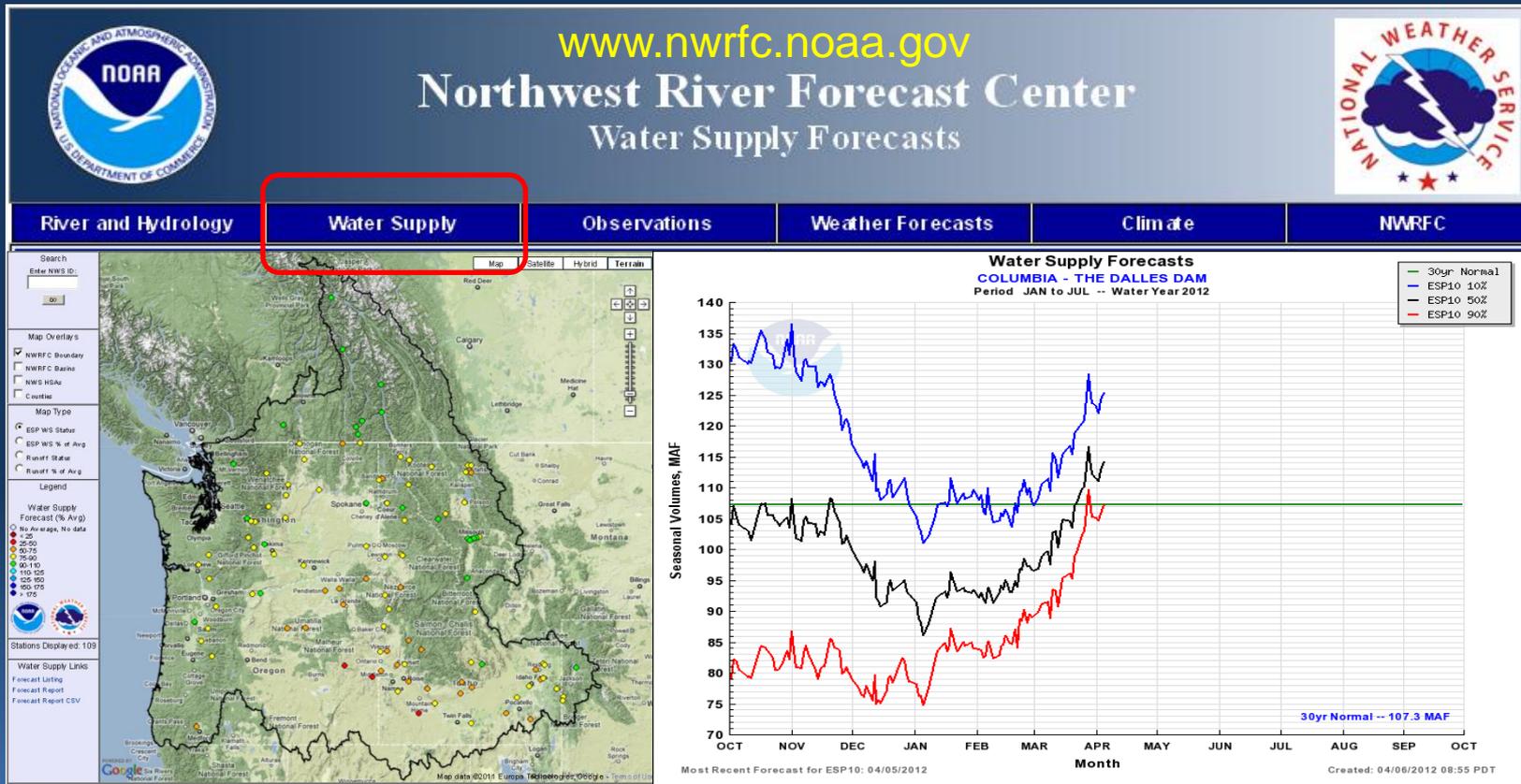


April 2012 Water Supply Briefing



Steve King, NWRFC
Stephen.King@noaa.gov
(503)326-7291



Observed Conditions



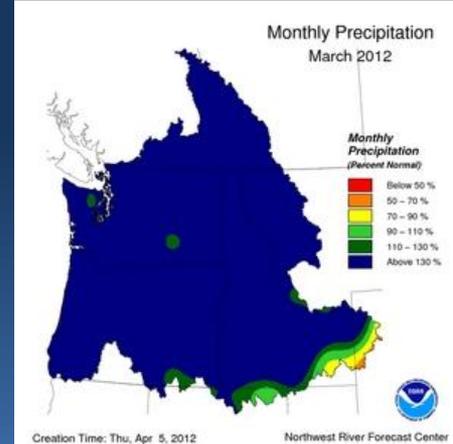
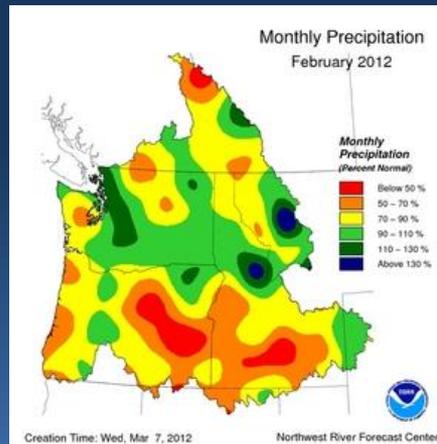
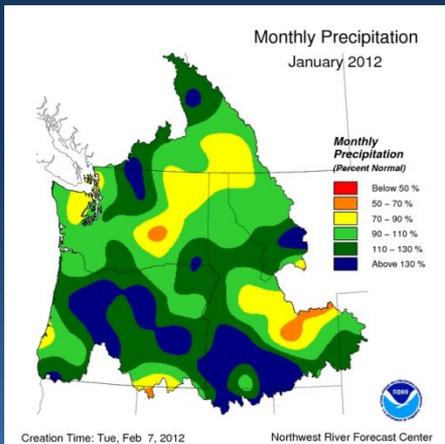
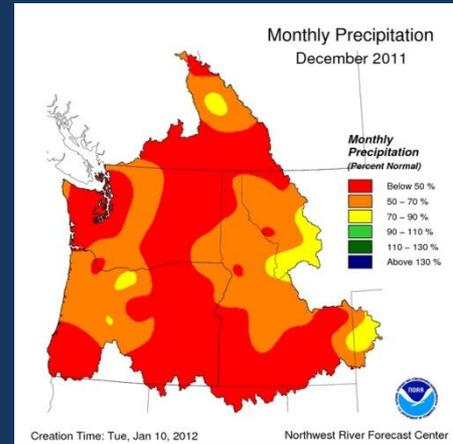
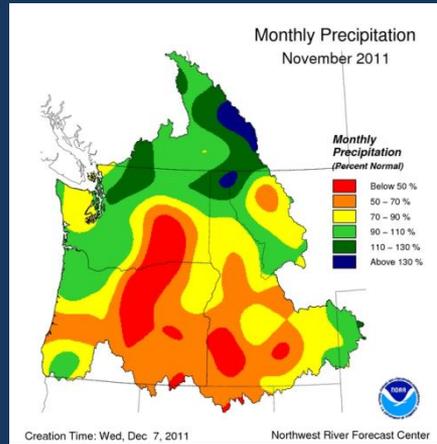
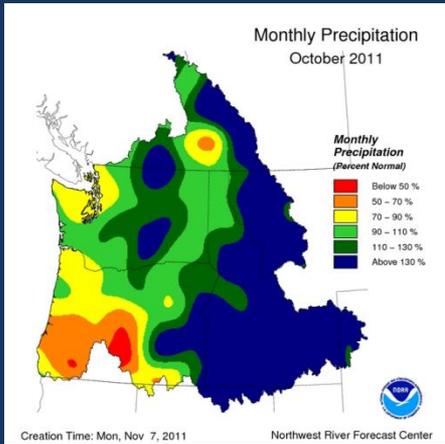
Precipitation

