

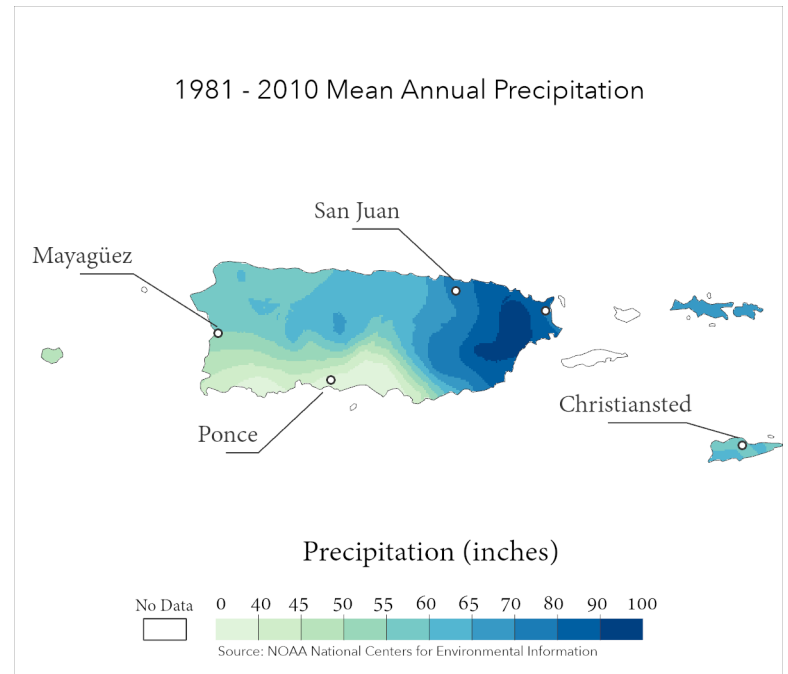
# Condition Monitoring Reporting Guide: Puerto Rico & USVI

## Regional Background

Puerto Rico and the US Virgin Islands (USVI) boast a tropical climate, experiencing mostly warm temperatures throughout the year and a rainy season from April through November. In Puerto Rico, rainfall varies across the island due to varied topography, but generally the Southern portion of the island receives less rainfall than the inland portion. The region can be heavily influenced by the Atlantic hurricane season, leading to extreme rainfall events.

