

January 2015 Water Supply Briefing

National Weather Service/Northwest River Forecast Center

www.nwrfc.noaa.gov/misc/NWRFC_WS_Monthly_Briefing.html

Telephone Conference : 1-877-501-8577

Pass Code : 71967

2015 Briefing Dates:

February 5 - 10am Pacific

March 5 - 10am Pacific

April 9 - 10am Pacific

May 7 - 10am Pacific

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January 2015 Water Supply Forecast



www.nwrfc.noaa.gov

Northwest River Forecast Center
Water Supply Forecasts



River and Hydrology

Water Supply

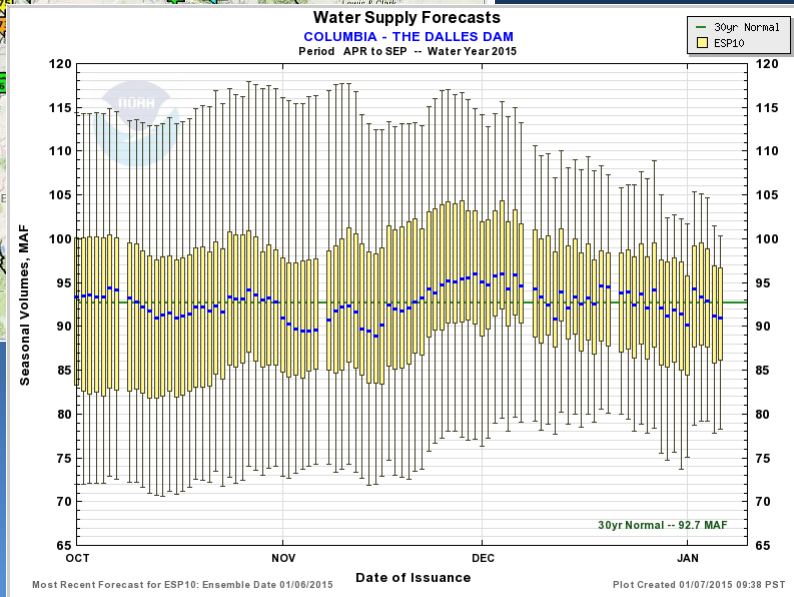
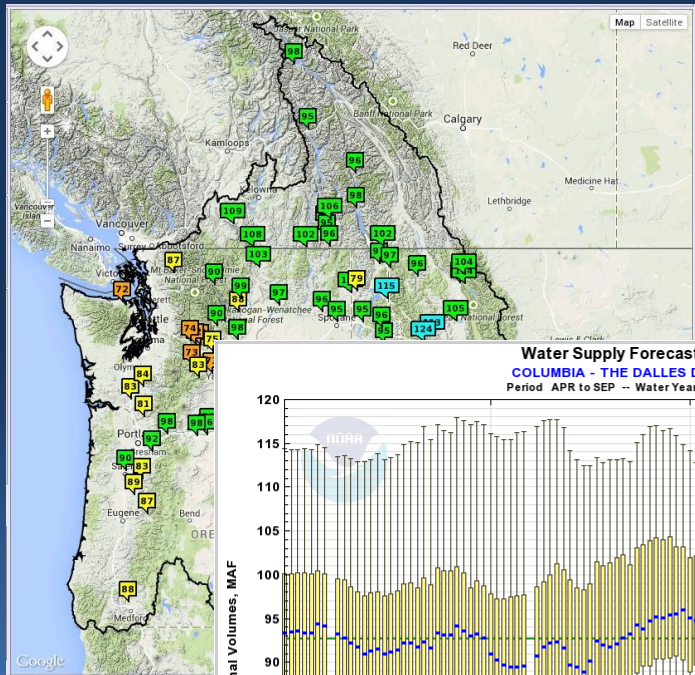
Observations

Weather Forecasts

Climate

NWRFC

Ensemble Streamflow Prediction



Forecasts updated daily

Official Forecasts include 10 days of forecast precipitation (QPF)

NWRFC offers 5 and 0 day QPF

Model States/Snow/Runoff updated continuously through month

Compared to 30 yr Runoff Normal (1981-2010)



New Products for 2015



Re-calibration effort in 2014

- Historic data thru wy2011
 - Precip, temperature, SWE, streamflow
- Calibration POR 1948 – 2011

Forcings Extension

- precip, temp model forcings extended thru wy2011



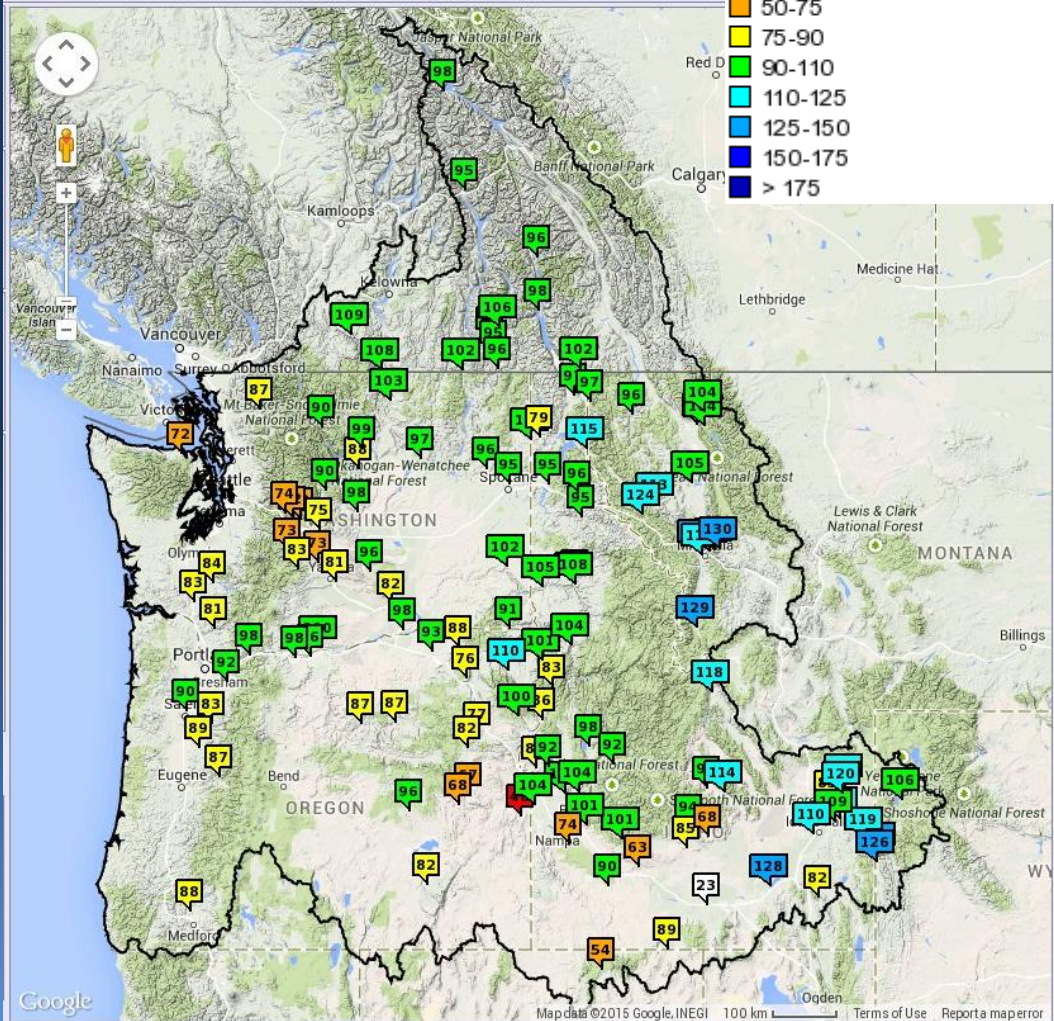
Water Supply Summary



Issued
Jan 6, 2015

Water Supply Forecast (% Avg)

