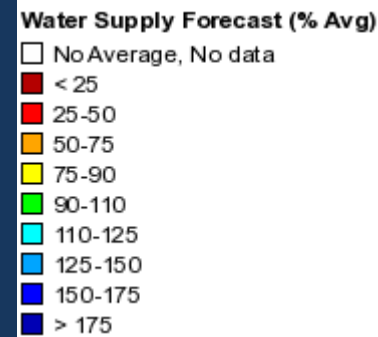
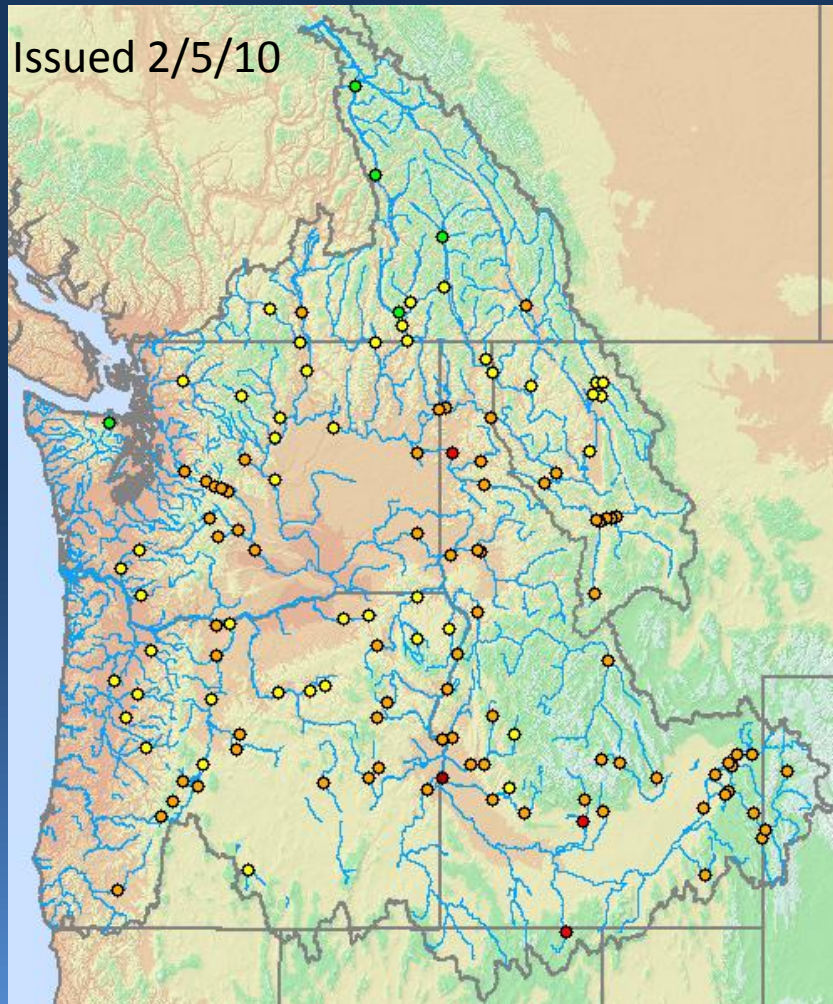


Northwest River Forecast Center Water Supply Briefing



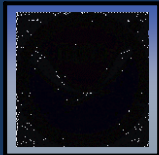
Feb 5th "Final" Forecast

Legacy Regression Model

Agency Coordinated

60% of Normal February
Precipitation Forecast

NWRFC Forecast for Canada



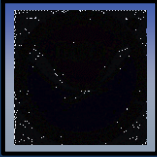
Observed Conditions



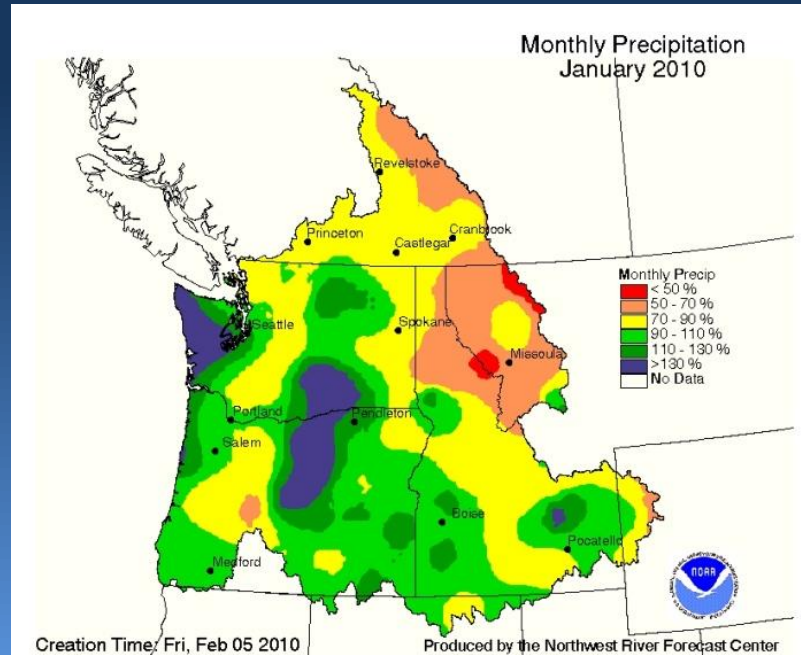
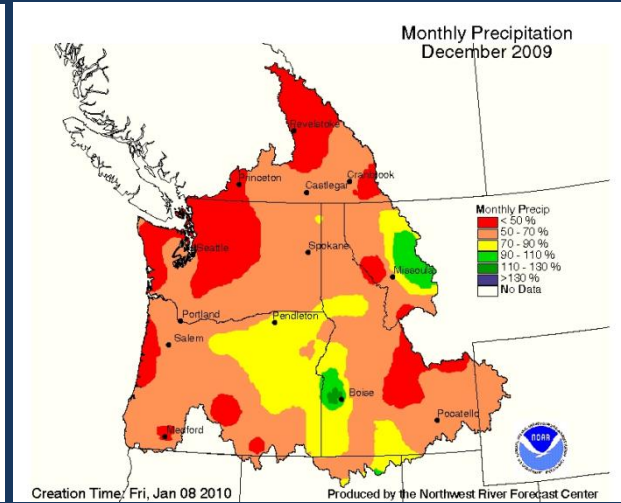
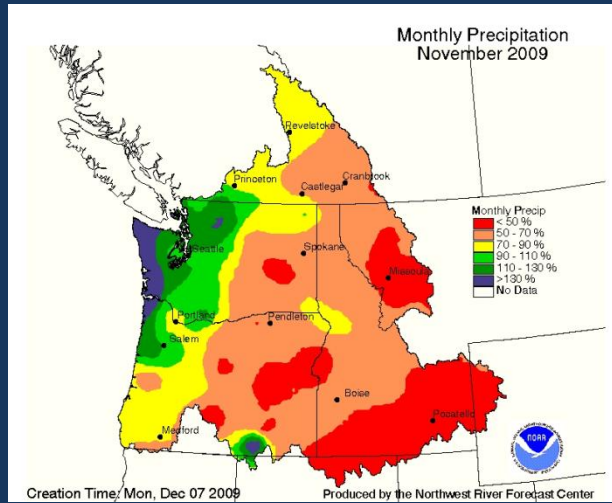
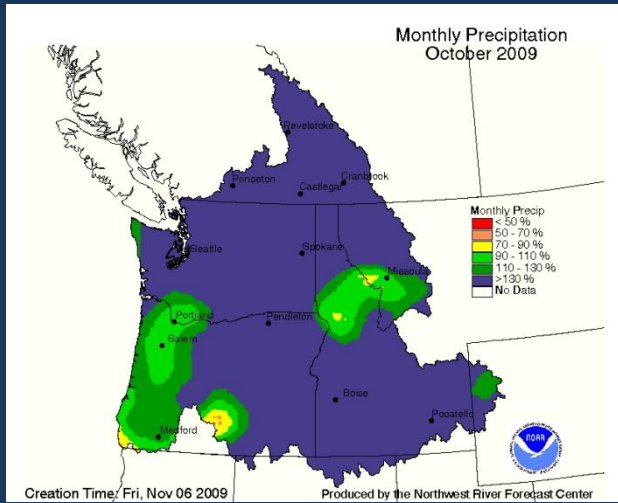
Precipitation

Snowpack

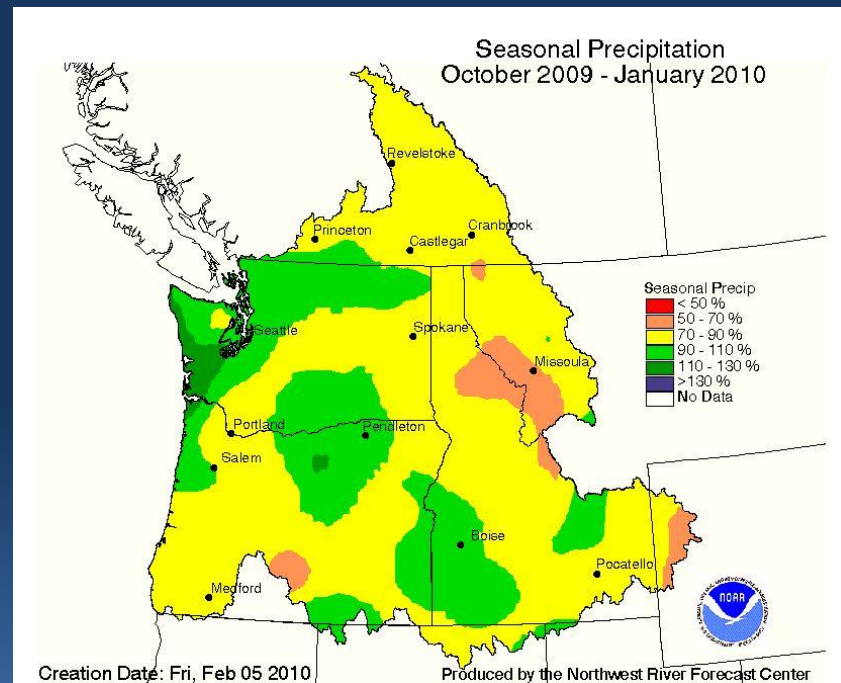
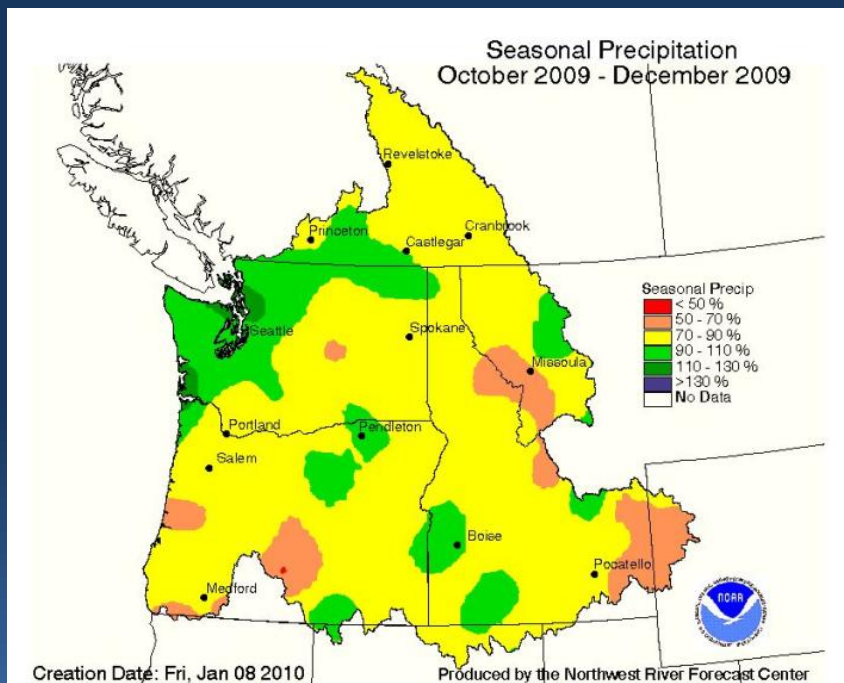
Runoff



