of climate impacts and how to consider them in grant and funding guidelines. Given the state's unique and varied geography, priority climate impacts differ for communities across the state and a one-size-fits all approach to incorporating climate resilience considerations will not work for infrastructure funding processes. Agencies will evaluate the needs for climate guidance on a range of critical infrastructure types including transportation, energy, water, and communication.

Strengthen the resilience of transportation networks

Action 7E	Cascadia Program: A resilient multimodal Interstate 5 corridor
Summary	The Cascadia Program is a broad reaching planning effort that seeks to expand multimodal transportation options for individuals and communities throughout the Interstate 5 corridor. This effort will bring together communities, agency staff, and others to address transportation needs and develop a bold vision for a more connected and resilient region. The Washington State Department of Transportation will create a master plan for mobility that specifically addresses climate considerations such as emergency routes and threats from flooding and landslides.
Agency	Department of Transportation
Improves our resiliency to withstand	 Multiple hazards

Action 7F	Transportation resilience improvement plan
Summary	The Department of Transportation is currently developing a Transportation Resilience Improvement Plan (TRIP) using federal funds identified for climate and natural hazards resilience for infrastructure. Depending on scope and consultant selection, the completed TRIP may produce vulnerability assessments, tools, and likely a prioritized list of potential projects to improve resilience. Estimated date of completion is December 2025.
Agency	Department of Transportation
Improves our resiliency to withstand	 Multiple hazards

Strategy 8: Improve land management and restoration practices to help ecosystems, habitats, and species adapt to changing conditions.

Strengthen climate-informed species and habitat management

Action 8A	Incorporating climate considerations into WDFW guidance updates
Summary	This action will provide additional capacity to update WDFW design guidelines and incorporate climate considerations. WDFW design guidelines are broadly accepted technical guidance and are therefore used by many different stakeholders to design habitat restoration projects. Incorporating climate considerations into this guidance will ensure habitat restoration work considers expected future climate conditions during design and construction.
Agency	Department of Fish and Wildlife
Improves our resiliency to withstand	 Multiple hazards

Action 8B	Enhance WDFW's Puget Sound marine fish monitoring and forage fish resilience
Summary	This action will increase monitoring of forage fish and key fish species in Puget Sound, including species of greatest conservation need, threatened and endangered species, and species in active fisheries. This action will directly measure temperature data at the surface and the seafloor to relate to fish observations and validate the Department's sea surface temperature models. Additionally, this project will use the monitoring data to predict shifts in fish distribution due to climate change. These monitoring efforts will reduce our uncertainty about the status of these fish populations, allow us to better assess these populations' responses to fishery impacts and climate change, and allow us to evaluate management actions.
Agency	Department of Fish and Wildlife
Improves our resiliency to withstand	 Marine and coastal changes

Action 8C	Climate enhanced fisheries management
Summary	Climate change is already impacting Washington's fisheries, with significant implications for Washington's salmon populations. This request will create a novel quantitative tool that estimates population dynamics and projects population abundances forward under projected climate change and alternative management strategies. By quantifying long-term conservation risks to populations and expected fishing opportunities, this tool will compare the performance of alternative management strategies under changing climate and ecosystem conditions. The resulting information will be integrated into regional fishery management plans, which can be updated regularly as new data become available. This approach aims to produce climate-ready fishery management plans that minimize conservation risks and support the recovery of at-risk populations while ensuring sustainable fishing opportunities.
Agency	Department of Fish and Wildlife
Improves our resiliency to withstand	 Marine and coastal changes

Action 8D	WDFW hatcheries and climate change impacts
Summary	This action will improve the resilience of WDFW managed hatcheries against climate resilience. Specific work will include a hatchery climate change vulnerability assessment of all agency-managed hatchery facilities. This work will help the agency identify and implement retrofits, modifications, and increases in staff capacity needed to build resilience of WDFW's hatchery program to the impacts of climate change.
Agency	Department of Fish and Wildlife
Improves our resiliency to withstand	 Multiple hazards

Action 8E	Toutle salmon reintroduction
Summary	The Department of Fish and Wildlife aims to restore fish passage and reintroduce salmon species to high-quality habitats above dams, focusing on the North Fork Toutle watershed in southwest Washington. The project will enhance salmon recovery by providing access to cooler, snow- and glacier-fed river flows, and helping salmon find refuge from increasing stream temperatures. The Army Corps of Engineers will improve fish passage facilities at the Sediment Retention Structure enabling year-round access for anadromous fish. The Department of Fish and Wildlife will implement a trap-and-haul program to reintroduce spring and fall Chinook salmon and expand the distribution of steelhead and coho salmon into 46 miles of unoccupied tributaries, including streams from Mt. St. Helens.
Agency	Department of Fish and Wildlife
Improves our resiliency to withstand	 Reduced water availability and drought, marine and coastal changes

Action 8F	Statewide kelp forest and eelgrass meadow health and conservation plan implementation
Summary	The Department of Natural Resources is proposing to accelerate progress towards the minimum 10,000-acre habitat goal for kelp and eelgrass recovery outlined in RCW 79.135.440 by implementing the Statewide Kelp Forest and Eelgrass Meadow Health and Conservation Prioritization Plan[3]. This will be accomplished by working with partners to establish kelp and eelgrass priority habitats, implement conservation and recovery actions within the priority habitats, and monitor progress. The Department of Natural Resources will implement stewardship actions that include implementing stressor reduction projects, restoration actions, and monitoring. Efforts will also leverage partners' expertise like that of Tribes, other state agencies, local governments and non-profit organizations to further ensure the success of conservation and recovery actions.
Agency	Department of Natural Resources
Improves our resiliency to withstand	 Marine and coastal changes

[3] https://www.dnr.wa.gov/kelp-and-eelgrass-plan

Prevent the worst effects of climate change on the Puget Sound ecosystem.