- No Average, No data
- < 25
- 25-50
- 50-75
- 75-90
- 90-110
- 110-125
- 125-150
- 150-175
- > 175



Upper Columbia forecasts generally near or above normal

Upper Snake near or above normal

Lower and Middle Snake near or below normal

West of Cascades forecast generally below normal



Observed Conditions



Precipitation

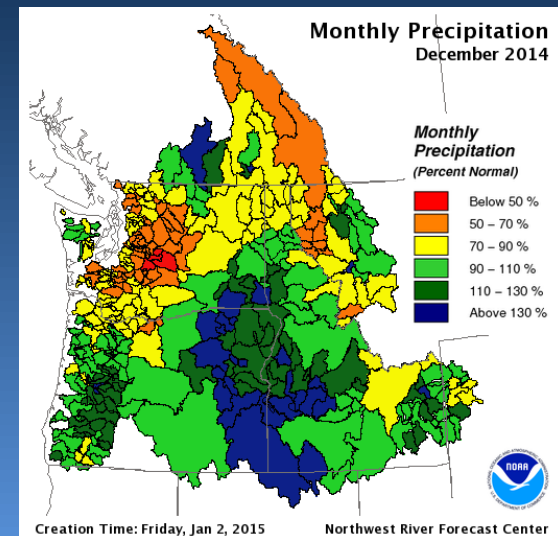
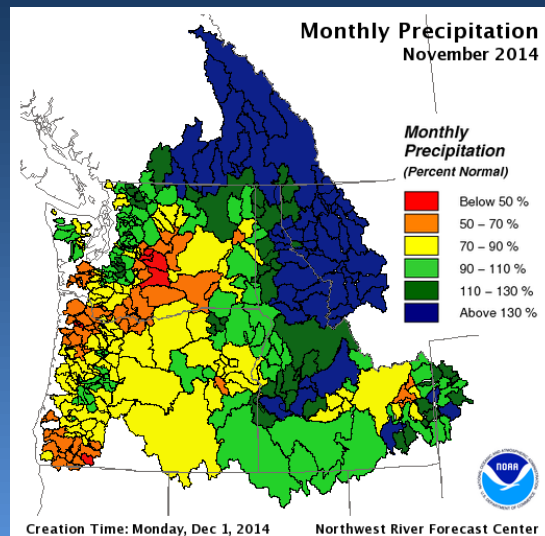
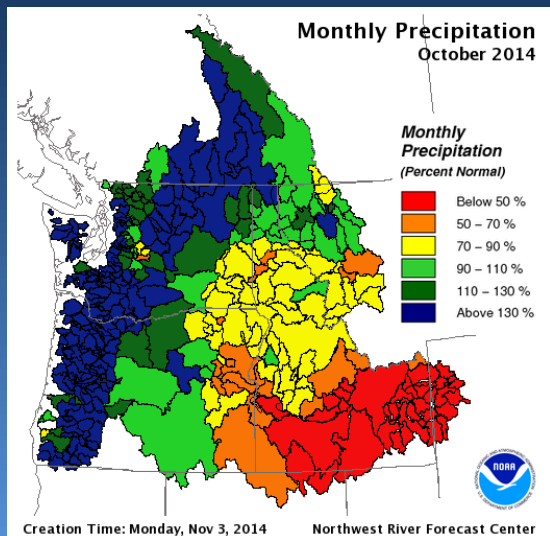
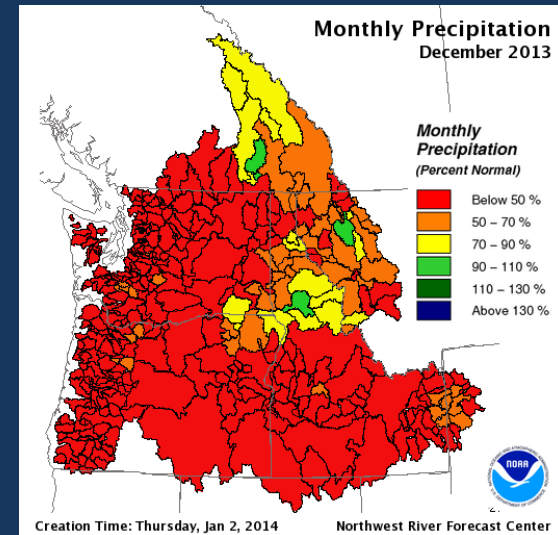
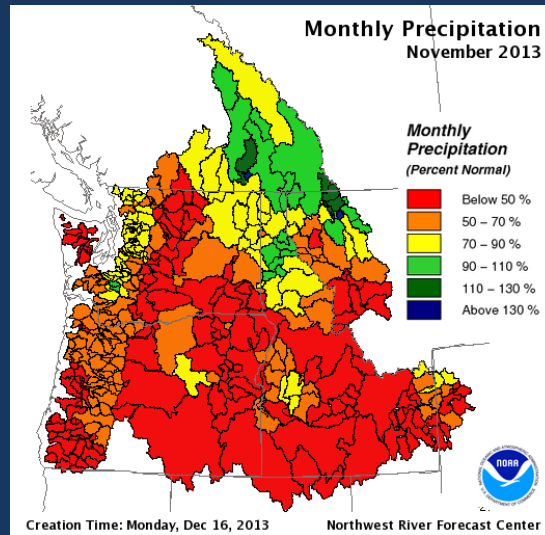
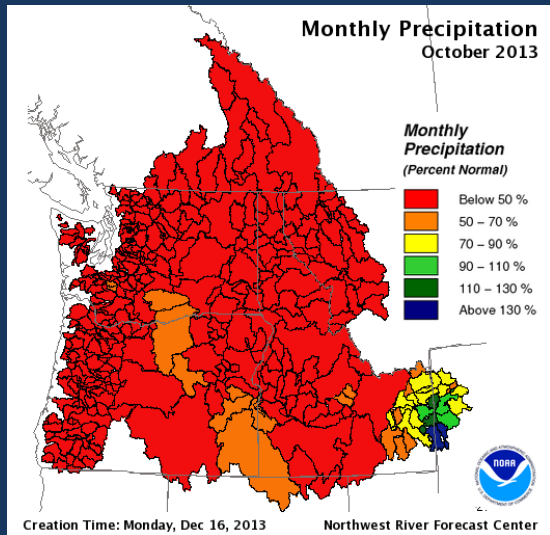
Temperature

