USDA United States Department of Agriculture

Natural Resources Conservation Service

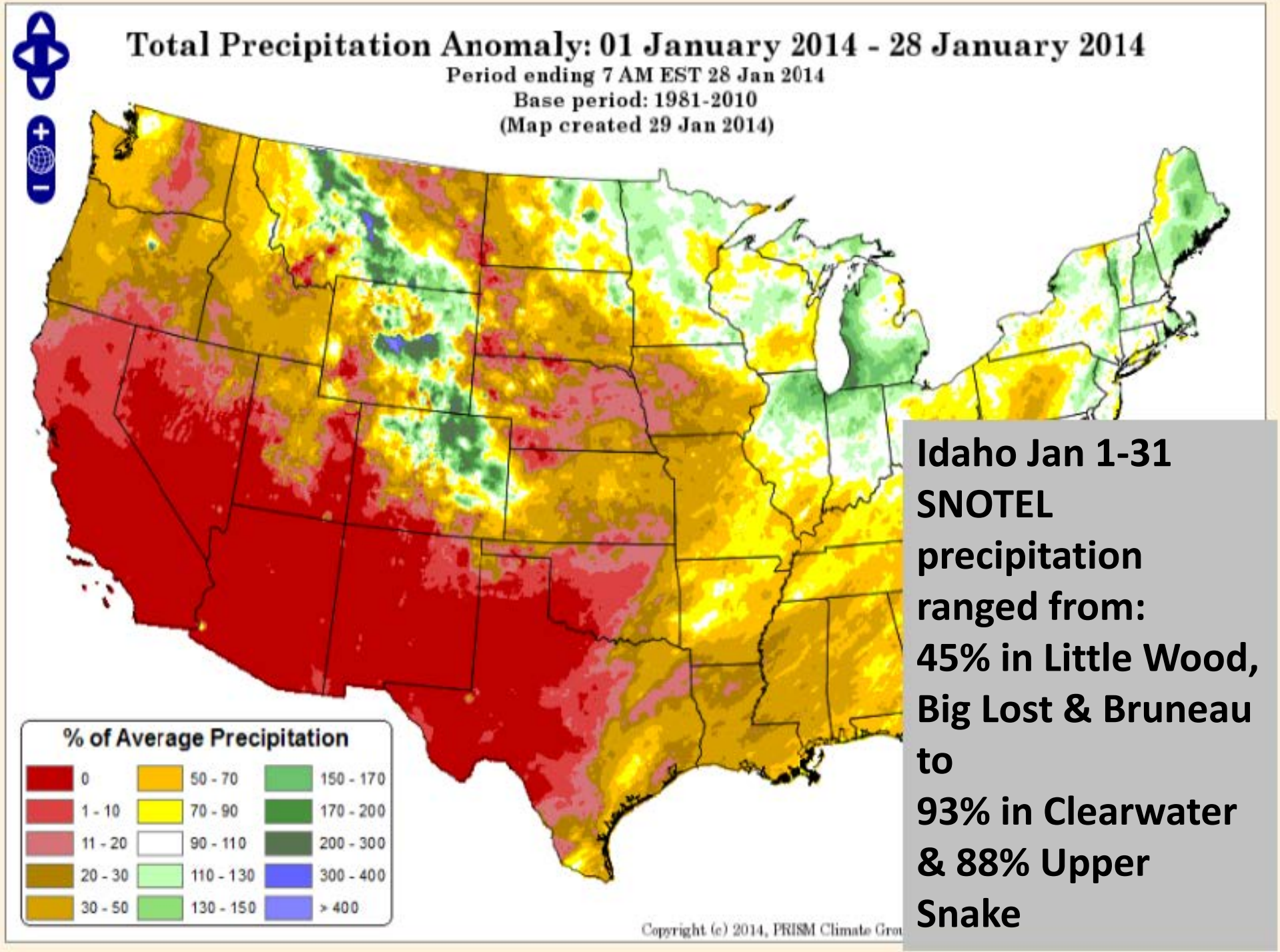
Idaho Water Supply Outlook Report

February 1, 2014

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

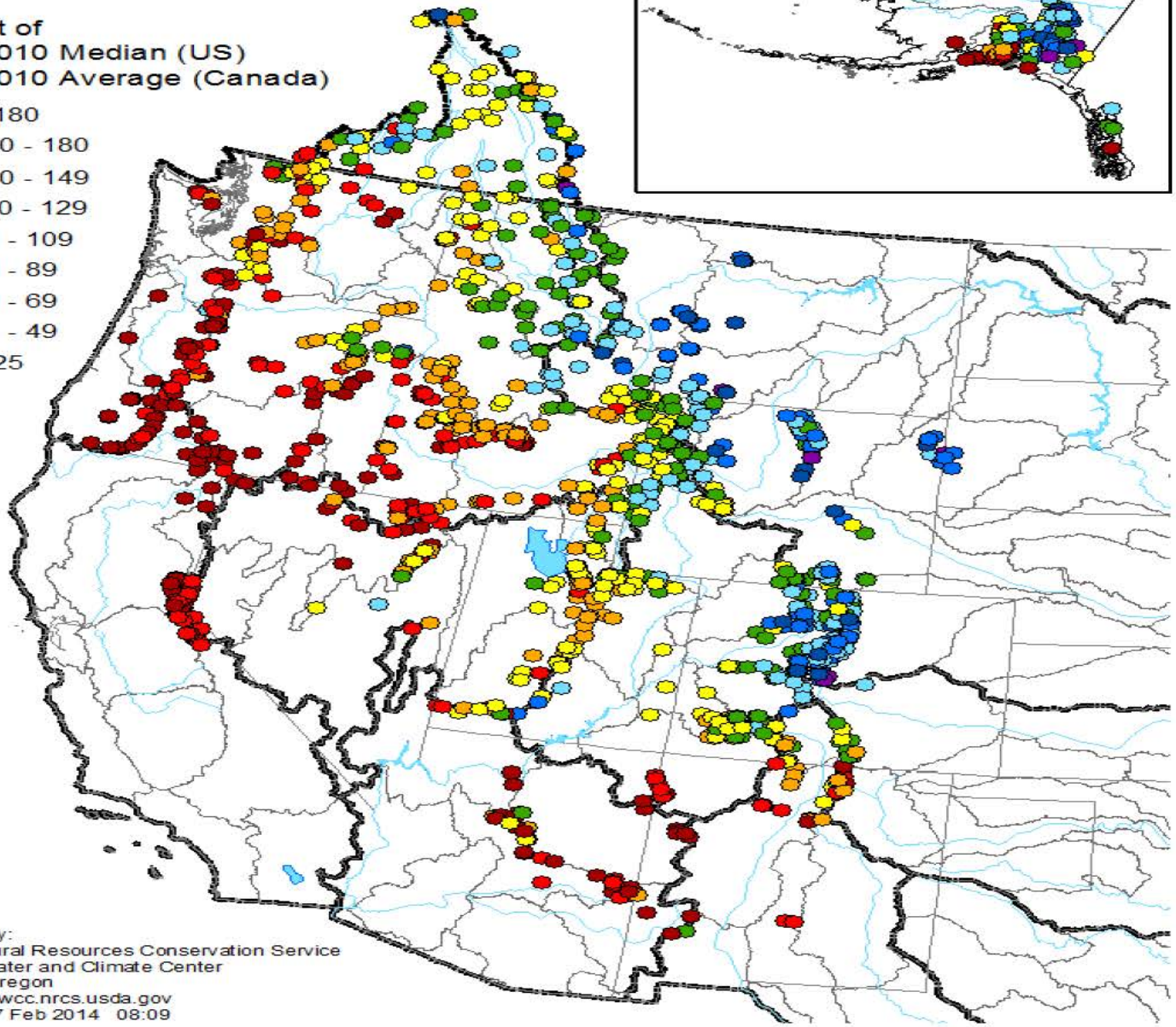
Part II Where's the Snow?

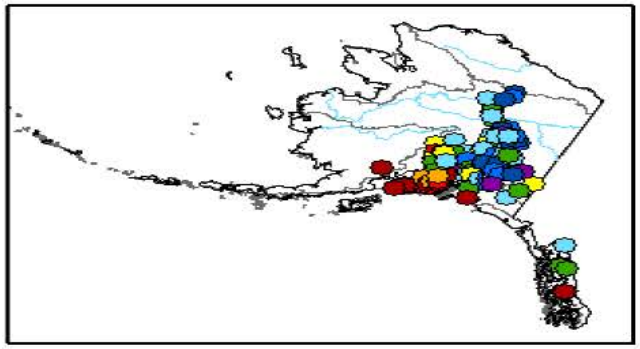
NRCS Natural Resources Conservation Service



Idaho Jan 1-31 SNOTEL precipitation ranged from:
45% in Little Wood, Big Lost & Bruneau to
93% in Clearwater & 88% Upper Snake

Mountain Snowpack as of February 1, 2014





Prepared by:
USDA Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov
Created: 7 Feb 2014 08:09

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

BASIN	*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)*
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 (+282)	10 (+290)	62 (+342)	125 (+405)	217 (+497)

Adequate Supply − Reservoir Storage = Streamflow Needed

Water Supply Outlook Key:	Shortages	Some Shortages	Marginal Supplies	Sufficient Supplies	Surplus

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

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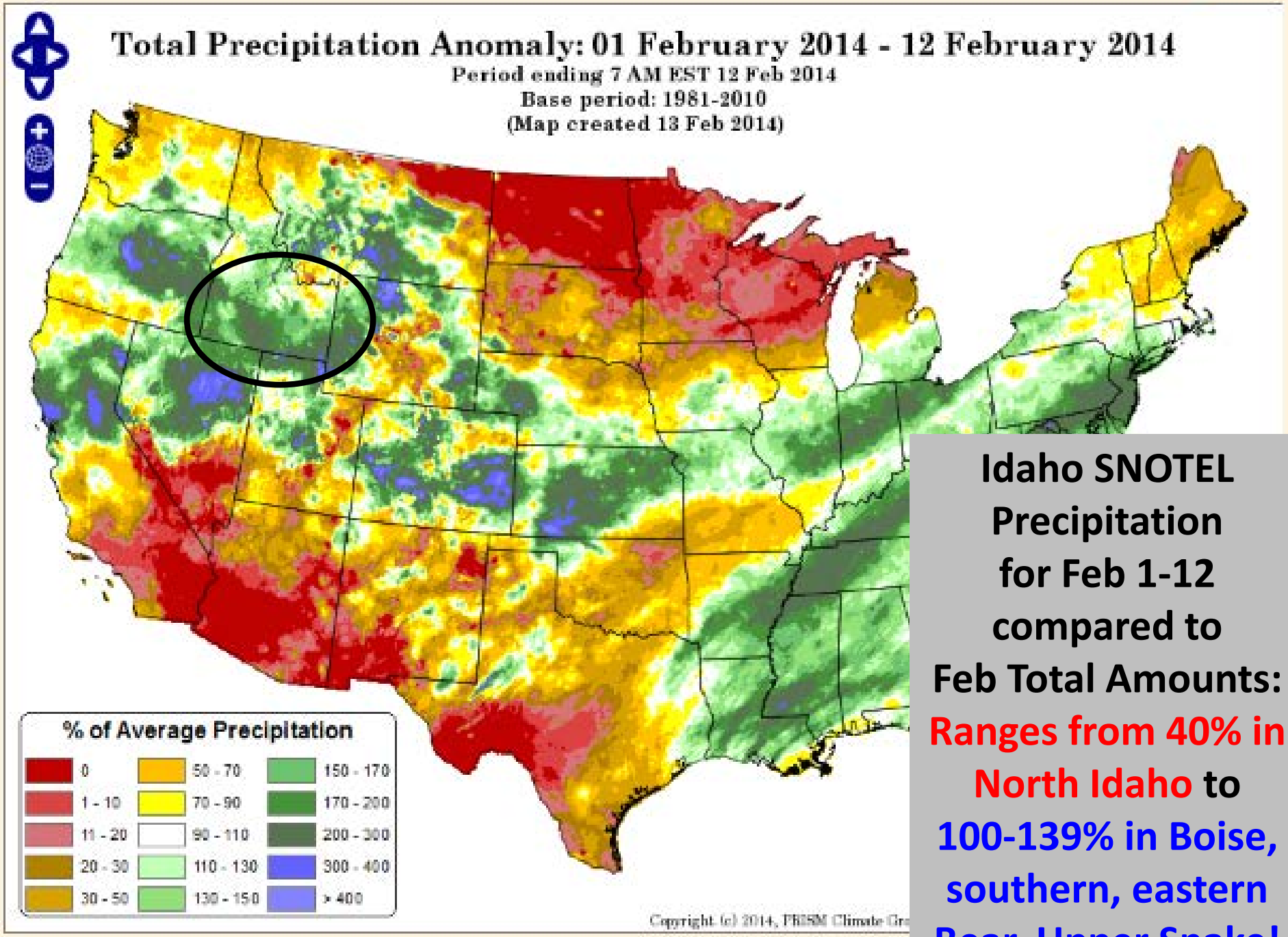


Idaho SNOTEL Precipitation for Feb 1-12 compared to Feb Total Amounts: Ranges from 40% in North Idaho to 100-139% in Boise, southern, eastern Bear, Upper Snake!

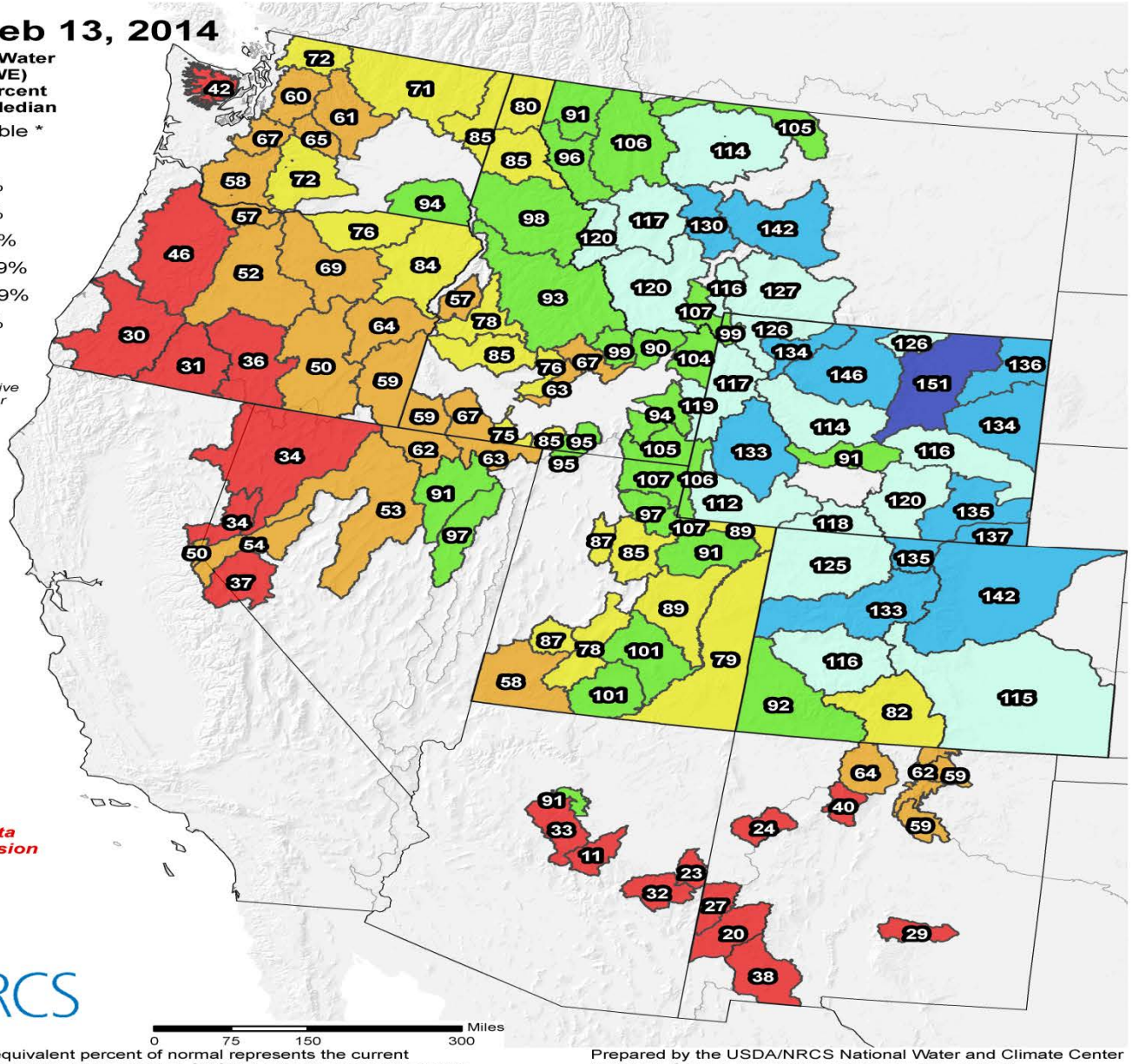
Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Feb 13, 2014

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >= 150%

* *Data unavailable at time of posting or measurement is not representative at this time of year*



Provisional data subject to revision

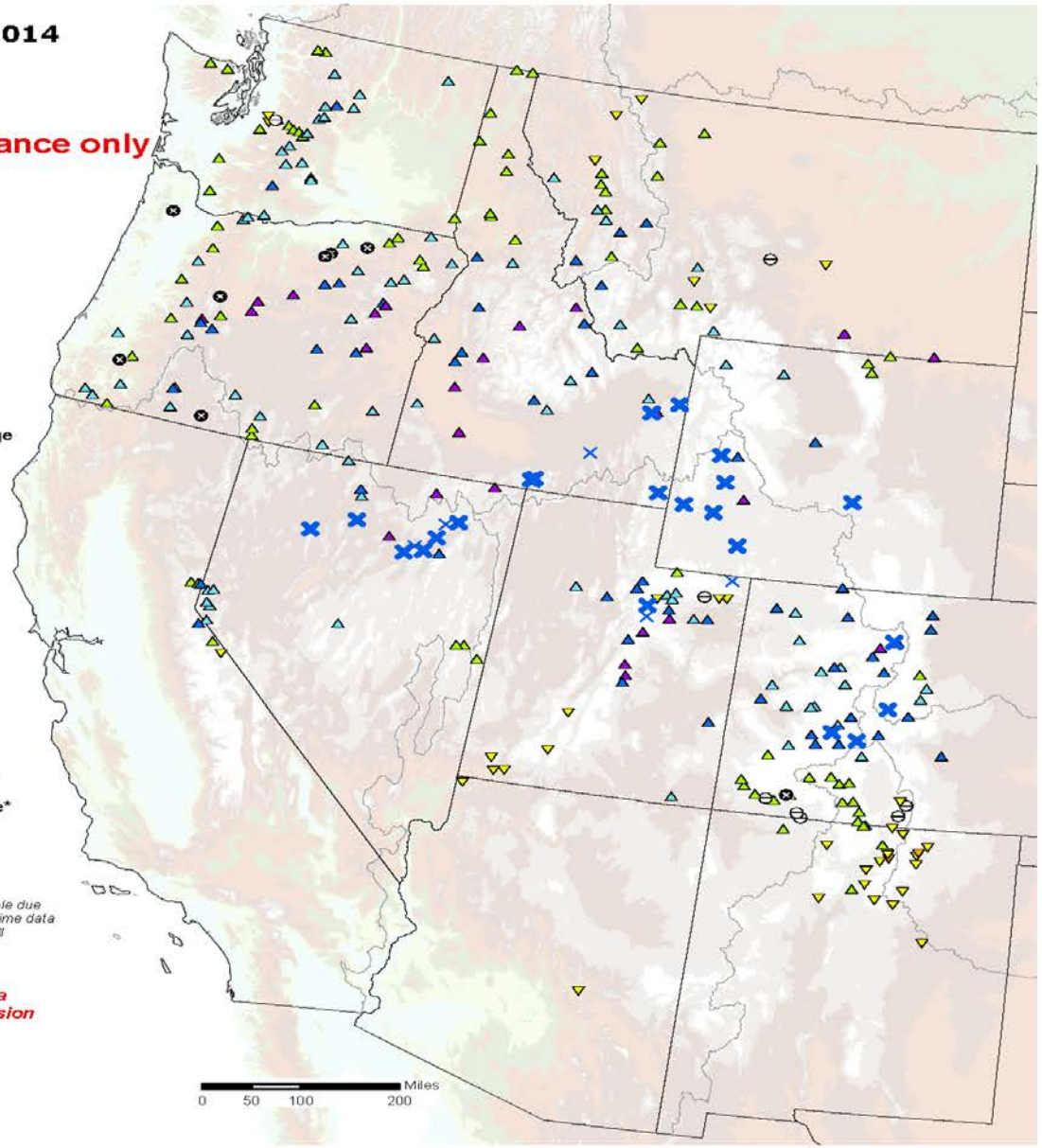
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

Month to Date Guidance Forecast Change as Percent of 1981-2010 Normal

Feb 13, 2014

For guidance only



Provisional Data Subject to Revision

USDA NRCS

Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon http://www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html
Based on data from
ftp.wcc.nrcs.usda.gov/data/water/wcs/daily_forecast/SummaryOutput.csv
Science contact: Jim.Marron@por.usda.gov 503 414 3047

This is a completely automated objective product based on SNOTEL data. This product is not meant to replace or supersede the official forecasts produced in coordination with the National Weather Service.

