



March Precipitation % of Normal

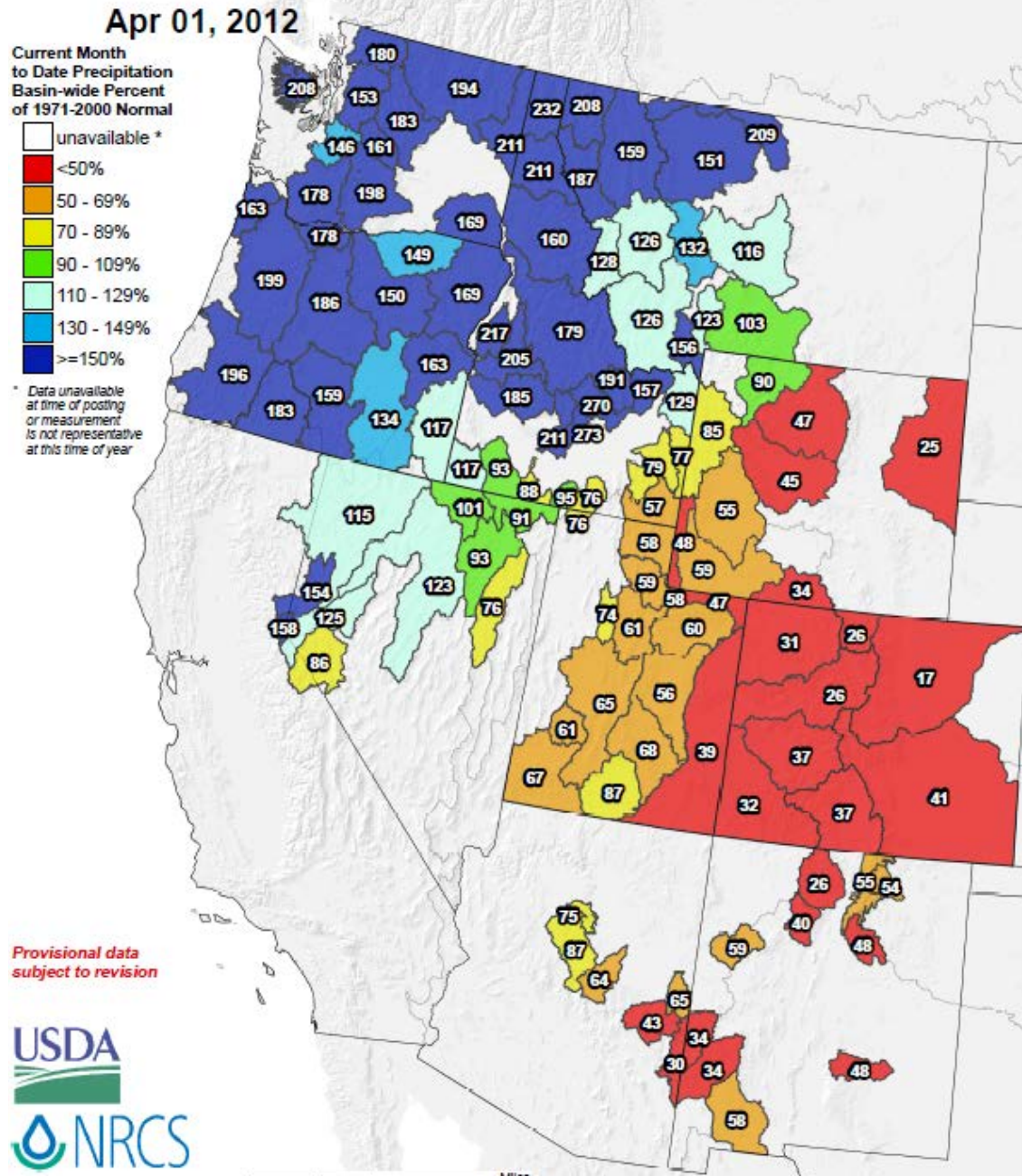
Idaho Water Supply Committee

April 12, 2012

Jeff Anderson
NRCS Snow Survey



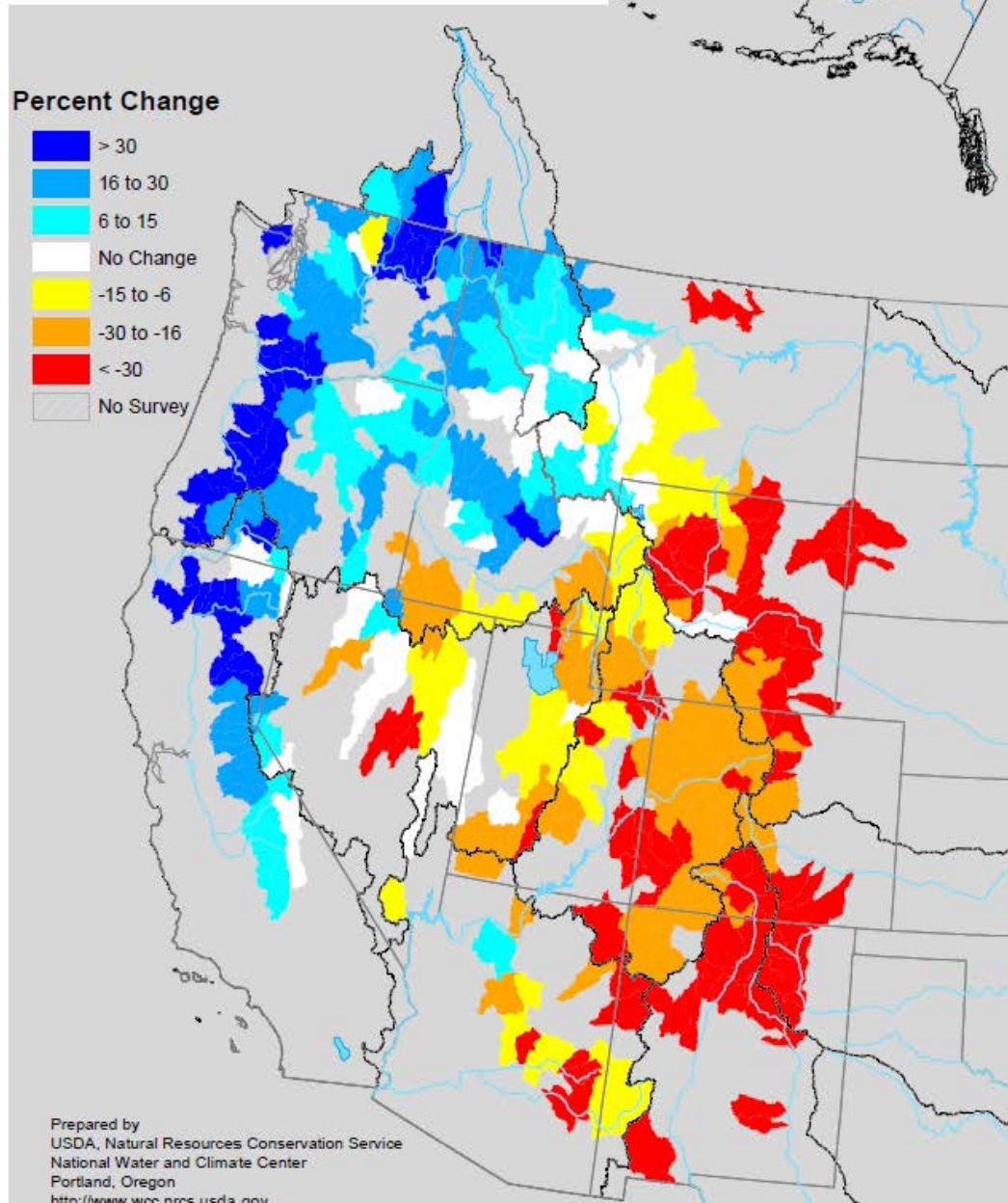
*Provisional data
subject to revision*





Mountain Snowpack Change between March 1 and April 1

Percent Change

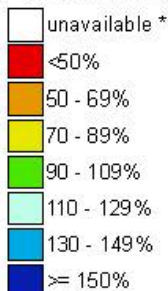


Prepared by
USDA, Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

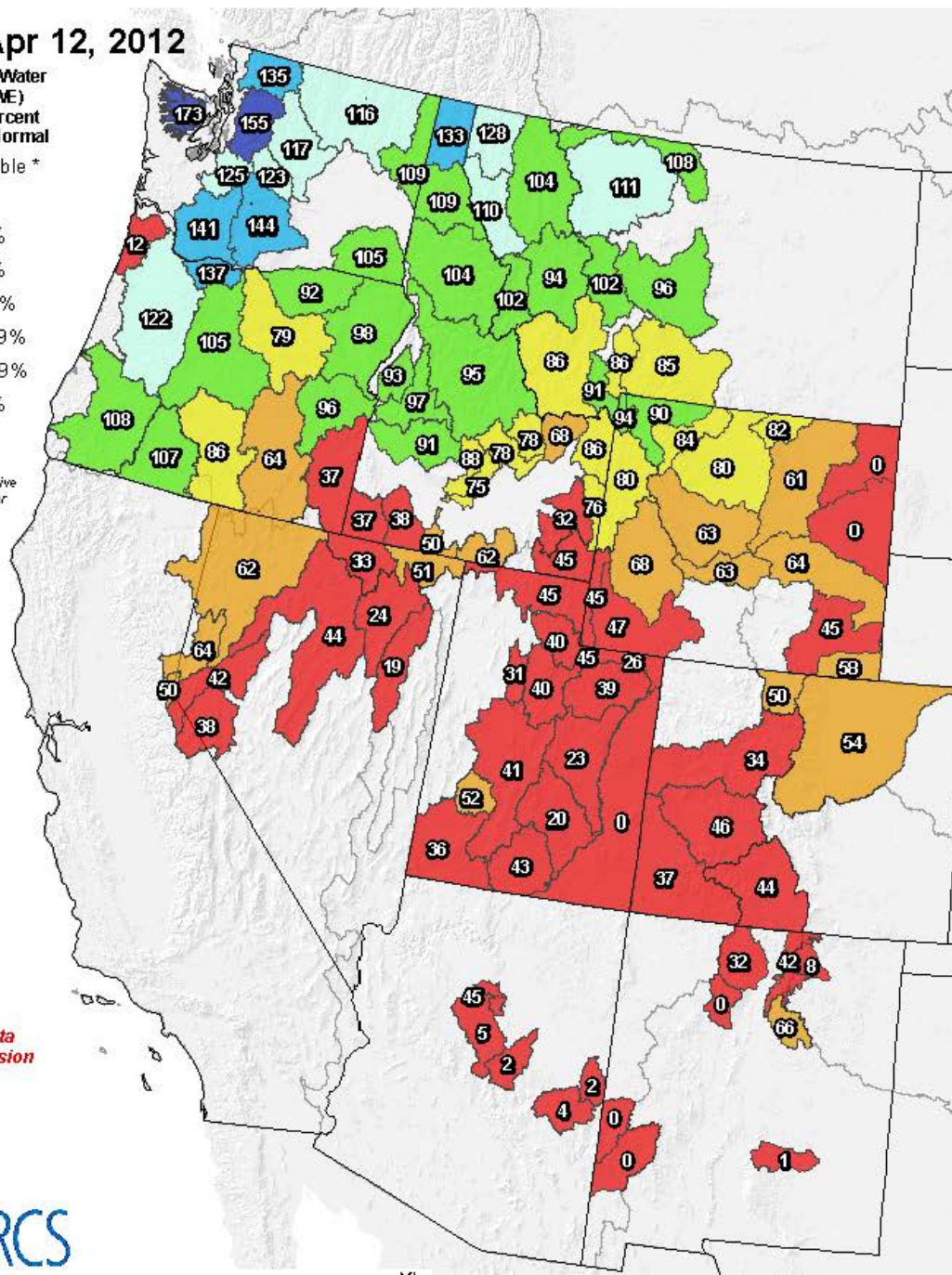
Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Apr 12, 2012

Current Snow Water
Equivalent (SWE)
Basin-wide Percent
of 1971-2000 Normal

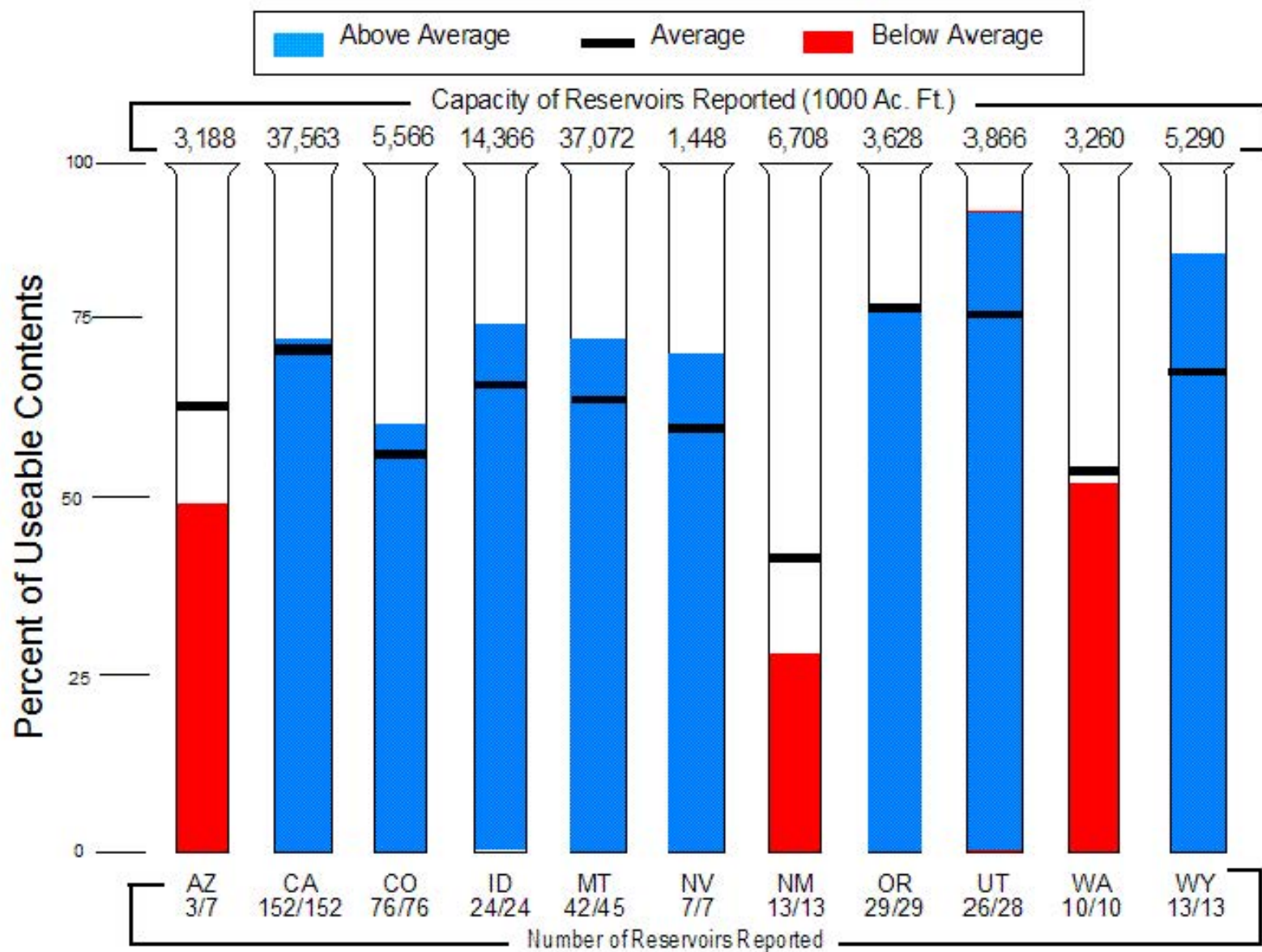


* Data unavailable
at time of posting
or measurement
is not representative
at this time of year

