

Protecting Washington's Economy, Communities and Environment from Global Warming

Global warming is already affecting Washington, and will continue to do so for decades to come. A successful comprehensive climate and energy bill will invest significant new revenue in protecting communities and local economies across America by creating jobs that protect wildlife and landscapes from the effects of global warming. The American Clean Energy and Security Act takes a critical first step, however, given the scale and duration of the threat, more funding will be needed.

Critical Issues for Washington:

- Decreasing water availability
- Damage to the local economy
- Increasing temperatures
- Decline in salmon habitat

Is Global Warming Affecting Natural Resources in Washington?

Yes. Washington is warming. Since mid-century, temperatures across the state have **risen approximately 1.7°F**,¹ and **are expected to rise an additional 5°F by 2050**.² These changes are significant, and the impacts are already being felt.

Across the U.S., more than 80% of plant and animal species studied are shifting their ranges in reaction to less than 1°F of warming in the last century.³ The Intergovernmental Panel on Climate Change predicts warming could result in **up to 30% of known species becoming extinct**, and the disappearance of more than one-fifth of the world's ecosystems.⁴

Washington is receiving less snow throughout the fall and winter, which results in less water in the spring and even less water available in critical late summer months for agriculture, forest fire prevention, and ecosystem health. In the Cascades, early spring runoff is predicted to **decline by as much as 28% by the 2020s, and up to 40% as early as the 2040s**.⁵

Puget Sound, too, will be affected by rising temperatures and is predicted to see sea levels rise by **around 13 inches—**with the possibility of **up to 50 inches by the end of the century**.⁶

Natural Resources Adaptation Funding Will:

- Create and protect jobs
- Preserve treasured landscapes
- Revive the rural economy
- Provide clean air and water for future generations



Protecting Washington's natural areas, such as Mt. Rainier and the Cascade Range—and the valuable services they provide—from the effects of global warming will safeguard communities across the state.

What is at Stake?

Changes brought on by global warming are disrupting the balance of natural resources and having significant impacts on communities and businesses across the state.

- **Water Availability:** As snowpack declines across the Cascades, the need for drinking water, irrigating crops, and generating electricity will be placed increasingly in competition with each other. Hydropower production will likely vary seasonally, but the most critical decline in generation is predicted to occur in summer months—up to 11% by 2020 and 16% by 2040—when air conditioning, drinking water, agricultural, and fire fighting demands are at their highest.⁷
- **Natural Resources:** As a result of changing climates, average stream temperatures are expected to rise across the state, wreaking havoc on the state's already critically stressed salmon population. As temperatures rise, salmon habitat will significantly degrade, causing up to \$531 million a year in economic losses by 2020, and up to \$1.4 billion per year by 2040.⁸ The state's forests will be affected as well. Mountain pine beetle, which has already destroyed 33 million acres in British Columbia, is predicted to begin impacting forests throughout the Northwest, affecting the many benefits these forests provide.⁹
- **Local Businesses:** Washington's outdoor recreation industry, which generates \$11.7 billion a year,¹⁰ is dependent on healthy ecosystems. Businesses that support fishing, rafting, and camping are being threatened by the effects of global warming which, if left unchecked, could cost Washington up to \$75 million a year by 2020 and \$210 million by 2040 in lost recreation opportunities.¹¹
- **Cost to Washington State Families:** Conservative estimates place the state's potential economic losses due to global warming at nearly \$3.2 billion per year by 2020 – rising up to as much as \$6.5 billion in 2040. Each Washington State family will pay an estimated \$1,250 per year by 2020, and almost \$2,000 a year by 2040.¹²



Increased funding is needed to protect Washington State's important natural and cultural resources, such as salmon, from the effects of a warming world.

Economy at Risk:
\$11.7 Billion
Annual contribution of outdoor recreation to Washington's economy

Protecting Natural Resources, Creating Jobs

Restoring ecosystem health helps ensure species have the best possible chance to adapt to the effects of global warming. Human communities rely on maintaining the viability of these natural systems of water and air filtration. Ecosystem adaptation projects, such as establishing wildlife corridors for animals migrating in search of needed habitat, are critical to the survival of many species and will create long-term American jobs. **Investing now in natural resources is the most cost-effective way to protect our treasured landscapes and the clean water, clean air and jobs they provide.**

Of the total allowance value generated from an energy and climate bill, at least 5% should be invested in protecting communities and local economies across America by safeguarding natural resources from the effects of global warming. This funding will allow Washington's wildlife and land management agencies, as well as the Land and Water Conservation Fund and the Forest Legacy Program, to ramp up important conservation projects.