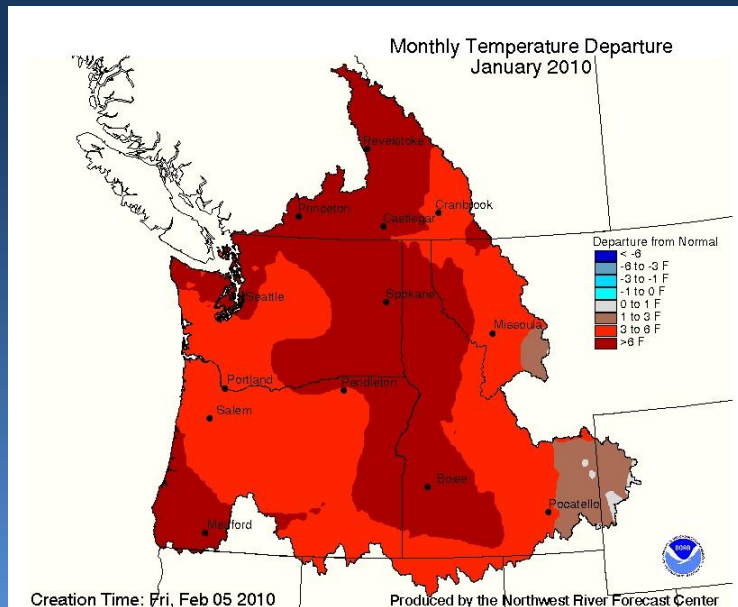
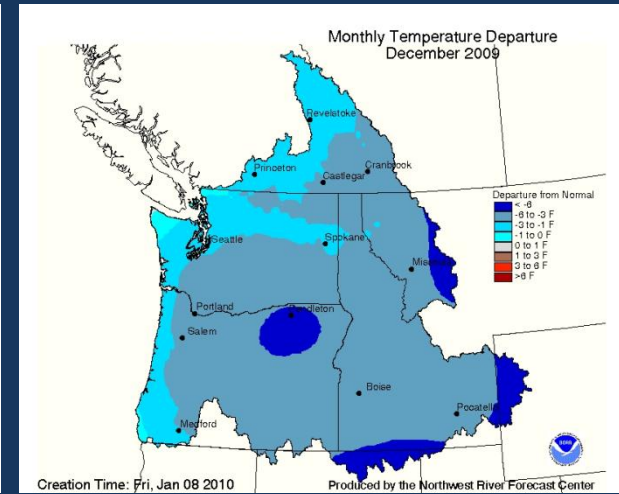
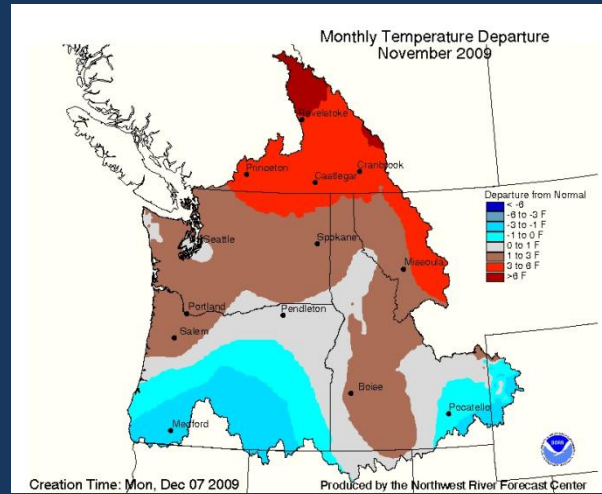
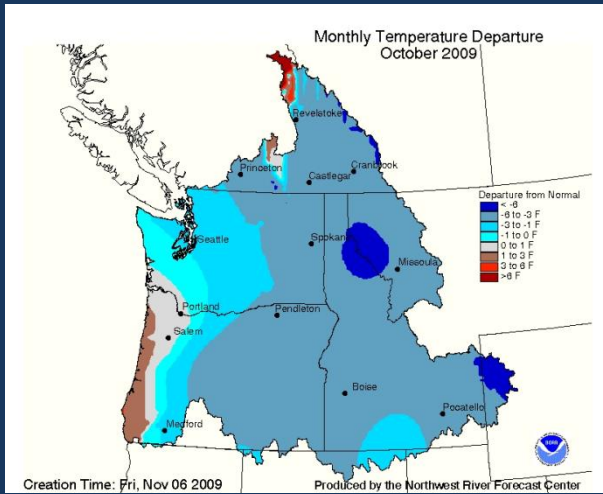
Observed Monthly Precipitation



Observed Seasonal Precipitation



Observed Monthly Temperature

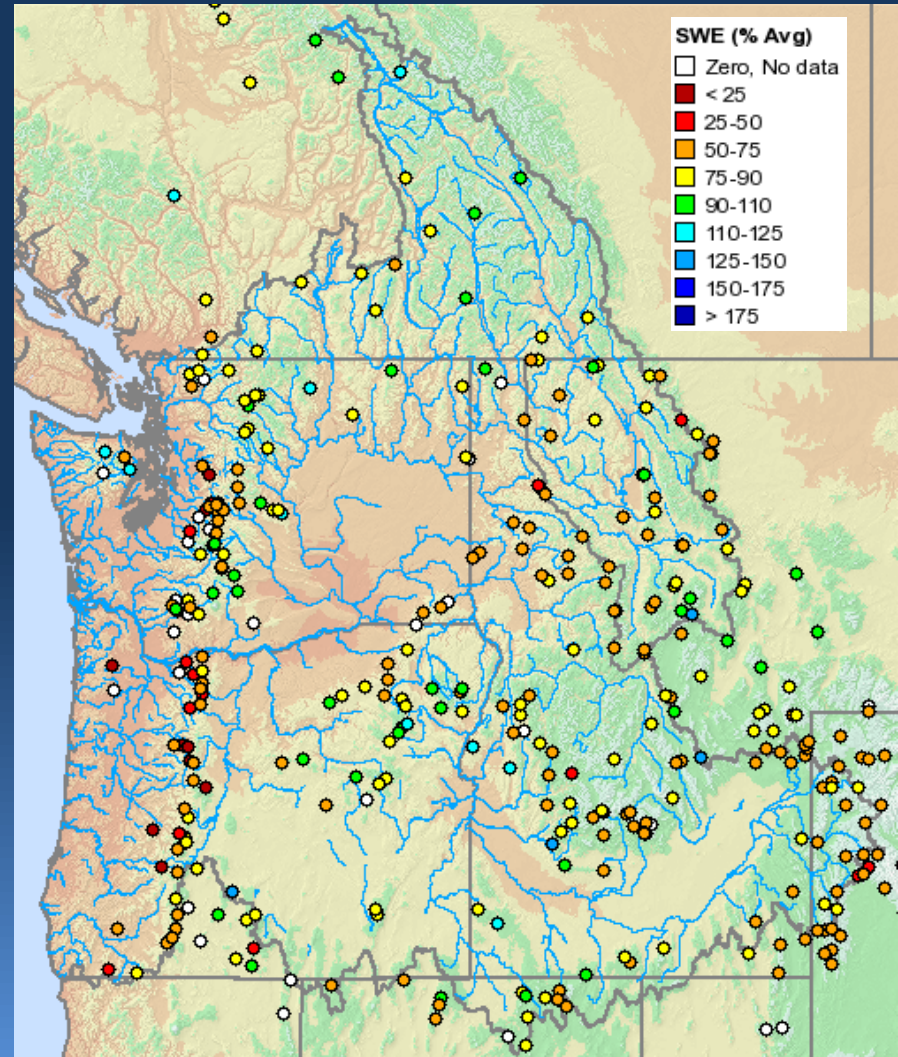
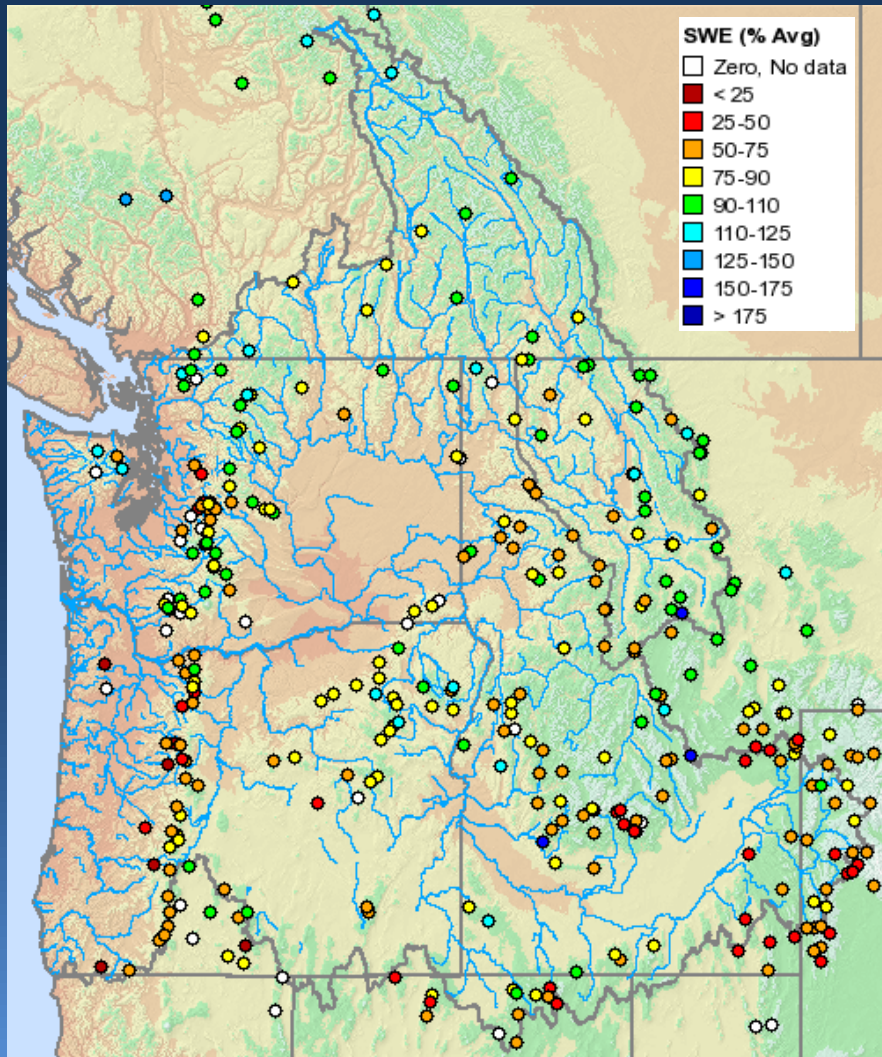


