

Report on 90-day Weather Projection for the Northern Half of New Mexico

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Introduction:

This is the latest 90-day weather forecast for the northern half of New Mexico. The forecast area covers a region bounded by the state borders on the north, west, and east, and Interstate 40 on the south.

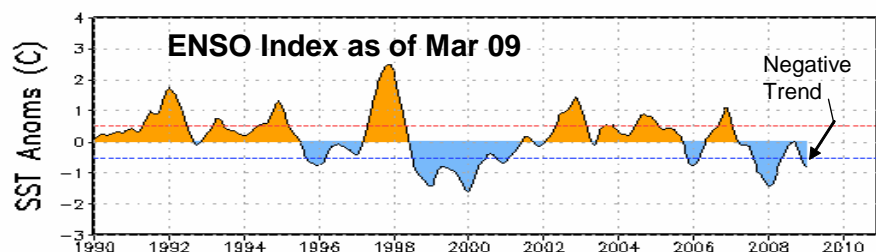
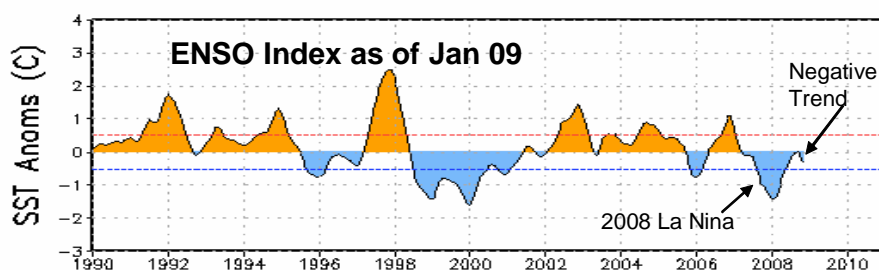
The report contains a summary weather outlook for February through April (directly below), a review of the current El Nino Southern Oscillation (ENSO) condition, and an overview of current weather trends along with outlook maps for the next 90 days.

Summary, Ninety-day weather outlook for forecast area:

- A La Nina has not been officially declared, but all atmospheric measures now indicate a moderate La Nina condition that is expected to create dry conditions over the forecast area this spring.
- Long-range computer models are in reasonable agreement that an official La Nina will not develop and that we will see the current condition moderate later this spring.
- Precipitation throughout the forecast area has been below average over the past 30 days. Temperatures have been significantly above normal in the same period.
- Springtime runoffs for most rivers in the forecast area are expected to be slightly below normal.

Review of Current El Nino Southern Oscillation Situation and Discussion:

The Historic Oceanic Nino Index, which is the official metric from which a La Nina or El Nino is declared, is at -0.8°C , about 25% more negative than last month.



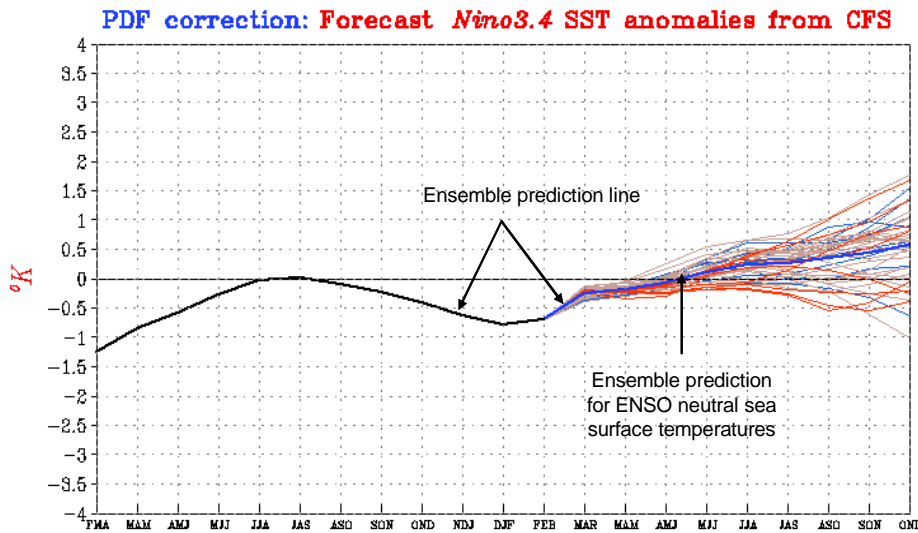
previous month, Feb, showed a 100% increase from the previous month, Jan. The conclusion is that the rate of temperature change is slowing and the cooling trend may be nearing an end.