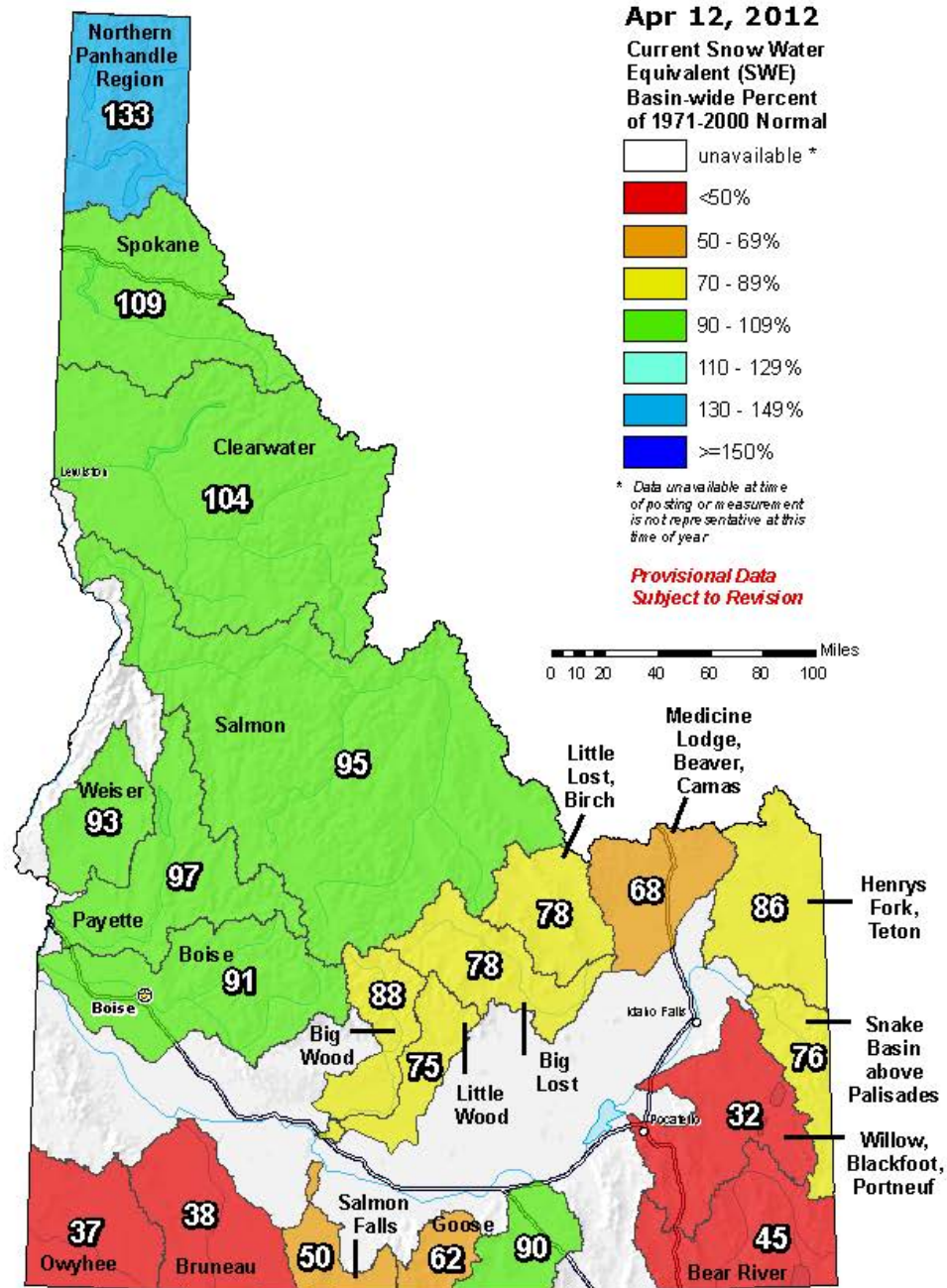


Provisional data
subject to revision

Reservoir Storage as of April 1, 2012



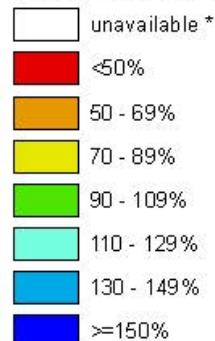
Idaho SNOTEL Current Snow Water Equivalent (SWE) % of Normal



Idaho SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

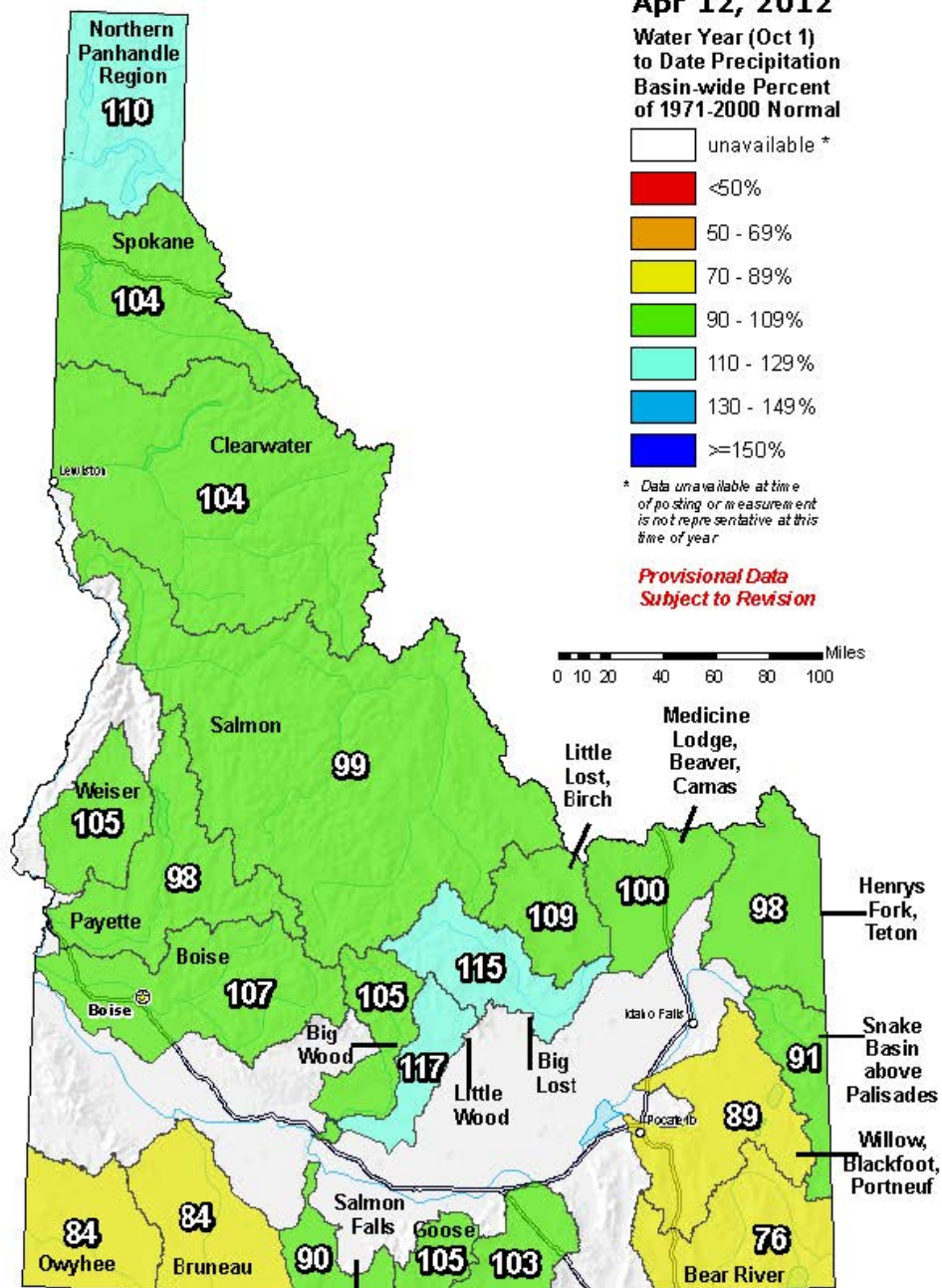
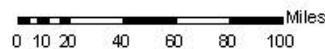
Apr 12, 2012

**Water Year (Oct 1)
to Date Precipitation
Basin-wide Percent
of 1971-2000 Normal**



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

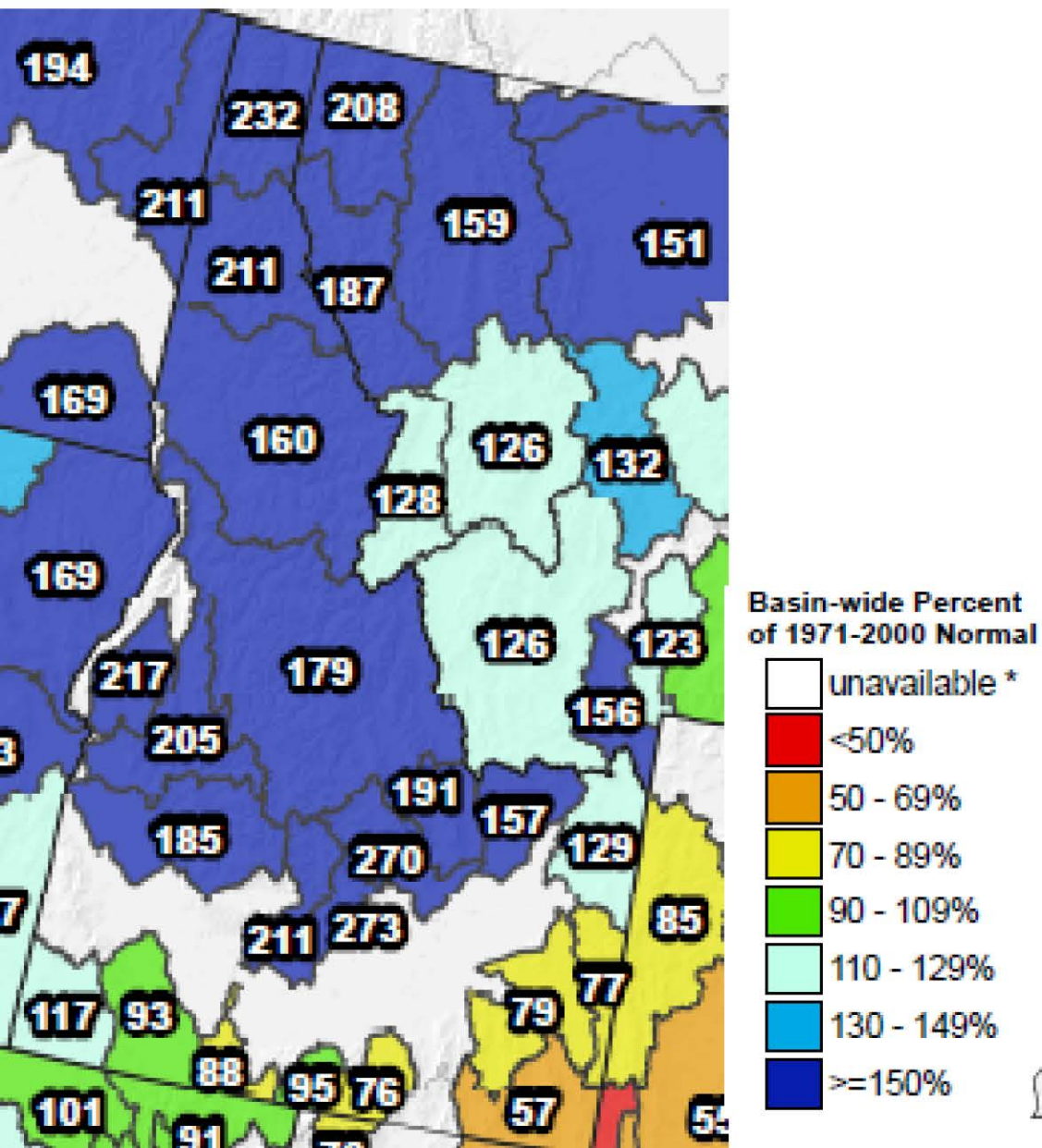
**Provisional Data
Subject to Revision**





SNOTEL Month to Date Precipitation % of Normal

March 2012

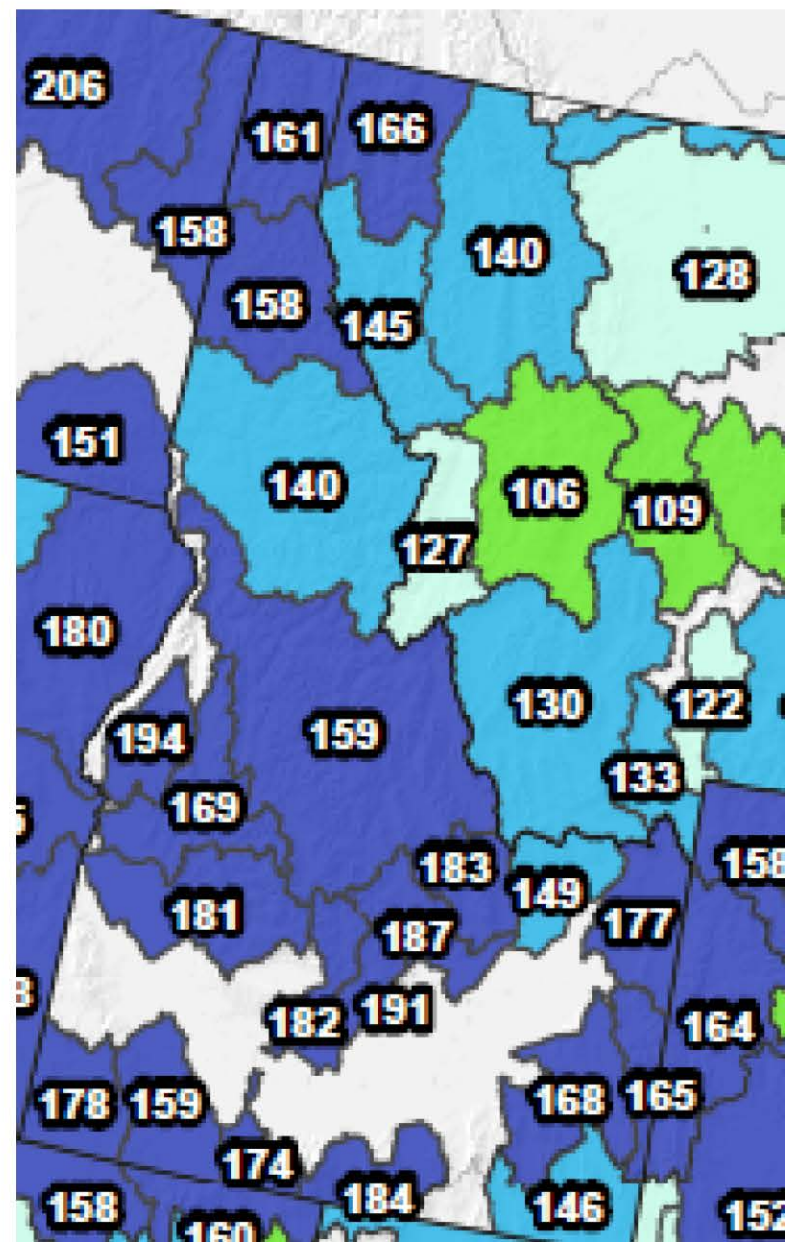
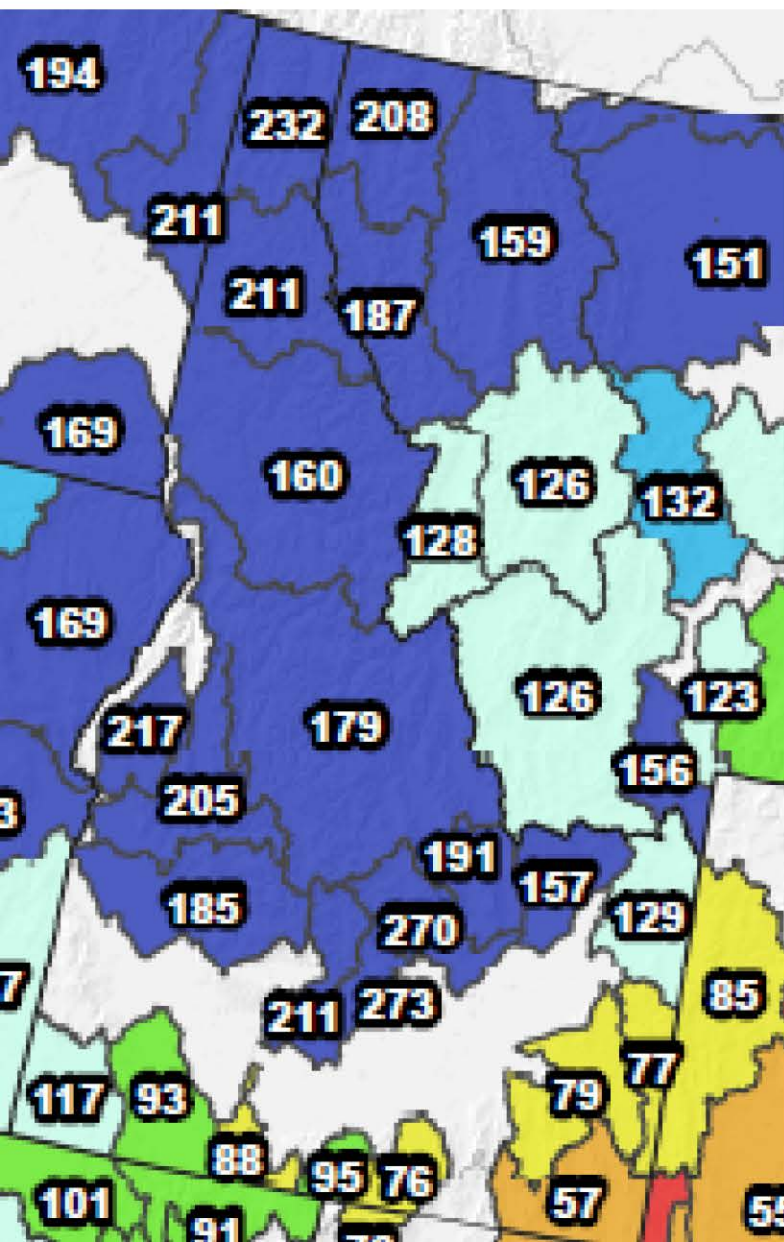