Dry Creek Watershed Jan 26, 2014
Boise Foothills (3,800-4,800 ft)
After Two Week Inversion

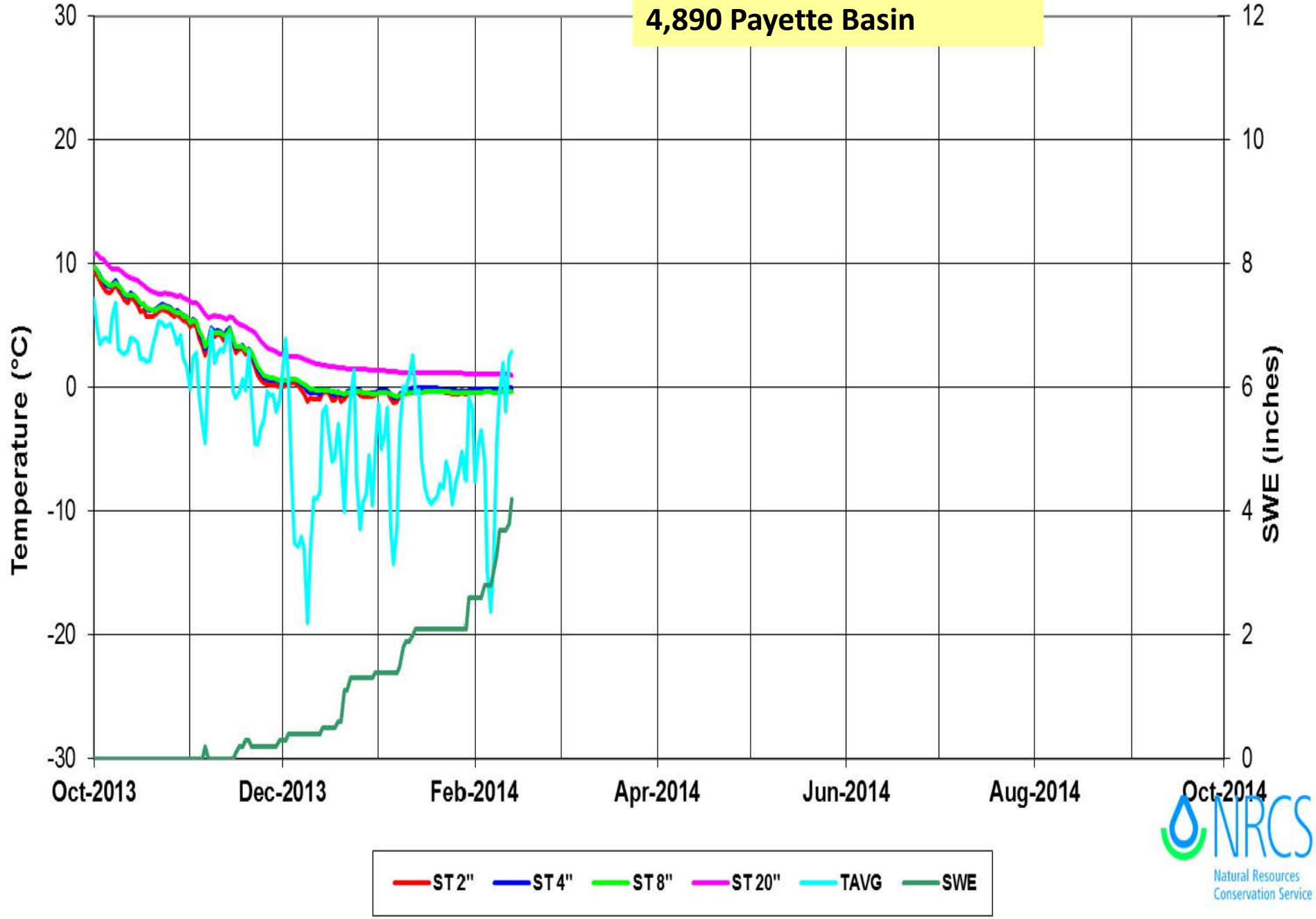
Bogus Basin SNOTEL 6,340 feet about 7 pm Feb 12, 2014 1.1” of precipitation in 2 days

Atlanta Summit SNOTEL 7,580 feet, did not drop below freezing Feb 12 2.5” of precipitation in 2 days

Deadwood, Atlanta & Mores Creek: increase about 10” of snow depth Feb 13

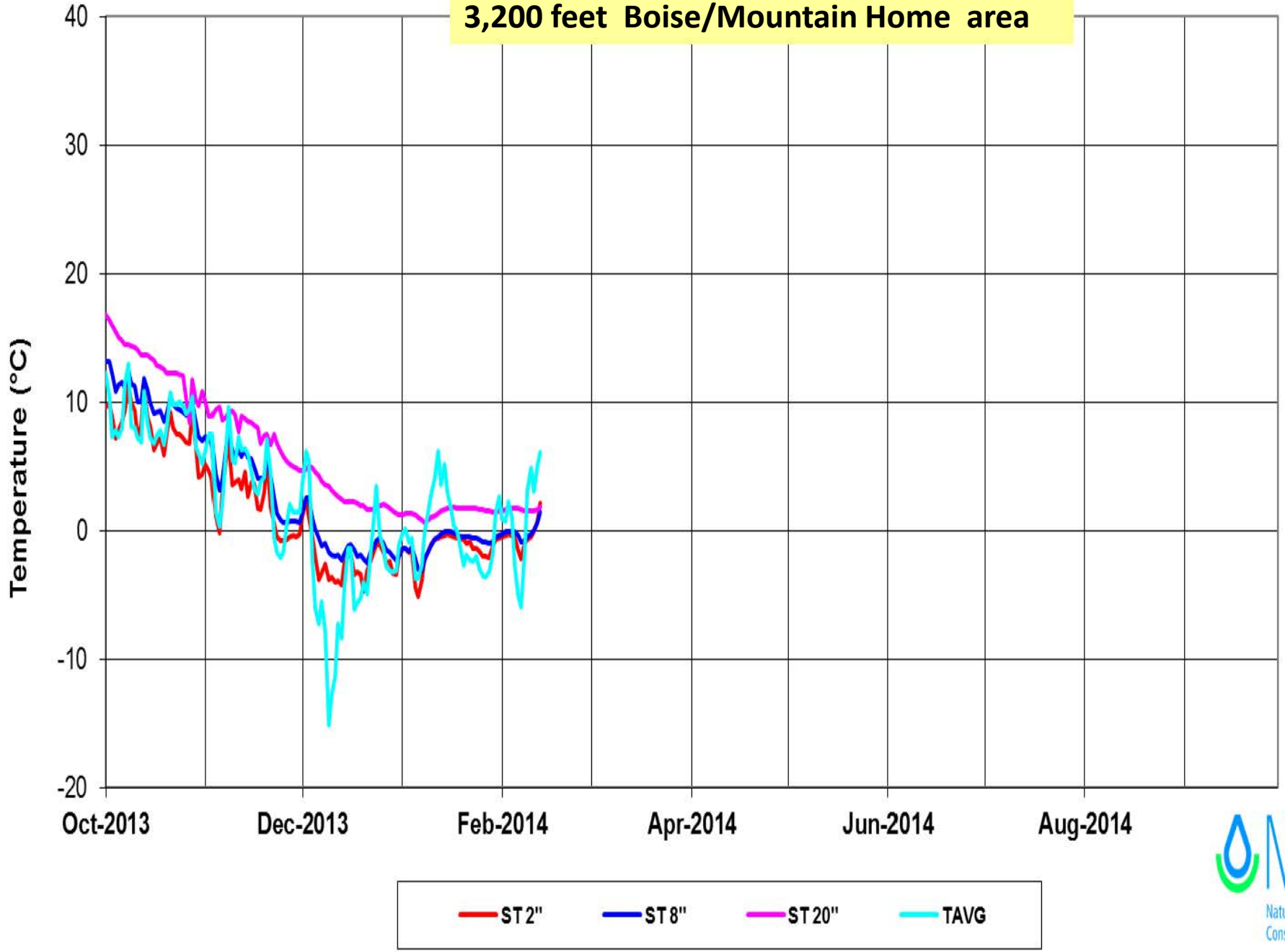
Long Valley Soil and Air Temperature - Water Year 2014

4,890 Payette Basin

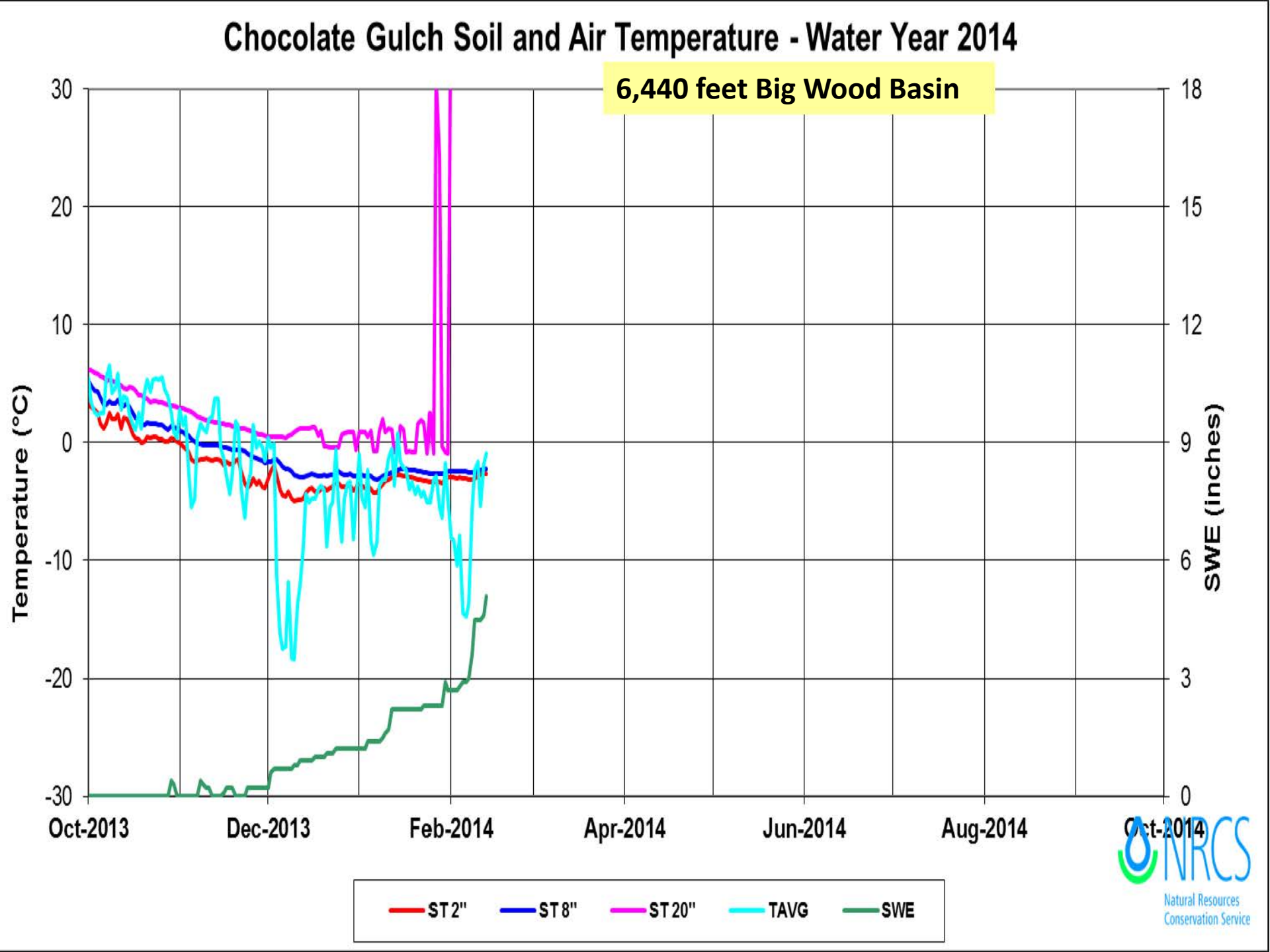


Orchard Range Soil and Air Temperature - Water Year 2014

3,200 feet Boise/Mountain Home area

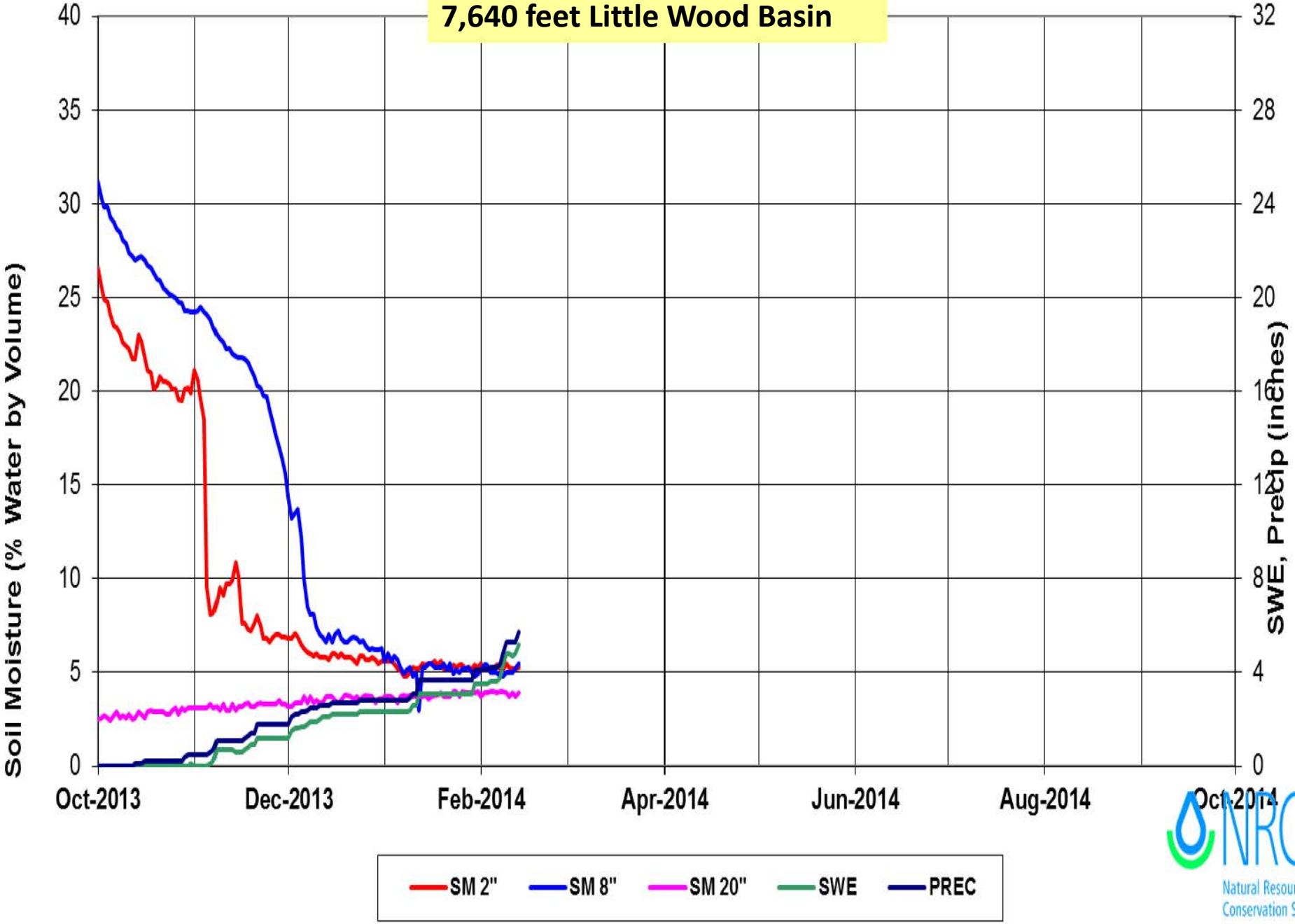


NRCS
Natural Resources Conservation Service


Chocolate Gulch Soil and Air Temperature - Water Year 2014
6,440 feet Big Wood Basin
Temperature (°C)
SWE (inches)
30
20
10
0
-10
-20
-30
18
15
12
9
6
3
0
Oct-2013
Dec-2013
Feb-2014
Apr-2014
Jun-2014
Aug-2014
Oct-2014
ST 2"
ST 8"
ST 20"
TAVG
SWE
NRCS
Natural Resources
Conservation Service

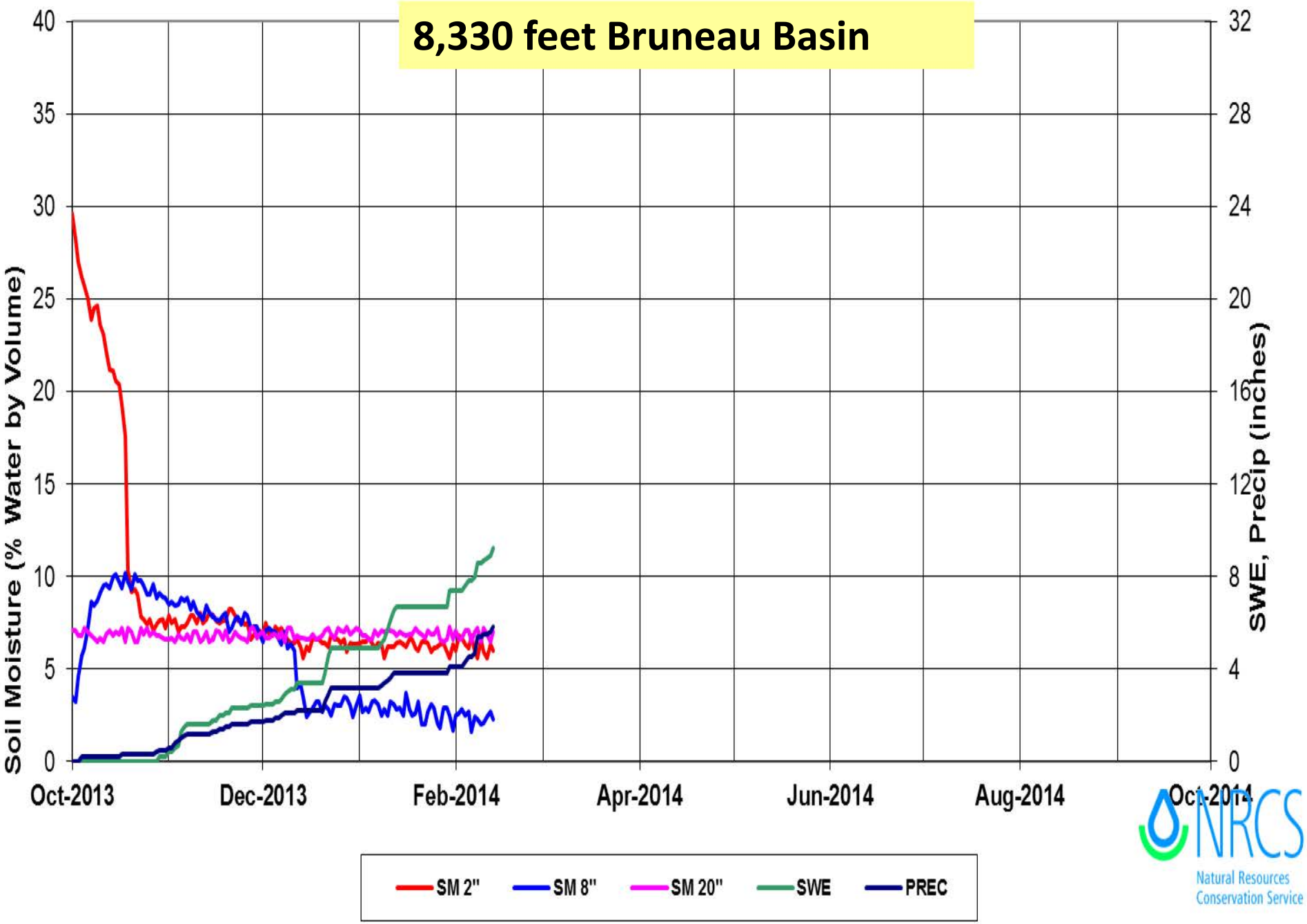
Swede Peak Soil Moisture - Water Year 2014