## Reporting Reminders

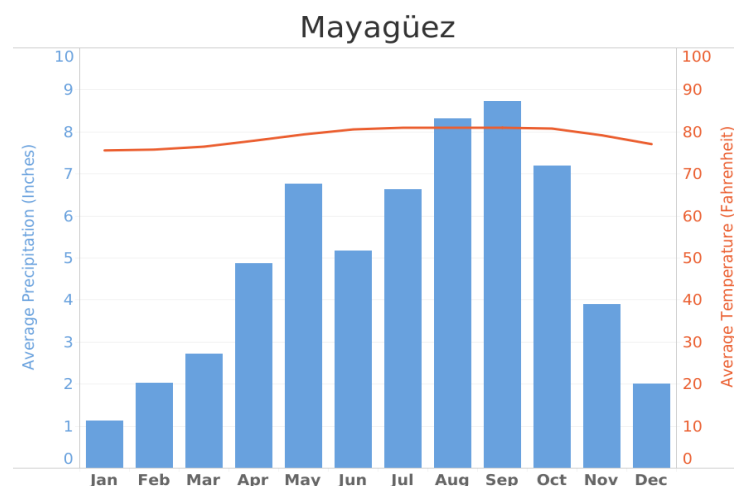
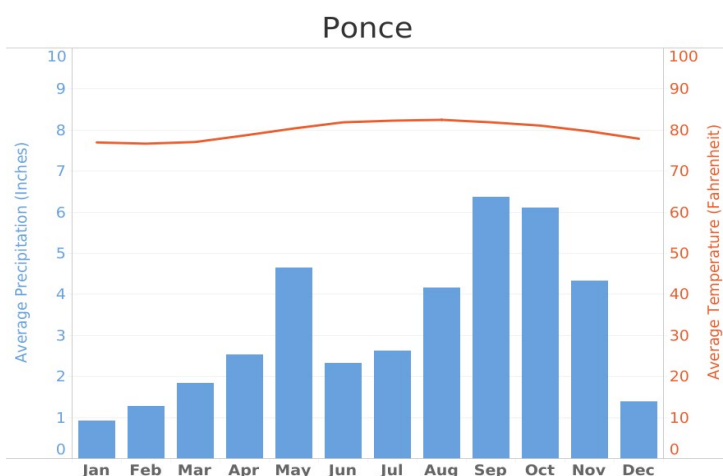
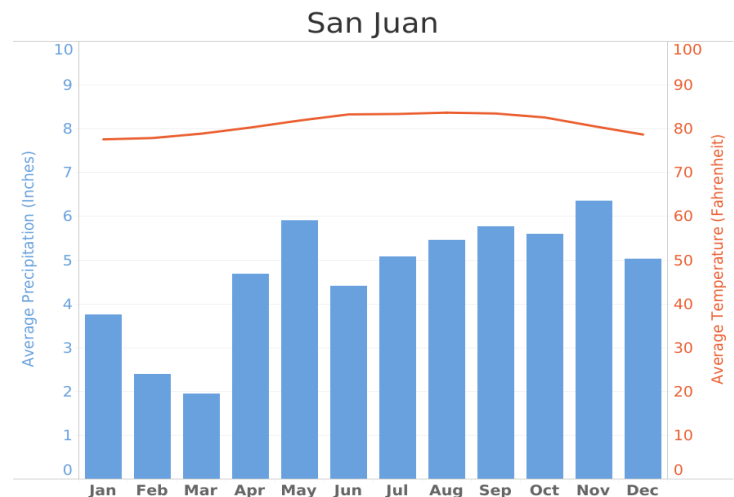
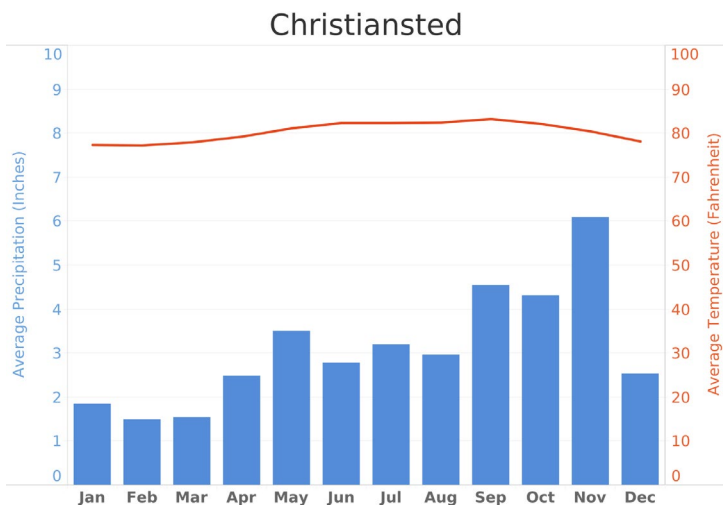
- Use “Severe” categories sparingly: overuse of these labels can make it hard for researchers to identify the hardest hit areas.
- While heat and drought often go together, be careful to note that impacts of heat (e.g., wilting plants) are not necessarily indicative of drought conditions.
- Droughts do not 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.
- Tropical cyclones heavily influence the annual rainfall, so it’s important to note events influenced by tropical activity in Condition Monitoring reports.
- If a region typically receives frequent rainfall, this will be considered “Near Normal” for the area, not “Severely Wet”.



## 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 and drought data:

- [National Drought Mitigation Center - Puerto Rico](#)
- [NOAA National Centers for Environmental Information](#)
- [Southeast Regional Climate Center](#)
- [National Weather Service - San Juan: Climate and Drought](#)
- [Caribbean – Florida Water Science Center – Reservoir Levels](#)