Snowpack

Runoff

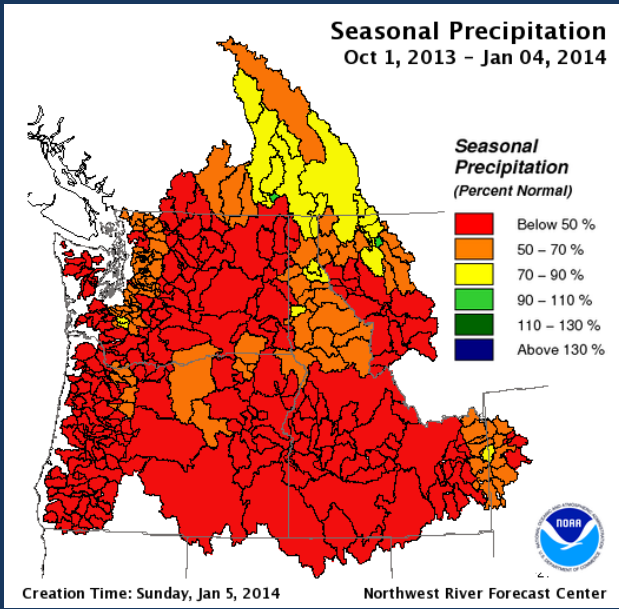


Observed Monthly Precipitation



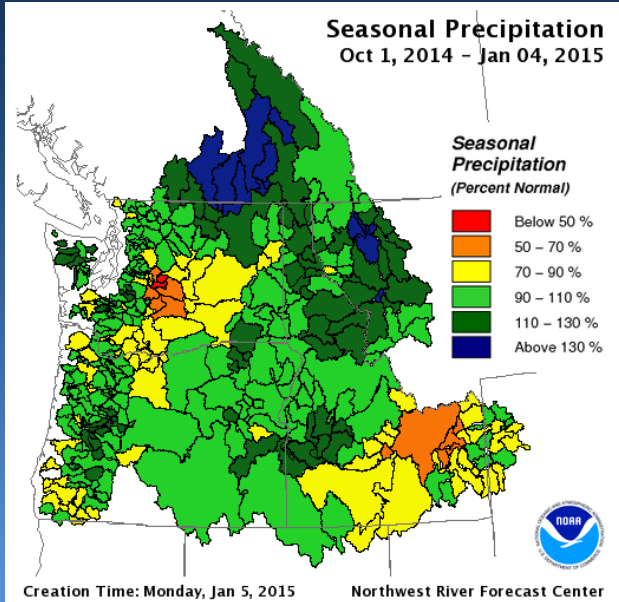


Observed Seasonal Precipitation



DIVISION NAME	2015wy OBS (in)	% Norm	2014wy % Norm
Columbia R abv Grand Coulee	21.3	120	61

Snake R abv Ice Harbor	7.1	99	45
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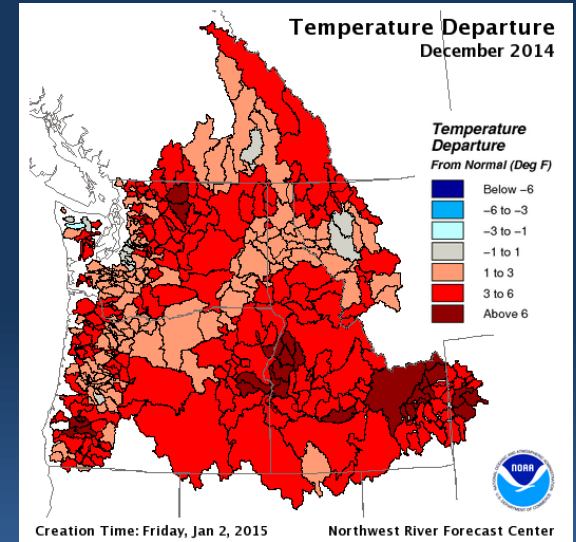
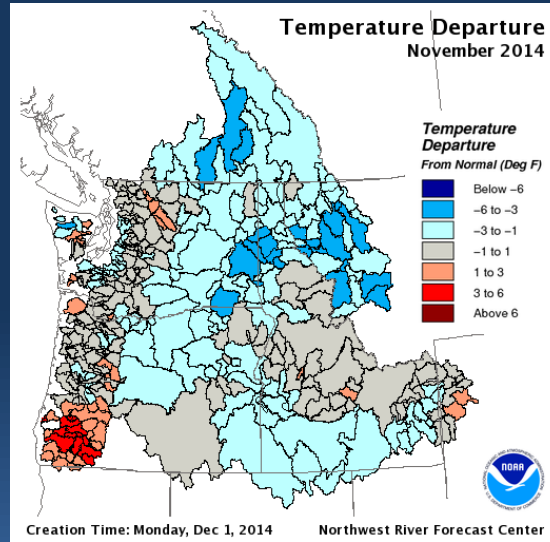
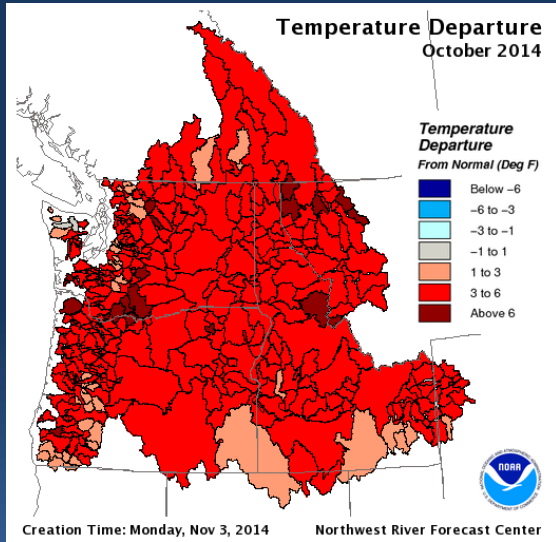
Columbia R abv The Dalles	9.8	104	50
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Temperature Departures



