Prioritizing Actions and Investments for Climate Resiliency in Washington

Report to the Legislature
Chapter 357, Laws of 2020

Budget Division
Office of Financial Management
December 2020

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Executive summary

In 2012, the Department of Ecology worked with other state agencies to publish Preparing for a Changing Climate: Washington's State's Integrated Climate Response Strategy. The report provides recommendations on how existing state policies and programs can better prepare Washington to respond to the impacts of climate change.

Many state agencies have adopted policies and procedures that incorporate these strategy and climate change considerations into infrastructure, planning and land acquisition projects.

In the 2020 supplemental operating budget (Chapter 357, Laws of 2020), the Legislature directed the Office of Financial Management to develop a prioritized list of actions and investments that mitigate the effects of climate change.

Section 129 of the budget states:

> *(16) The office shall consult with agencies of the state, including but not limited to the department of natural resources, state parks and recreation commission, department of fish and wildlife, conservation commission, Puget Sound partnership, recreation and conservation office, and department of ecology, to prioritize actions and investments that mitigate the effects of climate change and strengthen the resiliency of communities and the natural environment. The recommended prioritization list shall be submitted to the governor and the legislature by November 1, 2020, to be considered for funding from the climate resiliency account created in section 924 of this act.*

Section 924 of the budget creates a new climate resiliency account under Chapter 43.79 RCW:

> *The climate resiliency account is created in the state treasury. Revenues to the account shall consist of appropriations and transfers by the legislature and all other funding directed for deposit into the account. Moneys in the account may be spent only after appropriation. Expenditures from the account are dedicated to activities that increase climate resiliency and include, but are not limited to:*
>
> *(1) Response to climate driven stressors;*
>
> *(2) Prevention of environmental and natural resources degradation;*
>
> *(3) Activities that restore or improve ecosystem resiliency and sustainability; and*
>
> *(4) Measures that anticipate, adapt, or minimize the effects climate change has on communities and the natural environment.*

The Legislature also appropriated $50 million from the state General Fund to the Climate Resiliency Account (Section 715 of ESSB 6168). Gov. Jay Inslee vetoed this appropriation because of the dramatic decline in state revenues from the COVID-19 pandemic.

The conclusions and recommendations in this report are general in nature and do not preempt the governor's funding recommendations for the 2021–23 budget, which must be submitted to the Legislature no later than December 20.

Process

As the proviso specified, OFM established a work group that consisted of representatives from:

- Department of Natural Resources
- State Parks and Recreation Commission
- Department of Fish and Wildlife
- Conservation Commission
- Puget Sound Partnership
- Recreation and Conservation Office
- Department of Ecology

OFM also invited representatives from the University of Washington's Climate Impacts Group, the Insurance Commissioner's Office, the Department of Agriculture, the Washington State Department of Transportation, and the Pollution Liability Insurance Agency to help develop this report.

Work group representatives advised OFM and reviewed interim products and drafts. OFM asked state agencies to complete a template that collected information on existing programs and activities related to climate resiliency. This template included information on funding, goals, eligible activities, funding criteria, activity focus, primary risk addressed, activity type and co-benefits.

While developing the report and recommendations, OFM also reviewed other state, federal, and private programs focused on climate resiliency planning and implementation.

Conclusions

Washington invests significantly in projects that contribute to climate resilience, but climate resilience is not the primary focus. OFM estimates that the state will invest $1.24 billion from the capital, operating and transportation budgets in the 2019–21 biennium for programs, activities and projects that contribute to climate resilience.

While these investments help Washington become more climate resilient, improved resilience is an important co-benefit of projects, programs and activities when they were first established. This is not surprising, since climate change will exacerbate many existing challenges, such as flooding; habitat loss or degradation; heat, drought or water stress; landslides; invasive species and disease; and wildfire that current state efforts are designed to address.

Climate change will also reshape the risk landscape across the state. This will bring new risks, and change the frequency, timing, location and severity of many existing risks. Relying solely on existing programs and priorities will be insufficient to meet the climate resilience challenge.

Since 2012, state agencies have independently worked to incorporate agency-specific climate resiliency into their projects, programs and activities. However, several factors hamper the efforts. These include a lack of an updated comprehensive statewide resiliency strategy with required reporting and specific performance metrics, an absence of strong statutory authorization or executive directives, inadequate funding and limited agency capacity.

In prioritizing any new potential climate resiliency funding, the overall priority should be to support foundational work that provides state agencies the science, data and institutional capacity to incorporate climate resilience in their projects, programs and activities.

The lack of an updated climate resiliency strategy also handicaps prioritization climate resiliency projects, programs and activities. Although the state completed an Integrated Climate Response Strategy in 2012, much has changed about our understanding of the risk and impacts of climate change. Completing a risk-based assessment would help refine the most important strategies. It would provide context to determine if the state is appropriating sufficient funding to address the most important risks. It would also help support efforts designed to specifically enhance climate resilience, rather than rely on programs where climate resilience is a secondary benefit.

That state could use numerous potential criteria to evaluate climate resiliency projects, programs and activities. Important criteria to consider include:

- How well projects, programs and activities address climate related risks.
- How well projects, programs and activities address high-risk sectors and communities.
- Level of important environmental and community co-benefits.
- Stability of existing fund sources.

Although the budget proviso called for a prioritized list of climate resiliency projects and activities, the recommended approach was to provide a framework that prioritizes activities within categories. This came about because of the large variance in goals and objectives across the three categories of climate resilience work, the relatively short timeframe to complete the work directed by the proviso, and the lack of funding in the Climate Resiliency Account.

Recommendations

Climate resilience investments can help our ecosystems, our economic activities that rely on natural resources and working lands, and our communities to absorb and recover from climate change impacts. Climate resilience activities, projects and programs can help address the biggest risks we face: preventing future losses, and better preparing and protecting our communities from current and anticipated climate impacts. Investing in climate resiliency can bring job creation and economic benefits. In addition to supporting existing state climate-resilience activities, OFM (in consultation with its agency work group) recommends the following:

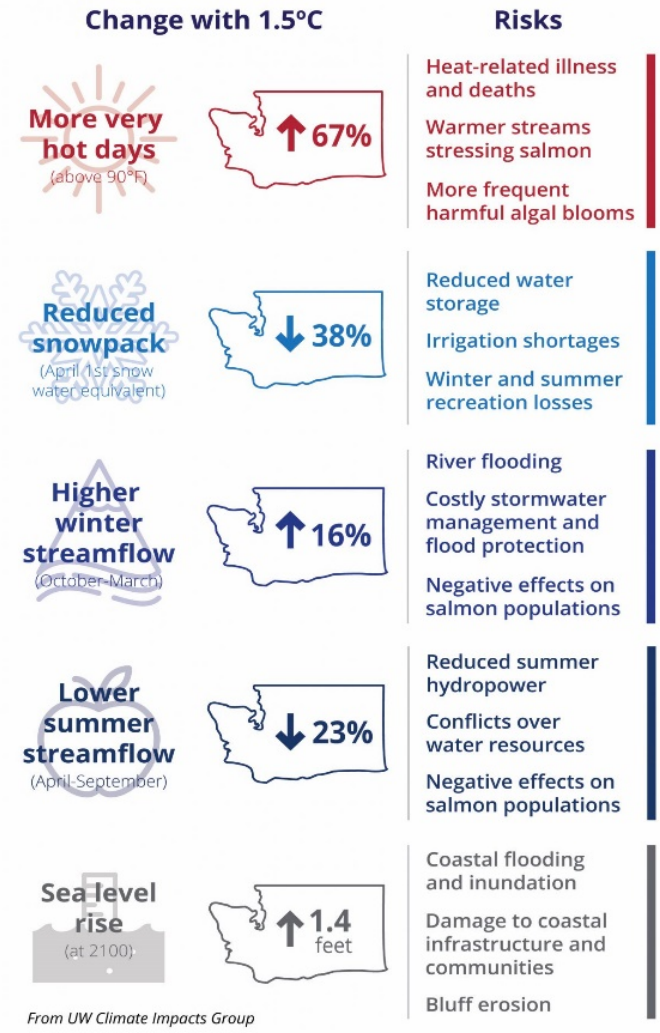
- Continue existing investments in projects, activities, and programs that contribute to increased climate resilience.
- Strengthen state mandates for addressing climate resilience by:
    - Updating the statewide climate resilience strategy.
    - Strengthening statutory requirements to incorporate climate resiliency and adaptation in state agency projects, programs and activities.
    - Creating a durable mechanism for coordinating and reporting on climate resilience needs and progress across agencies.

- Prioritize future climate resilience funding by using the suggested framework and criteria in this report. In particular, evaluate different funding categories separately and place a high priority on foundational work to address science, data and institutional capacity needs common to all agencies. Creating a durable interagency mechanism for coordination on climate resilience would be the best way to streamline future funding priorities and link it to an updated state strategy.

Impacts of climate change in Washington

Reports prepared by the University of Washington Climate Impacts Group show that climate change will significantly adversely impact the state[i].

CIG projects that these impacts will occur along our coast and in our mountains and forests. Anticipated risks from climate change include rising sea levels and increased flood events, ocean acidification, reduced snowpack and increased disease, insects and wildfires in our state forests. Sea level rise will increase the frequency of coastal flood events. This will bring about significant damage to property, public infrastructure and coastal ecosystems. Ocean acidification will continue to impact natural and cultivated shellfish species, threatening the state's shellfish industry. Decreased snowpack will reduce stream flows and water that is available for irrigation, as well as hydropower production. Decreases in summer stream flows combined with higher temperatures will make stream temperatures too high to support adult salmon. Declines in rainfall and increasing temperatures will reduce tree growth and productivity in Washington's forests. Wildland fires are also expected to increase in both eastern and western Washington.



From UW Climate Impacts Group

The extreme climate of 2015 provided a preview of impacts likely to become more frequent in Washington if we don't dramatically reduce greenhouse gas emissions. That year, the regional temperature was about 4.8 degrees Fahrenheit (2.7 degrees Celsius) warmer than pre-industrial times and the snowpack was 70% below normal. In 2015, estimated costs included the following:

- State and local government responded to record wildfires and damages associated with wildfires and landslides that triggered more than $121 million in expenditures. [ii] This

represents 74% of the costs of all fires from 2015-2019 and nearly 40% of the total costs of all fire and severe weather events in that same period.

- The Goodell wildfire in August 2015 forced Seattle City Light to de-energize transmission lines around its Skagit River Hydroelectric Project for several days. The combined impact of damages and lost power production totaled nearly $3 million (in 2015 dollars)[iii].
- Estimated agricultural economic losses were between $633 million and $773 million in Washington. This included losses of over $7.7 million in blueberries, nearly $14 million in red raspberries, $500 million in a selection of 15 crops that make up more than three-quarters of Washington's cultivated acreage, and more than $33 million in the dairy industry (losses reported in 2015 dollars)[iv].
- The Department of Ecology allocated almost $7 million in drought relief funds in 2015 (in 2015 dollars).[v]
- The warm ocean heat wave ('blob') affected salmon runs and triggered an extreme harmful algal bloom. This bloom shut down the Dungeness crab fishery and recreational razor clam digs for much of 2015 and early 2016. This represented economic losses of hundreds of millions of dollars for coastal communities along the West Coast.

Without concerted and significant effort to reduce greenhouse gas emissions and increase climate resilience, the costs of dealing with damage from future climate conditions will continue to rise significantly for Washingtonians. Estimated future costs include:

- Increased flooding is likely to damage farm infrastructure. An analysis evaluating the expected annual flood damages of a Skagit River flood estimated that farm buildings will incur just under $1.5 million worth of damage annually. More than $86 million worth of farm existing property in that one area is at risk. [vi]
- Increased stream temperatures translate to a projected 22% reduction in salmon habitat in Washington by late century under a high emissions future. This habitat loss corresponds to more than $3 billion in economic losses due to reductions in salmon populations and decreases in cold water angling opportunities ($3.3 billion in 2015 dollars, discounting method not specified). [vii]
- Because of the sensitivity of dairy cows to excessive temperature and humidity, climate change is projected to cause production losses in dairy cows in Yakima County. This means economic losses of $3.7 million a year in the 2050s, and $5.4 million a year (present-day prices) in the 2080s under a medium emissions scenario. [viii]
- Decreased snowpack will result in economic losses from declines in winter sports. This impact has already been observed in the Northwest. When comparing high-snowfall to low-snowfall years in the Northwest between 1999 and 2009, each low-snowfall year resulted in more than 2,100 fewer employees and a $173 million reduction in ski resort revenues ($189 million in 2015 dollars) compared to the high-snowfall years.[ix]

- Ocean acidification is expected to reduce harvests of shellfish throughout the country. Cumulative consumer losses of $230 million (in 2015 dollars) across all U.S. shellfish fisheries are anticipated by 2099.[x]

What do we mean by climate resilience?

The language in the Climate Resiliency Account (Section 924, Chapter 357, Laws of 2020) provides some guidance on how the state should make expenditures:

> *Expenditures from the account are dedicated to activities that increase climate resiliency and include, but are not limited to:*
>
> *(1) Response to climate driven stressors;*
>
> *(2) Prevention of environmental and natural resources degradation;*
>
> *(3) Activities that restore or improve ecosystem resiliency and sustainability; and*
>
> *(4) Measures that anticipate, adapt, or minimize the effects climate change has on communities and the natural environment.*

Although this section provides guidance, further definition was necessary to help evaluate potential programs and activities. To provide additional clarity, the work group reviewed Section 924, climate resiliency definitions by DNR[xi], and the recently adopted climate resiliency plan of the state of North Carolina,[xii] among others. The work group then developed its own definition of climate resiliency for meeting the proviso's intent.

> Climate resiliency was defined *as the ongoing process of anticipating, preparing, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure and communities.*
>
> Increasing resiliency means that we maintain, restore and increase the health and integrity of our natural systems, infrastructure and communities and their ability to absorb and recover from climate driven disturbance.
>
> For natural systems, increasing resiliency involves restoring and increasing the health, function and integrity of our ecosystems and improve their ability to absorb and recover from disturbance. For communities, increasing resiliency means enhancing their ability to understand, prevent, adapt and recover from potential climate impacts to people and infrastructure.