Snowpack

Runoff



Observed Monthly Precipitation

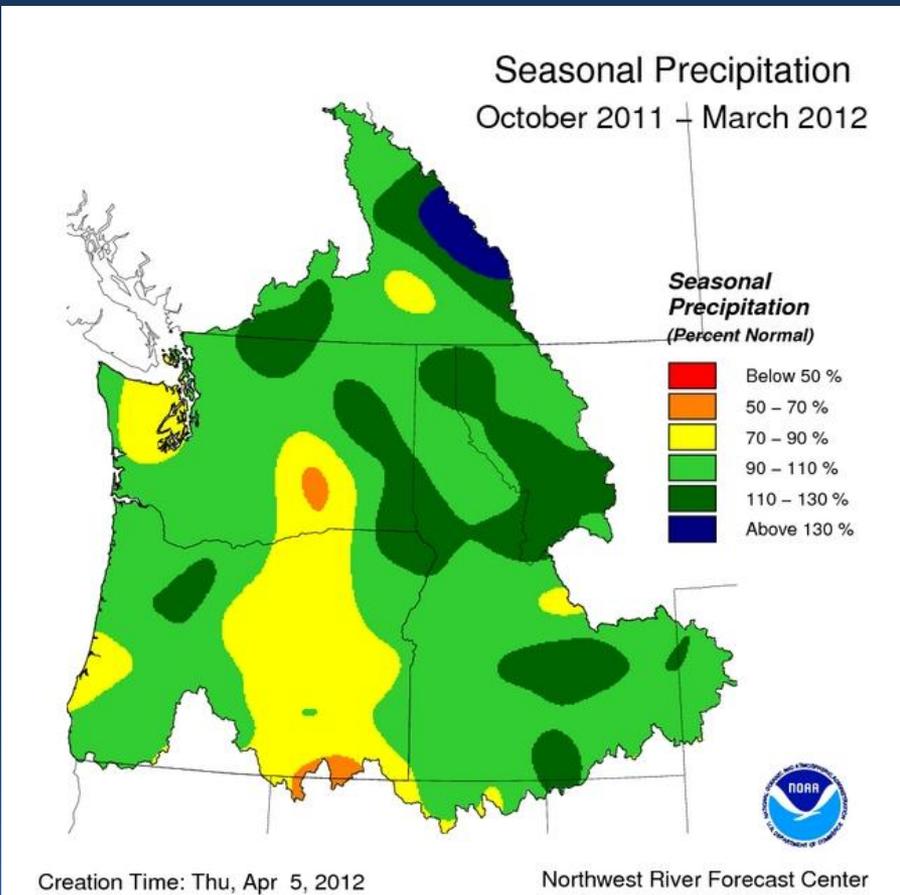


Observed March Precipitation

above Grand Coulee = 247%
above Ice Harbor = 169%
above The Dalles = 202%



Observed Seasonal Precipitation

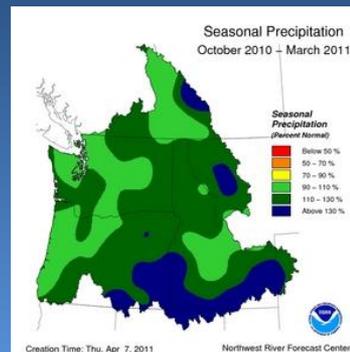


Observed Precipitation
Oct 1-March 31, 2012

above Grand Coulee = 111%
above Ice Harbor = 105%
above The Dalles = 108%

Last Year
Oct 1-March 31, 2011

above Grand Coulee = 118%
above Ice Harbor = 124%
above The Dalles = 119%



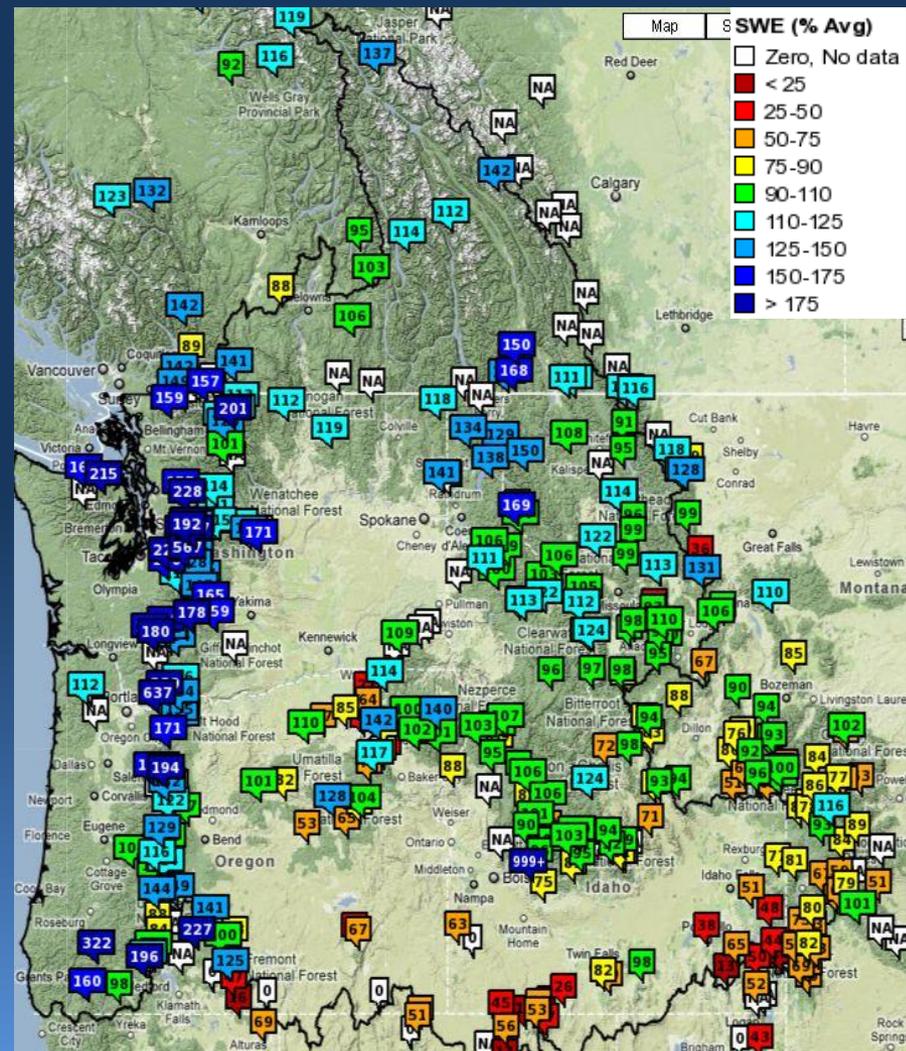
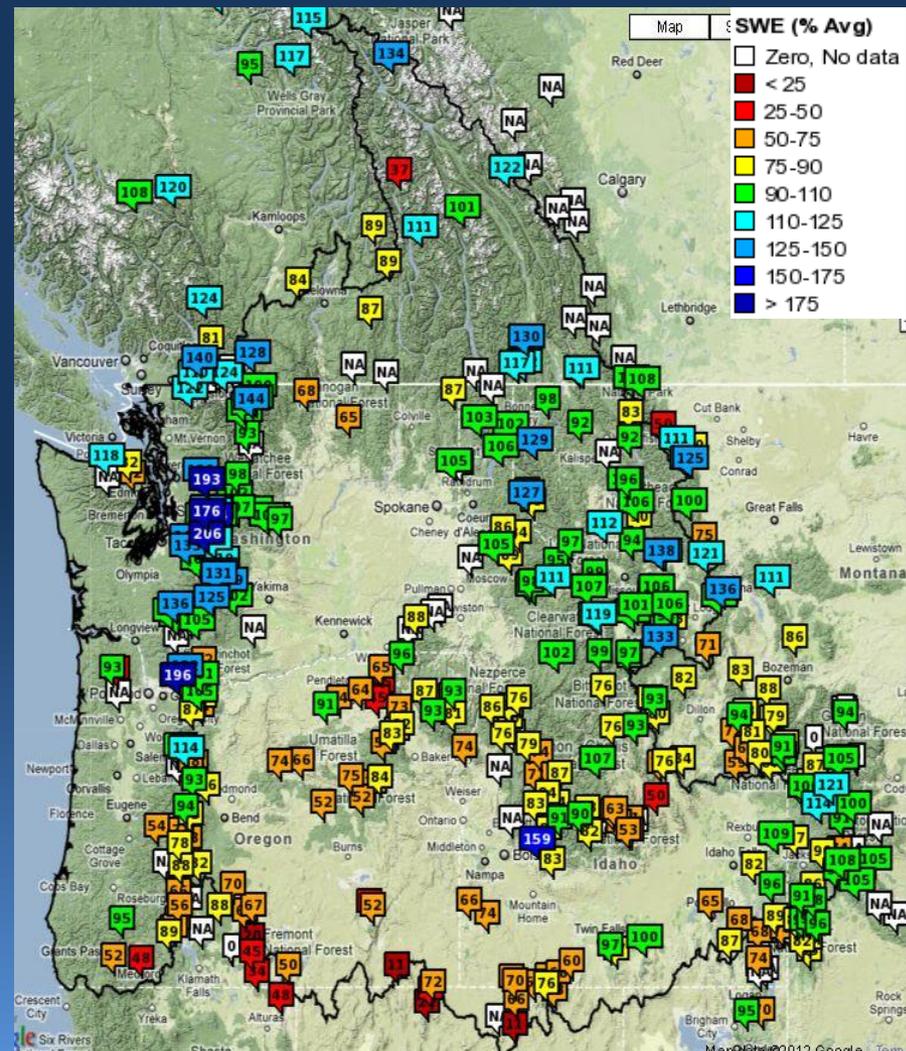


Current Snow Conditions



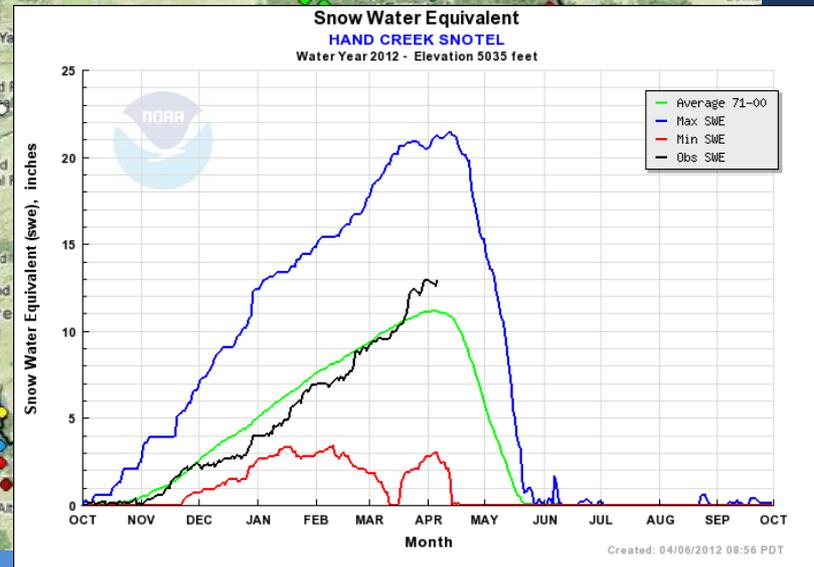
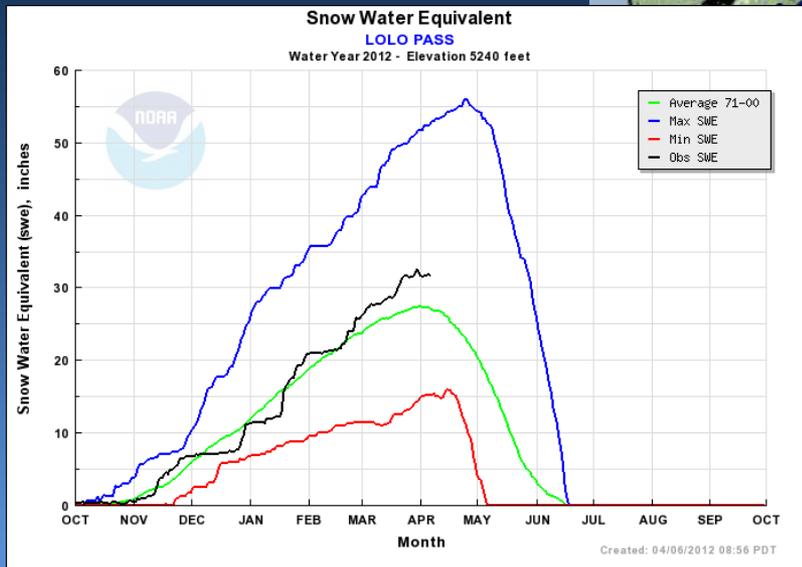
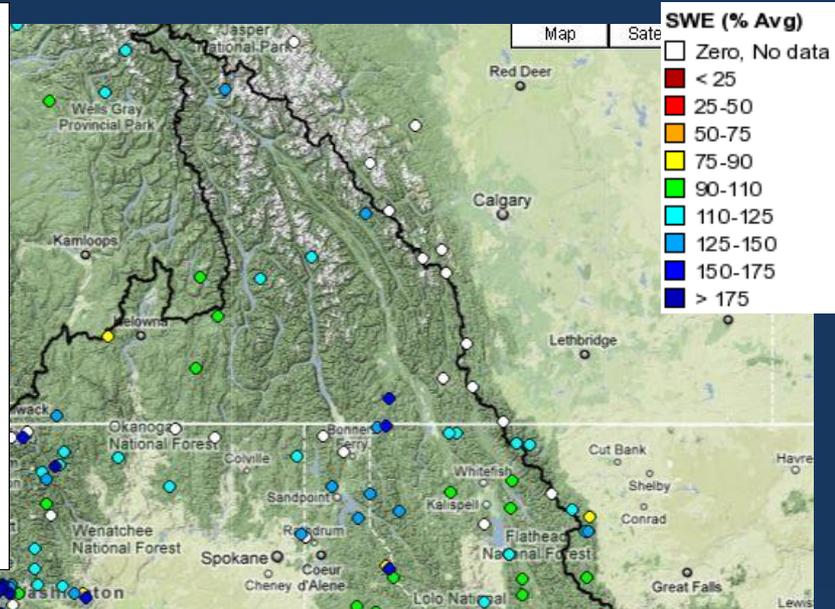
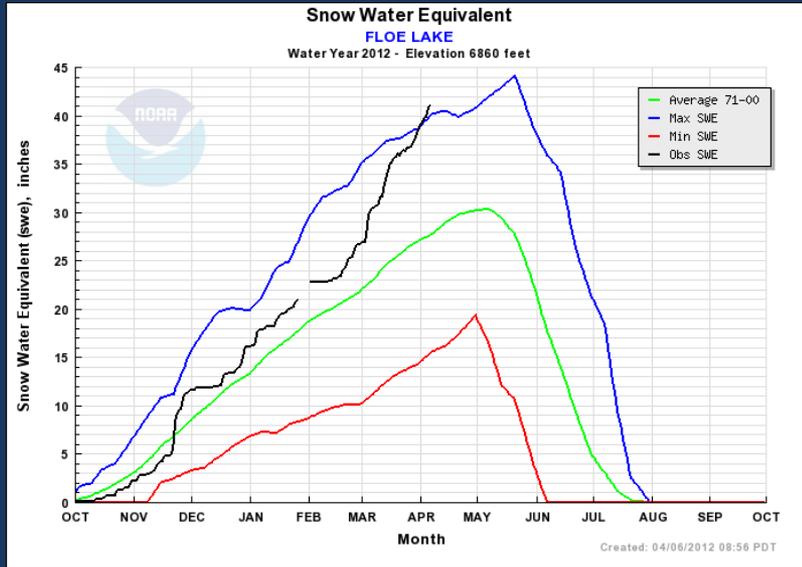
March 7, 2012

