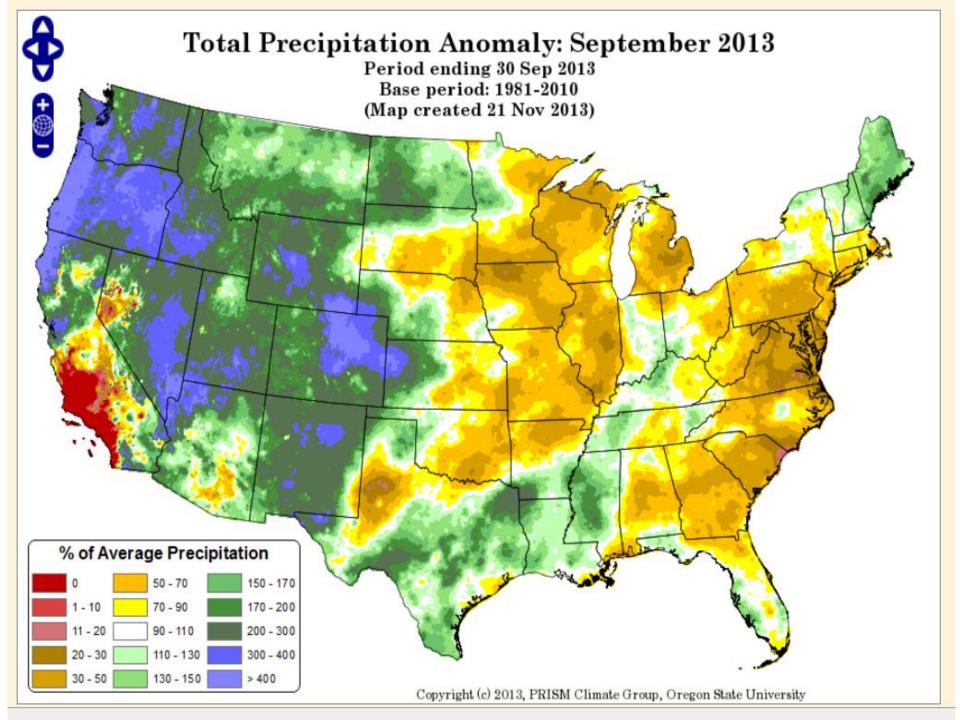
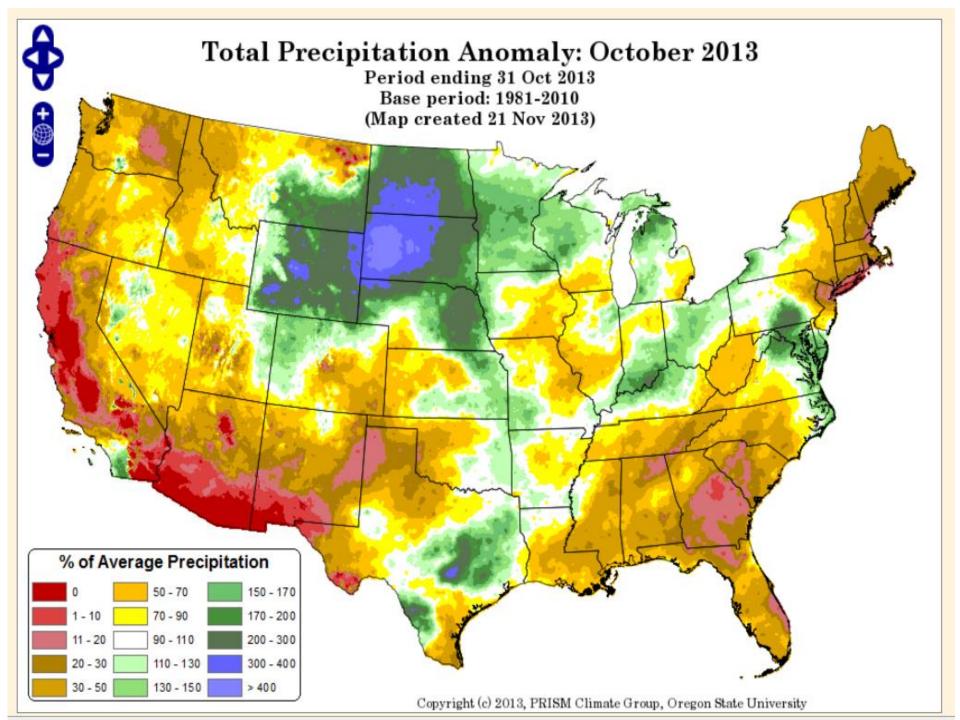
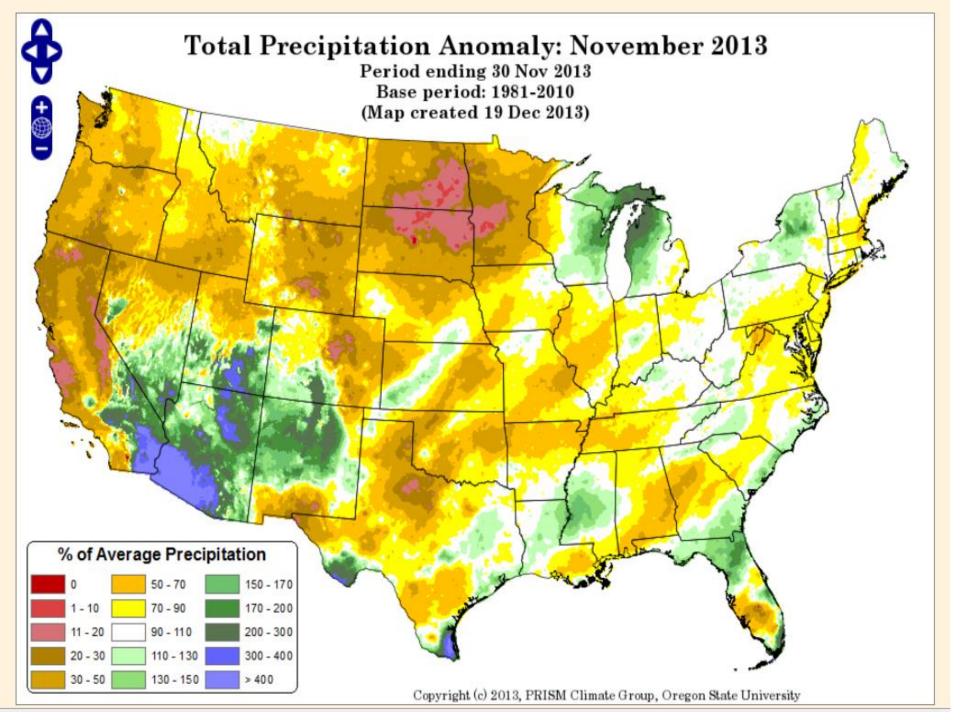
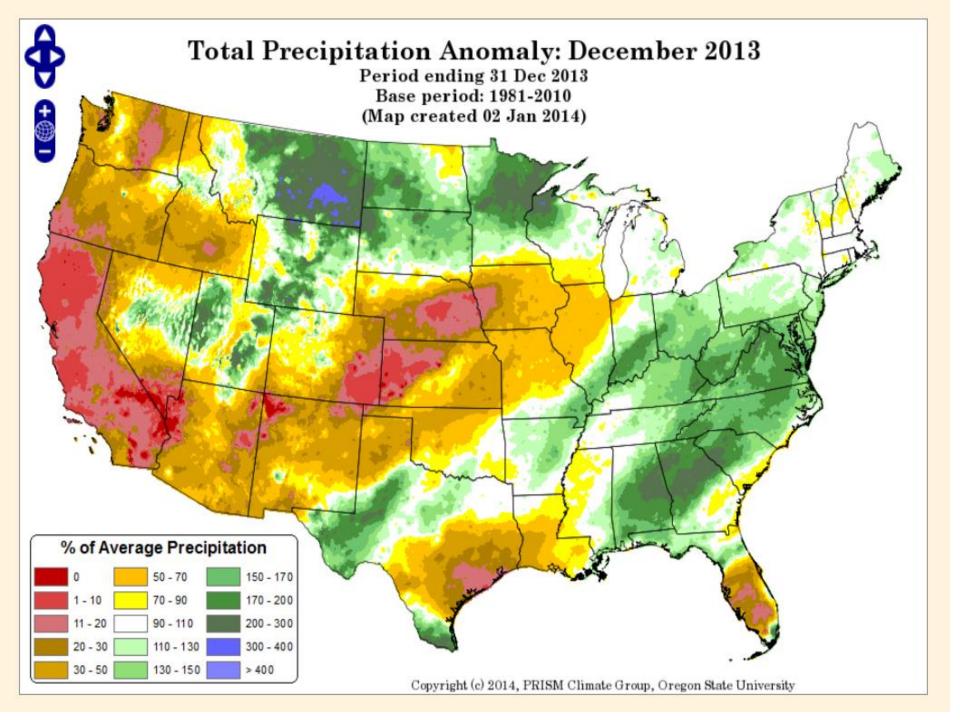


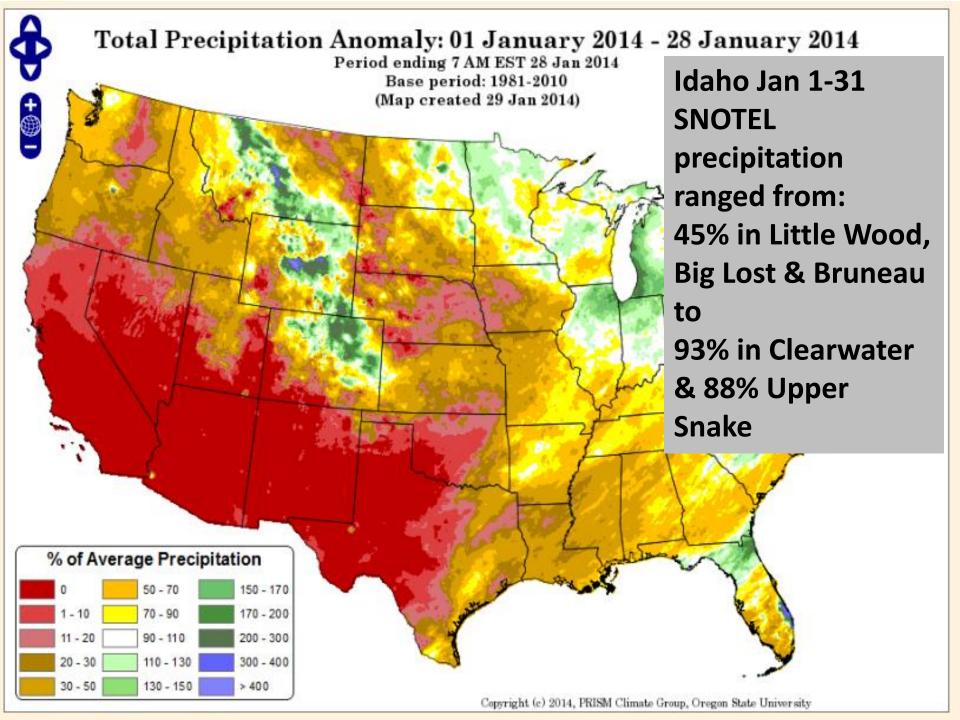
**Water Supply Specialist USDA NRCS Snow Survey Boise, Idaho** 