State climate resiliency efforts

In 2008, Washington enacted statewide greenhouse gas emission reduction targets. Updated in 2020, these targets require the state to limit greenhouse gas emissions by reducing emissions to 1990 levels by 2020; and below 1990 levels by 45% by 2030, by 70% by 2040 and by 95% by 2050. (RCW 70A.45.020)

In 2009, the University of Washington Climate Impacts Group completed the Washington State Climate Impacts Assessment. In the same year, the Legislature directed the departments of Ecology, Agriculture, Commerce, Fish and Wildlife, Natural Resources and Transportation to develop an integrated, climate change response strategy. This strategy needed to better enable the state, local agencies, public and private businesses, nongovernmental organizations and citizens to prepare for, address, and adapt to the impacts of climate change. (RCW 70A.05.010)

In 2012, the Department of Ecology published Washington's State's Integrated Climate Response Strategy. The report provides recommendations on how existing state policies and programs can better prepare Washington to respond to the impacts of climate change. The strategy identified seven high priority response strategies:

1. Protect people and communities.
2. Reduce risk of damage to buildings, transportation systems and other infrastructure.
3. Reduce risks to ocean and coastlines.
4. Improve water management related to water supply.
5. Reduce forest and agriculture vulnerability.
6. Safeguard fish, wildlife, habitat and ecosystems.
7. Support the efforts of local communities and strengthen capacity to respond and engage the public.

In 2009, the Legislature also directed state agencies to consider: "The integrated climate change response strategy when designing, planning and funding infrastructure projects; and incorporating natural resource adaptation actions and alternative energy sources when designing and planning infrastructure projects." (RCW 70A.05.040)

Since 2012, state agencies have worked independently to implement agency-specific recommendations contained in the strategy. To enhance coordination and cooperation, state agency staff formed the Interagency Climate Adaptation Network. ICAN is an informal network of state agency staff and partners working to assess and address impacts of climate change in Washington. Agencies meet on a quarterly basis to exchange information, collaborate, learn and work together to implement adaptation strategies and actions. In 2018, the Emergency Management Division coordinated with ICAN to update the State Enhanced Hazard Mitigation Plan to add climate change as a threat multiplier of natural hazards such as wildfires, floods and severe weather. The SEHMP profiles hazards, identifies risks and vulnerabilities and proposes strategies to reduce risk (among other things) to communities, the environment and infrastructure.

OFM has taken some initial steps to reduce climate impacts in the capital budget. OFM's capital budget instructions require all state agency capital project requests to include information on how the project contributes to statewide goals to reduce carbon pollution and/or improve energy efficiency. In addition, agencies are required to complete OFM's Life Cycle Cost Tool for the design of facilities with an area of 5,000 square feet or greater (Executive Order 13-03). This will demonstrate how the building design contributes to energy efficiency and conservation. More recently, Executive Order 20-01 requires (subject to available funding) newly constructed state-owned buildings to be designed as 'zero energy' or 'zero energy capable,' and include consideration of embodied carbon.

Several agencies, including WDFW[xiii], WSDOT[xiv], and DNR,[xv] have adopted policies and procedures that require them to consider climate change impacts in infrastructure and land acquisition projects. Yet, impacts from climate change in siting facilities or infrastructure projects are not uniformly addressed. A few existing capital grant programs have specifically incorporated climate change impacts (e.g., sea-level rise or flooding) into their requests for proposals. Specifically, from 2017–2019, 59 capital grant programs across 14 state agencies funded over $2 billion in projects in geographic areas potentially vulnerable to sea level rise. Currently, only six of the 59 capital grant programs explicitly state the terms "sea level rise" and/or "climate change" within their requests for proposals[xvi]. Typically, addressing impacts due to climate change is only one small component of scoring these project proposals.

In 2019, the Legislature created the Washington Disaster Resiliency Work Group (SSB 5106) to make recommendations on disaster mitigation and resiliency activities. This included whether an ongoing disaster resiliency program should be created. Climate change was among the threats that the work group considered. The work group submitted their recommendations[xvii] to the governor and the Legislature on November 10, 2020. One recommendation is to create an ongoing resiliency program within the Governor's Office.

The Office of the Insurance Commissioner doesn't have a specific budget for climate change activities. Yet, Commissioner Mike Kreidler actively pursues protection of insurance policyholders and a low-carbon economy at the state, national and international level. He chaired the Washington Disaster Resiliency Work Group. And, OIC participates in a number of state-level interagency groups related to specific resiliency and recovery topics. Commissioner Kreidler has chaired the working group on climate change at the National Association of Insurance Commissioners for more than a decade. The concrete results achieved by this work group includes an annual requirement for all large insurance companies operating in the United States to publicly post their responses to a survey on how they are managing climate change in their business. This includes governance and effect on investments and insurance products (a worldwide, first-of-its-kind effort for the insurance industry). This working group also added climate change themes to the handbook that financial examiners use across the country to assess insurers' financial health.

Current state agency work related to climate resilience

To get at the scope of state agency work that directly addresses or contributes to climate resiliency, OFM surveyed the state agencies in the work group for what work was being done at each agency, what the purpose of the work was, and the funding level. In consultation with the work group, OFM developed a threshold document to establish general criteria and assist in data collection.

State agency work related to climate resiliency* 2019-21

State agencies: 12
Programs/projects/activities: 74
*Capital funding**: $894,356,000*
*Operating funding**: $226,313,000*
*Transportation funding**: $280,145,000*

**Reflects data submitted to OFM, Oct. and Nov. 2020*
***Includes state appropriations only*

There were three qualifying questions on the threshold document to help determine if a program, project or activity contributed to climate resiliency in Washington. First, the program, project or activity had to respond directly to a significant climate change risk or vulnerability facing Washington in either the short or the long term. The following list of climate risks was included:

- Water resources – quality and quantity
- Species and habitats
- Flooding, sea-level rise, storm-surge and erosion
- Forest health and wildfires
- Agriculture – production, pests, disease and soil health
- Communities/built environment

Second, the program, project or activity had to have a 'yes' answer in either the second or third questions listed below.

> "Is the program, project or activity designed or authorized to specifically remedy or reduce identified climate change vulnerabilities and impacts?"
>
> **and/or**
>
> "Does the program, project or activity reduce vulnerability of ecosystems or the built environment to specific climate impacts using nature-based solutions?"

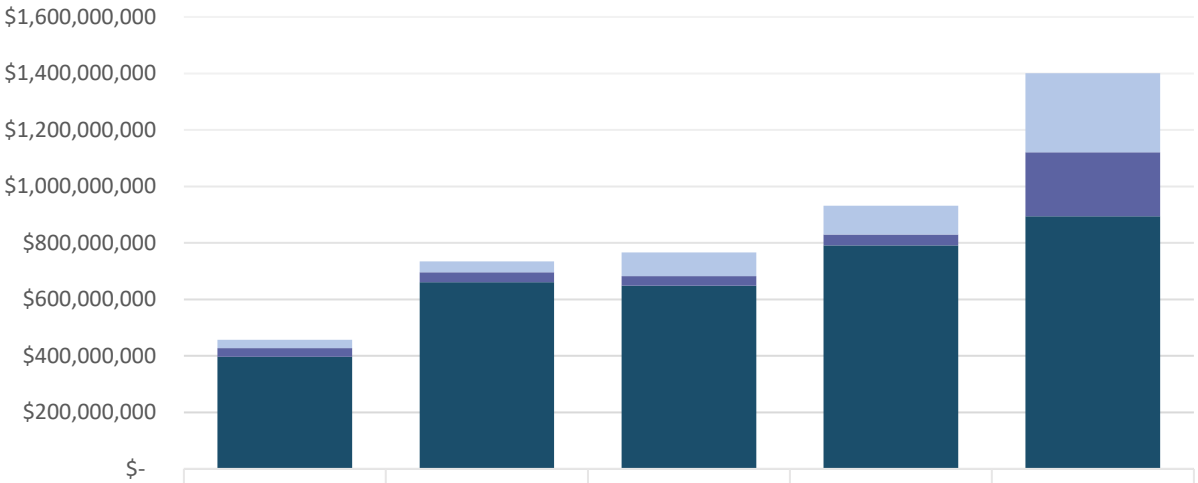
OFM ultimately received responses from 12 state agencies that accounted for 74 unique programs, activities or projects funded in the 2019-21 biennium that contribute to increased climate resiliency. While this data does not represent an exhaustive picture of every state activity with a climate resiliency nexus, the submissions represent a snapshot of state agency work that relates to or connects with climate resiliency. When collecting funding information on their agency's climate resilience related activities, many work group members reported difficulty teasing out the aspects of programs, projects or activities specifically relating to climate resilience. Work group members found climate resilience components throughout many of their agency's programs or activities, but noted it was rarely the focus of any particular program. Responses show there are very few existing programs

that focus primarily on climate risk and resiliency. Rather, climate resiliency is an important but secondary benefit.

That is why it was difficult to specify what portion of a particular program or activity or exactly how much funding was focused on climate resilience. The general approach used in this report identifies the total funding associated with the broader program, activity or project. The fiscal data reported should be interpreted as funding for programs, projects or activities that contribute to, rather than being solely focused on climate resiliency. The data, while imperfect, clearly shows increased investments in programs and activities with climate resilience benefits from fiscal year 2011 through the current fiscal year (2021).

State funding contributing to climate resiliency*

*Excludes federal, local authority. Data from before 2019-21 may be incomplete.



	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021
Transportation	$29,212,000	$39,279,000	$82,727,000	$101,772,000	$280,145,000
Operating	$30,785,000	$34,182,000	$34,769,000	$38,318,000	$226,313,000
Capital	$397,184,000	$661,557,000	$648,339,000	$791,693,200	$894,356,000

Types of state agency projects, programs and activities

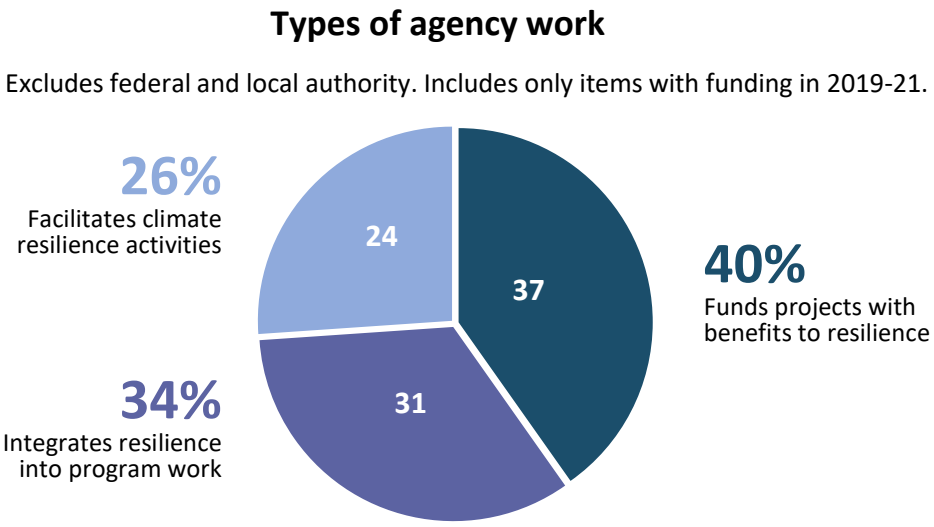
We identified three categories of projects/programs/activities with climate resiliency benefits:

- **Integrates climate resilience programmatically** – Agencies implement, design and plan strategies, measures and actions that consider current and future climate impacts and risks (e.g., avoid or minimize specific anticipated climate risks and vulnerabilities). The goal is to improve resiliency over the service life of the project and employ nature-based solutions, where relevant.
- **Facilitates climate resilience activities** – Agencies provide climate-specific capacity, research, modeling, training, or tools to enable actions by human communities that reduce risk and vulnerability of people and natural systems to climate impacts.

- **Climate resiliency projects** – Agencies use grant criteria to evaluate and prioritize how well a project addresses anticipated specific climate impacts. This will ensure resilience over the long term or service life of the project.

Agencies selected one or more of these focuses for the projects, programs and activities that they submitted to OFM with climate resiliency benefits. Overall, the three categories identified above were distributed fairly evenly, with each representing about a third of the projects, programs and submitted activities

When agencies integrated climate resilience into an agency program, it helps to prioritize where and how resources are spent. The Puget Sound Partnership develops and updates the Puget Sound Action Agenda, an ecosystem recovery plan that describes outcomes and strategies for Puget Sound recovery. The Action Agenda does not focus primarily on climate change but it includes the Partnership's ongoing efforts to integrate changing climate and ocean conditions as well as climate resilience. The goal is to avoid or reduce risks from climate change. DNR is undertaking a similar effort as it incorporates its agency climate resiliency plan into agency activities. These activities range from trust land management, to forest health to aquatic land management.



Agencies facilitate activities that increase climate resiliency through education, technical assistance, incentives, or by supporting planning and research. For example, Ecology promotes climate resilience along Washington's coastlines through data, education and professional development for coastal managers and planners. DNR supports and facilitates community level climate resilience planning and implementation in Washington's state forestlands, by reducing wildfire risk through the Firewise and fire adapted communities programs. The University of Washington's Climate Impacts Group provides important scientific data, research, tools and publications. These can help decision makers and communities across the state understand how to respond to climate change impacts and build climate resiliency.