This dedicated funding will allow scientists, engineers, construction crews, and others to be employed across Washington:

- Repairing damaged watersheds to ensure clean water for communities by removing impediments and deteriorating structures, restoring eroding river banks, and repairing in-stream habitat.
- Acquiring land and establishing migration corridors to increase species' survival as climates change.
- Monitoring wildlife, habitat and local climate and developing appropriate adaptation responses.
- Restoring native landscapes to increase resiliency in a warming world by removing unnecessary roads and barriers, constructing buffer strips along river corridors, and removing invasive species.

This work will protect and create American jobs—providing new skills and income to workers and their families across the state and revitalize rural economies.



Restoring river habitats protects ecosystems, jobs, and drinking water

Investing in Solutions for Families, Businesses and the Planet

The risks to Washington and the nation from global warming are significant—and require an extensive and sustained commitment to reducing heat-trapping pollution, and to protecting our natural resources and the communities that rely on them. A cap-and-invest system that reduces pollution and auctions emission allowances will provide billions of dollars for combating the climate crisis.

Revenues from a cap-and-invest system must be directed to three primary solutions:

- **Invest at least 5% of the total allowance value generated in annual dedicated funding for natural resource protection** in order to create jobs while increasing resiliency across landscapes, protecting important natural services and safeguarding communities.
- **Offset increased energy costs for at-risk consumers** by allocating a percentage of allowance auction revenues to consumers through existing mechanisms.¹³
- **Invest in areas such as clean energy choices, job training, and business assistance**, which will aid businesses and communities in transitioning to a clean energy economy, while creating jobs and reducing heat-trapping pollution.

Washington State and the nation need your support for reducing carbon pollution and protecting communities by safeguarding our natural resources.

For more information, please contact:

David Moulton – Director, Climate Change Policy (202) 429-2681

JP Leous – Climate Change Policy Advisor (202) 429-2676

Text Box Citation: Outdoor Industry Association. 2007. "State by State Active Outdoor Recreation Economy Report." Available from: http://www.outdoorindustry.org/research.php?action=detail&research_id=52

Photo Credits: Thanks to the Wilderness Society for the picture of Mt. Rainier, the National Park Service for providing the picture of the salmon, and the State of Massachusetts for the picture of river restoration.

¹ NOAA National Climatic Data Center. 2009. "U.S. Climate at a Glance – Statewide." Available from: <http://www.ncdc.noaa.gov/oa/climate/research/cag3/state.html>

² The University of Washington and The Nature Conservancy. 2009. Climate Wizard. Available from: <http://www.climatewizard.org/index.html>

³ Sagarin, Raphael. 2002. "Historical Studies of Species' Responses to Climate Change." In: *Wildlife Responses to Climate Change: North American Case Studies*. Ed: Terry L. Root and Stephen H. Schneider. Island Press. Washington, DC.

⁴ Intergovernmental Panel on Climate Change. 2007. "Summary for Policy Makers." In: *Climate Change 2007: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Pg 792.

⁵ The Climate Impacts Group. 2009. "The Washington Climate Change Impacts Assessment. Evaluating Washington's Future in A Changing Climate. Executive Summary." University of Washington. Available from: <http://cses.washington.edu/db/pdf/wacciaexecsummary638lowres.pdf>

⁶ United States Global Change Research Program. 2009. "Global Climate Change Impacts in the United States. Northwest Region." Available from: <http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts>

⁷ The Climate Impacts Group. 2009.

⁸ The Climate Impacts Group. 2009; and University of Oregon. 2009. "An Overview of Potential Economic Costs to Washington of a Business-As-Usual Approach to Climate Change." Institute for a Sustainable Environment. Available from: http://www.ecy.wa.gov/climatechange/docs/021609_ClimateEconomicsImpactsReport.pdf

⁹ United States Global Change Research Program. 2009.

¹⁰ Outdoor Industry Association. 2007.

¹¹ University of Oregon. 2009.

¹² Ibid.

¹³ Stone, Chad and Hannah Shaw. 2009. "Extending "Climate Rebates" to Include Middle-Income Consumers." *Center on Budget and Policy Priorities*.