Data Source: NOAA National Centers for Environmental Information

# 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> <li>Soil is saturated</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> <li>Soil is very damp</li> </ul> | <ul style="list-style-type: none"> <li>Frequent precipitation for several days</li> <li>Standing water is common</li> <li>Soil moisture is above normal</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> <li>Soil is somewhat dry</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> <li>Soil is very dry</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>Soil is completely dry</li> <li>Water is scarce</li> <li>State of Emergency</li> </ul> |

|                      | WET  | DRY  |
|----------------------|--|--|
| Agriculture          | Crops and grazing pastures will likely be green and in healthy conditions. Even with moderately wet conditions, needs for irrigation may drop off noticeably. Yields for important commodities such as coffee, pineapple, and bananas are not likely to suffer from lack of precipitation.   | Without enough water, soil quality degradation, plant desiccation, fruit damages, and decreased yields may be seen. Coffee can experience yield decreases of up to 80% under drought conditions, and other important crops such as pineapple, bananas, and livestock also heavily depend on rainfall.  |
| Business             | Rainy and muddy conditions may delay construction and infrastructure projects. Flooding may result in power outages, school closures, or lost work hours, particularly in rural areas where alternative routes may not be available.   | Landscaping and similar businesses are likely to lose revenue as residents are pressured to reduce their water consumption. Manufacturers that use large amounts of energy and water may have difficulty operating at full capacity.   |
| Energy               | Hydropower output may benefit from increased precipitation. Periods of heavy rain may create the risk of power outages due to wind, hail, or falling tree limbs.   | The islands may experience an increase in utility bills due to difficulty in producing energy output, especially in areas reliant on hydroelectric or coal plants.   |
| Fire                 | Expect fire danger declarations to be at or near minimum levels. Fire crews will often wait for wet conditions to perform prescribed burns to minimize the danger of unwanted spreading.   | Drought conditions both heighten the risk of wildfire ignition and promote fast spreading of ignited fires due to lack of moisture. Wildfires will be larger and more common, as reflected in the Fire Weather Outlook forecasts released by San Juan's National Weather Service and by USDA's Inciweb reporting tool.   |
| Plants & Wildlife    | Rainy seasons may boost growth in rainforest regions. Plants and wildlife will have more nutrients to flourish. The dry southwestern region of Puerto Rico will likely see healthier grasses. Mosquito populations will likely succeed. During periods without drought, it is expected that native island species will find more success than non-natives. | Plants and wildlife will experience greater stress and may show signs through shedding leaves or being sparsely populated. Drought has also contributed to declines in insect populations. Invasive species are expected to be more dominant during drought periods.   |
| Relief & Response    | Restrictions on water use and outdoor burning are likely to be lifted or relaxed as weather shifts from dry to wet. Highway safety measures are possible on routes likely to be affected by fog, flooding, or landslides.  | Governments and other agencies may issue statements encouraging voluntary water and energy conservation. These will often become mandatory if drought worsens. Regulations on outdoor burning and the use of fireworks are common, even at low levels of drought.  |
| Safety & Health      | Heavy, saturated soil creates a risk of landslides and flooding in the region. In mountainous areas, weather can be highly variable throughout the year, making driving conditions dangerous. Pooling water can cause increases in mosquito populations following wet periods.   | Note excessive haze and heat, as both pose a danger to human health. Drought can potentially impact the safety of drinking water and cause air pollution, especially with the occurrence of wildfires. Many households in USVI use rainwater harvesting programs in order to manage water in their homes, so a lack of precipitation has the potential to affect health and water supply in both urban and rural households. |
| Tourism & Recreation | While the region is characterized by frequent rain, extended wet periods may discourage hiking, camping, and other outdoor activities, which works to the detriment of the area's rainforest tourism. If flash floods or other dangerous conditions are likely, tourism and recreation can be significantly stalled.                                       | Tourism infrastructure is crucial to the success of Puerto Rico. Many tourist areas will not feel the impacts of milder drought because tankers in the rainforest ensure that water is available for tourists. Boating and fishing activities may be harmed by warmer, shallower waters. Wildlife tourism activities may be limited by stress on wildlife during drought conditions.   |
| Water                | Rivers and reservoirs may be at normal or above-normal levels. Wet conditions will allow for an increase in water use, and a likely improvement in water quality. Rainwater harvesting and recycling programs will operate smoothly and safely.  | Island droughts often cause water shortages. In Puerto Rico and the USVI, potable water quality may significantly decrease. When reservoir storage decreases due to lack of rainfall, sedimentation frequently affects water quality and yield for municipal areas. The government will likely set daily water use limits; past restrictions have limited household water use to one day every two to four days.             |