Current Snow Conditions

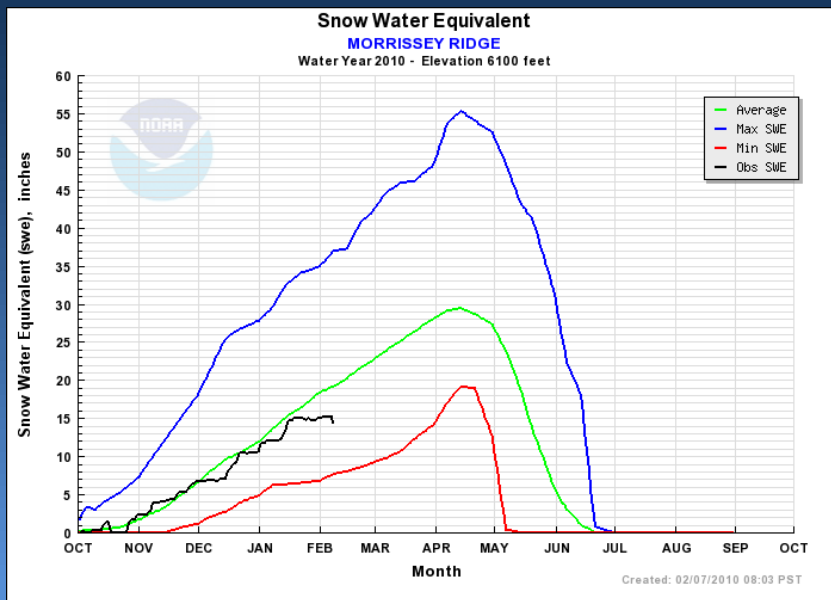
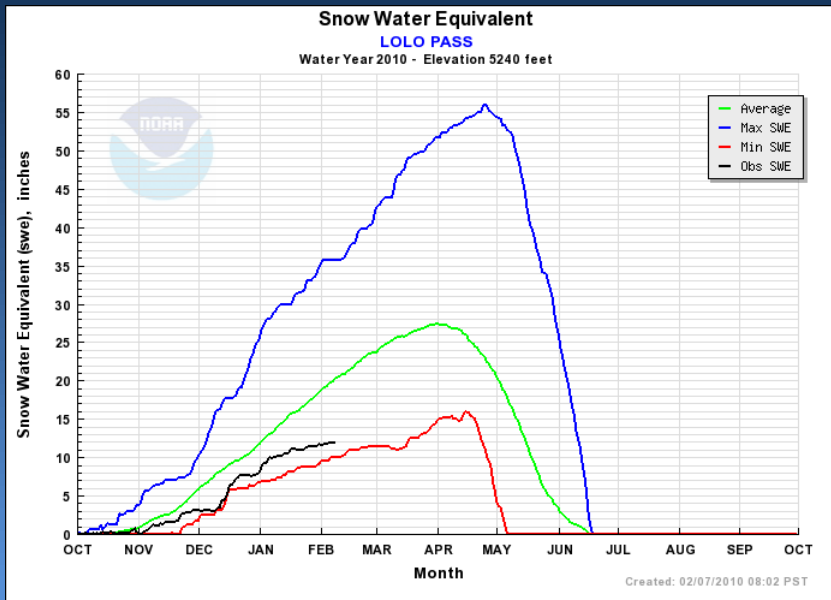
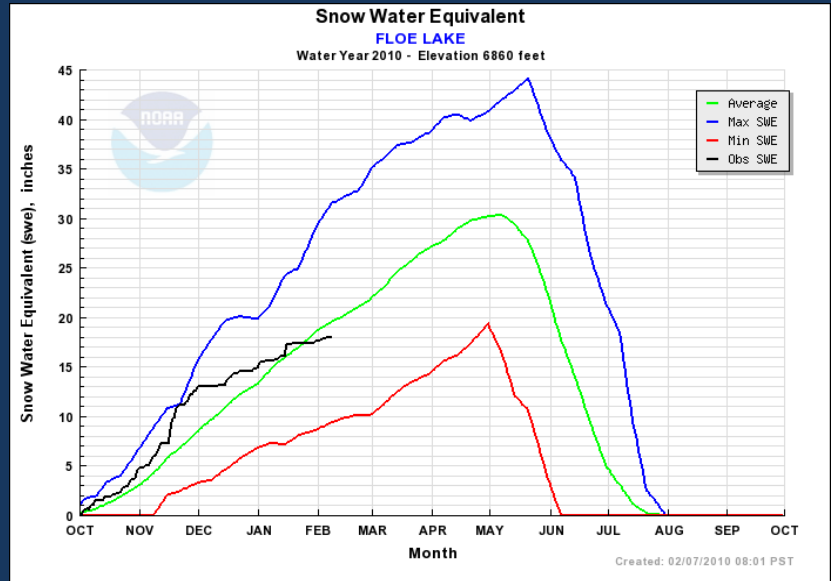
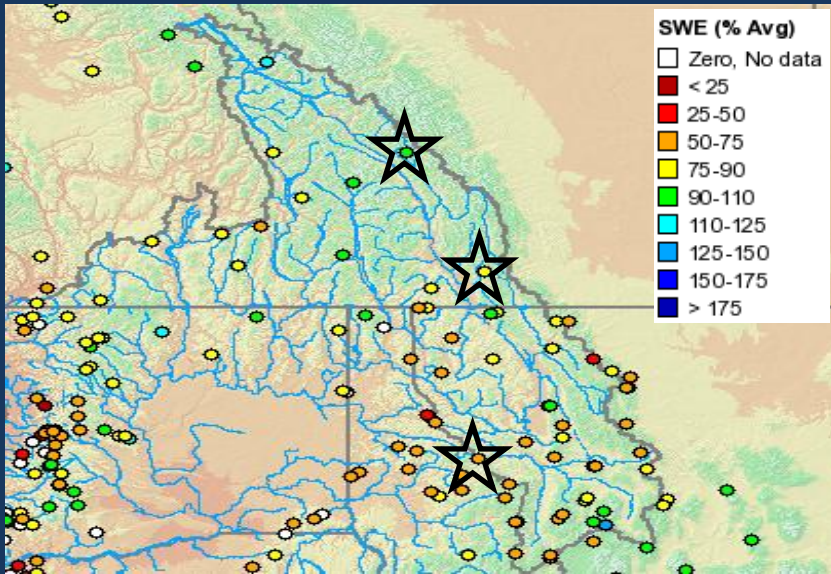


Jan 8, 2010

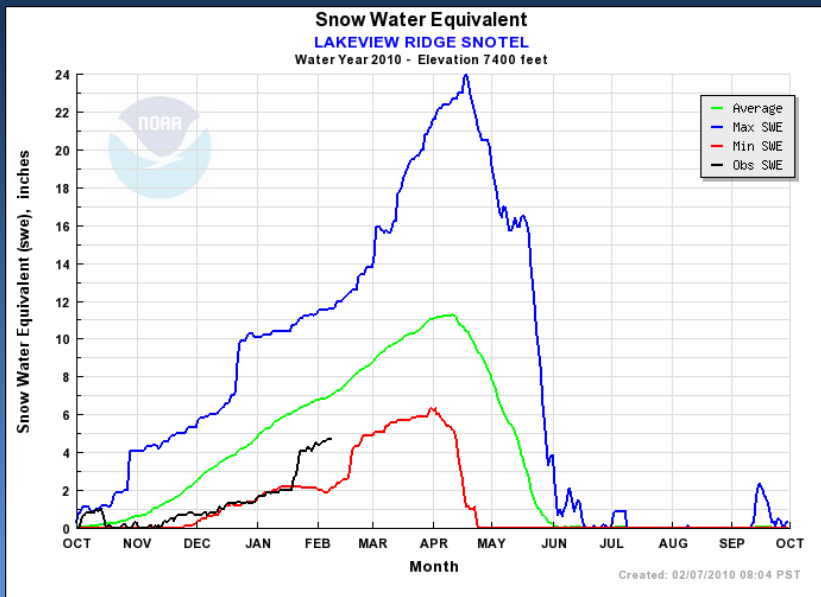
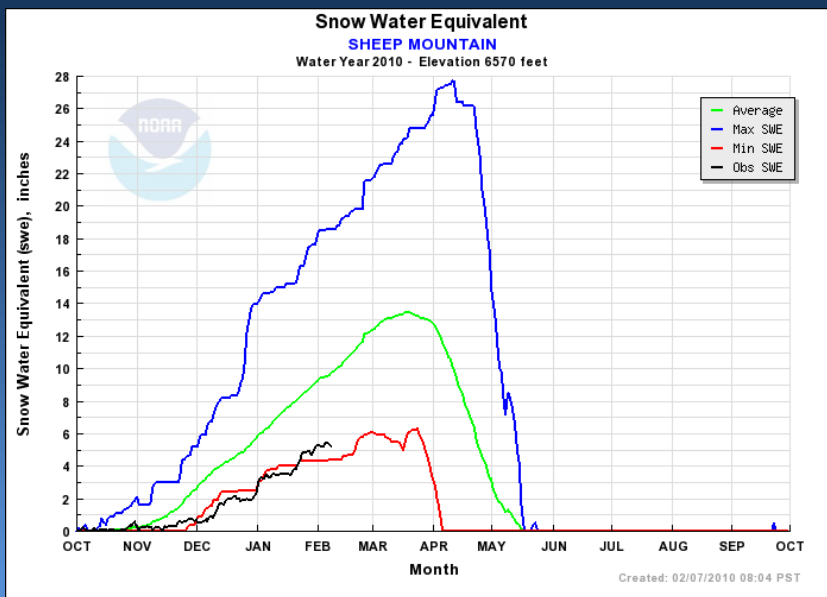
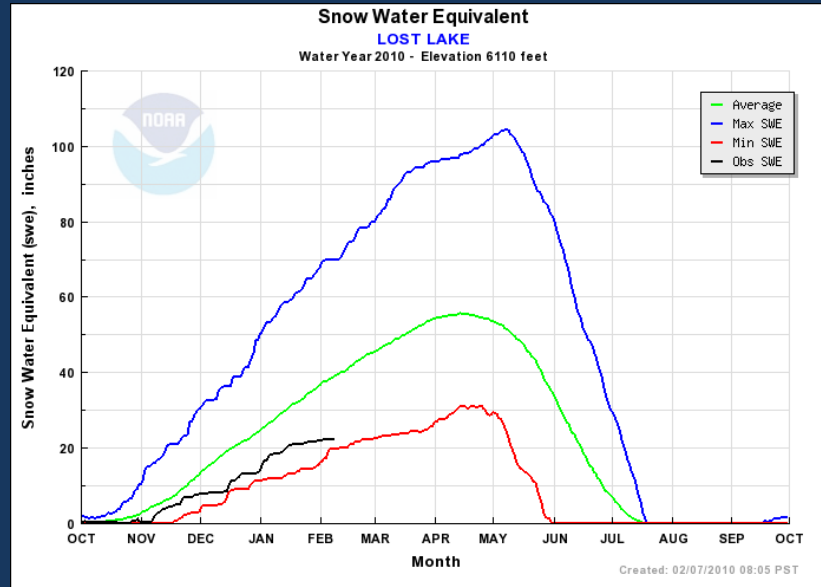
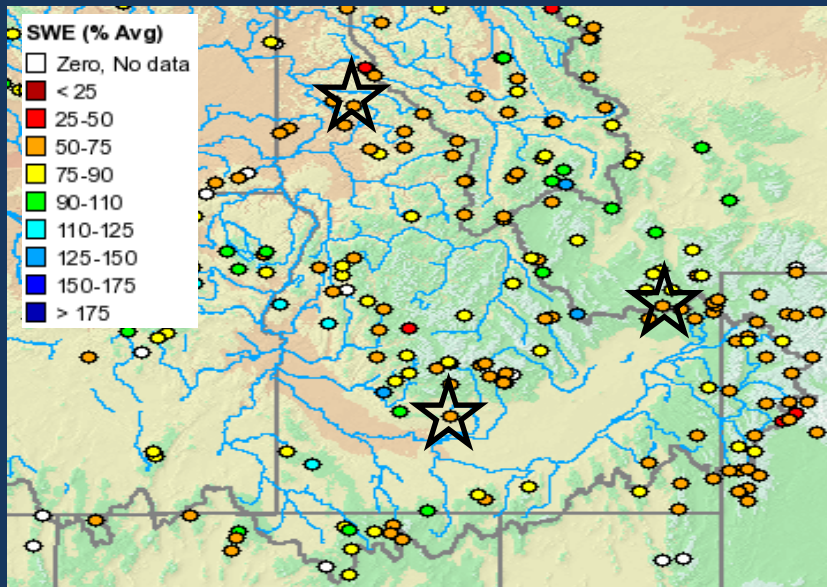
Feb 8, 2010