April 5, 2012

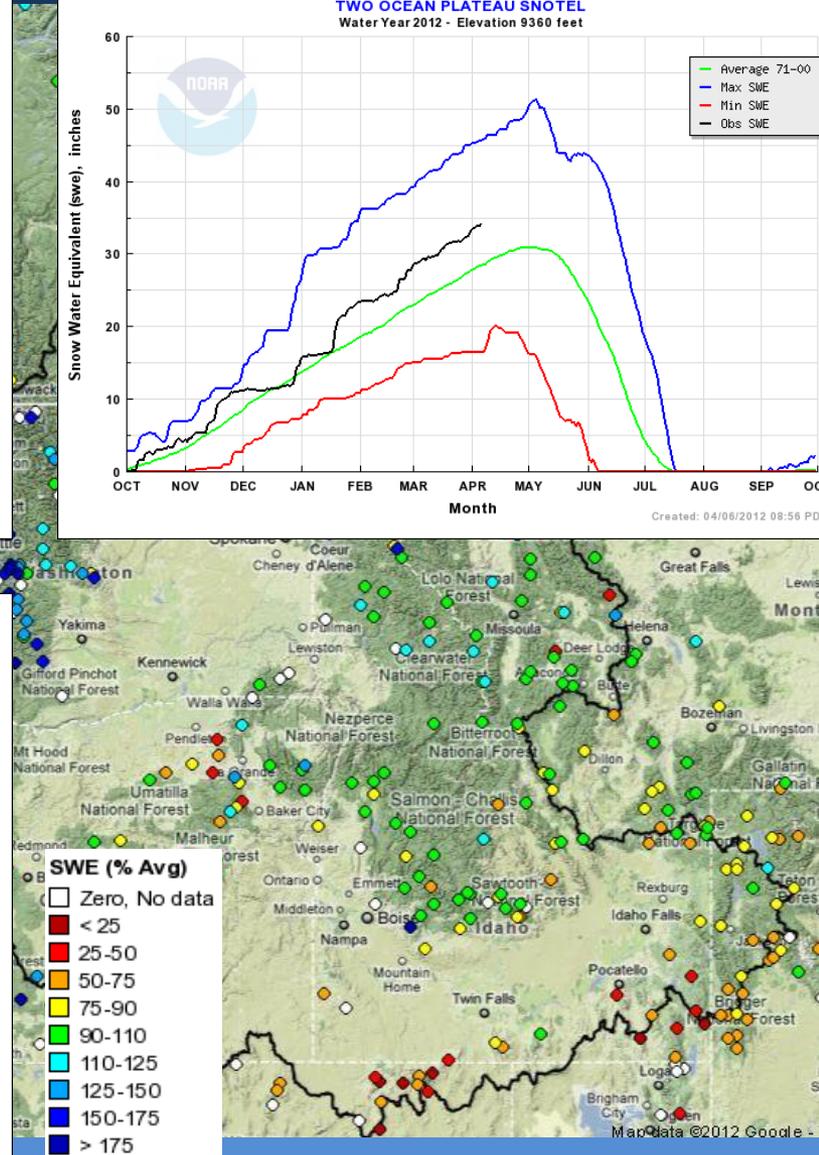
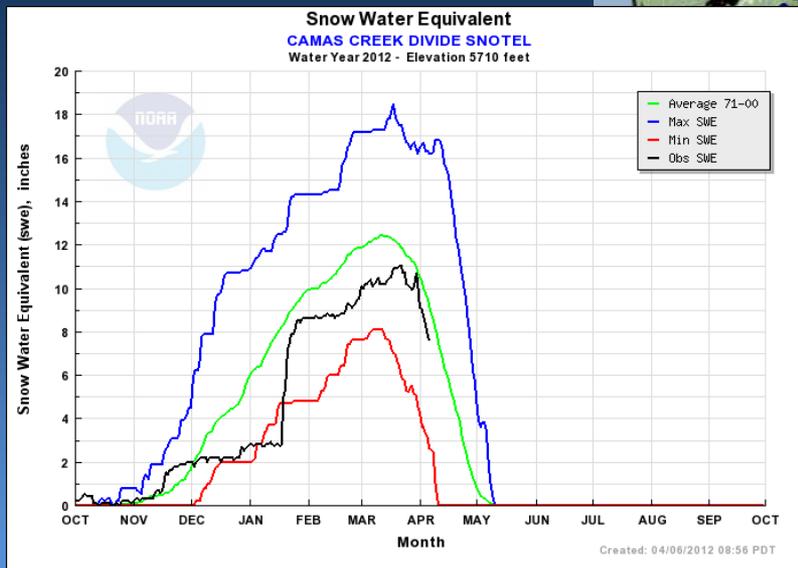
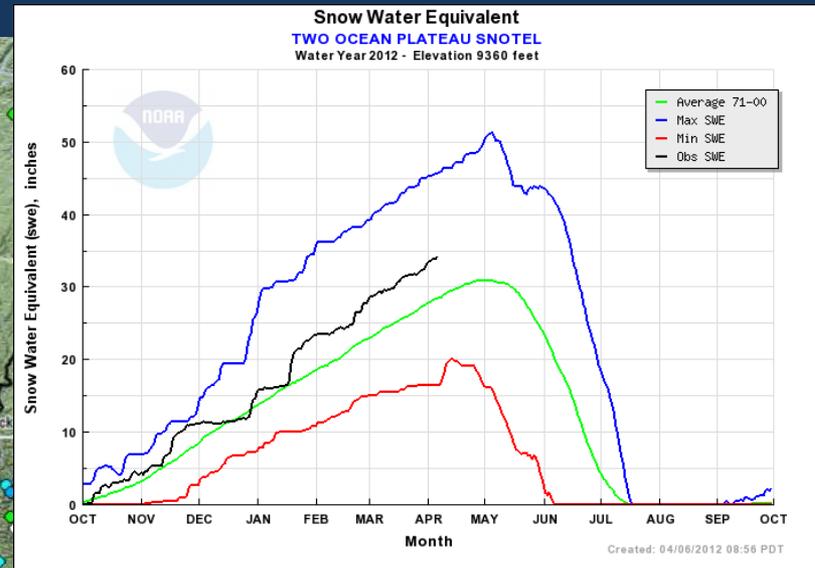
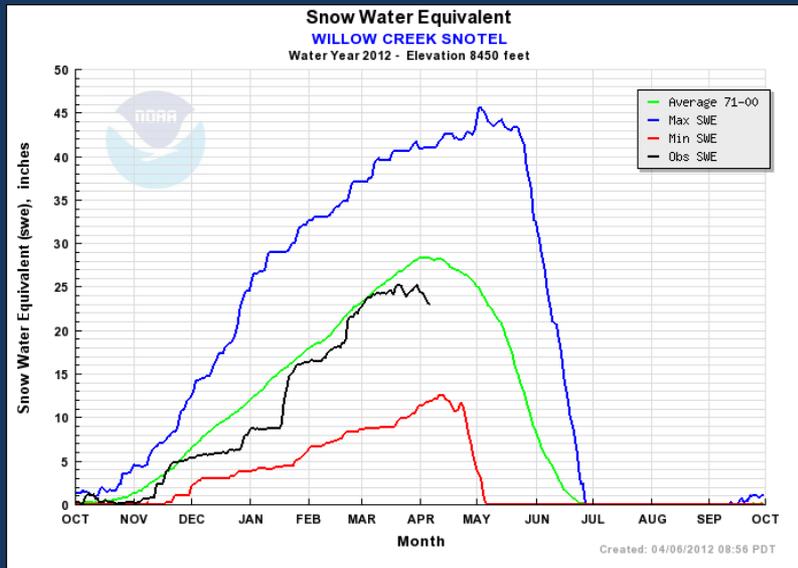