7,640 feet Little Wood Basin

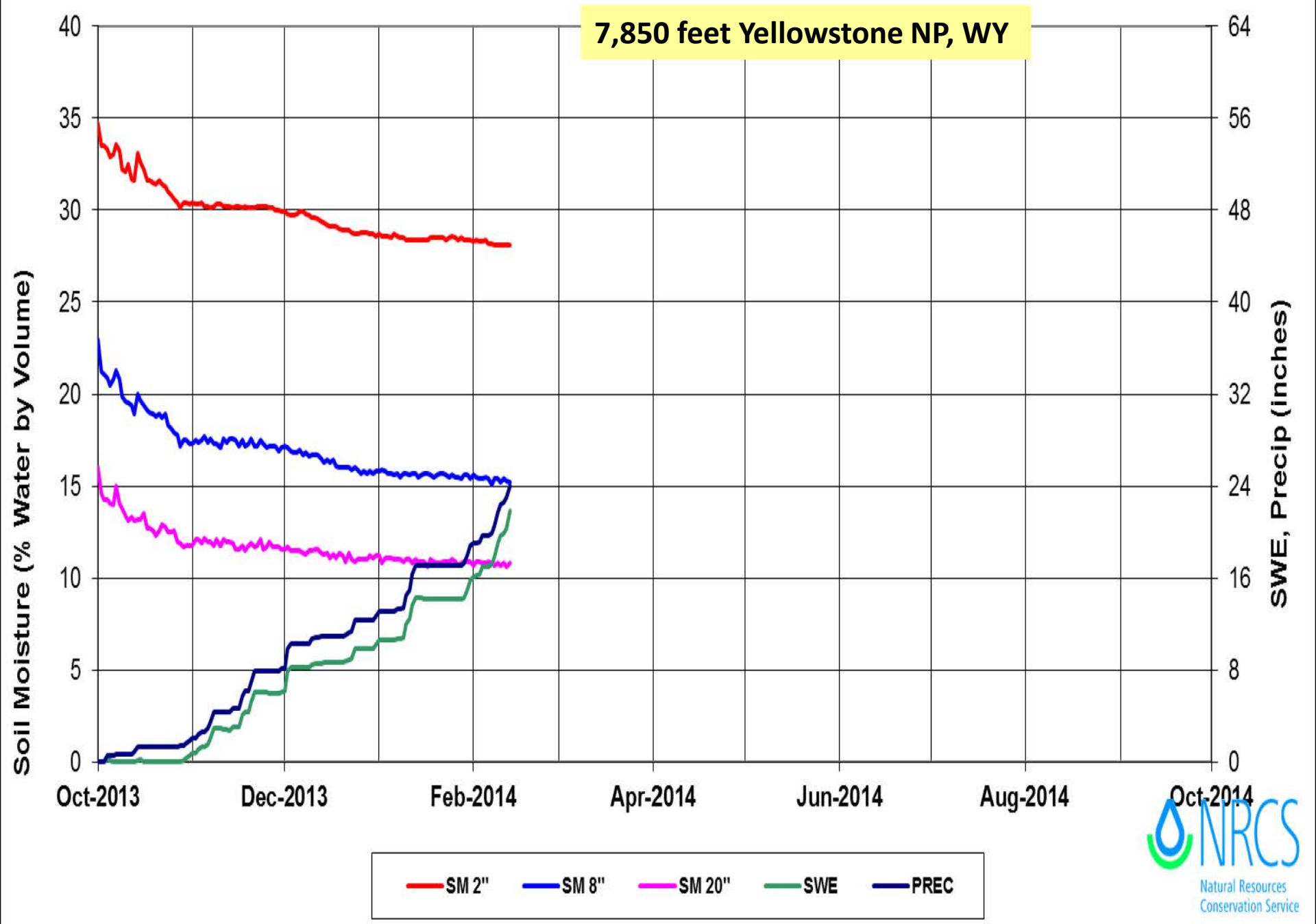


NRCS
Natural Resources Conservation Service

Pole Creek R.S. Soil Moisture - Water Year 2014



Lewis Lake Divide Soil Moisture - Water Year 2014

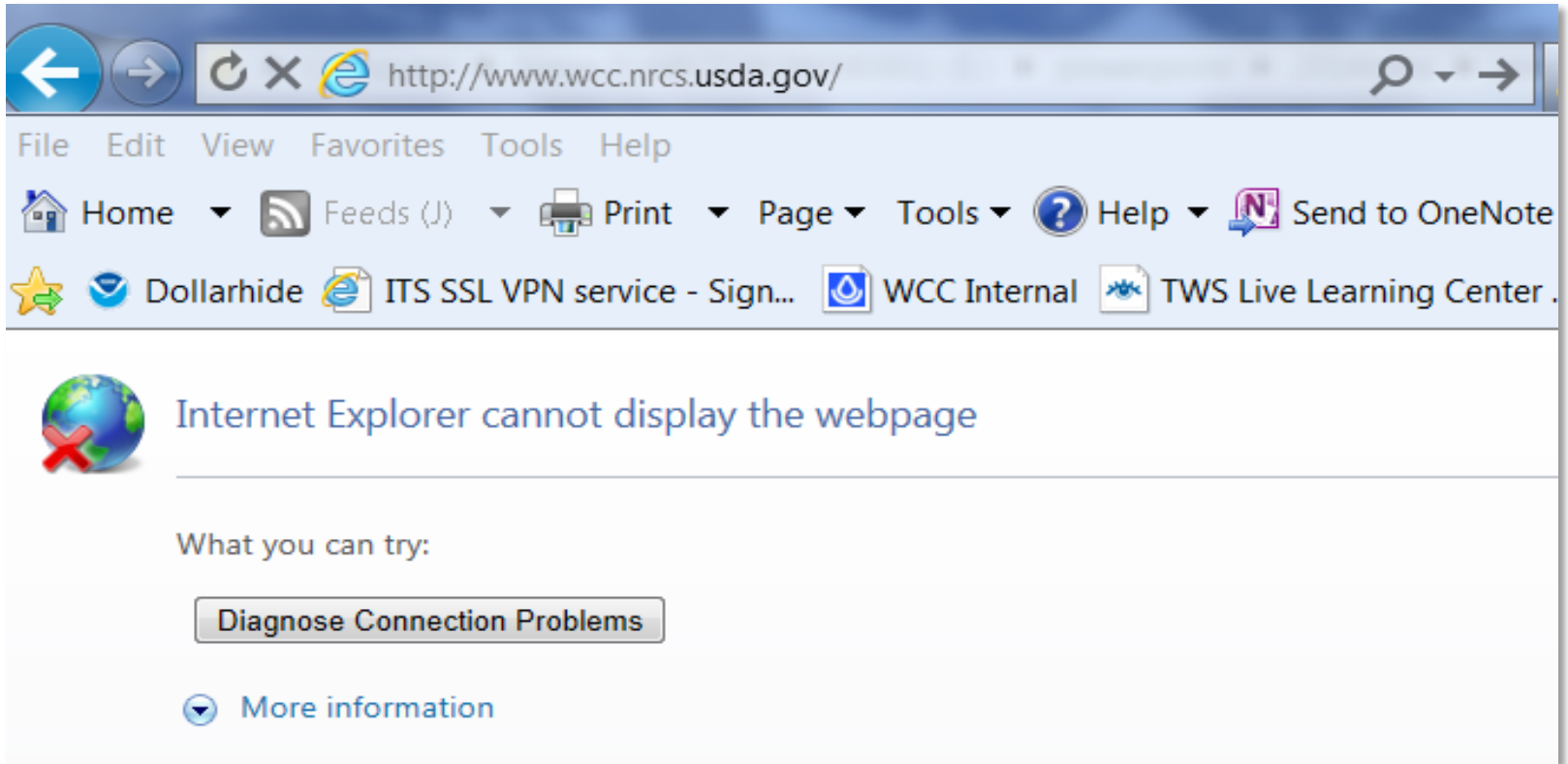


Website Update - January 2014

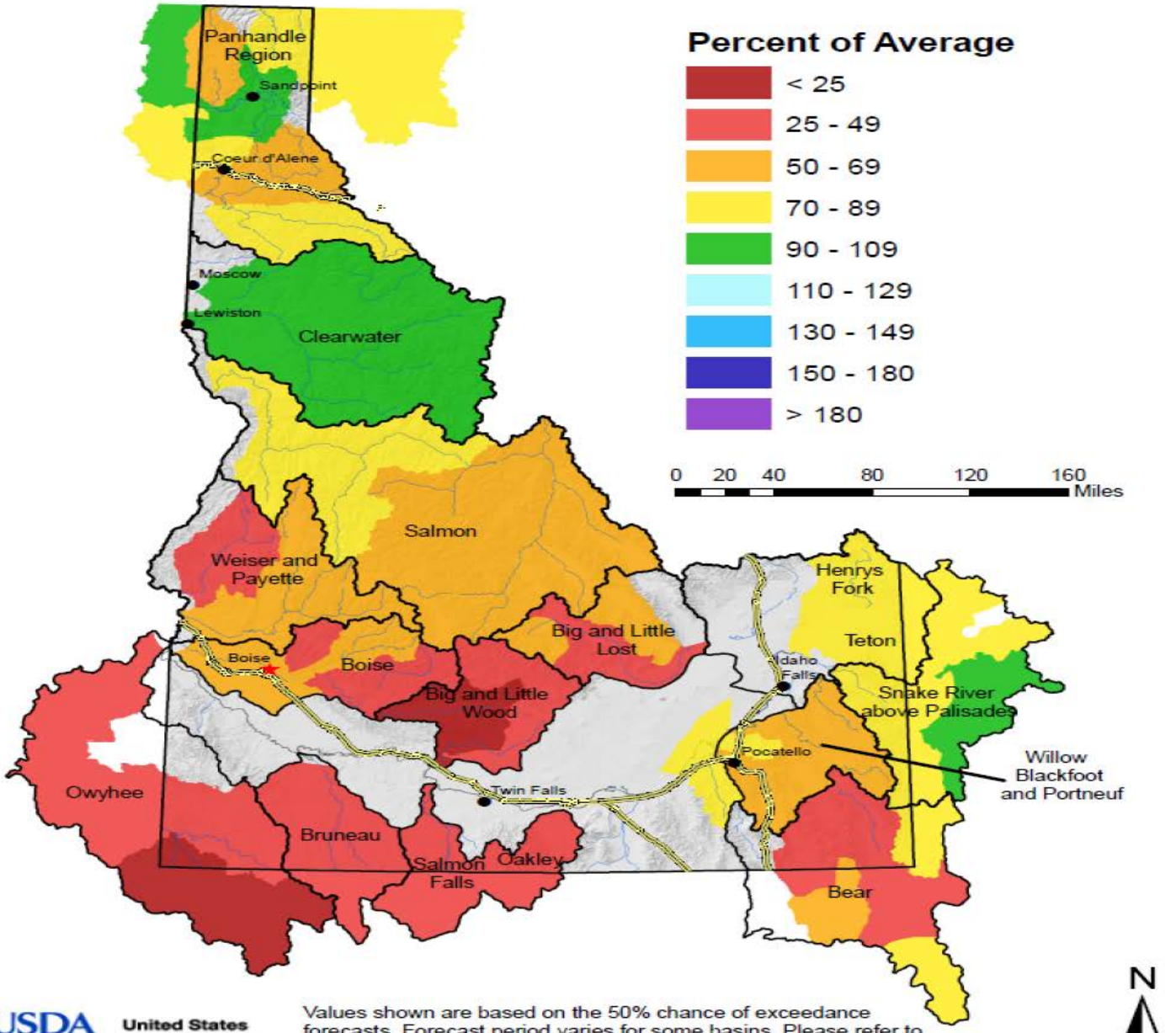
Web Page Progress is being made since migration last July – let us know about problems.

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: IDBOISE-NRCS-SNOW@one.usda.gov

We apologize for this week's server problems but they were resolved with a new server….



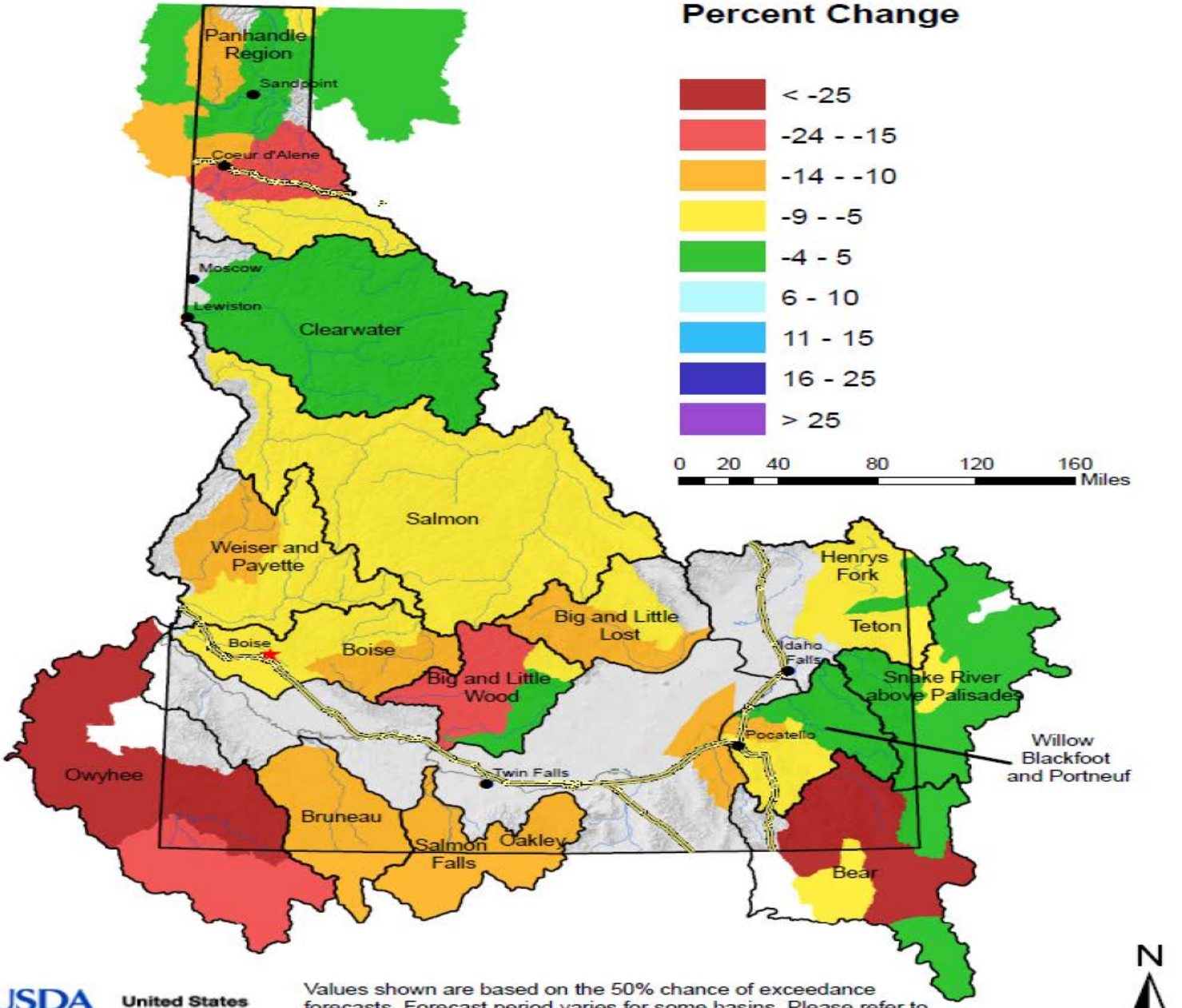
February 1, 2014 NRCS April - July Streamflow Forecasts



USDA United States Department of Agriculture

Values shown are based on the 50% chance of exceedance forecasts. Forecast period varies for some basins. Please refer to the Water Supply Outlook Report for more details regarding these forecasts. http://www.nrcs.usda.gov/wps/portal/nrcs/main/id/snow/

Change in Streamflow Forecasts from Jan. 1 - Feb. 1, 2014



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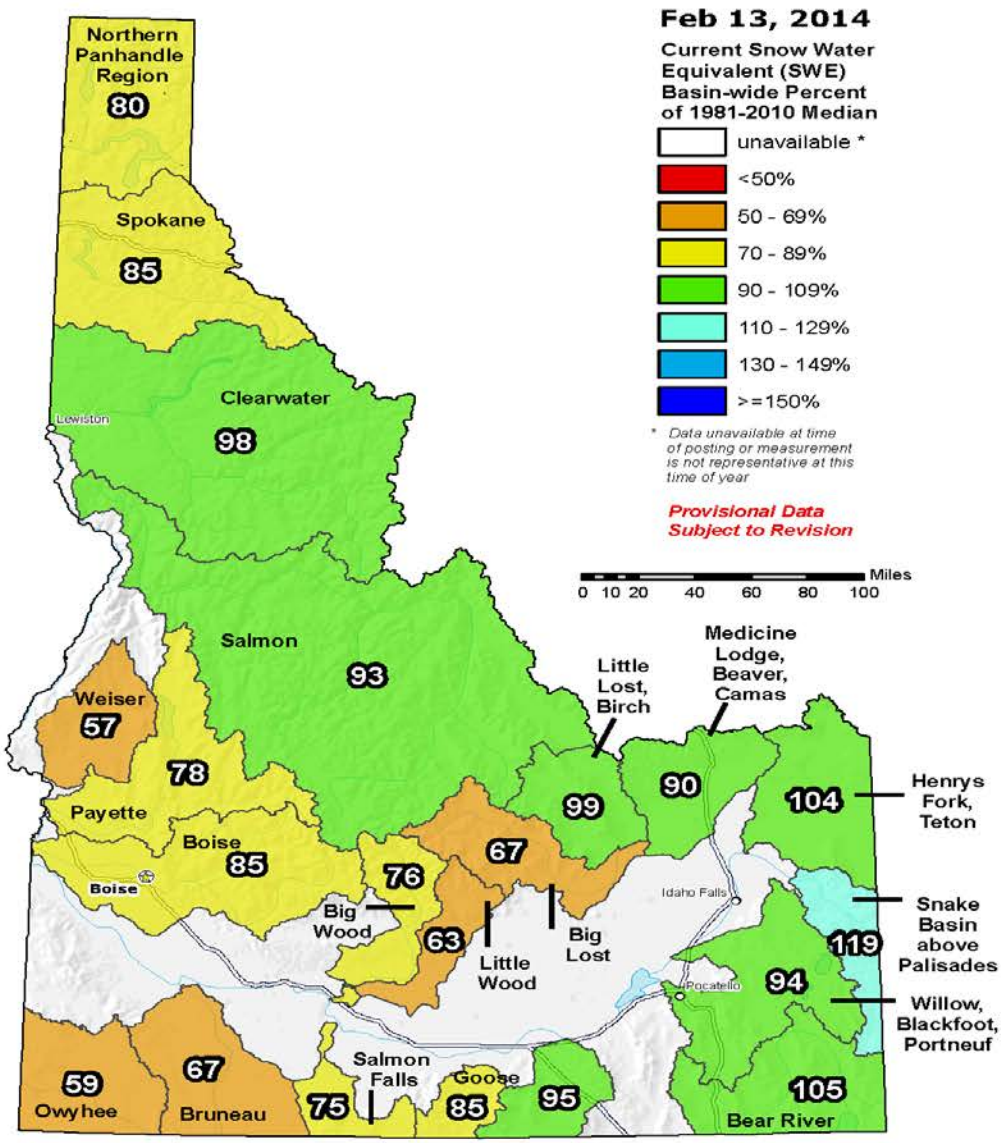
Idaho SNOTEL Current Snow Water Equivalent (SWE) % of Normal