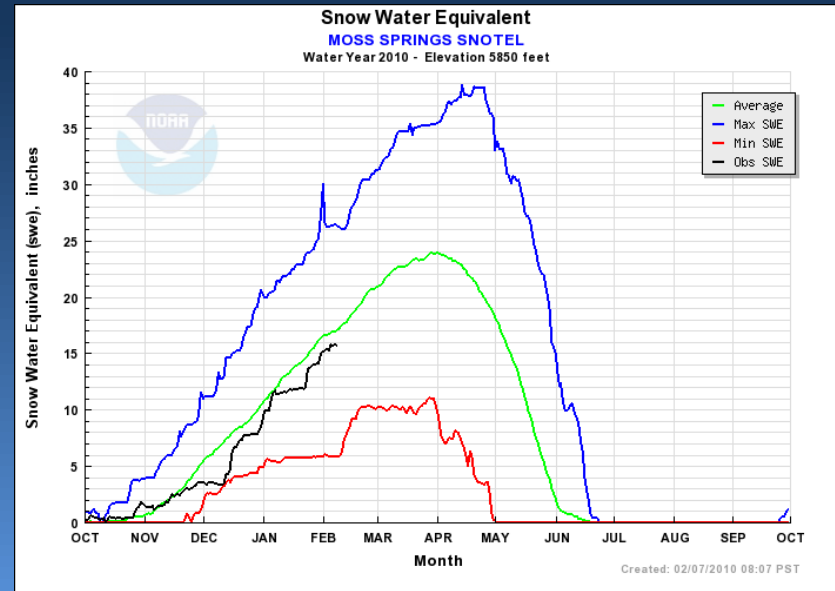
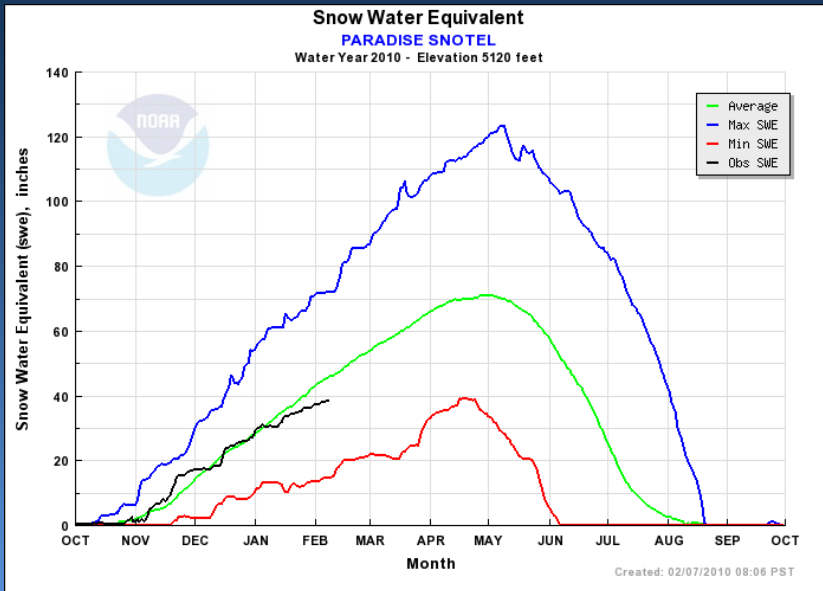
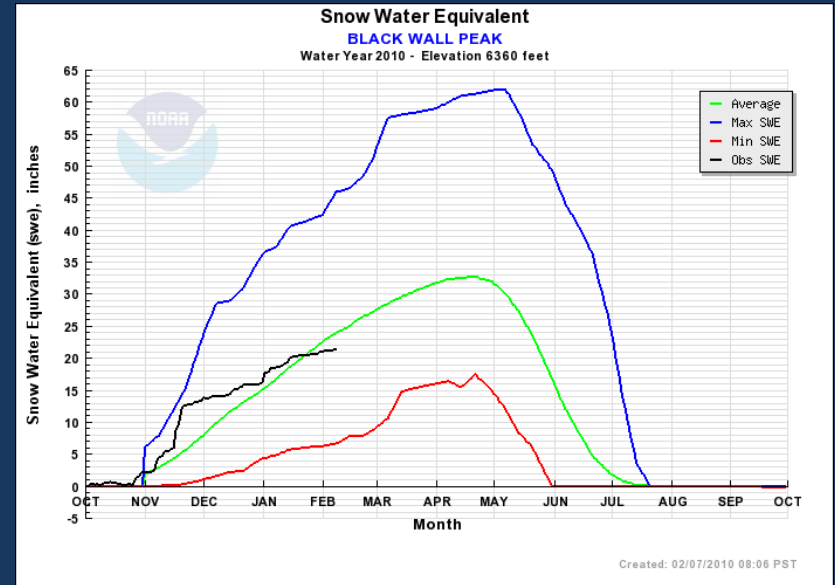
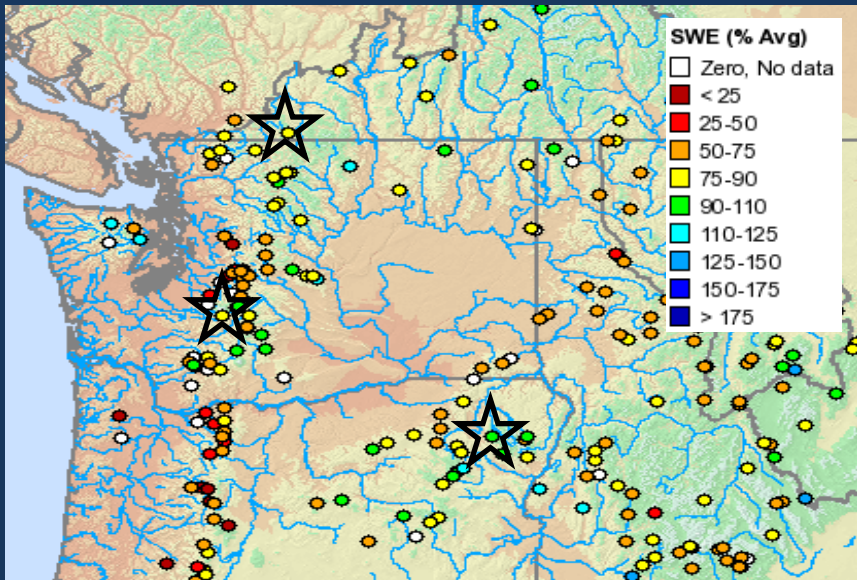
Upper Columbia Snow Conditions



Snake River Snow Conditions

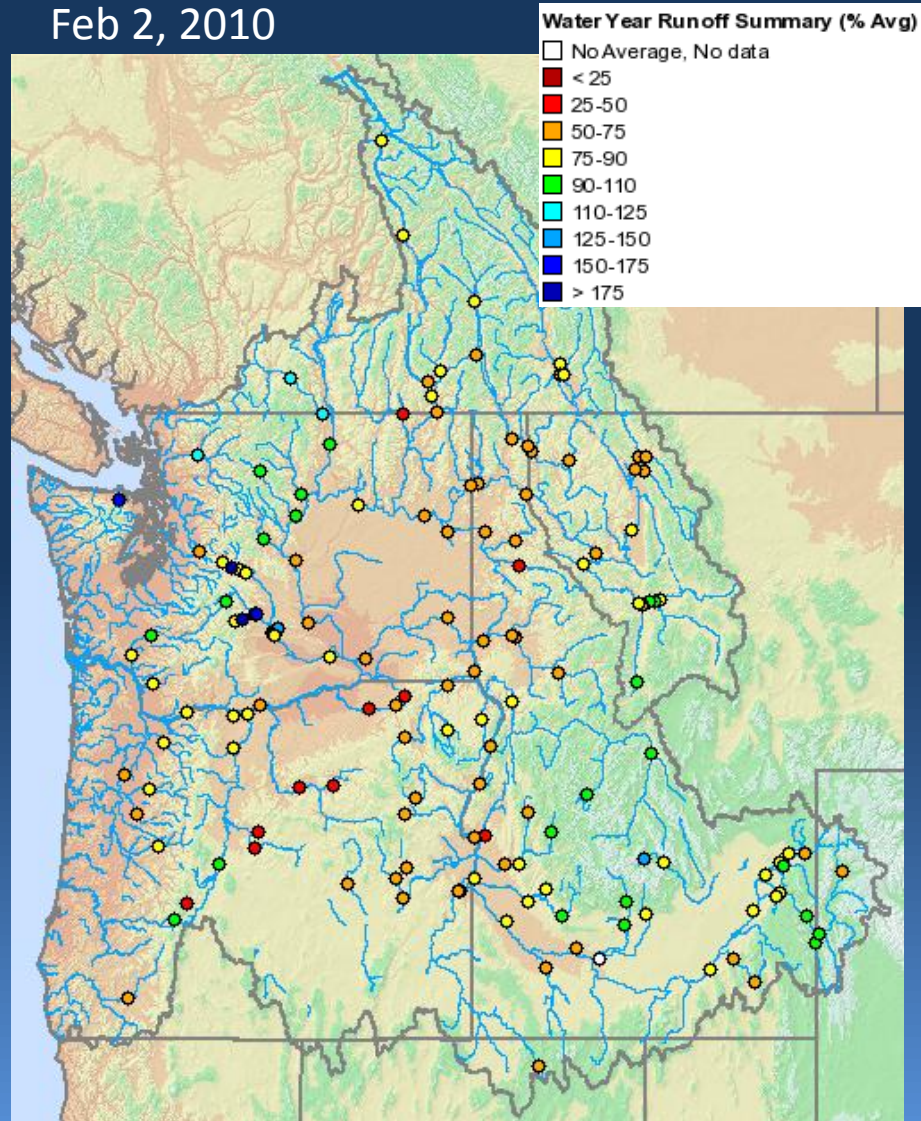


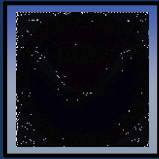
Lower Columbia Snow Conditions



Current Runoff Conditions

Feb 2, 2010





Future Conditions



Climate Outlooks

Short Term Precipitation Forecast

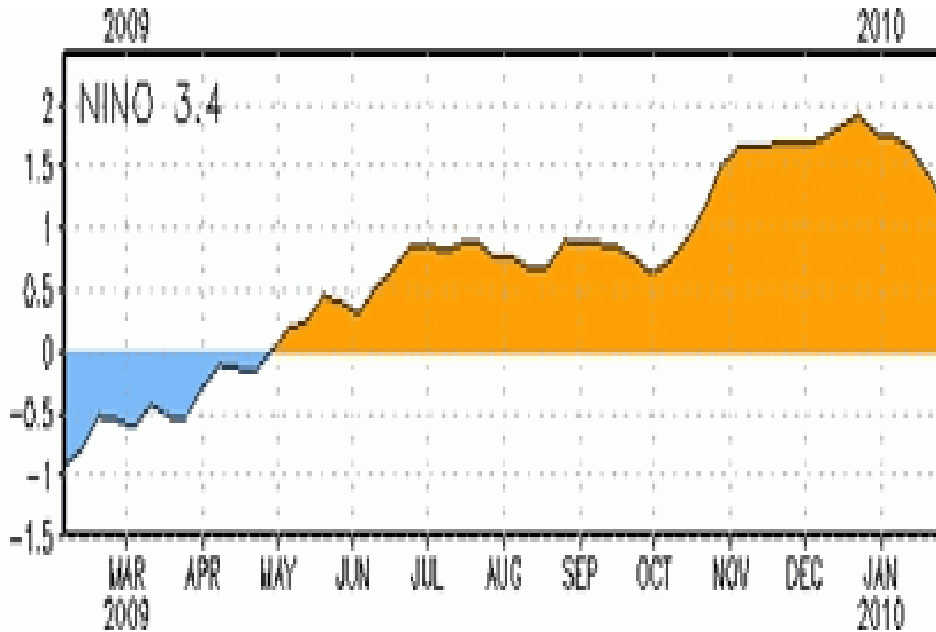
Water Supply Forecasts

Enso: Observed and Forecast

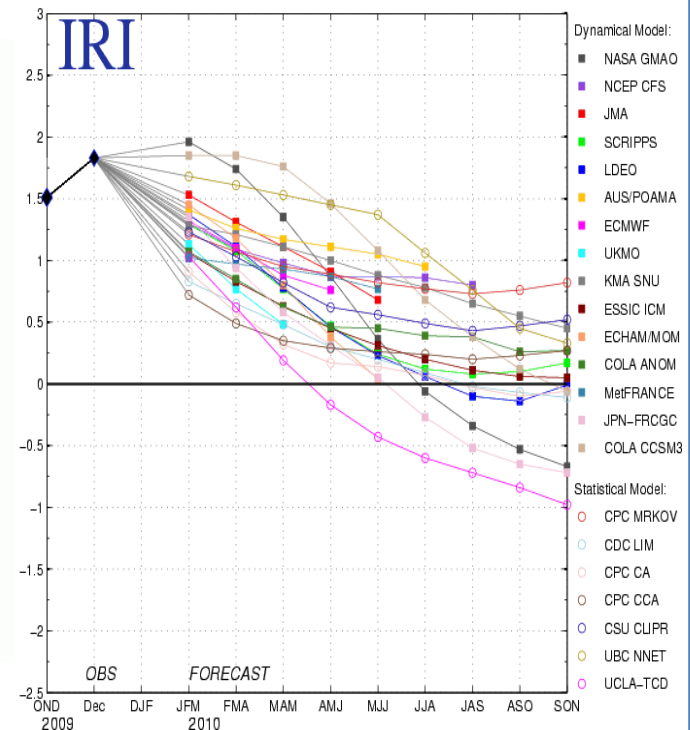
SST Anomaly (Deg C)



