Water Year Outlook
Long Range Weather Forecast

• Use a combination of long term predictors
  – Phase of Pacific Decadal Oscillation (PDO)
  – Phase of Atlantic Multi-Decadal Oscillation (AMO)

• And seasonal predictors
  – ENSO
    • El Nino
    • La Nina
  – North Pacific sea surface temperature anomalies
    • Anomaly-difference from the mean

• Analog years
  – Years with similar weather patterns as the upcoming year
Long Term Predictors

- PDO is in cold phase
- AMO is in warm Phase
- Climatological precipitation patterns as a function of PDO and AMO Phases are below

This is the present status

25% = normal drought frequency
ENSO Forecast
ENSO Forecast

Nino3.4 SST plumes from POAMA Forecasts 14 Aug 2011 - 12 Sep 2011

Anomaly (°C)

Pacific Sea Surface Temperature Anomaly Forecast
Boise and Normal Precipitation (1954-1956) and Snake River Flows at Weiser
NOAA’s Climate Prediction Center: La Niña is back

September 8, 2011

La Niña, which contributed to extreme weather around the globe during the first half of 2011, has re-emerged in the tropical Pacific Ocean and is forecast to gradually strengthen and continue into winter. Today, forecasters with NOAA’s Climate Prediction Center upgraded last month’s La Niña Watch to a La Niña Advisory.

NOAA will issue its official winter outlook in mid-October, but La Niña winters often see drier than normal conditions across the southern tier of the United States and wetter than normal conditions in the Pacific Northwest and Ohio Valley.

“This means drought is likely to continue in the drought-stricken states of Texas, Oklahoma and New Mexico,” said Mike Halpert, deputy director of the Climate Prediction Center. “La Niña also often brings colder winters to the Pacific Northwest and the northern Plains, and warmer temperatures to the southern states.”
Fall and Winter Outlook

- La Niña conditions are present across the equatorial Pacific.

- Sea surface temperature (SST) anomalies have become increasingly negative in the east-central equatorial Pacific Ocean during the last several weeks.

- Atmospheric circulation anomalies are consistent with La Niña.

- La Niña is expected to strengthen and continue into the Northern Hemisphere winter 2011-12.
Fall and Winter Outlook

January - March anomalies and patterns during moderate to strong La Nina

Climate Prediction Center/NCEP/NWS
Fall and Winter Outlook

http://www.cpc.ncep.noaa.gov/
Fall and Winter Outlook

THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
2.5 MONTH LEAD
VALID NDJ 2011
MADE 18 AUG 2011

EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

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Fall and Winter Outlook

THREE-MONTH OUTLOOK
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In Idaho, normal temperatures increased about 0.6 degree F for the max temperatures and about 0.3 degree F on the min temperatures.
Boise 2011 Water Year

KBOI - Oct 2010 Through Sep 2011

Temperature (Deg F)

Precipitation (Inches)

Snow (Inches)

Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep

Record Min  Record Max  Normal  Below Normal  Above Normal

110 90 70 50 30 10 -10 -30

110 90 70 50 30 10 -10 -30

12
10
8
6
4
2
0

13.92
21.8