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Portland, Oregon http://www.wcc.nrcs.usda.gov/gis/
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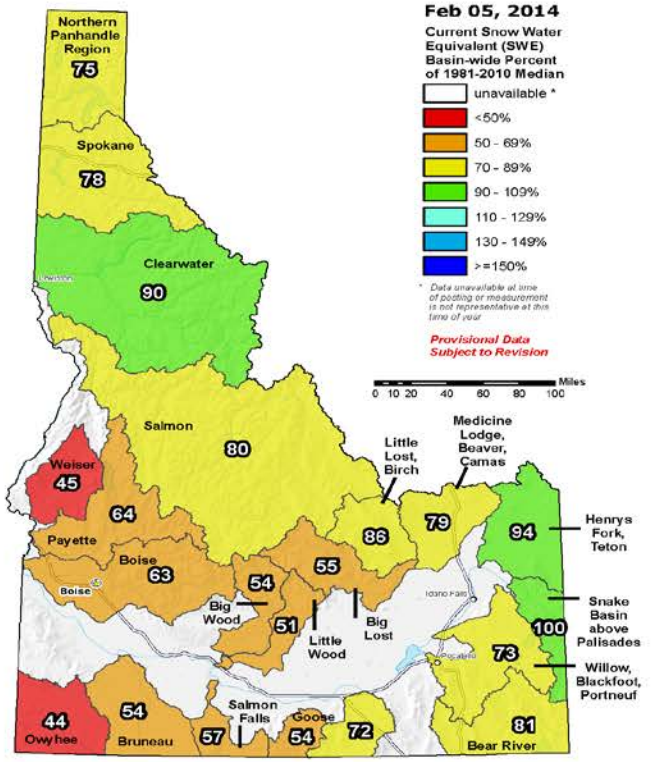
Idaho SNOTEL Current Snow Water Equivalent (SWE) % of Norma



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Prepared by the USDA/NRCS National Water and Climate Cen
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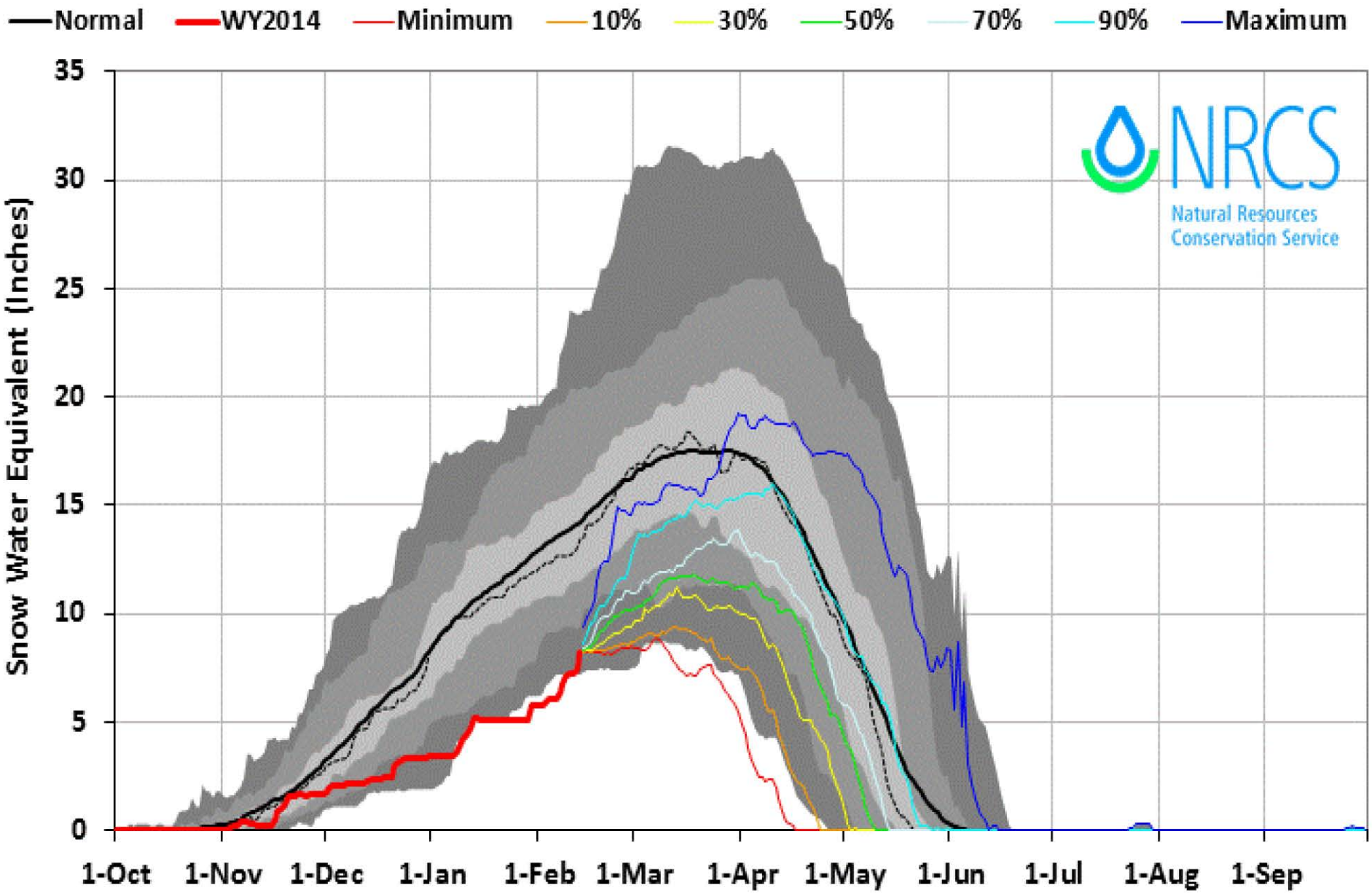
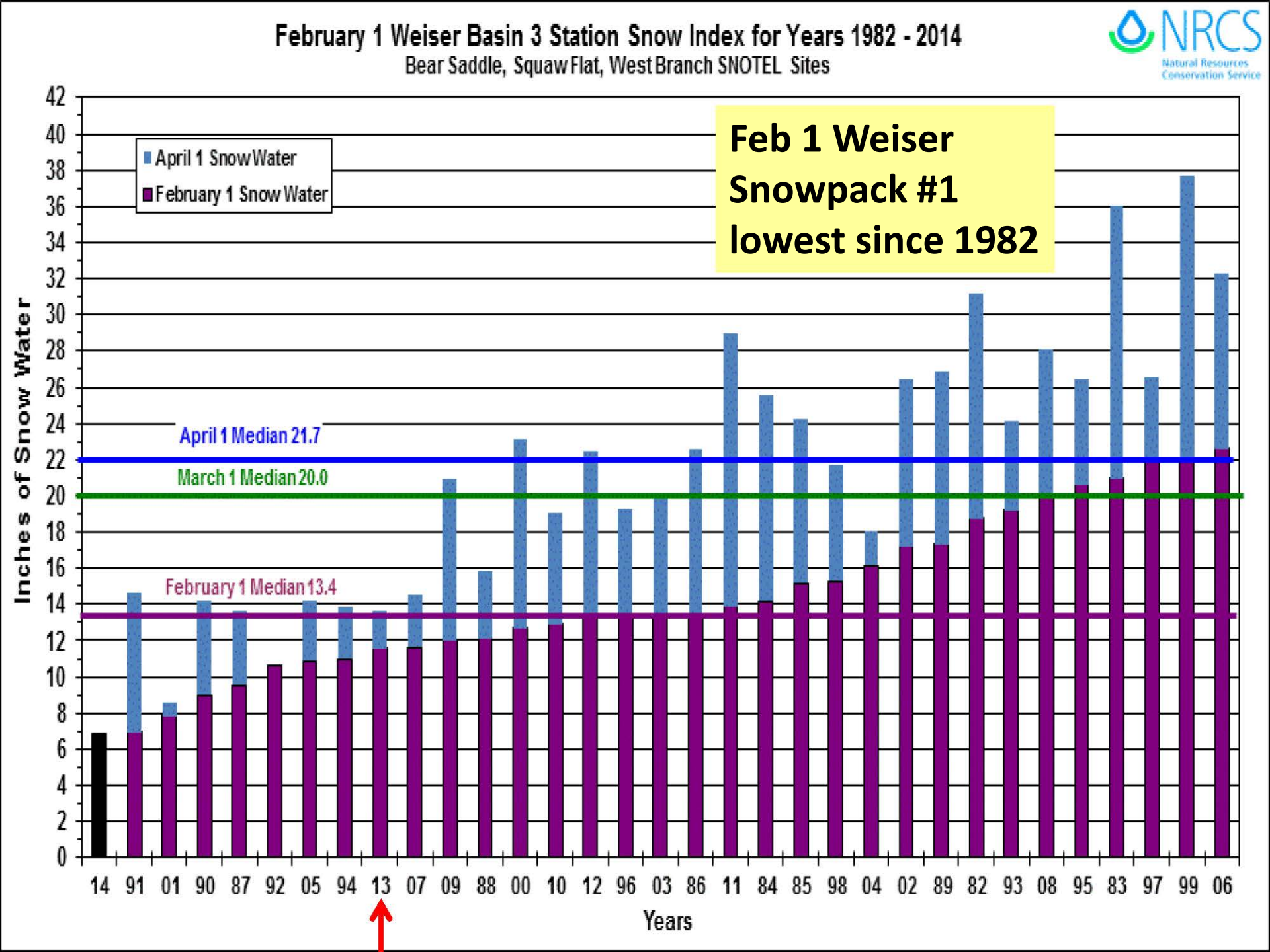
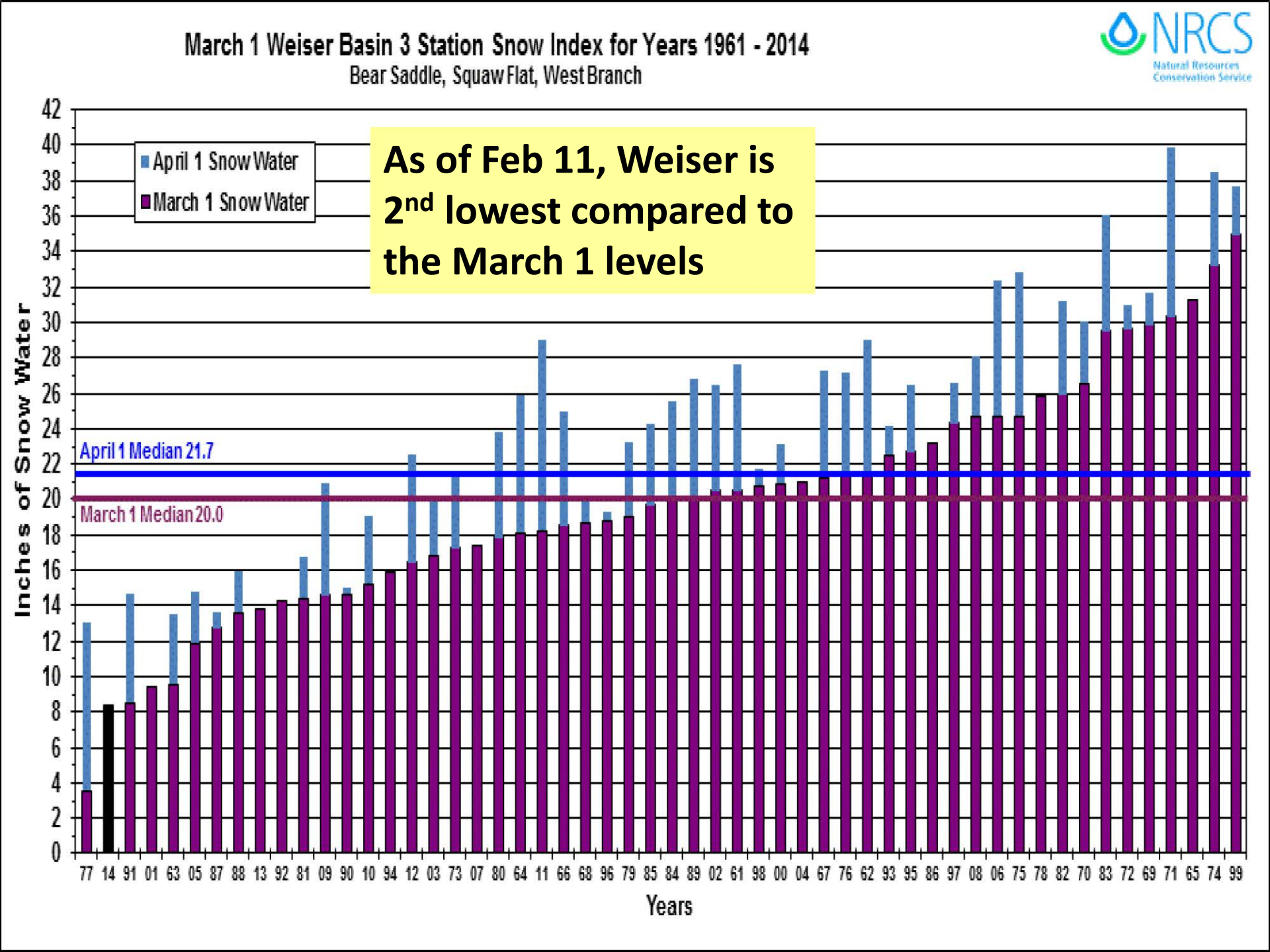
Science contact: Jim.Marron@por.usda.gov 503 414 3047

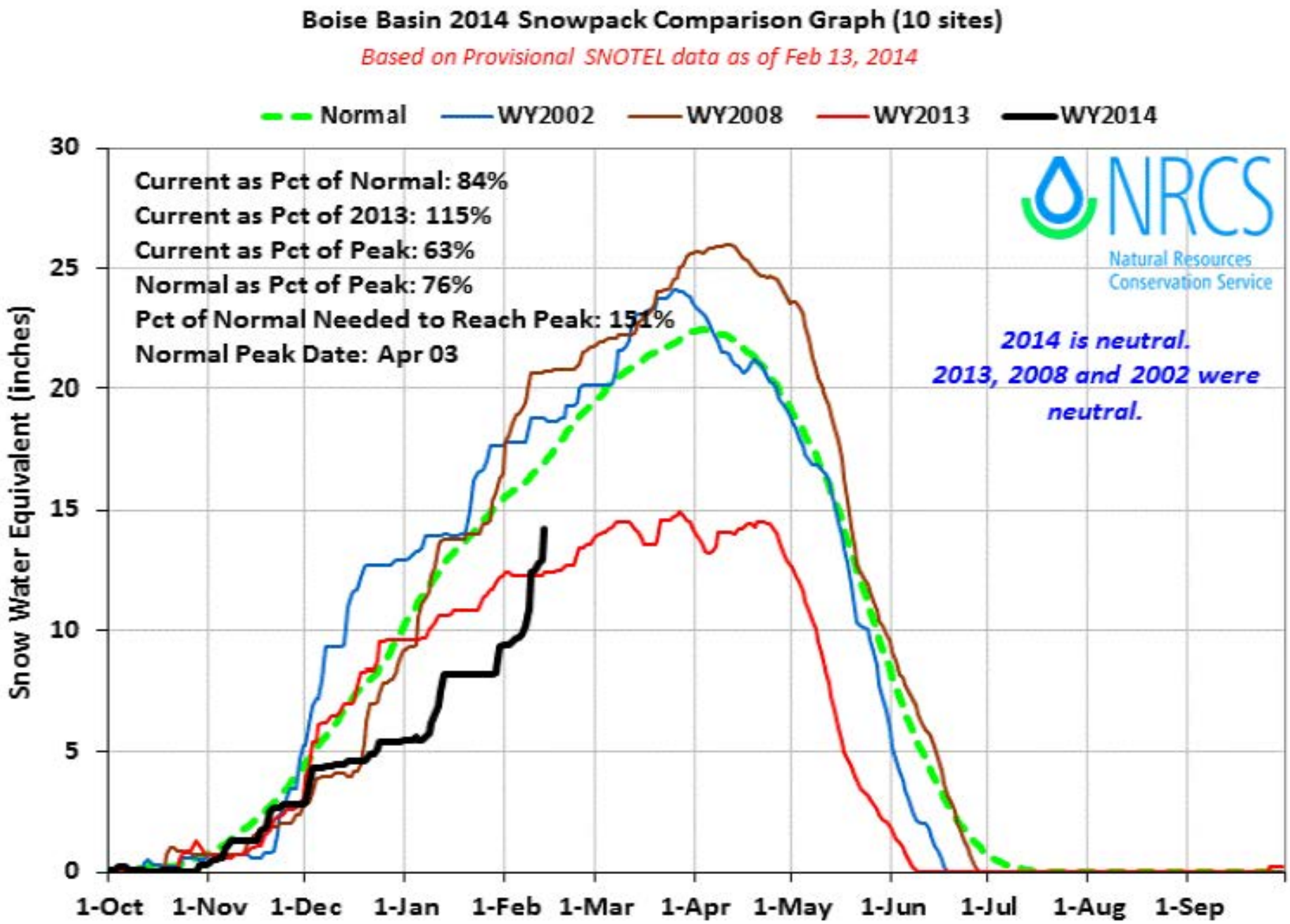
Weiser Basin 2014 Snow Water with Non-Exceedence Projections (4 sites)

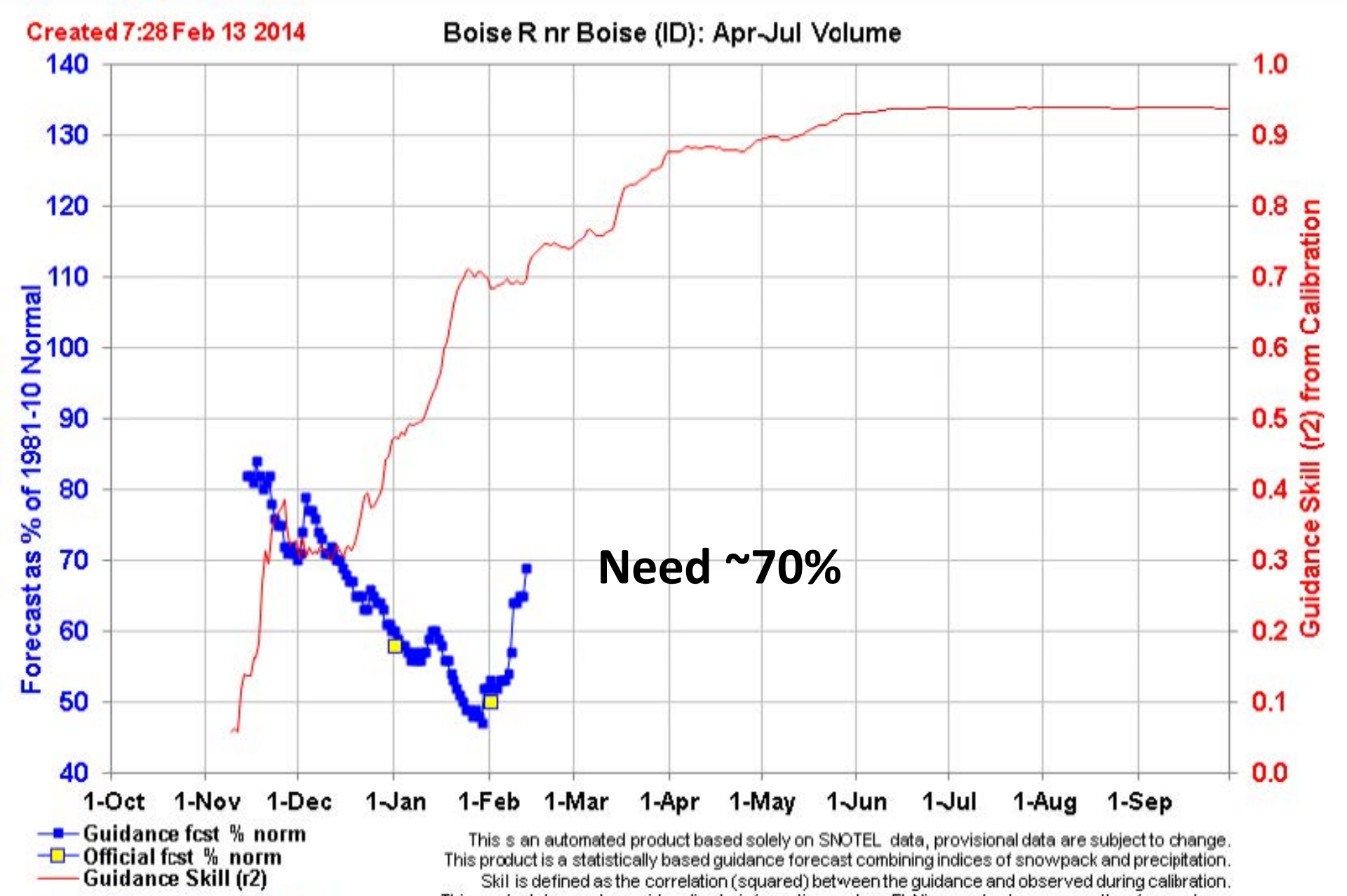
Based on Provisional SNOTEL data as of Feb 13, 2014