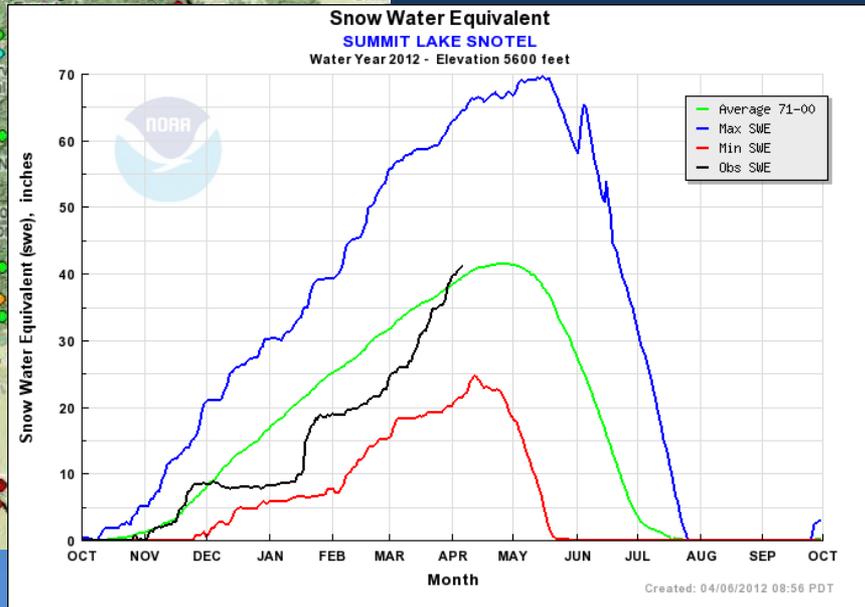
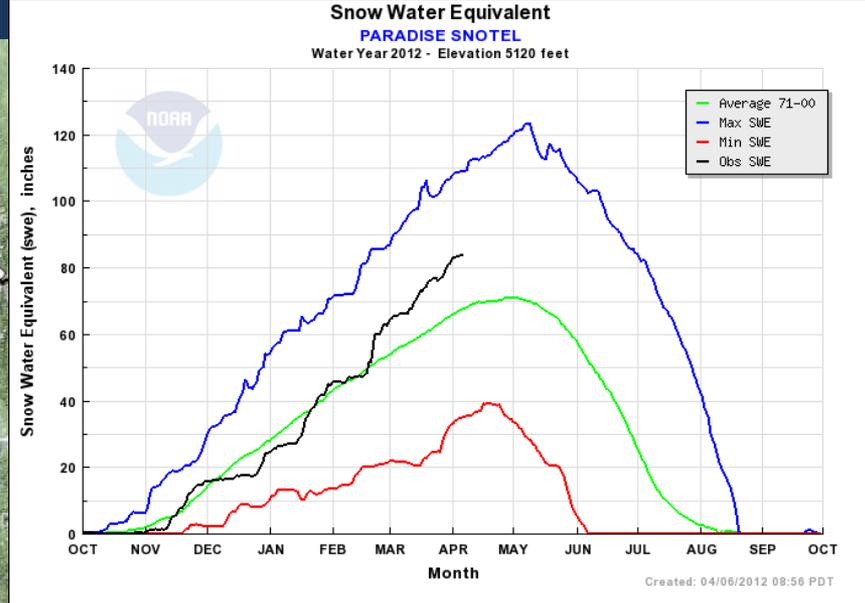
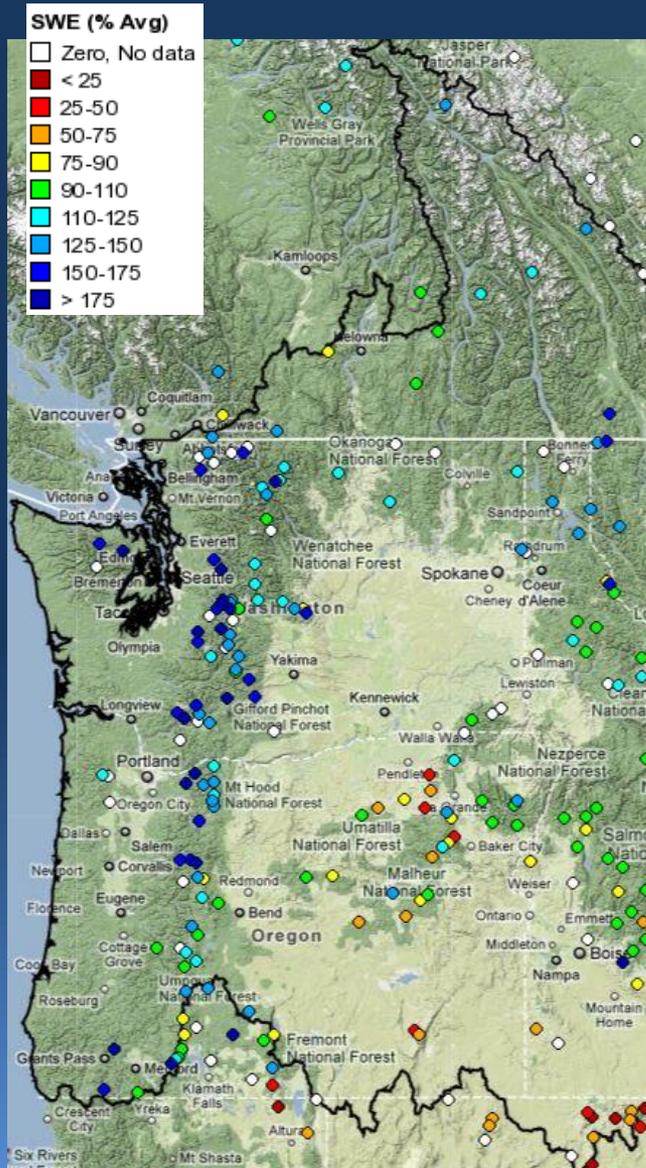
Upper Columbia Snow Conditions



Snake River Snow Conditions

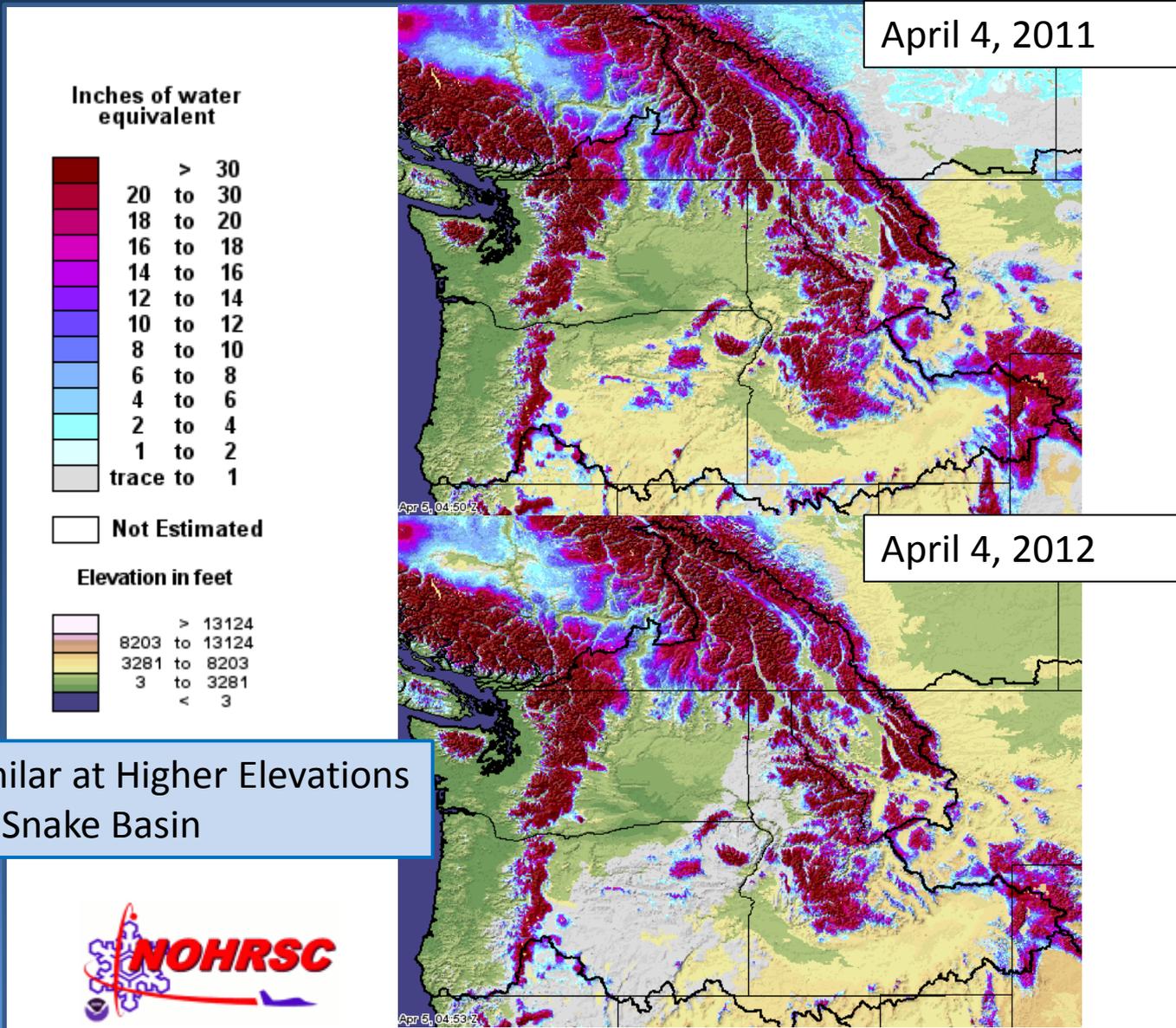


Lower Columbia Snow Conditions



Snow Water Equivalent

2012 compared to 2011



SWE Similar at Higher Elevations
Less in Snake Basin





Future Conditions



Climate Outlooks

10 Day Precipitation Forecast

Water Supply Forecasts

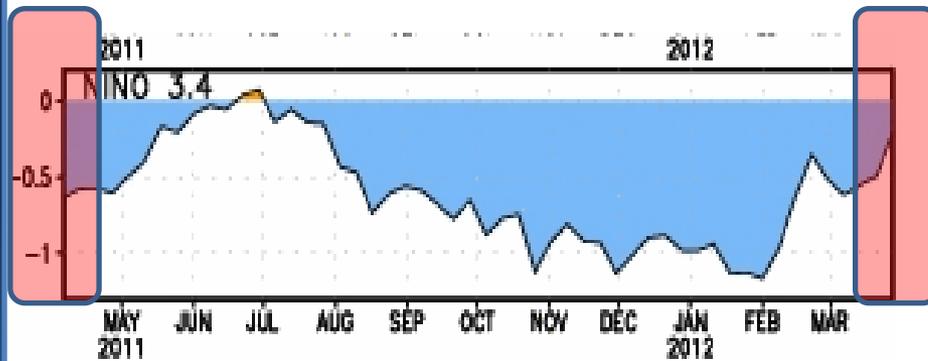


Enso: Observed and Forecast

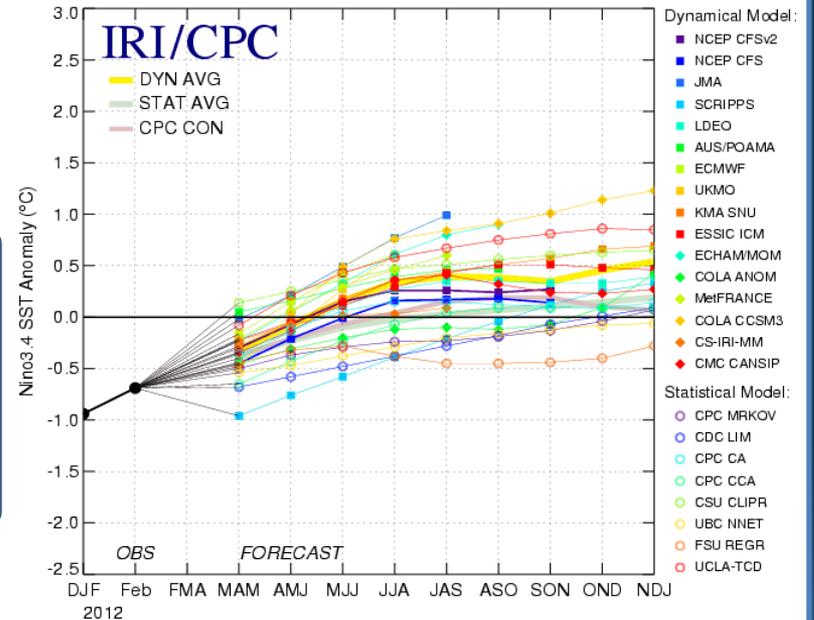
SST Anomaly (Deg C)