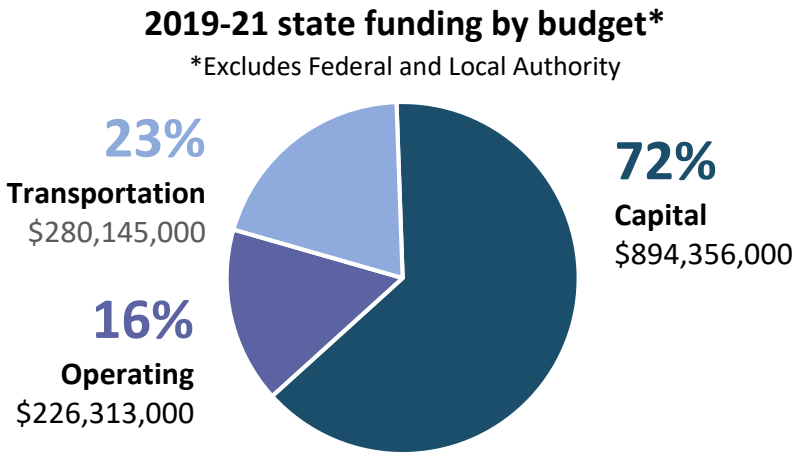
State agencies fund projects by state and local governments and organizations that have a climate resiliency benefit. The Emergency Management Division of the Washington Military Department

leverages federal funding to fund natural hazard risk reduction projects and planning initiatives by local jurisdictions and state agencies. Many of these hazard mitigation projects focus on responding to risks exacerbated by the changing climate including flooding and wildfires. Ecology works with irrigators and communities to provide grants for capital projects. These projects mitigate drought and increase water supply through the Columbia River Basin Water supply program and the Yakima River Basin Integrated Plan. The RCO helps restore salmon populations and associated species through the Salmon Recovery Program, the Washington Coast Restoration and Resiliency Program, and with the Puget Sound Partnership, the Puget Sound Acquisition and Restoration Program.

We are seeing an increased frequency of droughts and rising stream temperatures in Washington due to changing climate conditions. Projects such as these aimed at improving resilience of water supplies to drought and restoring salmon habitat increases resilience to these changing climate conditions.

Climate resiliency related funding

Funding for climate resilience related work falls in the state's three budgets: capital, transportation and operating. OFM estimated that there was approximately $1.24 billion appropriated for projects related to climate resilience for the 2019-21 biennium. The capital budget funds large scale capital projects such as those in the Yakima River Basin Integrated Plan. Projects in the Yakima River Integrated Basin Plan are designed to improve stream flows, habitat and secure water for farms, cities and industry – especially during times of drought when climate change will exacerbate their severity and durations. The capital budget also funds state facility construction projects, such as those managed by State Parks and Recreation Commission and the WDFW. These projects are prioritized, in part, by how the projects respond proactively to the effects of climate change.



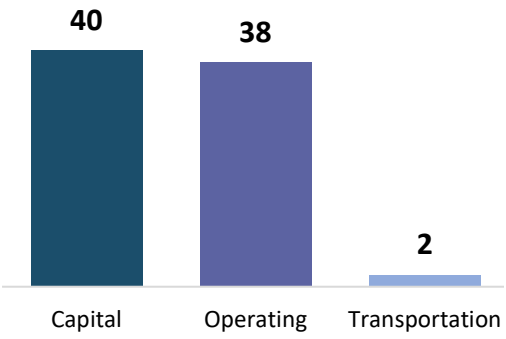
The operating budget includes programs and activities with climate resiliency benefits to state agencies and local governments through grants and partnerships. An example of this is the Sustainable Farms and Fields Program. Funded and operated by the Department of Agriculture and the State Conservation Commission, the program incentivizes farmers, ranchers, and aquaculturists to adopt sustainable practices to sequester carbon, reduce emissions and enhance soil health.

Projects are prioritized, in part, by their ability to contribute to climate resilience in the state's agricultural lands, through riparian buffers or improved fish habitats, for example. The UW Climate Impacts Group supports state agencies' climate resilience efforts by providing technical assistance, climate science, and the evaluation of projects and plans that advance climate resilience.

WSDOT, funded through the transportation budget, identifies, evaluates and repairs road infrastructure. This improves access to habitat for fish through fish passages or can address bank erosion. These projects are designed to handle current and future conditions due to climate change, as new water crossings can better handle increased flooding and washouts resulting from climate stressors.

Programs by budget

*Excludes federal and local expenditure authority. Includes only items with 2019-21 funding. Programs may have funding in both the capital and operating budgets.

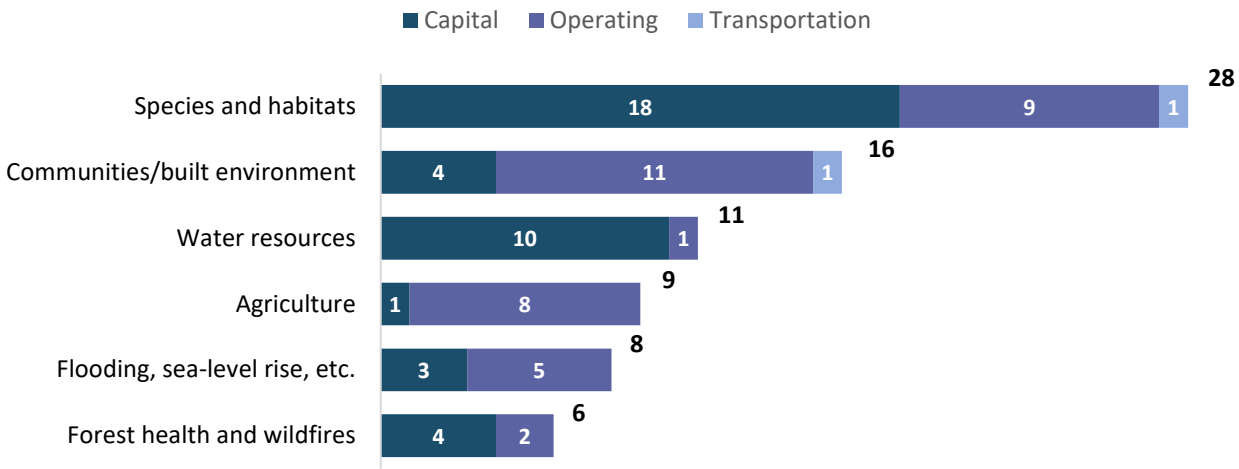


Primary risk addressed

OFM asked agencies to select the primary climate risk related to each project, program or activity. The list of risks was derived from the Climate Impacts Group's work. It was included in the guidance to agencies, along with questions to determine if a particular program, project or activity met the threshold to be included. Work group members expressed concern and difficulty choosing only one climate risk because many programs impact and stem from multiple climate risks or stressors. It is helpful to keep in mind that the risks indicated here only represent the primary risk addressed by a particular program, activity or project and are helpful as high-level indicators of where state resources are allocated.

Primary risk by numbers of programs*

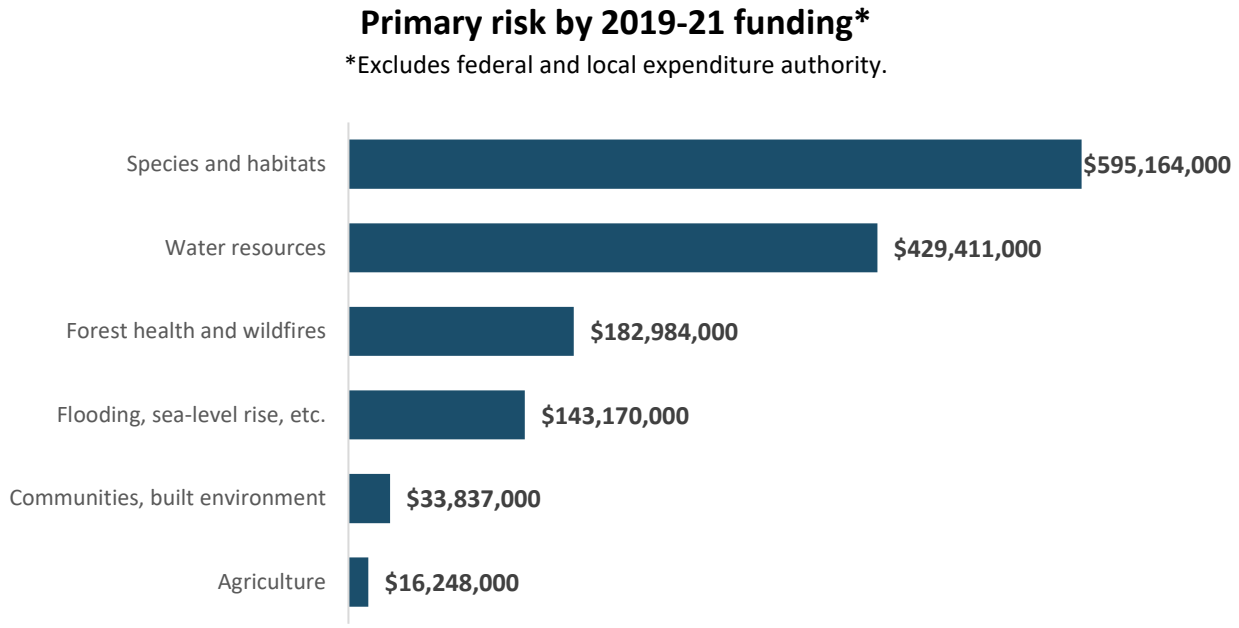
*Excludes Federal and Local Authority. Includes only items with funding in 2019-21.



Climate change risks to species and habitats was selected most often as the primary risk addressed by a program, activity or project. For example, many state agencies contribute to improving salmon habitat in state forestlands that DNR manages, fish barrier removals by WDFW, or estuary restoration by the RCO.

The spread of primary risk differed in the capital and operating budgets. Projects that addressed water resources, and species and habitats are often large-scale infrastructure projects. That's why they show up in the capital budget more often. Projects relating to risks to communities and the built environment or agriculture are seen more frequently in the operating budget. See Appendix I for the complete list of current state programs, activities and projects for examples for each risk.

In preparation for developing the 2021–23 biennial budget, state agencies requested $2.1 billion for projects, programs and activities that contribute to climate resilience. This includes $13 million in the operating budget, $1.4 billion in the capital budget and $728 million in the transportation budget.



Findings – challenges and needs

Our review revealed that the state is conducting a great deal of work that helps Washington become more climate resilient. However, climate resilience is rarely the sole focus or priority of many of the existing programs, activities or projects when they were first established. Rather, improved resilience is an important co-benefit of the work. This is not surprising, since climate change will exacerbate many existing challenges. Any state effort that addresses these risks may also help the state prepare for climate change. However, climate change will reshape the risk landscape across the state, bringing new risks and changing the frequency, timing, location and severity of many existing risks. Relying solely on existing programs and priorities will be insufficient for meeting the climate resilience challenge. If investments in existing programs don't consider how future risks are changing, investments may be less effective, create a false sense of risk reduction, or even be ineffective.

Our review revealed apparent gaps in how the state is addressing climate resilience. Discussions with work group participants revealed a key challenge: current climate resilience efforts do not necessarily target the biggest climate risks, nor are they sufficient to meet the size of the challenge. Additional challenges that the work group identified include:

- Lack of a comprehensive framework to evaluate key climate risks and needs and to address them strategically (i.e., an updated statewide plan or strategy).
- Insufficient funding for existing programs, projects or activities.
- Absence of authorization or directive to address the need. This includes inconsistent consideration of climate risks in capital grant programs.
- Limited agency capacity and expertise.
- Inconsistent or competing prioritization and mandates for and by agencies. This results in variation in integration and coordination of climate resilience within and across agencies.
- Difficulties bringing updated climate science into decision-making (e.g., updating guidance). Limited resources and capacity to acquire specific, localized climate risk data that supports planning and designing for greater climate resilience.
- Lack of required reporting and specific performance metrics for climate resilience.
- No dedicated, stable state funding for hazard mitigation work, including aspects related to climate resilience, without a federal disaster declaration.
- Need to evaluate potentially conflicting or competing state goals, mandates, policies and laws to advancing climate resilience.

A variety of staff from a number of state agencies and other partners participate in the informal ICAN. As part of the work on this report, ICAN conducted a quick survey of this group of climate resilience practitioners on their perspectives about climate resilience gaps and priorities. An overwhelming majority of responders (38 total, 35 who were affiliated with a state agency) agreed with the following:

- Existing programs, activities, and projects should better target climate resilience (97%).
- Agencies need new climate resilience programs and activities (95%).
- Existing climate resilience work is underfunded (92%).

Although a rapid assessment, the survey also provided input on the specific, relative resilience funding gaps under several different natural resource priority topics (e.g., water resources, agricultural resources and forest management/wildfires).

In 2018, the Climate Impacts Group produced a report that evaluated the progress state agencies use to prepare for future climate change impacts. The report showed that the state made progress on nearly two-thirds of the 200-plus actions in the 2012 Washington State's Integrated Climate Response Strategy. The greatest number of actions were related to water infrastructure and the built environment. The adaptation actions being pursued are mostly related to coordination (33%),

policy/administrative activities (22%), research (22%), and education (17%). Only a small fraction (6%) of activities were classified as risk reduction actions (e.g., investments in new infrastructure, alteration in natural resource management practices). At the same time, the report identified a number of barriers similar to those that the climate proviso work group identified. Some critical barriers included lack of financial or human resources, inadequate institutional support, and inadequate information and expertise.

The report urged state agencies to make climate adaptation a standard part of agency planning and make scientific information about climate change impacts accessible to public and private-sector decision makers. It suggests a need for more detailed performance metrics and tracking for the state's resilience activities, and the role that directives or mandates can play in ensuring ongoing agency buy-in and implementation. It also recommends that state agencies strengthen existing efforts to help local and tribal governments, private and public organizations, and individuals reduce their vulnerability to climate change. The state's Climate Response Strategy underscores the need to build strong partnerships to support state, local and tribal adaptation; coordinate activities across sectors; and engage stakeholders and the public. For more details on the report's findings and recommendations, see Summary Report: Are Washington State Agencies Preparing for Climate Change?

Resilience approaches by other states and regions

Many other states have started to address the challenges of climate resilience through more comprehensive and coordinated approaches.

California – In 2018, California updated its *Safeguarding California Plan,* which identifies state policies, plans and programs to address ongoing and future impacts of climate change. The Governor's Office of Planning and Research also administers the Integrated Climate Adaptation and Resiliency Program (established by the state Legislature in 2015) to help the state organize a cohesive and coordinated response to the impacts of climate change. The program helps coordinate regional and local adaptation efforts with state initiatives. Since 2006, California has funded four assessments of the state's changing climate and impacts to develop scientific understanding necessary to address evolving local needs.

North Carolina – The comprehensive strategy to reduce North Carolina's vulnerability to climate change was released in June 2020. It included a science report, state agency resilience strategies, a statewide climate vulnerability assessment, and an update to the state's hazard mitigation plan. Included with the strategy were cycles for updating each of these elements. The North Carolina Office of Resiliency and Recovery will lead the state's resilience efforts, along with an interagency team and council. The creation of the North Carolina Resilient Communities Program will provide access to climate data and tools, training and grant funding for communities.

