## Probabilistic Mountain Weather Forecast (Prob MtnWx)



The Probabilistic Mountain Weather Forecast is a briefing-style decision support tool intended for use in snow safety activities including avalanche mitigation as well as emergency management. It is designed to be used in conjunction with official NWS forecasts, the Avalanche Weather Guidance (AVG) and local Area Forecast Discussions (AFDs).

## Multi-Model Ensemble Probabilistic

 Snow and Snow Water Equivalent (SWE)A statistically robust three-bin probabilistic forecast is presented as a set of High-End (95th percentile), Low-End (5th percentile), and Most Likely (25th - 75th percentile) scenarios.

## WPC Mode-Matched PWPF and PQPF

Snow Water Equivalent and Snow Amount are based on the Mode-Matched Probabilistic Winter Precipitation Forecast (PWPF) and Probabilistic Quantitative Precipitation Forecast (PQPF) provided by the Weather Prediction Center (WPC). The independent columns reflect the average Snow-Liquid Ratio (SLR) throughout the 12-hour forecast period.

## Visualizing Uncertainty with NDFD and NBM

The official forecast (from the NDFD, in black) is displayed alongside with the high-end (95th percentile, shaded red) and low-end (5th percentile, shaded blue) values (from the NBM). This allows for an effective presentation of not just the range of forecast outcomes, but the windows of time in which the forecast confidence is greatest (or least), and if the lower-probability outcome is above, below, or equally likely to fall on either side of the deterministic forecast.

## Toggle Relevant Parameters

Allows the user to view fields in their preferred context, such as toggling snow ratio or snow density (\%), and precipitation intensity in terms of hourly snowfall or water equivalent (in/hour)


## Hourly Readout

Mouseover on a timeseries forecast parameter to view hourly numeric output