Observed: SST 3.4 ~ 1.2 Deg C



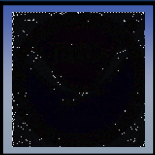
Model Forecasts of ENSO from Jan 2010



CPC Synopsis: El Niño is expected to continue through spring of 2010

Source: El Niño/Southern Oscillation (ENSO) Diagnostic Discussion, Feb 4, 2010

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/index.shtml

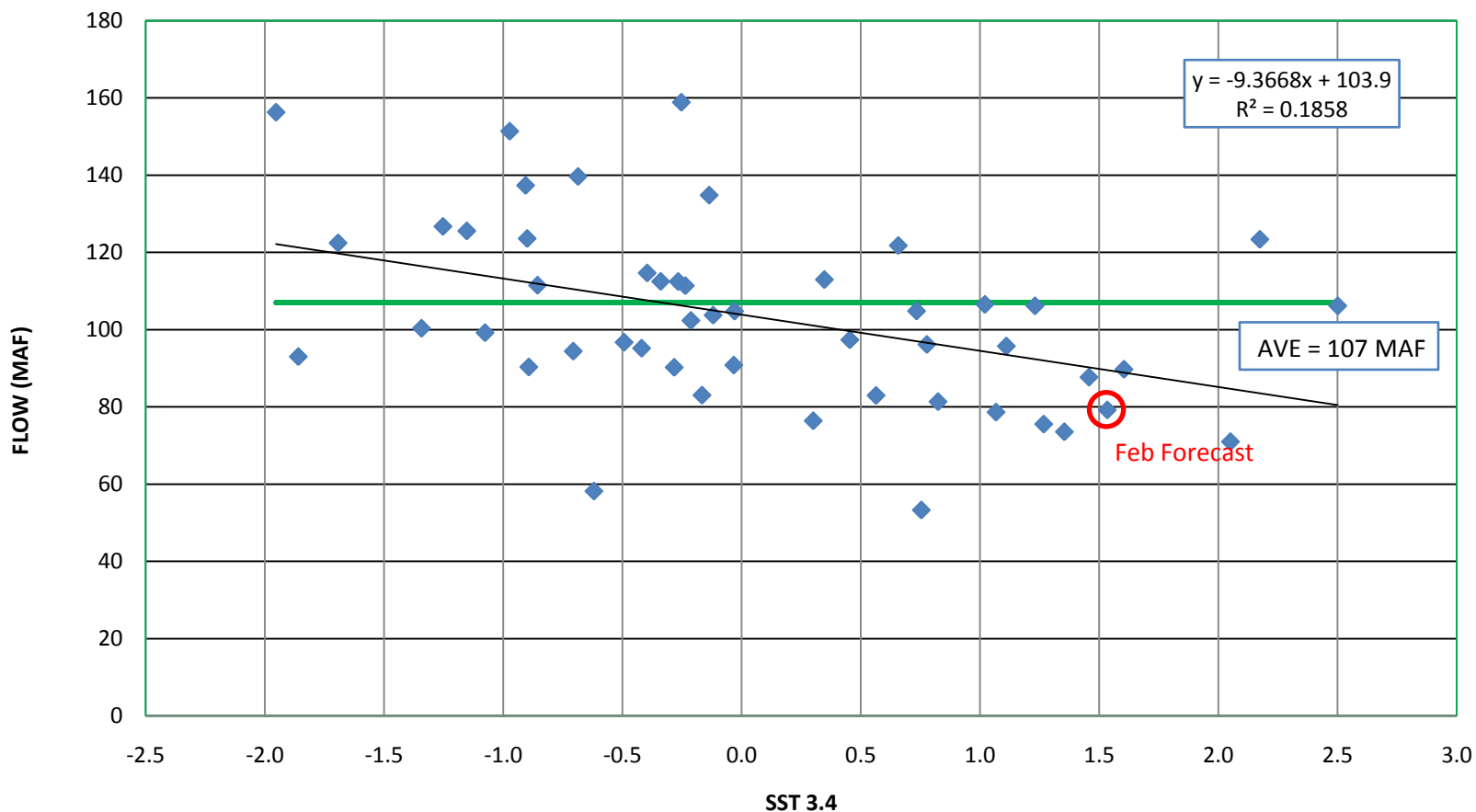


SST Anomaly vs Streamflow

Columbia River near The Dalles



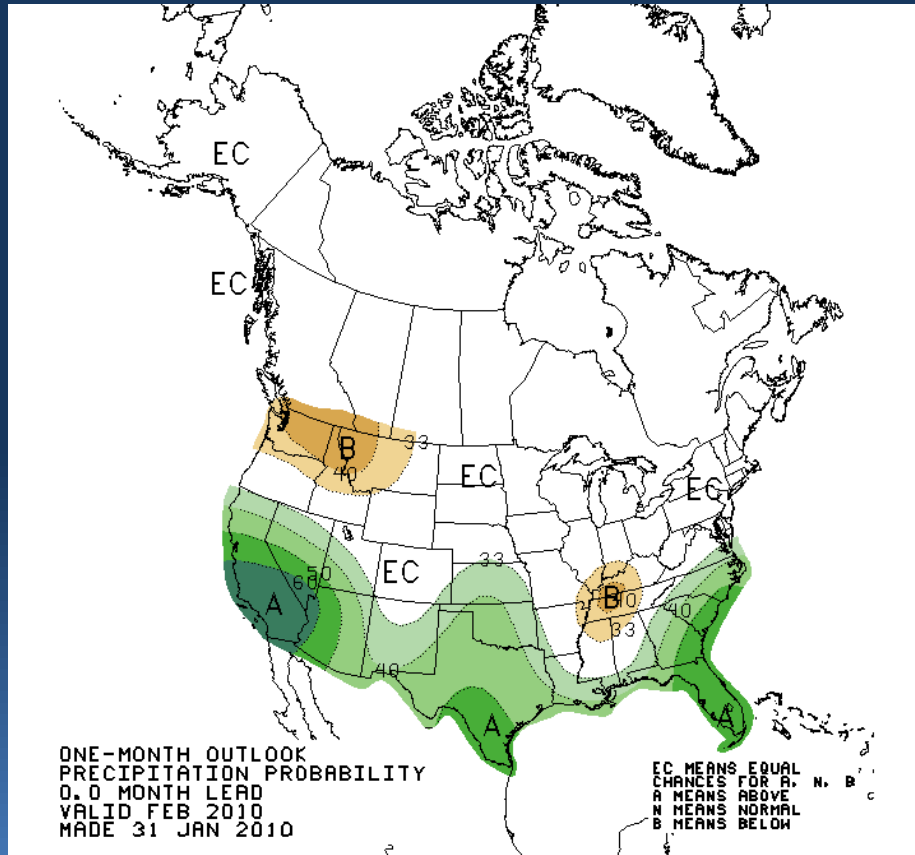
TDAO3 Jan-Jul vs SST AVE (OCT-DEC)