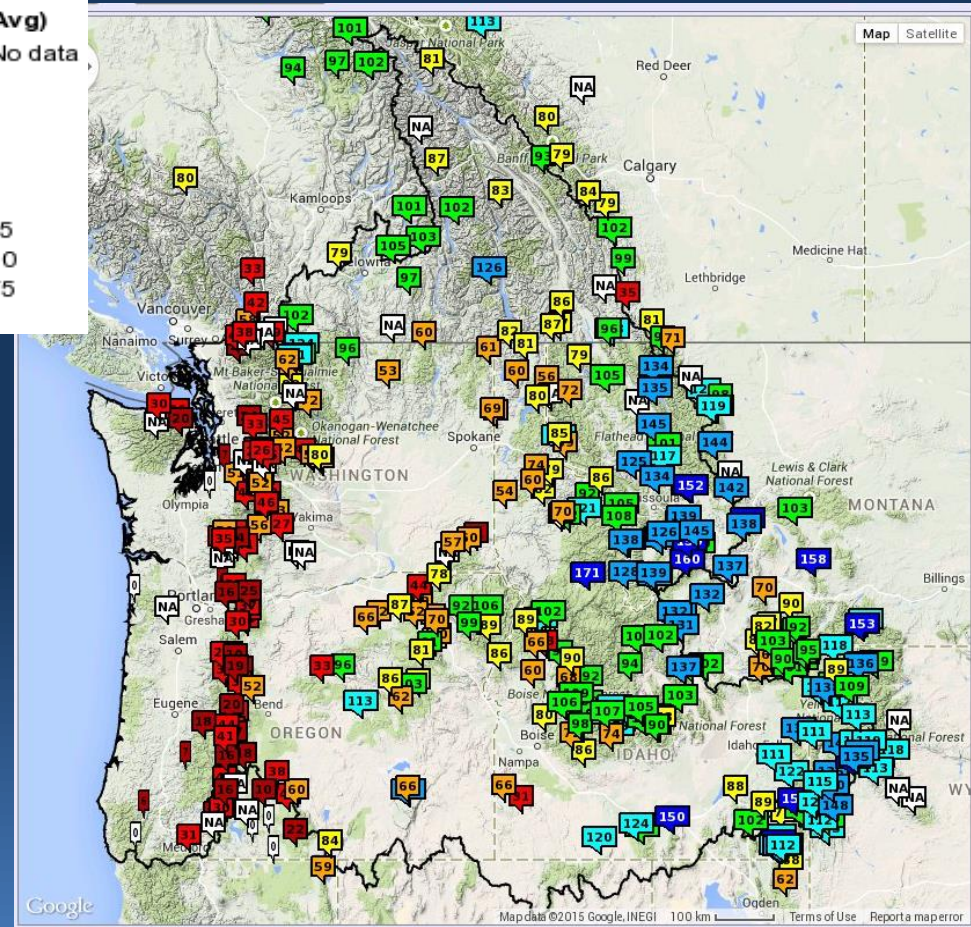
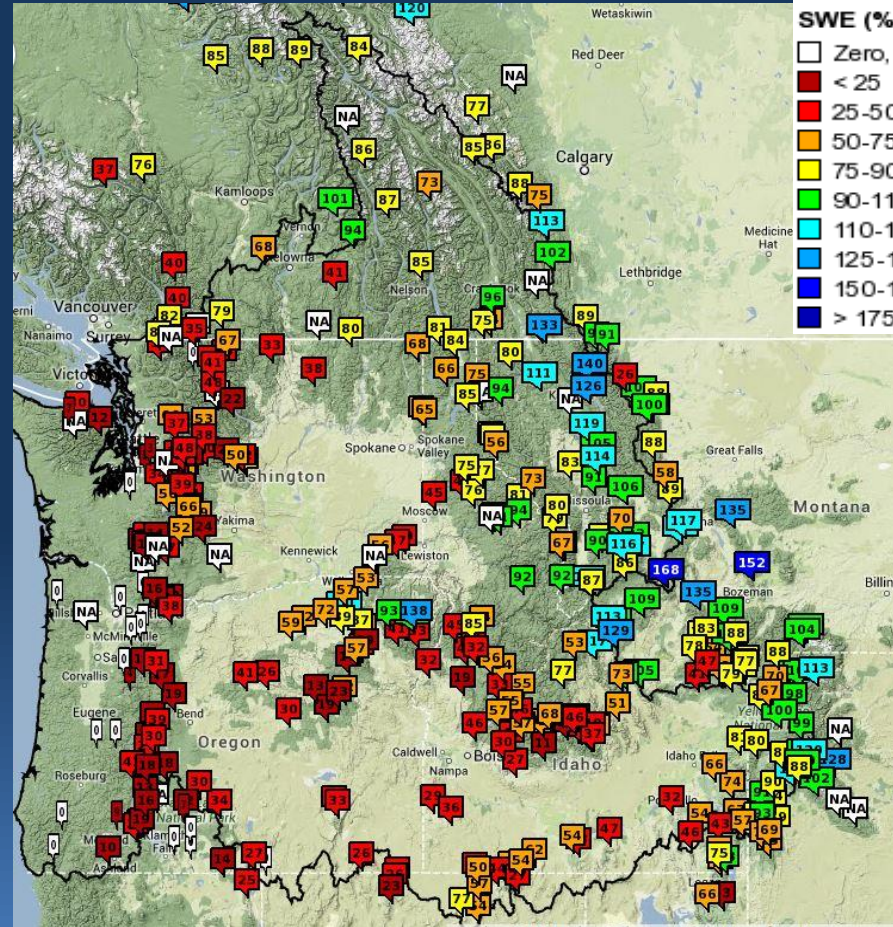
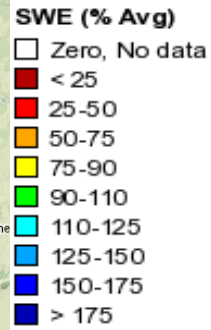
Water Year 2015



Current Snow Conditions

Jan 7, 2014

Jan 7, 2015



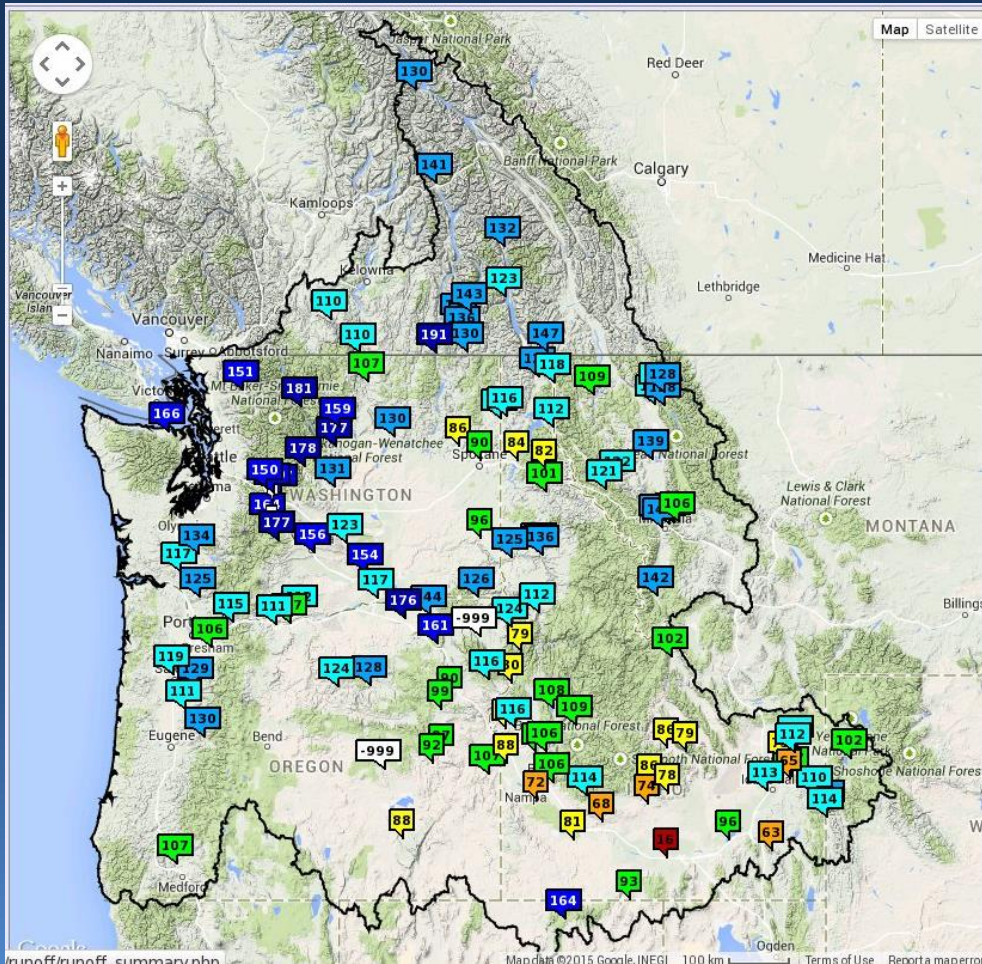


Current Adjusted Runoff Conditions



Percent of Normal

Oct 1– Jan 6



UPPER COLUMBIA BASIN

MICA	131
DUNCAN	131
QUEENS BAY	124
LIBBY	110
HUNGRY HORSE	130
GRAND COULEE	131

SNAKE RIVER BASIN

JACKSON LAKE	104
PALISADES	111
DWORSHAK	111
LOWER GRANITE	97

LOWER COLUMBIA BASIN

THE DALLES	112
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Future Outlook



