

La Nina

By Doug Chabot, Director, Gallatin National Forest Avalanche Center

This winter, the Climate Prediction Center is predicting a La Nina (the girl) weather pattern, which should bring colder temperatures and more snow to western Montana. Like a Vegas bookie, the CPC put the odds of La Nina at 70%. Nothing is sure when it comes to weather, but 70% is better odds than a coin toss, and average snowfall around here is pretty good, anyway. To be fair to the bookies, this also means we have a 30% chance to receive *below* average precipitation. But who wants to think about that?

Ocean temperature in the southern Pacific is a driving force of global weather. Warmer ocean temperatures cause El Nino (the boy) patterns, which often brings below average snowfall to Montana and deep snow to the Arizona deserts. Last winter was an El Nino season. We suffered through thin snow cover and breakable crusts, while powder fell near the Grand Canyon. This year, cooler ocean waters have set La Nina on track to drive the jet stream across the northern United States. This should pump cold, moist air into Montana—essential ingredients for an epic winter. This year's long range weather models predict a moderate to strong La Nina lasting through March. The two stormy winters before last were also La Nina. And remember the biblical snowstorms of 1996-97? The Girl.

More snow equals more avalanches, says an old adage. While we do need snow to have avalanches, there is also another more complicated reality to contend with: in a low snow year, days and weeks pass without snow accumulation. This causes surface snow to weaken and form facets. When buried by new snow, these facets become persistent weak layers. Last winter, Southwest Montana had never-ending dangerous avalanche conditions. However, during a winter of steady snow, weak layers are less likely to form. If we're lucky, this year a steady, almost daily stream of storms will put perma-grins on our faces and keep the backcountry safe. How's *that* for optimism?