

Responding to Changing Climate

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Costly Climate-Related Challenges



- Less water for hydropower, irrigation and people
- Increased floods
- More wildfires
- Increased insect and disease outbreaks
- Loss of agriculture production
- More air pollution and heat related deaths
- Ecosystem and species declines
- Infrastructure damage
- Land loss, erosion and landslides from sea level rise
- Marine food web destruction from ocean acidification



Climate Change and the Washington Economy



- All sectors of the economy affected.
- Economic impacts unevenly distributed.
- Places major stress on public sector budgets.
- Total annual economic cost in 2020: \$10 billion or \$3200 per household

Potential Economic Costs in Washington

*“costs of doing nothing”
(million dollars per year)*

	2020	2040
Lost Natural Water Storage	\$7,150	\$11,100
Increased health-related costs	\$1,300	\$2,200
Reduced salmon populations	\$531	\$1,400
Increased energy costs (reduced hydro supply, higher energy demand)	\$222	\$623
Increased wildland fire costs	\$102	\$208
Lost recreation opportunities	\$75	\$210
Increased coastal and storm damage	\$72	\$150
Reduced food production	\$35	\$64
Impacts to Forestry of Beetle Kill	\$31	\$28.7
Total increased costs	\$9,500	\$15,900

By 2020 total cost expected to reach \$3,166 per household each year

Source: University of Oregon, Climate Leadership Initiative

Responding to the Challenge

Washington State Integrated Climate Response Strategy

http://www.ecy.wa.gov/climatechange/ipa_responsestrategy.htm

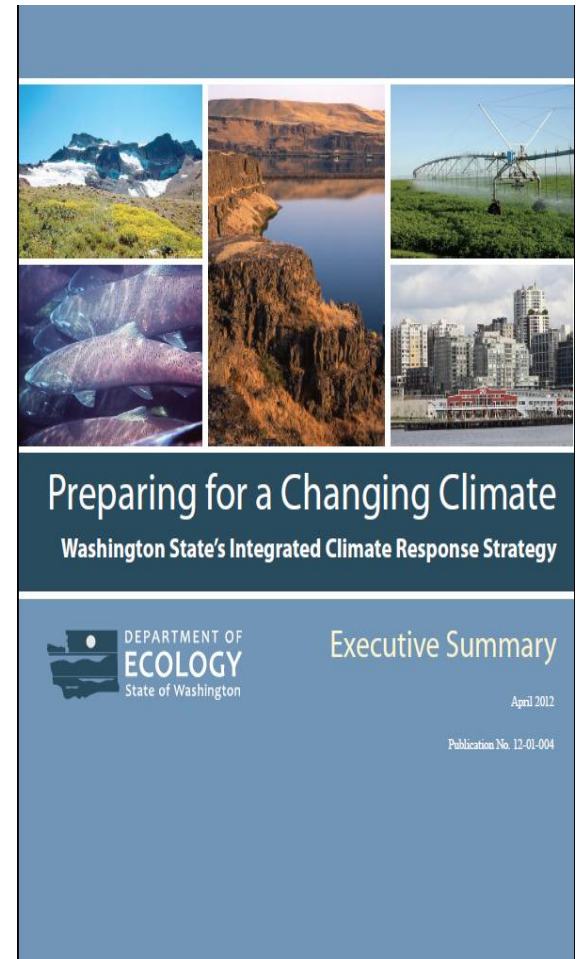
- Adaptation is essential to sustain the state's human and natural systems and economy.
- Sets framework to protect communities, natural resources and economy.
- Provides assessment of impacts and vulnerability with further efforts underway.
- Concludes that economic cost of inaction is untenable.
- Identifies priorities and response strategies



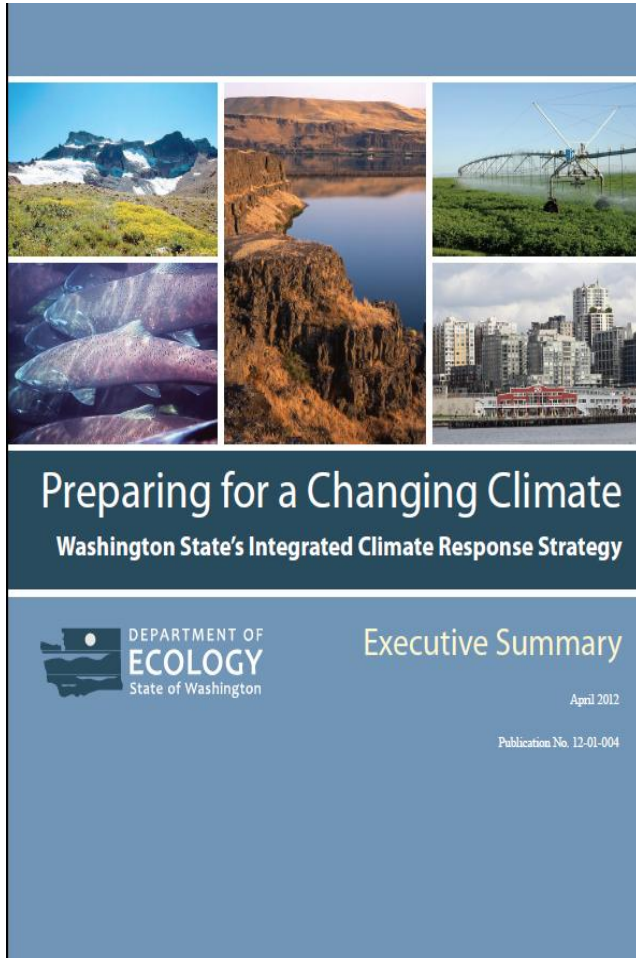
Integrated Climate Change Response Strategy

- Climate risks and priority strategies
- Observed and projected change in climate
- Human Health
- Ecosystems, species, and habitats
- Ocean and Coastlines
- Water Resources
- Agriculture
- Forests
- Infrastructure and the Built Environment
- Research and Monitoring
- Climate Communication, Public Awareness, and Engagement

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Key Priorities



- Protect people, communities and natural systems:
 - Protect vulnerable communities from heat, diseases and injuries.
 - Reduce risks of damage to coastlines, buildings and infrastructure.
 - Safeguard fish, wildlife, habitats and ecosystems.
 - Improve water supply.
 - Reduce risk of fires, pests and diseases to agriculture and forestry.
- Support the efforts of local governments and communities
- Improve our scientific knowledge and engage our citizens

Example of Key Strategies



- Make climate adaptation a standard part of agency decision making efforts.
- Design policies that reduce climate-related risks and build resilience to climate impacts.
- Consider climate risks in site selection, design, and construction of state-funded capital projects.
- Guide future development away from areas at high risks.
- Protect and restore ecosystem function and services at risk from climate change.
- Enhance capacity to prepare and respond to increasingly extreme events.
- Improve our knowledge and engage the public.