

## 2.8 DRAFT Climate Resilience Element

**Purpose.** Climate change is expected to alter the quantity, quality, and availability of water supplies across Washington. However, these impacts vary across the state and the specific impacts realized by different water systems are determined by a multitude of factors such as supply source (surface, groundwater), water rights, access to alternative supplies, and financial resources. This section should document which extreme events are likely to pose the most significant challenges for water systems and the range of potential impacts of these challenges such that water systems can incorporate this information into their assessment of critical assets (Chapter 3), Capital Improvement Program (Chapter 8), and Financial Program (Chapter 9).

Beginning June 30, 2025, water systems serving 1,000 or more connections must include a Climate Resilience Element in their Water System Plans (WSP). The requirements are outlined in [RCW 43.20.310](#) and include that water systems must:

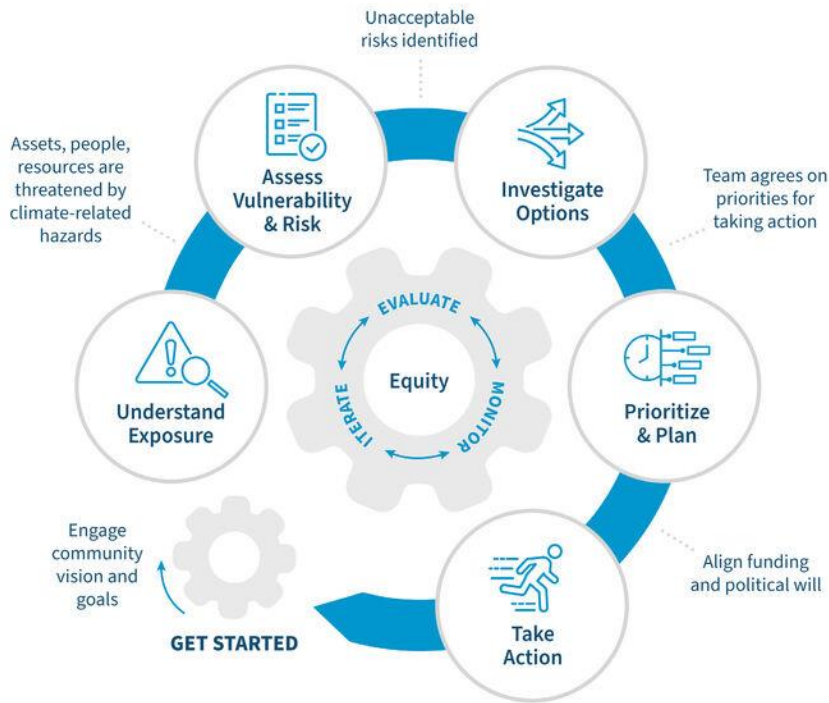
- A. (1) Determine which extreme weather events pose significant challenges to their system; and (2) Build scenarios to identify potential impacts;
- B. Assess critical assets and the actions necessary to protect the system from the consequences of extreme weather events on system operations; and
- C. Generate reports describing the costs and benefits of the system's risk reduction strategies and capital project needs.

Acknowledging the diversity of climate resilience activities water systems may pursue, this section provides a general approach for addressing the requirements of [RCW 43.20.310](#) and shares resources available to support water systems in evaluating and addressing their system's specific challenges. The approach outlined in this section is modeled after the 'Steps to Resilience' framework in the [U.S. Climate Resilience Toolkit](#) (Figure 1) and is structured to align with requirements A-C in [RCW 43.20.310](#). A [Climate Resilience Element \(CRE\) Workbook \(link\)](#)<sup>1,2</sup> and other resources are available to support water systems in fulfilling the requirements of this section. The University of Washington, Climate Impacts Group (CIG) '[Water System Planning Resources](#)' [webpage \(link\)](#) includes links to additional resources supporting climate resilience planning.

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<sup>1</sup> The final name for this document will be decided pending further discussion/structure of final product.

<sup>2</sup> Text in **BLUE** indicates a future link to an external document or resource which may be existing, in development, or under consideration for development. Links to existing resources are provided when available.