February 1 Weiser Basin 3 Station Snow Index for Years 1982 - 2014
Bear Saddle, Squaw Flat, West Branch SNOTEL Sites
NRCS
Natural Resources Conservation Service
Feb 1 Weiser Snowpack #1 lowest since 1982
April 1 Snow Water
February 1 Snow Water
April 1 Median 21.7
March 1 Median 20.0
February 1 Median 13.4
Inches of Snow Water
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
14 91 01 90 87 92 05 94 13 07 09 88 00 10 12 96 03 86 11 84 85 98 04 02 89 82 93 08 95 83 97 99 06
Years


March 1 Weiser Basin 3 Station Snow Index for Years 1961 - 2014
Bear Saddle, Squaw Flat, West Branch
NRCS
Natural Resources Conservation Service
April 1 Snow Water
March 1 Snow Water
As of Feb 11, Weiser is 2nd lowest compared to the March 1 levels
April 1 Median 21.7
March 1 Median 20.0
Inches of Snow Water
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42
77 14 91 01 63 05 87 88 13 92 81 09 90 10 94 12 03 73 07 80 64 11 66 68 96 79 85 84 89 02 61 98 00 04 67 76 62 93 95 86 97 08 06 75 78 82 70 83 72 69 71 65 74 99
Years


Boise Basin 2014 Snowpack Comparison Graph (10 sites)
Based on Provisional SNOTEL data as of Feb 13, 2014
Normal
WY2002
WY2008
WY2013
WY2014
Current as Pct of Normal: 84%
Current as Pct of 2013: 115%
Current as Pct of Peak: 63%
Normal as Pct of Peak: 76%
Pct of Normal Needed to Reach Peak: 151%
Normal Peak Date: Apr 03
NRCS
Natural Resources Conservation Service
2014 is neutral.
2013, 2008 and 2002 were neutral.
Snow Water Equivalent (inches)
30
25
20
15
10
5
0
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep

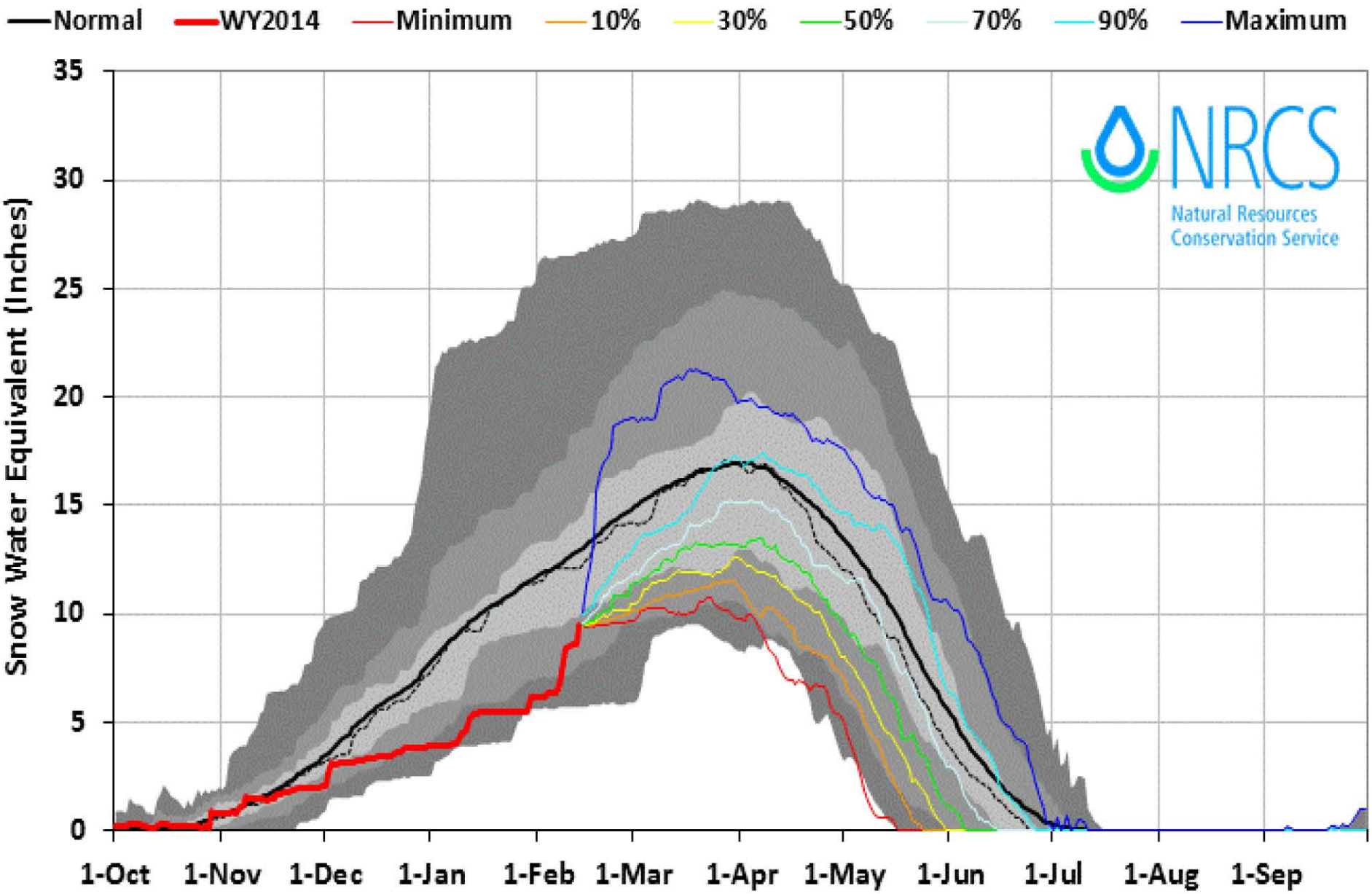


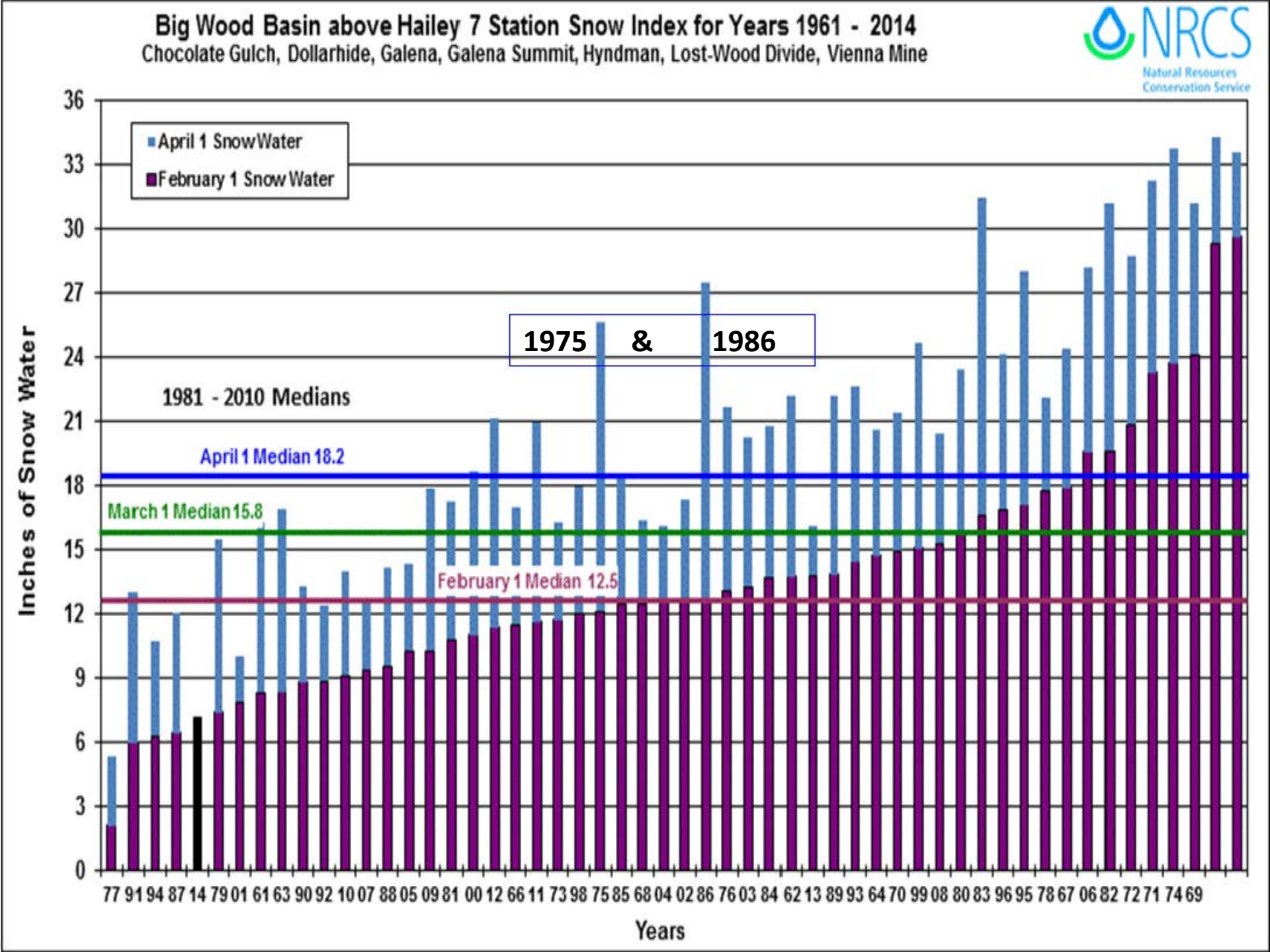
This s an automated product based solely on SNOTEL data, provisional data are subject to change. This product is a statistically based guidance forecast combining indices of snowpack and precipitation. Skil is defined as the correlation (squared) between the guidance and observed during calibration. This product does not consider climate information such as El Nino or short range weather forecasts, or a variety of other factors considered in the official forecasts. This product is not meant to replace or supercede the official forecasts produced in coordination with the National Weather Service. Science Contact: Cara.s.McCarthy@por.usda.gov www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

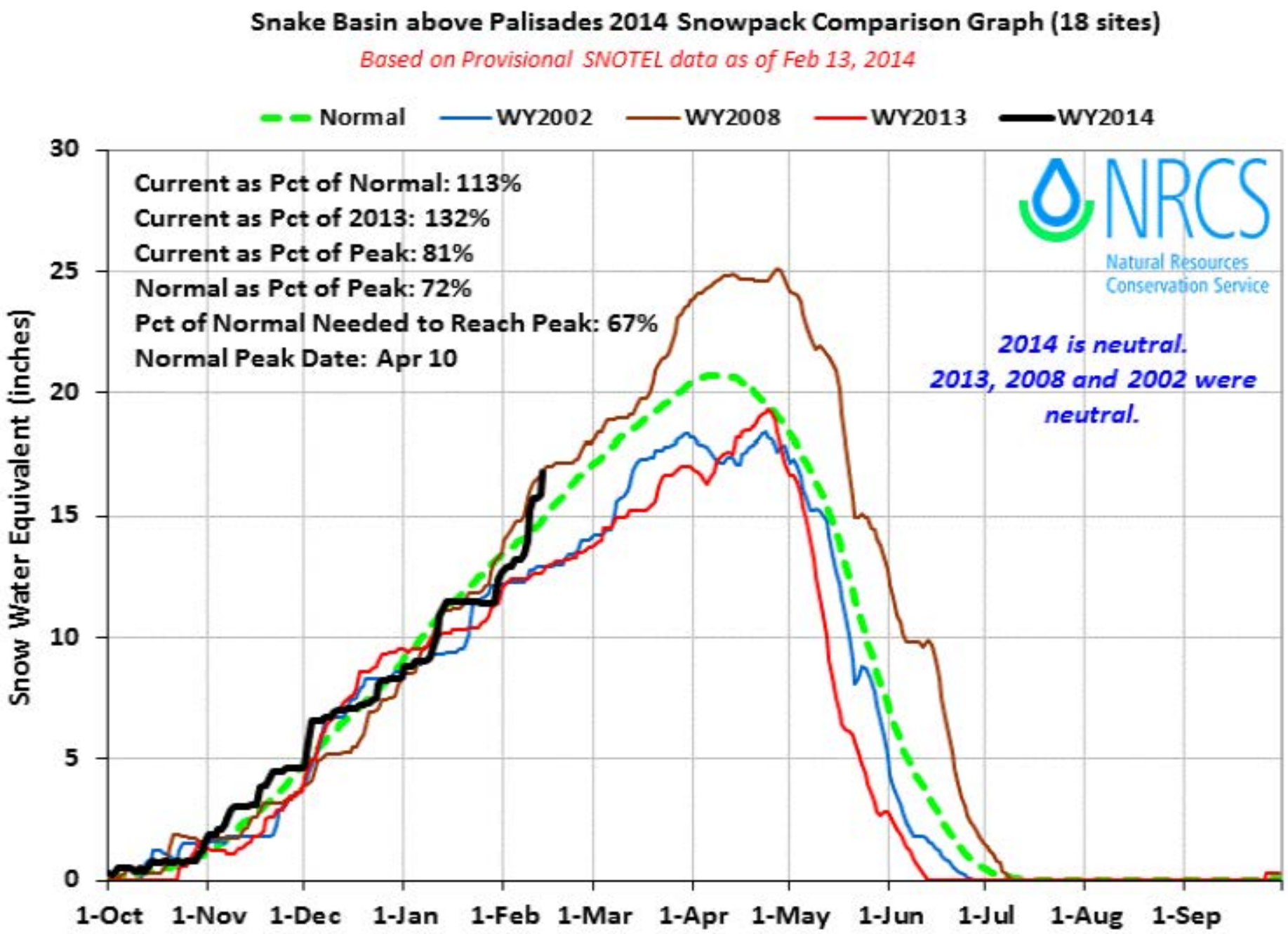
NRCS

Big Wood Basin 2014 Snow Water with Non-Exceedence Projections (9 sites)

Based on Provisional SNOTEL data as of Feb 13, 2014




Big Wood Basin above Hailey 7 Station Snow Index for Years 1961 - 2014
Chocolate Gulch, Dollarhide, Galena, Galena Summit, Hyndman, Lost-Wood Divide, Vienna Mine
NRCS
Natural Resources Conservation Service
April 1 Snow Water
February 1 Snow Water
1975 & 1986
1981 - 2010 Medians
April 1 Median 18.2
March 1 Median 15.8
February 1 Median 12.5
Inches of Snow Water
0
3
6
9
12
15
18
21
24
27
30
33
36
77 91 94 87 14 79 01 61 63 90 92 10 07 88 05 09 81 00 12 66 11 73 98 75 85 68 04 02 86 76 03 84 62 13 89 93 64 70 99 08 80 83 96 95 78 67 06 82 72 71 74 69
Years


Snake Basin above Palisades 2014 Snowpack Comparison Graph (18 sites)
Based on Provisional SNOTEL data as of Feb 13, 2014
Normal
WY2002
WY2008
WY2013
WY2014
Current as Pct of Normal: 113%
Current as Pct of 2013: 132%
Current as Pct of Peak: 81%
Normal as Pct of Peak: 72%
Pct of Normal Needed to Reach Peak: 67%
Normal Peak Date: Apr 10
NRCS
Natural Resources Conservation Service
2014 is neutral.
2013, 2008 and 2002 were neutral.
Snow Water Equivalent (inches)
30
25
20
15
10
5
0
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep

SFE Probabilistic Forecasting Tool

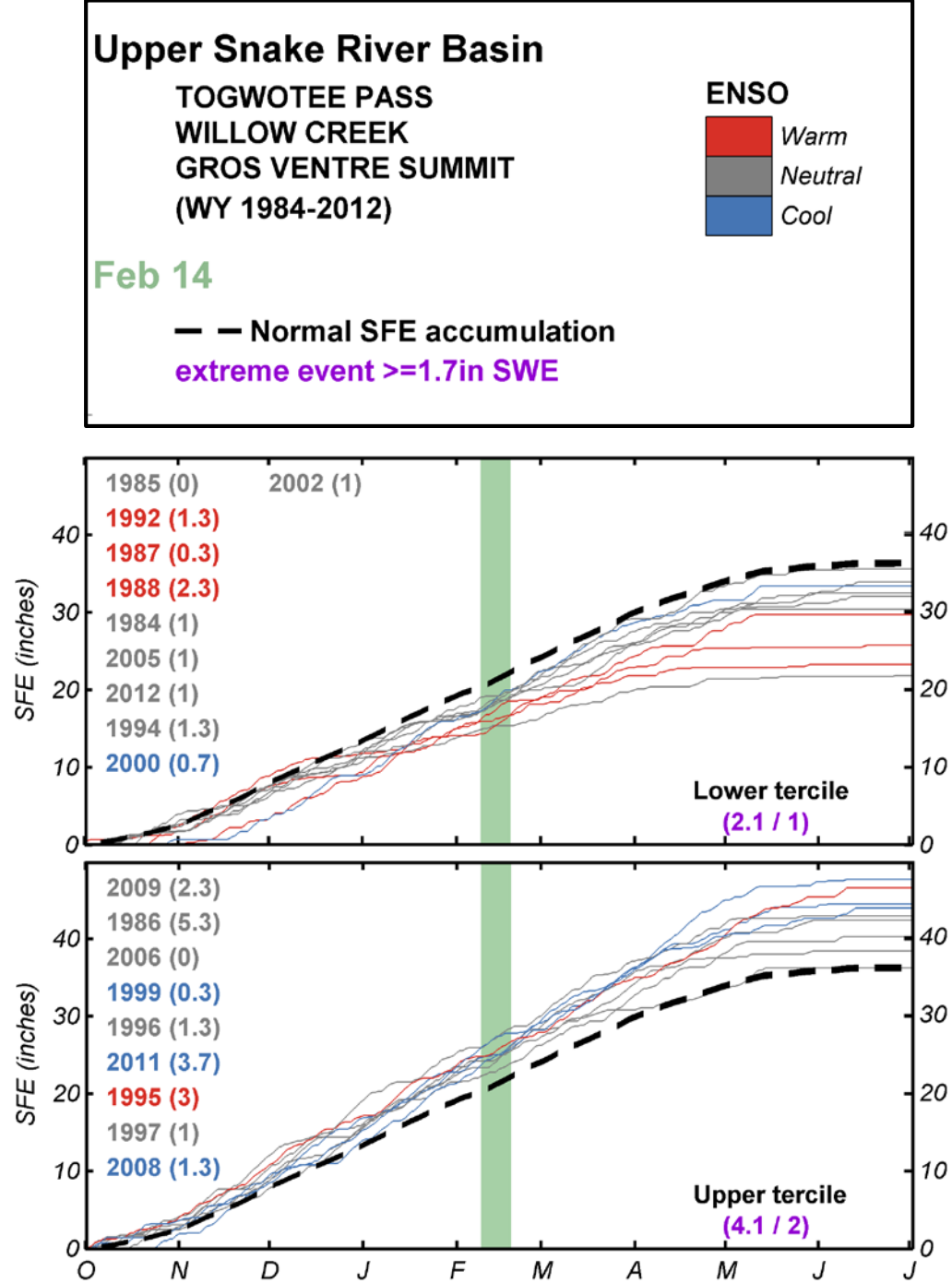
Extreme snowfall events account for about 50% of annual SFE anomalies in this basin.