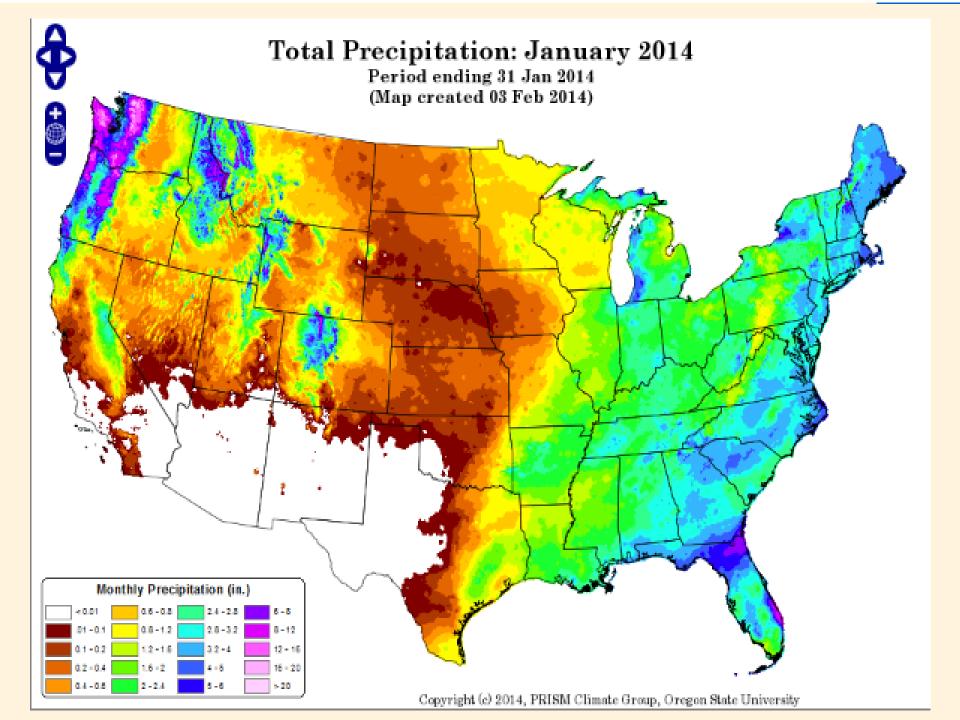


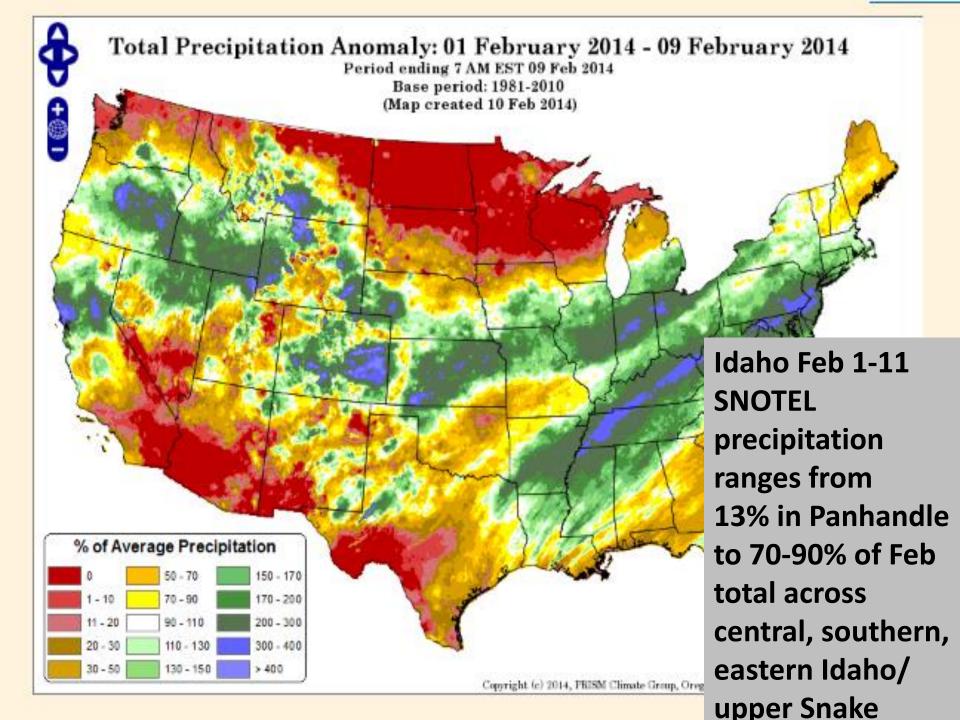












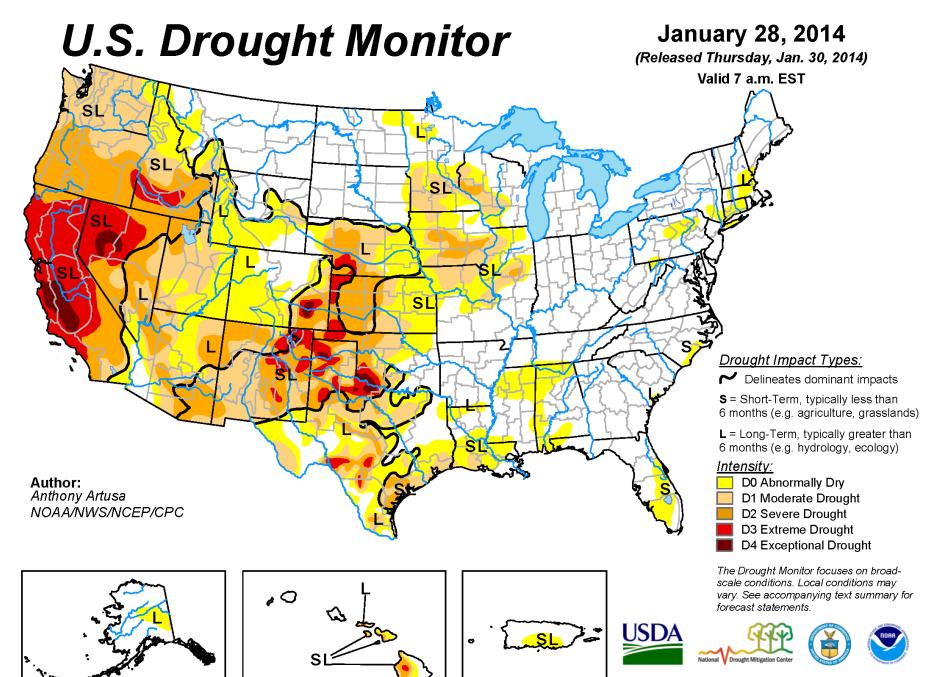
# **PRISM Maps**

Maps were produced by Oregon State University's PRISM Climate Group.

Data and website development are funded by USDA Risk Management Agency (RMA) for crop insurance verification, and quality control of SNOTEL data is funded by NRCS.

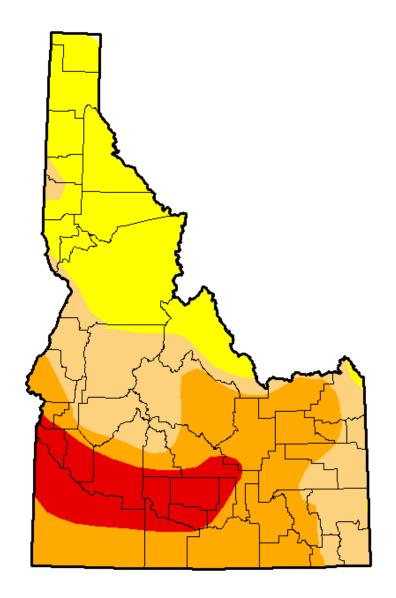
The maps include all SNOTEL stations and many other national and regional networks.

Maps are <a href="http://www.prism.oregonstate.edu/">http://www.prism.oregonstate.edu/</a>



http://droughtmonitor.unl.edu/

# U.S. Drought Monitor Idaho



### **January 28, 2014**

(Released Thursday, Jan. 30, 2014)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.06	99.94	71.96	46.71	13.79	0.00
Last Week 1/21/2014	0.06	99.94	71.96	46.71	13.79	0.00
3 Month s Ago 10/29/2013	21.57	78.43	70.09	41.87	5.09	0.00
Start of Calendar Year 12/31/2013	21.66	78.34	70.07	45.43	7.70	0.00
Start of Water Year 10/1/2013	12.06	87.94	76.96	43.33	5.09	0.00
One Year Ago 1/29/2013	38.79	61.21	36.69	0.52	0.00	0.00

#### Intensity:

D0 Abnormally Dry

D3 Extreme Drought

D1 Moderate Drought

D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

#### Author:

Anthony Artusa NOAA/NWS/NCEP/CPC











## Today's Featured Post: January 27-29 Northeast Coastal Clipper Storm

Friday, December 27, 2013

## January 17-21 Potential Colorado Low / Panhandle Hook Winter Storm

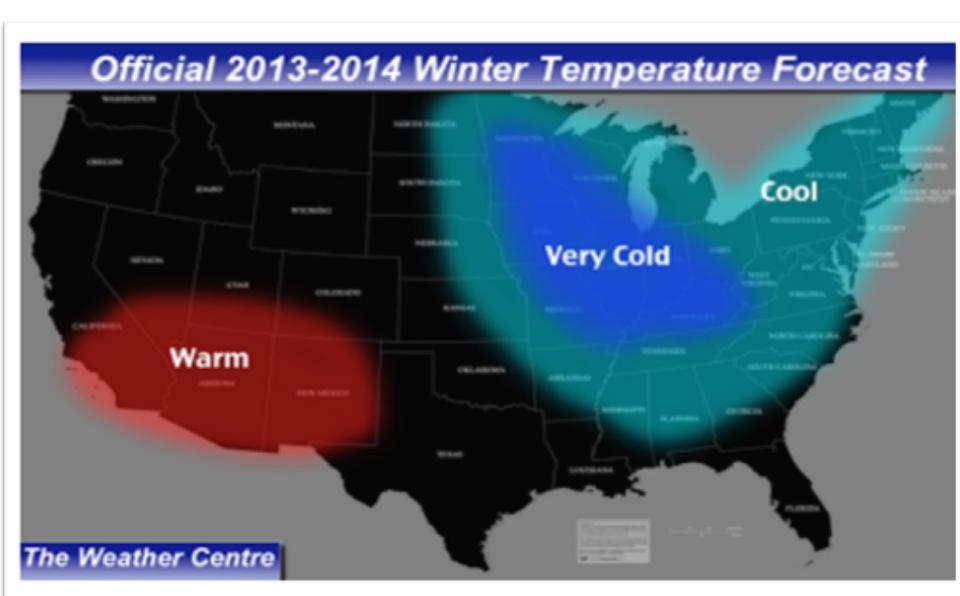
By Andreat 2:46 PM

This is an updated look at the January 17-21 potential winter storm, which had previously been titled the January 18-20 winter storm. The timeframe was extended to provide a 'cushion', as a look at some new indices favor a wider timeframe.

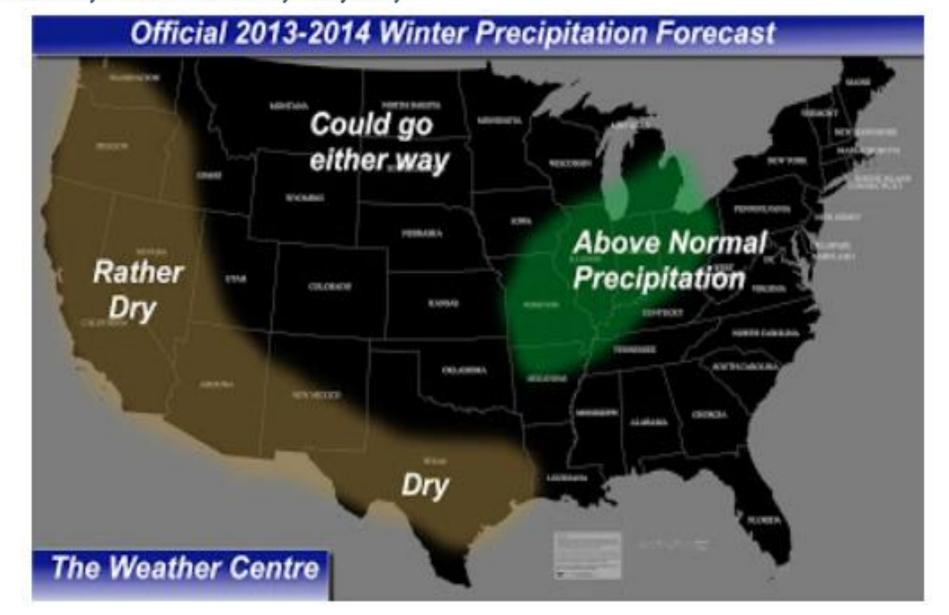
This is a long range post, and many found the notion of me publishing such a far out storm possibility appalling. However, the evidence is building for a potential storm system in this timeframe, and if you'll just give this post a good read, you can see why I'm posting about it this early.