These conditions do not constitute an official La Nina. For one to

be declared, the 3-month moving average index must be greater than -0.5C for five consecutive averaging periods. In this latest cooling episode we have just two consecutive averaging months that meet that condition.

The graphic above (from Climate Prediction Center) shows the history of the Nino Index. In the graphic are two plots, one generated late last January, and another generated this week. The ocean sea surface cooling trend is obvious.

Computer models are generally in agreement that no official La Nina will develop in the next six months. The graphic below (from National Climate Prediction Center) shows the predicted ENSO sea surface temperature departure from normal. The solid, heavy line is the ensemble, or the average of all the predictions. The black part contains actual measures and the blue portion are predictions.



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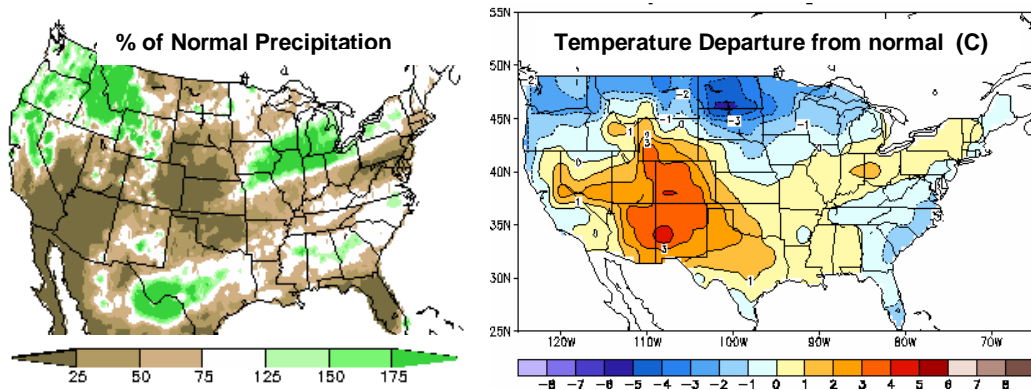
As can be seen, there is consensus that the ENSO region will return to neutral conditions sometime in early summer. Then it shows a positive trend into fall. Therefore, more normal precipitation conditions are

expected this summer, but this spring will likely be dry and dusty.

Last 30 days.

The maps below (from National Climate Prediction Center) show the precipitation and

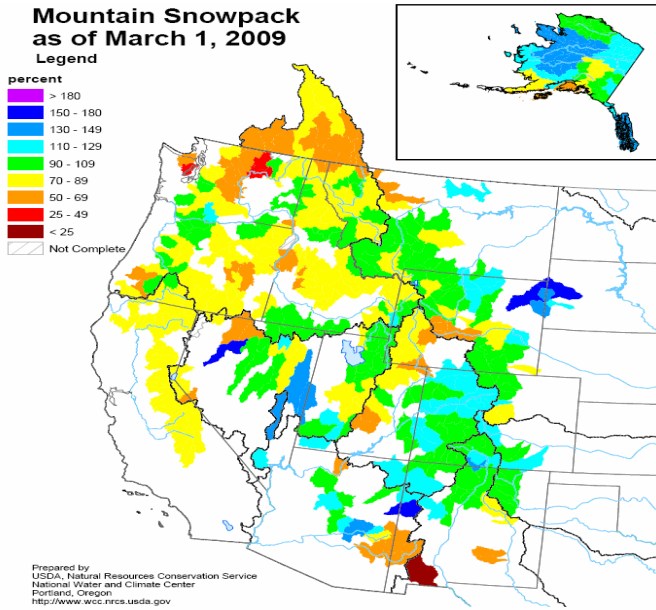
Precipitation and Temperature Last 30 Days



temperature conditions in the forecast area over the past month. It has generally been dryer and much warmer than normal.