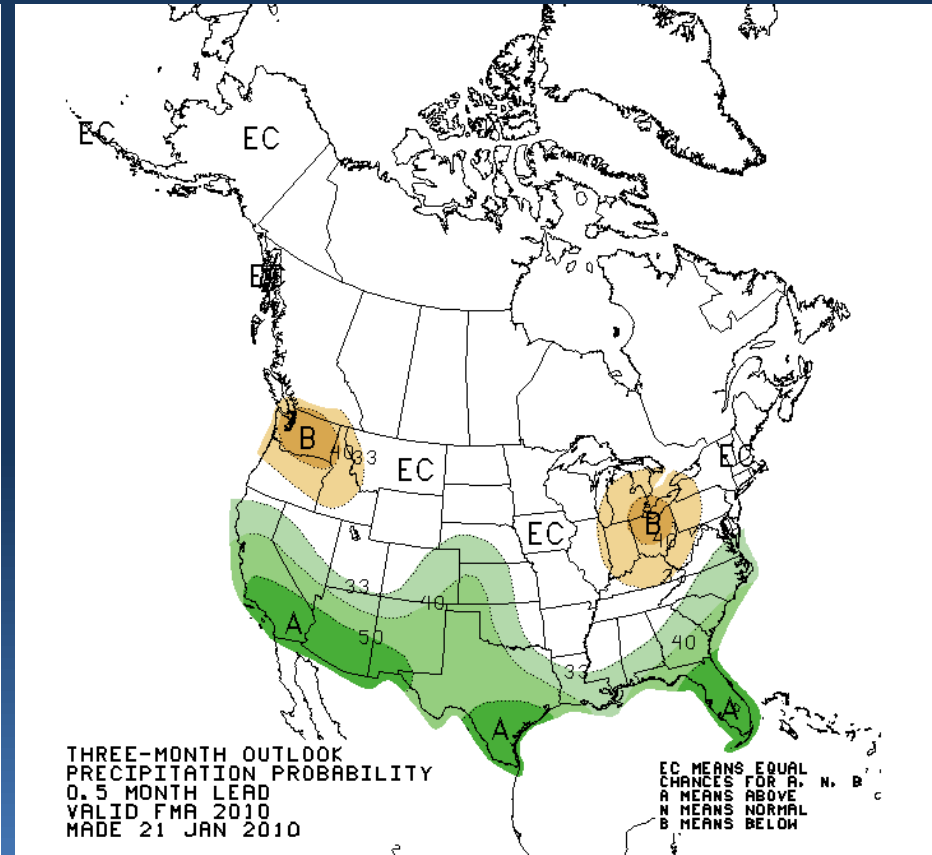
Climate Outlook: Precipitation



Current Month Outlook



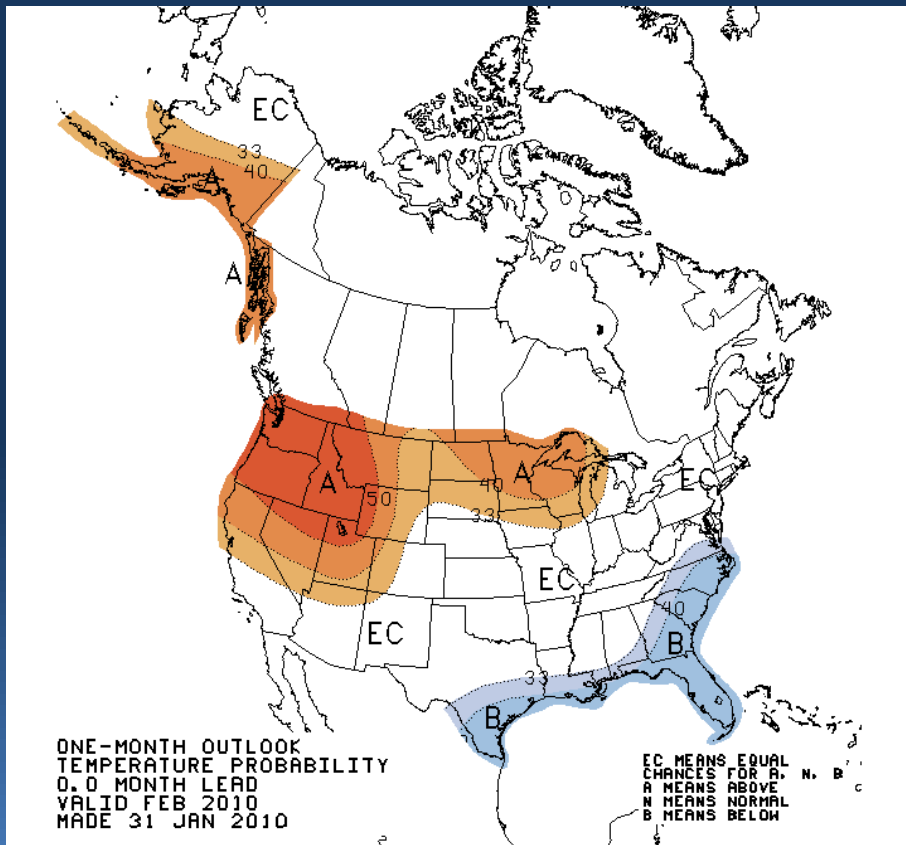
Three Month Outlook



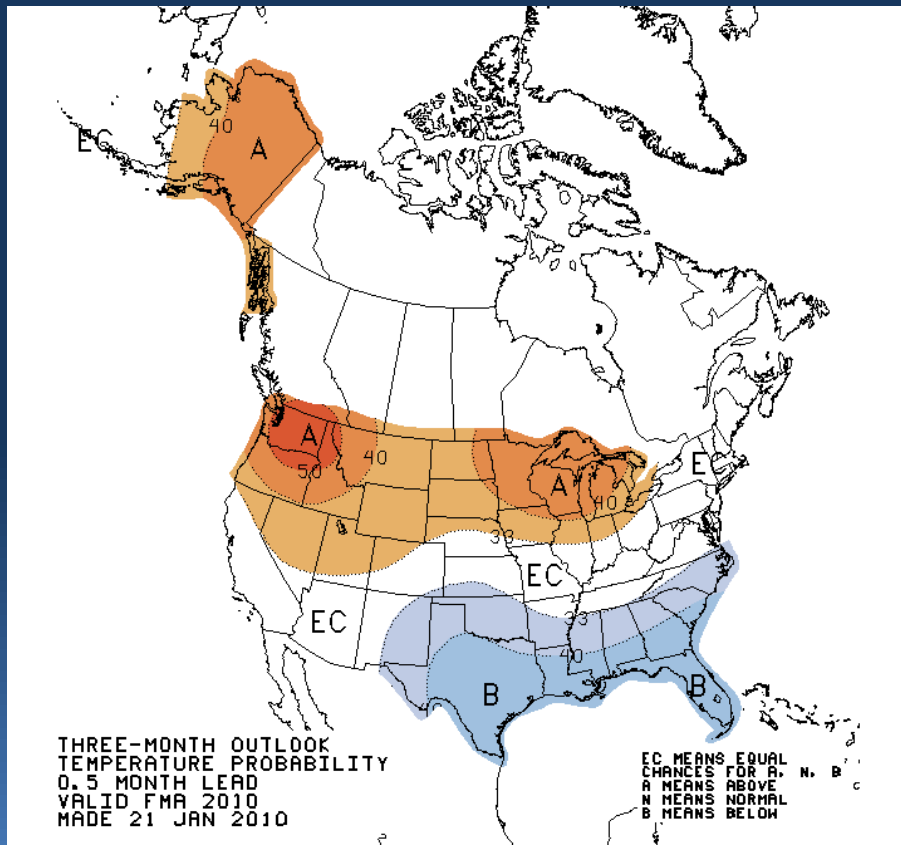
Climate Outlook: Temperature



Current Month Outlook



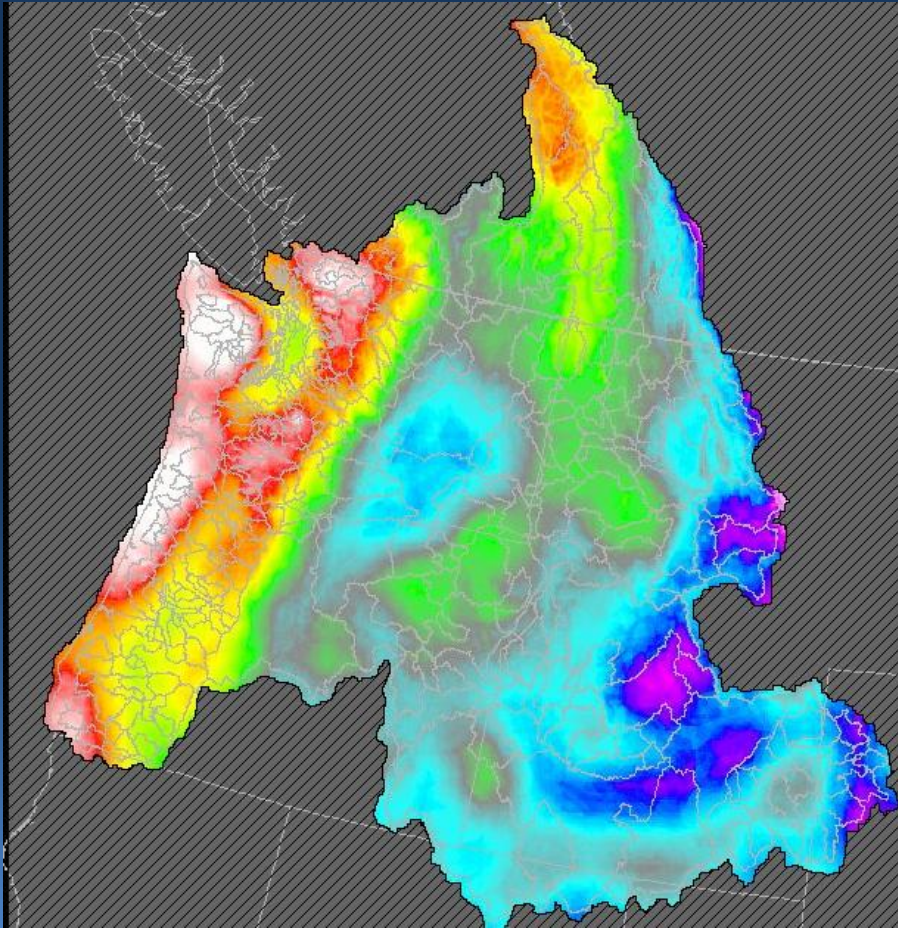
Three Month Outlook



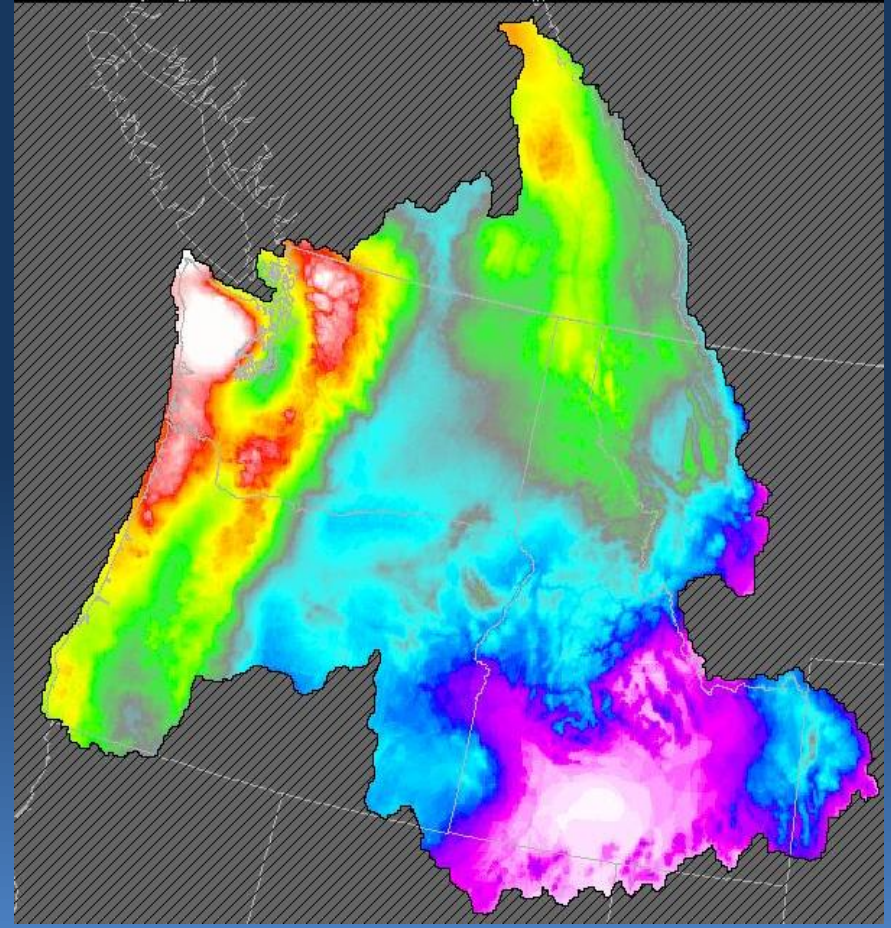
10 Day Precipitation Forecast



Jan 7-17, 2010



Feb 8-18, 2010



(Inches)

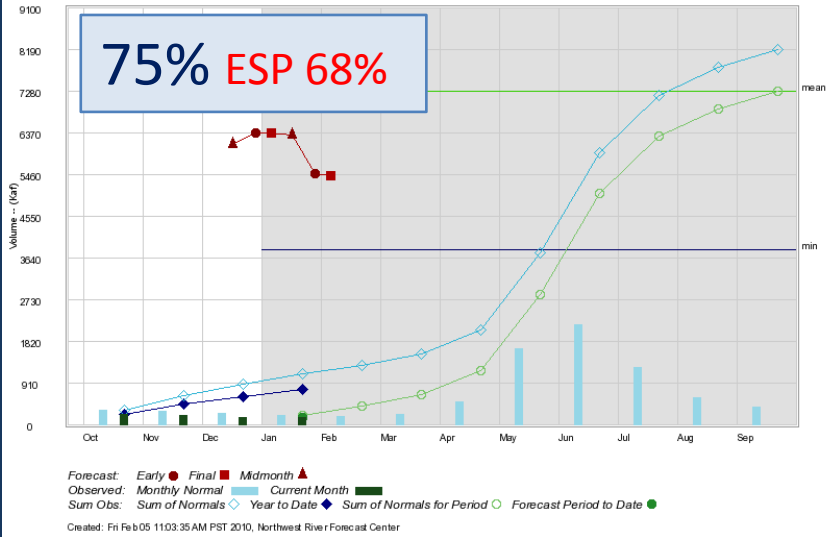


Water Supply Forecast: Upper Columbia



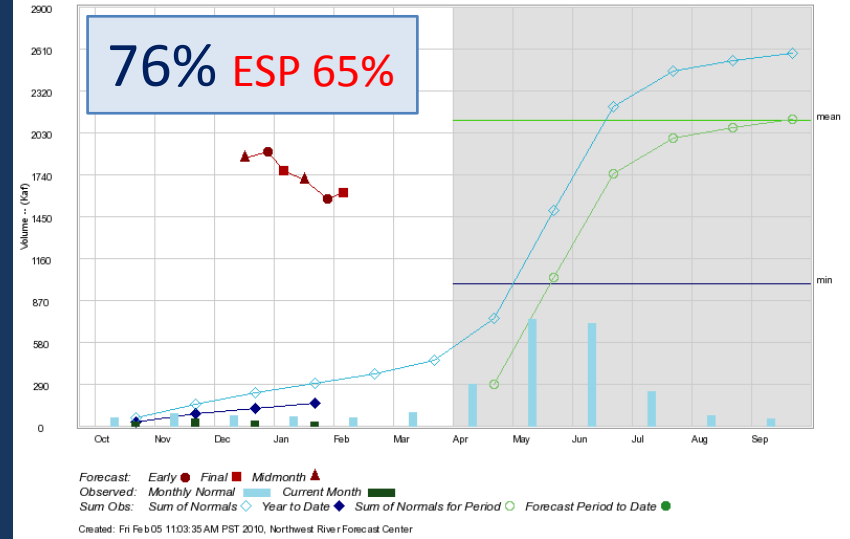
LIBBY RES INFLOW, MT (1) (LYDM8)

Water Year 2010, Forecast Period Jan -- Sep



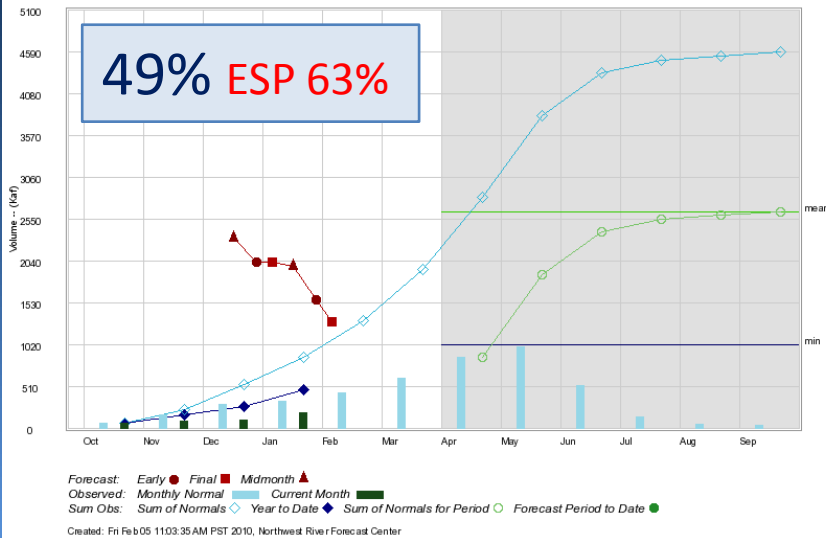
HUNGRY HORSE RES IN, MT (1) (HHWM8)