Latest observed: SST 3.4 ~ -.20 Deg C



Mid-Mar 2012 Plume of Model ENSO Predictions



CPC Synopsis: La Niña is expect to transition to ENSO-neutral by end of April

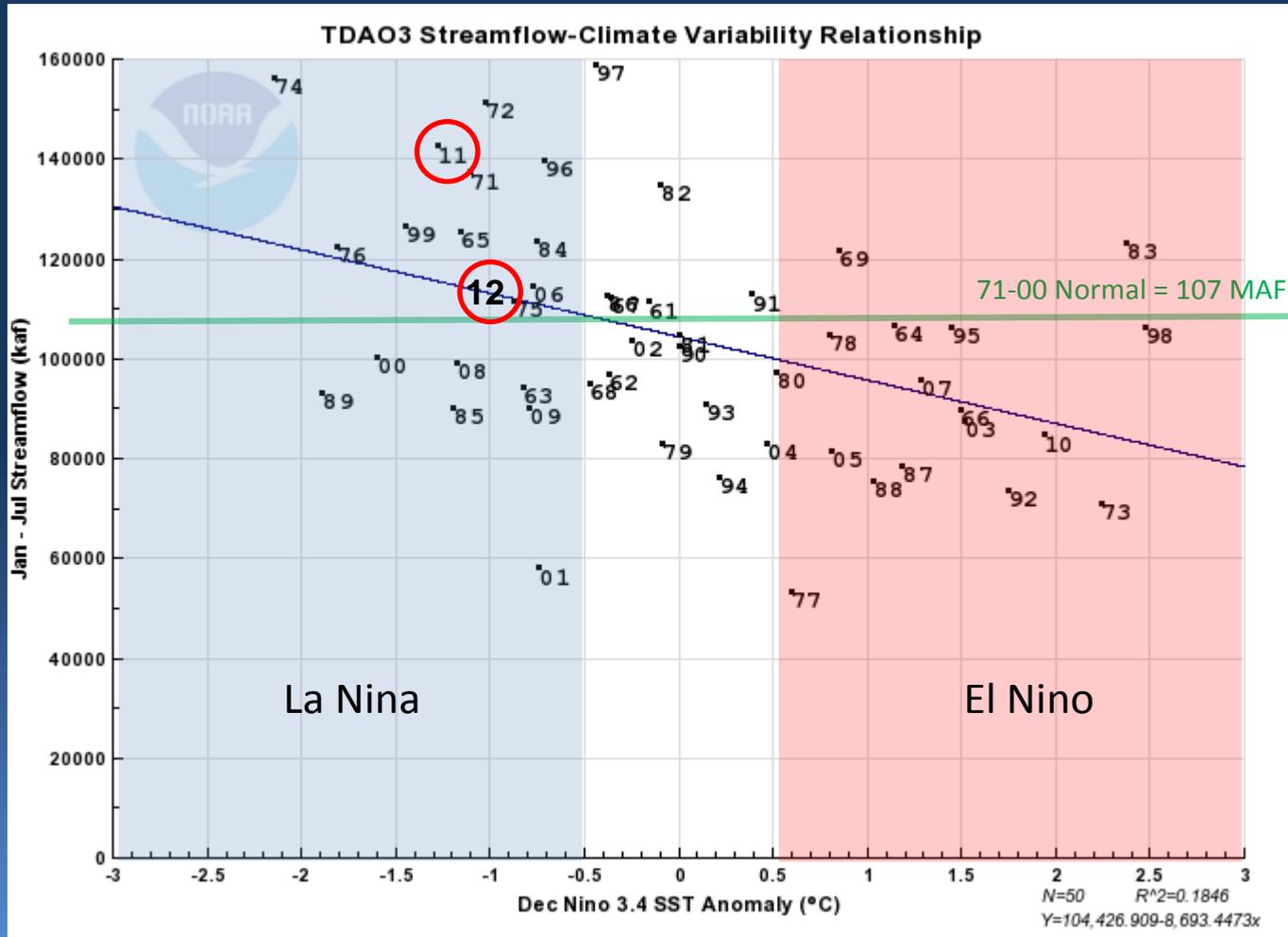
Source: Climate Prediction Center Weekly ENSO Update

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf



SST Anomaly vs Streamflow

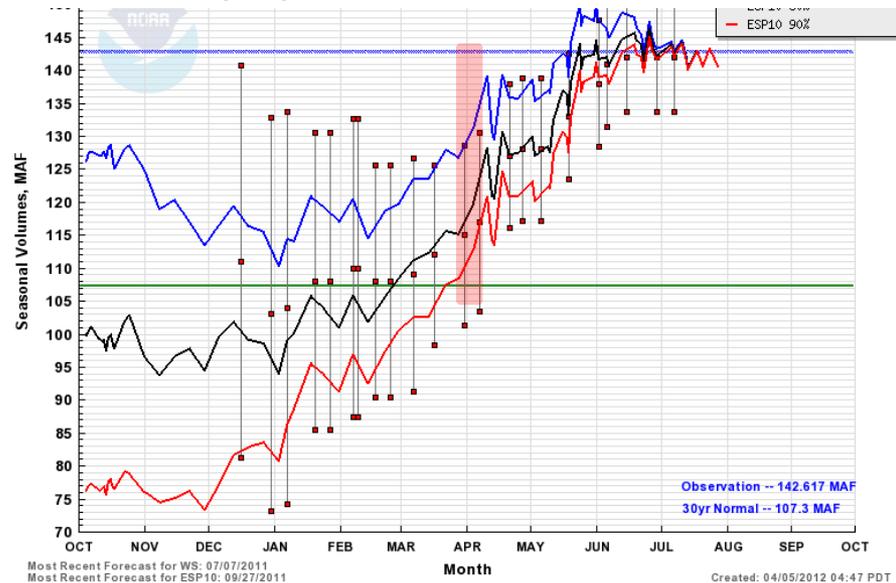
Columbia River near The Dalles



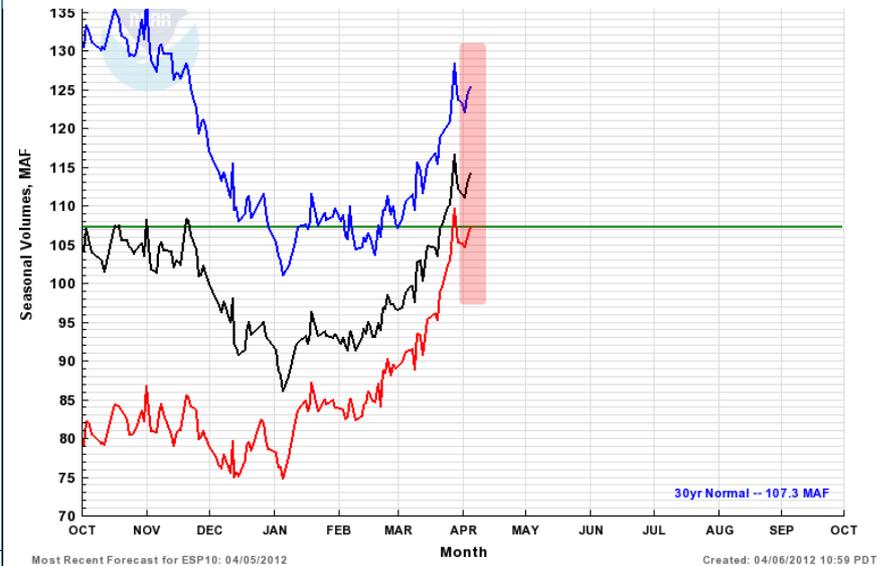


Comparison of 2011 – 2012 Early April Water Supply Forecast Columbia River near The Dalles

2011 Jan – Jul Fcst at The Dalles
Early April Forecast = 119 MAF

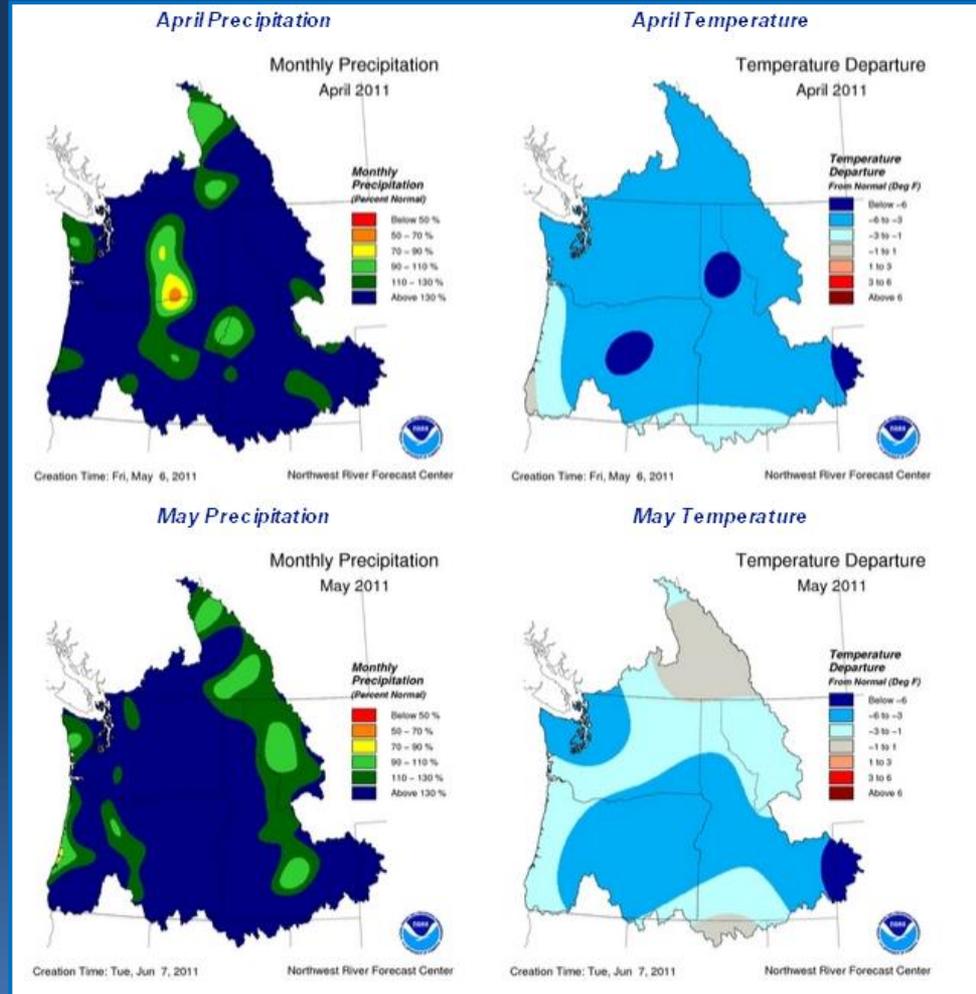


2012 Jan – Jul Fcst at The Dalles
Early April Forecast = 114 MAF





Late Spring 2011: Wet, Cold



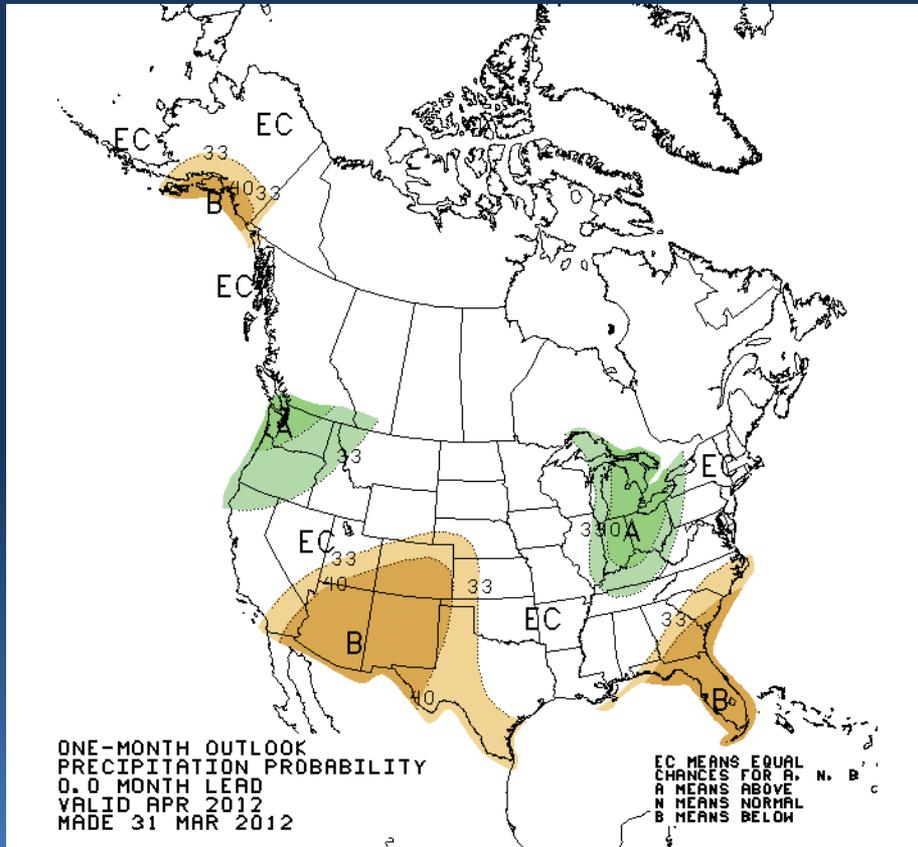
Late Spring 2012: ??