Action 8G	Fully fund the Puget Sound Acquisition and Restoration Program
Summary	The Puget Sound Acquisition and Restoration (PSAR) Program funds projects that recover salmon and protect/restore salmon habitat across Puget Sound. Most of the projects are designed to adapt to the impacts of climate change and/or increase resiliency to impacts. Full funding of the program would allow the Puget Sound Partnership to fund more projects to increase habitat protection and restoration across the Sound.
Agency	Puget Sound Partnership
Improves our resiliency to withstand	 Flooding, marine and coastal changes

Action 8H	Implement the regional chapter of the Puget Sound Salmon Recovery Plan
Summary	The Partnership is responsible for updating and assisting with implementation of the regional chapter of the Puget Sound Salmon Recovery Plan. The 2024 Salmon Recovery Plan Addendum (Addendum) provides a regional monitoring and adaptive management framework, which identifies climate change as a topic area with key strategies and actions to address impacts. Other strategies and actions in the Addendum also increase the resiliency of the Puget Sound ecosystem to climate change, such as estuary restoration. Implementation of the actions included within the Addendum will ensure salmon recovery efforts are resilient to projected climate impacts.
Agency	Puget Sound Partnership
Improves our resiliency to withstand	 Marine and coastal changes

Support large-scale, interagency habitat planning and connectivity

Action 8I	Interagency shrubsteppe resilience implementation
Summary	The Washington Shrubsteppe Restoration and Resiliency Initiative seeks to create a resilient shrubsteppe ecosystem, achieved through collaborative partnerships for the benefit of wildlife and communities. This action will enhance personnel and resource capacity to strategically restore habitat both before and after wildfire events. By replacing non-native annual grasses and forbs with native perennial vegetation, we will reduce the primary driver of wildfire risk. This effort will result in a landscape and working lands both more resistant and resilient, where fires are less impactful, and habitats are more able to bounce back on their own.
Agency	Interagency action led by the Departments of Fish and Wildlife, Natural Resources, and State Conservation Commission
Improves our resiliency to withstand	 Reduced water availability and drought, wildfire and smoke, extreme heat

Action 8J	Increasing habitat connectivity in Washington State
Summary	The Washington Department of Fish and Wildlife and the Washington State Department of Transportation will continue promoting the protection and management of wildlife corridors as identified in the Washington Wildlife Habitat Connectivity Action Plan to preserve the natural heritage of the state and to improve highway safety by reducing wildlife vehicle collisions. Specific work may include the purchase of land through voluntary conservation easements, landowner assistance programs to remove fencing and invasive weeds and other habitat restoration activities within corridors, development of wildlife crossing structures (overpass or underpass) at roadways, as well as increased agency capacity (administrative and personnel staffing needs) for implementation of the Washington Habitat Connectivity Action Plan. This effort will also seek funding to complete the planning, scoping, design, and construction of wildlife crossing structures, fencing, and other wildlife safety and connectivity features.
Agency	Departments of Fish and Wildlife and Transportation

Improves our resiliency to withstand	 Reduced water availability and drought, wildfire and smoke, extreme heat

Action 8K	Forest health
Summary	The Department of Natural Resources is proposing the development of a comprehensive reforestation strategy for Washington and the enhancement of reforestation capacity to meet current and projected needs. The Reforestation Strategy will provide a coordinated and comprehensive approach to reforestation, allowing Washington to identify the scale and scope of need, address barriers to reforestation, and capitalize on opportunities to build resilience in our forests. Simultaneous improvements in our state's reforestation system will allow the state to produce the types and quantities of seedlings required for successful implementation of the strategy. This action will result in a strategy that is actionable and a supply of seedlings that is appropriate to meet the increasing reforestation need. The strategy will identify opportunity areas where reforestation makes ecological, social, and economic sense, and propose solutions to identified barriers to reforestation, including seed supply and workforce capacity. The Department of Natural Resources will address known limitations in our state's ability to produce seedlings and lay the groundwork to scale up production.
Agency	Department of Natural Resources
Improves our resiliency to withstand	 Reduced water availability and drought, wildfire and smoke, extreme heat

Action 8L	Watershed Resilience Program
Summary	Watershed resilience and salmon recovery efforts are challenged by the cumulative impacts of climate change including rising temperatures, variable precipitation, and extreme flooding or drought. The Department of Natural Resources aims to scale up watershed resilience through a Watershed Resilience Program with targeted investments to maximize and achieve durable progress. This action will build the Department of Natural Resources' capacity to implement freshwater habitat restoration and nature-based solutions including coordination and engagement with tribes and local partners to implement on the ground projects promoting salmon recovery and watershed health.
Agency	Department of Natural Resources
Improves our resiliency to withstand	 Reduced water availablity, flooding, extreme heat