Water Year 2010, Forecast Period Apr -- Sep



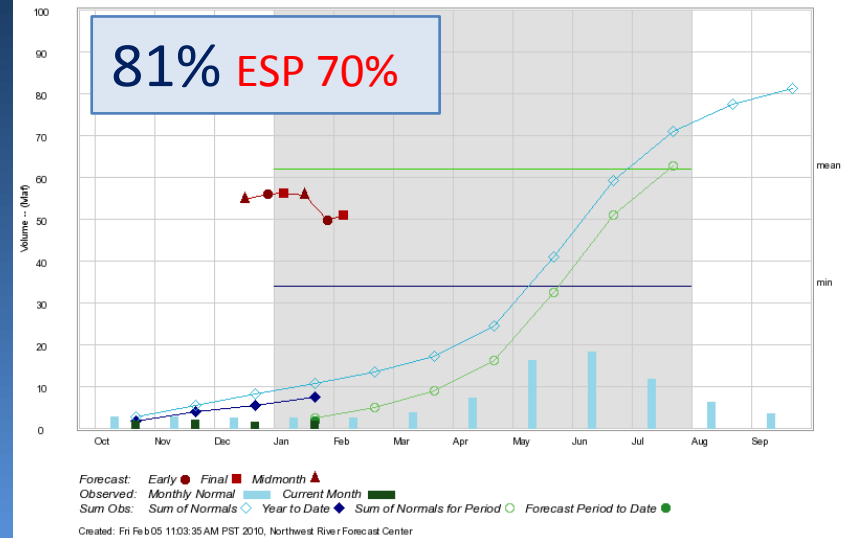
COEUR D'ALENE LAKE IN, ID (COE1)

Water Year 2010, Forecast Period Apr -- Sep

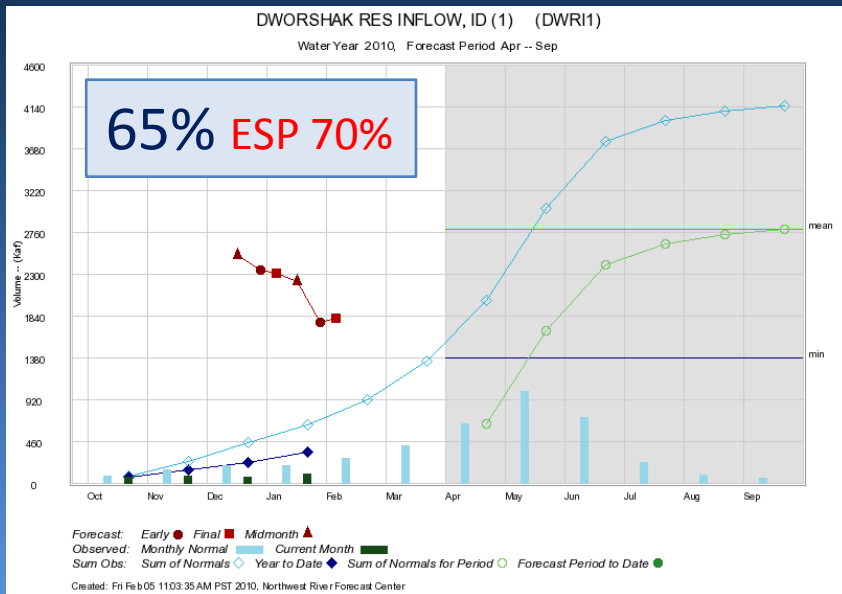
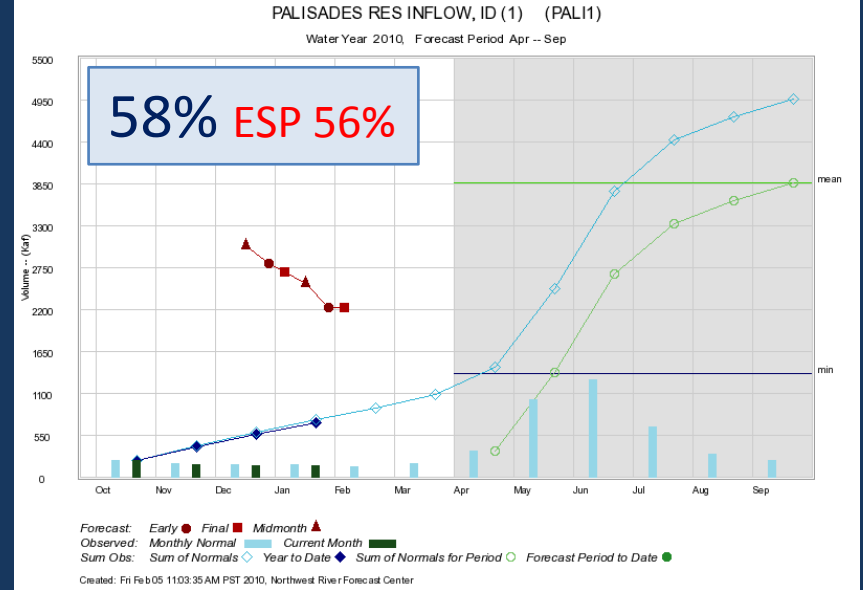
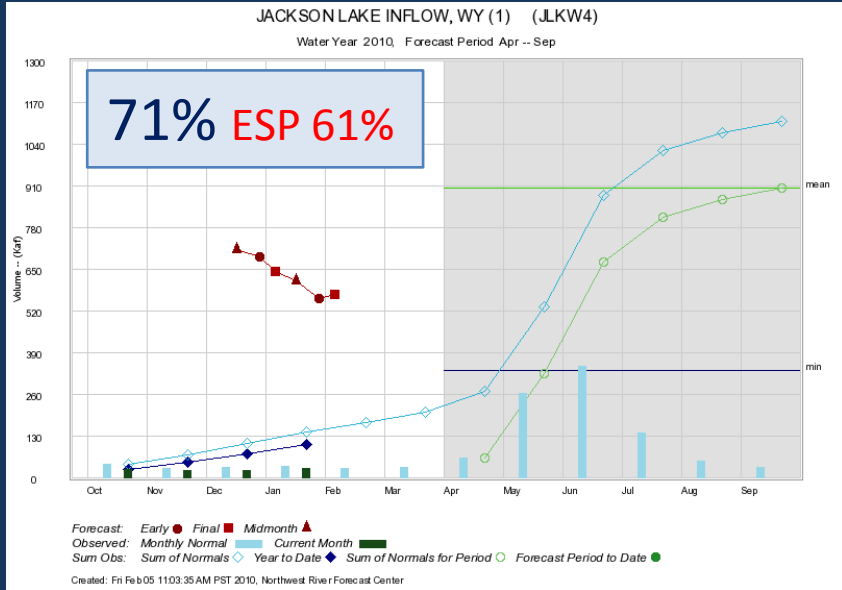
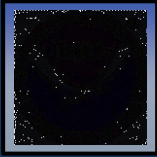


GRAND COULEE, WA (1) (GCDW1)

Water Year 2010, Forecast Period Jan -- Jul



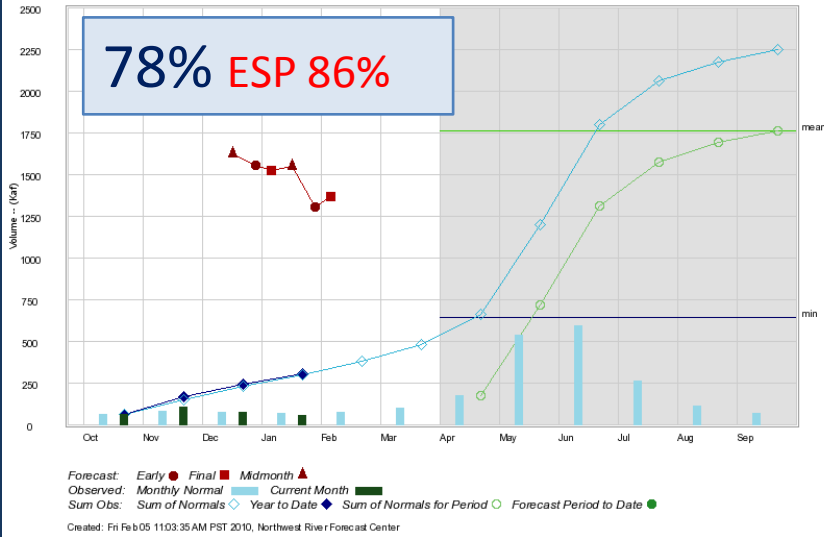
Water Supply Forecast: Snake



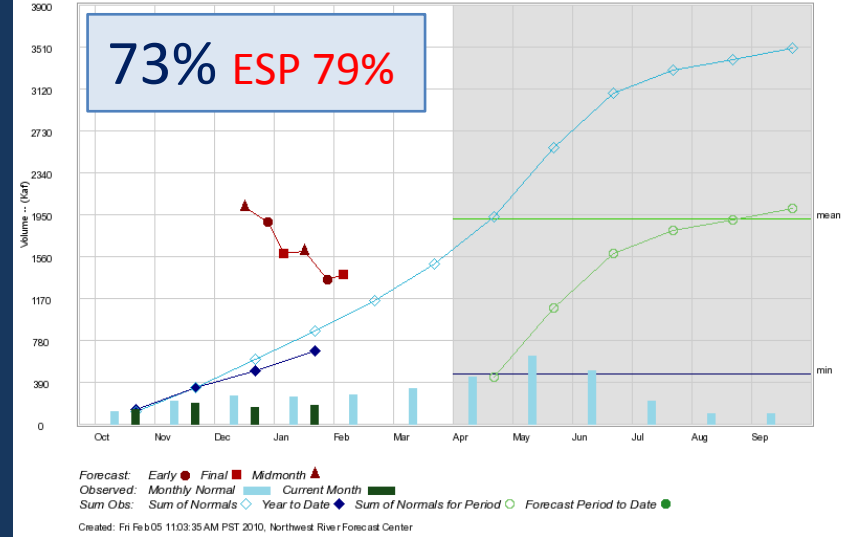
Water Supply Forecast: Lower Columbia



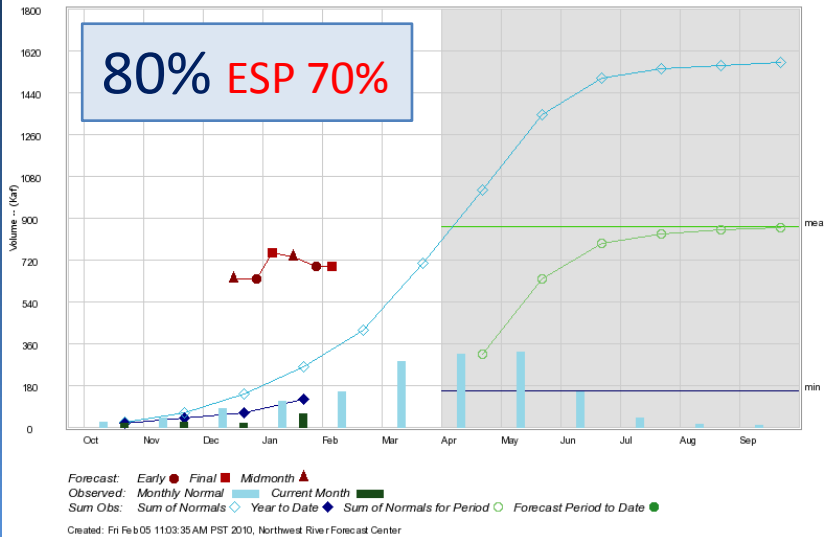
TONASKET NR, WA (1) (TONW1)
Water Year 2010, Forecast Period Apr -- Sep