Next 90 days.

The snow pack is beginning to melt, especially at lower elevations (less than 8,000’).



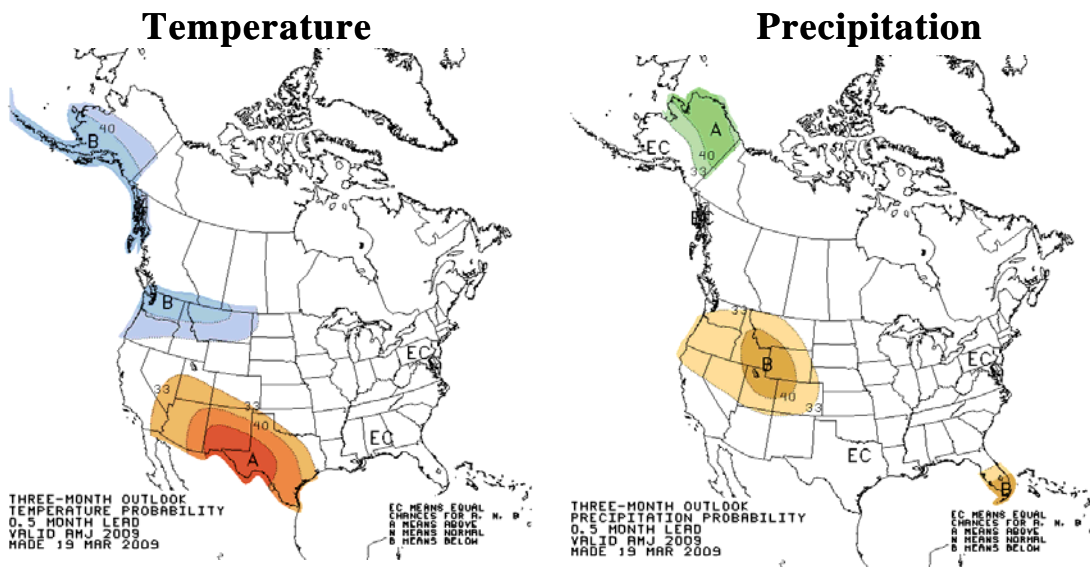
Many areas have packs that are slightly below normal, including much of the forecast area. Together, these snow packs are expected to produce slightly lower than normal runoffs for NM rivers, at least in terms of total water volume over the spring season.

However, the higher than normal expected temperatures may produce heavier runoffs earlier in the year with lower water flows later in the spring.

The map at left (from the National Weather Service National Hydrologic Center) shows the current snowpack in terms of percent of normal.

The expectation for the next 90 days is shown in the dual maps below (from the National Climate Prediction Center). Above normal temperatures are expected. But precipitation is expected to be around normal, which is consistent with the expected warming of the sea surface in the ENSO region.

Outlook for Apr Through Jun 09



Recent Weather Trends

The recent weather continues to show a preponderance of high pressure ridges over the forecast area that weaken or block moisture laden storms. These storms originate in the Aleutian Island area and mid-latitude Pacific regions and are the sources of most of the winter and spring moisture in the forecast area.

Storms have tried to invade the area over the past few weeks, and one of them successfully produced limited beneficial precipitation. This storm trend is expected to continue over the next couple of months.

Follow-up reports:

The next report is scheduled for late April. In addition to the normal information about ENSO, the report will also contain an explanation for the spring wind phenomenon that is common in the SW US.