

Washington's Integrated Plan is Creating Partnerships and Diversifying Funding for Climate Adaptation

Overview

Washington State's *Integrated Climate Response Strategy* provides a roadmap for State and local policymakers and planners to manage water resources and prepare for unprecedented ecosystem changes caused by climate change. The *Strategy* emphasizes integrated water resource management for highly vulnerable basins, community and stakeholder involvement for the development of sustainable solutions, and capacity building for local governments, tribes, and watershed groups.

Background

In 2009, Governor Chris Gregoire and the State Legislature directed State agencies to develop an *Integrated Climate Change Response Strategy* to aid preparation and planning efforts at all levels of government. The goal was to provide decision makers with a tool illustrating the risks of climate change, the climate adaptation mechanisms were already in place at different levels of government, State priorities for contending with climate change's adverse effects, and paths forward for different stakeholders by working together. The result is a framework covering a wide breadth of environmental sectors (including water) emphasizing integrating responses across agencies, communities, organizations, and individuals.

The document begins by explaining the need for action to combat threats resulting from climate change in Washington, reviewing risks to human health, economic sectors, and ecosystems. The next section discusses how State agencies can make climate adaptation a standard part of operations, followed by a detailed discussion of the observed and projected changes in the climate in various parts of Washington. Lastly, the document identifies key climate impacts and response strategies for different sectors, including water resources.

Washington's Response Strategy for Oceans and Coasts and for Water Resources

A key component of the *Strategy* addresses potential responses to climate change in ocean and coastal

Program Partners: Washington State Department of Ecology (WDE), Dept. of Agriculture (WSDA), Dept. of Commerce, Dept. of Fish and Wildlife (WDFW), Dept. of Natural Resources (WDNR), Dept. of Health (WDOH), Dept. of Transportation (WDOT)

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management. Almost 70% of Washington's residents live in counties bordering the coast. Some risks identified in the *Strategy* are as follows:

- Sea level rise increasing the frequency/severity of flooding damage, erosion, saltwater intrusion, and disruption to important ports and harbors.
- Coastal acidification affecting marine ecosystems and the State's shellfish economy.
- Warmer temperatures altering the strength and frequency of dangerous harmful algal blooms.

The *Strategy* also addresses risks and responses for Water Resources in general. The primary risks listed include:

- Less water stored by snowpack and glaciers due to rising temperatures.
- Declining late summer stream flow and increased demand and for limited water resources.
- Increases in winter precipitation posing new challenges for water management.
- Reduced water quality due to lower summer streamflow and increased winter flooding.

Each risk listed in the *Strategy* is accompanied by recommendations such as regulation, risk prioritization, feasibility studies, improved monitoring, providing local government with resources and information, and identification of funding mechanisms. Capacity building for watershed and regional groups, water managers, and communities is also an important part of the *Strategy*. For water resources specifically, the *Strategy* encourages implementation of integrated water resource

management approaches for vulnerable basins such as the Yakima River Basin, discussed below. Suggested actions to emphasize integrated management approaches statewide include accounting for future temperature and precipitation changes, rather than relying on past data, and incorporating such data into any management for basins most vulnerable to climate change. The section also calls for also helping vulnerable basin communities who have less experience with integrated planning to build local capacity.

The Climate Response Strategy at Work: The Yakima River Basin Integrated Plan

In 2009, WDE and the U.S. Bureau of Reclamation convened a working group of parties which, historically, have battled for management of water resources, including: representatives from the Yakama Nation, various irrigation districts, environmental NGOs, and federal, State, and local governments. The workgroup was tasked with developing and proposing an integrated water resources management plan for the Yakima River Basin, where water supply shortages are becoming more common. Through the working group process, stakeholders put aside differences and reached consensus on different water resource management issues to ensure economic growth along with environmental restoration and enhancement. The end result of this public and collaborative effort was the Yakima Basin Integrated Plan (YBIP). The workgroup continues to hold and announce public meetings and post relevant documents on their [Department of Ecology webpage](#).