Rhode Island – *Resilient Rhody*, published in July 2018, assesses statewide vulnerability to climate impacts and identifies a number of climate resilience actions to address each issue. Bond funding helped launch a grant program that awarded $4.36 million in 2020 for a number of climate resilience projects at the local level.

Some other states with statewide plans to address climate adaptation and resiliency include: Colorado, Delaware, New Jersey, and Massachusetts.

In addition, the Pacific Coast Collaborative (the governors of Washington, Oregon, and California and the premier of British Columbia) have worked for a number of years on how to advance climate resiliency on the West Coast. In 2018, these governors signed a Declaration on Climate Resilience.[xviii] This declaration specified that the state and provincial partners will identify successful programs and approaches that lead to enhanced resilience outcomes, and specific areas for regional collaboration and coordination. The declaration encourages developing recommendations that "ensure the most vulnerable and disadvantaged populations in our communities are equipped to thrive in a climate-impacted world, with special attention to those living in rural, impoverished and particularly vulnerable or isolated areas." Particular areas of emphasis included:

- Natural disaster preparation and response
- Wildland fire prevention and management strategies
- Coastal adaptation measures
- Water management and drought preparedness strategies
- Enhancing resilience of natural and working lands
- Development of reliable
- Resilient and affordable energy
- Transportation systems and infrastructure across the west

One specific outcome of this work has been a *Memorandum of Understanding on Pacific Coast Temperate Forest*[xix] to support information sharing among the region's state and provincial forestry agencies on forestry management under changing climate conditions. The PCC has also helped lead efforts by West Coast states and provinces to understand and address the impacts of ocean acidification caused by climate change. The PCC is currently working on a framework for collaborative action on climate resiliency, including regional goals and near-term priorities. This will be released in late 2020 or early 2021.

Potential next steps

The Legislature's proviso did not direct OFM to recommend how the state could improve the effectiveness of climate resilience activities. Yet, this topic was a natural outgrowth of the resilience prioritization process. Questions raised in the context of discussing priorities included the nature of climate risks (e.g., short versus long-term, degree of harm), distribution of effort across these risks and needs, and opportunities to foster collaboration and improve efficiency. Addressing such questions would take more time and resources than were available for fulfilling this proviso. Some potential next steps could include:

- **Establish a climate resilience framework** by creating a durable statutory commitment and mechanism for coordinating and tracking the state's work on climate resilience.
- **Update the statewide climate resilience strategy** to include new scientific understanding of risks; improve alignment of activities around common understanding of risks, needs and costs; adjust priorities; better incorporate environmental justice; enhance accountability by

establishing reporting targets and performance metrics; and enhance collaboration on common needs such as scientific information, capacity and resources.

- **Provide climate resilience funds** for foundational and common needs across agencies such as scientific information, capacity and coordination. Funding could also be used to stabilize state resources for climate resilience hazard mitigation activities (i.e., reducing or preventing impacts/loss) and de-coupling this work from efforts that rely on Federal Emergency Management Agency disaster declarations.

In many ways, Washington is similar to the federal government. In its recent testimony to the House Select Committee on the Climate Crisis, the General Accounting Office testified that:

> "…the federal government has invested in projects that may enhance climate resilience but does not have a strategic approach for investing in high-priority climate resilience projects. Some federal agencies have made individual efforts to manage climate change risk within existing programs and operations, and these efforts may convey climate resilience benefits. … However, even with individual agency efforts, federal investment in projects specifically designed to enhance climate resilience to date has been limited… Our analysis shows the federal government does not strategically identify and prioritize projects to ensure they address the nation's most significant climate risks."[xx]

Prioritizing activities and programs related to climate resilience

The proviso that created the work group directed OFM to develop a prioritized list of projects. This list was to prioritize actions and investments that mitigate the effects of climate change and would strengthen the resiliency of communities and the natural environment.

The work group determined there are numerous potential criteria to evaluate climate resiliency projects, programs and activities. The primary criteria discussed by the work group focused on short and long-term climate risks, as well as impacts to economic sectors and communities. Other important criteria considered was environmental, social and community co-benefits including restoring ecosystems, reducing carbon emissions, enhancing carbon sequestration and promoting environmental justice. Programs and activities should consider whether the program fills important planning or scientific gaps

The work group felt that **the overall priority should be to ensure funding for foundational work that provides state agencies with the science, data and institutional capacity to strategically incorporate climate resilience in their programs, projects and activities.** Without this foundational capacity, many agencies will be unable to make significant progress on incorporating climate resiliency into their programs and activities.

A lack of an updated climate resilience strategy handicaps the prioritization of climate resiliency projects, programs and activities. Although the state's Integrated Climate Response Strategy was completed in 2012, much has changed about our understanding of the risk and impacts from climate change. In addition, the existing strategy does not include an assessment and prioritization of the suite of climate risks facing the state or establish metrics or processes for measuring and reporting

on progress. Completing a risk-based assessment would help refine the most important strategies to address these risks, enabling agencies to move beyond approaches with resilience co-benefits. It would also provide context to determine if the state is appropriating sufficient funding to address the most important risks.

Given the large variance in goals and objectives across the three categories of climate resilience work, the relatively short timeframe to complete the work of the proviso, and the lack of funding in the Climate Resiliency Account, it was determined that the best approach was not to prioritize across categories nor to identify a specific list of projects, but rather to provide a recommended framework that prioritizes activities within categories. In order not to penalize existing programs that incidentally improve climate resilience but were created to achieve different goals, this prioritization framework described below should be used to review new additional funding primarily focused on climate resilience.

Climate resiliency projects

As described earlier, climate resiliency projects incorporate climate impacts and are designed specifically to increase climate resilience in natural systems and to protect human communities. These projects are funded in both the state capital and the transportation budgets.

Projects would be prioritized amongst each other and would be based upon the following criteria.

1. The extent the projects responds to an identified climate-driven risk, which include, but are not limited to:
    a. Water quality and quantity
    b. Flooding and sea-level rise
    c. Drought
    d. Invasive species
    e. Wildfires
    f. Other
2. The extent the projects helps a high risk sector impacted by climate stressors:
    a. Agriculture and working lands
    b. Critical infrastructure
    c. Species and ecosystems
    d. Communities
3. The extent to which climate resiliency is built into the service life of the project and employs nature-based solutions, where relevant.
4. Additional environmental co-benefits:
    a. Protects, restores or improves natural systems
    b. Reduces other environmental stressors that amplify climate impacts and risks (e.g., decreases pollution, reduces flooding, increases cold water in streams, etc.)
    c. Enhances carbon sequestration of natural and working lands
    d. Reduces greenhouse gas emissions

5. The extent that the projects promote environmental justice and benefits historically underserved communities.
6. Funding level and predictability:
    a. Projects without a dedicated fund source or with unpredictable funding would receive priority.
    b. Projects which are generally funded but at unpredictable levels.
    c. Multiple fund sources and predictable funding.

Climate resiliency programs

Climate resiliency programs are plans, strategies, measures and actions that consider current and future climate impacts and risks (e.g., avoid or minimize specific anticipated climate risks and vulnerabilities) to improve resiliency.

Climate resiliency programs, or activities would be prioritized based upon the following criteria.

1. Extent to which climate resiliency, considering current and future climate impacts and risks, are built into the agency program, and activities.
2. Extent to which action improves climate resiliency, including by prioritizing use of nature-based solutions, where relevant.
3. Extent that the program promotes environmental justice and benefits historically overburdened communities.
4. Funding level and predictability
    a. Programs without a dedicated fund source or with unpredictable funding would receive priority.
    b. Programs which are generally funded but at unpredictable levels
    c. Multiple fund sources and predictable funding.

Facilitates climate resilience activities

Facilitating climate resilience activities include climate-specific capacity, science, research, modeling, training, tool development and technical assistance that enable individuals, communities, organizations and businesses to reduce risk and vulnerability of people and natural systems to climate impacts.

Climate resilience activities would be prioritized and would be based upon the following criteria.

1. Fills important information gaps related to a current climate impact or high climate risk anticipated for Washington State.
2. Provides information, tools, or resources beneficial to multiple users.
3. Enhances likelihood of effective on-the-ground climate resilience activities by others (e.g., capacity, training, guidance, outreach).
4. Identifies the extent that the activities promote environmental justice and benefits historically underserved communities.

5. Funding level and predictability
    a. Activities without a dedicated fund source or with unpredictable funding would receive priority.
    b. Activities which are generally funded but at unpredictable levels.
    c. Multiple fund sources and predictable funding.

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[ii] Source: Washington State Emergency Management Division

[iii] Source: Seattle City Light 2015, cited in **May et al. 2018**
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[iv] Source: McLain et al. 2017, cited in May et al. 2018

[v] Source: Anderson et al. 2016, cited in May et. al. 2018.

[vi] Source: US Army Corps of Engineers 2014, cited in Mauger et al. 2015 (page 8-5, ref 26).

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Mauger, G.S., J.H. Casola, H.A. Morgan, R.L. Strauch, B. Jones, B. Curry, T.M. Busch Isaksen, L. Whitely Binder, M.B. Krosby, and A.K. Snover. 2015. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle. doi:10.7915/CIG93777D

[vii] Source: Niemi et al. 2009, cited in May et al. 2018.

[viii] Source: Mauger, G.S., Bauman, Y, Nennich, T., and Salathé, E.P. 2014. Impacts of climate change on milk production in the United States. Professional Geographer, doi:10.1080/00330124.2014.921017

[ix] Burakowski et al. 2012 cited in May et al. 2018

[x] : Fourth National Climate Assessment: https://nca2018.globalchange.gov/chapter/9/#fn:62

[xi] https://www.dnr.wa.gov/publications/em_climaterresilienceplan_feb2020.pdf?r5qt4w&whdrio

[xii] https://files.nc.gov/ncdeq/climate-change/resilience-plan/Appendix-E-Glossary-of-Terms-FINAL.pdf

[xiii] https://wdfw.wa.gov/sites/default/files/2019-08/pol-5408.pdf

[xiv] https://wsdot.wa.gov/sites/default/files/2017/11/15/ENV-Climate-ClimateGuidance.pdf

[xv] https://www.dnr.wa.gov/publications/em_climate_resilience_cplo_202006.pdf?whdrio

[xvi] https://fortress.wa.gov/ecy/publications/documents/2006015.pdf

[xvii] https://www.insurance.wa.gov/sites/default/files/documents/washington-disaster-resiliency-work-group-final-report-november-2020.pdf

[xviii] https://pacificcoastcollaborative.org/wp-content/uploads/2018/09/PCC_Climate_Resilience_Declaration_FINAL-forweb.pdf

[xix] https://resources.ca.gov/CNRALegacyFiles/wp-content/uploads/2018/12/CA-WA-BC-Forest-MOU.pdf

[xx] https://www.gao.gov/assets/710/703117.pdf

Appendix A

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
DNR	Carbon Sequestration	Operating	001-1	$0	$0	$0	$0	$375,000		Goals: Conduct carbon inventories to build on existing efforts to understand carbon stocks, flux, trends, emissions, and sequestration across Washington's natural and working lands, including harvested wood products, wildfire emissions, land management activities, and sawmill energy use and emissions. Compile and provide access to information on existing opportunities for carbon compensation services and other incentive based carbon reducing programs to assist owners of private and other nonstate owned or managed forestland interested in voluntarily engaging in carbon markets. Form a natural and working lands carbon sequestration advisory group. Eligibility Criteria: Eligible projects: carbon sequestration activities. Evaluation Criteria: 1) Sequesters carbon, 2) Feasible/practical, 3) Cost-effective, 4) Consistent with law, rule, and policy.	Prevention	Species and habitats	Integrates resilience programmatically; Facilitates resilience activities	Enhances carbon sequestration
DNR	Columbia Basin Sequestration and Energy	Capital	057-1					$0	$1,922,000	Goals: Produce maps and reports on opportunities and resource availability related to geothermal energy, groundwater, and carbon sequestration. Evaluation Criteria: In alignment with the agencies plan for climate resilience and statewide efforts to sequester carbon.	Prevention	Communities / built environment	Facilitates resilience activities	Enhances carbon sequestration
DNR	Community Resilience Planning	Operating	001-1					*Unavailable		Goals: Support and facilitate community-level resilience planning and implementation. Eligibility Criteria: Community-level resilience activities. Evaluation Criteria: 1) Promotes climate resilience, 2) High level of community interest and engagement.	Community resilience	Communities / built environment	Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors
DNR	Derelict Vessel Removal and Recycling	Capital	057-1	$6,650,000				$2,500,000	$5,600,000	Goals: Leads to improved water quality and salmon habitat recovery in Snohomish County, Pacific County, and Port Townsend. Evaluation Criteria: Funding is specifically meant to remove and recycle derelict vessels that have already been identified as a high priority and that once removed will have a large, positive impact to water quality in critical watersheds in Snohomish and Pacific counties.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors
DNR	Endangered, Threatened, and Rare Species and Ecosystem Conservation	Operating	041-1; 014-1; 02R-1; 001-1					*Unavailable		Goals: Protect and manage habitat to conserve endangered and threatened species, and representative examples of native ecosystems on state-owned uplands and aquatic lands. Eligibility Criteria: Habitat and ecosystem conservation activities. Evaluation Criteria: 1) Conserves endangered or threatened species habitat, or representative examples of native ecosystems, 2) Feasible/practical, 3) Cost-effective.	Prevention	Species and habitats	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors; Enhances carbon sequestration
DNR	Family Forest Fish Passage Program	Capital	057-1					$5,000,000	$10,000,000	Goals: Cost share program that helps small forest landowners correct fish passage barriers. Evaluation Criteria: Ecological restoration and water/stream quality priorities.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
DNR	Forest Biomass	Operating	041-1; 014-1					*Unavailable		Goals: Promote forest biomass as an alternative to fossil fuels. Eligibility Criteria: Forest biomass sales. Evaluation Criteria: 1) Provide an alternative to fossil fuels combustion, 2) Increase revenue for state trust land beneficiaries, 3) Support rural communities.	Prevention	Communities / built environment	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems
DNR	Forest Regeneration	Operating	041-1; 014-1; 193-1					$10,571,300		Goals: Provide the expertise and tree seedlings needed to regenerate forests following wildfire, timber harvest, and other disturbances. Eligibility Criteria: Regeneration and propagation activities and research. Evaluation Criteria: 1) Provides knowledge and expertise needed to regenerate Washington forests, 2) Propagates resilient tree seedlings, 3) Feasible/practical, 4) Cost-effective.	Restoration	Species and habitats	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems
DNR	Forest Resiliency	Capital	057-1	$6,320,000	$4,000,000	$10,000,000	$13,000,000	$14,200,000	$25,000,000	Goals: Capital request that crosses State, small landowner private, and federal lands for rapid job development in multiple sectors statewide, linking the Forest Action Plan, Forest Health Strategic Plan, and Wildfire Strategic Plan. Evaluation Criteria: Funding will be dispersed according to DNR's 20-year forest health strategic plan, 10-year wildfire strategic plan, and Washington's forest action plan.	Community resilience	Forest health and wildfires	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
DNR	Forest Riparian Easement Program	Capital	057-1	$1,000,000	$2,000,000	$3,500,000	$3,500,000	$3,500,000	$10,420,000	Goals: Allows purchase of 50-year forest riparian conservation easements from small forest landowners to counter the disproportionate financial impacts of the expanded riparian protections of the Forests and Fish law and rules. Evaluation Criteria: Funding to meet obligations as outlined in statute to repair disproportionate burden on small forest landowners due to riparian buffer requirements.	Prevention	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors; Enhances carbon sequestration
DNR	Groundwater	Operating	041-1; 001-1					$0		Goals: Conserve groundwater. Eligibility Criteria: Groundwater assessment and conservation activities. Evaluation Criteria: 1) Advances knowledge of groundwater and human use interactions, 2) Promotes groundwater conservation, 3) Feasible/practical, 4) Cost-effective.	Community resilience	Water Resources	Facilitates resilience activities	Protects, restores or improves natural systems
DNR	Improving Roads for Salmon	Capital	057-1	$6,843,000	$2,000,000	$5,000,000	$2,302,000	$3,766,000	$1,930,000	Goals: Open up miles of salmon habitat and keep roads safe for timber hauling and recreation access. Evaluation Criteria: Money is dispersed in accordance with regional needs to ensure timber sale revenues remain constant and that recreational access does not compromise ecological health and salmon recovery efforts.	Restoration	Species and habitats	Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors
DNR	Plan for Climate Resilience	Operating	001-1	$0	$0	$0	$0	$276,000		Goals: Advance climate resilience within DNR, throughout the natural resource sectors, and among partners throughout the state, including tribes, cities, counties, stakeholders, and other state agencies. Eligibility Criteria: Activities that advance climate resilience. Evaluation Criteria: 1) Advances climate resilience (human communities and ecosystems), 2) Promotes environmental justice, 3) Feasible/Practical, 4) Cost-effective, 5) High likelihood of success, 6) Consistent with law, rule, and policy.	Prevention	Communities / built environment	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors; Enhances carbon sequestration