Extreme event over 3 day period 1.7” is 90%ile of events

Below normal:

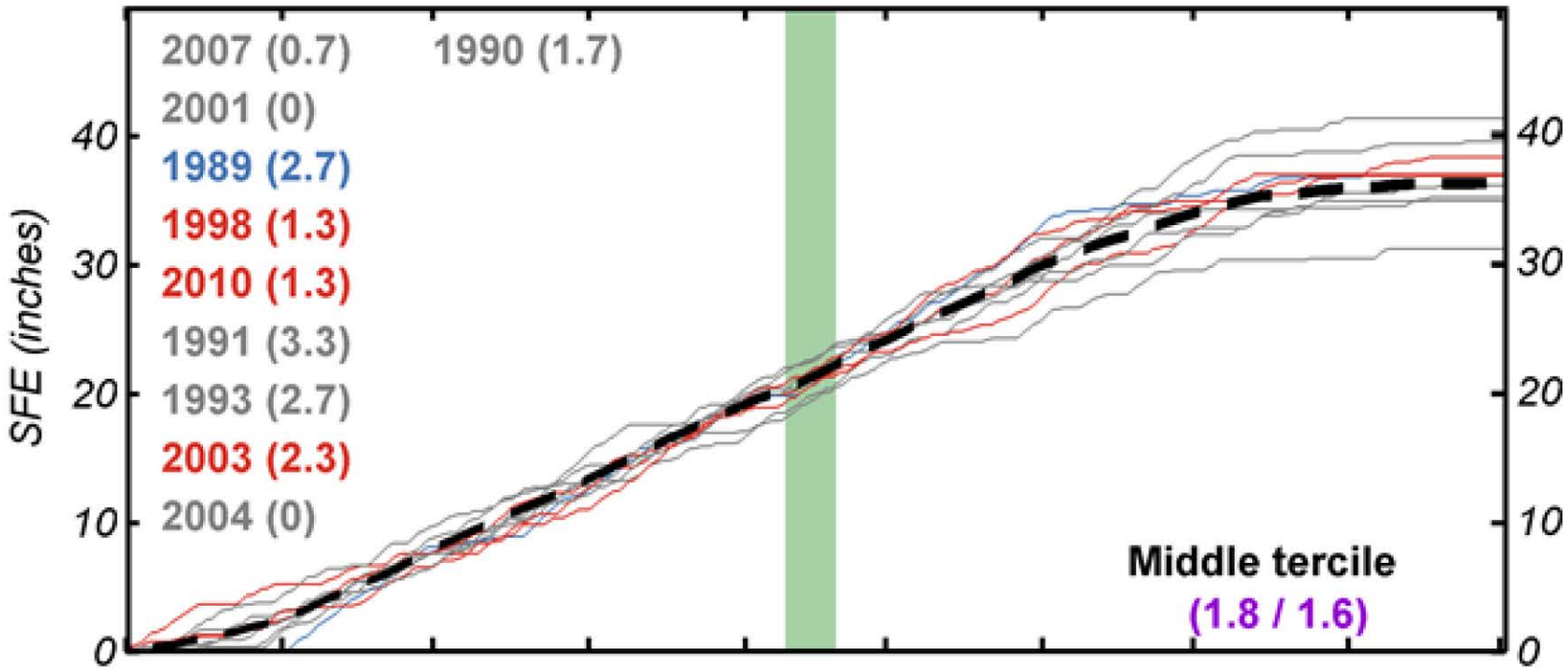
(2.1 avg # events before given date / 1.1 avg # events after given date)

Above normal:



University of Idaho

Near Normal:

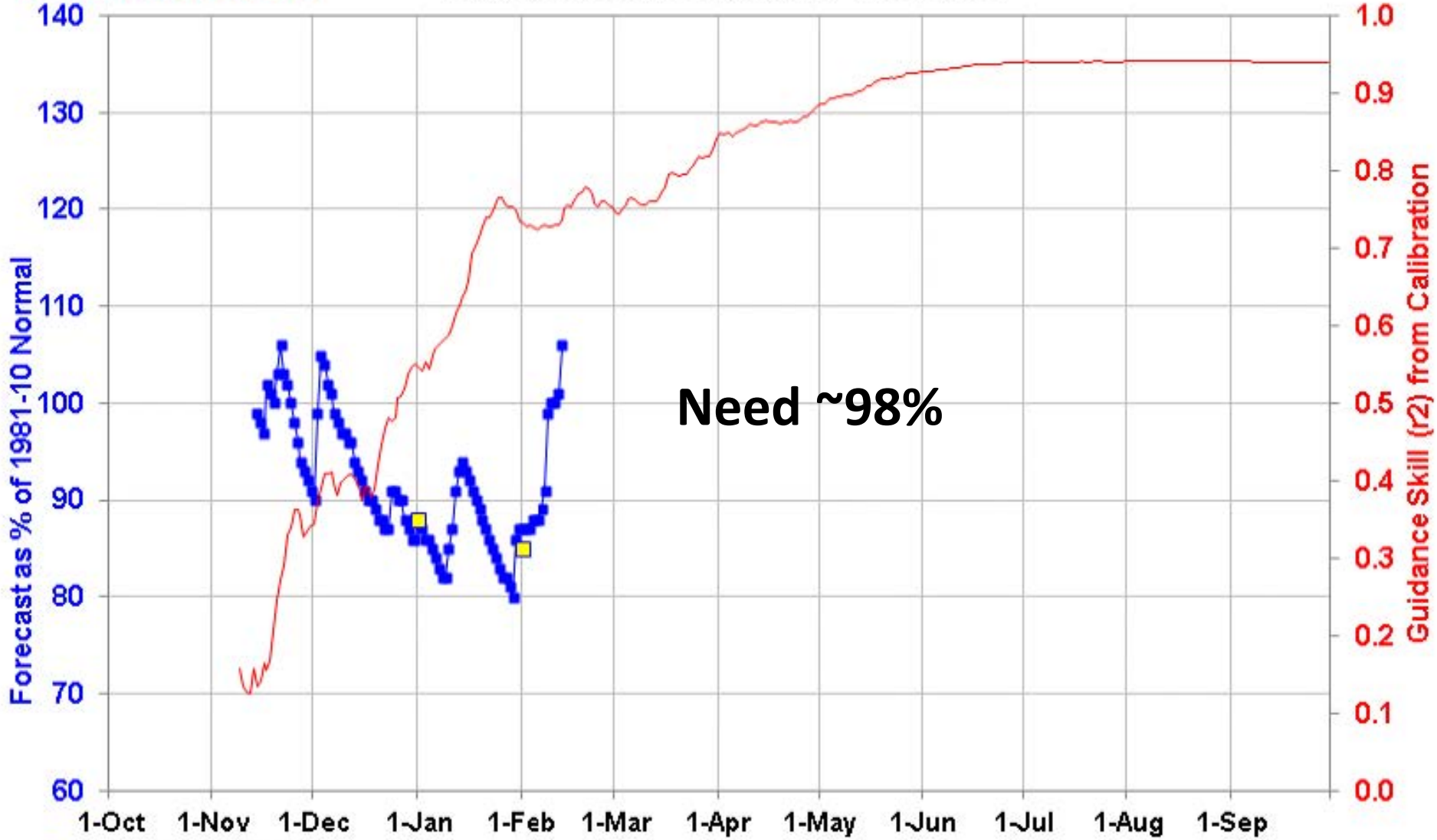


Learn more at:

http://nimbus.cos.uidaho.edu/abby/SFETOOL/

Created 7:24 Feb 13 2014

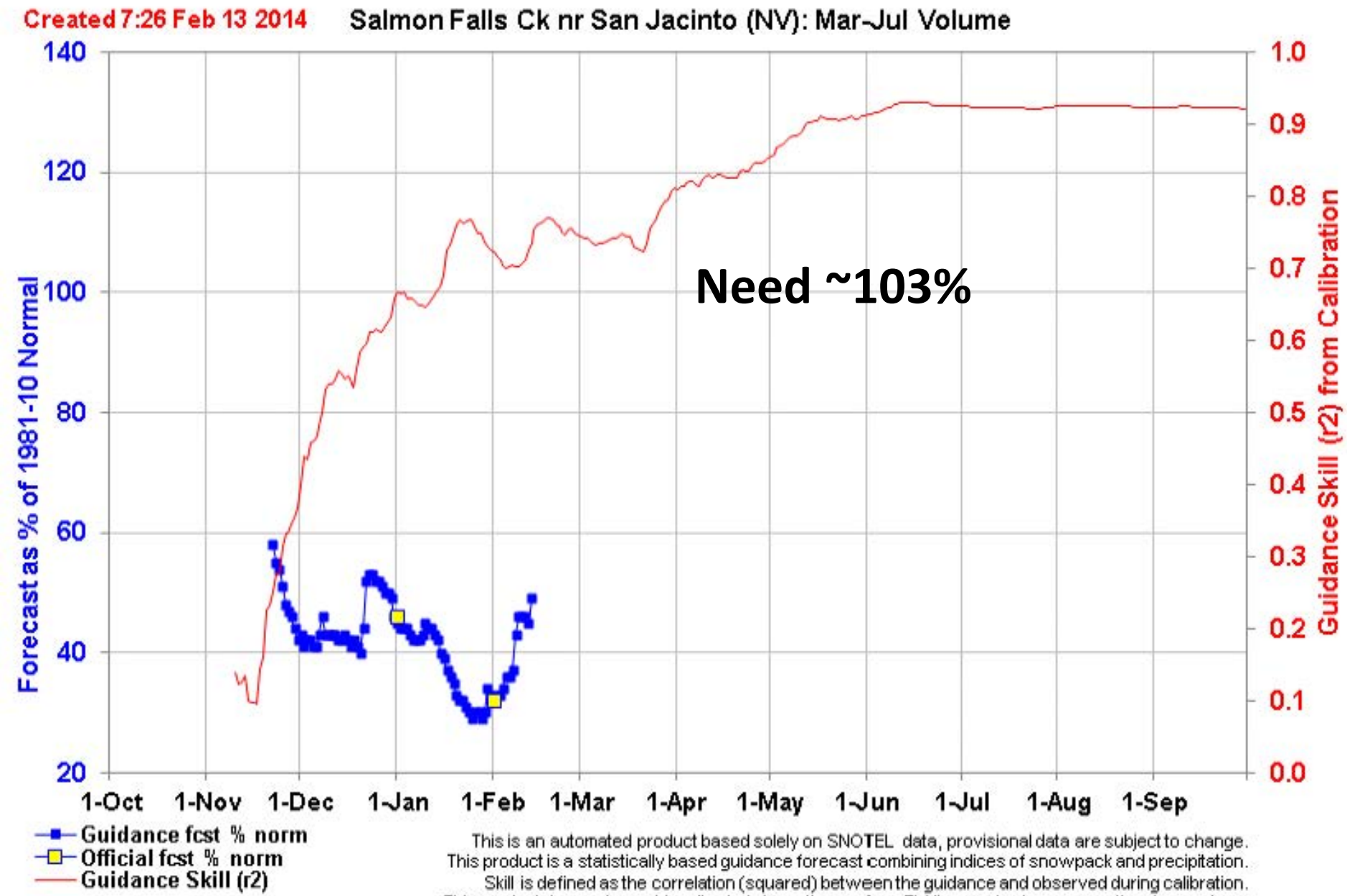
Snake River nr Heise (ID): Apr-Jul Volume



Guidance fcst % norm
Official fcst % norm
Guidance Skill (r2)

This s an automated product based solely on SNOTEL data, provisional data are subject to change. This product is a statistically based guidance forecast combining indices of snowpack and precipitation. Skil is defined as the correlation (squared) between the guidance and observed during calibration. This product does not consider climate information such as El Nino or short range weather forecasts, or a variety of other factors considered in the official forecasts. This product is not meant to replace or supercede the official forecasts produced in coordination with the National Weather Service. Science Contact: Cara.s.McCarthy@por.usda.gov www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

NRCS



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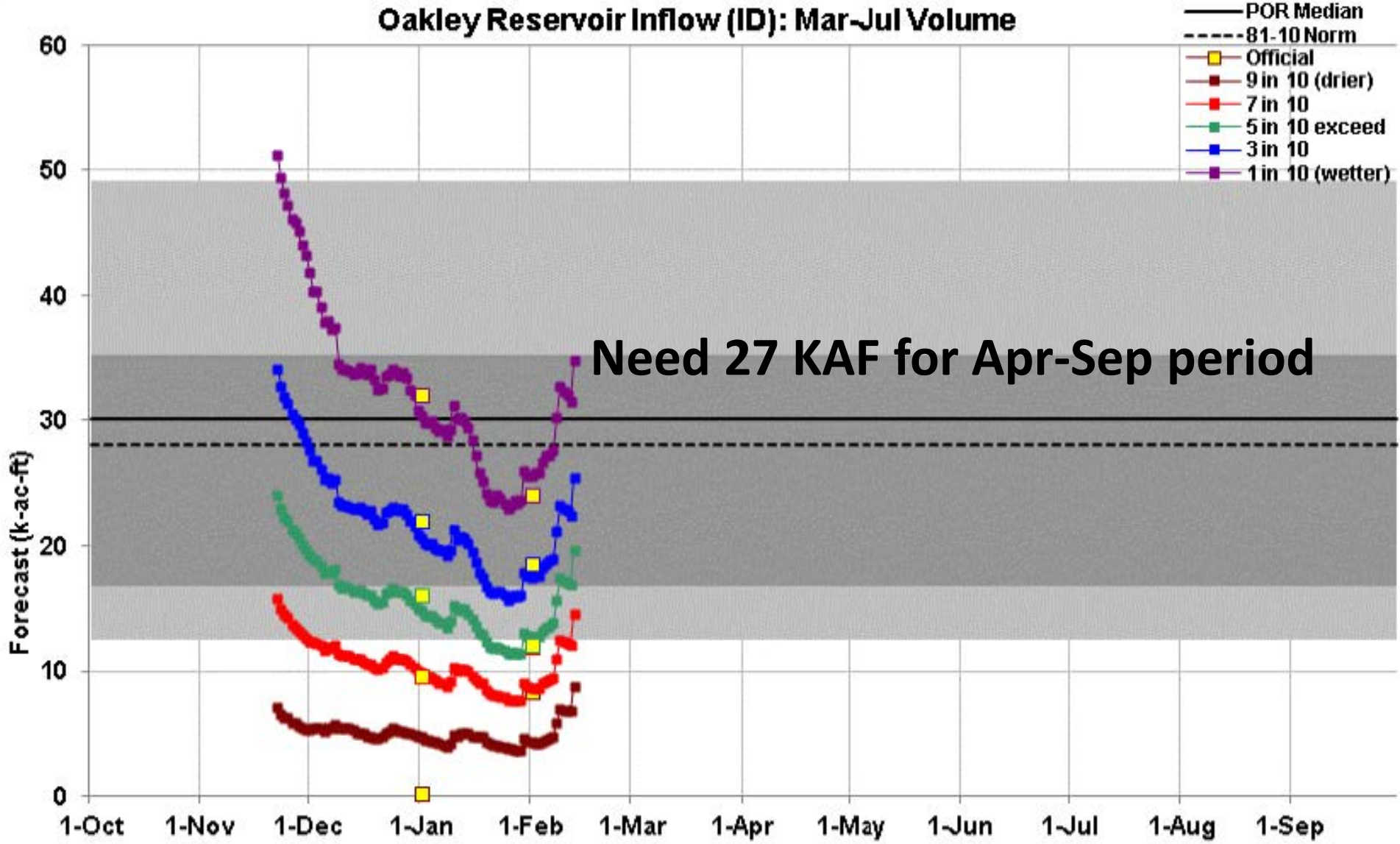
NRCS

