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

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## Purpose of Discussion

This document provides considerations for the committee’s discussion on whether or not to include climate change considerations in the planning process; and if a committee choses 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 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]](#footnote-1) The Northwest and Washington State will experience reduced snowpack, increased stream temperatures and changing ocean conditions. [[2]](#footnote-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]](#footnote-3) Projected lower summer flows may cause warmer water temperatures that exceed the thermal threshold for salmon.[[4]](#footnote-4) Projected shifts in temperature and precipitation regimes are likely to compound existing stressors on habitats and salmon populations. [[5]](#footnote-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. Floodplain by Designs funding program, Hood Canal Coordinating Council, Snohomish Forum, 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 or considerations for climate change inclusions. The ideas described below are a starting point for committee discussion.

* Overall Planning Process
  + Committees could review State of Knowledge: Climate Change in Puget Sound, Climate Change Impacts and Adaptation in Washington State, and any local assessments or projections for considerations throughout the planning process. For instance, a “climate safety factor” could be applied throughout the technical components of the plan that adds additional protection or resiliency to unknown future conditions.
  + Review how water system plans are considering climate change.
  + Request a localized climate assessment and / or presentation from the Climate Impacts Group to help support further discussion and considerations.
* Consumptive Use
  + Consider an assumption of increased water use/consumptive use during warmer summers.
* Projects and Actions
  + Recognize that water timing may shift (e.g. flashier systems, more water in the winter, change from snow-dominant to rain-dominant or mixed system).
  + Consider a criteria that evaluates whether projects are resilient to changing systems (wetter winters, drier summers, flashier systems).
  + Consider restrictions on summer watering when flows are lowest.
  + Identify 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.
  + Provide a safety factor on the amount of offset to ensure we overshoot consumptive use estimates.

## Questions for committee discussion

* Does the committee want to consider climate change 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? (See the list above for possible considerations for the committee).
  + 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?

1. [Impacts, Risks, and Adaptation in the United States: The Fourth National Climate Assessment, Volume II](https://data.globalchange.gov/report/nca4) (2018) https://nca2018.globalchange.gov/chapter/24/ [↑](#footnote-ref-1)
2. [Impacts, Risks, and Adaptation in the United States: The Fourth National Climate Assessment, Volume II](https://data.globalchange.gov/report/nca4) (2018) https://nca2018.globalchange.gov/chapter/24/ [↑](#footnote-ref-2)
3. [The Washington Climate Change Impacts Assessment: Evaluating Washington’s Future in a Changing Climate](http://cses.washington.edu/db/pdf/wacciareport681.pdf) (2009) (Climate Impacts Group) [↑](#footnote-ref-3)
4. [The Washington Climate Change Impacts Assessment: Evaluating Washington’s Future in a Changing Climate](http://cses.washington.edu/db/pdf/wacciareport681.pdf) (2009) (Climate Impacts Group, cig.uw.edu) [↑](#footnote-ref-4)
5. [The Washington Climate Change Impacts Assessment: Evaluating Washington’s Future in a Changing Climate](http://cses.washington.edu/db/pdf/wacciareport681.pdf) (2009) (Climate Impacts Group, cig.uw.edu) [↑](#footnote-ref-5)