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
DNR	Puget Sound Corps	Capital	057-1	$10,000,000		$6,800,000	$5,000,000	$4,000,000	$8,000,000	Goals: Create 100 jobs, scholarships, and real life on-the-job training through trail building, forest health treatments, noxious weed abatement, and targeted work in aquatic reserves and Natural Areas in fragile watersheds. Evaluation Criteria: Projects are prioritized in accordance with DNR's 20-year forest health strategic plan, forest action plan, salmon strategy work, plan for climate resilience, and local community partners.	Restoration	Species and habitats	Funds resilience projects	Reduces other environmental stressors; Protects, restores or improves natural systems
DNR	Renewable Energy	Operating	041-1					*Unavailable		Goals: Lease state trust lands for solar, wind, and geothermal electricity generation. Eligibility Criteria: Solar, wind, and geothermal energy projects. Evaluation Criteria: 1) Provide carbon-free, renewable energy, 2) Increase revenue for state trust land beneficiaries, 3) Support rural communities, 4) Promote fair labor practices.	Prevention	Communities / built environment	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems
DNR	Rivers and Habitat Open Space Program	Capital	057-1		$500,000	$1,000,000	$1,000,000	$1,000,000	$6,100,000	Goals: Allow acquisition of perpetual conservation easements from private forest landowners to protect channel migration zones and critical habitat for threatened and endangered species. Evaluation Criteria: Prioritizes ecological restoration and preservation in accordance with state 20-year forest health strategic plan, salmon strategy efforts, and the plan for climate resilience.	Prevention	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors; Enhances carbon sequestration
DNR	Snohomish Watershed Restoration	Capital	057-1					*Unavailable	$2,300,000	Goals: Create six Puget Sound Corps crew team positions and two FTEs to work on improved water quality and salmon habitat recovery within the priority watershed area for the Commissioner. Evaluation Criteria: Projects are prioritized according to the agency's salmon strategy work that prioritizes linking investments in the Snohomish watershed to limiting factors for salmon recovery.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors
DNR	Teanaway/Klickitat Community Forests	Capital	057-1				$1,481,000	$1,856,000	$2,400,000	Goals: Meet the goals of the Community Forest Trust Program and implement management plans. This request funds subprojects to further protect and enhance watersheds and restore vital habitat, enhance opportunities for forestry and grazing, and provide recreation opportunities. Evaluation Criteria: Funding dispersed in alignment with the agency's 20-year forest health strategic plan, plan for climate resilience, and salmon recovery efforts around the state.	Restoration	Forest health and wildfires		
DNR	Urban Forestry	Capital	057-1	$400,000				*Unavailable	$1,300,000	Goals: Modernizes the Evergreen Communities Act to help communities develop urban forestry plans aligning with other high priority goals, such as salmon and orca recovery, environmental health disparities, human health, and local air and water quality improvements with least 50 percent of all program activities benefiting highly impacted communities. Evaluation Criteria: Utilizes the environmental health disparities mapping tool to target investments in highly impacted communities in alignment with the agency's plan for climate resilience, 20-year forest health strategic plan, and state forest action plan. This also prioritizes environmental justice opportunities.	Community resilience	Communities / built environment	Integrates resilience programmatically	Enhances carbon sequestration; Reduces other environmental stressors; Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
DNR	Wildland Fire Protection	Operating	001-1; 190-1					$164,441,000		Goals: Work collaboratively across jurisdictional boundaries and with engaged communities to safeguard what we value. All of Washington is adapted and prepared, and our landscapes are healthy and resilient. Prevent wildland fire, use fire where allowable, and safely suppress unwanted fire. Eligibility Criteria: Wildland fire preparedness, prevention, and suppression activities. Evaluation Criteria: 1A) Prepares for, prevents, or extinguishes unwanted wildland fires, 1B) Uses prescribed fire as a tool to improve resilience, 2) Safeguards lives, human communities, and property, 3) Feasible/practical, 4) Cost-effective.	Prevention	Forest health and wildfires	Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Biosolids	Operating	199-1	$1,525,000	$1,957,000	$1,930,000	$2,032,000	$2,071,000	$0	Goals: Encourage the maximum beneficial use of biosolids through application of biosolids on crop and forest lands. Eligibility Criteria: Increased amount of carbon in soil from biosolids application. Increase soil's water holding ability (tilth), sequester carbon, off set fossil fuel derived fertilizers. Increased amount of carbon in soil from biosolids application. Increase soil's water holding ability (tilth), sequester carbon, off set fossil fuel derived fertilizers.	Prevention	Agriculture	N/A	Protects, restores or improves natural systems
Ecology	Centennial Clean Water Program	Capital	057-1; 173-1; 19G-1; 174-1	$34,100,000	$50,000,000	$22,500,000	$35,000,000	$30,000,000	$80,000,000	Goals: Protect and restore water quality and watershed function through prioritized funding of water quality infrastructure and nonpoint activity projects. Eligibility Criteria: 1) Planning, design, and construction of wastewater facilities, stormwater facilities, and large onsite sewage systems in small hardship communities, 2) Planning and implementation of nonpoint source pollution control activities, 3) Planning and implementation of estuary conservation and management activities, 4) Onsite sewage system repair and replacement programs. Evaluation Criteria: Priority rating and ranking evaluation process focused on: 1) Water quality and public health improvement, 2) Scope and budget, 3) Project planning, project schedule and team.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Chehalis Basin Strategy	Capital	057-1	$0	$0	$0	$50,000,000	$73,200,000	$70,000,000	Goals: Develop a comprehensive, long-term Chehalis Basin strategy to reduce flood-related damage, restore aquatic habitat for salmon and other native species, and provide other public benefits. Eligibility Criteria: 1) Pre-Construction, 2) Feasibility and Design, 3) Construction, 4) Design and Construction, 5) Land Purchase, 6) Project Specific Outreach and Education, 7) Riparian/wetland restoration, planting, 8) Pre and Post Project assessment, 9) Other Admin Costs. Evaluation Criteria: 1) Reduce Flood Risk and Damage, 2) Ecological Restoration and/or Preservation, 3) Tribal Support, 4) Enhance Agriculture, 5) Cost Effectiveness, 6) Other Community Needs, 7) Climate Impacts.	Community resilience	Flooding, sea-level-rise, etc.	Funds resilience projects	Protects, restores or improves natural systems
Ecology	Clean Water State Revolving Fund	Capital	727-1; 727-2	$192,144,000	$250,000,000	$203,000,000	$210,000,000	$216,000,000	$300,000,000	Goals: Protect and restore water quality and watershed function through prioritized funding of water quality infrastructure and nonpoint activity projects. Eligibility Criteria: 1) Planning, design, and construction of wastewater facilities, stormwater facilities, and large onsite sewage systems, 2) Planning and implementation of nonpoint source pollution control activities, 3) Planning and implementation of estuary conservation and management activities, 4) Onsite sewage system repair and replacement programs. Evaluation Criteria: Priority rating and ranking evaluation process focused on: 1) Water quality and public health improvement, 2) Scope and budget, 3) Project planning, project schedule and team.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
Ecology	Climate Change Mitigation and Adaptation	Operating	001-1; 216-1; 173-1;23P-1; 489-1	$1,248,000	$1,761,000	$1,813,000	$6,519,000	$9,486,000	$243,000	Goals: Preparing for and responding to climate change by monitoring, tracking and setting requirements on airborne pollutants contributing to climate change. Agency activity contains multiple programs and initiatives. Eligibility Criteria: Includes: 1) Conducting and reporting the biennial greenhouse gas emissions inventory, 2) Administering mandatory greenhouse gas reporting, 3) Developing and implementing the Clean Air Rule to cap and reduce carbon emissions, 4) Adopting rules to limit the use of hydrofluorocarbons and identifying and reporting on ways to promote alternatives, 5) Providing technical work required for the implementation of the Clean Energy Transformation Act, 6) Adopting rules to strengthen and standardize the consideration of climate change risks, vulnerability, and impacts in environmental assessments for major projects with significant environmental impacts as required by the Governor's Directive 19-18.	Community resilience	Communities / built environment	Facilitates resilience activities	Reduces other environmental stressors
Ecology	Coastal Hazards and Climate Resilience	Operating	23P-1; 173-1	$404,000	$424,000	$445,000	$468,000	$491,000	$0	Goals: Strengthen the coastal hazards and climate resilience efforts of communities and the state by delivering coordinated multi-organizational assistance to connect resources and expertise, spearhead cross-fertilization of ideas, enhance collaboration, and coordinate strategic investment in science, projects, and programs. This includes: Coastal Hazards Resilience Network, Coastal Hazards Organizational Resilience Team (COHORT), Coastal Monitoring & Analysis, Risk MAP (mapping, assessment, and planning), Regional Sediment Management.	Community resilience	Flooding, sea-level-rise, etc.	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems
Ecology	Coastal Hazards and Climate Resilience	Operating	Local 001-7	$966,000	$1,014,000	$1,065,000	$1,118,000	$1,174,000	$0		Community resilience	Flooding, sea-level-rise, etc.	Integrates resilience programmatically; Facilitates resilience activities	Protects, restores or improves natural systems
Ecology	Coastal Protection Fund Grants	Operating	408-1	$1,556,000	$1,556,000	$1,556,000	$1,556,000	$1,064,000	$0	Goals: The Coastal Protection Account derives revenue from Natural Resource Damage Assessments and penalties related to oil spills and water quality violations. The account funds grants for projects that improve shoreline and riparian habitat as well as other restoration projects that support climate change resilience related to sea-level rise and other water quality and species/habitat impacts. Eligibility Criteria: Construction, Restoration, and Land Purchase costs related to the following: 1) Shoreline and Riparian Restoration, 2) Aquatic Land Geographic Information Systems, 3) Wetland Restoration, 4) Stream Bank Stabilization, 5) Fish and Wildlife Habitat Enhancement. Evaluation Criteria: 1) Expected habitat, sensitive species and resource, and public benefits, 2) Sustainable outcomes and protection, 3) Leveraged funds and resources, 3) Tribal and Stakeholder support, 4) Regional significance, 5) Readiness to proceed, 6) Concrete, measurable, and well-planned deliverables, 7) Realistic project schedule that can be completed within the funding cycle, 8) Reasonable budget.	Restoration	Flooding, sea-level-rise, etc.	Funds resilience projects	Protects, restores or improves natural systems
Ecology	Coastal Wetlands Acquisition	Capital	Local 001-7	$8,700,000	$9,800,000	$10,000,000	$9,500,000	$9,200,000	$8,000,000	Goals: Federal grants are passed through to local partners to protect important coastal and estuarine areas that have significant conservation, recreation, or ecological value. Eligibility Criteria: 1) Land Purchase, 2) Restoration, 3) Other Admin Costs.	Prevention	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
Ecology	Columbia River Basin Water Supply	Capital	10P-1; 18B-1; 057-1; 296-1; 355-1	$41,000,000	$74,500,000	$19,000,000	$33,800,000	$40,000,000	$40,000,000	Goals: Provides funding to assess, plan, and develop new water supplies for both instream and out-of-stream benefits across Eastern Washington. Eligibility Criteria: Includes new storage, altering operations of existing storage facilities, conservation projects, pump exchanges, water markets, or any other actions designed to provide access. Evaluation Criteria: Directly Improves Water Resources - Supply and Quality, Species and habitats, Agriculture – production, pests, disease and soil health and Communities/built environment/public health and more indirectly improves Forest health and wildfires.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Drought Response	Capital	05W-1; 057-1	$0	$0	$16,000,000	$0	$669,000	$0	Goals: Projects that mitigate drought impacts instream and out of stream to improve habitat, fish passage, and water for farms, cities and commercial water users. Eligibility Criteria: Includes water conservation, operational changes, fish passage, habitat protection and enhancement, water right leases or purchases, etc. Evaluation Criteria: Directly Improves Water Resources - Supply and Quality, Species and habitats, Agriculture – production, pests, disease and soil health and Communities/built environment/public health and more indirectly improves Forest health and wildfires.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Drought Response	Operating	001-1	$0	$0	$0	$0	$2,000,000	$0		Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Flood Control Assistance	Operating	02P-1	$1,929,000	$1,976,000	$1,989,000	$2,173,000	$2,584,000	$3,200,000	Goals: Support effective floodplain management through technical assistance, local ordinance review, comprehensive flood hazard management planning support, and grants for planning, flood risk studies, and flood hazard emergency response. Eligibility Criteria: 1) Floodplain planning, 2) Studies to identify flood risk, 3) Emergency response. Evaluation Criteria: Reduce flood risk to people and property.	Prevention	Flooding, sea-level-rise, etc.	Funds resilience projects; Facilitates resilience activities	Protects, restores or improves natural systems
Ecology	Flood Plains by Design	Capital	057-1	$0	$44,000,000	$35,560,000	$35,388,000	$50,500,000	$70,000,000	Goals: Advance integrated floodplain management strategies and projects that consider a broader variety of ecological functions, values, and benefits to the affected human communities. Eligibility Criteria: 1) Pre-Construction, 2) Feasibility and Design, 3) Construction, 4) Design and Construction, 5) Land Purchase, 6) Project Specific Outreach and education, 7) Riparian/wetland restoration, planting, 8) Pre and Post Project assessment, 9) Other Admin Costs. Evaluation Criteria: 1) Reduce Flood Risk and Damage, 2) Ecological Restoration and/or Preservation, 3) Tribal Support, 4) Enhance Agriculture, 5) Cost Effectiveness, 6) Other Community Needs, 7) Climate Impacts.	Prevention	Flooding, sea-level-rise, etc.	Funds resilience projects	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
Ecology	Food Waste Reduction	Operating	044-1	$0	$0	$0	$0	$700,000	$0	Goals: Reduce wasted food 50% by 2030 (from 2017 level). This goal in RCW 70A.205.715. 1. Food waste reduction program and projects responds to a significant climate change risk, as reducing wasted food is a key way to reduce all the GHG emissions (and water use) associated with producing food (Agriculture – production, pests, disease and soil health) 2. Food waste reduction program and projects Integrates Resilience Programmatically by instilling strategies, measures and actions that will reduce GHGs emissions, and thus improve resiliency. 3. Food waste reduction program and projects reduces vulnerability of ecosystems in all these ways. Using the food grown, instead of increasing what we need to grow because of waste protects, restores or improves natural systems. It also reduces other environmental stressors, such as not adding the need for increase water use and pollution from growing additional food. Finally, composting food that is wasted, as well as inedible prats of food, and using that compost on lands, enhances carbon sequestration of natural and working lands. Eligibility Criteria: Food waste plan and Pacific Coast Collaborative Food waste prevention group.	Prevention	Agriculture	N/A	Protects, restores or improves natural systems
Ecology	Local Government Disaster Response Plans	Operating	001-1	$0	$0	$0	$128,000	$142,000		Goals: Local governments are responding to an increased number of disasters due to wildfires and floods. In order to qualify for FEMA reimbursement, especially if there is no declaration of emergency, local governments need to have an approved disaster response plan. An Environmental Planner 5 is working with high risk county governments on the preparation and approval of disaster response plans. Eligibility Criteria: Inter-governmental coordination/technical assistance on local disaster response plan.	Community resilience	Communities / built environment	Integrates resilience programmatically	Protects, restores or improves natural systems