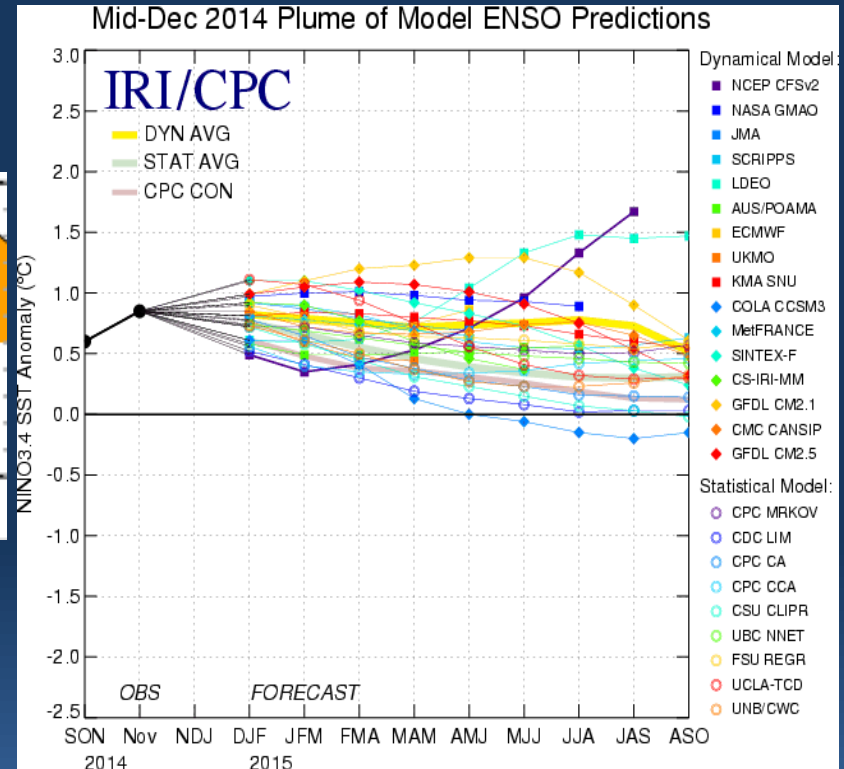
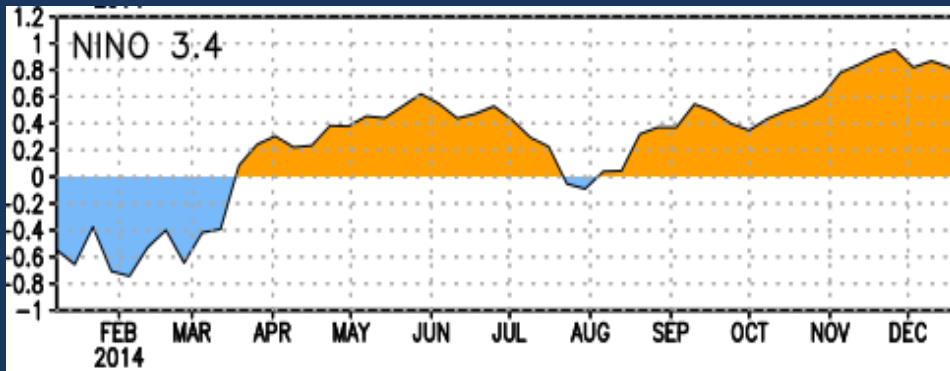
Climate Outlooks

10 Day Precipitation Forecast

Water Supply Forecasts



ENSO: Observed and Forecast



CPC Synopsis: 65% chance that El Nino conditions will be present during the Northern Hemisphere winter and last into Spring 2015 (Jan 5, 2015)

Source: Climate Prediction Center Weekly ENSO Update

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

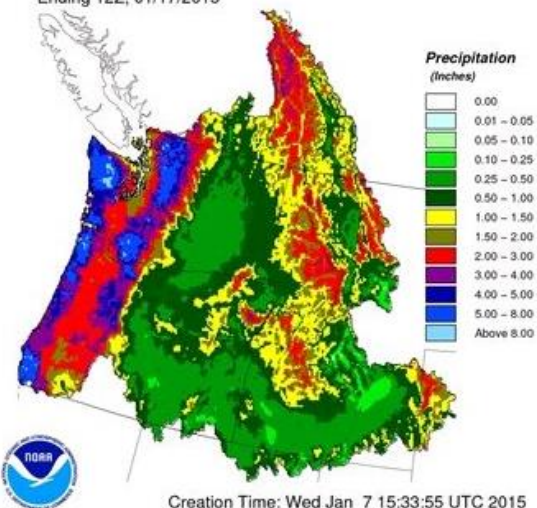
Plume Model Graphic provided by Intl Research Institute for Climate and Society – updated Dec 16, 2014