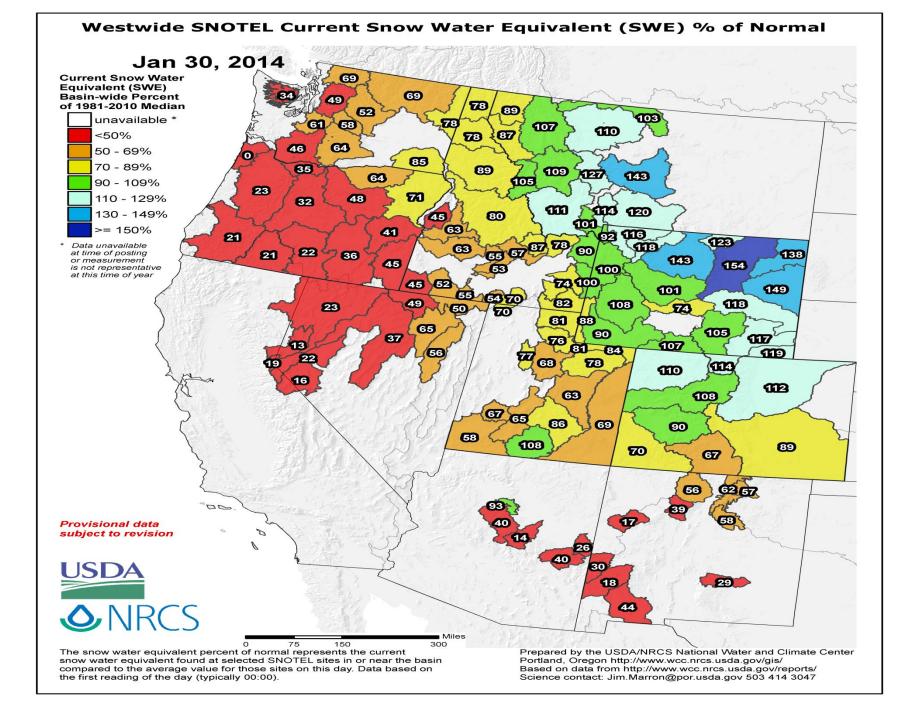
#### Official 2013-2014 Winter Forecast

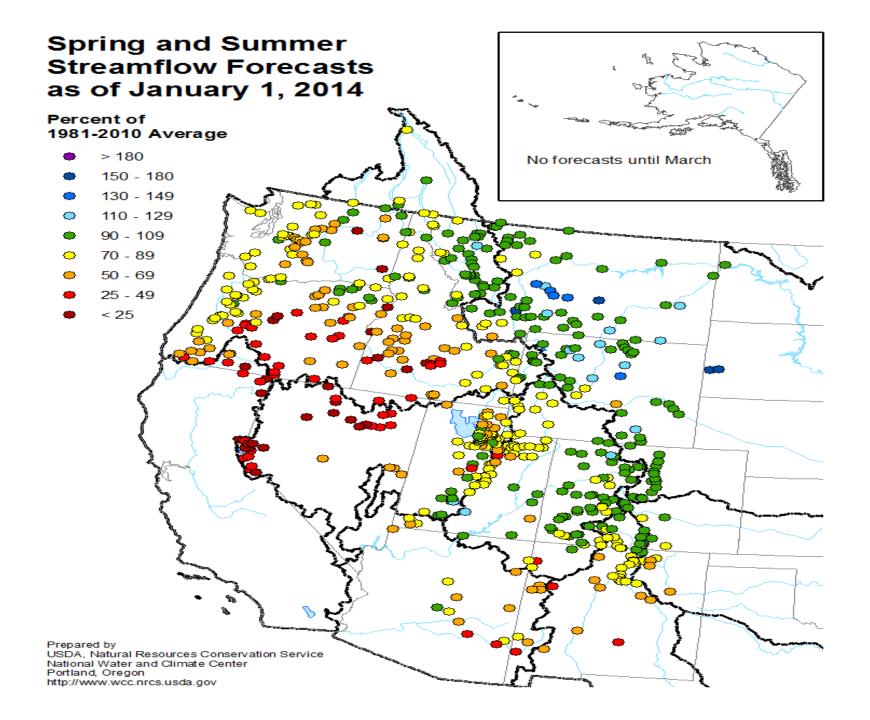
By Andreat 12:00 PM



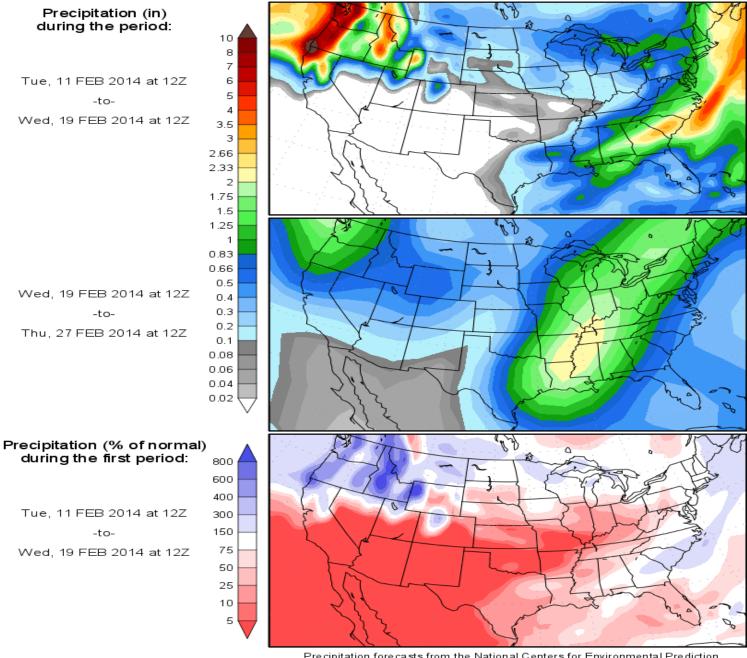
Precipitation is a wild card this year. With a ridging pattern expected along the western coast of North America, drier than normal conditions are expected. I'm not completely confident in the entire Western US receiving dry weather, which is why it is labeled 'Rather Dry' over just dry.







#### **Precipitation Forecasts**

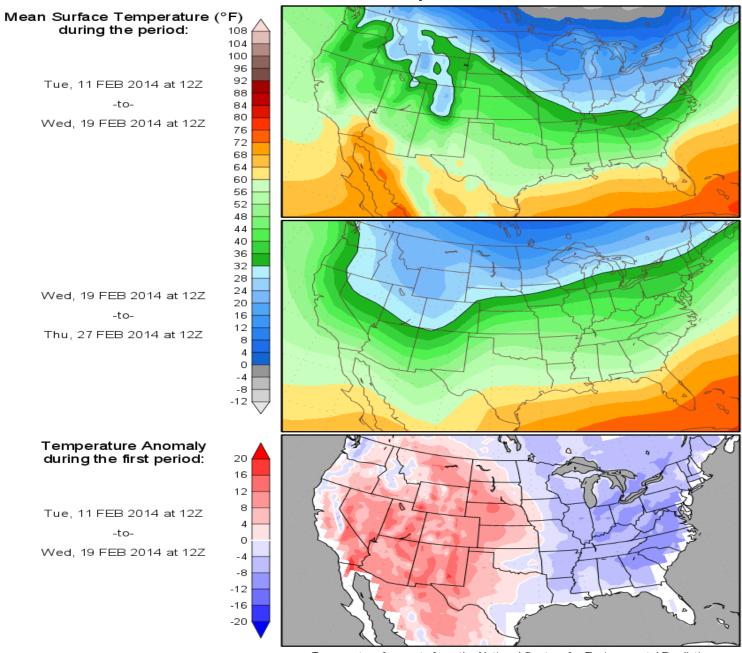


Precipitation forecasts from the National Centers for Environmental Prediction.

Normal rainfall derived from Xie-Arkin (CMAP) Monthly Climatology for 1979-2003.

Forecast Initialization Time: 12Z11FEB2014

#### Temperature Forecasts



Temperature forecasts from the National Centers for Environmental Prediction.

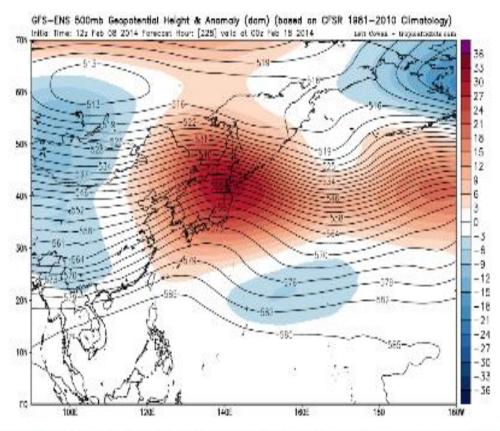
Normal Temperature derived from CRU monthly climatology for 1901-2000

Forecast Initialization Time: 12Z11FEB2014

## Arctic Cold to Abruptly End in Mid February, Return in March

By Andreat 4:24 PM Feb 8 2014

It's looking like we will see the recent Arctic cold come to a quick end in mid-February.

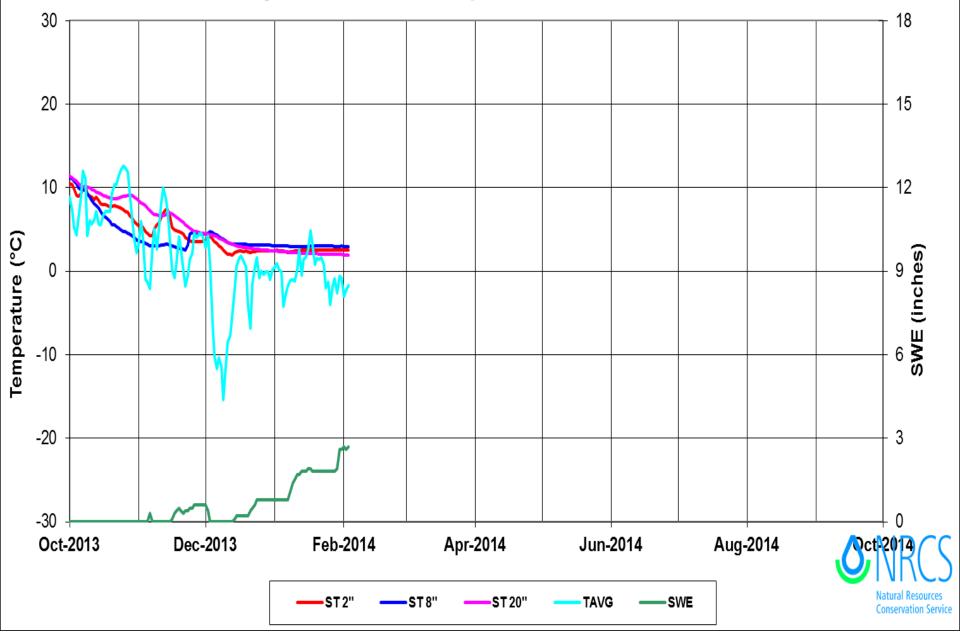


The image above shows the GFS Ensemble 500mb height anomaly forecast for February 17th over the western Pacific.