Ecology	Promoting Coastal Resiliency	Operating	Local 001-7	$491,000	$448,000	$494,000	$533,000	$573,000	$0	Goals: Coastal Training Program - Promote resilience and adaptation for coastal planners and managers through education and professional development. This training supports Floodplains by Design and the Shoreline Master Plans. Also research and restore coastal habitats with a focus on climate resilience.	Community resilience	Flooding, sea-level-rise, etc.	Facilitates resilience activities	N/A
Ecology	Promoting Coastal Resiliency	Operating	23P-1	$210,000	$192,000	$212,000	$228,000	$245,000	$0		Community resilience	Flooding, sea-level-rise, etc.	Facilitates resilience activities	N/A
Ecology	Puget Sound Nutrient Reduction	Capital	057-1	$0	$0	$0	$0	$0	$9,000,000	Goals: Protect and restore water quality and ecological function in the Puget Sound Estuary through prioritized funding of nutrient reduction projects at wastewater facilities. Eligibility Criteria: 1) Implementation of nutrient reduction facility operational efficiencies, 2) Facility planning for nutrient reduction infrastructure improvements. Evaluation Criteria: Prioritization of projects that yield timely and cost effective nutrient reduction outcomes.	Community resilience	Water Resources	Funds resilience projects	Reduces other environmental stressors
Ecology	Shoreline Management Planning Grants	Operating	23P-1; 001-1; 173-1; 174-1; 19G-1	$8,794,000	$6,792,000	$2,300,000	$1,400,000	$3,000,000	$0	Goals: Responsible for the implementation of the Shoreline Management Act, which includes a partnership with local governments to Shoreline Master Programs (SMPs), local land-use policies and regulations that guide use of Washington shorelines. SMPs apply to both public and private uses for Washington's more than 28,000 miles of lake, stream, wetland, and marine shorelines. They protect natural resources for future generations, provide for public access to public waters and shores, and plan for water-dependent uses. Eligibility Criteria: 1) Research/assessment, 2) Planning, 3) Community engagement.	Community resilience	Flooding, sea-level-rise, etc.	Integrates resilience programmatically	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
Ecology	Stormwater Financial Assistance Program	Capital	057-1; 173-1; 174-1; 19G-1; 23R-1	$68,403,000	$99,781,000	$51,200,000	$76,400,000	$48,508,000	$52,700,000	Goals: Protect and restore water quality and watershed function through prioritized funding of stormwater retrofits and pollutant source control projects. Eligibility Criteria: 1) Planning, design and construction of stormwater retrofit projects providing treatment and flow control, 2) Planning and implementation of pollutant source control activities. Evaluation Criteria: Priority rating and ranking evaluation process focused on: 1) Water quality and public health improvement, 2) Scope and budget, 3) Project planning, project schedule and team.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Streamflow Restoration Program	Capital	366-1	$0	$0	$0	$13,600,000	$40,000,000	$40,000,000	Goals: Projects that that offset impacts from new domestic permit-exempt wells and achieve a net ecological benefit within the watershed. Eligibility Criteria: Eligible projects include water right acquisitions, water storage, altered water management or infrastructure, riparian and fish habitat improvements, watershed function, environmental monitoring, and feasibility studies. Evaluation Criteria: Directly Improves Water Resources - Supply and Quality, Species and habitats, Agriculture – production, pests, disease and soil health and Communities/built environment/public health and more indirectly improves Forest health and wildfires.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Sunnyside Valley Irrigation District Water Conservation	Capital	057-1	$0	$3,055,000	$3,055,000	$4,684,000	$4,234,000	$4,281,000	Goals: Projects that improve on-site agricultural efficiency and improve instream flows via conservation. Eligibility Criteria: Includes water conservation and irrigation piping (from open ditch) projects.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
Ecology	Washington Conservation Corps	Operating	173-1; 001-1; 23P-1; 02P-1; Inter-Agency Agreements	$10,210,810	$13,993,510	$14,189,700	$14,621,250	$15,832,400	$163,000	Goals: WCC members complete environmental and disaster service projects while serving on crews stationed throughout Washington State. These crews provide assistance to local, state, and federal natural resource agencies through the following activities: 1) Installing native trees and shrubs to restore or enhance habitat for fish and wildlife, 2) Monitoring restoration sites and controlling invasive species, 3) Increasing public access and safety through constructing or improving trails and boardwalks, 4) Reducing the risk of floods and wildfires through environmental restoration and forest health management.	Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems
Ecology	Washington Conservation Corps	Operating	Local 001-7	$3,197,250	$3,415,650	$3,537,450	$3,951,150	$6,208,050	$59,000		Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems
Ecology	Washington Conservation Corps	Operating	Federal 001-2	$7,909,650	$7,771,350	$8,180,550	$8,680,350	$12,240,050	$269,000		Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems
Ecology	Washington Conservation Corps	Capital	19G-1	$0	$1,000,000	$0	$0	$0	$0		Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
Ecology	Waste to Fuels Research	Operating	044-1; 173-1; 23P-1	$0	$0	$225,000	$459,000	$450,000	$0	Goals: To conduct research on organic waste materials to make clear how they maybe best utilized for beneficial purposes to: promote biomass energy generation, improve soil health, increase agricultural yields, facilitate drought resiliency, and encourage sustainable agriculture practices. Promote the benefits of the diversion of organic waste material from being landfill or burned. Support small business economic development of composting and biochar use for agriculture use, while reducing greenhouse emissions and the impacts of climate change. Eligibility Criteria: Support the research and development of biochar technologies for energy/fuel generation as well as biochar production for use as a soil amendment in compost. Research the beneficial use of compost amended with biochar to maximize crop yields, increase water soil and nutrient retention to facilitate drought resiliency. Promote biochar production as part of a solution for better forest health to beneficially use and reduce the surplus of deadwood fuel on forest floors to help fire wise communities and control wildfires. Conduct outreach and education of the benefits of biochar and compost use. Facilitate economic development and markets for biochar materials. Study and make recommendations regarding composting best management practices to maximize organic material resource use and reduction in greenhouse emissions from waste materials to reduce the impacts of climate change, wildfire smoke pollution, and health impacts.	Prevention	Agriculture	N/A	Protects, restores or improves natural systems
Ecology	Yakima River Basin Integrated Plan	Capital	057-1; 355-1	$2,000,000	$32,100,000	$30,000,000	$31,100,000	$40,000,000	$42,000,000	Goals: Projects and activities outlined in the plan's first phase are designed to quickly improve streamflow, habitat, and fish passage, and secure water for farms, cities, and industry, especially during times of drought and to respond to climate change. Eligibility Criteria: Includes Enhanced water conservation, Structural and operational changes, Fish passage, Habitat protection and enhancement, Water markets, Surface and groundwater storage. Evaluation Criteria: Directly Improves Water Resources - Supply and Quality, Species and habitats, Agriculture – production, pests, disease and soil health and Communities/built environment/public health and more indirectly improves Forest health and wildfires.	Community resilience	Water Resources	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors
EMD	Hazard Mitigation Assistance grant programs	Operating	Federal 001-2					$150,871,500*		Goals: FEMA Hazard Mitigation Assistance grant programs fund natural hazard risk reduction projects and planning initiatives to local jurisdictions and State agencies, EMD administers the programs with state and federal funds. Eligibility Criteria: 1) Pre-construction, design, and scoping, 2) Hazard mitigation planning, 3) Construction, 4) Land/property acquisition, 5) Other admin costs. Evaluation Criteria: 1) Cost effectiveness, 2) Projects must be associated with an identified hazard in a FEMA-approved hazard mitigation plan, 3) Projects must help the State achieve its mitigation goals as outlined in the State Enhanced Hazard Mitigation Plan. * Note: These amounts include total amounts, including State share, for the previous 10 years. However, due to the natural hazard focus of this program, not all of this funding was put toward climate hazards. To specify the amount spent only on climate hazards would require reviewing each grant funded over the past 10 years to determine if it had a climate component. It can be estimated that between 40-50% of the projects funded under this program are related to wildfire, flooding, extreme weather, or some other climate-related natural hazard. Additionally, this funding cannot be easily broken down by biennium because much of it occurs only after a disaster has been declared and does not follow budget or fiscal cycles. The State share comes from the DRA, which I believe is considered Operating.	Community resilience	Communities / built environment	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
EMD	Hazard Mitigation Assistance grant programs	Operating	001-1					$15,374,073*			Community resilience	Communities / built environment	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors
EMD	Hazard Mitigation Assistance grant programs	Operating	Local 001-7					$30,624,636*			Community resilience	Communities / built environment	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors
EMD	State Enhanced Hazard Mitigation Plan	Operating	Federal 001-2			$240,890				Goals: Identify the natural hazards present in WA State, assess our vulnerabilities to these hazards, and develop a State-level strategy for mitigating those hazards and reducing our vulnerabilities. This activity focuses on the risks and vulnerabilities to numerous natural hazards, which includes many climate-influenced events such as drought, wildfire, extreme weather, and flooding. Updates to the plan occur at 5-year intervals and are often partially funded with Federal grants (up to 75% of the cost). Eligibility Criteria: 1) Hazard identification and vulnerability analysis, 2) Stakeholder engagement, 3) Planning, 4) Other admin costs. Evaluation Criteria: As a planning-only activity, it does not fund other projects.	Community resilience	Communities / built environment	Facilitates resilience activities	N/A
EMD	State Enhanced Hazard Mitigation Plan	Operating	001-1			$80,296					Community resilience	Communities / built environment	Facilitates resilience activities	N/A
Parks	Agency Climate Adaptation Plan Development	Operating	269-1, 001-1	$0	$0	$72,922	$126,803	$0	$0	Goals: Develop agency-wide climate adaptation plan. The adaptation plan addresses multiple climate-related vulnerabilities, including siting and design of infrastructure, park access, water features, park visits/revenue, historic structures and archaeological sites, and natural resources and habitats. Eligibility Criteria: Identification of climate vulnerabilities and adaptation plan. Strategies for adapting to cross-cutting programmatic concerns.	Community resilience	Communities / built environment	Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors
Parks	Capital Construction Projects	Capital	057-1	$0	$0	$0	$0	$300,000	$16,423,515	Goals: Develop, repair, and move park infrastructure and facilities. Eligibility Criteria: Project to construct either new facilities or make significant, long-term renewal improvements to existing facilities. Evaluation Criteria: Parks' Ten-Year Capital Plan Guidance Tool, which includes: "Respond proactively to the effects of climate change." Climate change resiliency was not considered in design of most capital projects prior to 21-23.	Community resilience	Communities / built environment	Funds resilience projects	Protects, restores or improves natural systems
Parks	Forest Health	Operating	269-1, 001-1		$381,280	$683,470	$482,000	$636,632	$224,000	Goals: Fund forest health treatments on park land to decrease forest-replacement losses across undeveloped areas of the park system. Eligibility Criteria: Removing flammable vegetation, thinning out densely packed trees, restoring native vegetation. Evaluation Criteria: 1) Reduce wildfire risk in undeveloped, forested park landscapes, 2) Restore native plant communities.	Prevention	Forest health and wildfires	Integrates resilience programmatically	Protects, restores or improves natural systems
Parks	Forest Health	Capital	057-1	$0	$0	$0	$0	$350,000	$350,000		Prevention	Forest health and wildfires	Integrates resilience programmatically	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
PLIA	Commercial UST Loan & Grant Program	Capital	20T	$0	$0	$1,800,000	$5,730,000	$12,500,000	$0	Goals: Provide financial assistance to owners and operators of underground storage tanks (UST) to facilitate clean up and replacement projects. Eligibility Criteria: 1) Replace or upgrade aging fuel systems to prevent releases and dispense modern fuels, 2) Clean up historical or ongoing contamination caused by UST releases, 3) Transform old stations to adapt to changing transportation fuel market by installing alternative fueling infrastructure such as electric vehicle charging stations. Evaluation Criteria: Owners and operators must complete a program application which includes financial information for underwriting determinations. Preliminary Planning Assessments (PPAs) are conducted to characterize site cleanup needs and other construction needs for infrastructure upgrades.	Restoration	Communities / built environment	Integrates resilience programmatically	Protects, restores or improves natural systems
PLIA	Heating Oil Loan & Grant Program	Operating	20T	$0	$0	$66,119	$90,000	$989,000	$0	Goals: Offer low-interest loan and/or grant funding to heating oil tank owners to facilitate clean up and replacement projects. Eligibility Criteria: 1) Pay for assessment and cleanup of releases, 2) Upgrade, replace, or remove heating oil tank systems to prevent future releases, 3) Install new infrastructure. Evaluation Criteria: Heating Oil tank owners and operators must submit a completed application with limited financial information. Preliminary Planning Assessments (PPAs) are paid for through grant awards of up to $5,000, or $6,000 with enrollment in the Heating Oil Technical Assistance Program. PPAs collect data necessary to determine level of cleanup or construction work required. PLIA anticipates prioritizing applicant sites based on clean up and contamination need, and environmental justice concerns.	Restoration	Communities / built environment	Integrates resilience programmatically	Protects, restores or improves natural systems
PLIA	Heating Oil Loan & Grant Program	Capital	20T	$0	$0	$0	$0	$4,000,000	$0		Restoration	Communities / built environment	Integrates resilience programmatically	Protects, restores or improves natural systems
PSP	Develop and update the Puget Sound Action Agenda	Operating	001, 173, 02R	$0	$0	$3,657,000	$2,482,000	$0	$0	Goals: The Action Agenda is an ecosystem recovery plan that charts the course for Puget Sound recovery. The plan is regularly updated and describes priority outcomes, strategies, actions necessary to advance and accelerate progress toward statutorily mandated Puget Sound recovery goals. As an ecosystem recovery plan, the Action Agenda focuses on both protection and restoration and on water quality, habitats, species, water quantity, and more. The Action Agenda does not focus primarily on climate change, but changing climate and ocean conditions are integrated into planning so that we understand how climate change effects Puget Sound and are able to avoid or reduce risks from climate change. Eligibility Criteria: Actions that will advance Puget Sound recovery and are aligned with recovery strategies are eligible for inclusion in the Action Agenda. These actions may receive federal funding or funding by other programs (state, local, private). Evaluation Criteria: 1) Contribution to recovery, 2) Alignment with recovery strategies, 3) Likelihood of success (technical), 4) Likelihood of success (human).	Prevention	Species and habitats	Integrates resilience programmatically	Reduces other environmental stressors