SNOTEL Month to Date Precipitation % of Normal

March 2012

March 2011



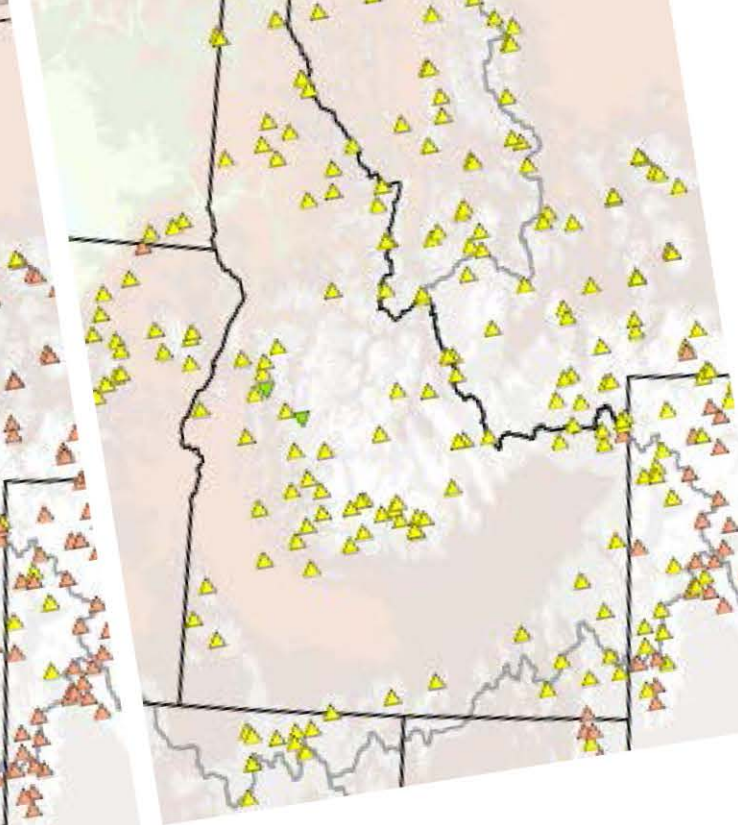
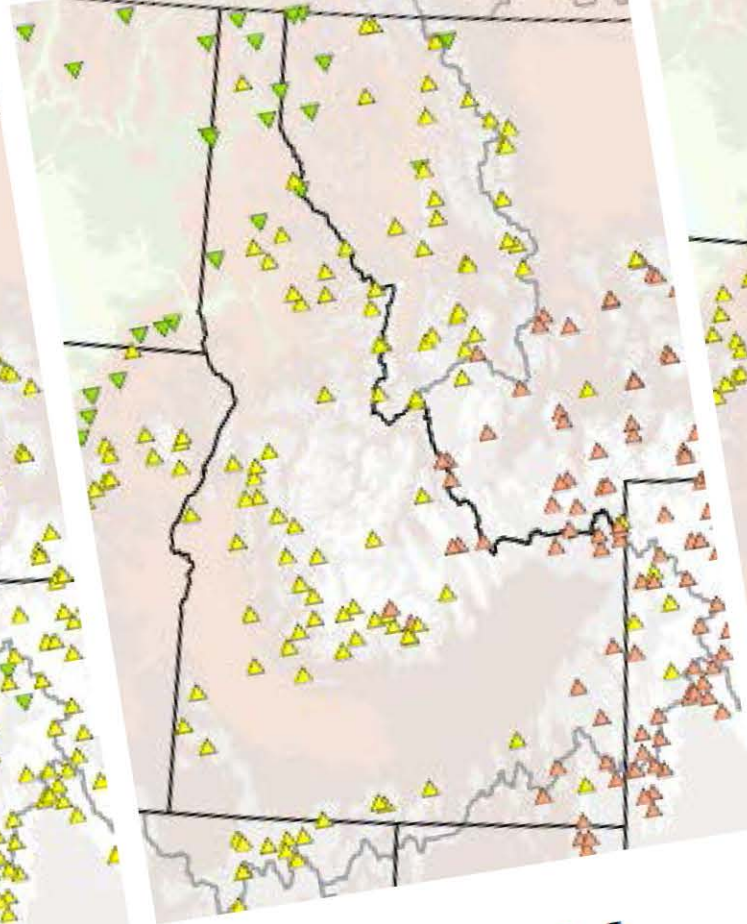
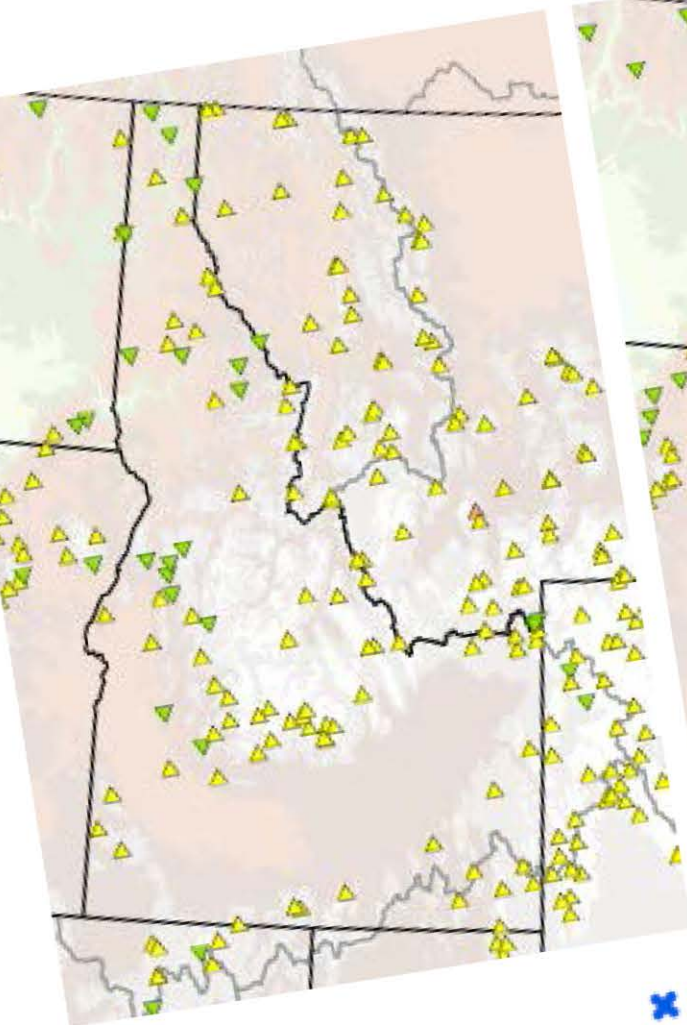


SNOTEL 14-Day Average Temperature Anomalies

March 1-14

March 15-29

March 30-April 12

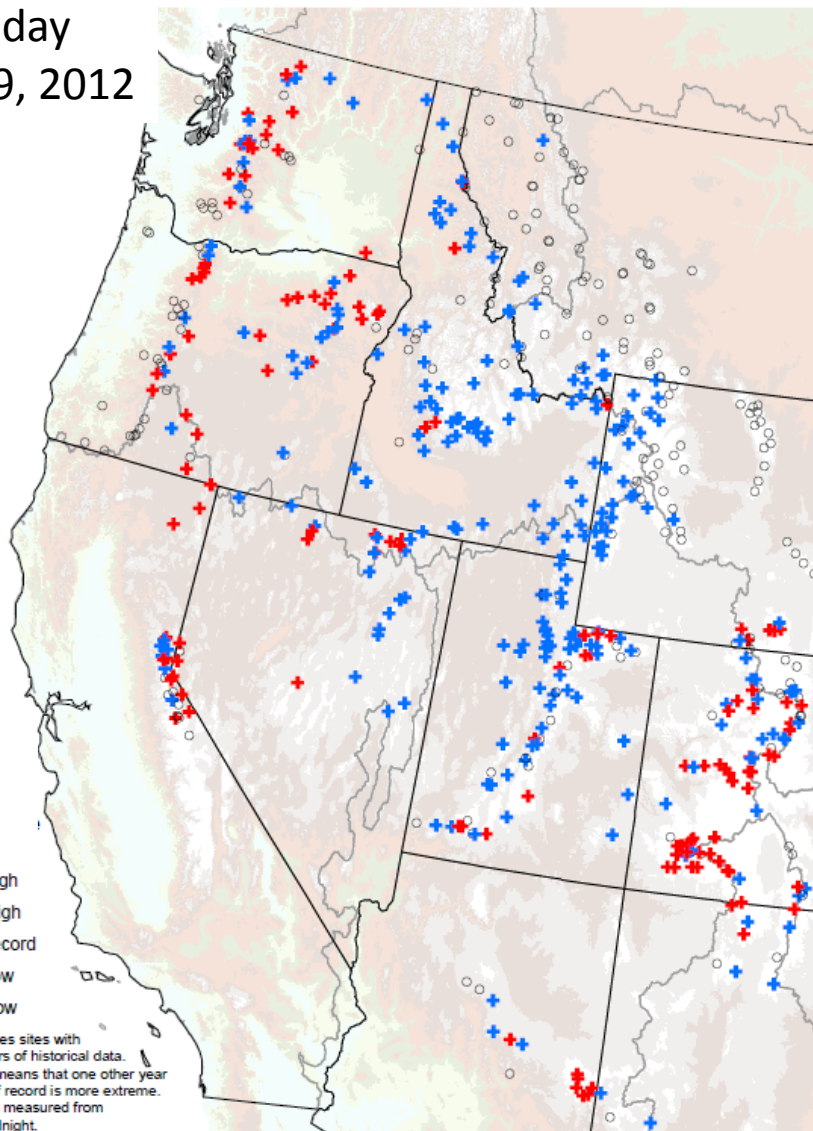


- ✕ < -20 cold
- ▼ -20 -- -15
- ▼ -15 -- -10
- ▼ -10 -- -5

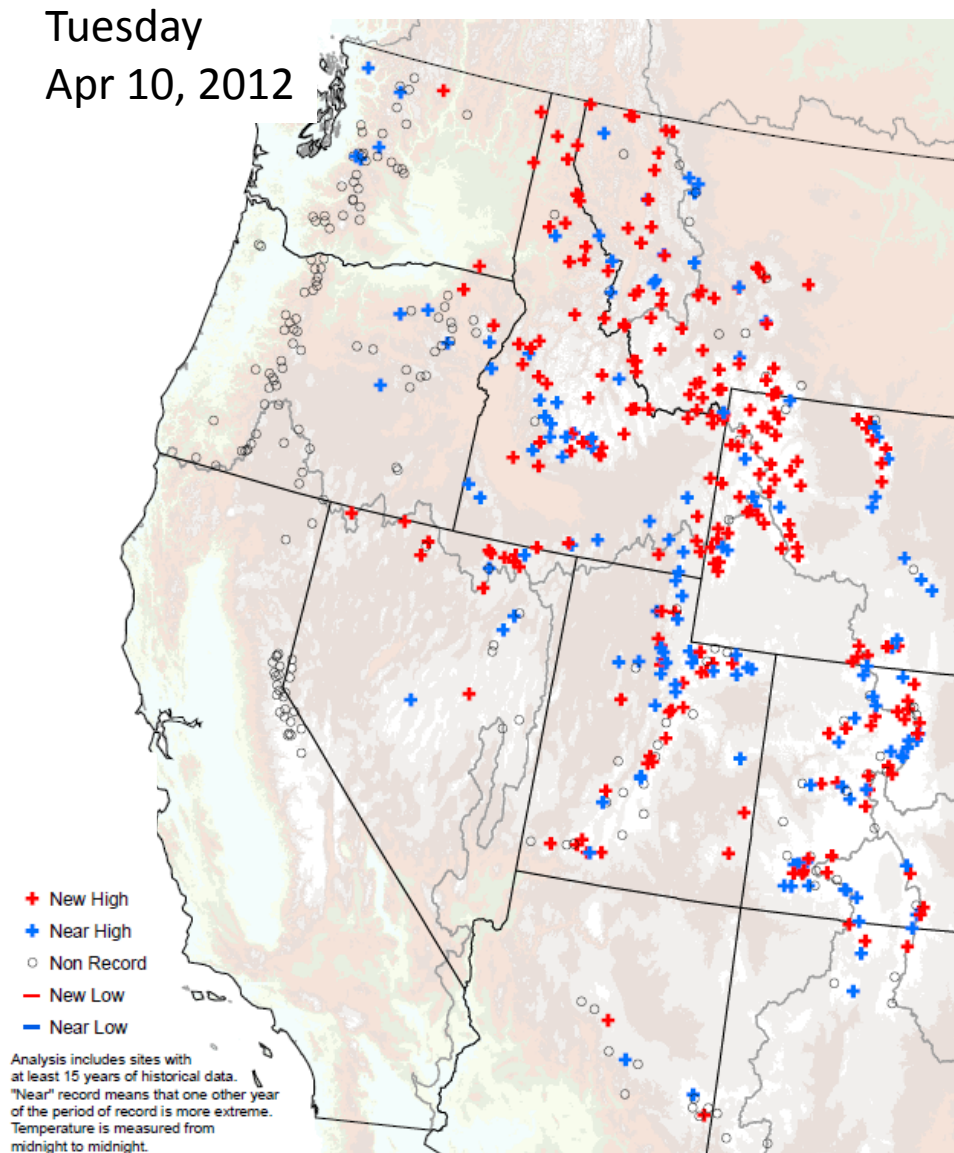
- ▲ 0 - 5
- ▲ 5 - 10
- ▲ 10 - 15
- ▲ 15 - 20
- ✚ > 20 warm