Cumulative 10 Day Precipitation

10 Day Forecast Precipitation: Volume Analysis

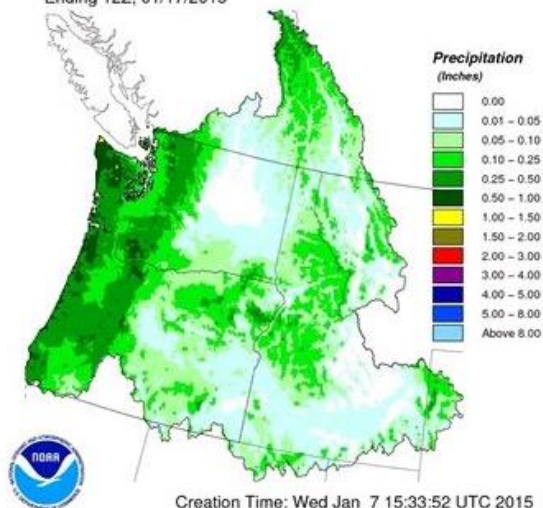
10 Day Precipitation Climatology

Ending 12Z, 01/17/2015



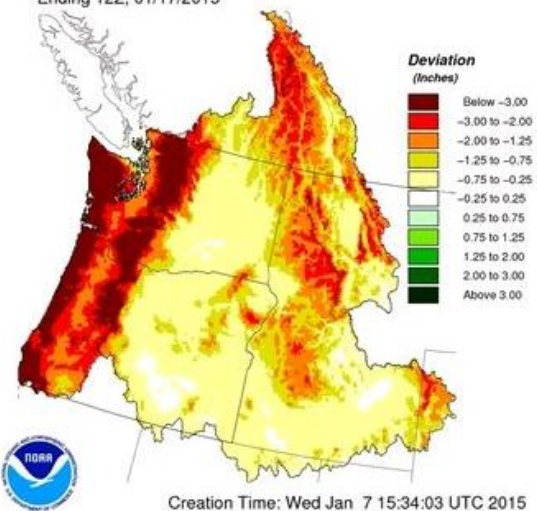
10 Day QPF

Ending 12Z, 01/17/2015



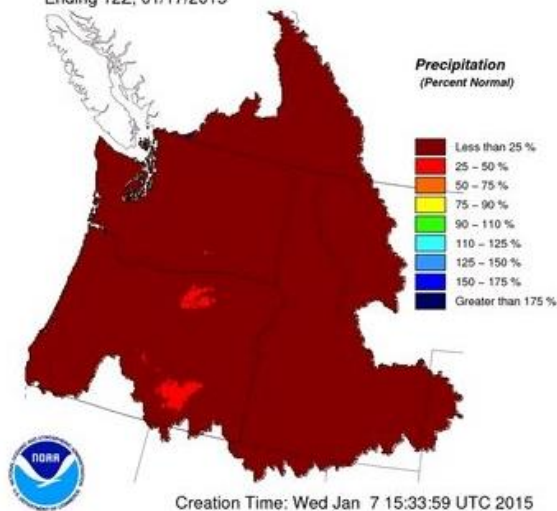
10 Day QPF (Deviation from Climatology)

Ending 12Z, 01/17/2015



10 Day QPF (Percent of Climatology)

Ending 12Z, 01/17/2015

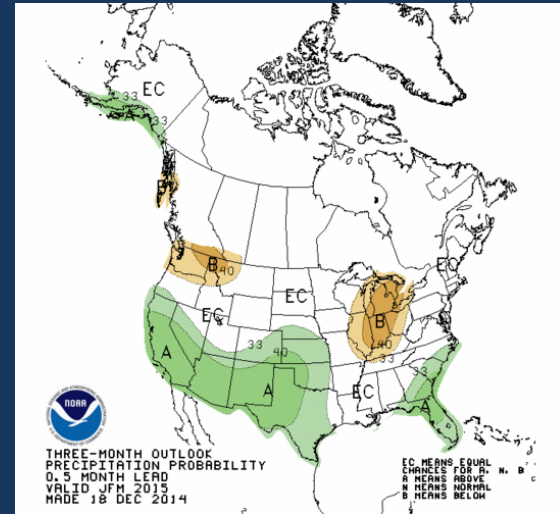
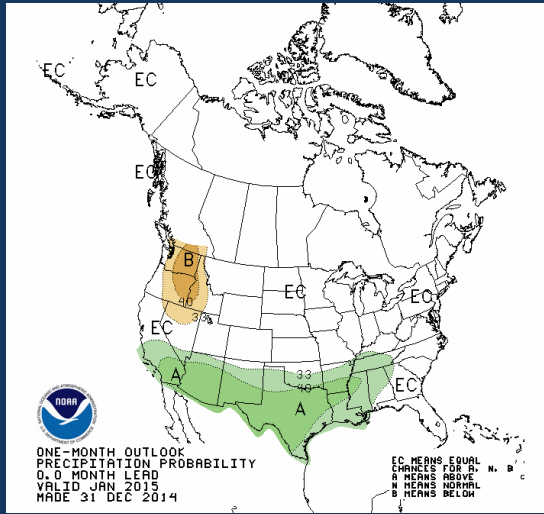


CPC Climate Outlook

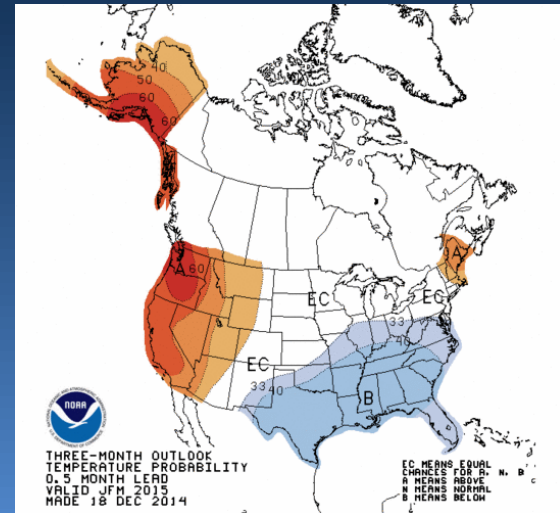
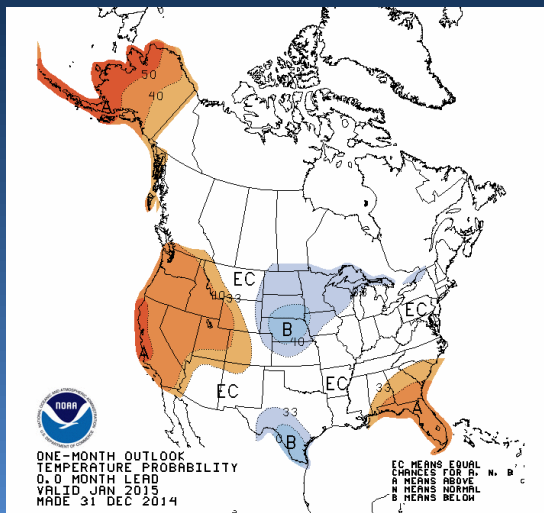
Current Month Outlook - update