## Long Valley Soil and Air Temperature - Water Year 2014 30 12 20 10 8 Temperature (°C) SWE (inches) 0 -10 -20 -30 Aug-2014 Oct-2013 Dec-2013 Feb-2014 Apr-2014 Jun-2014 —\_\_ST2" —\_\_ST4" —\_\_ST8" —\_\_ST20" —\_\_TAVG —\_\_SWE

## Van Wyck Soil and Air Temperature - Water Year 2014



## Van Wyck Soil Moisture - Water Year 2014 32 40 35 28 30 24 Soil Moisture (% Water by Volume) SWE, Precip (inches) 25 20 15 10 5 0 Aug-2014 Jun-2014 Oct-2013 Dec-2013 Feb-2014 Apr-2014

-SM 20"

-SWE

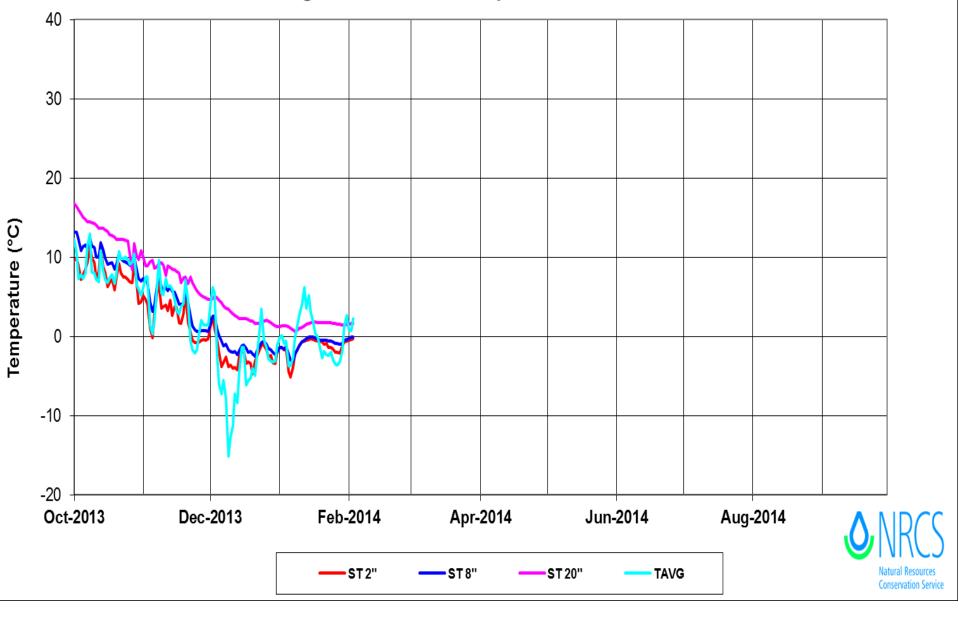
-PREC

**Conservation Service** 

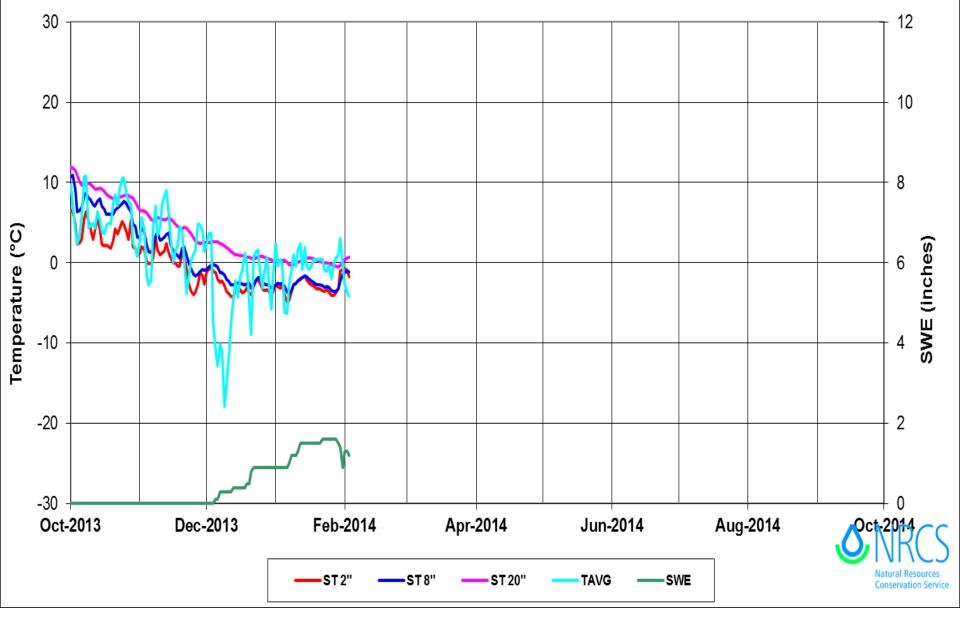
-SM 2"

----SM 8"

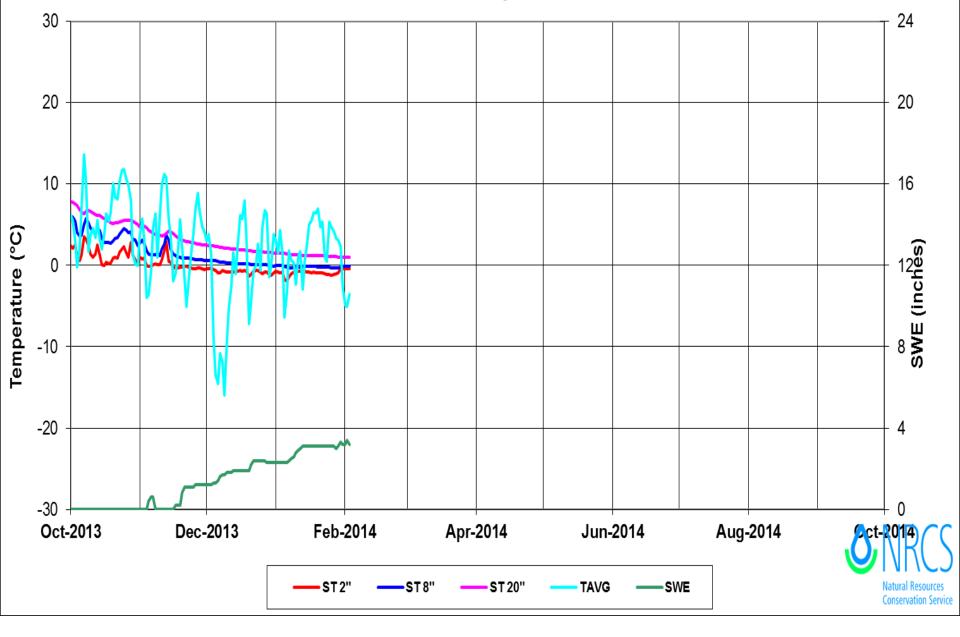
## Orchard Range Soil and Air Temperature - Water Year 2014



## Mud Flat Soil and Air Temperature - Water Year 2014



## South Mountain Soil and Air Temperature - Water Year 2014





#### Natural Resources Conservation Service

# Idaho Water Supply Outlook Report February 1, 2014



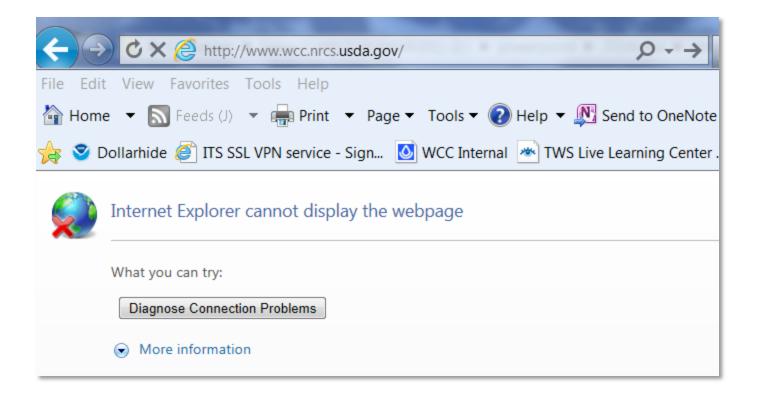


Above and Below the Treasure Valley's Inversion - January 19th

Part II
Where's
the
Snow?

#### Website Update - January 2014

We have been making progress fixing broken links on our website this month. We apologize for any inconvenience the website construction has caused. If you are having problems locating information please contact our staff at: <a href="mailto:IDBOISE-NRCS-SNOW@one.usda.gov">IDBOISE-NRCS-SNOW@one.usda.gov</a>

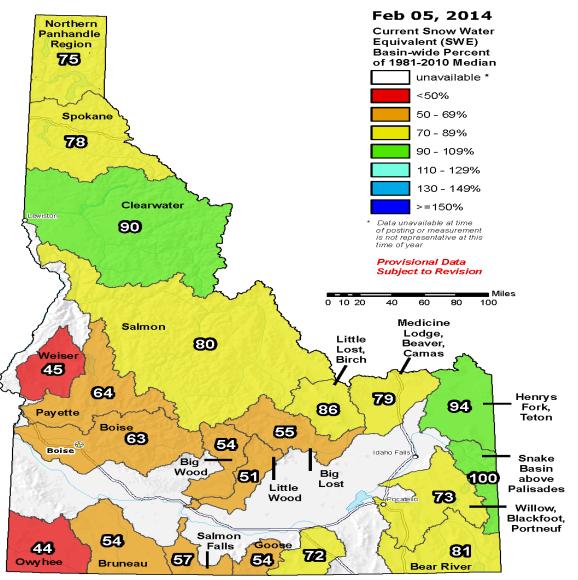




## **Draft Assessing Our Future**

The Natural Resources Conservation Service in Idaho is looking to reduce snow survey program costs while still providing a high level of service. We are seeking ideas to optimize the snow survey data collection network and forecasting operations as well as the water supply products we provide. Over the next year, we will assess the Idaho program to improve efficiency. Your input can help us determine where to focus efforts in the future.

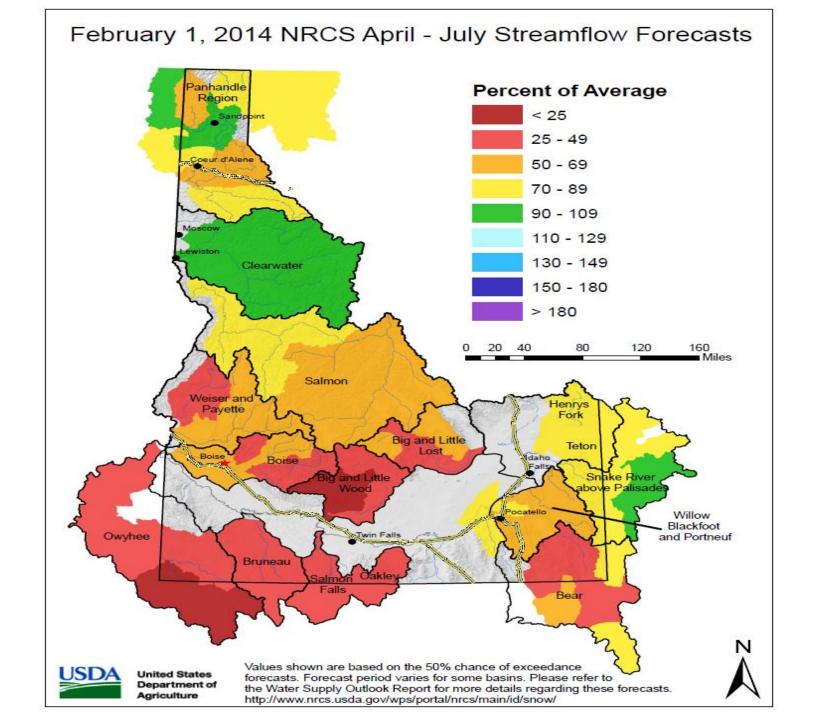
#### Idaho SNOTEL Current Snow Water Equivalent (SWE) % of Normal