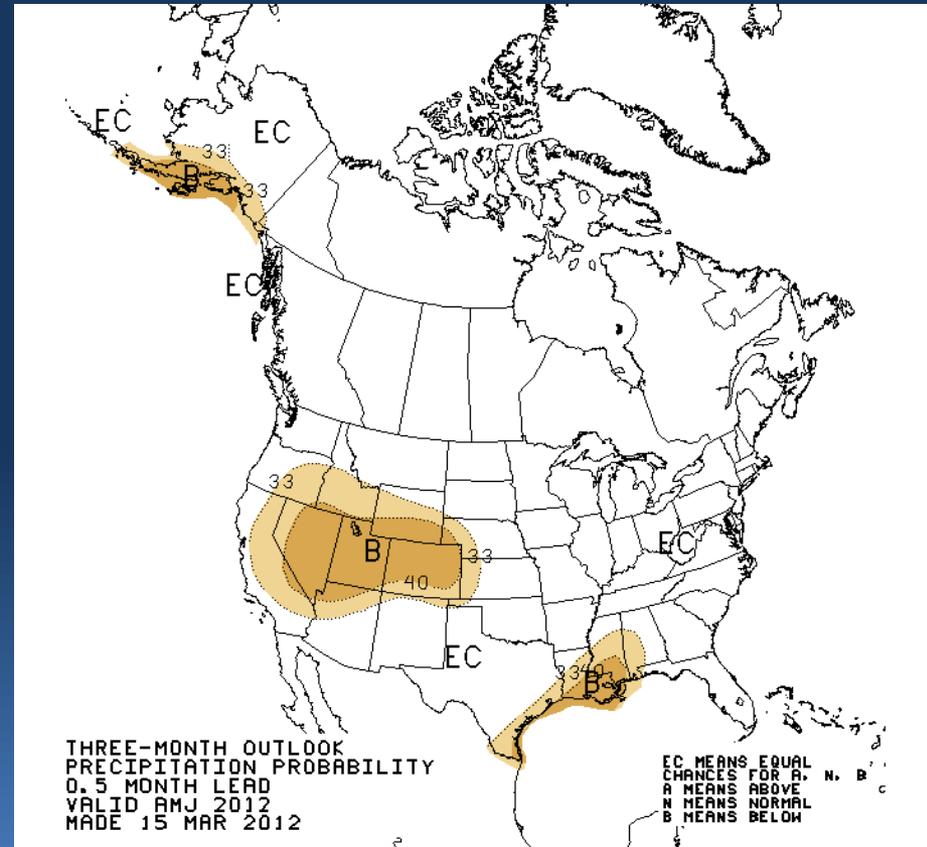
Climate Outlook: Precipitation



Current Month Outlook



Three Month Outlook

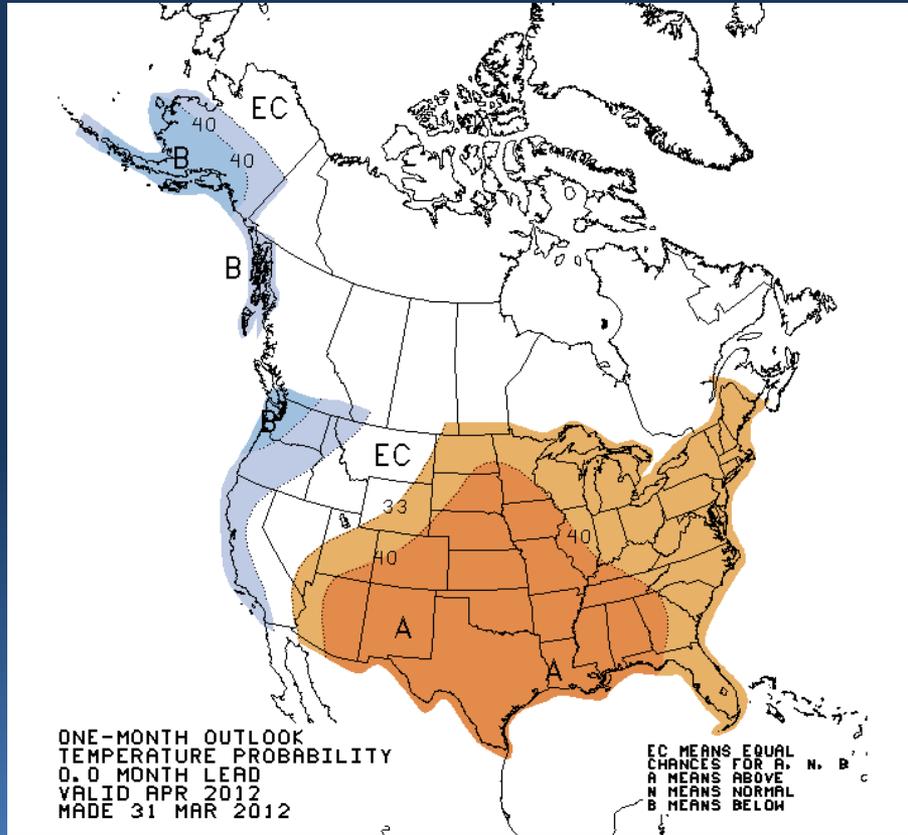




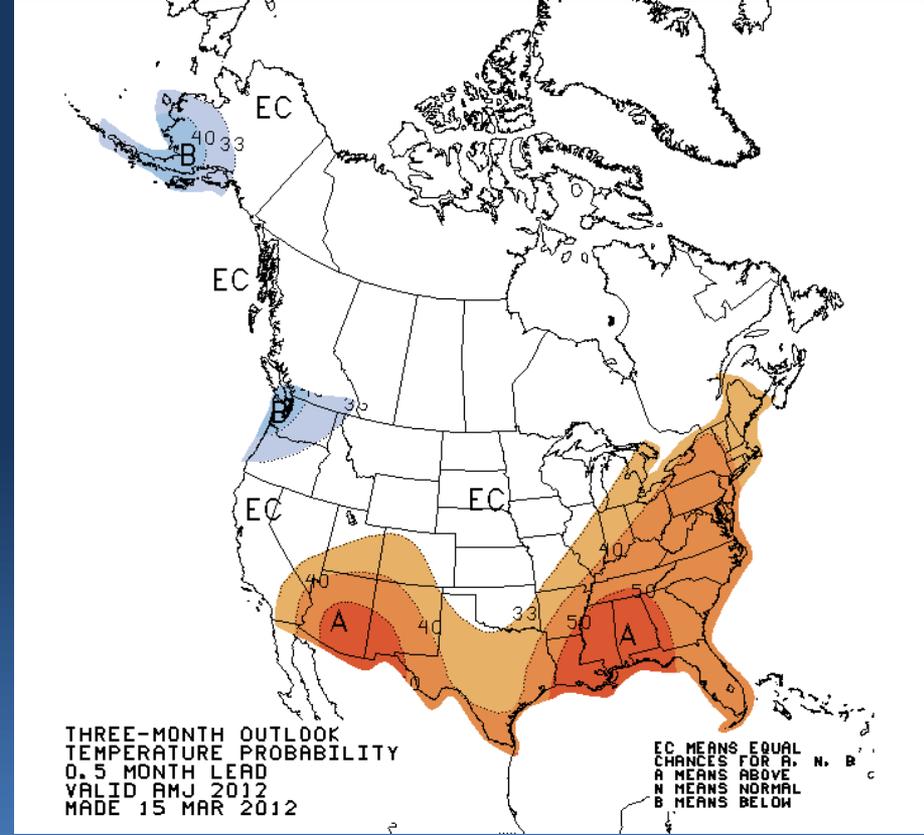
Climate Outlook: Temperature



Current Month Outlook



Three Month Outlook

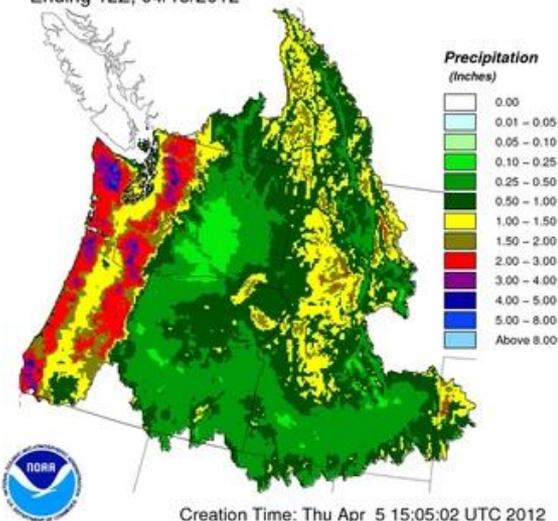




ESP 10 Day Precipitation Forecast

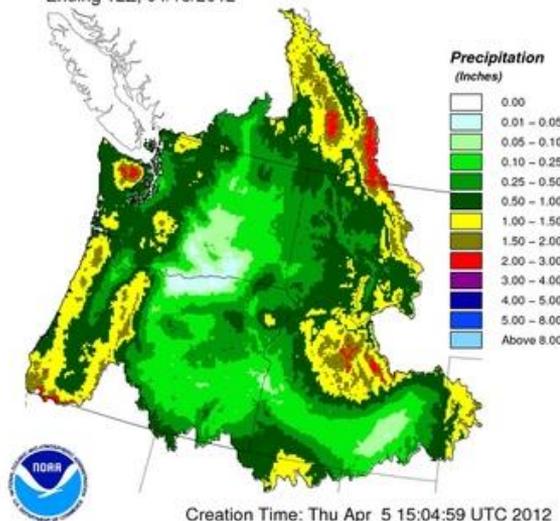


10 Day Precipitation Climatology
Ending 12Z, 04/15/2012



Creation Time: Thu Apr 5 15:05:02 UTC 2012

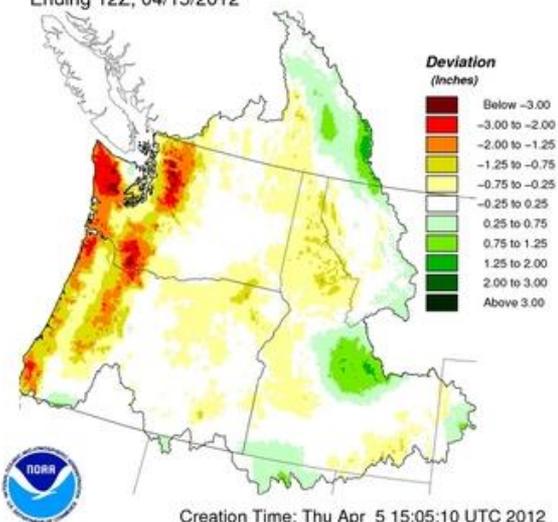
10 Day QPF
Ending 12Z, 04/15/2012



Creation Time: Thu Apr 5 15:04:59 UTC 2012

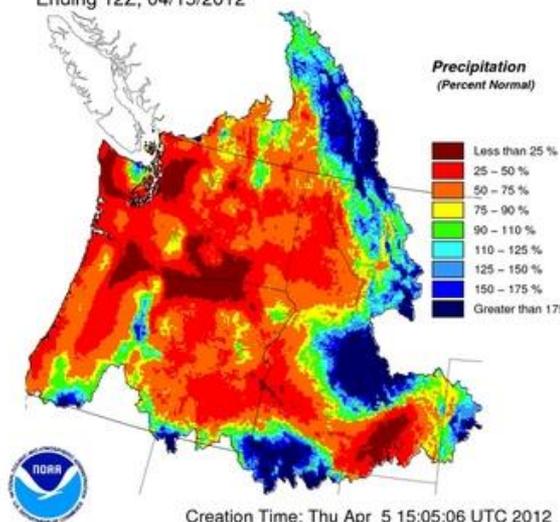
Work in progress to make these plots available on web

