



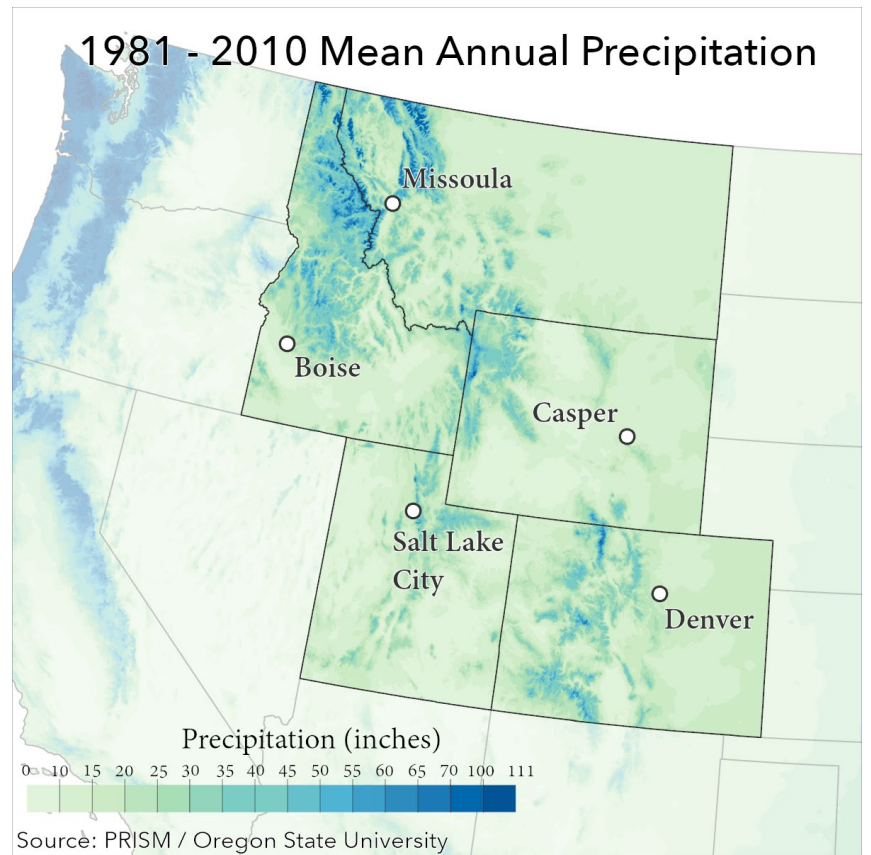
# Condition Monitoring Reporting Guide: Mountain West

## Regional Background

Dry conditions are the norm in the Mountain West. Across the Great Plains, summers are intensely hot during the day, but cool at night due to the lack of humidity. In these same areas, winters can be expected to be quite cold. High elevations in the Rocky Mountains will be relatively cool year-round. Because of this cooler air, communities at higher altitudes will receive more precipitation on average than surrounding areas.