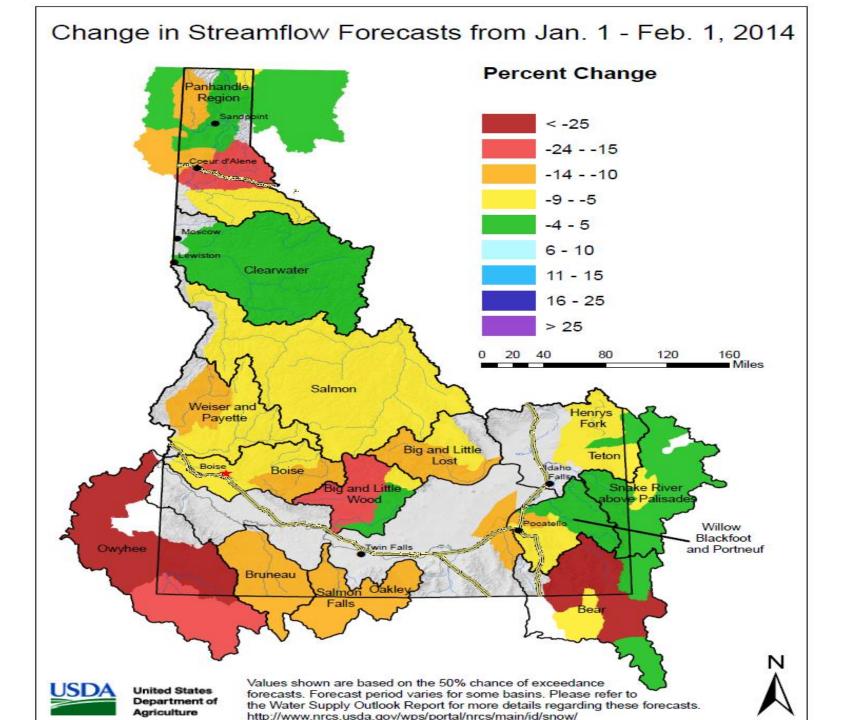




The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

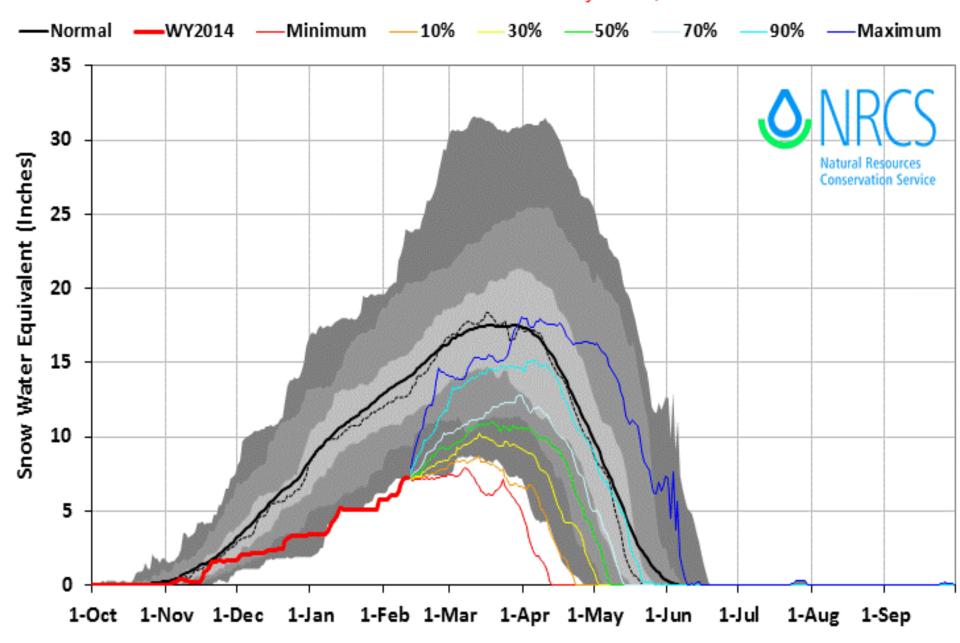
Prepared by the USDA/NRCS National Water and Climate Center Portland, Oregon http://www.wcc.nrcs.usda.gov/gis/Based on data from http://www.wcc.nrcs.usda.gov/reports/Science contact: Jim.Marron@por.usda.gov 503 414 3047





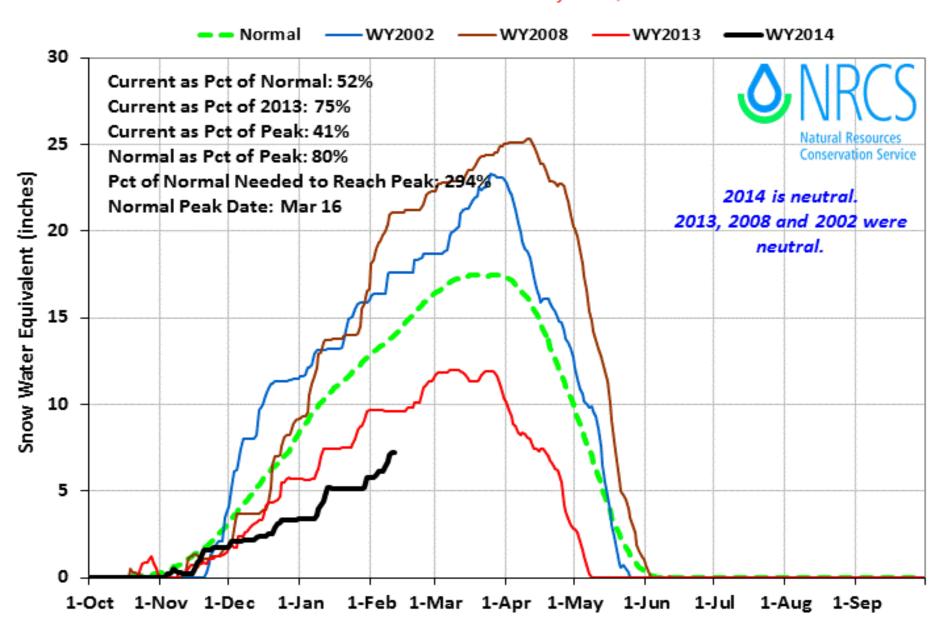
## Weiser Basin 2014 Snow Water with Non-Exceedence Projections (4 sites)

Based on Provisional SNOTEL data as of Feb 11, 2014



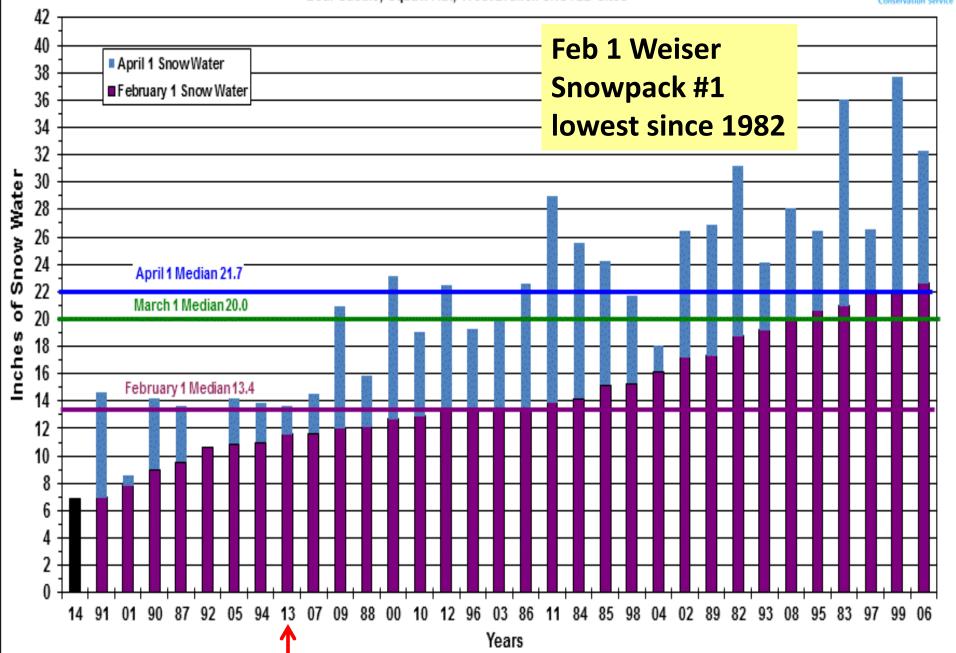
#### Weiser Basin 2014 Snowpack Comparison Graph (4 sites)

Based on Provisional SNOTEL data as of Feb 11, 2014



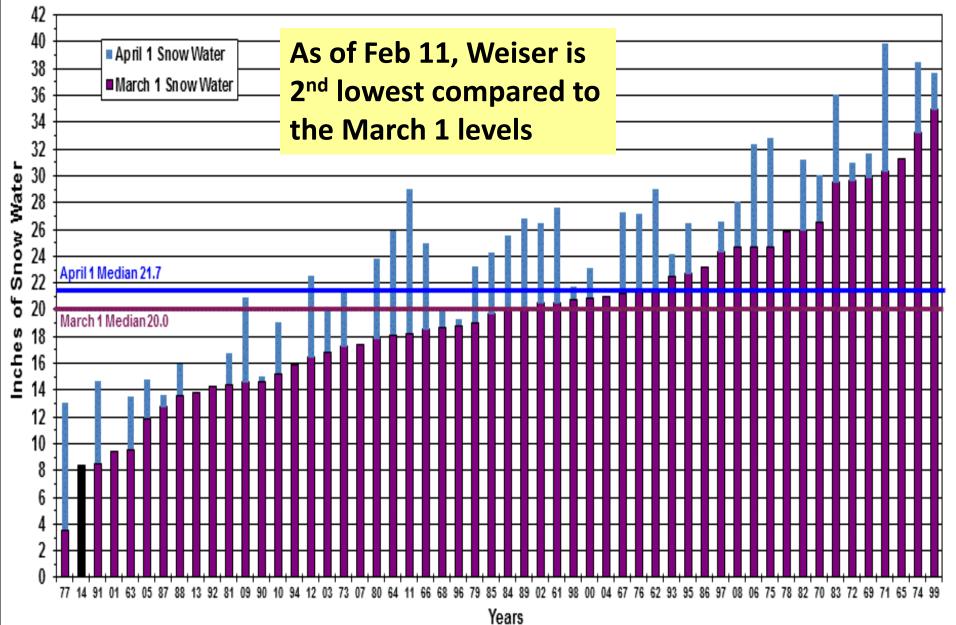
## February 1 Weiser Basin 3 Station Snow Index for Years 1982 - 2014 Bear Saddle, Squaw Flat, West Branch SNOTEL Sites

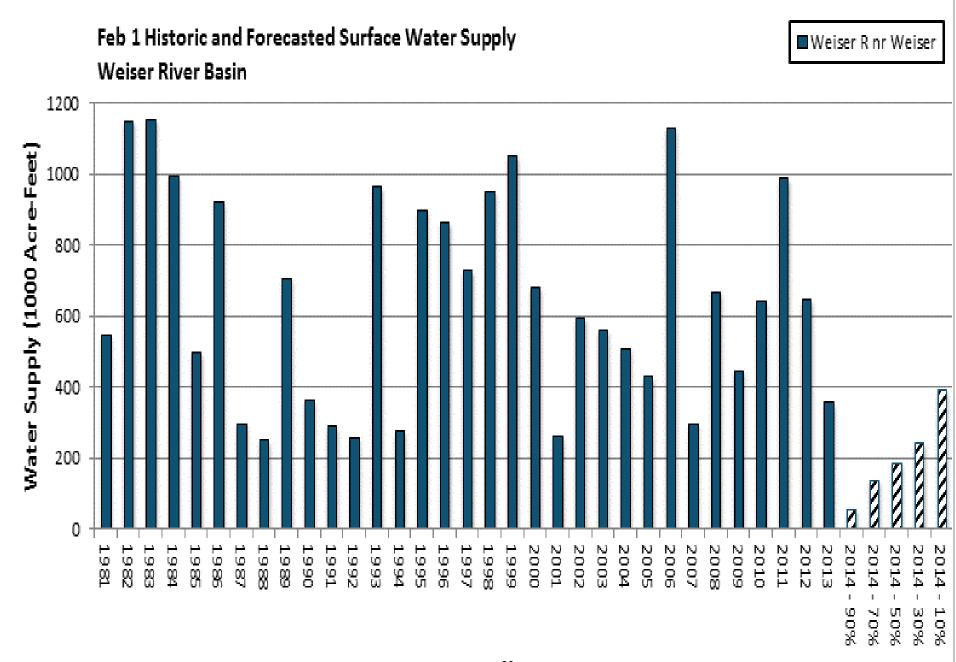




## March 1 Weiser Basin 3 Station Snow Index for Years 1961 - 2014 Bear Saddle, Squaw Flat, West Branch



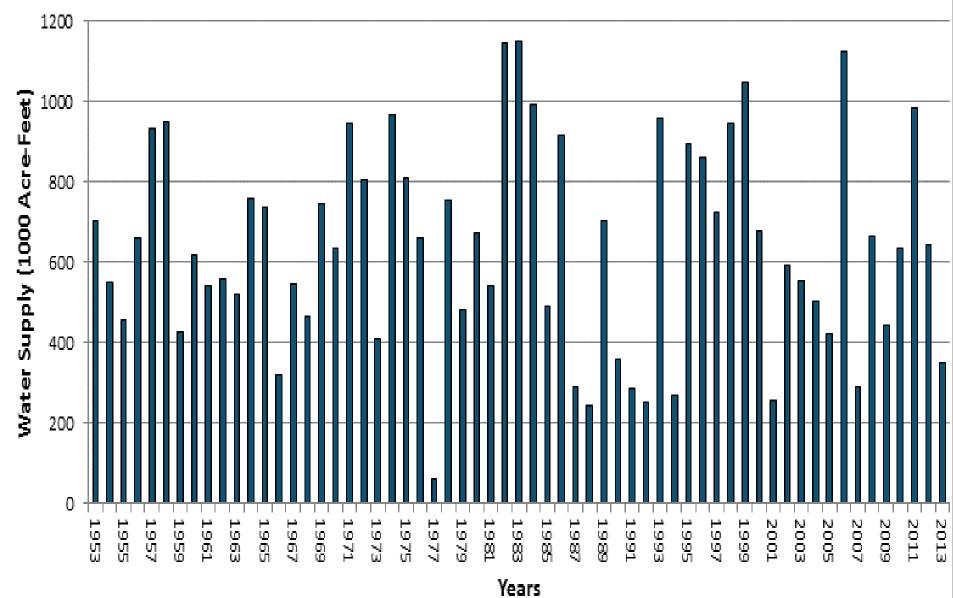




Years



■ Weiser R nr Weiser

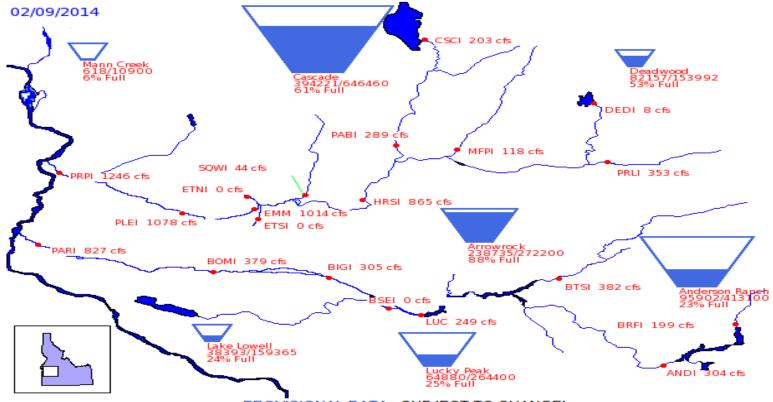


Search Reclamation

>>

Reclamation Home | Regional Offices | Newsroom | Library Projects & Facilities | About Us | Program & Activities | Water Operations Hydromet Home | Reservoir Storage | Boat Ramps | Current Data | Historical Data

## Bureau of Reclamation, Pacific Northwest Region Major Storage Reservoirs in the Boise & Payette River Basins



PROVISIONAL DATA - SUBJECT TO CHANGE!