10 Day QPF (Deviation from Climatology)
Ending 12Z, 04/15/2012



Creation Time: Thu Apr 5 15:05:10 UTC 2012

10 Day QPF (Percent of Climatology)
Ending 12Z, 04/15/2012



Creation Time: Thu Apr 5 15:05:06 UTC 2012

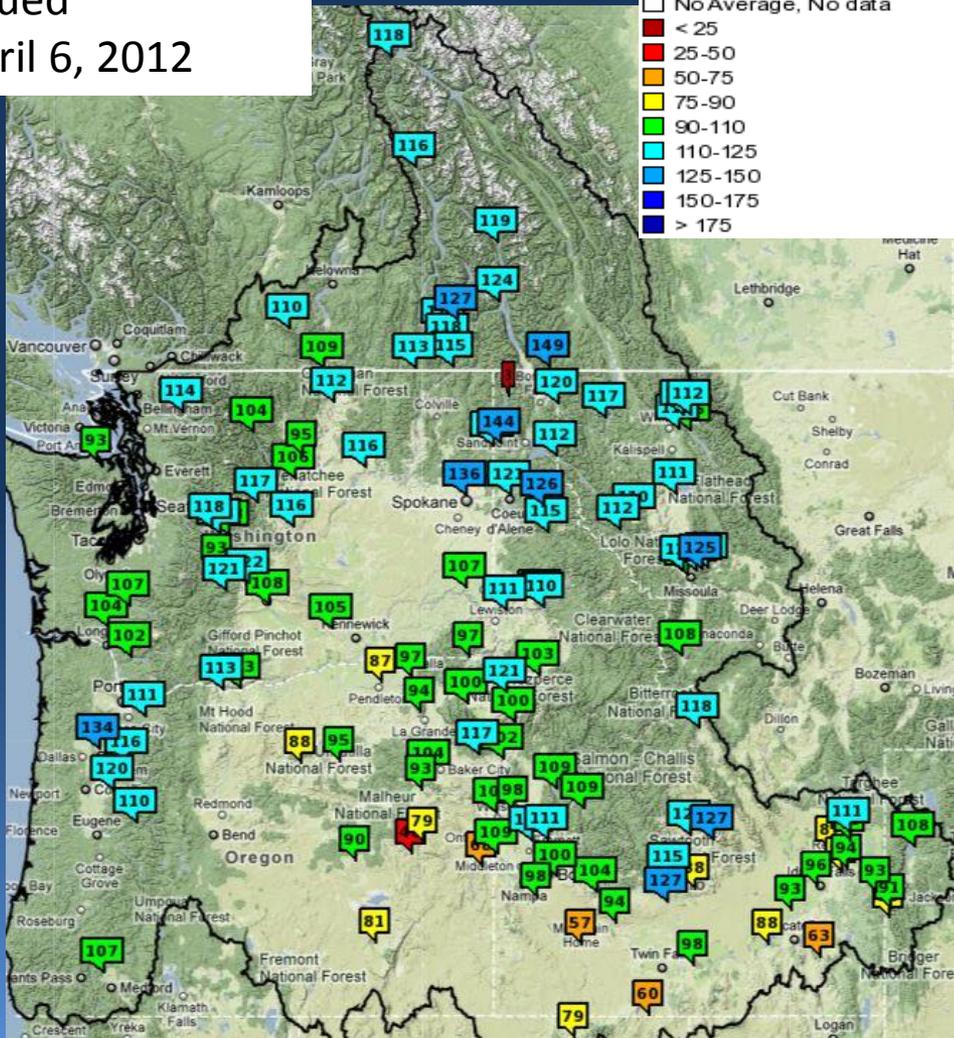
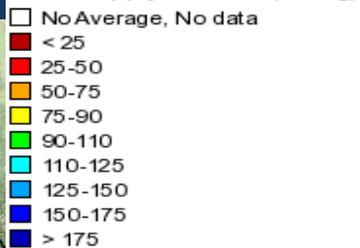


Water Supply Forecasts



Issued
April 6, 2012

Water Supply Forecast (% Avg)



Ensemble Streamflow Procedure
April 6th Issuance Date
April 5th Ensemble Date

Forecasts updated weekly/daily
All forecasts are 'official'

NWRFC Forecasts
Agency Collaborated

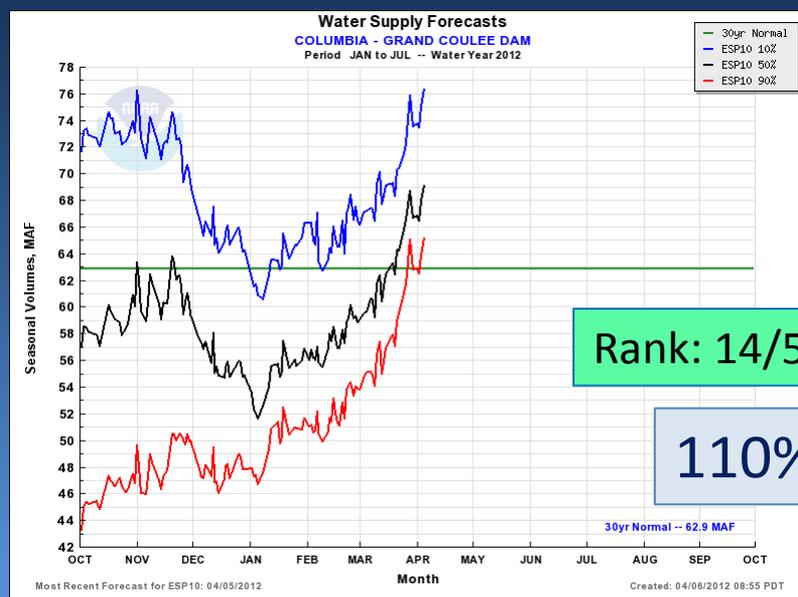
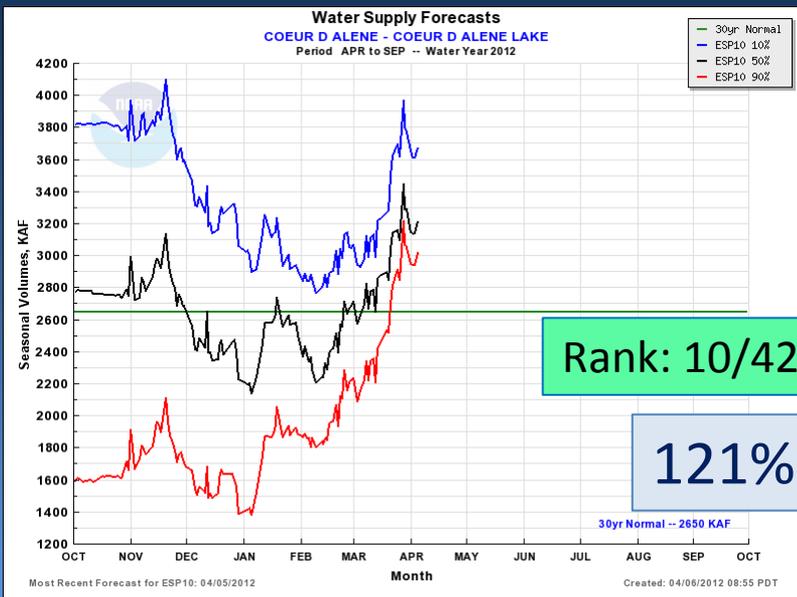
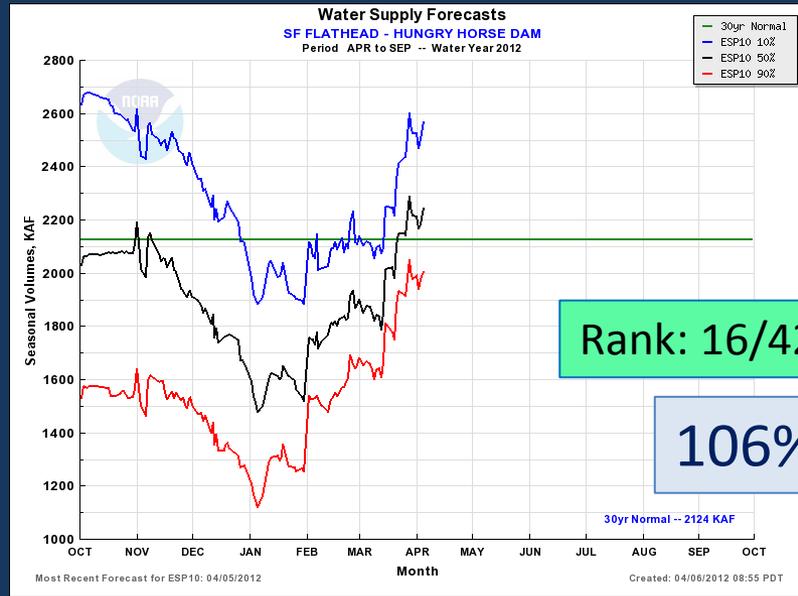
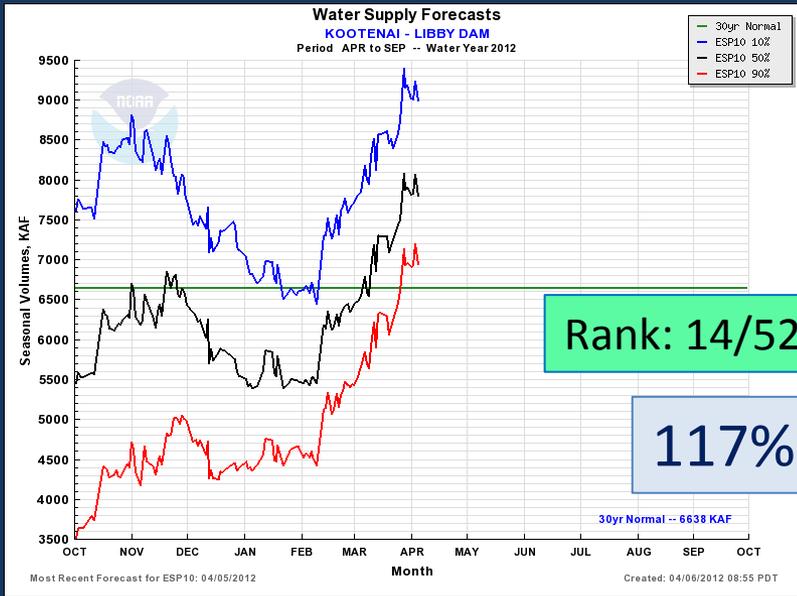
Forecasts include 10 days of
forecast precipitation