## Reporting Reminders

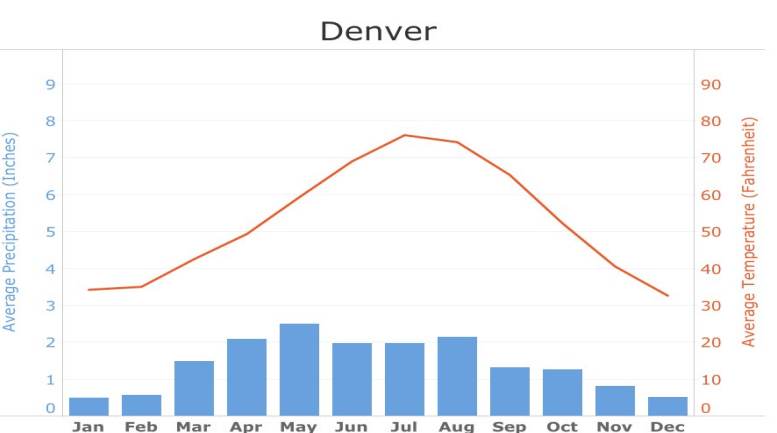
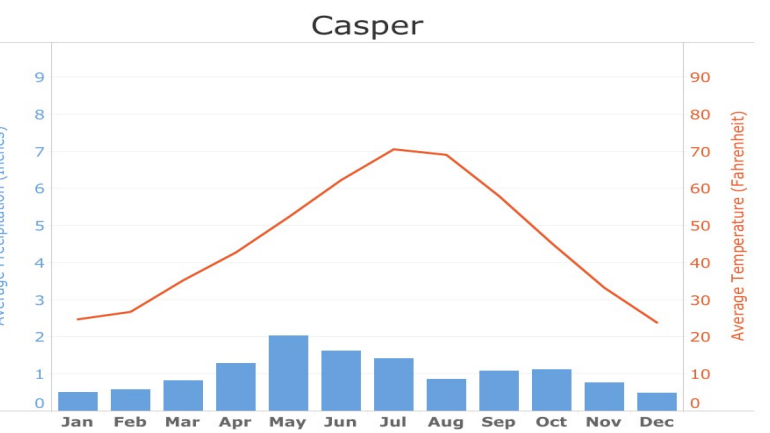
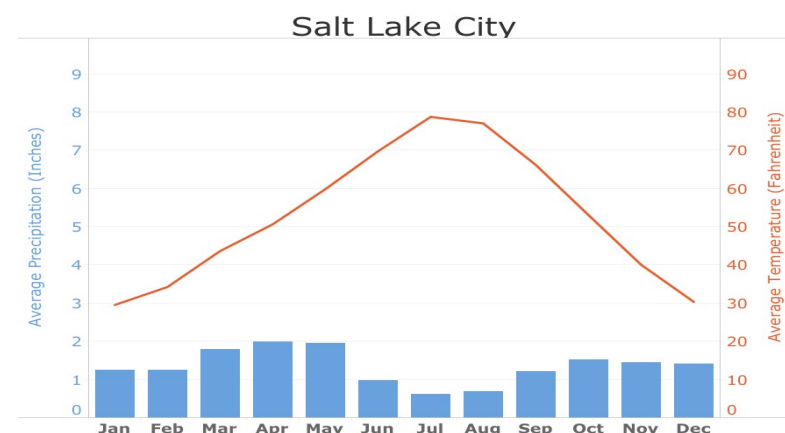
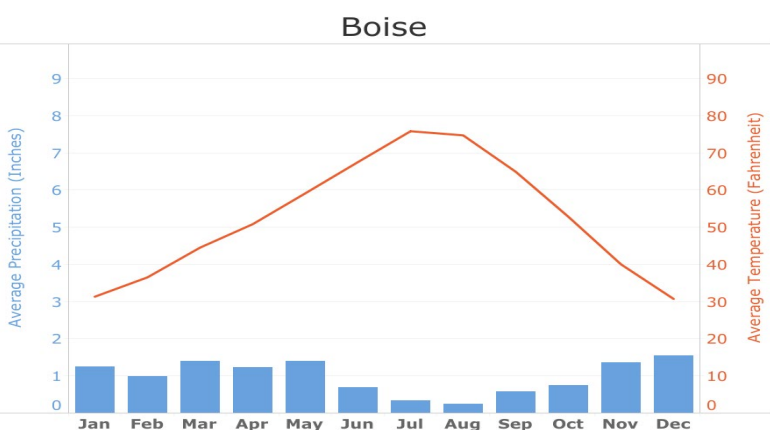
- Use “Severe” categories sparingly: overuse of these labels can make it hard for researchers to identify the hardest hit areas.
- Sometimes, minor events may still have major human impacts, or vice versa. Don’t worry if your precipitation measurements seem to conflict with the severity reflected in your reports: differentiating between magnitude and human impact is valuable to researchers and decision makers!
- While heat and drought often go together, be careful to note that impacts of heat (e.g., wilting plants) are not necessarily indicative of drought conditions.
- Droughts don’t end instantly. Rain after long droughts may mean *less dry* conditions, but not necessarily a reset to “Near Normal” conditions. Think *long term*.
- In addition to rain measurements, notes on a storm’s duration, power outages, road closures, and other such impacts are helpful to include.



## Average Monthly Climate Data

These sample climate charts represent normal monthly precipitation and temperature in your region. Pick a city near you and use the data below as a baseline for your “near normal” conditions. Explore these resources for climate data in other locations:

- [National Drought Mitigation Center](#)
- [NOAA National Centers for Environmental Information](#)
- [NOAA Regional Climate Centers](#)
- [American Association of State Climatologists](#)



# What to Look For

The following tables provide examples of the types of conditions you might observe during different wet or dry periods. **These lists are designed as an aid.** The first table shows the condition monitoring scale bar categories and the types of conditions that correspond to those categories. The second table organizes different types of conditions and impacts by sectors and areas of interest. Be sure to note any other observations that you think may relate to dry or wet conditions.