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 42 % of capacity.

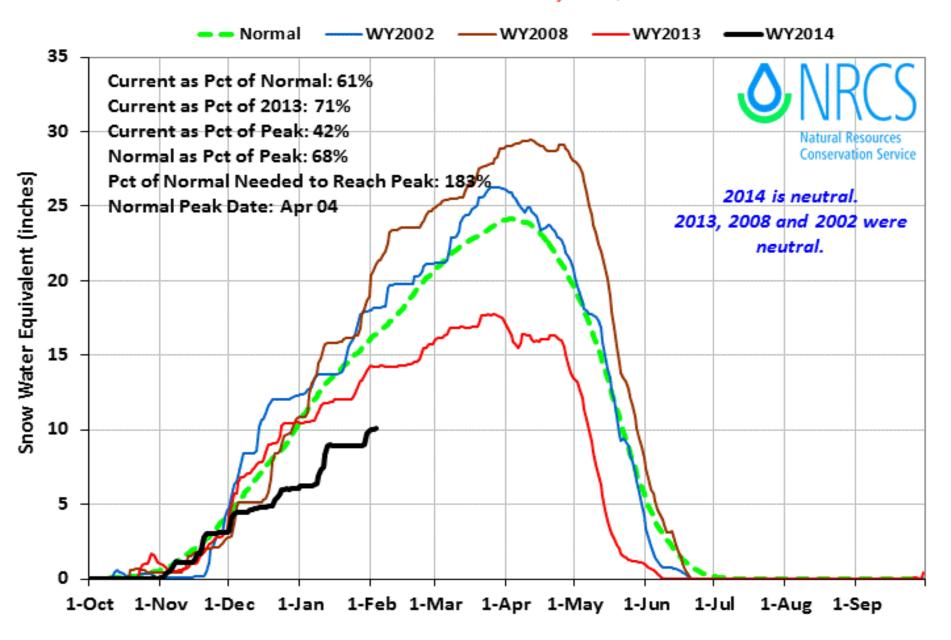
Total space available: 550183 AF
Total storage capacity: 949700 AF
Natural Flow: 1003 CFS

Payette River system (Cascade, Deadwood) is at 60 % of capacity.

Total space available: 324074 AF
Total storage capacity: 800452 AF
Natural Flow: 933 CFS

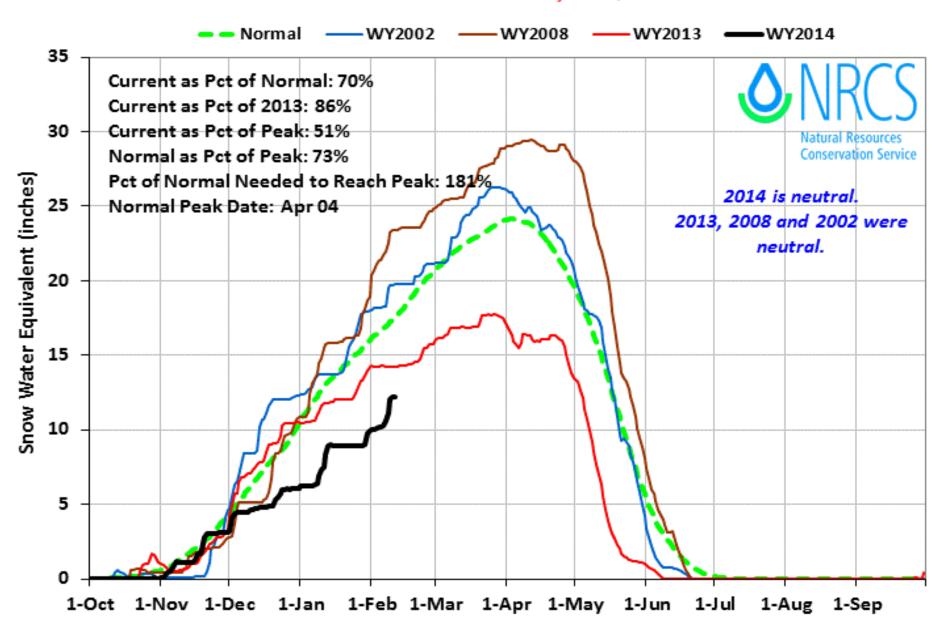
### Payette Basin 2014 Snowpack Comparison Graph (11 sites)

Based on Provisional SNOTEL data as of Feb 03, 2014



### Payette Basin 2014 Snowpack Comparison Graph (11 sites)

Based on Provisional SNOTEL data as of Feb 11, 2014



Feb 1 Historic and Forecasted Surface Water Supply ■StreamFlow Apr-Sep **Payette River Basin** Reservoir 31-Jan Water Supply (1000 Acre-Feet) 10% 50% 30%

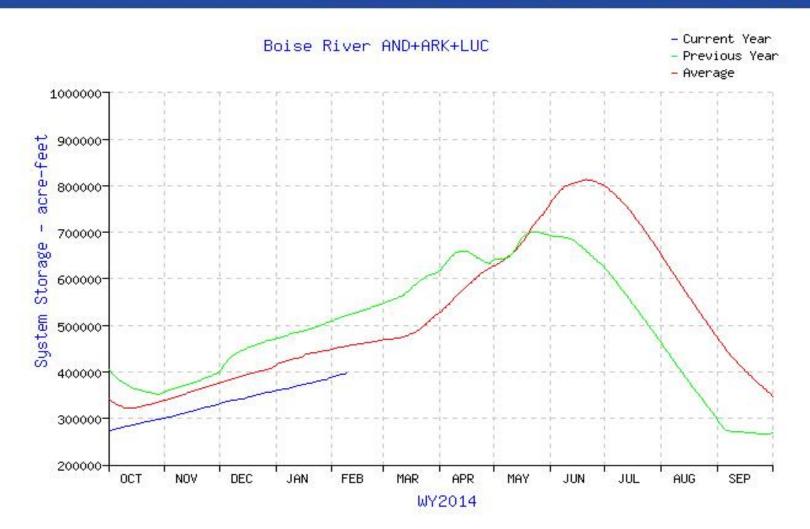
Years

# RECLAMATION Pacific Northwest Region Managing Water in the West

Search Reclamation

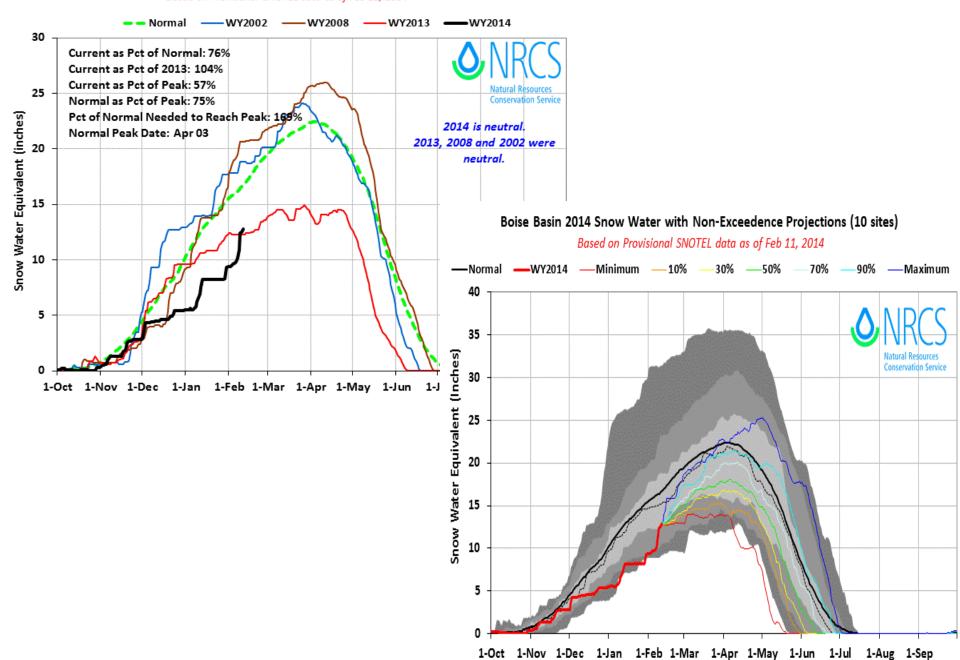
>>

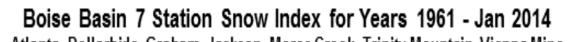
Reclamation Home | Regional Offices | Newsroom | Library Projects & Facilities | About Us | Program & Activities | Water Operations Hydromet Home | Reservoir Storage | Boat Ramps | Current Data | Historical Data



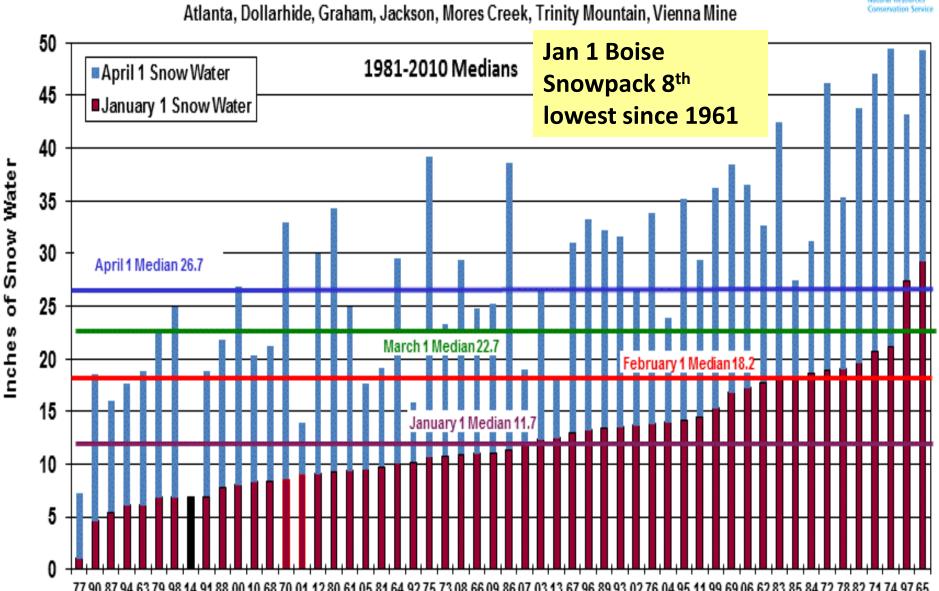
#### Boise Basin 2014 Snowpack Comparison Graph (10 sites)