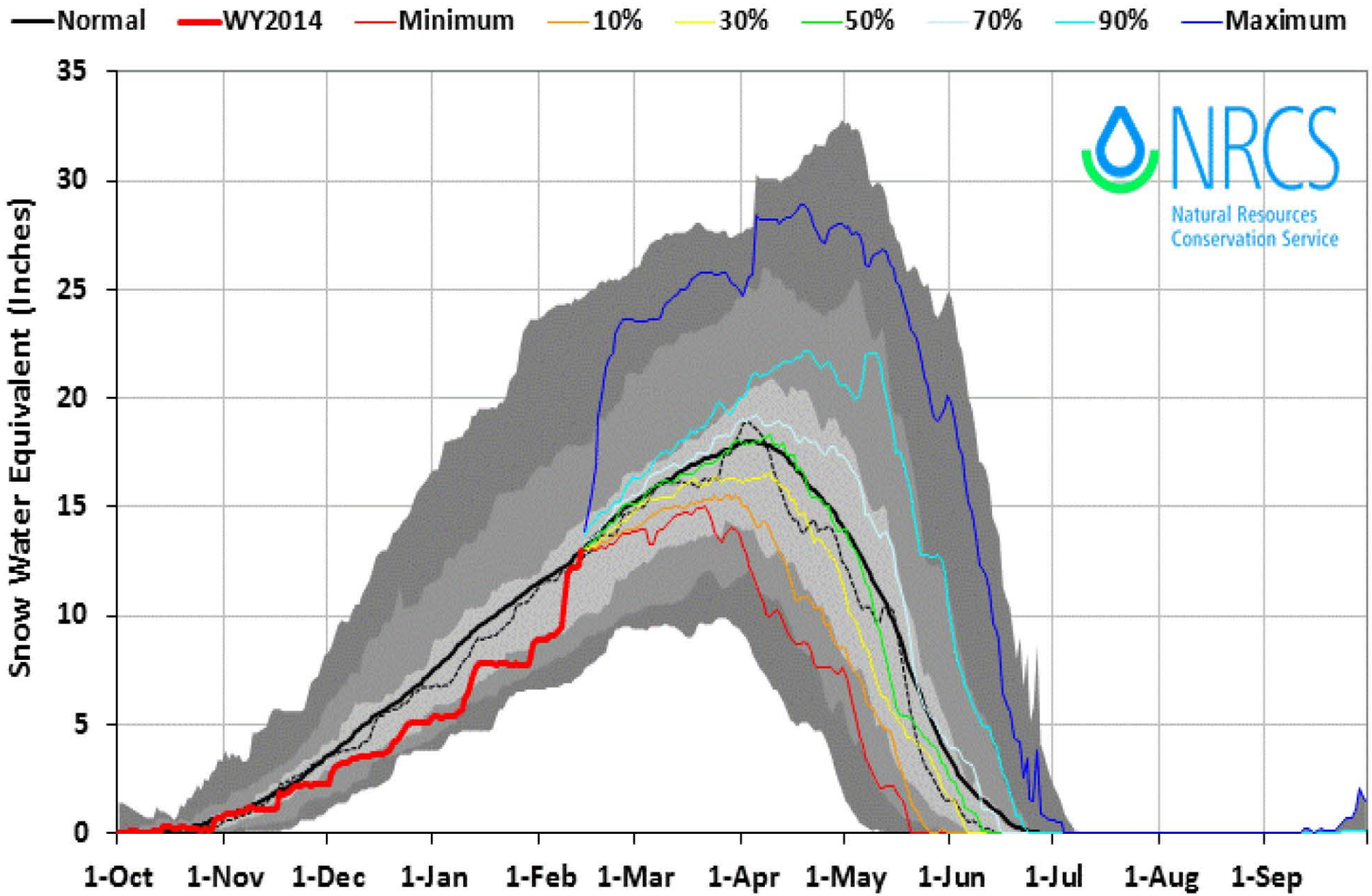


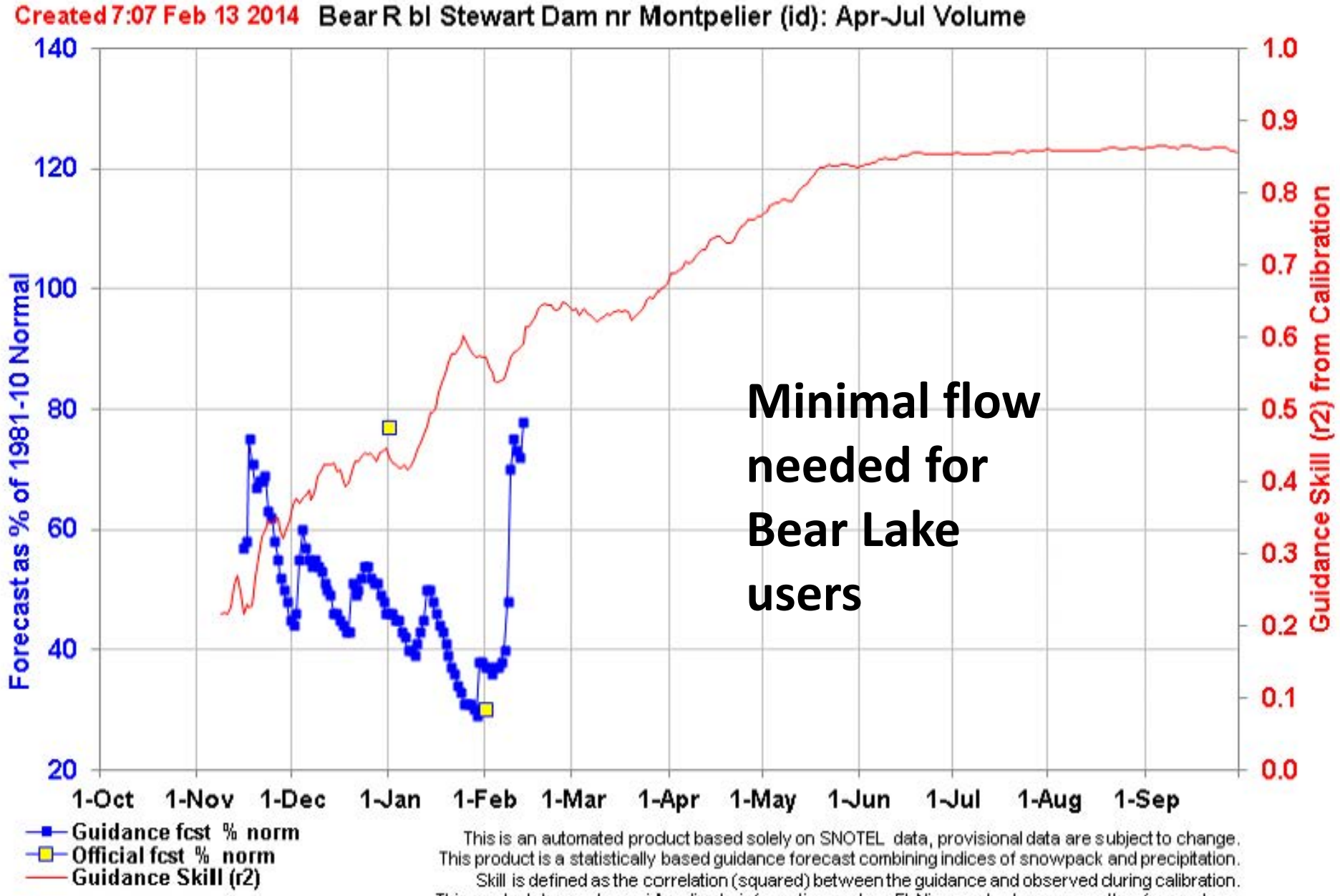
Created 7:26 Feb 13 2014

This s an automated product based solely on SNOTEL data, provisional data are subject to change. This product is a statistically based guidance forecast combining indices of snowpack and precipitation. **Yellow squares** are the official outlooks. **Gray background** is the historical period of record variability. This product does not consider climate information such as El Nino or short range weather forecasts, or a variety of other factors considered in the official forecasts. This product is not meant to replace or supercede the official forecasts produced in coordination with the National Weather Service. Science Contact: Cara.s.McCarthy@por.usda.gov www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

Bear Basin 2014 Snow Water with Non-Exceedence Projections (15 sites)

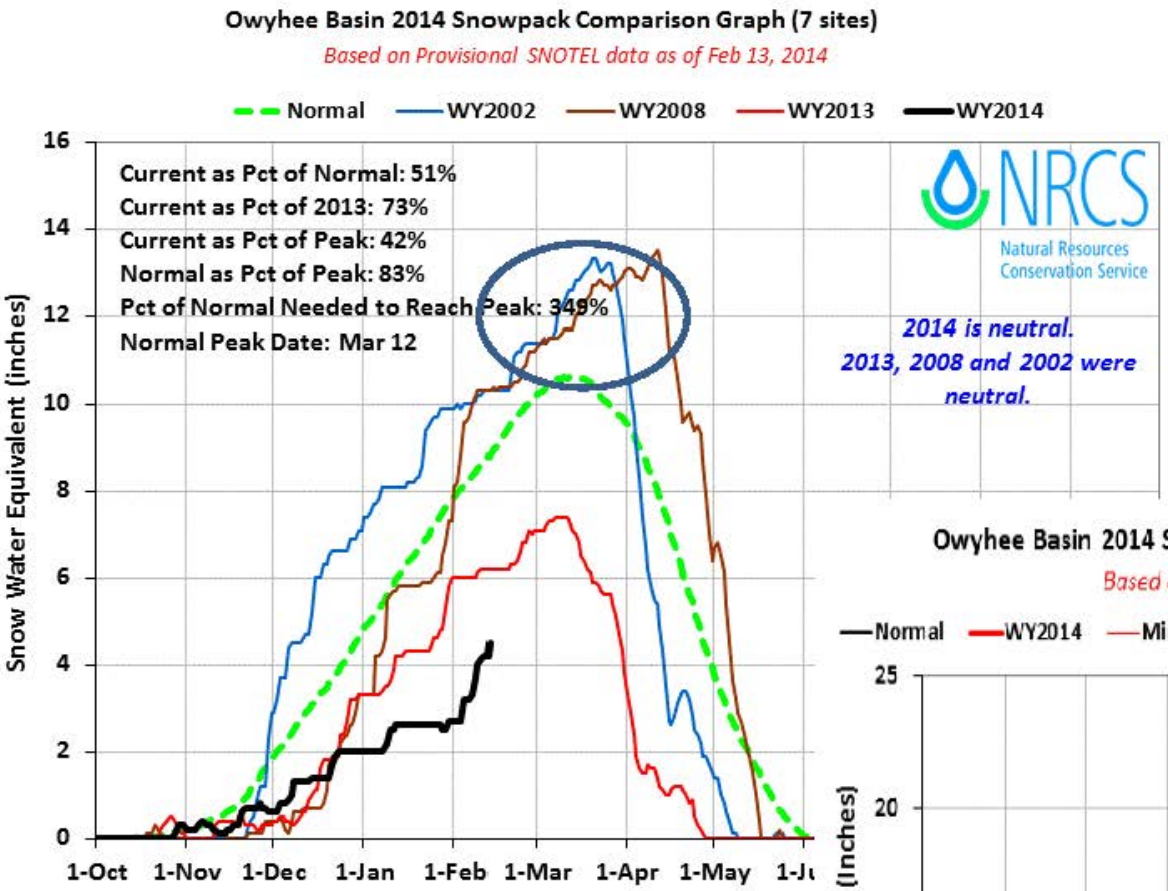
Based on Provisional SNOTEL data as of Feb 13, 2014

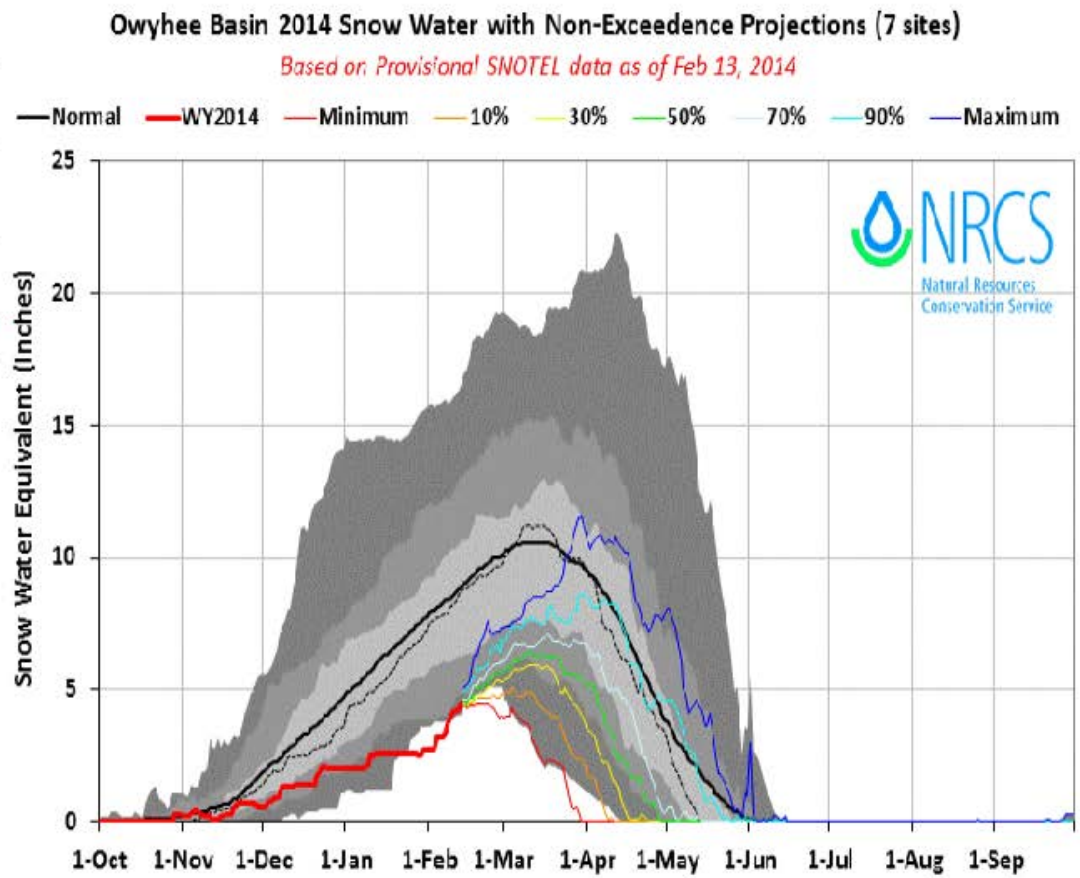


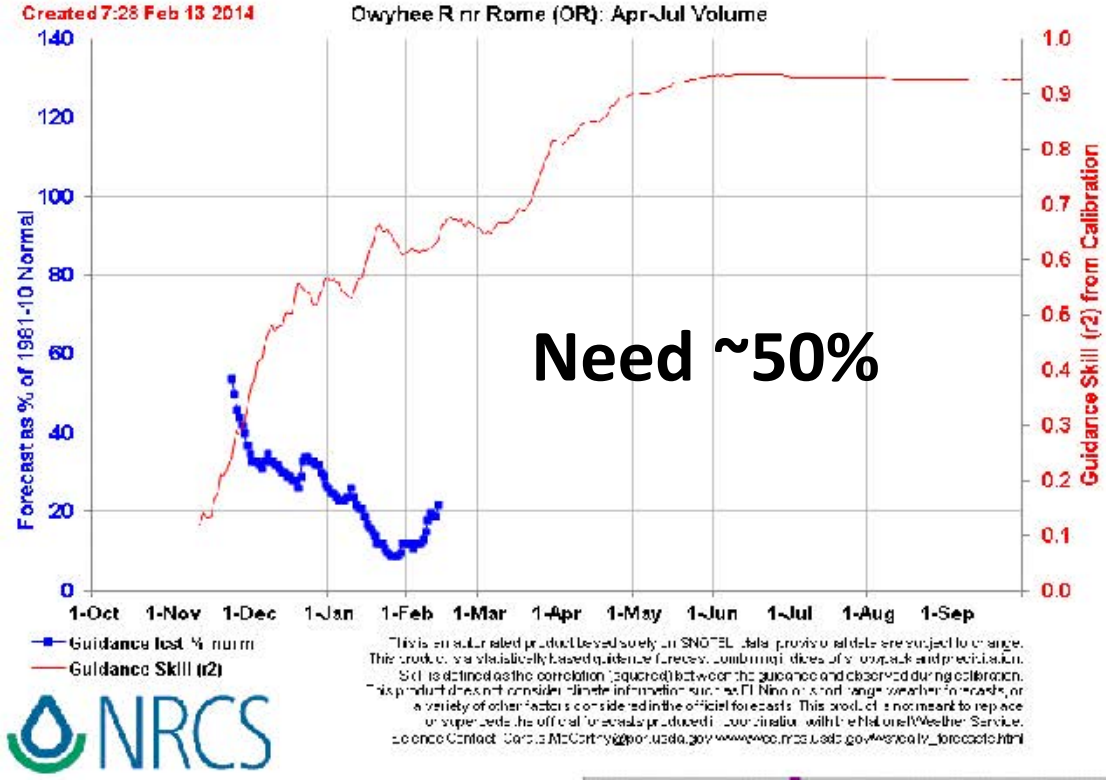


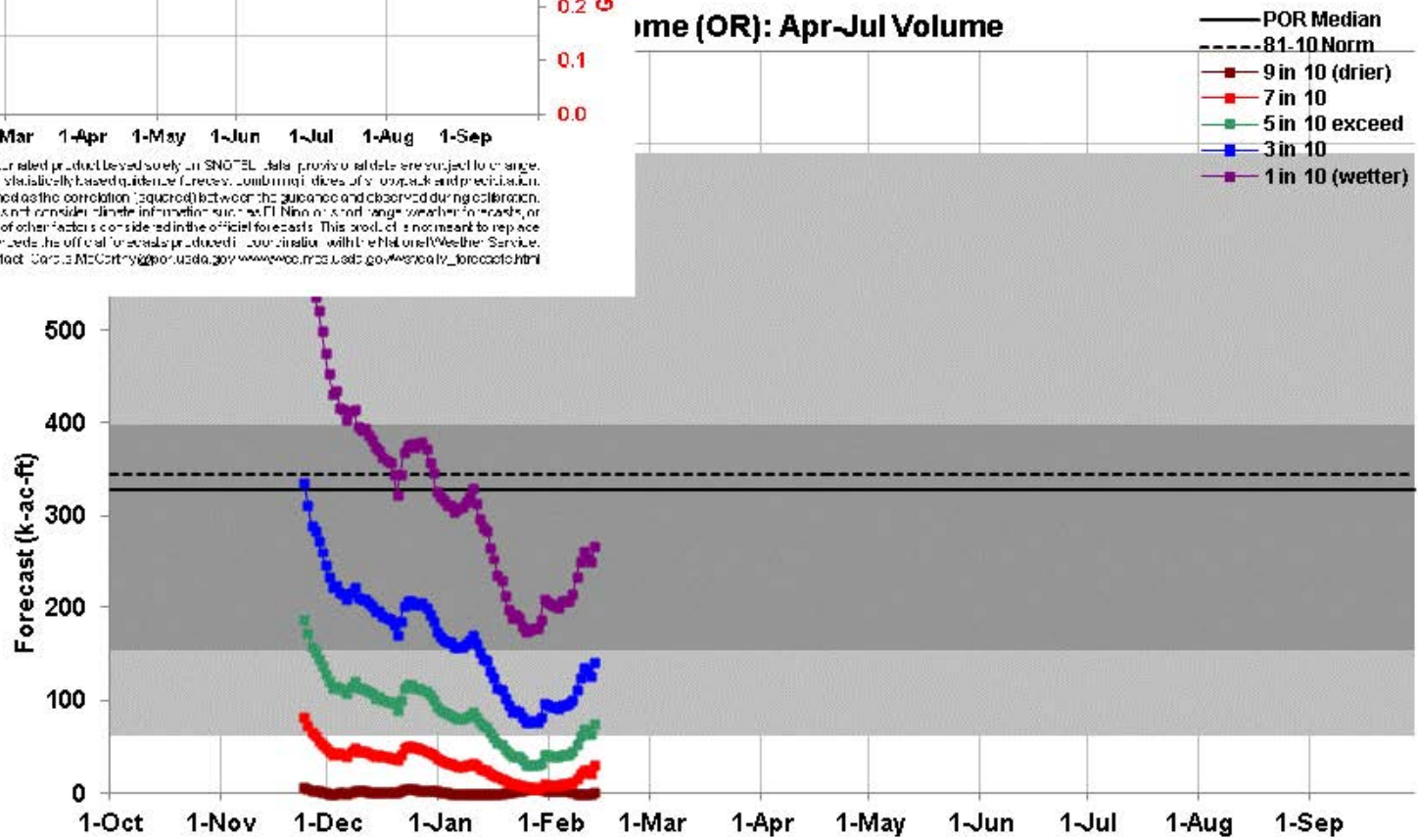
This is an automated product based solely on SNOTEL data, provisional data are subject to change. This product is a statistically based guidance forecast combining indices of snowpack and precipitation. Skill is defined as the correlation (squared) between the guidance and observed during calibration. This product does not consider climate information such as El Nino or short range weather forecasts, or a variety of other factors considered in the official forecasts. This product is not meant to replace or supercede the official forecasts produced in coordination with the National Weather Service. Science Contact: Cara.s.McCarthy@por.usda.gov www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

NRCS


Owyhee Basin 2014 Snowpack Comparison Graph (7 sites)
Based on Provisional SNOTEL data as of Feb 13, 2014
Normal
WY2002
WY2008
WY2013
WY2014
Current as Pct of Normal: 51%
Current as Pct of 2013: 73%
Current as Pct of Peak: 42%
Normal as Pct of Peak: 83%
Pct of Normal Needed to Reach Peak: 349%
Normal Peak Date: Mar 12
NRCS
Natural Resources Conservation Service
2014 is neutral.
2013, 2008 and 2002 were neutral.
Snow Water Equivalent (inches)
0
2
4
6
8
10
12
14
16
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May

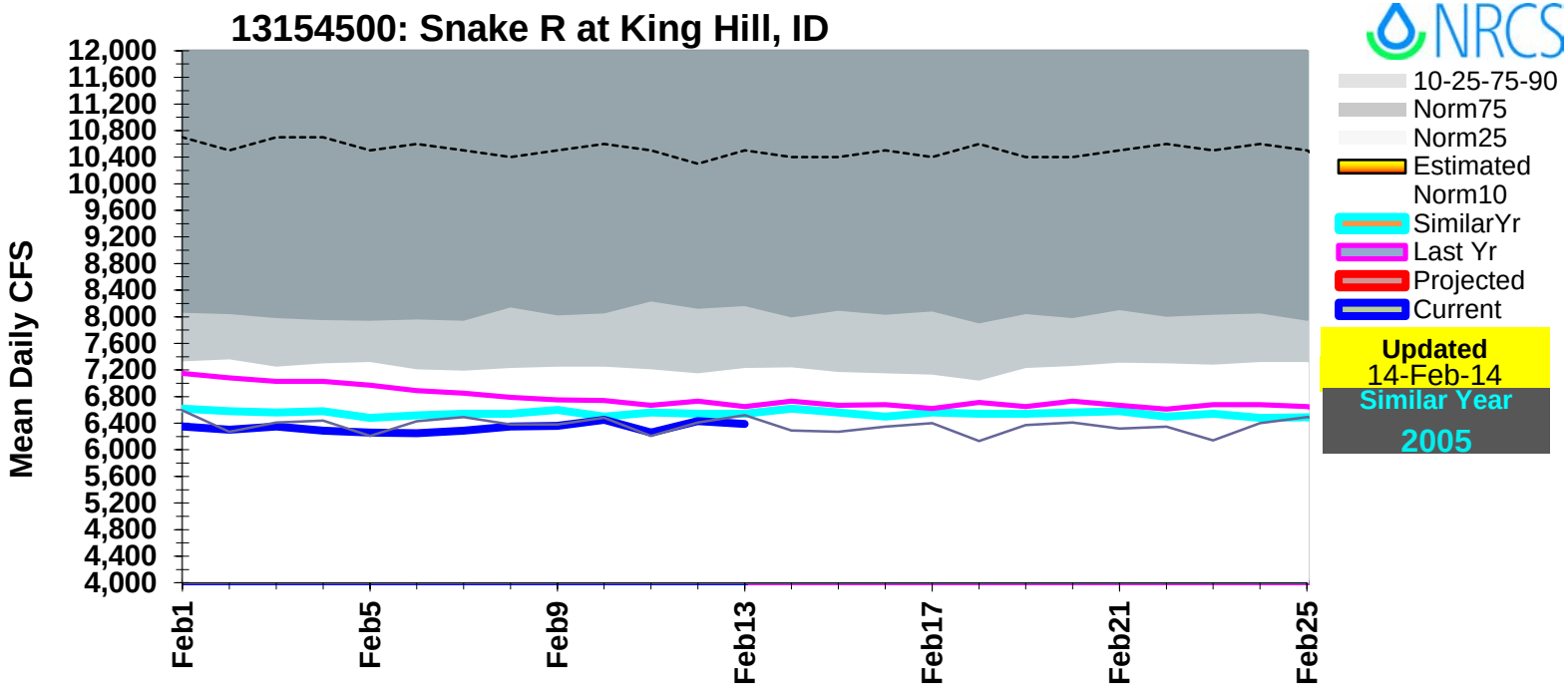

Owyhee Basin 2014 Snow Water with Non-Exceedence Projections (7 sites)
Based on Provisional SNOTEL data as of Feb 13, 2014
Normal
WY2014
Minimum
10%
30%
50%
70%
90%
Maximum
NRCS
Natural Resources Conservation Service
Snow Water Equivalent (Inches)
0
5
10
15
20
25
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep

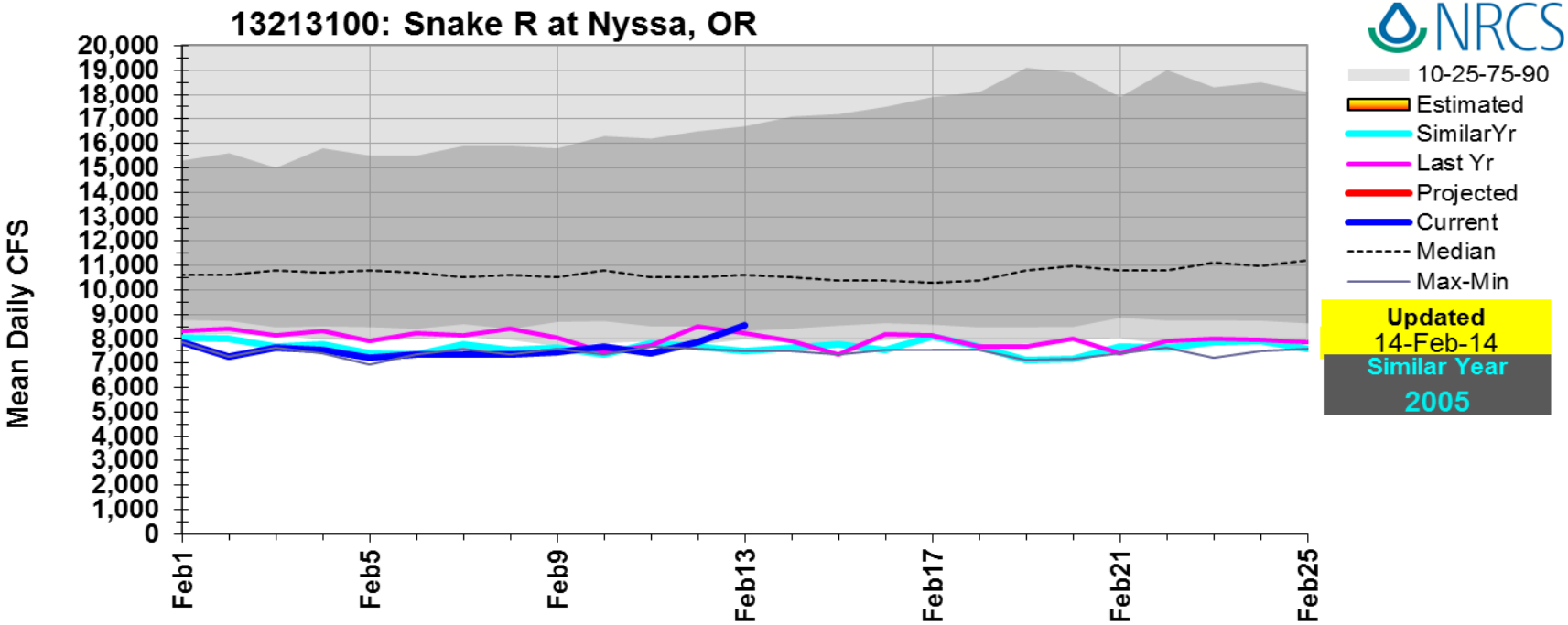


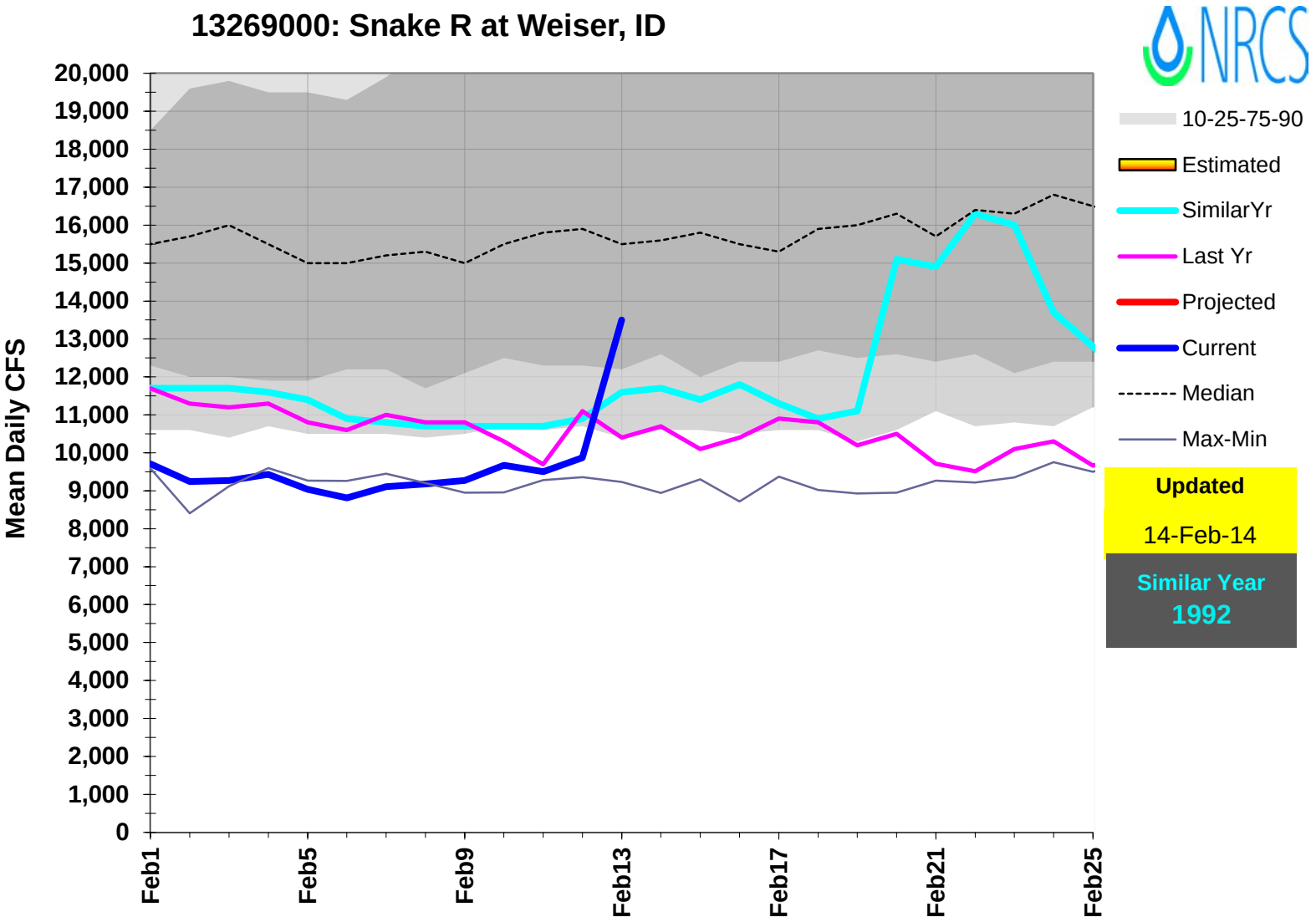


Created 7:28 Feb 13 2014

This is an automated product based solely on SNOTEL data, provisional data are subject to change. This product is a statistically based guidance forecast combining indices of snowpack and precipitation. **Yellow squares** are the official outlooks. **Gray background** is the historical period of record variability. This product does not consider climate information such as El Nino or short range weather forecasts, or


13154500: Snake R at King Hill, ID
Mean Daily CFS
12,000
11,600
11,200
10,800
10,400
10,000
9,600
9,200
8,800
8,400
8,000
7,600
7,200
6,800
6,400
6,000
5,600
5,200
4,800
4,400
4,000
Feb1
Feb5
Feb9
Feb13
Feb17
Feb21
Feb25
NRCS
10-25-75-90
Norm75
Norm25
Estimated
Norm10
SimilarYr
Last Yr
Projected
Current
Updated
14-Feb-14
Similar Year
2005

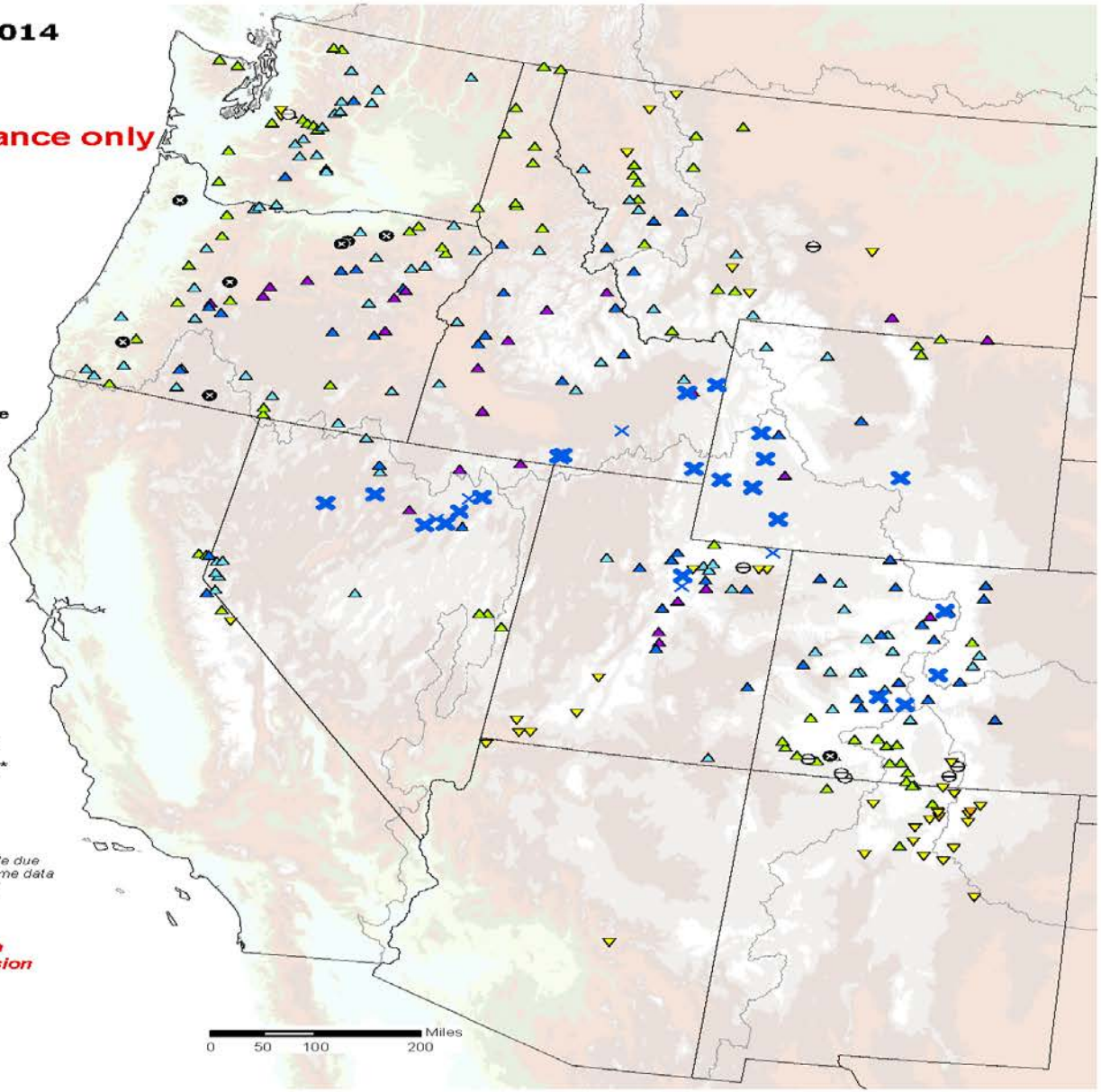

13213100: Snake R at Nyssa, OR
Mean Daily CFS
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Feb1
Feb5
Feb9
Feb13
Feb17
Feb21
Feb25
NRCS
10-25-75-90
Estimated
SimilarYr
Last Yr
Projected
Current
Median
Max-Min
Updated
14-Feb-14
Similar Year
2005


13269000: Snake R at Weiser, ID
Mean Daily CFS
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Feb1
Feb5
Feb9
Feb13
Feb17
Feb21
Feb25
NRCS
10-25-75-90
Estimated
SimilarYr
Last Yr
Projected
Current
Median
Max-Min
Updated
14-Feb-14
Similar Year
1992

Month to Date Guidance Forecast Change as Percent of 1981-2010 Normal

Feb 13, 2014

For guidance only



* *Forecast unavailable due to insufficient realtime data or low forecast skill*

Provisional Data Subject to Revision

USDA NRCS

Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon http://www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html
Based on data from
ftp.wcc.nrcs.usda.gov/data/water/wcs/daily_forecast/SummaryOutput.csv
Science contact: Jim.Marron@por.usda.gov 503 414 3047

This is a completely automated objective product based on SNOTEL data. This product is not meant to replace or supersede the official forecasts produced in coordination with the National Weather Service.

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

January 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.)*
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 & Shortages Based on the 5 Exeedance Forecasts

BASIN	*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 (+273)	108 (+378)	160 (+430)	252 (+522)	357 (+627)

Adequate Supply − Reservoir Storage = Streamflow Needed

Water Supply Outlook Key: Shortages | Some Shortages | Marginal Supplies | Sufficient Supplies | Surplus

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

BASIN	*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)*
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 (+282)	10 (+290)	62 (+342)	125 (+405)	217 (+497)

Adequate Supply − Reservoir Storage = Streamflow Needed

Water Supply Outlook Key:	Shortages	Some Shortages	Marginal Supplies	Sufficient Supplies	Surplus

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

BASIN	*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)*
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 (+282)	10 (+290)	62 (+342)	125 (+405)	217 (+497)

Adequate Supply − Reservoir Storage = Streamflow Needed

Water Supply Outlook Key:	Shortages	Some Shortages	Marginal Supplies	Sufficient Supplies	Surplus

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) February 1, 2014

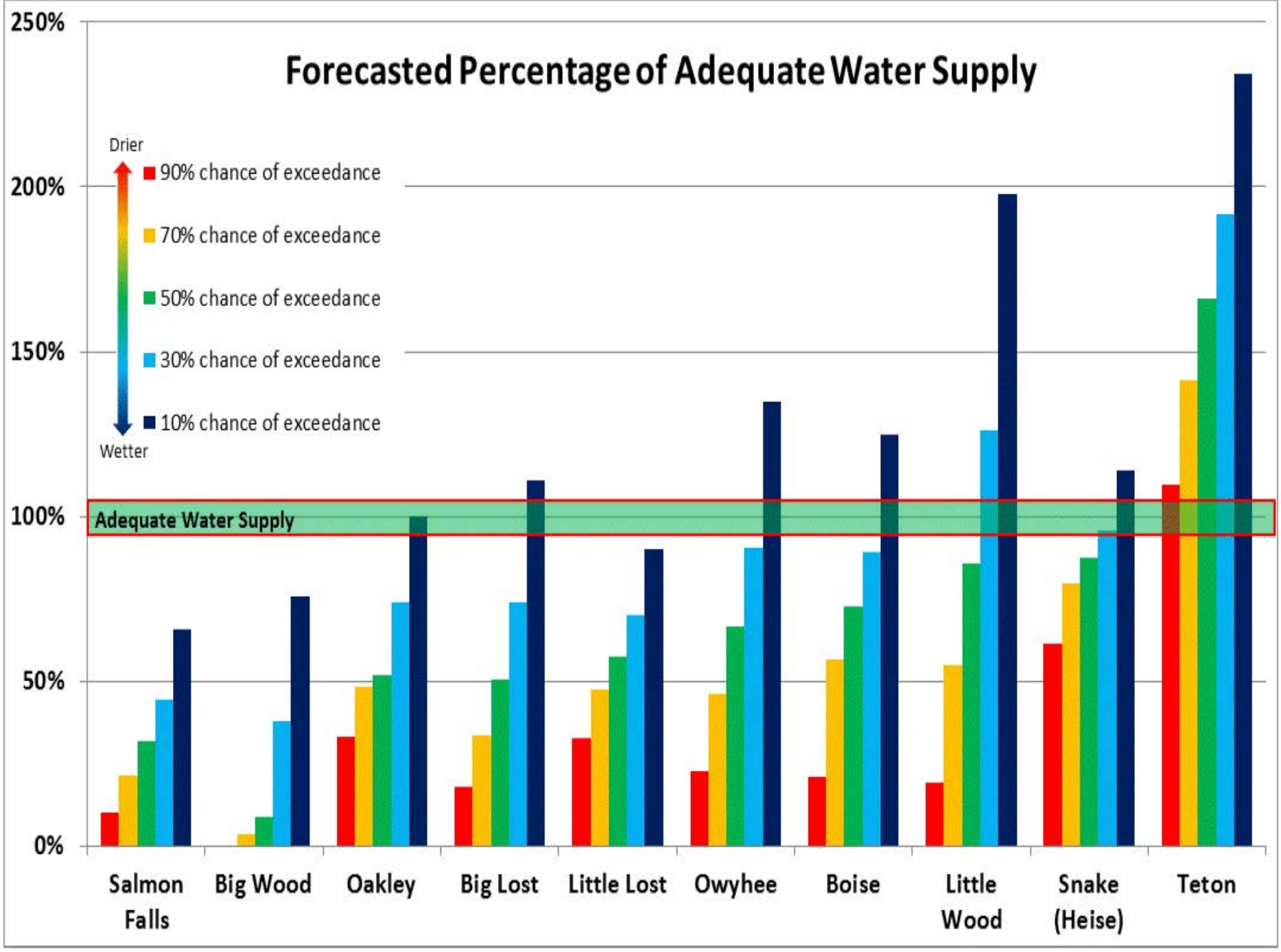
The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled 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.

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.

BASIN or REGION	***SWSI Value***	***Most Recent Year With Similar SWSI Value***	***Agricultural Water Supply Shortage May Occur When SWSI is 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
Boise	**-3.3**	**1991/2001**	**-1.5**
Big Wood	**-3.7**	**1992/2013**	**0.5**
Little Wood	**-3.3**	**2001/2002**	**-1.5**
Big Lost	**-2.3**	**2003**	**0.5**
Little Lost	**-2.1**	**2007**	**1.2**
Teton	-1.6	2002/2013	-3.9
Henrys Fork	-1.3	2007	-3.4
Snake (Heise)	**-1.8**	**2007/2013**	**-1.5**
Oakley	**-2.5**	**2002/2004**	**0.2**
Salmon Falls	**-3.8**	**1992/2001**	**-1.0**
Bruneau	**-3.3**	**2001/2012**	**NA**
Owyhee	**-3.8**	**1992/2003**	**-3.4**
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      |        Near Normal        | Above    | Much  |
|Below   | Normal     |        Water Supply       | Normal   | Above |
```


Forecasted Percentage of Adequate Water Supply
250%
200%
150%
100%
50%
0%
Drier
Wetter
90% chance of exceedance
70% chance of exceedance
50% chance of exceedance
30% chance of exceedance
10% chance of exceedance
Adequate Water Supply
Salmon Falls
Big Wood
Oakley
Big Lost
Little Lost
Owyhee
Boise
Little Wood
Snake (Heise)
Teton

Bogus Basin
SNOTEL
6,340 feet
~7 pm
Feb 12,
2014

Think Snow!!

Questions – Comments - Corrections

Not Rain – this week