



A User Guide to Climate Change Portals

*and other resources that support planning
and adaptation in the Mountain West*

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Climate change portals and related resources

Climate assessments



Portals for visualizing
climate change
(comprehensive)



Portals for visualizing
climate change
(targeted)



Portals for downloading
climate change data



Portals for exploring
historical data



Adaptation guidance
and climate service
providers



Climate challenges in the Mountain West



Rising temperatures



Diminishing snowpack



Earlier streamflow timing



More severe wildfires



The climate is changing, and we can no longer assume the weather of the past will be the weather of the future. To prepare, communities need to know how climate change will impact people, infrastructure, and other resources.

Fortunately, a lot of climate change *data* has been synthesized, curated, visualized, and posted online. But for this information to be useful, you need to know these resources exist, where to find them, and what they can and can't tell you.

We have created an online guide to help you do this.

www.agci.org/climate-portal-guide

Climate Change Portals and Related Resources

To help you navigate to the resource most appropriate for your needs, we outline six resource types and show how they align with desired uses. Our focus is on online portals, though we highlight reports and other supporting guidance too.



Climate assessments

These reports synthesize what is known about recent and likely future climate changes and impacts for a particular nation, region, state, or city. They can be especially helpful when you need summary statements or basic maps and figures for a given area.



We highlight [eight recent climate assessments](#) that cover all or part of the Mountain West (see page 4). We also list other reports that provide climate change information relevant to the Mountain West.

Portals for visualizing climate change data (comprehensive & targeted)

These are interactive websites that allow users to produce maps and plots of projected future climate variables from one or more datasets. Most data-visualization portals also allow you to download the underlying data in a summary format.



We highlight [three of the most comprehensive portals](#). These are user-friendly and versatile sites, and we provide more details about their capabilities and features (see page 4).



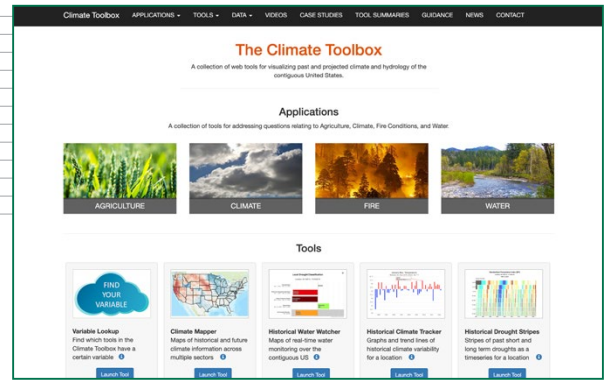
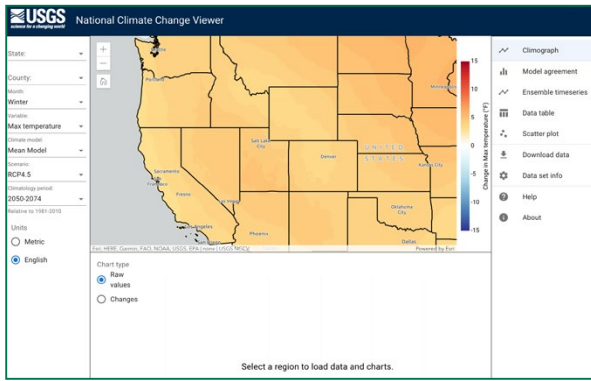
We also identify [10 other targeted portals](#) with additional features that may be valuable for particular uses (see page 4).

Portals for downloading climate change data

Many web portals allow you to download complete datasets of projections of future climate. Most are intended for use by researchers and only have data available in formats that require specialized software to open and analyze.



We highlight [two downloading portals](#) that allow you to download the most often-used downscaled CMIP5 datasets (MACA, LOCA, BCCA, BCSD) in multiple file formats, including text files (ASCII/CSV) (see page 4). Both portals have interactive tools that allow you to select data only for specific areas (e.g., counties).



Portals for exploring historical data

These portals provide local and regional information about the past climate, based on observations from past decades to the past month. This information complements future climate change projections by providing context: How has the climate in this area already changed?



We highlight [two historical climate portals](#) we think are most helpful to users in the Mountain West.

Adaptation guidance and climate service providers

At the community level, climate change information is typically used to inform planning processes for climate adaptation, preparedness, and resilience. Many websites and resources outline climate adaptation approaches, and are valuable in helping frame the questions for which climate change portals can provide answers.

Additionally, there are many *climate service providers* who can help communities acquire and use relevant, trusted information and provide other guidance to enhance climate preparedness.



We highlight several [online adaptation guidance resources and provide tips on finding a climate service provider](#) to match your needs.

FOR MORE INFORMATION

Explore the full User Guide at www.agci.org/climate-portal-guide
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users. We thank the many people who provided
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Places to go for climate change information

Match your need for climate change information (left) with the type of resources available (right; Boxes 1–4). All resources named in the numbered boxes are described in the guide, available online at www.agci.org/climate-portal-guide.

What climate change information do you need?

Summary statements about projected future climate changes for your state or multi-state region

Static maps and charts for projected climate changes for your state or multi-state region

Interactive maps, charts, and analysis:

Projected climate changes for many variables, for a specific location, county, state, or watershed, anywhere in the contiguous U.S.

Need additional variables, datasets, visualizations?

Interactive maps, charts, and analysis:

Projected climate changes for a region, state, watershed, fewer options in each portal than the 3 above

Climate change projection data to allow you to conduct your own analyses, and generate maps and charts not available elsewhere

Here's where to find it:

1. CLIMATE ASSESSMENTS

- U.S. National Climate Assessment (NCA4)
 - ▶ SW, NW, N Great Plains Chapters
 - ▶ **State** Summaries (few graphics)
- Climate Change in **New Mexico**
- **Greater Yellowstone** Climate Assessment
- Fifth **Oregon** Climate Assessment
- **California's** Fourth Climate Change Assessment
- **Montana** Climate Assessment
- Climate Change in **Colorado**
- Climate Change Impacts and Adaptations in **Washington State**

2. DATA VISUALIZING PORTALS (COMPREHENSIVE)

- Climate Explorer (T + P only)
- Climate Toolbox
- National Climate Change Viewer

3. DATA VISUALIZING PORTALS (TARGETED)

- Climate Impact Map
- NOAA Climate Change Web Portals
- IPCC AR6 Interactive Atlas
- CONUS Climate Console
- Pacific Northwest Climate Projection Tool
- AdaptWest Watershed Climate Data Explorer
- KNMI Climate Change Atlas
- Cal-Adapt Climate Tools
- EPA CREAT

4. DATA DOWNLOADING PORTALS

- GDO-DCHP
- MACA Download Tools

Easier to use

Fewer choices

More context for data

Harder to use

More choices

Less context for data