Based on Provisional SNOTEL data as of Feb 11, 2014



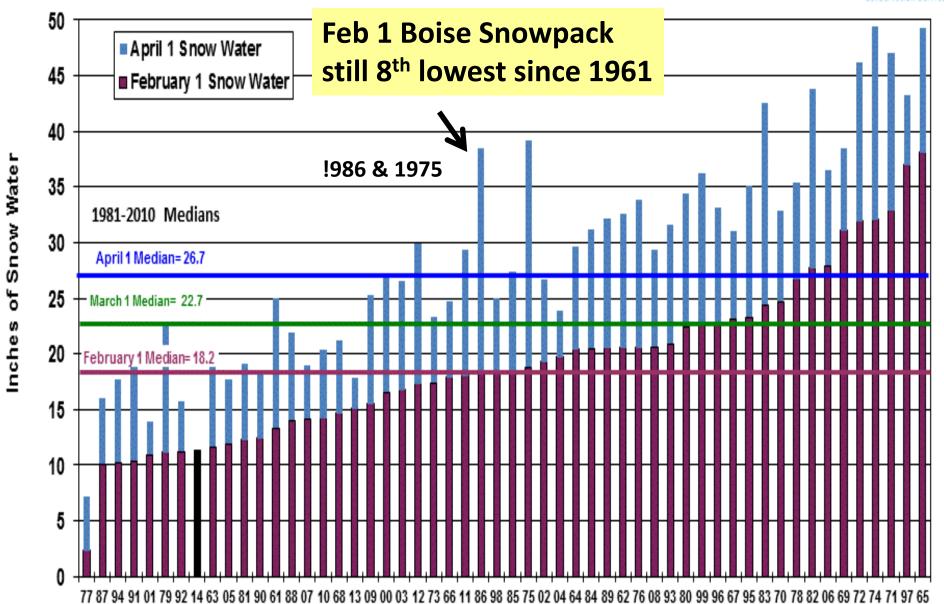


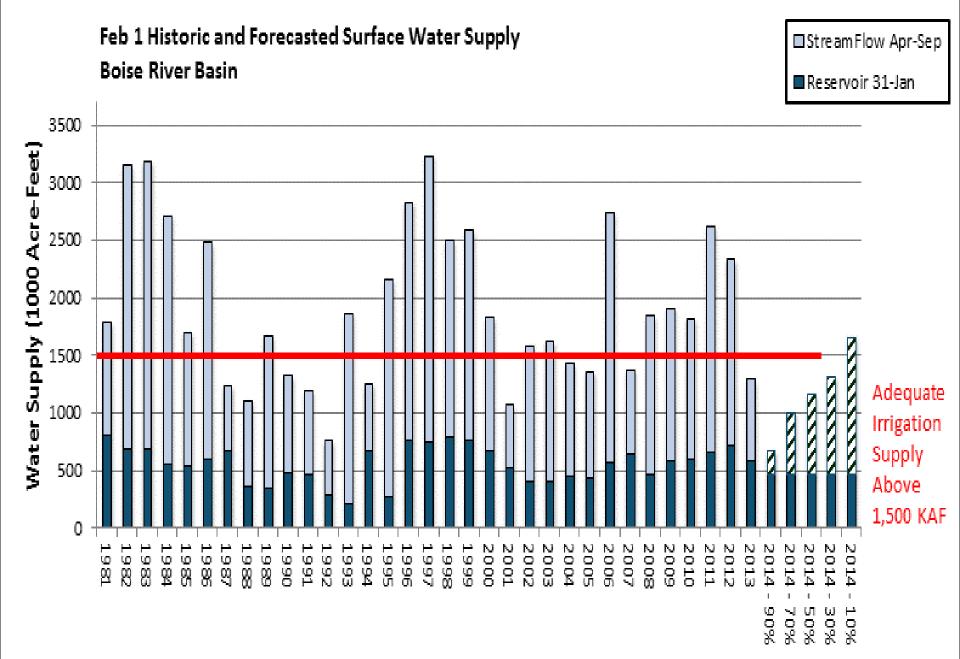




## Boise Basin 7 Station Snow Index for Years 1961 - Feb 2014 Atlanta, Dollarhide, Graham, Jackson, Mores Creek, Trinity Mountain, Vienna Mine







Years

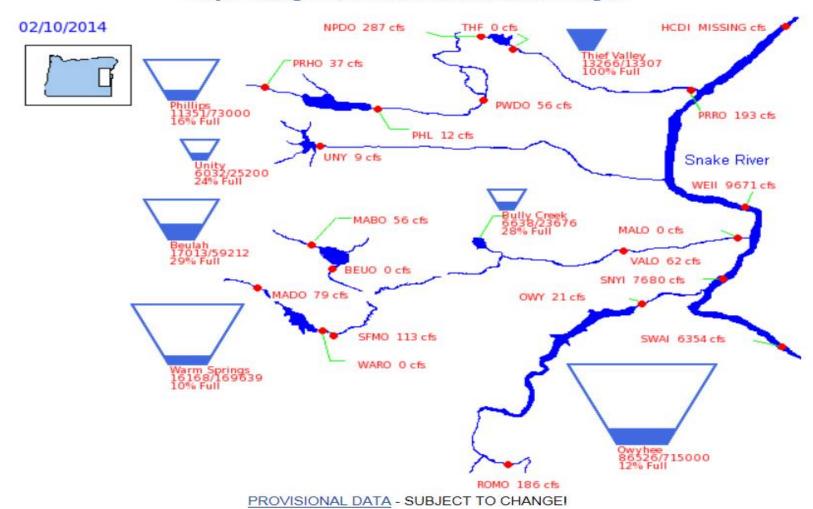
# RECEAMATION Pacific Northwest Region Managing Water in the West

Search Reclamation

>>

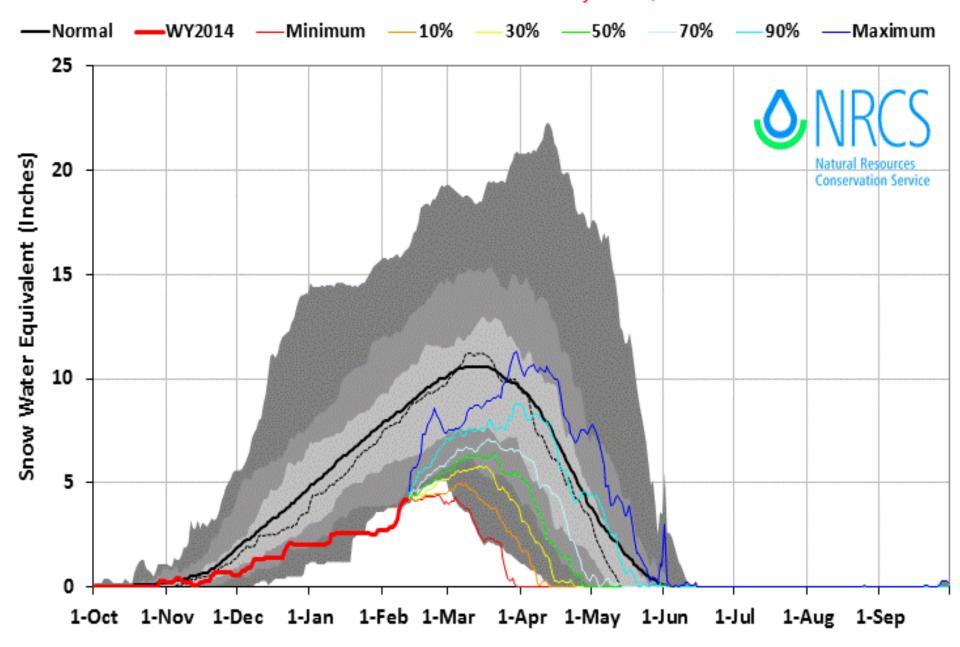
Reclamation Home | Regional Offices | Newsroom | Library Projects & Facilities | About Us | Program & Activities | Water Operations Hydromet Home | Reservoir Storage | Boat Ramps | Current Data | Historical Data

### US Bureau of Reclamation, Pacific Northwest Region Major Storage Reservoirs in Southeastern Oregon



## Owyhee Basin 2014 Snow Water with Non-Exceedence Projections (7 sites)

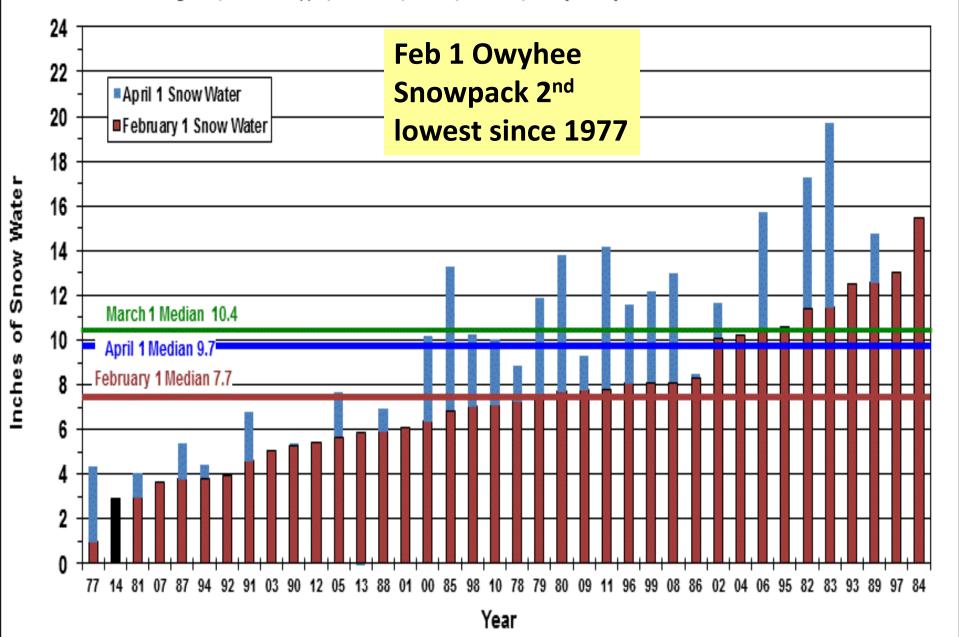
Based on Provisional SNOTEL data as of Feb 11, 2014