SNOTEL Maximum Temperature Records

Monday
Apr 9, 2012



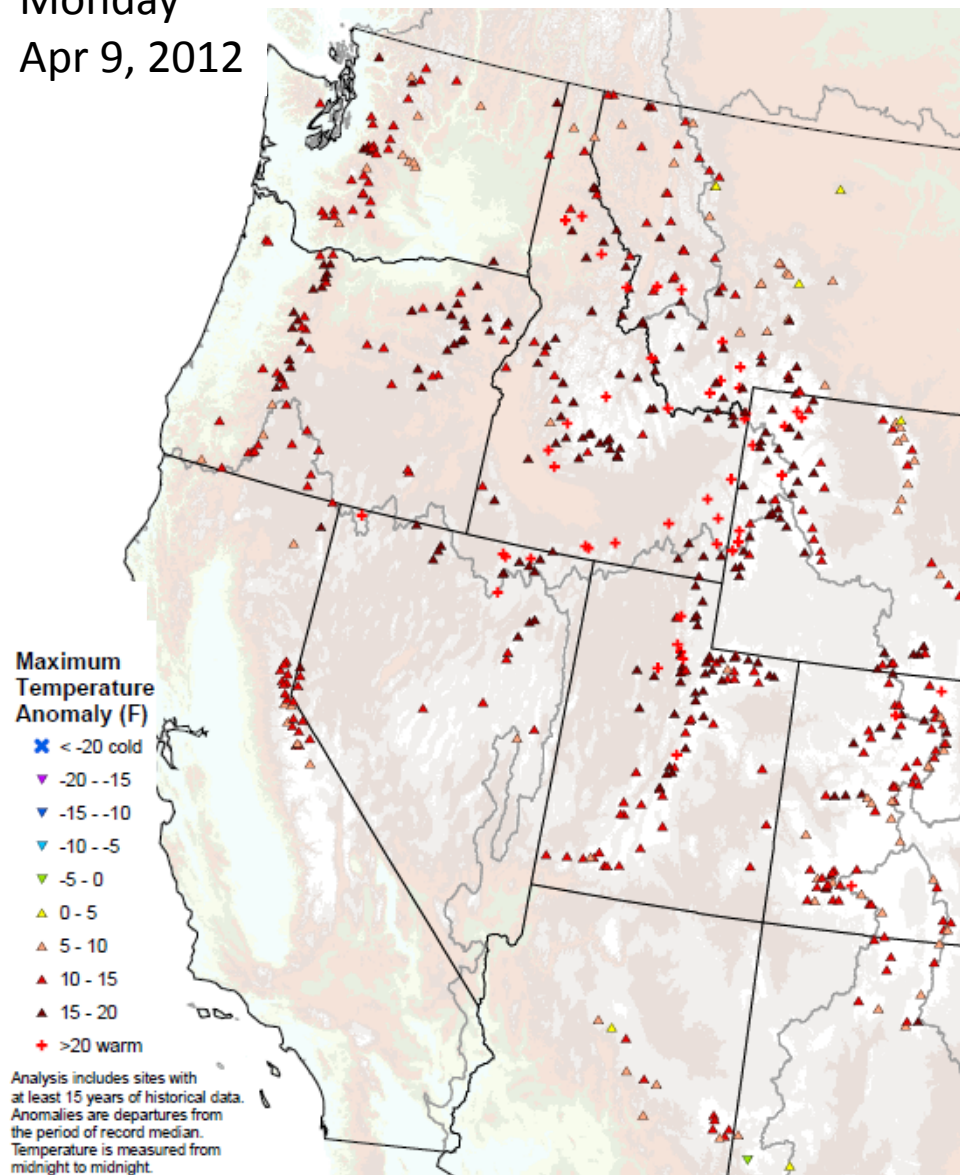
Tuesday
Apr 10, 2012



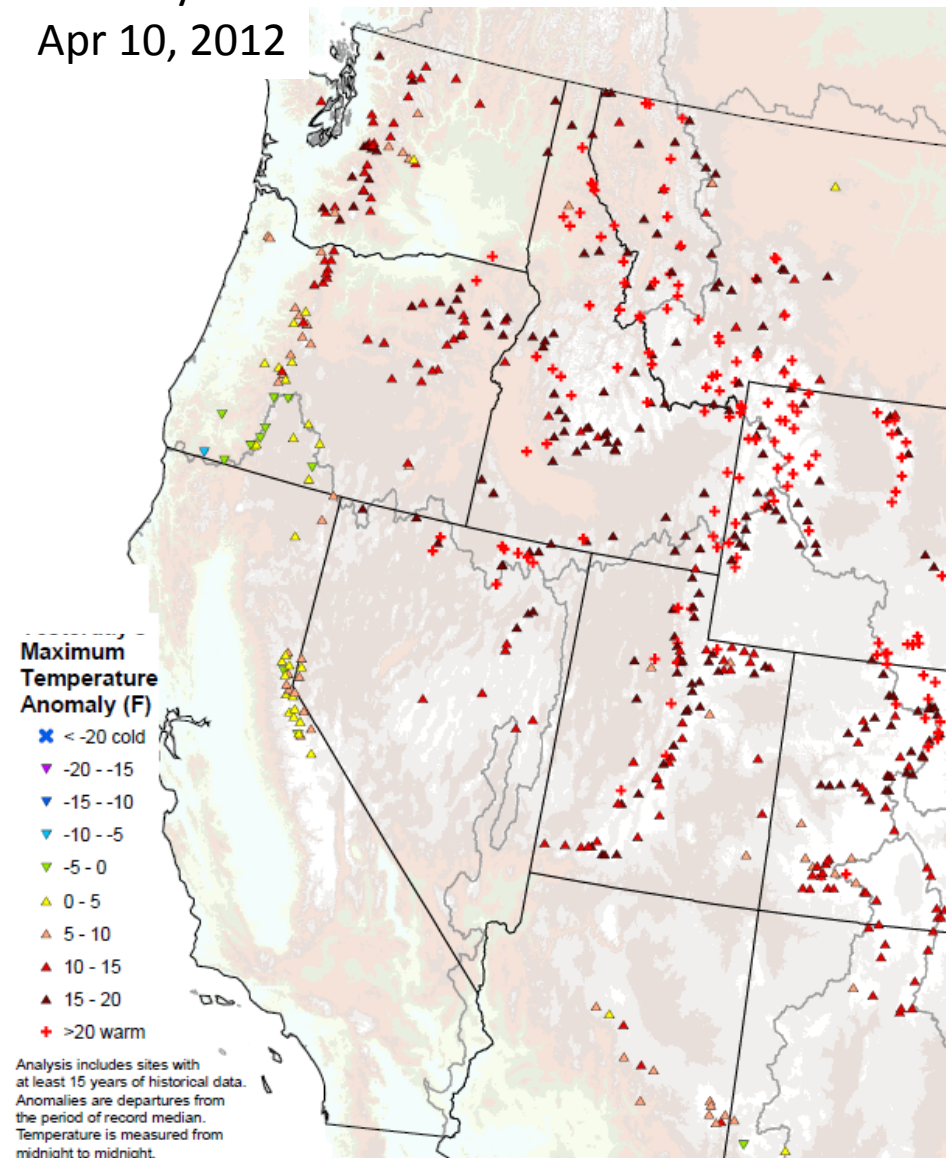


SNOTEL Maximum Temperature Anomaly

Monday
Apr 9, 2012



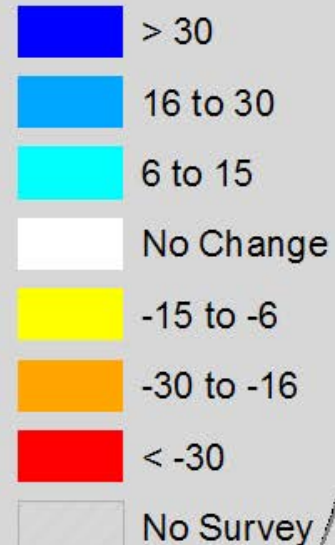
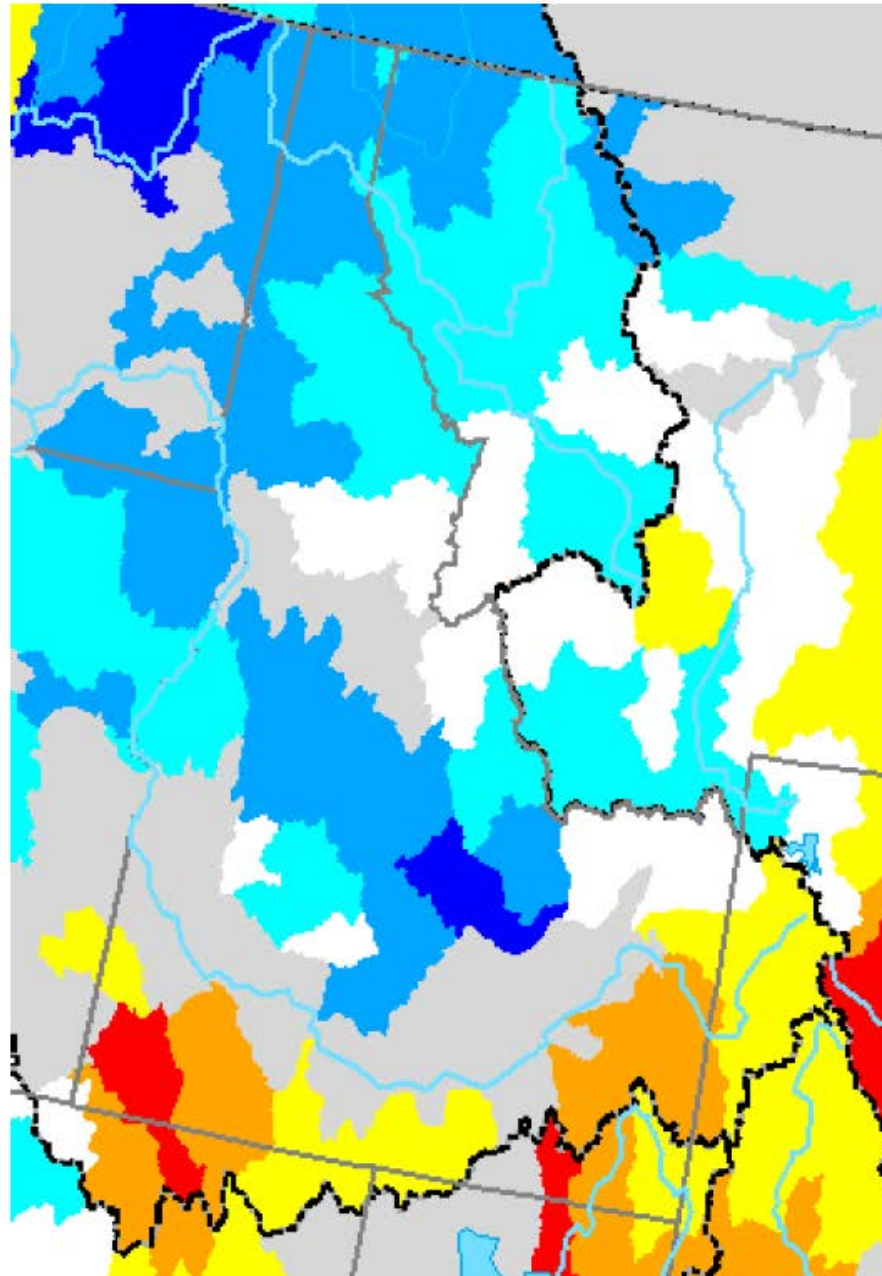
Tuesday
Apr 10, 2012



Mountain Snowpack Change between March 1 and April 1, 2012

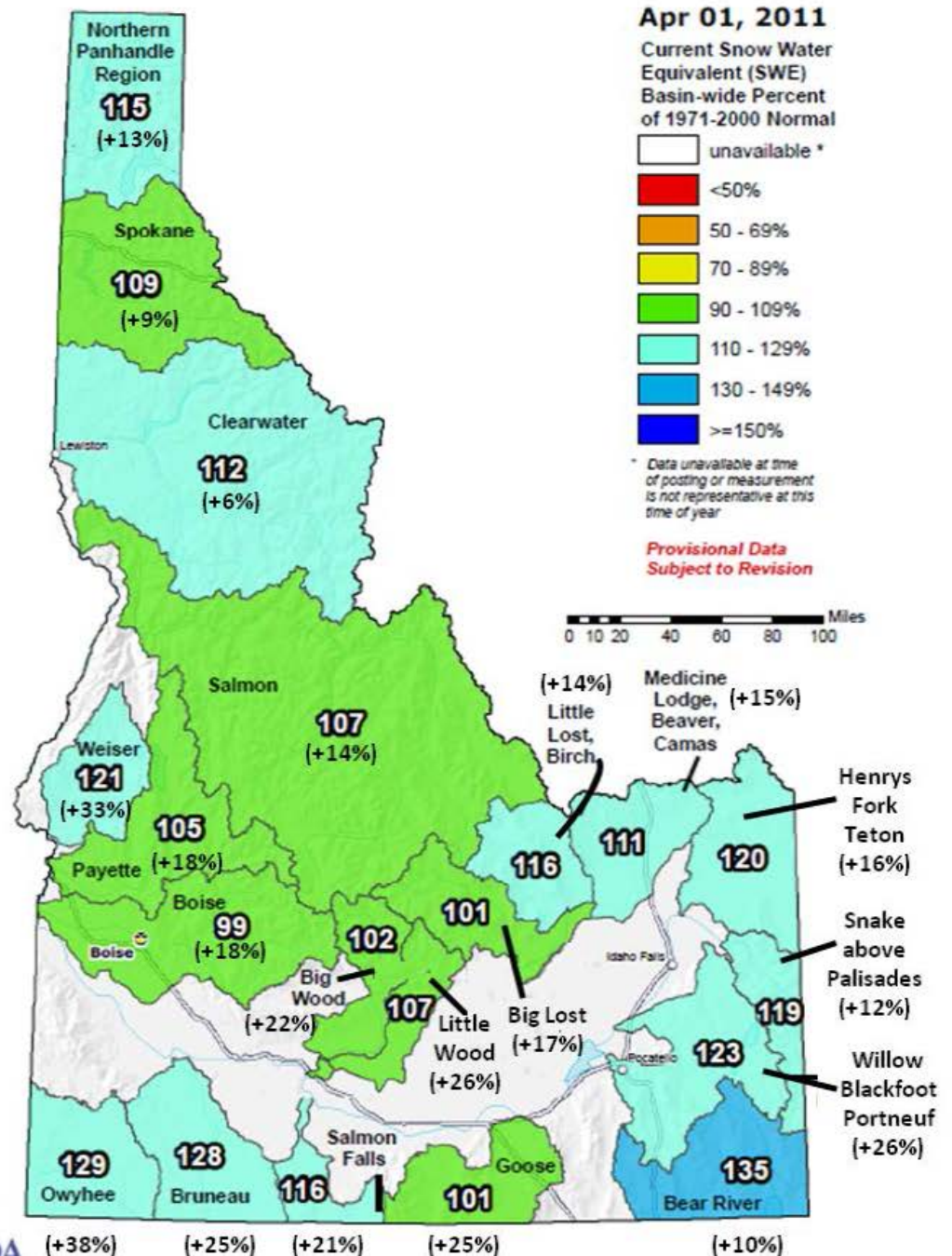
Big Lost	+34%
Priest	+29%
Payette	+23%
Little Wood	+22%
Salmon	+19%
Big Wood	+16%
Little Lost	+16%
Weiser	+10%
Boise	+ 6%
Henry's Fk	+ 3%

Teton	- 2%
Snake above Pal	- 6%
Goose/Trapper	-12%
Salmon Falls	-15%
Bear	-15%
Owyhee	-20%
Bruneau	-21%
Blackfoot	-22%



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

Compare to
March 1 to April 1, 2011
SWE % increased statewide
from 6-38%

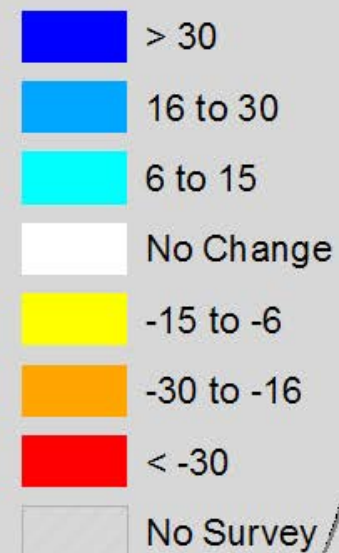
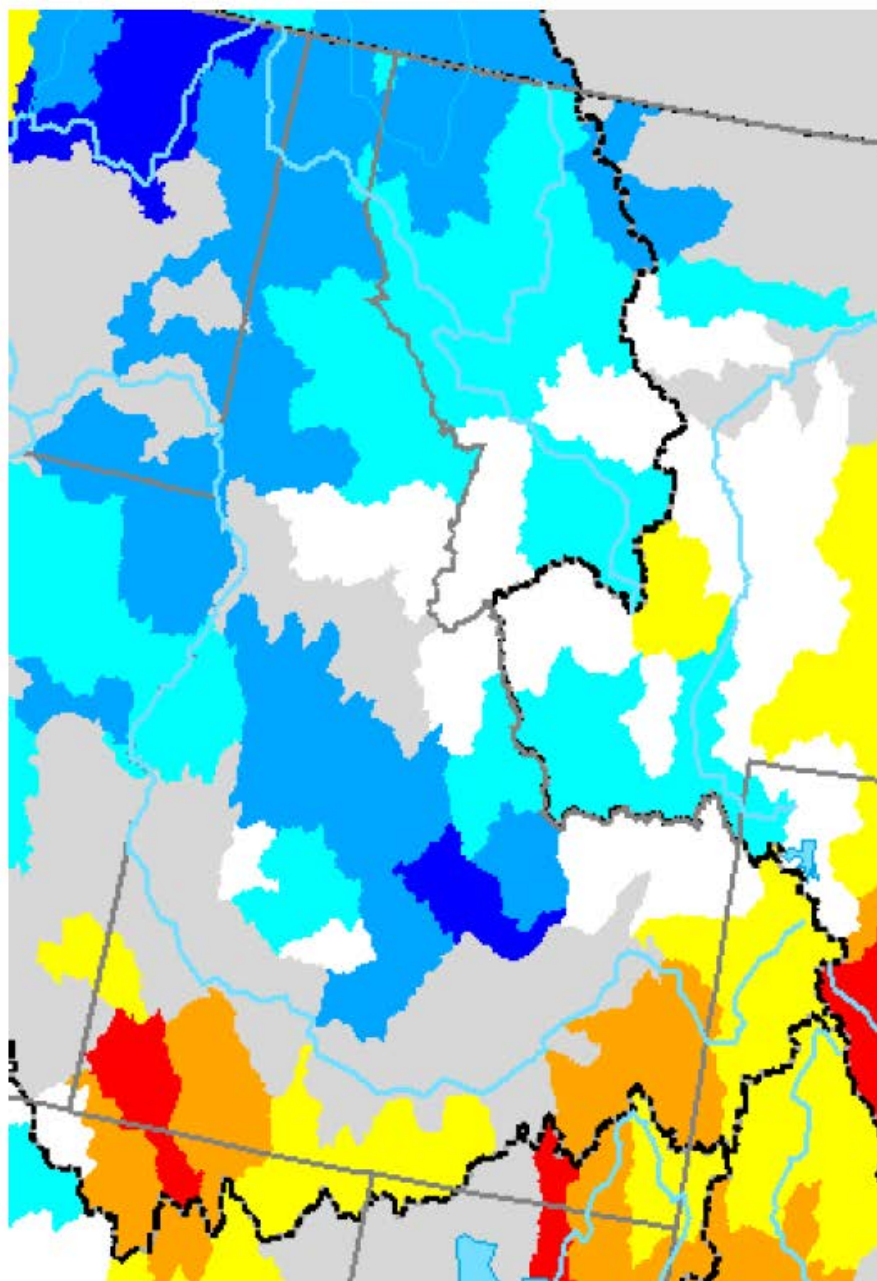