**Figure 1. Steps to Resilience Framework**

**Source:** U.S. Climate Resilience Toolkit

## A.1. Understand Exposure

**Objective: Determine which extreme weather events pose significant challenges to your system.**

For this requirement, systems should review relevant resources on climate indicator data and extreme weather events to identify which types of extreme events (e.g., drought, wildfire, extreme heat) are most important to consider further in their water system planning efforts. The companion [CRE Workbook \(link\)](#) includes a list of potential extreme events and links to additional resources for assessing exposure to extreme events.

Water systems should report their findings using the template worksheet provided in the supporting [CRE Workbook \(link\)](#) or via other approaches providing comparable information (e.g., types of extreme events considered, brief description of potential change and challenges, relative significance of these events, how the significance of extreme events was evaluated). In either case, systems should clearly note which types of extreme events they will be considering further in the remainder of their water system planning efforts.

There are many tools and resources available to help water systems better understand the magnitude and geography of climate-related changes in Washington ([link to CIG WSP tools and resources webpage](#)). Which approaches, tools, and resources are of greatest use to a given water system will vary with a system’s level of exposure to extreme events, geography, system characteristics, risk tolerance, finances, and other factors. Examples of the types of approaches

and/or resources water systems may find useful in evaluating their exposure and vulnerability to extreme events include:

- Reviewing existing planning documents for consideration of extreme weather events and climate impacts;
- Using past events as an analog for future change;
- Regional summaries of climate impacts ([WA State Climate Resilience Strategy, Appendix A](#));
- [Climate Mapping for a Resilient Washington mapping tool](#); and
- Modeling and/or other locally tailored analysis.

The [CRE Workbook \(link\)](#) includes additional information on these approaches and a template table for summarizing findings from this section (Workbook Table 3).

## A.2. Assess Vulnerability and Risk

**Objective: Build scenarios to identify potential impacts.**

Water systems should use the extreme events of greatest concern identified in the preceding section to assess potential risks or challenges those events pose to specific water system operations, functions, and critical assets. The [CRE Workbook \(link\)](#) includes a series of reflection questions systems may find helpful in thinking through these impacts across each section of their WSP and for each area of operations/critical assets. A template table (Workbook Table 4) is provided in the [CRE Workbook \(link\)](#) to support water systems in summarizing key findings from their assessment. Systems should summarize the findings from their assessment using this template or another comparable approach. Water systems should also summarize key findings from this assessment as scenario(s) of impacts on specific system components (e.g., source water supply, infrastructure and critical assets, system finances, etc.). The aim of this section is to develop descriptive scenarios of significant, potential impacts from extreme events that can be incorporated into the identification of critical assets and support and planning for key adaptation and resilience strategies in the following sections.

## B. Investigate Options

**Objective: Assess critical assets and the actions necessary to protect the system from the consequences of extreme weather events on system operations.**

This section builds on the water system's existing assessment of critical assets. The aim of this requirement is to ensure the extreme events, risks, and challenges identified in the previous sections are incorporated into a WSP's assessment of critical assets (Chapter 3). The reflection questions included in [the CRE Workbook \(link\)](#) may be a helpful starting point.

Water systems should also identify the adaptation and resilience actions needed to reduce risks and/or protect critical assets from the consequences of extreme weather events on system operations. Links to case studies, tools and resources supporting identification and evaluation of climate adaptation and resilience strategies are included on CIG's [WSP Resources webpage \(link\)](#). Systems should include a brief description of how they addressed this requirement in their WSP and incorporate the substance of their work into applicable activities/sections of their plan (e.g., asset criticality, capacity analysis).

## C. Prioritize and Plan

**Objective: Generate reports describing the costs and benefits of the system's risk reduction strategies and capital project needs.**

Systems should incorporate the risk reduction strategies and capital project needs identified in the previous section into their WSP's Capital Improvement (Chapter 8) and Financial (Chapter 9) Programs. WSP should include a brief summary of how this requirement was addressed, as well as incorporating the substance of their work into applicable sections of the WSP, such as the Capital Improvement and Financial Programs.

## Publications Reference List

To Be Completed