Unique Partnerships for Protection

The [Integrated Plan](#) was proposed along with a 2 volume [Yakima River Basin Study](#) report, which outlined the seven key elements of the YBIP: fish passage, structural and operational changes, surface water storage, groundwater storage, habitat protection and enhancement, market reallocation, and enhanced water conservation. Each element aligns with the goals of one or more stakeholder group, and every project put forth by the YBIP aligns with one or more element. In this way, all stakeholder needs are met in an egalitarian fashion, and all participants have reasons to advocate for working group partners. This model has resulted in unique inter-group coordination and partnerships, including:

- Irrigators such as the Kittitas Reclamation District

- brokering agreements to reroute irrigation water through dry creek-beds during hot summer months, providing sorely needed cool water for stranded fish. This effort required the approval of downstream users whose water KRD utilized, as well as input from the Washington Department of Fish and Wildlife, the Yakama Nation, and the Department of Ecology.
- Kittitas and Yakima County supporting the establishment and protection of public lands like the Teanaway Community Forest, a 50,241 acre forest surrounding the Yakima's only undammed tributary. The YBIP workgroup obtained funds from the State to purchase the forest from a private logging company in 2013 to restore headwater habitat, increase groundwater storage capacity and protect water quality for communities downstream. It is now jointly managed by DNR and WDFW for outdoor recreation, forest health and grazing.
- Support from American Rivers, Trout Unlimited, and The Wilderness Society for increased surface storage in order to help maintain a viable agricultural community. As snowpack declines, expanded surface storage will be necessary not only to meet valid, existing water rights, but to protect instream flows for fisheries and habitat. The YBIP demonstrates that a strong economy goes hand in hand with a thriving environment.
- The Bureau of Reclamation and the Yakima Nation collaborating to restore fish passage at the five Yakima Basin reservoirs, constructed without passage facilities in the early 1900s. By the early 90s, sockeye, coho and summer Chinook were all locally extinct, and runs that once approached a million fish were reduced to a mere 10,000. Under the YBIP, the Bureau has committed to creating facilities at all their reservoirs, while the Yakama Nation work to restore extirpated salmon. Thanks to these joint efforts, sockeye have returned to the healthier rivers of the Yakima Basin for the first time in more than a century.

Diverse Partnerships for Funding

Legislatively, Washington is taking an approach to funding centered on using diverse partnerships to generate different funding streams to ensure sustainability. Washington has agreed to fund 50% of



the total cost of the YBIP going forward, with funding from sources including but not limited to: WDE, US Bureau of Reclamation, US Natural Resource Conservation Service, US Forest Service, US National Marine Fisheries Service, US Fish and Wildlife Service, US Army Corps of Engineers, US Bureau of Indian Affairs, Public-Private-Partnerships, Irrigation Districts, local counties, and private water users. Diverse partnerships enable Washington to incentivize contributions to the YBIP from many different stakeholders. Lastly, Senators Cantwell and Murray introduced the Yakima River Basin Water Enhancement Project Phase III Act of 2015 ("S1694"), to authorize Federal Government funding for the first ten year phase of YBIP projects. A conference was convened to reconcile differences between the House and Senate versions of the Energy Bill, but could not be completed before the conclusion of the session on December 9, 2016. The YBIP stakeholders and working groups are working to determine legislative paths forward at this time.


"[The Yakima Basin Integrated Plan] is a national model for integrated water storage that will also help one of the most productive agricultural and salmon-spawning areas in our state deal with the devastating impacts of waters shortages."
-Sen. Maria Cantwell



BUILDING A FUTURE FOR WATER, WILDLIFE AND WORKING LANDS

YAKIMA RIVER BASIN INTEGRATED WATER RESOURCE MANAGEMENT PLAN

How much water is in that pint of beer?

There's the obvious: about a pint.

Then the not-so-obvious:



1.5 gallons for hops



18 gallons for barley

Total: about 20 gallons per pint



YAKIMA BASIN

Here in the Yakima River Basin, we produce 70% of the United States' hops. Climate change threatens the water supply needed to grow this crop and fuel the local craft beer movement.

The **Yakima Basin Integrated Plan** is committed to providing water security. Help us make sure there's enough water for quality hops and great beer at www.yakimariver.org