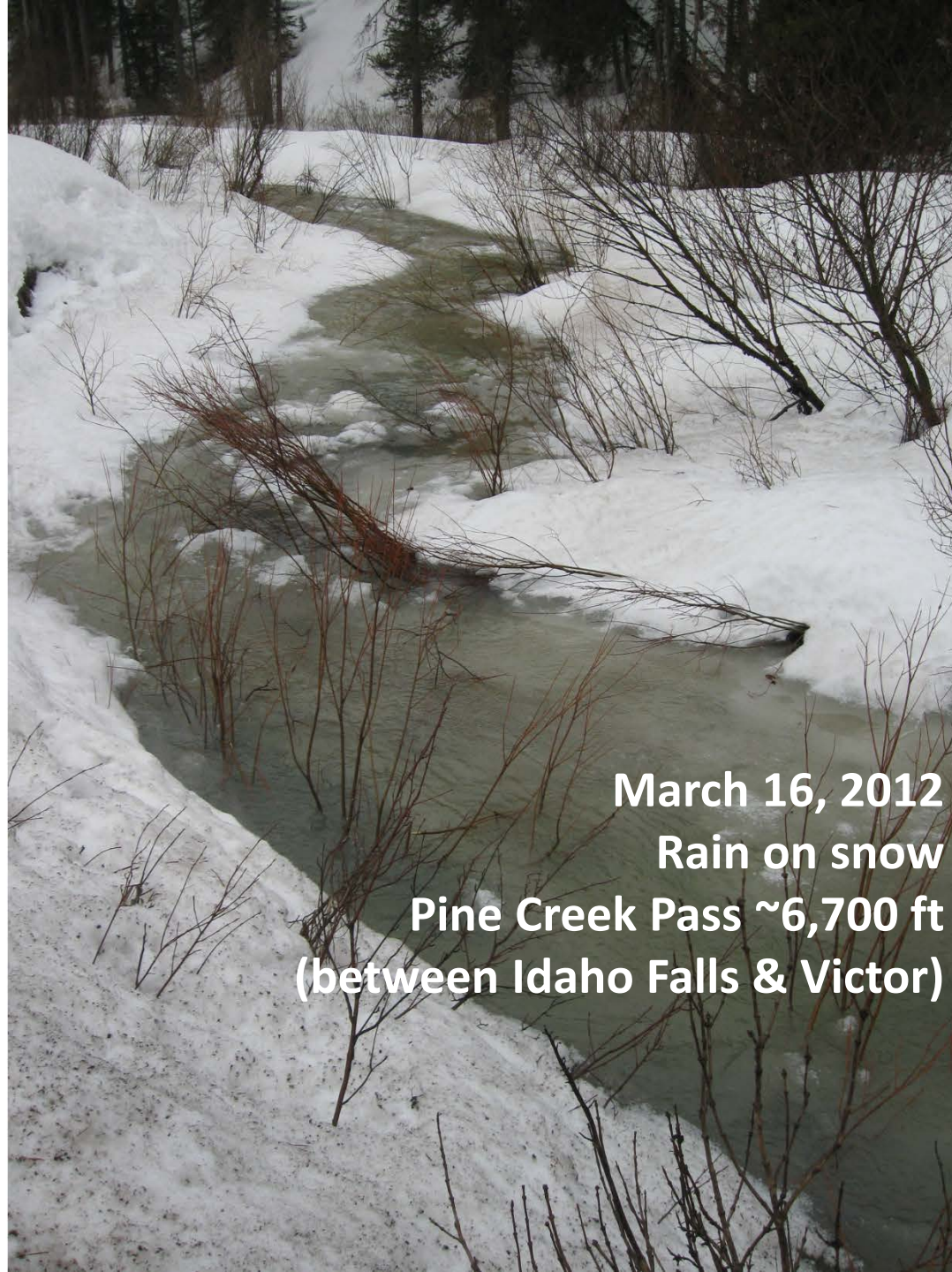


Mountain Snowpack Change between March 1 and April 1, 2012

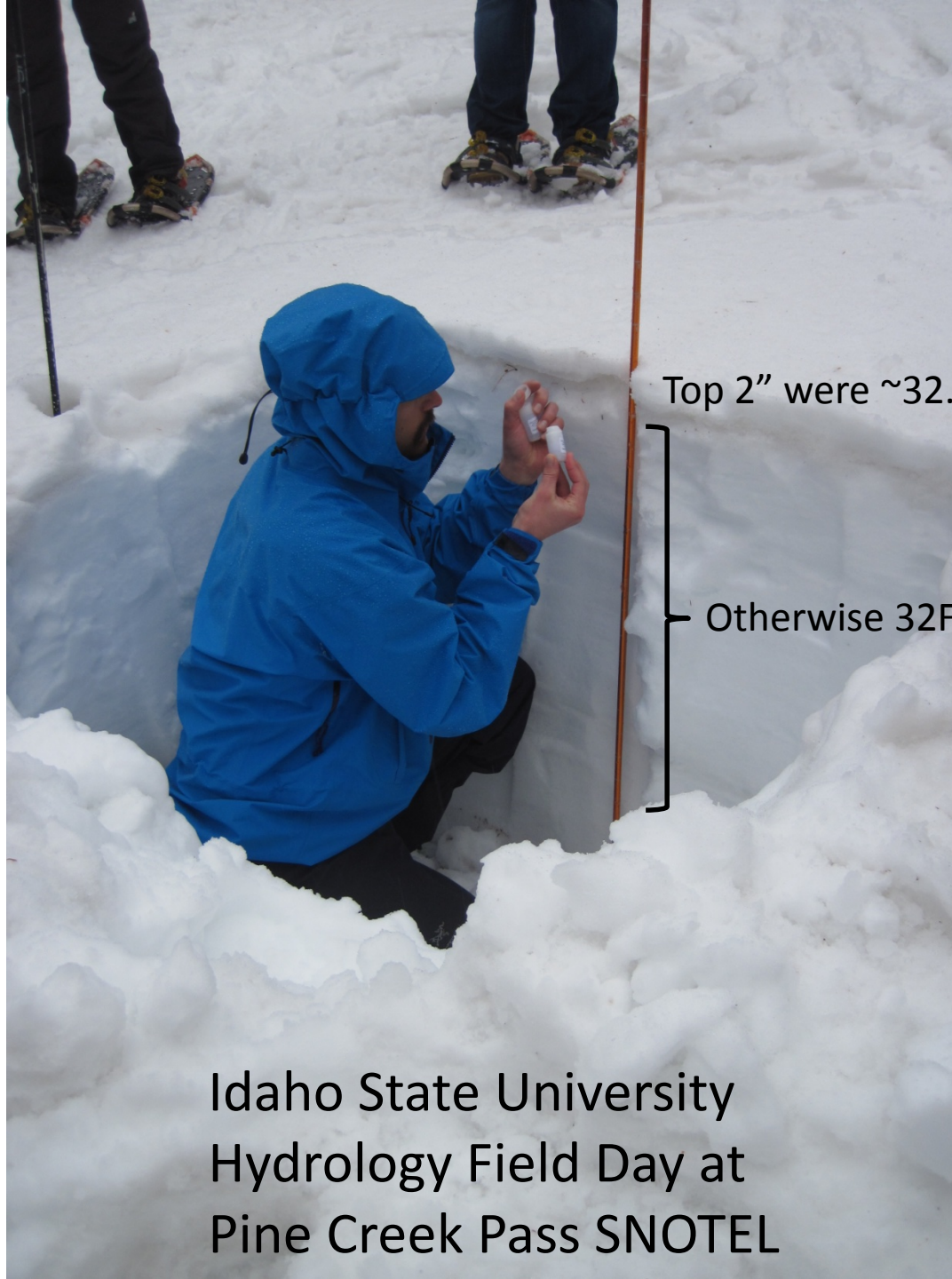
Big Lost	+34%
Priest	+29%
Payette	+23%
Little Wood	+22%
Salmon	+19%
Big Wood	+16%
Little Lost	+16%
Weiser	+10%
Boise	+ 6%
Henry's Fk	+ 3%

Teton	- 2%
Snake above Pal	- 6%
Goose/Trapper	-12%
Salmon Falls	-15%
Bear	-15%
Owyhee	-20%
Bruneau	-21%
Blackfoot	-22%





March 16, 2012
Rain on snow
Pine Creek Pass ~6,700 ft
(between Idaho Falls & Victor)

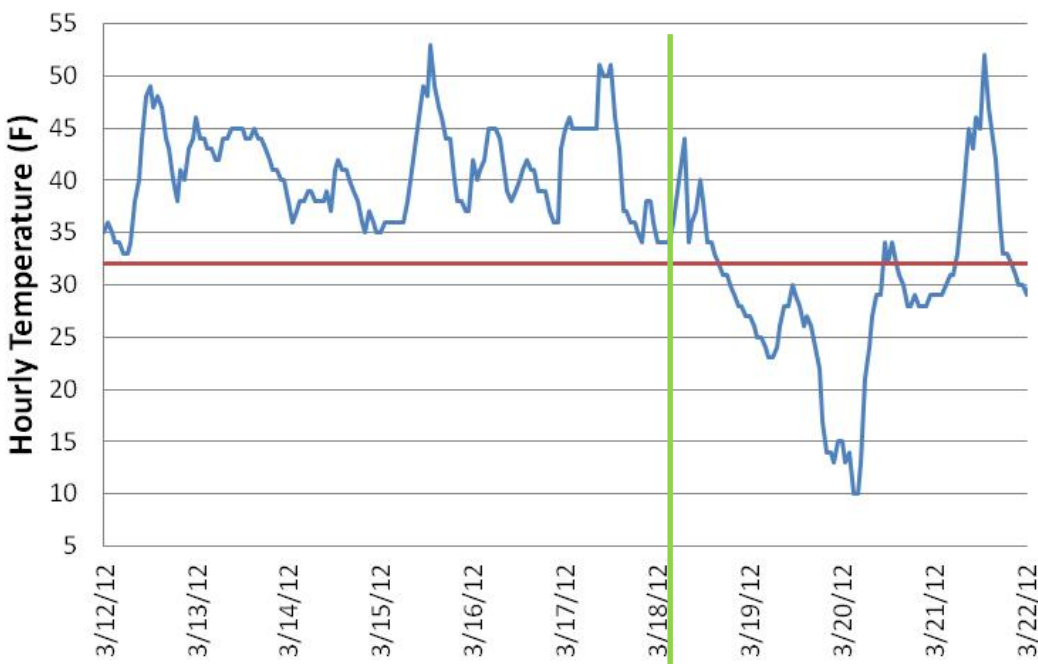


Top 2" were ~32.5F due to liquid water

Otherwise 32F top to bottom

Idaho State University
Hydrology Field Day at
Pine Creek Pass SNOTEL

Hourly Temperature - Pine Creek Pass SNOTEL 6720 ft elev

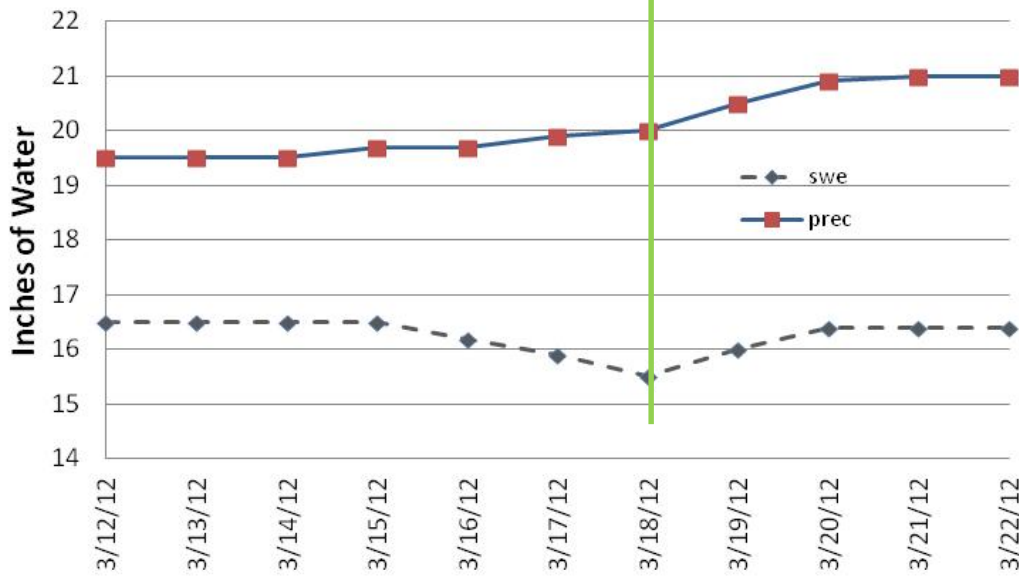


+6 days with temps above freezing

Rain	=	0.6"
Snowmelt	=	1.0"
Total runoff	=	1.6"

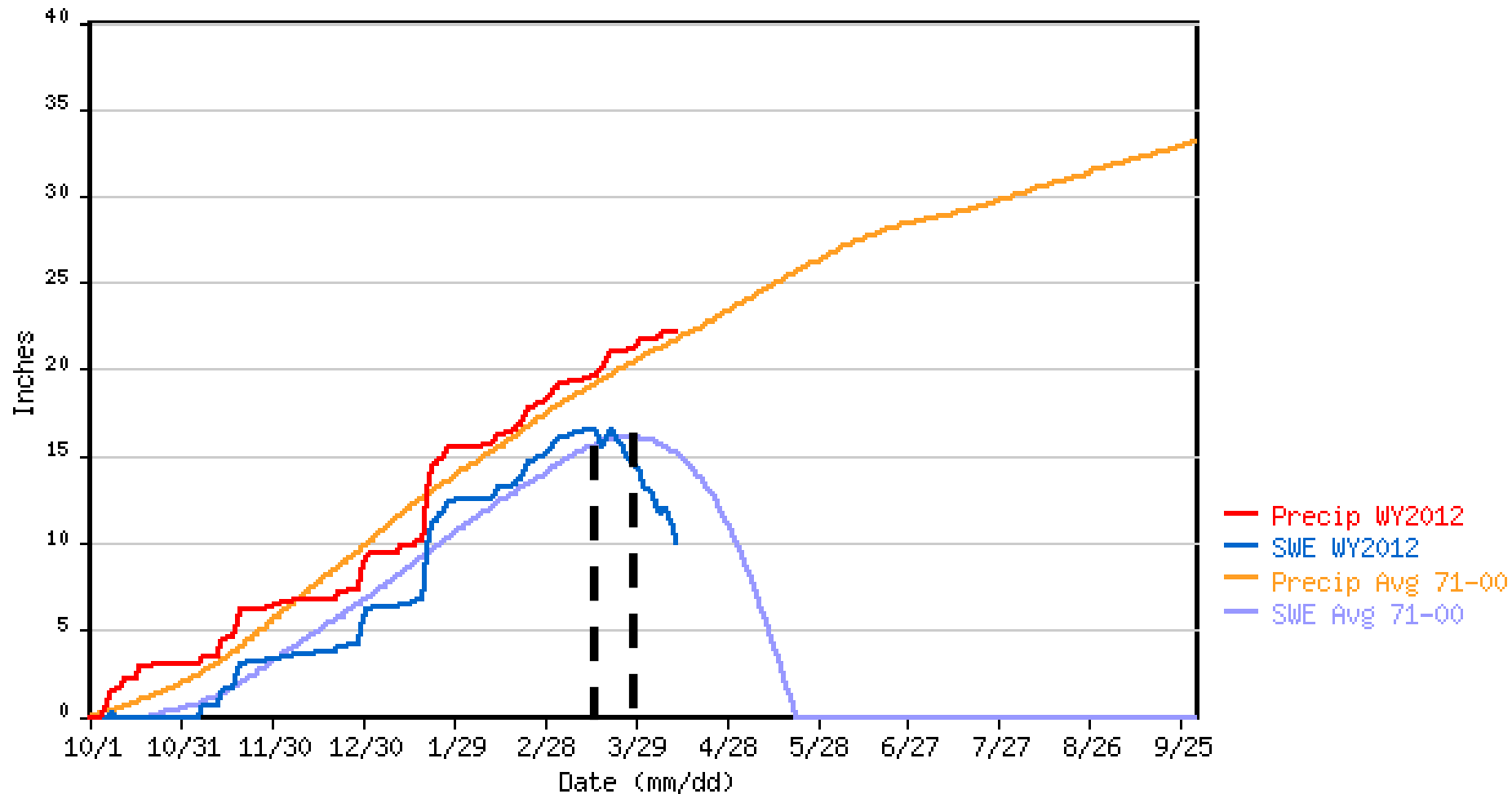
17 sites saw snow melt begin in mid-March