Three Month Outlook

Precipitation



Temperature



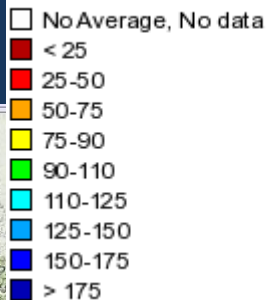


Water Supply Forecasts

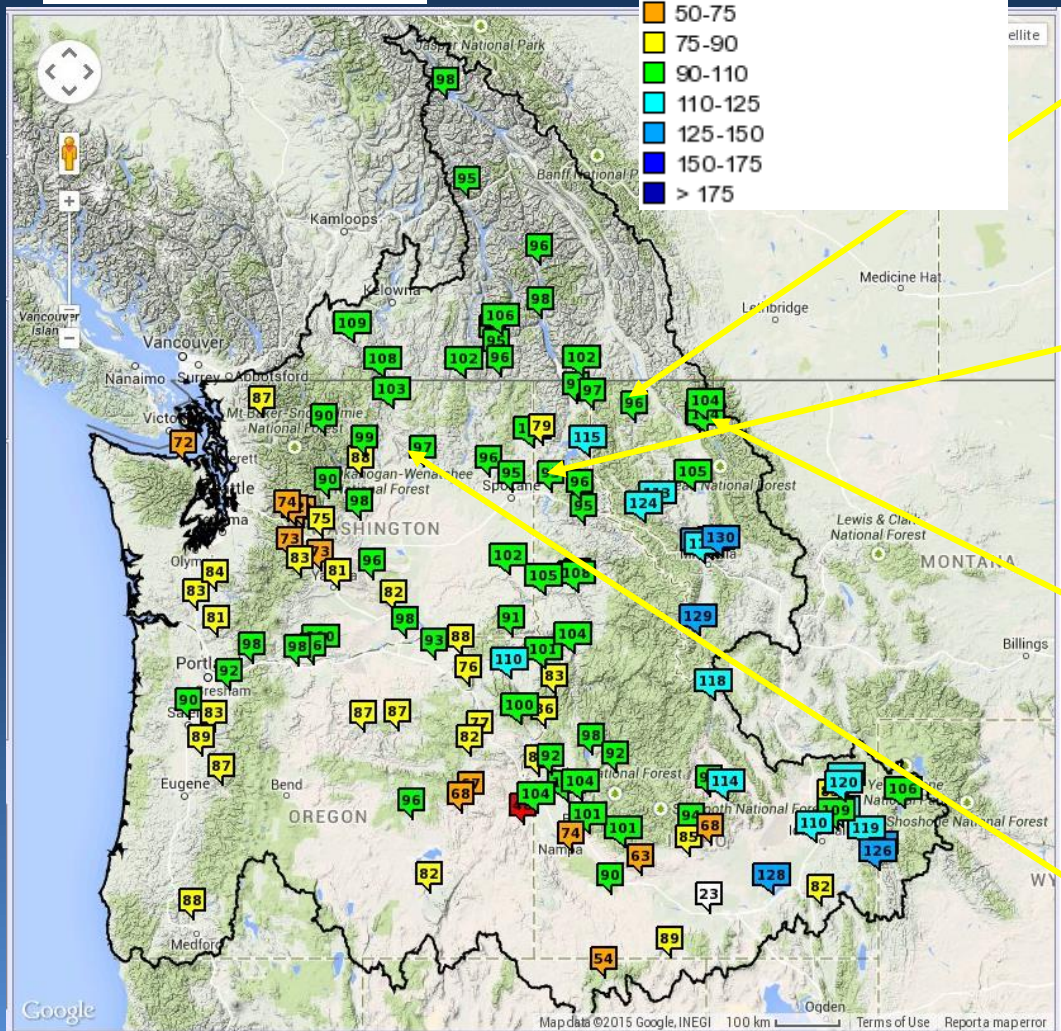


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Water Supply Forecast (% Avg)



Jan 2015 Apr – Sep Forecast



Kootenai River

- Libby Dam

Rank

96 %

35/55

Coeur d'Alene River

- Coeur d'Alene Lake

Rank

95%

24/45

SF Flathead River

- Hungry Horse Dam

Rank

104 %

23/45

Columbia River

- Grand Coulee Dam

Rank

97 %

36/55

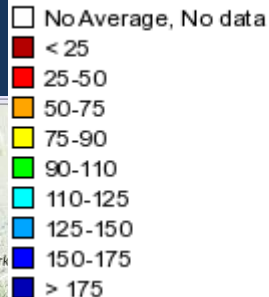


Water Supply Forecasts

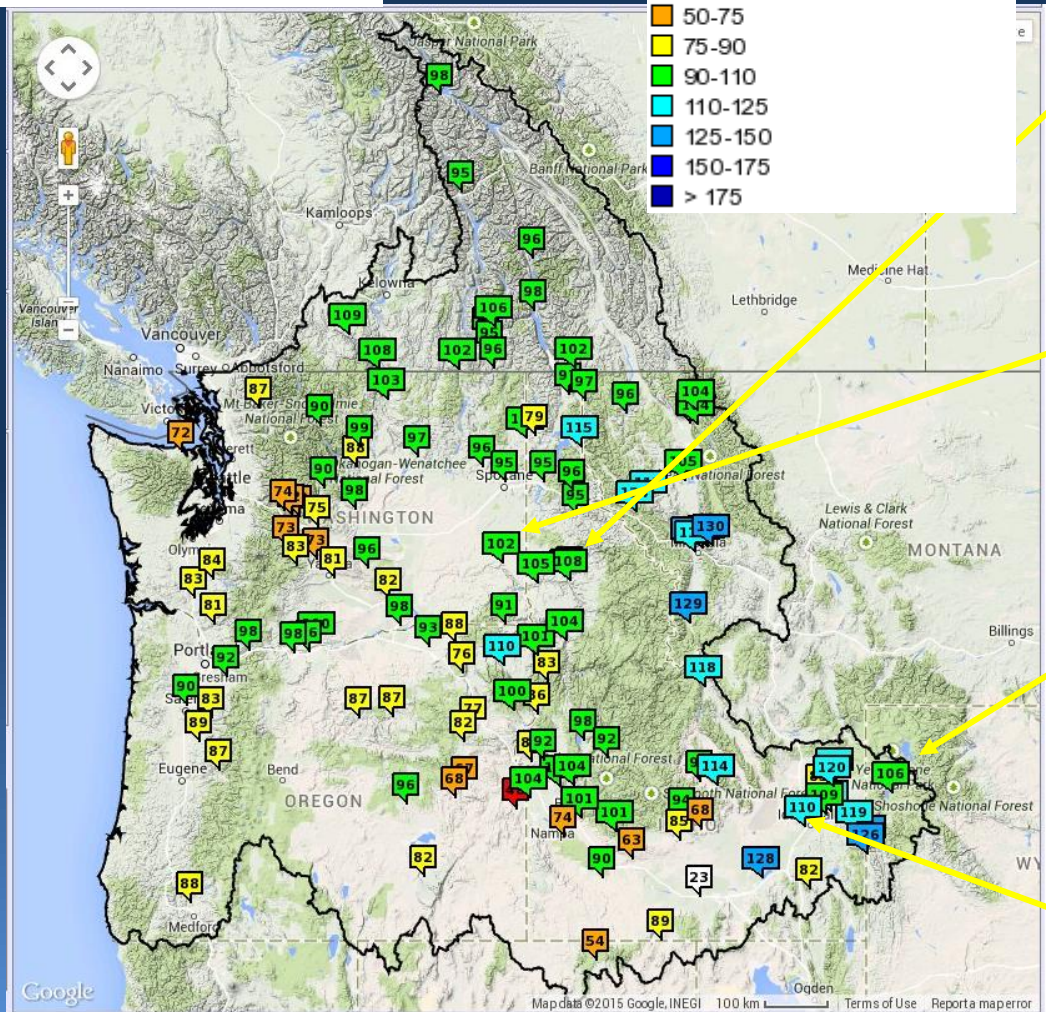


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Water Supply Forecast (% Avg)



Jan 2015 Apr – Sep Forecast



NF Clearwater River
- Dworschak Dam
Rank 98%
28/48

Lower Snake River
- Lower Granite Dam
Rank 102%
28/55

Upper Snake River
- Jackson Lake Dam
Rank 106%
20/45

Upper Snake River
- near Shelley
Rank 110%
18/45



NWRFC Water Supply Product



COLUMBIA - THE DALLES DAM (TDAO3) Forecasts for Water Year 2015

Official Forecast

10 days QPF: Ensemble: 2015-01-06 Issued: 2015-01-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	78265	90951	98	100302	92704
APR-JUL	66856	77470	97	87767	79855
APR-AUG	73385	85638	98	95443	87532
JAN-JUL	86017	99749	98	113672	101368