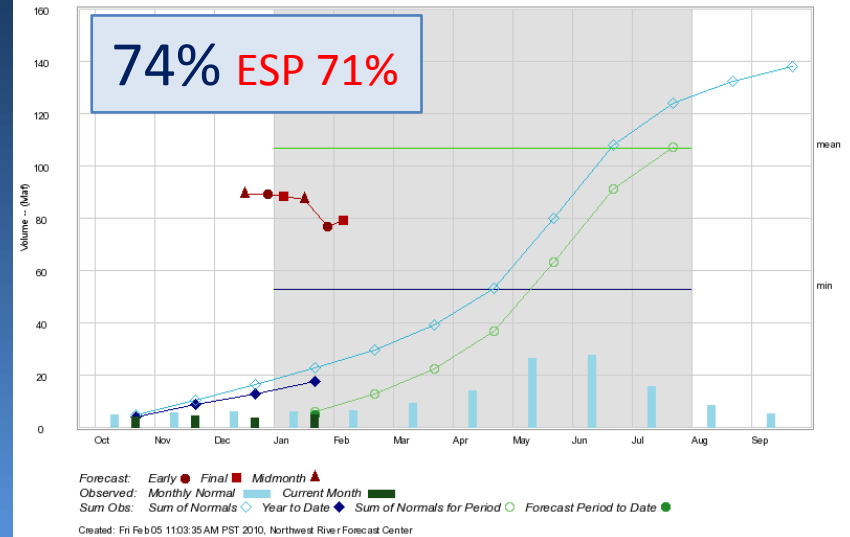
PARKER NR, WA (PARW1)
Water Year 2010, Forecast Period Apr -- Sep



SERVICE CREEK, OR (1) (SER03)
Water Year 2010, Forecast Period Apr -- Sep



THE DALLES NR, OR (1) (TDA03)
Water Year 2010, Forecast Period Jan -- Jul



Water Supply Forecast Summary



January - July Forecast

79.2 MAF 74% of (1971-2000) average

Historical January-July Volumes in MAF
 Mean: 107 Min: 53 Max: 159

Year	Jan-Jul Vol (MAF)	Rank	Exceedance Prob
1966	89.73	38	74.510 %
2003	87.69	39	76.471 %
1979	83.03	40	78.431 %
2004	82.96	41	80.392 %
2005	81.35	42	82.353 %
2010	79.20	43	84.314 %
1987	78.64	44	86.275 %
1994	76.40	45	88.235 %
1988	75.54	46	90.196 %
1992	73.55	47	92.157 %
1973	70.99	48	94.118 %

Rankings and probabilities based on historical water years 1961 to 2010
 Click for full ranking list of all years

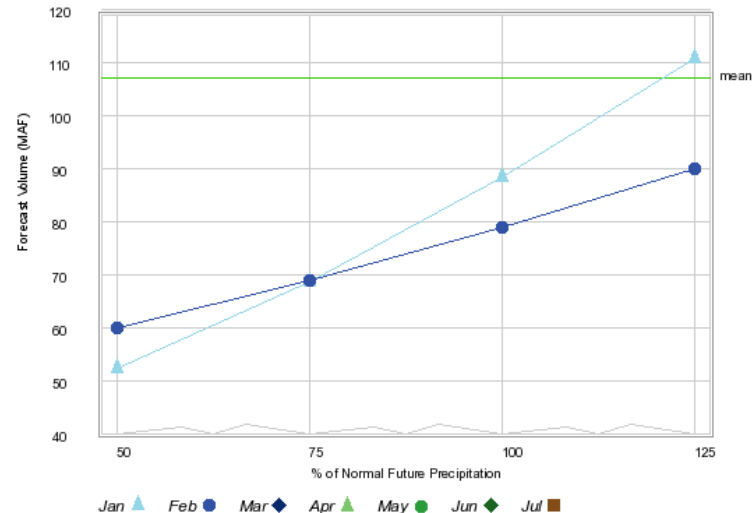
(50 years)

2001	58.19	49	96.078 %
1977	53.29	50	98.039 %

		Contingency Forecast (MAF)			
Date	Type	50%	75%	100%	125%
2010-01-01	Early Bird	52	69	89	111
2010-01-01	Final	52	68	88	111
2010-01-01	Mid Month	56	70	87	105
2010-02-01	Early Bird	57	69	79	99
2010-02-01	Final	60	69	79	90

THE DALLES (TDAO3)

Contingency forecast for 2010, Forecast period: Jan - Jul



Water Supply Forecast: ESP Comparison



COLUMBIA - GRAND COULEE DAM (GCDW1) Forecasts for WY 2010

Official Forecast (Regression) <i>Issued: 2010-02-05</i>								ESP Forecasts <i>Issued: 2010-02-06</i>						
(Description)								ESP Forecasts for Forecast Period (KAF)						Obs Flow From Start of Period To 2/1/2010
Period	Forecast (KAF)	% of Average	5% Forecast	95% Forecast	30yr (1971-2000) Average	Max of Record	Min of Record	Forecast Period	90 % Exceedance Probability	70 % Exceedance Probability	50 % Exceedance Probability	30 % Exceedance Probability	10 % Exceedance Probability	
JAN-SEP	59200.0	81	71667.0	46733.0	73040.0	103500.0	44000.0	JAN-SEP	48388.2	50660.9	53559.0	57209.7	63805.0	1880.0
FEB-SEP	57300.0	81	69767.0	44833.0	70460.0			FEB-SEP	46508.2	48780.9	51679.0	55329.7	61925.0	0.0
APR-JUL	43900.0	82	56367.0	31433.0	53850.0	76239.0	31885.0	APR-JUL	34067.4	36397.1	38892.0	41002.4	47877.2	0.0
APR-SEP	52100.0	81	64567.0	39633.0	63990.0	88512.0	39829.0	APR-SEP	42645.4	44555.1	47558.3	50813.4	57351.6	0.0
JAN-JUL	51000.0	81	63467.0	38533.0	62900.0	91140.0	34760.0	JAN-JUL	39810.2	42482.3	44270.3	47049.2	55121.5	1880.0

SNAKE - LOWER GRANITE DAM (LGDW1) Forecasts for WY 2010

Official Forecast (Regression) <i>Issued: 2010-02-05</i>								ESP Forecasts <i>Issued: 2010-02-06</i>						
(Description)								ESP Forecasts for Forecast Period (KAF)						Obs Flow From Start of Period To 2/1/2010
Period	Forecast (KAF)	% of Average	5% Forecast	95% Forecast	30yr (1971-2000) Average	Max of Record	Min of Record	Forecast Period	90 % Exceedance Probability	70 % Exceedance Probability	50 % Exceedance Probability	30 % Exceedance Probability	10 % Exceedance Probability	
JAN-SEP	21000.0	64	30314.0	11686.0	32610.0	53055.0	14754.0	JAN-SEP	20672.9	23831.3	24756.9	25930.7	30597.2	1491.0
FEB-SEP	19500.0	64	28814.0	10186.0	30370.0	47685.0		FEB-SEP	19181.9	22340.3	23265.9	24439.7	29106.2	0.0
APR-JUL	13800.0	64	23114.0	4486.0	21550.0	33528.0	8634.0	APR-JUL	12761.7	15269.3	16408.4	17020.4	20331.6	0.0
APR-SEP	15500.0	64	24814.0	6186.0	24140.0	37104.0	10420.0	APR-SEP	15013.8	17952.7	19088.5	19744.8	23128.7	0.0
JAN-JUL	19300.0	64	28614.0	9986.0	30020.0	49478.0	12878.0	JAN-JUL	18368.5	21190.3	22080.7	23141.4	27525.1	1491.0
APR-AUG	14700.0	64	24014.0	5386.0	22870.0	35290.0		APR-AUG	13873.0	16538.3	17778.1	18422.2	21707.2	0.0
FEB-JUL	17800.0	64	27114.0	8486.0	27780.0			FEB-JUL	16877.5	19699.3	20589.7	21650.4	26034.1	0.0


COLUMBIA - THE DALLES DAM (TDAO3) Forecasts for WY 2010

Official Forecast (Regression) <i>Issued: 2010-02-05</i>								ESP Forecasts <i>Issued: 2010-02-06</i>						
(Description)								ESP Forecasts for Forecast Period (KAF)						Obs Flow From Start of Period To 2/1/2010
Period	Forecast (KAF)	% of Average	5% Forecast	95% Forecast	30yr (1971-2000) Average	Max of Record	Min of Record	Forecast Period	90 % Exceedance Probability	70 % Exceedance Probability	50 % Exceedance Probability	30 % Exceedance Probability	10 % Exceedance Probability	
JAN-SEP	89500.0	74	112088.0	66912.0	121300.0	176593.0	64517.0	JAN-SEP	80067.0	85976.0	89849.8	96213.1	106926.9	4869.0
FEB-SEP	84600.0	74	107188.0	62012.0	115000.0			FEB-SEP	75198.0	81107.0	84980.8	91344.1	102057.9	0.0
APR-AUG	68500.0	74	91088.0	45912.0	93090.0	133733.0	49445.0	APR-AUG	60011.4	65924.3	68494.9	73552.5	82644.6	0.0
JAN-AUG	85400.0	74	107988.0	62812.0	115700.0	168669.0	59871.0	JAN-AUG	75183.5	81503.5	84272.4	89241.4	101744.0	4869.0
FEB-AUG	80500.0	74	103088.0	57912.0	109400.0			FEB-AUG	70314.5	76634.5	79403.4	84372.4	96875.0	0.0
APR-SEP	72600.0	74	95188.0	50012.0	98650.0	141056.0	54091.0	APR-SEP	64622.9	71085.4	73991.7	79781.7	87819.8	0.0
JAN-JUL	79200.0	74	101788.0	56612.0	107300.0	159000.0	53359.0	JAN-JUL	68005.8	74315.6	76576.1	80830.0	93457.0	4869.0

NWRFC Water Supply Webpage

www.nwrfc.noaa.gov





**National Weather Service
Northwest
River Forecast Center**

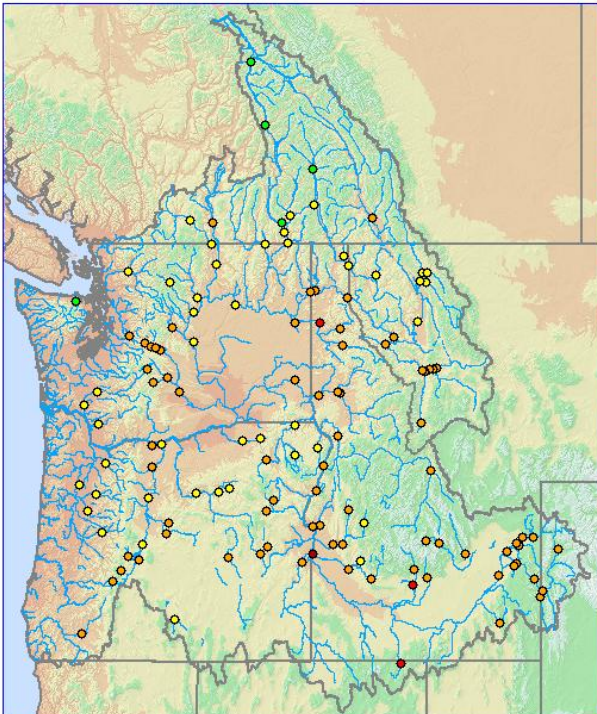
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Water Supply Forecast (Issued 02-05-2010)

Map data updated 02/05.16:55 GMT, 02/05.08:55 PST.

Join Us LIVE for a Water Supply Briefing -- click here for more Information
click for Water Supply Briefing -- 01/11/2010

Place cursor over point for Station Info, click point for data plot.
Select Zoom Option to zoom in on map
Click to: [Select](#) | [Zoom](#) **Zoom to:** 1x 4x 8x



Legend
Water Supply Forecast (% Avg)

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

Point Info/Search

Station Name

ID

Forecast Period

Volume Forecast (KAF)

% of Avg (1971-2000)

5% Forecast (KAF)

95% Forecast (KAF)

30-YR Avg (KAF)

Click for [Summary List of Water Supply Forecasts](#)
Click for [Comma Delimited WS Forecasts \(Issued 02-05-2010\)](#)
(Description)

Water Supply Forecast Information

- Summary
- Western Water Sup

ESP Water Supply

- ESP Natural
- ESP Interactive

Peakflow

- Description
- Verification

Inputs

- Precipitation
- Temperature
- Snow
- Runoff

Descriptive Information

- Summary
- Schedule
- Fcst Locations
- Publications

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