

Discussion Guide: Climate Change Considerations for Watershed Planning Under RCW 90.94

14 October 2019

Purpose of Discussion

This document provides considerations for the committee's discussion on whether or not to include climate impacts in the planning process; and if a committee chooses to do so, some initial ideas on approaches.

What is Required?

Chapter 90.94.030 RCW does not require Ecology or WRE Committees to consider climate change in the planning process. Likewise, the Final Guidance on Net Ecological Benefit Determination (GUIDE-2094) released by Ecology to inform the planning process on how plans will be evaluated, does not address or require climate change.

Why might a WRE Committee consider climate change in their planning process?

Climate change will have impacts on our watersheds and water systems, which could have implications for the elements considered in our planning process: water use, consumptive water use, streamflow and process success. Considerations for climate change impacts on water resources may support a plan that is more robust and resilient to changing conditions – whether climate related or other influences.

Background and Context

Washington State, including watersheds that are completing watershed planning under chapter 90.94.030 RCW, are facing a future climate that does not resemble historic patterns, as described by the University of Washington's Climate Impacts Group and the National Climate Assessment.

- Climate change is projected to enhance extreme conditions, with prolonged and more frequent drought in summer and more and heavier rains in winters.¹
- The Northwest and Washington State will experience reduced snowpack, increased stream temperatures and changing ocean conditions.²

These changing conditions are a significant concern for all aspects of streamflow restoration planning.

- The extent and frequency of flooding is projected to increase in the future, resulting in higher flood risks to human communities and further impacts to salmon populations.³
- Projected lower summer flows may cause warmer water temperatures that exceed the thermal threshold for salmon.⁴

¹ [Impacts, Risks, and Adaptation in the United States: The Fourth National Climate Assessment, Volume II](https://nca2018.globalchange.gov/chapter/24/) (2018) <https://nca2018.globalchange.gov/chapter/24/>

² [Impacts, Risks, and Adaptation in the United States: The Fourth National Climate Assessment, Volume II](https://nca2018.globalchange.gov/chapter/24/) (2018) <https://nca2018.globalchange.gov/chapter/24/>

³ [The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate](#) (2009) (Climate Impacts Group, cig.uw.edu)

⁴ [The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate](#) (2009) (Climate Impacts Group, cig.uw.edu)

- Projected shifts in temperature and precipitation regimes are likely to compound existing stressors on habitats and salmon populations.⁵
- Many planning processes across the Puget Sound region are considering climate projections as they plan for management of natural resources in the future (e.g. Salmon Recovery Lead Entities, Floodplain by Designs funding program, Local Integrating Organizations, Nooksack Indian Tribe, and many others).
- Many project proponents are considering how to ensure their projects are more resilient in a changing climate system (e.g. Washington Sea Grant’s Coastal Resilience Project, Puget Sound Partnership’s Chinook Salmon Projects and Climate Change guidance for lead entities).

Considerations for the Committee

The WRE Committee will need to determine if they want to include climate change considerations in the plan. If so, there are many options for climate change considerations, such as adding a “climate safety factor” to the consumptive use estimate; evaluating whether projects are resilient to changing systems (wetter winters, drier summers, flashier systems); identifying projects that take advantage of changing future conditions (e.g. storage of water during the wetter winters) and that focus on the timing of water availability. These ideas are a starting point for committee discussion.

Questions for the Committee:

- Does the committee want to consider climate change impacts in the planning process?
 - If you are unsure, what additional information do you need to make a decision on whether or not to consider climate change?
- If the committee wants to consider climate change, are there specific components of the plan or the process you are particularly concerned about?
 - Does the committee or members of the committee have the required expertise and resources to address these considerations? If not, do you have suggestions on how to address this?

Resources for WRIA 9

- [The Washington Climate Change Impacts Assessment](#): Evaluating Washington’s Future in a Changing Climate (2009) (Climate Impacts Group, cig.uw.edu)
- [State of Knowledge: Climate Change in Puget Sound](#) (2015) (Climate Impacts Group, cig.uw.edu) See Appendix D, pages D-15 to D-16.
- [WRIA 9 Climate Change Impacts on Salmon](#): Technical briefing for the update to the WRIA 9 Salmon Habitat Plan (2017). See chapter 3, page 69 “Implications of 21st Century Climate Change for the Hydrology of Washington State.”

⁵ [The Washington Climate Change Impacts Assessment: Evaluating Washington’s Future in a Changing Climate](#) (2009) (Climate Impacts Group, cig.uw.edu)