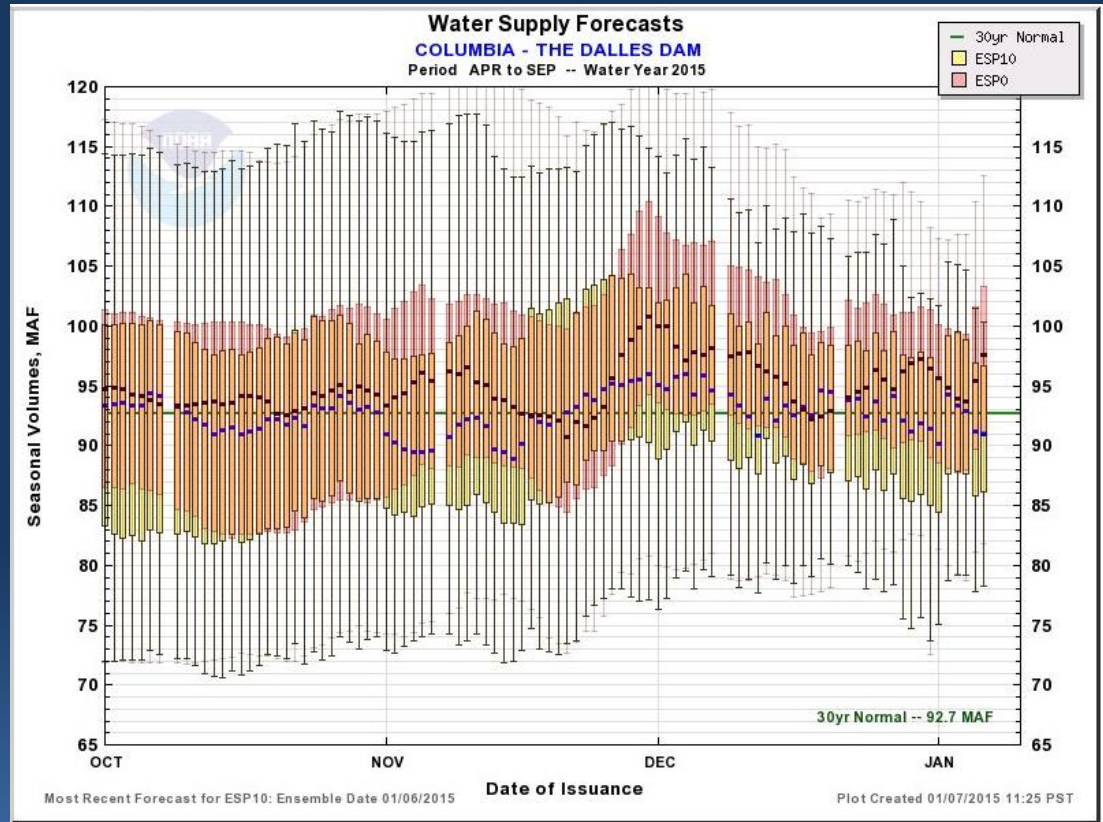
5 days QPF: Ensemble: 2015-01-06 Issued: 2015-01-06

APR-SEP	78667	94032	101	105754	92704
APR-JUL	66821	80756	101	91513	79855
APR-AUG	73791	88596	101	99458	87532
JAN-JUL	87710	103107	102	118293	101368

0 days QPF: Ensemble: 2015-01-06 Issued: 2015-01-06

APR-SEP	81816	97610	105	112556	92704
APR-JUL	70823	83104	104	97027	79855
APR-AUG	77502	92021	105	104696	87532
JAN-JUL	91879	105706	104	122458	101368

Move the mouse over the desired "Forecast Period" to display a graph.



90% -> 9 in 10 chance of volume being exceeded (quite likely)
 10% -> 1 in 10 chance of volume being exceeded (a possibility)
 50% -> 5 in 10 chance of volume being exceeded (most expected)



NWRFC Water Supply Webpage

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



2015 Schedule for <i>Live</i> Water Supply Briefings					
Jan	Feb	Mar	Apr	May	Jun
8	5	5	9	7	TBD
<i>All presentations held at 10am PDT/PST, unless noted otherwise</i>					
Click here for Registration Information					
Archive of Previous Briefings					

<http://www.nwrfc.noaa.gov/presentations/presentations.cgi>

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Northwest River Forecast Center Water Supply Forecasts



River and Hydrology

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Questions?

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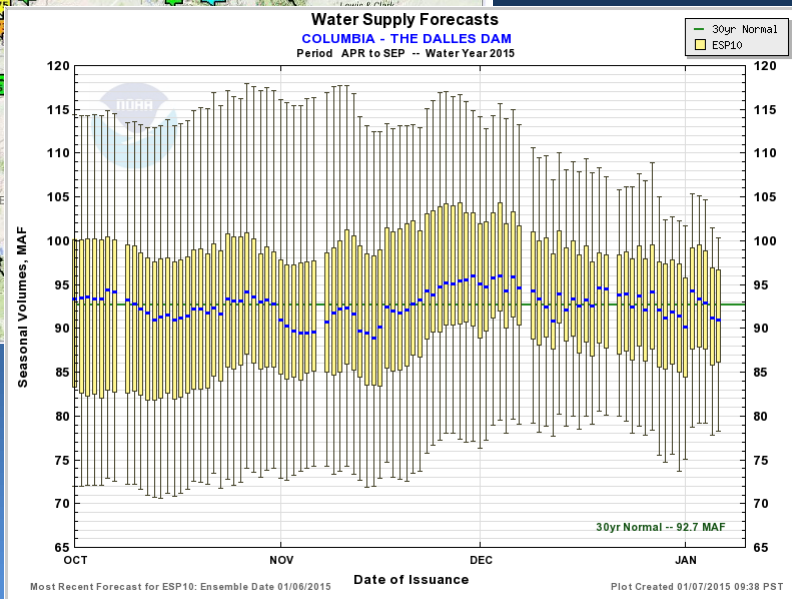
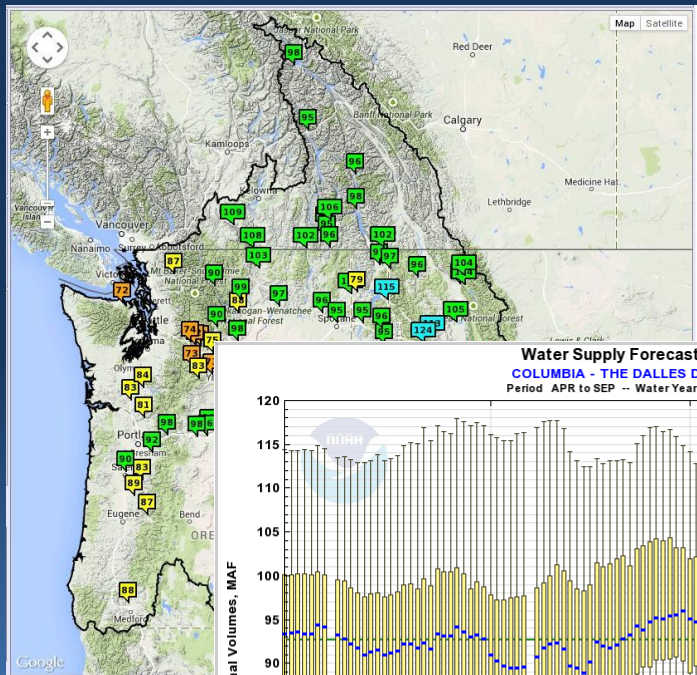
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