Cumulative SWE and Precipitation



Pine Creek Pass SNOTEL Water Year 2012

*** Provisional Data, Subject to Change ***



Melt starts ~2 weeks
ahead of normal

**Current
Idaho and Upper Snake
SNOTEL Snowmelt Status**
(based on 104 sites)

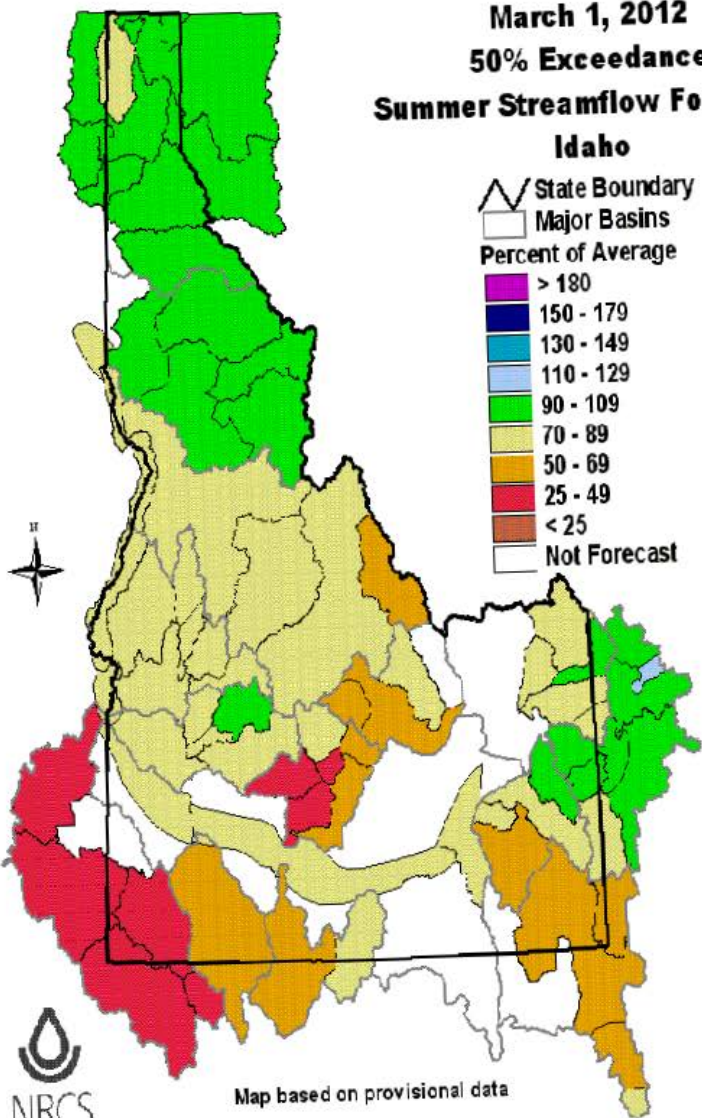
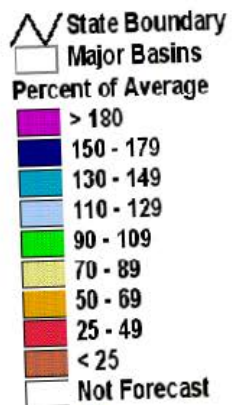
10 sites have melted out

75 sites had >0.3" SWE melt between Apr 8-11th

3 SNOTELs >9,000ft with >1" melt this week

March 1, 2012
50% Exceedance
Summer Streamflow Forecasts

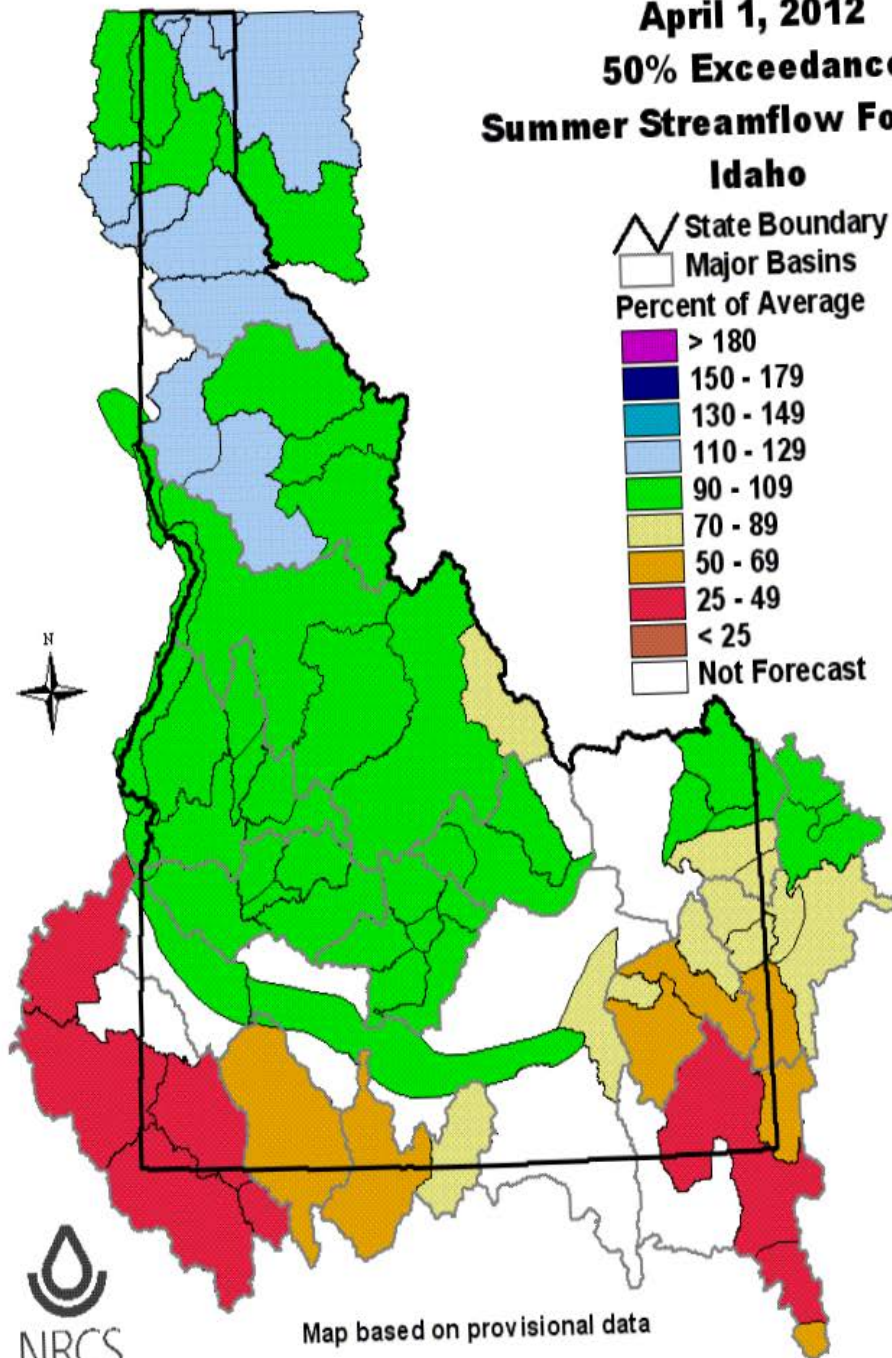
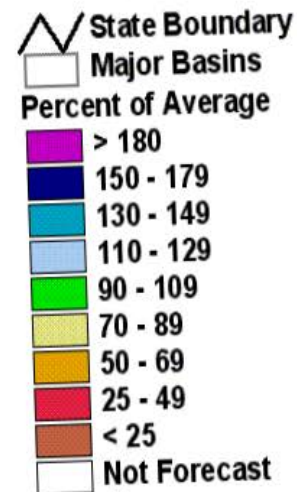
Idaho



Map based on provisional data

April 1, 2012
50% Exceedance
Summer Streamflow Forecasts

Idaho



Map based on provisional data



Panhandle

April 5, 2012

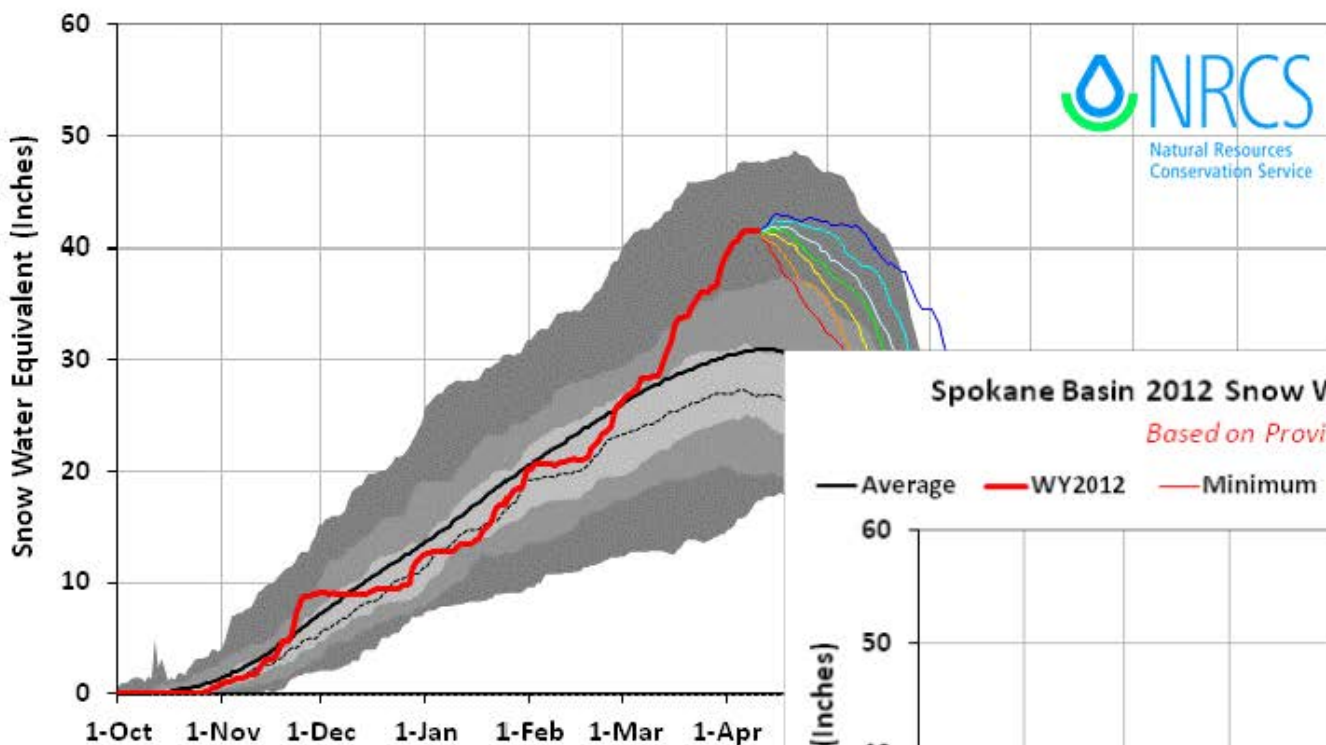
SAMUELS — A 60-foot-wide section of the forest road washed out on Friday, rendering it impassible to vehicles.



Northern Panhandle Region 2012 Snow Water with Non-Exceedence Projections (6 sites)

Based on Provisional SNOTEL data as of Apr 10, 2012

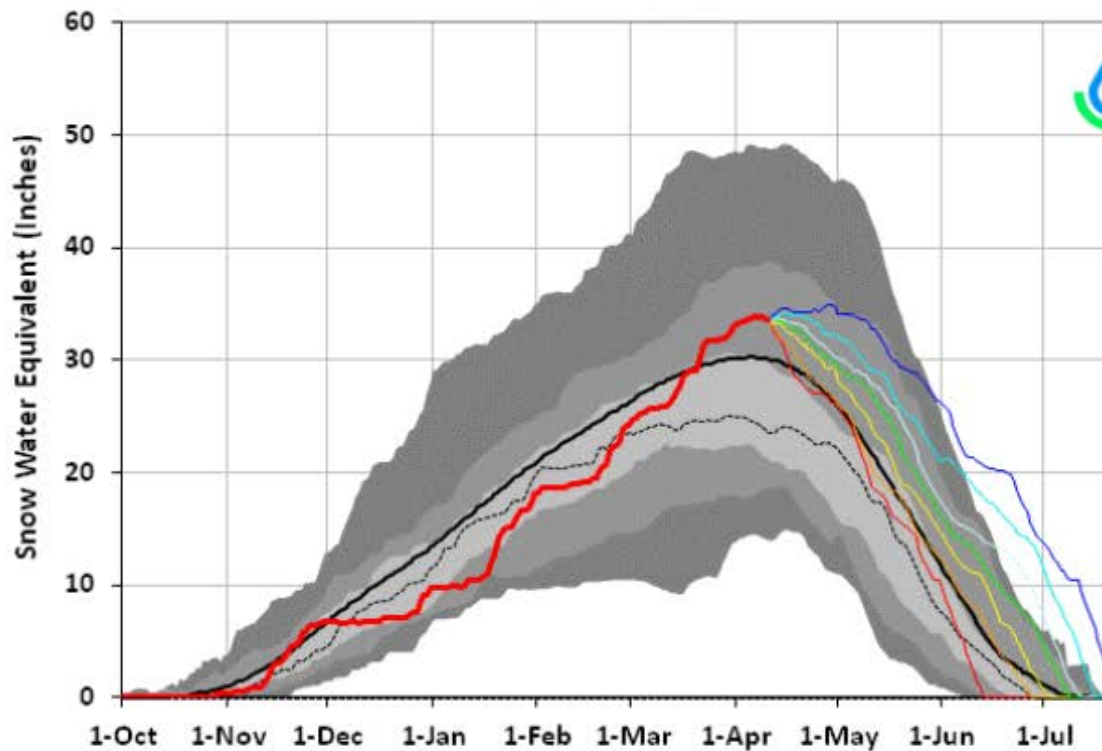
— Average — WY2012 — Minimum — 10% — 30% — 50% — 70% — 90% — Maximum



Spokane Basin 2012 Snow Water with Non-Exceedence Projections

Based on Provisional SNOTEL data as of Apr 10, 2012

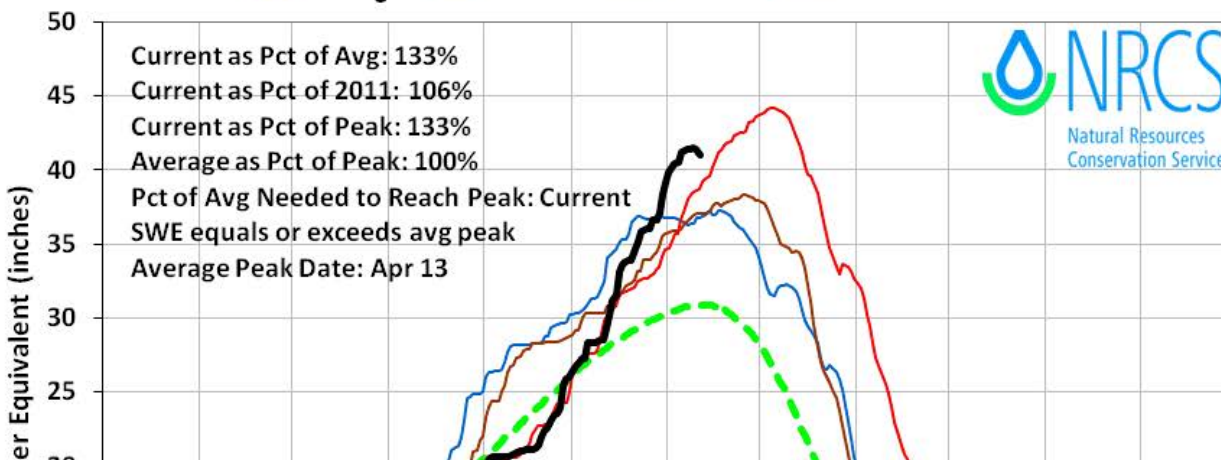
— Average — WY2012 — Minimum — 10% — 30% — 50% — 70% — 90% — Maximum



Northern Panhandle Region 2012 Snowpack Comparison Graph (6 sites)

