

Communicating Forecast Atmospheric River Scenarios in the Sierra and Western Nevada

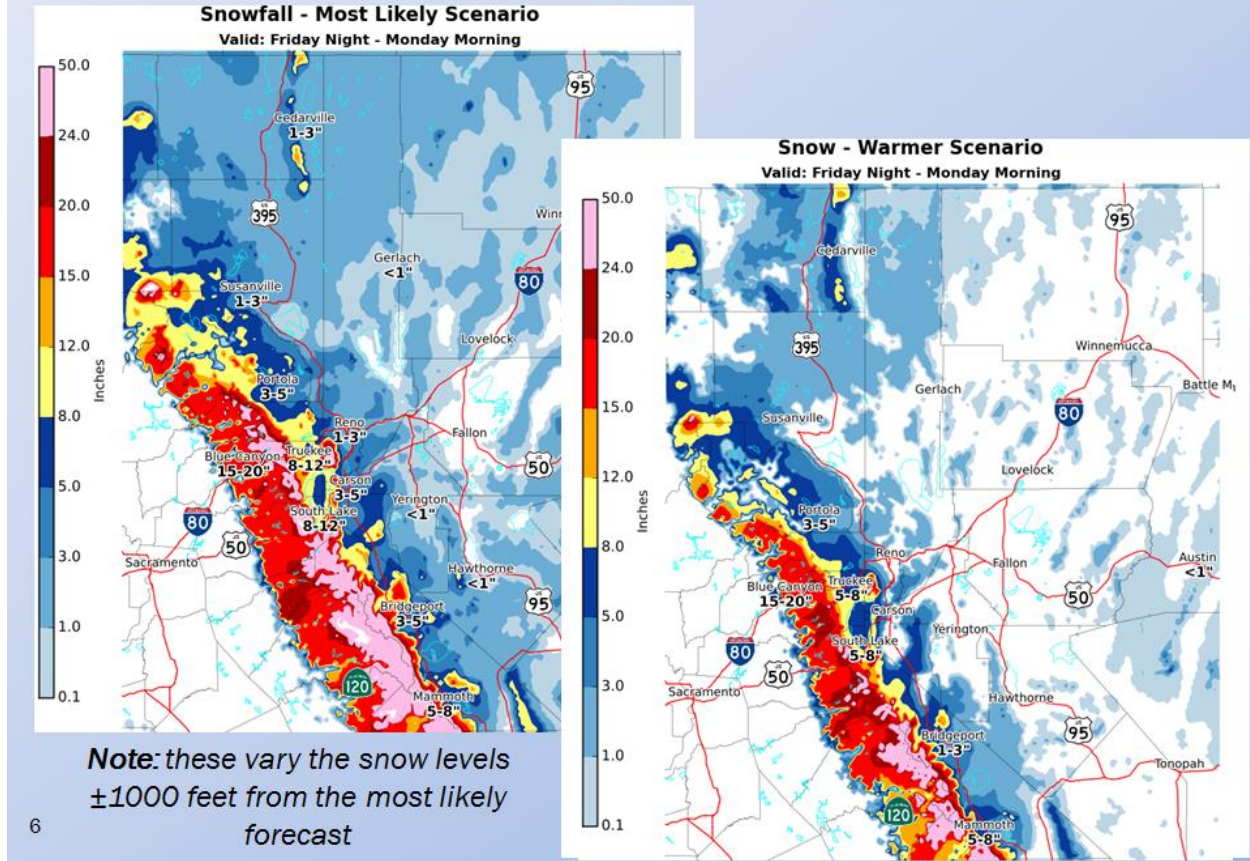
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The term atmospheric river is gaining traction within public safety agencies in California and Nevada, however often the term carries with it a connotation of blizzards, floods, and widespread calamity. While the predictability of atmospheric rivers has also increased in recent years, critical details such as the axis of heaviest precipitation and snow level variations remain low predictability even just 1-2 days in advance.

Over the past two winters NWS Reno has been developing messaging to help put atmospheric river events in context. One specific action we've started is to provide partner agencies in the Sierra and western Nevada with feasible rain, snowfall, and wind scenarios ahead of atmospheric river storms. Even without probability of occurrence forecasts, these scenarios provide useful guidance to agencies for planning staffing, emergency response, and adjusting schedules for community events and travel. The key is to provide a readily digestible amount of information on top of the NWS official deterministic forecast - so we've focused on just three: "most likely", "low", and "high" scenarios.

This presentation will cover methods used at NWS Reno to brief partner agencies using the scenario approach, focusing on precipitation and snowfall forecasts from actual storms during the 2015-16 winter. While partners still heavily weight their decisions on the "most likely" or official NWS forecast, the alternate scenarios give them enhanced situational awareness of where the forecast may bust.

Scenarios – This Weekend



Example scenario provided to public safety partners ahead of an early March 2016 atmospheric river event. In this scenario, snow levels end up being higher (warmer) than forecast resulting in substantially less snow in lower elevation areas such as Reno, Carson City, and around Lake Tahoe. A lower snow level (colder) scenario was also provided.