Model States/Snow/Runoff
updated continuously through
month

Compared to 30 yr Runoff Normal
(1971-2000)

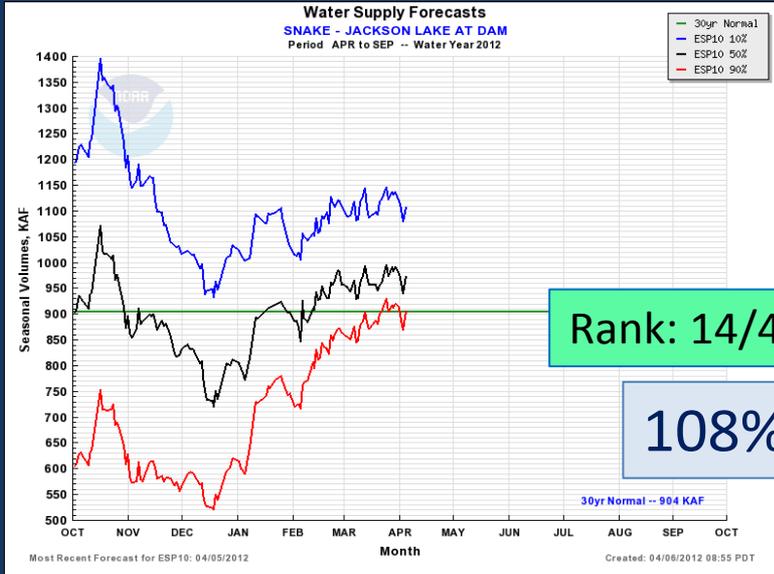


Water Supply Forecast: Upper Columbia



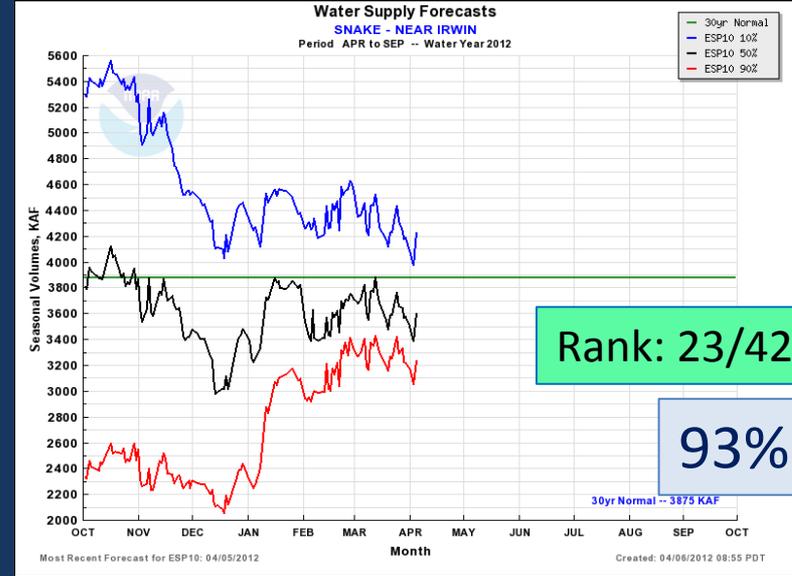


Water Supply Forecast: Snake



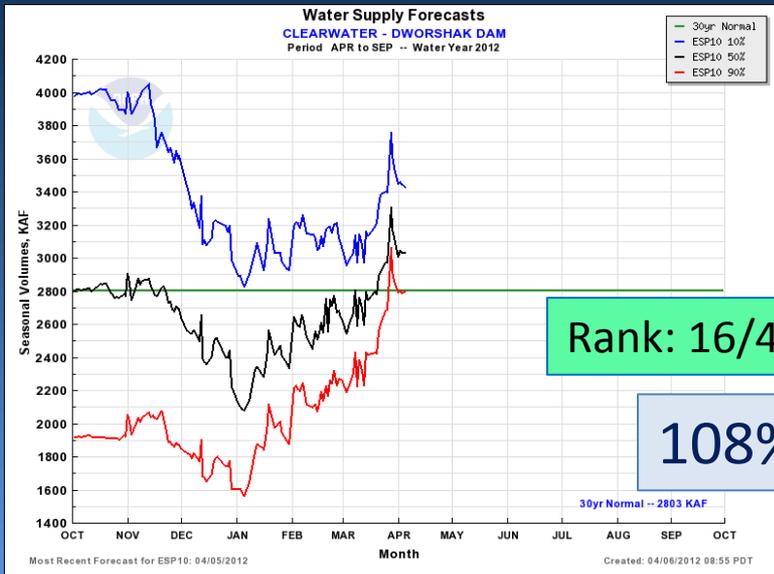
Rank: 14/42

108%



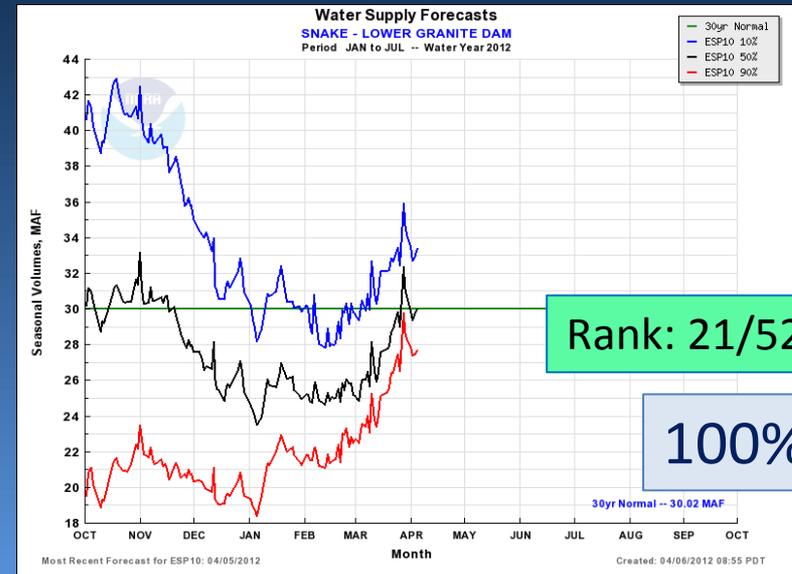
Rank: 23/42

93%



Rank: 16/45

108%

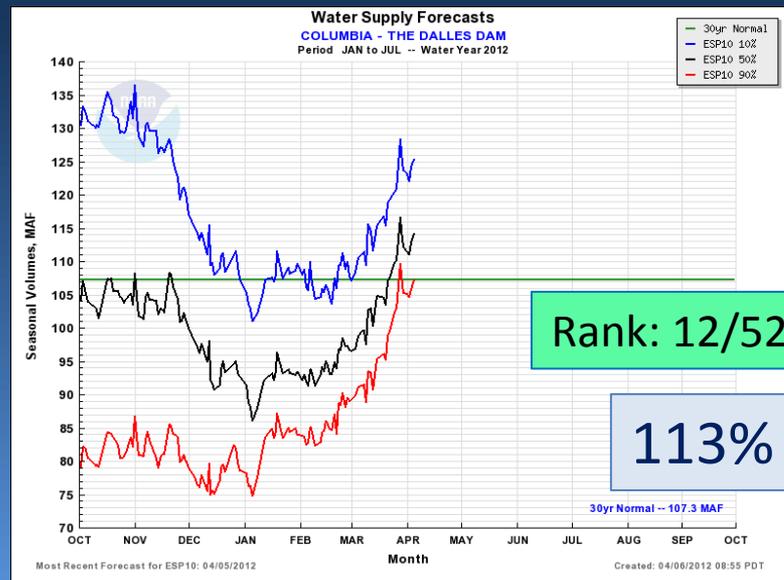
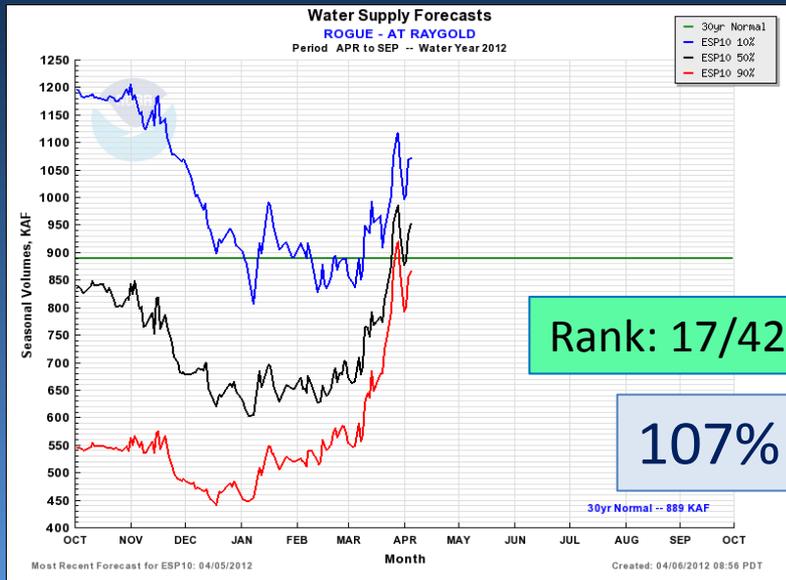
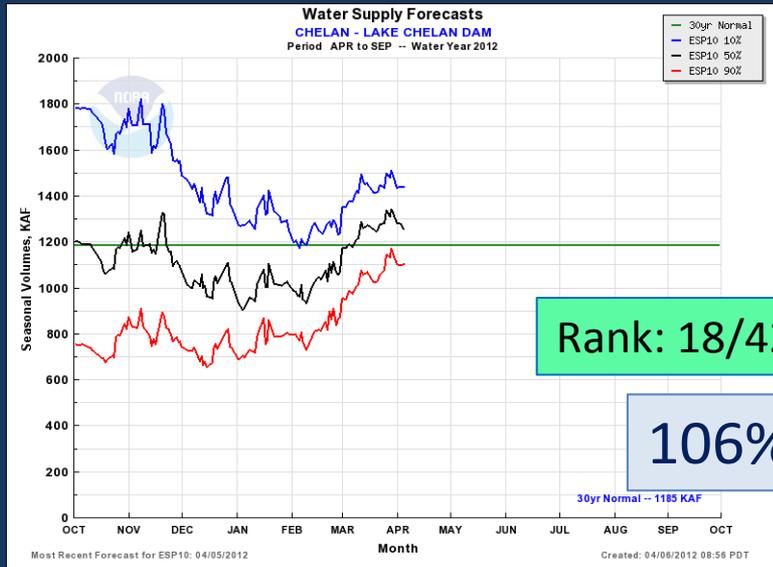


Rank: 21/52

100%



Water Supply Forecast: Lower Columbia





NWRFC Water Supply Webpage

http://www.nwrfc.noaa.gov/water_supply/ws_schd.cgi



Schedule for *Live* Water Supply Briefings

Jan	Feb	Mar	Apr	May	Jun
10	8	8	6	8	8

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