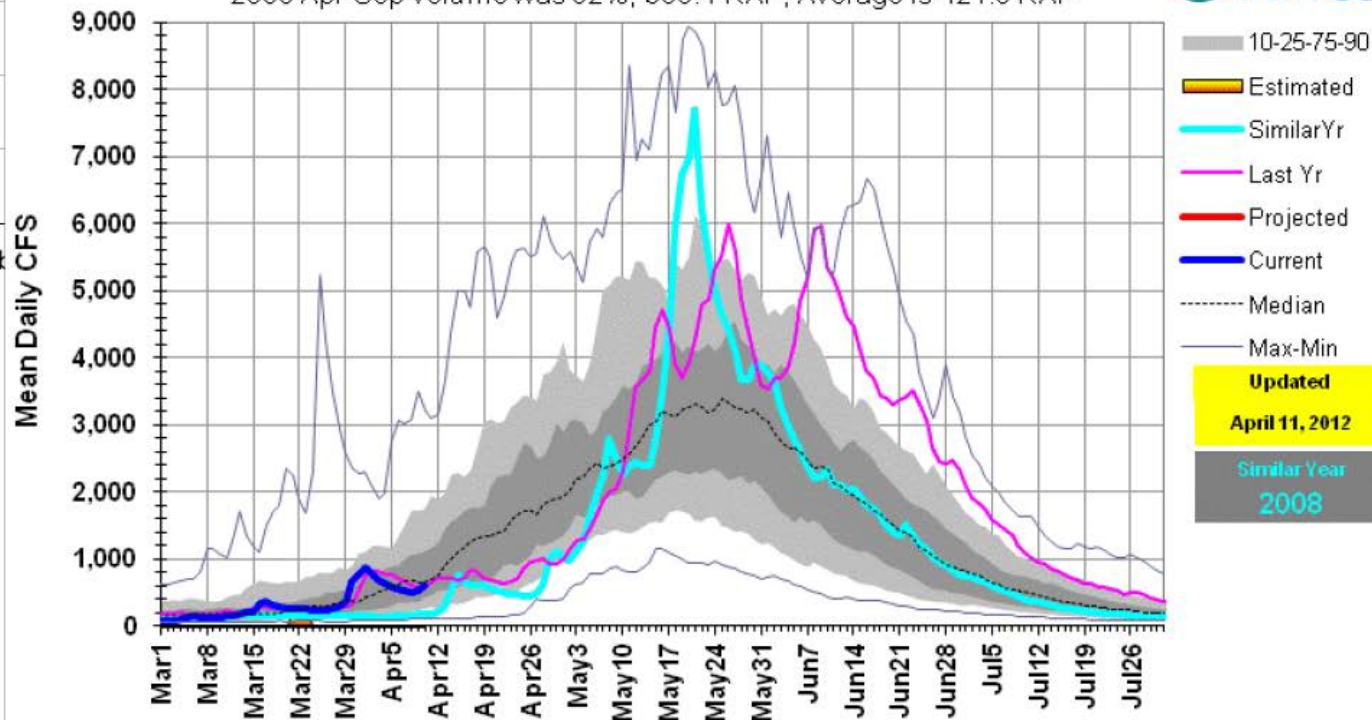
Based on Provisional SNOTEL data as of Apr 11, 2012

— Average — WY2002 — WY2008 — WY2011 — WY2012



12306500: Moyie R at Eastport, ID

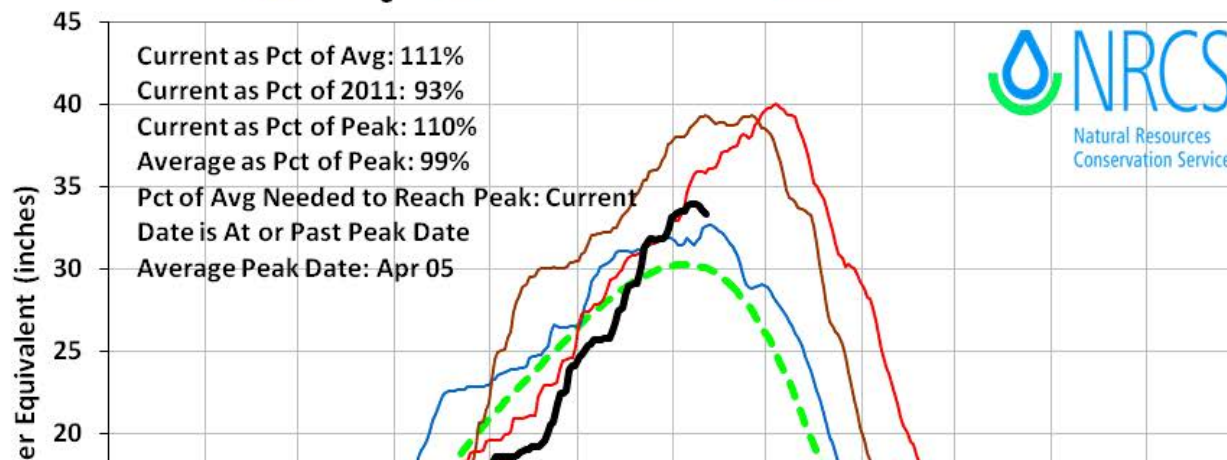
2008 Apr-Sep volume was 92%, 388.4 KAF, Average is 421.5 KAF



Spokane Basin 2012 Snowpack Comparison Graph (9 sites)

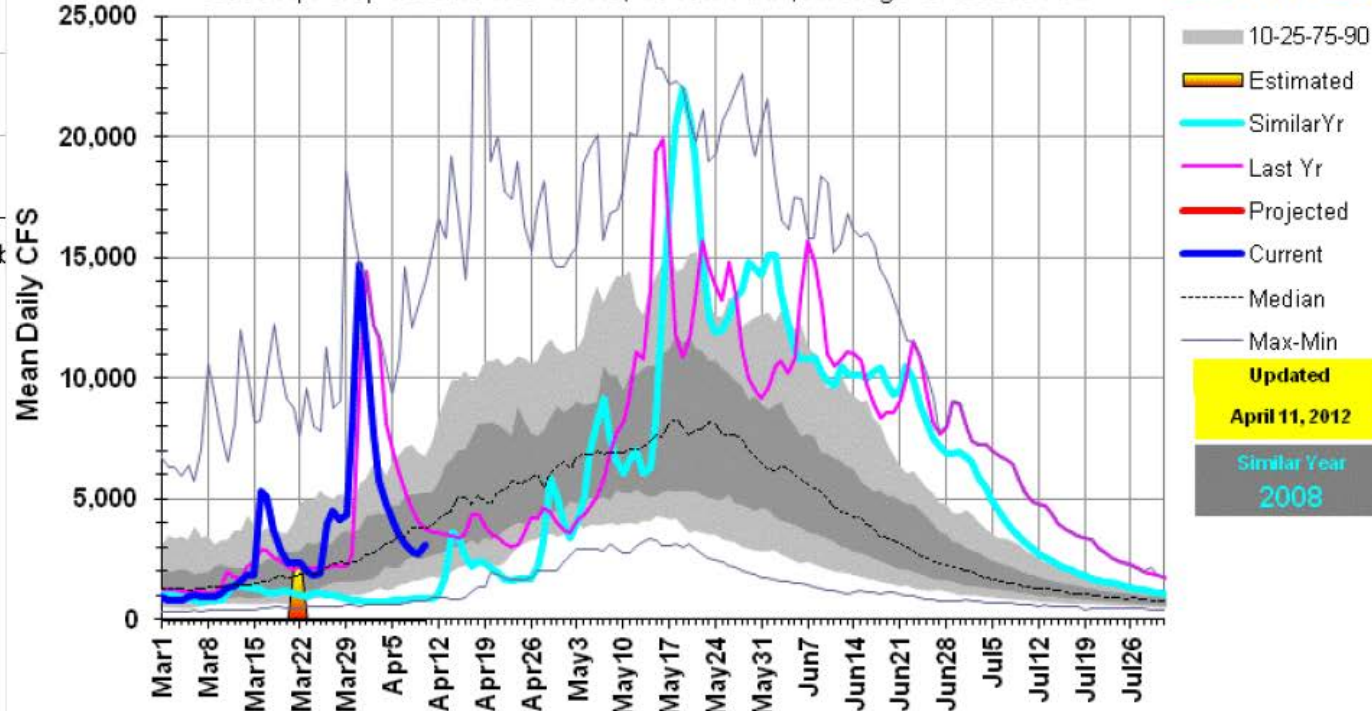
Based on Provisional SNOTEL data as of Apr 11, 2012

— Average — WY1991 — WY2008 — WY2011 — WY2012



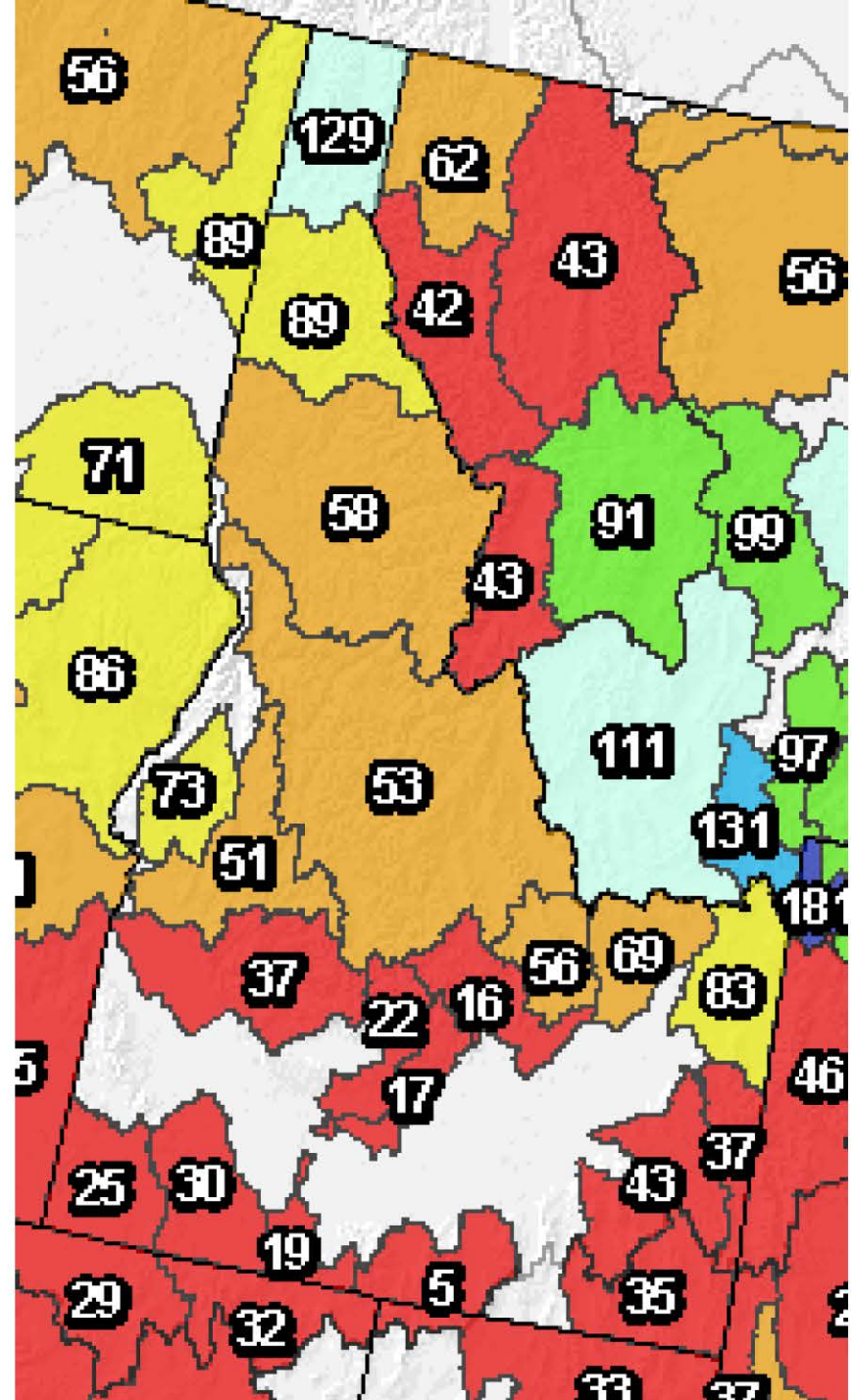
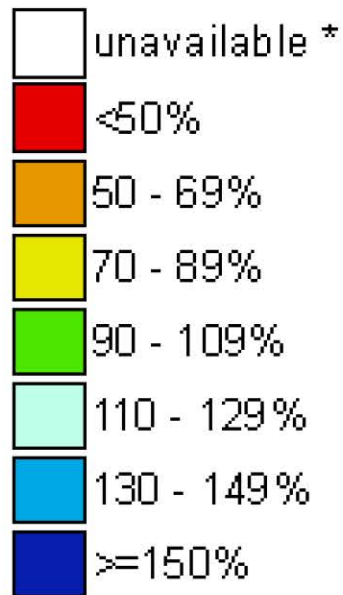
12414500: St. Joe R at Calder, ID

2008 Apr-Sep volume was 134%, 1640.7 KAF, Average is 1226.6 KAF



SNOTEL Month to Date Precipitation % of Normal As of April 11, 2012

Current Month
to Date Precipitation
Basin-wide Percent
of 1971-2000 Normal



Boise Basin

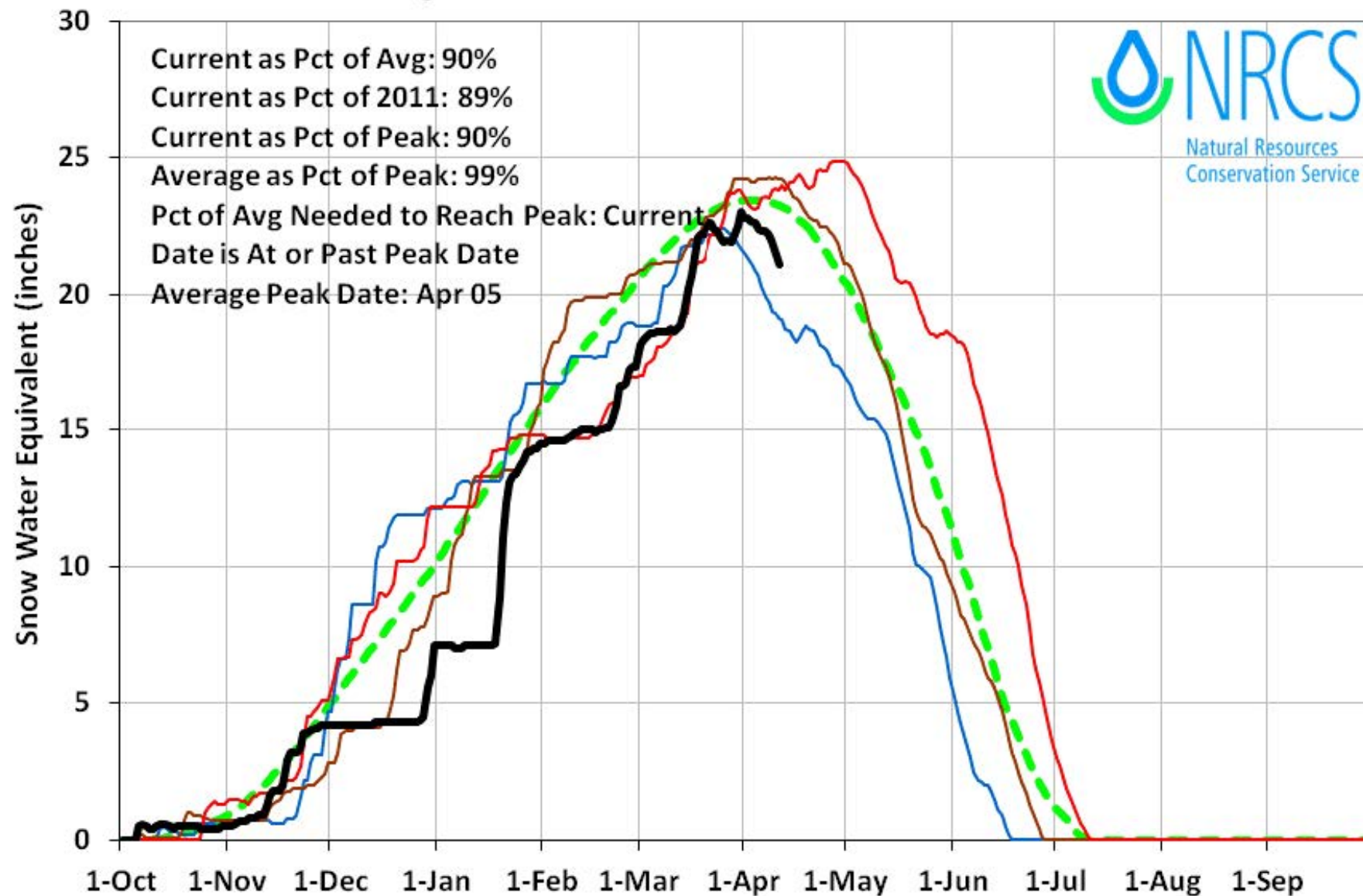




Boise Basin 2012 Snowpack Comparison Graph (10 sites)