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
PSP	Puget Sound Acquisition and Restoration Fund	Capital		$15,000,000	$70,000,000	$37,000,000	$40,000,000	$49,500,000	$69,900,000	Goals: The Puget Sound Acquisition and Restoration fund supports projects that support salmon recovery in Puget Sound. Grants are invested in priority habitat restoration and protection projects that bring back Puget Sound's natural systems for salmon, people, and community. Eligibility Criteria: Eligible activities include restoration and acquisition projects, and activities directly supporting implementing capital projects. Evaluation Criteria: 1) Benefit to salmon, 2) Link to Puget Sound Action Agenda, 3) Climate Change Considerations, 4) Project Readiness, 5) Match Funding. Note: The PSAR program is funded in the Recreation and Conservation Office capital budget and the PSAR grant program is administered by RCO.	Restoration	Species and habitats	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems
PSP	Puget Sound Ecosystem Monitoring Program	Operating	001-1; 23P-1; 02R-1	$420,000	$420,000	$420,000	$420,000	$866,000	$866,000	Goals: The Partnership facilitates and supports the Puget Sound Ecosystem Monitoring Program, which is a collaborative network of researchers who study and communicate about Puget Sound ecosystem status and trends and effectiveness of recovery actions to decision-makers, scientists, and the public. Program objectives of science coordination, communication, and adaptive management are supported by coordinators and investments in PSEMP products. Eligibility Criteria: Coordination of PSEMP work groups, commissioning of PSEMP products. Evaluation Criteria: Priorities for work group support and PSEMP products identified biennially based on cross-sector advice of the PSEMP Steering Committee.	Restoration	Species and habitats	Facilitates resilience activities	Protects, restores or improves natural systems
PSP	Puget Sound Ecosystem Monitoring Program	Operating	Federal 001-2	$724,000	$724,000	$724,000	$724,000	$724,000	$724,000		Restoration	Species and habitats	Facilitates resilience activities	Protects, restores or improves natural systems
PSP	Science Work Plan and Puget Sound Scientific Research	Operating	001-1	$0	$0	$0	$0	$2,222,000	$2,222,000	Goals: The Partnership's Science Panel prepares a science work plan every four years and, beginning in 2019-2021, oversees competitive, peer-reviewed award of funds for investigations to implement the science work plan. Eligibility Criteria: Development of science work plan, development and oversight of competitive, peer-reviewed selection of awards, scientific investigations to implement the science work plan. Evaluation Criteria: Priorities identified in the science work plan (e.g., 2020-2024 SWP) and specific criteria of scientific research investigations developed and published in RFP (e.g., in early 2021 and early 2023).	Restoration	Species and habitats	Funds resilience projects; Facilitates resilience activities	Protects, restores or improves natural systems
PSP	Update the Puget Sound Salmon Recovery Plan	Operating	001; 23104; 540B	$0	$0	$0	$0	$500,000	$0	Goals: RCW 77.85.090 designates the Puget Sound Partnership's Leadership Council as the regional salmon recovery organization for Puget Sound salmon species, excluding Hood Canal summer chum. The Leadership Council's primary role as the Puget Sound regional recovery organization, as well as the Partnership's role as the staffing organization for the Leadership Council, is to implement and adaptively manage the Puget Sound Salmon Recovery Plan. The Recovery Plan is intended to guide federal, state, local, and tribal investments in Puget Sound salmon recovery and should be updated every 10 years. The Salmon Recovery Plan does not focus primarily on climate change, but changing climate and ocean conditions and associated impacts are integrated into planning and project development so that we are able to avoid or reduce risks from climate change and increase salmon species' resilience. Eligibility Criteria: Updates to local watershed salmon recovery chapters/strategies and the regional salmon recovery chapter (which all make up the Puget Sound Salmon Recovery Plan) are eligible activities	Prevention	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
										under this program goal. Currently this proviso funding is supporting 3 watersheds in updating their recovery chapters/strategies and the Partnership in updating the regional chapter of the salmon recovery plan.				
RCO	Aquatic Lands Enhancement Account	Capital		$0	$0	$5,269,000	$12,285,000	$6,600,000	$9,100,000	Eligibility Criteria: Acquisition and restoration of lands adjacent to navigable waters of the state. Evaluation Criteria: 1) Property acquisition, 2) Design and construction, 3) Habitat restoration.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems
RCO	Estuary and Salmon Restoration	Capital		$0	$0	$8,000,000	$8,000,000	$10,000,000	$20,000,000	Eligibility Criteria: To ensure Washington's estuaries, bays, and shorelines are intact, functioning, and resilient to climate change. Evaluation Criteria: 1) Property acquisition, 2) Design, 3) Feasibility studies, 4) Habitat restoration.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems
RCO	Puget Sound Acquisition and Restoration	Capital		$0	$0	$37,000,000	$40,000,000	$49,507,000	$69,900,000	Eligibility Criteria: Acquisition and restoration of lands to support the health of Puget Sound. Evaluation Criteria: 1) Property acquisition, 2) Design and construction, 3) Habitat restoration.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems
RCO	Salmon Recovery	Capital		$0	$0	$16,500,000	$16,500,000	$25,000,000	$80,000,000	Eligibility Criteria: Acquisition and restoration of lands to support salmon recovery. Evaluation Criteria: 1) Property acquisition, 2) Design and construction, 3) Habitat restoration.	Prevention	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems
RCO	Washington Coast Restoration and Resiliency Initiative	Capital		$0	$0	$11,185,000	$12,500,000	$12,086,000	$15,000,000	Eligibility Criteria: Acquisition and restoration of lands near or adjacent to the Washington Coast. Evaluation Criteria: 1) Property acquisition, 2) Design and construction, 3) Habitat restoration.	Restoration	Flooding, sea-level-rise, etc.	Funds resilience projects	Protects, restores or improves natural systems
RCO	Washington Wildlife and Recreation Program	Capital		$0	$0	$93,719,000	$80,000,000	$85,000,000	$140,000,000	Eligibility Criteria: Acquisition and restoration of wildlife habitat and acquisition and development of outdoor recreation sites and facilities. Evaluation Criteria: 1) Property acquisition, 2) Design and construction, 3) Habitat restoration.	Prevention	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems
SCC	Conservation Reserve Enhancement Program	Capital	057-1	$3,277,000	$4,821,000	$4,831,000	$4,900,000	$3,700,000	$7,500,000	Goals: Increase riparian habitat on agricultural land by compensating farmers for voluntarily planting native trees and shrubs along salmon-bearing streams, rather than crops. Eligibility Criteria: 1) Project specific outreach and education 2) Site feasibility and planning 3) Riparian restoration, planting 4) Maintenance 5) Other Admin Costs. Evaluation Criteria: Ownership/operation of land at least 12 months before enrollment, cropland or marginal pastureland capable of supporting riparian buffer, property borders eligible, salmon-bearing stream segments.	Restoration	Species and habitats	Funds resilience projects	Enhances carbon sequestration
SCC	Conservation District Operations	Operating	001-1	$3,561,000	$3,802,005	$3,802,005	$3,802,005	$3,802,005	N/A	Goals: Unrestricted funds to support all 45 Conservation District operations. Many of the CDs use a portion of implementation funds to provide education, outreach, technical assistance, and cost-share for practices that contribute to climate resiliency. Eligibility Criteria: 1) Education and Outreach 2) Technical Assistance 3) BMP Implementation. Evaluation Criteria: Each of the 45 Conservation Districts determine best use of implementation funds to support their operations/programs. Districts must be in compliance with legal accountability requirements in the Conservation Accountability and Performance Program when receiving funds from the SCC.	Restoration	Agriculture	Facilitates resilience activities	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
SCC	Irrigation Efficiencies Program	Capital	057-1	$5,047,362	$3,800,000	$2,020,000	$6,260,000	$0	$4,000,000	Goals: Restore instream flows in rivers and streams determined to not have enough water for fish populations and other competing needs by improving on-farm water application. Eligibility Criteria: 1) Pre-Project Assessment, 2) Feasibility and Design, 3) Project Development, 4) Installation, 5) Irrigation Management Plans, 6) Post-Project Assessment, 7) Other Admin Costs. Evaluation Criteria: Projects must meet eligibility guidelines (https://assets.website-files.com/5ec2d4f7da309c68cdc0655a/5f30e84ea163487e962045bc_IEGP16_Eligibility.pdf).	Restoration	Water Resources	Funds resilience projects	Protects, restores or improves natural systems
SCC	Natural Resource Investments Program	Capital	057-1	$0	$4,500,000	$4,000,000	$4,000,000	$4,000,000	$11,905,000	Goals: Cost-share program through which private landowners voluntarily work with conservation districts to develop and implement best management practices that address natural resource problems. Eligibility Criteria: 1) Site Assessment, 2) Feasibility and Design, 3) Installation, 4) Other Admin Costs. Evaluation Criteria: Projects are prioritized by each Conservation District.	Restoration	Water Resources	Funds resilience projects	Protects, restores or improves natural systems
SCC	Shellfish Area Improvement Program	Capital	057-1	$0	$4,500,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	Goals: Cost-share program that helps landowners work with their conservation districts to install best management practices on their properties to prevent pollution from flowing into shellfish growing areas, improve shellfish beds, and occasionally mitigate effects of sea-level rising in coastal areas. Eligibility Criteria: 1) Site Assessment, 2) Feasibility and Design, 3) Installation, 4) Other Admin Costs. Evaluation Criteria: Eligible projects must occur in a watershed that has a shellfish growing area or in watersheds with a resource concern of ocean acidification. Projects occurring in close proximity to other funded projects in targeted geographic areas.	Restoration	Water Resources	Funds resilience projects	Protects, restores or improves natural systems
SCC	Sustainable Farms & Fields	Operating	001-1	$0	$0	$0	$0	$99,000	N/A	Goals: In development: Support Washington's climate change goals while increasing carbon sequestration and reducing GHG emissions on agricultural land. Eligibility Criteria: 1) Project Specific Outreach and Education, 2) Carbon Farm Plan Development, 3) Implementation of carbon-sequestration and GHG emissions reduction BMPs, 4) Efficacy Verification. Evaluation Criteria: In development but projects will be prioritized based on: ability to increase carbon in topsoil or aquatic soils, integrate trees, shrubs, seaweed and other vegetation on agricultural/aquacultural lands, reduce CO2, nitrous oxide, and methane emissions, increase precision agricultural practices. Projects that create riparian buffers or improved fish habitats will receive enhanced prioritization. Projects that cause significant environmental damage will be downgraded.	Restoration	Agriculture	Funds resilience projects	Enhances carbon sequestration
SCC	TA Grants (Salmon/Orca TA for 19-21)	Operating	001-1	$0	$0	$0	$0	$1,000,000	$5,000,000	Goals: Increase landowner participation in voluntary actions that protect habitat to benefit salmon and southern resident orcas. Eligibility Criteria: 1) Education and Outreach, 2) Technical Assistance, 3) BMP Implementation. Evaluation Criteria: Each of the 45 Conservation Districts determine the best use of these funds to increase landowner participation in voluntary actions to protect habitat to benefit salmon and orcas.	Restoration	Species and habitats	Facilitates resilience activities	Protects, restores or improves natural systems
SCC	Voluntary Stewardship Program	Capital	058-1	$0	$1,000,000	$7,600,000	$7,619,000	$8,456,000	$8,462,000	Goals: Watershed-based, incentive-based process to protect critical areas, promote viable agriculture, and encourage cooperation among diverse stakeholders to address the state's Growth Management Act. Eligibility Criteria: 1) Education and Outreach, 2) Plan Development, 3) Technical Assistance, 4) BMP Implementation, 5) Monitoring, 6) Reporting. Evaluation Criteria: Goals and objectives set by each County in its VSP Plan.	Restoration	Agriculture	Facilitates resilience activities	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
UW Climate Impacts Group	Greenhouse gases legislation support	Operating	001-1	$127,564	$127,536	$127,536	$131,234	$136,150	$136,150	Goals: Support climate resilience efforts by state agencies and enhance the state's role as a leader in climate resilience. Eligibility Criteria: 1) Technical assistance for state agencies, 2) Evaluation of projects and plans that advance climate resilience, 3) Climate science information needs to support policy. Evaluation Criteria: 1) Addresses the greatest climate risks for state agencies, 2) Contributes to the most important research and information needs, 3) Addresses knowledge and data gaps that are limiting progress, 4) Embeds climate science into current decisions with long-term consequences for resilience.	Community resilience	Communities / built environment	Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors
UW Climate Impacts Group	Climate Science Proviso	Operating	001-1	$0	$0	$400,000	$400,000	$800,000	$800,000	Goals: Funding is added to conduct data modeling and provide technical assistance on climate impact analysis to Washington communities, businesses, and governments. Eligibility Criteria: 1) Climate science and resilience synthesis reports, 2) Climate and impacts research and modeling, 3) Technical assistance for local community and government resilience planning, 4) Evaluation of projects and programs for climate resilience, 5) Outreach and education on impacts and resilience planning. Evaluation Criteria: 1) Benefits multiple communities and sectors, 2) Leverages other federal, regional or local funding and efforts to support community resilience, 3) Addresses the state's greatest climate risks, 4) Contributes to the most important research and information needs, 5) Addresses knowledge and data gaps that are limiting progress, 6) Embeds climate science into current decisions with long-term consequences for resilience.	Community resilience	Communities / built environment	Facilitates resilience activities	Protects, restores or improves natural systems; Reduces other environmental stressors
UW Climate Impacts Group	Clean Energy Transformation Proviso	Operating	001-1	$0	$0	$0	$0	$63,000		Goals: Assist with climate impacts information needs to support implementation of the Clean Energy Transformation Act. Eligibility Criteria: Support DOH and UW DEOHS in adding climate change information to DOH's Cumulative Impact Analysis tool.	Community resilience	Communities / built environment	Facilitates resilience activities	Reduces other environmental stressors
WDFW	Brian Abbott Fish Barrier Removal Board	Capital					$19,747,000	$24,730,000	$65,664,932	Goals: The Brian Abbott Fish Barrier Removal Board aids restoration of healthy and harvestable levels of salmon and steelhead statewide through the coordinated and strategic removal of barriers to fish passage. Fish passage projects increase the resiliency of human infrastructure to anticipated impacts from climate change, for example increases in peak flood flows. These projects enable flood waters to move more freely and reduce the risk of over bank flooding. Removal of fish passage barriers are needed under current climate conditions and become even more urgent as future changes increase the intensity and scale of impacts. Eligibility Criteria: 1) Design, 2) Design and Construction, 3) Construction, 4) Program Admin (including ranking and reviewing projects). Evaluation Criteria: 1) Habitat Gain, 2) Species Presence and Benefits, 3) Habitat Quality, 4) Project Readiness, 5) Cost Effectiveness, 6) Priority Watershed, 7) Coordination with Other Projects.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors
WDFW	Chehalis Basin Aquatic Species Restoration Plan - Celina Abercrombie	Capital					$397,200	$445,000		Goals: Landowner outreach and technical assistance for ASRP and flood damage reduction efforts in the Chehalis Basin. Eligibility Criteria: Feasibility, Design, Community engagement and outreach. Evaluation Criteria: Landowner/community engagement experience.	Restoration	Species and habitats	Facilitates resilience activities	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
WDFW	Chehalis Basin Aquatic Species Restoration Plan - Celina Abercrombie	Capital						$725,000		Goals: Restoration effectiveness projects to inform future project design activities in the Chehalis Basin. These projects will inform restoration actions that may generate the highest rate of success for different outcomes and how to adapt future work to optimize success of restoration treatments. Eligibility Criteria: Research and studies, Feasibility, Design, Construction, Aquatic restoration, Riparian restoration, Invasive species management, Project maintenance and monitoring. Evaluation Criteria: Life history benefits, Species, Process-based restoration, Immediate priorities, High priority areas, High priority actions, Benefits of project actions, Synergy with other actions, Science-based approach, Project readiness.	Restoration	Species and habitats	Funds resilience projects; Facilitates resilience activities	Protects, restores or improves natural systems
WDFW	Forest health and fuels management	Capital		$0	$0	$800,000	$5,000,000	$1,500,000	$6,000,000	Goals: Restore forests on WDFW owned lands that are overstocked with non-resilient species and excessive fuels, in order to improve forest system health and protect human health and safety from wildfire and associated smoke. This program is not a grant program to external entities but funds activities to make WDFW lands more resilient. Eligibility Criteria: 1) Forest inventory, 2) Project planning, 3) Commercial and Pre-commercial thinning, 4) Fuel break development and maintenance, 5) Fuels piling and burning, 6) Prescribed burning, 7) Planting of resilient tree species, 8) Administrative costs. Evaluation Criteria: 1) Ecological restoration and/or preservation, 2) Improve wildlife habitat, 3) Reduce wildfire risk to nearby communities, 4) Reduce wildfire intensity/impacts in forests, 5) Reduce insect and disease damage, 6) Preserve stream flows. These criteria follow the guidance in 20-year Forest Health Plan for Eastern Washington.	Restoration	Forest health and wildfires	Funds resilience projects	Protects, restores or improves natural systems
WDFW	Puget Sound Estuary and Salmon Restoration Program	Capital	057-1	$5,000,000	$10,000,000	$8,000,000	$8,000,000	$10,000,000	$20,000,000	Goals: Restore Puget Sound shoreline "natural processes" like sediment delivery, hydrologic function, and intertidal and floodplain habitats. ESRP strategically applies our science-based investment plans to targeted nearshore areas for restoration. Primary outcomes are Chinook salmon, forage fish, eelgrass, shellfish, and other nearshore-dependent fisheries and habitats. Eligibility Criteria: 1) Pre-Construction, 2) Feasibility and Design, 3) Construction, 4) Design and Construction, 5) Land Purchase, 6) Project Specific Outreach, 7) Riparian/wetland restoration, planting, 8) Pre and Post Project assessment, 9) Other Admin Costs. Evaluation Criteria: 1) Large effect on shoreline processes, 2) Will the site be resilient to future degradation, 3) Do the surrounding conditions support the project, 4) Does it provide ecosystem services that benefit society, 5) Are the techniques reliable and likely to have the desired outcomes, 6) Identified strategy for addressing or resolving uncertainty around the project, 7) Is the project designed to be resilient to climate change and/or does it promote ecosystem resilience in the face of climate change, 8) Is the project ready to go, 9) Are actions cost appropriate for the site, 10) Are the actions cost effective, 11) Is there a clear and understandable budget, 12) Are there social benefits, 13) Are there the appropriate level of stakeholders and partners involved.	Restoration	Species and habitats	Funds resilience projects	Protects, restores or improves natural systems; Reduces other environmental stressors; Enhances carbon sequestration
WDFW	Puget Sound Nearshore Ecosystem Restoration Project	Capital					$500,000	$3,024,000	$59,500,000	Goals: To restore natural physiographic processes in the nearshore zone that sustain the Puget Sound nearshore ecosystem and associated diverse nationally and regionally significant biologic, economic, and aesthetic resources. Eligibility Criteria: 1) Construction, 2) Design and Construction, 3) Land Purchase, 4) Project Specific Outreach and education, 5) Riparian/wetland restoration, planting, 6) Resilient Infrastructure, 7) Fish Passage, 8) Pre and Post Project assessment, 9) Other Admin Costs. Evaluation Criteria: 1) Project readiness 2) Fit to federal (Corps) programs.	Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
WDFW	Puget Sound Nearshore Ecosystem Restoration Project	Operating		$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	Goals: To restore natural physiographic processes in the nearshore zone that sustain the Puget Sound nearshore ecosystem and associated diverse nationally and regionally significant biologic, economic, and aesthetic resources. Eligibility Criteria: 1) Study and Evaluation, 2) Feasibility and Design, 3) Pre-Construction. Evaluation Criteria: 1) Fit of action(s) proposed to impairment of a site (i.e., "right action, right place" analysis), 2) Cost-Benefit analysis, 3) Technical feasibility, 4) Readiness-to-proceed.	Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems
WSDA	Agriculture and Water Supply Modeling	Operating	296-1					$398,680		Goals: Develop a modeling tool for agricultural production and water supply in Eastern WA to provide estimates of economic impacts to agriculture from changes in water availability and crop production and prices.	Community resilience	Agriculture	Facilitates resilience activities	N/A
WSDA	Soil Health Initiative	Operating	001-1					$174,000		Goals: Improve agricultural viability, nutrition, and environmental function across Washington's diverse agricultural systems.	Community resilience	Agriculture	Integrates resilience programmatically	Protects, restores or improves natural systems; Enhances carbon sequestration
WSDA	Sustainable Farms and Fields Grant Program	Operating	001-1					$97,820		Goals: Incentivize farmers, ranchers, and aquaculturists to adopt sustainable practices to sequester carbon, reduce emissions, and enhance soil health.	Community resilience	Agriculture	Funds resilience projects; Integrates resilience programmatically	Protects, restores or improves natural systems; Enhances carbon sequestration
WSDA	Voluntary Stewardship Program	Operating	Local 058-7			$150,000	$200,000	$200,000		Goals: An incentive-based program that offers counties and agricultural landowners farm friendly options for protecting critical areas in places where agricultural activity is conducted.	Community resilience	Agriculture	Integrates resilience programmatically	Protects, restores or improves natural systems
WSDOT	Chronic Environmental Deficiencies	Transportation	108; 09H; 550	$6,589,000	$13,645,000	$14,767,000	$7,917,000	$5,145,000	$2,030,000	Goals: To evaluate sites along state highways where chronic bank erosion requires frequent maintenance due to dynamic river or coastal forces. To reduce repair of infrastructure and implement proactive, long-term solutions that reduce impacts on fish and fish habitat while also addressing transportation needs. Eligibility Criteria: 1) Pre-Construction, 2) Feasibility and Design, 3) Construction, 4) Land Purchase, 5) Project Specific Outreach and education, 6) Riparian/wetland restoration, planting, 7) Pre and Post Project assessment, 8) Other Admin Costs. Evaluation Criteria: Sites are prioritized and coordinated with internal and external partners to ensure that immediate threats are addressed first, and opportunities for cost savings are identified. Prioritization criteria include: 1) infrastructure risk, 2) infrastructure impact (asset damage, safety, delays to traveling public), 3) project benefits for fish and fish habitat, 4) maintenance burden (occasional, low cost vs frequent, high cost), and 5) stakeholder interest.	Community resilience	Communities / built environment	Integrates resilience programmatically	Reduces other environmental stressors; Protects, restores or improves natural systems