SEVERELY WET	MODERATELY WET	MILDLY WET	NEAR NORMAL	MILDLY DRY	MODERATELY DRY	SEVERELY DRY
<ul style="list-style-type: none"> <li>• Use this category sparingly</li> <li>• Wet conditions have persisted for several weeks</li> <li>• Major flooding</li> </ul>	<ul style="list-style-type: none"> <li>• Wet conditions have persisted for a few weeks, or there has been a major rainfall event</li> <li>• Standing water and minor flooding</li> </ul>	<ul style="list-style-type: none"> <li>• Frequent precipitation for several days</li> <li>• Standing water is common</li> </ul>	<ul style="list-style-type: none"> <li>• Observed conditions normal for this time of year</li> <li>• <b>This should be your default entry</b></li> </ul>	<ul style="list-style-type: none"> <li>• Dry conditions have persisted for a few weeks</li> </ul>	<ul style="list-style-type: none"> <li>• Dry conditions have persisted for several weeks</li> <li>• Lakes and rivers are low</li> <li>• Water use restrictions start</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Use this category sparingly</b></li> <li>• Dry conditions have persisted for months</li> <li>• Water is scarce</li> <li>• State of Emergency</li> </ul>

	WET	DRY
Agriculture	Mud or pooling water in fields may delay planting or harvesting. Very wet or muddy conditions can reduce yields for potatoes and other root vegetables. Wet seasons may help to restore rangelands that have been overgrazed by ranchers.	Without enough water, crops may develop late, show stunted growth, or yield smaller harvests. Livestock may be smaller or require supplemental water and feed, especially where the growth of pastureland is stunted. In severe cases, farmers may pursue reserve land for emergency haying and grazing. Ranchers may reduce their herd sizes.
Business	Rainy and muddy conditions may delay construction and infrastructure projects. Because many mountain communities may depend on tourism revenue, years with high snowfall will likely experience economic benefits from increased tourism.	Communities that are dependent on agriculture or mountain tourism may suffer significant economic impacts. Landscaping and similar businesses are likely to lose revenue as urban areas are pressured to reduce their water consumption.
Energy	Hydropower output may benefit from increased snowmelt. Solar energy facilities at lower elevations may suffer decreased production due to an increase in overcast days.	Utility bills are likely to increase, especially in areas reliant on hydroelectric, coal, or nuclear plants. Dying tree limbs and heat are threats to electrical infrastructure and may increase the likelihood of power outages. Increases in solar energy production are possible.
Fire	U.S. Forest Service fire danger ratings at or near minimum. Fire crews may wait until conditions are wet to hold prescribed burns to have easier control fire conditions.	Wildfires will be larger and more common, as reflected in increases in Fire Danger ratings from the US Forest Service. Firefighting groups may release public statements or increase crew sizes. Fire season may begin earlier or last longer.
Plant & Wildlife	Heavier-than-usual snowfall at high elevations may push animal populations farther down the mountain to forage, potentially resulting in increased encounters with humans. Autumn colors will likely occur later in the season during wet years.	Scarcity of water and food may push animals to scavenge in residential areas. Deer and elk may be visibly less healthy. Changes in water level and temperature may result in fish kills. Mature trees will likely show signs of browning and drying if conditions are severe. Damage to native tree populations may also increase the risk for outbreaks of spruce beetles.
Relief & Response	Officials may close roads in anticipation of flash floods, landslides, or volatile weather, especially at higher elevations. Restrictions on water use and outdoor burning are likely to be lifted or relaxed as weather shifts from dry to wet. Emergency declarations or school closures for heavy snowfall are an indicator of wet conditions.	In the West, state and municipal restrictions on water use and burn bans are common, even when drought conditions are not severe. Water use restrictions, particularly in the Colorado River Basin, will range from voluntary to mandatory as conditions worsen. Rangelands under the Conservation Reserve Program may be opened for emergency grazing.
Safety & Health	At high elevations, severe weather conditions can develop very quickly, making roads dangerous. Trails and high elevation roads may be closed if there is risk of heavy rain or snow.	Dry topsoil can be picked up by the wind, creating the potential for dust storms and low visibility. A sharp decline in air quality around urban areas is also likely. Where heat is also present, working conditions may become dangerous for outdoor workers. Drought can also harm community morale and mental health, especially in agricultural communities.
Tourism & Recreation	Mildly wet seasons may work to the benefit of ski resorts and whitewater rafting communities. Due to the risk of flash flooding, certain trails and campgrounds may be closed during inclement weather.	Ski resorts and other mountain tourism communities may delay their seasons or invest in alternative activities if there is insufficient snow. A lack of snowmelt may similarly impact communities built around rafting tourism. As fire risk increases and animal populations decline, campgrounds may close and interest in camping or hunting may decline.
Water	Wetter years may experience greater alpine snowpack that lasts later into the season. Mountain streams fed by snowmelt may be at higher levels throughout the spring.	Ponds, small streams, and wells dry completely in severe conditions. Allotments to irrigators and municipalities may be strained during severe droughts. Water quality will typically decrease due to increased temperature and decreased volume. There may be less snowpack at higher elevations, in turn resulting in lower springtime stream levels.