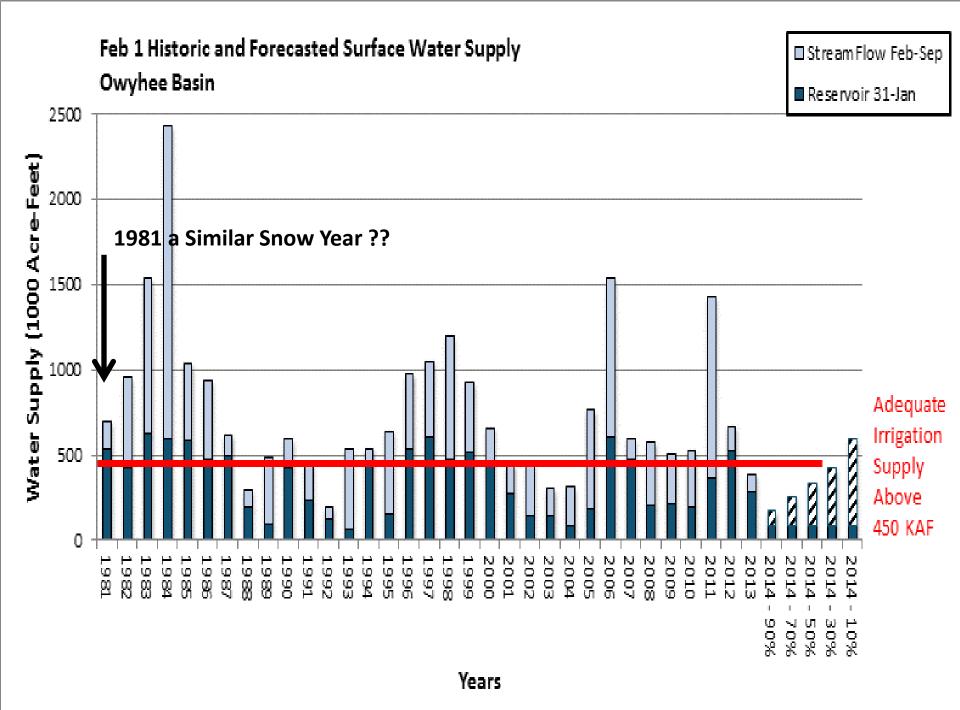


## Snow Index for the Owyhee River, ID 1977- Feb 2014



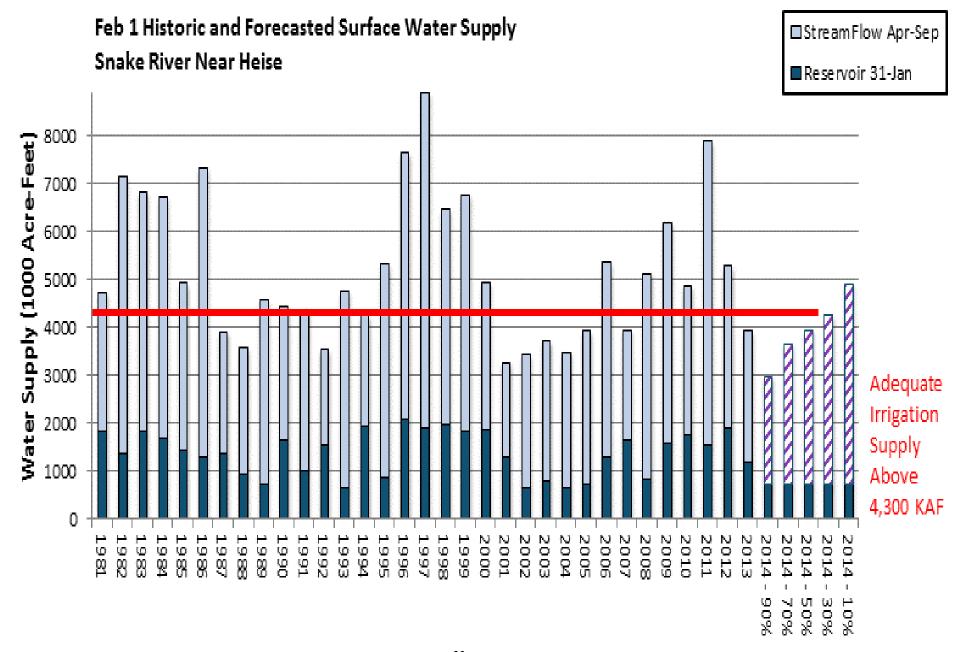
Big Bend, Jack Creek Upper, Laurel Draw, Mud Flat, South Mtn, and Taylor Canyon SNOTEL Sites





# IDAHO RESERVOIR STORAGE Usable Contents

Reservoir (s)	Percent of Capacity January 31, 2014	Percent of Average January 31, 2014			
Salmon Falls	8	39			
Owyhee	11	23			
Coeur d' Alene	18	66			
Magic	23	63			
Oakley	24	80			
Palisades & Jackson	30	51			
Little Wood	40	74			
Blackfoot	44	88			
Boise (3)	45	85			
Bear Lake	46	93			
Ririe	54	112			
American Falls	56	85			
Mackay	57	98			
Payette (2)	61	96			
Dworshak	67	100			



Years

# January 1, 2014 Water Supply Forecasts, Amount Needed & Shortages based on the 5 Exeedance Forecasts

		tages	buscu (
Basin or Region	Adequate Irrigation Water Supply (KAF)	Projected March 31 Reservoir Storage (KAF)	Streamflow Volume Needed for Adequate Water Supply (KAF) (% of Ave.)
Big Wood	275	40	235 (89%)
Salmon Falls	110	20	90 (122%)
Oakley	50	20	30 (115%)
Big Lost	180	30	150 (100%)
Little Lost	40	0	40 (119%)
Boise	1,500	480	1020 (75%)
Snake (Heise)	4,400	684	3516 (93%)
Little Wood	60	18	42 (51%)
Owyhee	450	75	375 (93%)
Teton	85	0	85 (44%)
Bear River	400	670	0

# January 1, 2014 Water Supply Forecasts, Amount Needed, Reservoir Storage, & 5 Exceedance Forecasts

ONRCS Resources Conservation  REGION	Adequate Irrigation Water Supply (KAF)	Projected March 31 Reservoir Storage (KAF)	Streamflow Volume Needed for Adequate Water Supply (KAF) (% of Ave.)	90% Chance of Exceedance Streamflow Forecast Apr-Sep (KAF)	70% Chance of Exceedance Streamflow Forecast Apr-Sep (KAF)	50% Chance of Exceedance Streamflow Forecast Apr-Sep (KAF)	30% Chance of Exceedance Streamflow Forecast Apr-Sep (KAF)	10% Chance of Exceedance Streamflow Forecast Apr-Sep (KAF)
Big Wood	275	40	235 (89%)	7 (-228)	18 -(217)	82 (-153)	160 (-75)	265 (+30)
Salmon Falls	110	20	90 (122%)	14 (-76)	28 (-62)	40 (-50)	54 (-36)	79 (-11)
Oakley	50	20	30 (115%)	1 (-29)	11 (-19)	18 (-12)	25 (-5)	35 (+5)
Big Lost	180	30	150 (100%)	7 (-143)	58 (-92)	93 (-57)	128 (-22)	179 (+29)
Little Lost	40	0	40 (119%)	14 (-26)	21 (-19)	26 (-14)	32 (-8)	42 (+2)
Boise	1,500	480	1020 (75%)	205 (-815)	625 (-395)	815 (-205)	1010 (-10)	1420 (+400)
Snake (Heise)	4,400	684	3516 (93%)	2440 (-1076)	2980 (-536)	3350 (-166)	3720 (+204)	4260 (+744)
Little Wood	60	18	42 (51%)	7 (-35)	17 (-25)	42 (+ -0)	65 (+23)	100 (+58)
Owyhee	450	75	375 (93%)	145 (-230)	285 (-90)	405 (+30)	545 (+170)	795 (+420)
Teton	85	0	85 (44%)	88 (+3)	125 (+40)	154 (+69)	186 (+101)	240 (+155)
Bear River	400	670	0	3 (+3)	108 (+108)	160 (+160)	252 (+252)	357 (+357)
					Some	Marginal	Sufficient	

**Shortages** 

**Shortages** 

**Supplies** 

**Supplies** 

**Surplus** 

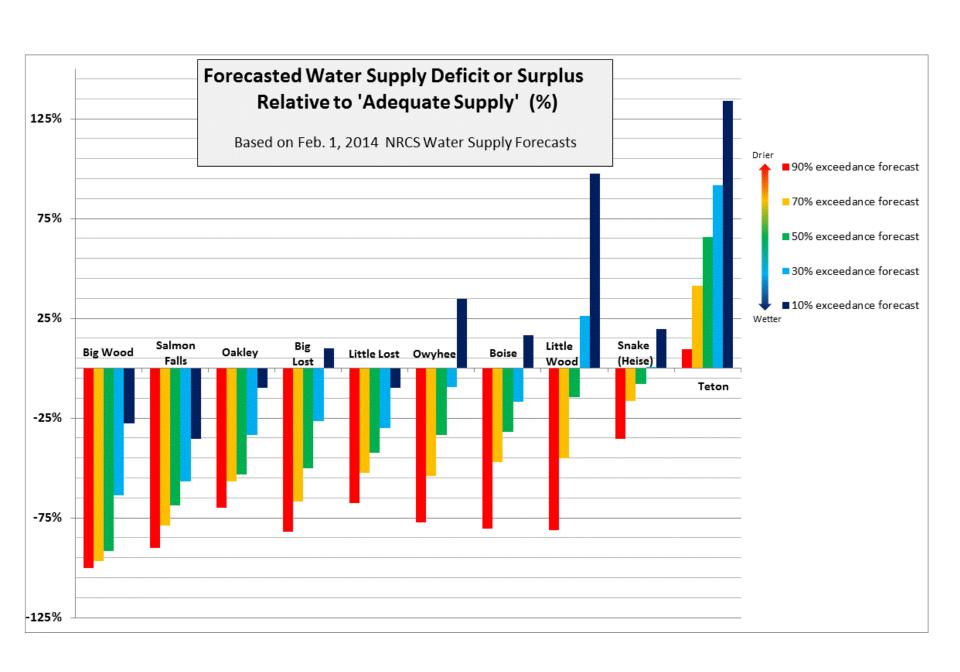
Water Supply Outlook Key:

# February 1, 2014 Water Supply Forecasts, Amount Needed & Shortages based on the 5 Exeedance Forecasts

BASIN or REGION	Adequate Irrigation Water Supply (KAF)	Projected March 31 Reservoir Storage (KAF)	Streamflow Volume Needed for Adequate Water Supply (KAF) (% of Ave.)	90% Chance of Exceedance Streamflow Forecast Apr- Sep (KAF)	of Exceedance Streamflow	of Exceedance Streamflow	of Exceedance Streamflow	10% Chance of Exceedance Streamflow Forecast Apr- Sep (KAF)
Salmon Falls	110	22	88 (103%)	9 (-79)	19 (-69)	28 (-60)	39 (-49)	58 (-30)
Big Wood	275	50	225 (85%)	0 (-225)	8 (-217)	20 (-205)	85 (-140)	170 (-55)
Oakley	50	23	27 (87%)	9 (-18)	13 (-14)	14 (-13)	20 (-7)	27 (0)
Big Lost	180	31	149 (99%)	27 (-122)	50 (-99)	75 (-74)	110 (-39)	165 (+16)
Little Lost	40	0	40 (85%)	13 (-27)	19 (-21)	23 (-17)	28 (-12)	36 (-4)
Owyhee	450	75	375 (50%)	85 (-290)	173 (-202)	250 (-125)	340 (-35)	505 (+130)
Boise	1500	545	955 (70%)	200 (-755)	540 (-415)	695 (-260)	850 (-105)	1190 (+235)
Little Wood	60	18	42 (45%)	8 (-34)	23 (-19)	36 (-6)	53 (+11)	83 (+41)
Snake (Heise)	4400	700	3700 (98%)	2270 (-1430)	2940 (-760)	3240 (-460)	3540 (-160)	4210 (+510)
Teton	85	0	85 (44%)	93 (+8)	120 (+35)	141 (+56)	163 (+78)	199 (+114)
Bear River	400	680	0	2 (+2)	10 (+10)	62 (+62)	125 (+125)	217 (+217)

Water Supply Outlook Key: Shortages Shortages Shortages Supplies Supplies Supplies Supplies





#### IDAHO SURFACE WATER SUPPLY INDEX (SWSI)

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.0 (abundant supply) to -4.0 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences. The SWSI analysis period is from 1981 to present.

February 1, 2014

SWSI values provide a more comprehensive outlook of water availability by combining streamflow forecasts and reservoir storage where appropriate. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been determined for some basins to indicate the potential for agricultural irrigation water shortages.

	Most Recent Year		Supply Shortage May
	SWSI	With Similar SWSI	Occur When SWSI is
BASIN or REGION	Value	Value	Less Than
Northern Panhandle	-2.6	2004/2005	NA
Spokane	-2.1	2007	NA
Clearwater	-0.9	2004	NA
Salmon	-2.1	2005	NA
Weiser	-2.6	2013	NA
Payette	-2.8	1991/2007	NA
<b>Boise</b>	<mark>-3.3</mark>	1991/2001	<mark>-1.5</mark>
Big Wood	<mark>-3.7</mark>	1992/2013	<mark>0.5</mark>
Little Wood	<mark>-3.3</mark>	2001/2002	<mark>-1.5</mark>
Big Lost	<mark>-2.3</mark>	<mark>2003</mark>	<mark>0.5</mark>
Little Lost	<mark>-2.1</mark>	<mark>2007</mark>	<mark>1.2</mark>
Teton	-1.6	2002/2013	-3.9
Henrys Fork	-1.3	2007	-3.4
Snake (Heise)	<mark>-1.8</mark>	<mark>2007/2013</mark>	<mark>-1.5</mark>
<b>Oakley</b>	<mark>-2.5</mark>	2002/2004	<mark>0.2</mark>
Salmon Falls	<mark>-3.8</mark>	1992/2001	<mark>-1.0</mark>
<b>Bruneau</b>	<mark>-3.3</mark>	<mark>2001/2012</mark>	NA NA
<b>Owyhee</b>	<mark>-3.8</mark>	<mark>1992/2003</mark>	<mark>-3.4</mark>
Bear River	-0.3	1989/2001	-2.7

#### SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

-4	-3	-2	-1	0	1		2	3		4
 99%	 87%	 75%	 63%	-  50%	-  37%		25%	- - 13	 %	-  1%
Much  Below	Below   Normal	   		Normal Supply			Above Normal	   	Much Above	   