				Funding					Budget Request	Program/Activity/Project Description	Climate Resiliency Detail			
Agency Name	Program Name	Budget	Account(s)	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	Program Goals, Eligible Activities/Projects, Evaluation/Funding Criteria	Primary Activity Focus	Primary Risk Addressed	Activity Type(s)	Other Climate Benefit(s)
WSDOT	Fish Passage Program	Transportation	108; 20H; 09H	$22,623,000	$25,634,000	$67,960,000	$93,855,000	$275,000,000	$726,385,000	Goals: To ensure highway culverts are fish passable and provide access to spawning and rearing habitat. To identify and correct barriers, and to monitor and maintain corrected fish passages to ensure they remain passable over time. To support the state's salmon recovery efforts and comply with 2013 Culvert Injunction. Eligibility Criteria: 1) Pre-Construction, 2) Feasibility and Design, 3) Construction, 4) Land Purchase, 5) Project Specific Outreach and education, 6) Riparian/wetland restoration, planting, 7) Pre and Post Project assessment, 8) Other Admin Costs. Evaluation Criteria: 1) Habitat Gain as determined in collaboration with WDFW and Tribes, 2) Partnership opportunities, 3) Culvert condition, 4) Downstream Barriers, 5) Geographic Bundling to promote efficiencies.	Restoration	Species and habitats	Integrates resilience programmatically	Protects, restores or improves natural systems; Reduces other environmental stressors

* Unavailable: funding exists for the program or activity in the indicated biennium but the amount was unavailable from the specific agency.