Based on Provisional SNOTEL data as of Apr 11, 2012

— Average — WY2002 — WY2008 — WY2011 — WY2012



Big Wood

March 21, 2012

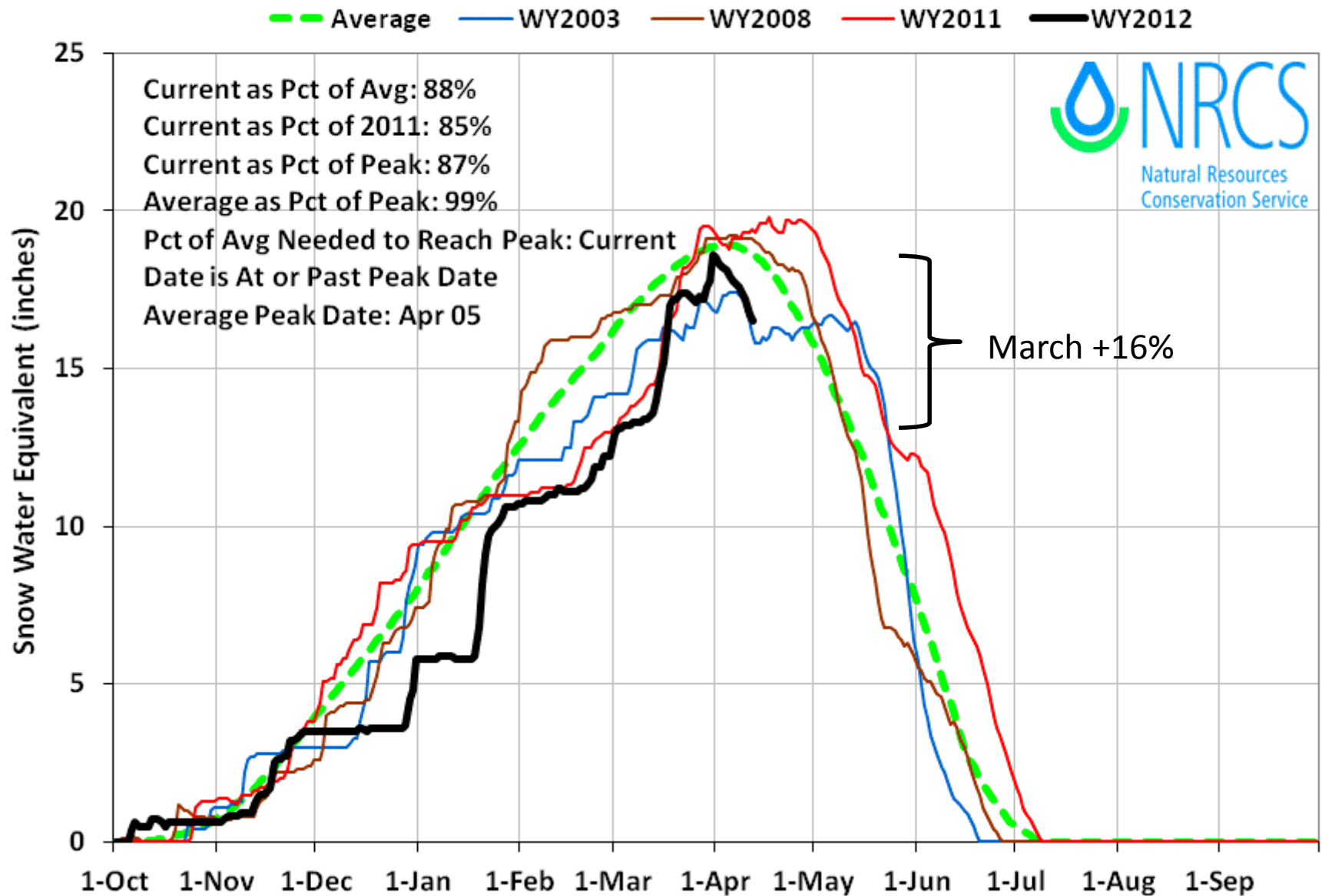


Big Wood
April 12, 2012

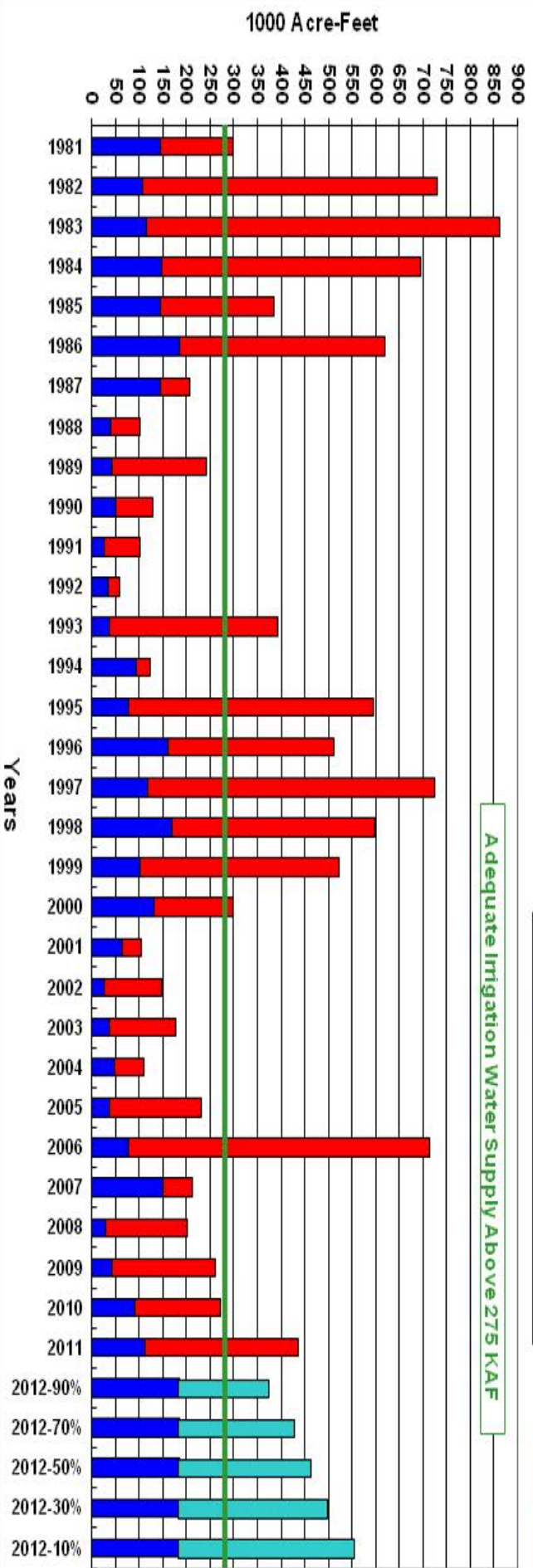


Big Wood Basin 2012 Snowpack Comparison Graph (9 sites)

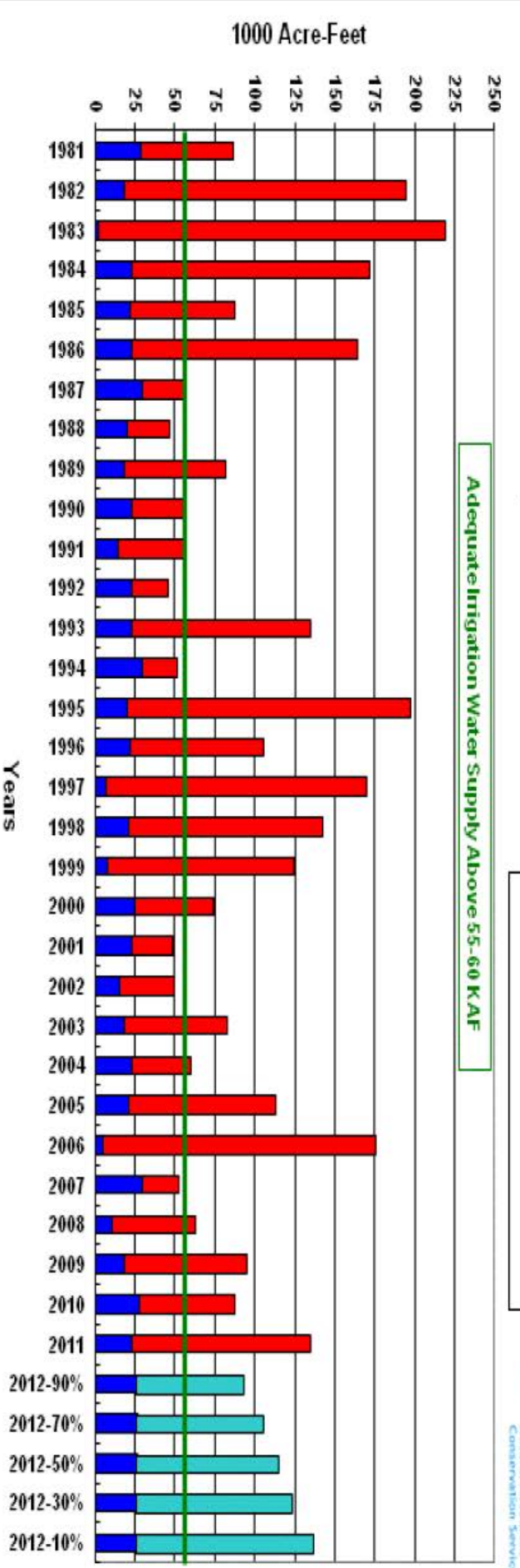
Based on Provisional SNOTEL data as of Apr 12, 2012



April 1 Big Wood Surface Water Supply Index (SWSI)
Big Wood River below Magic & Magic Reservoir



April 1 Surface Water Supply Index (SWSI)
Little Wood River near Carey & Reservoir

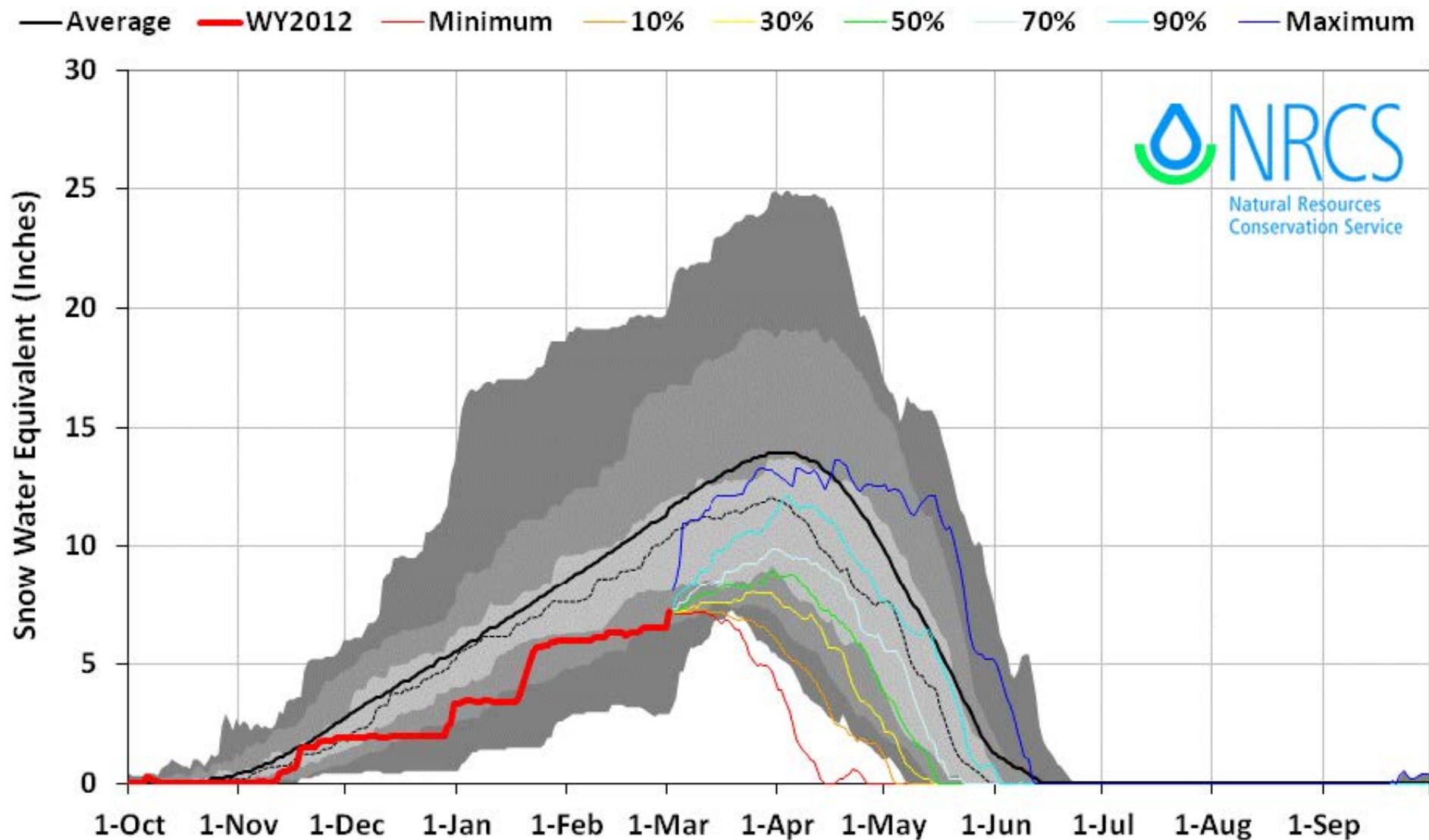


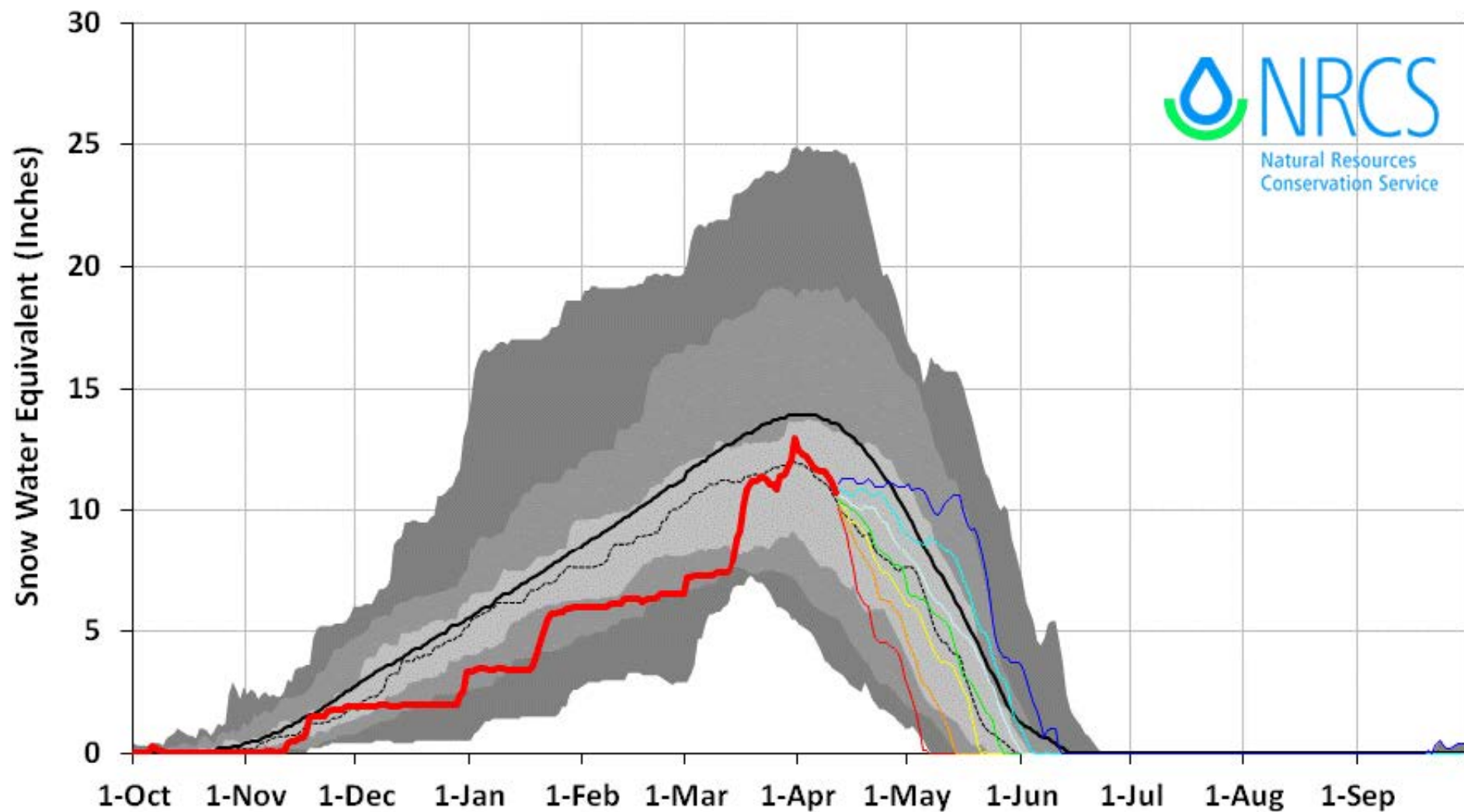
March 15, 2012



Big Lost Basin 2012 Snow Water with Non-Exceedence Projections (4 sites)

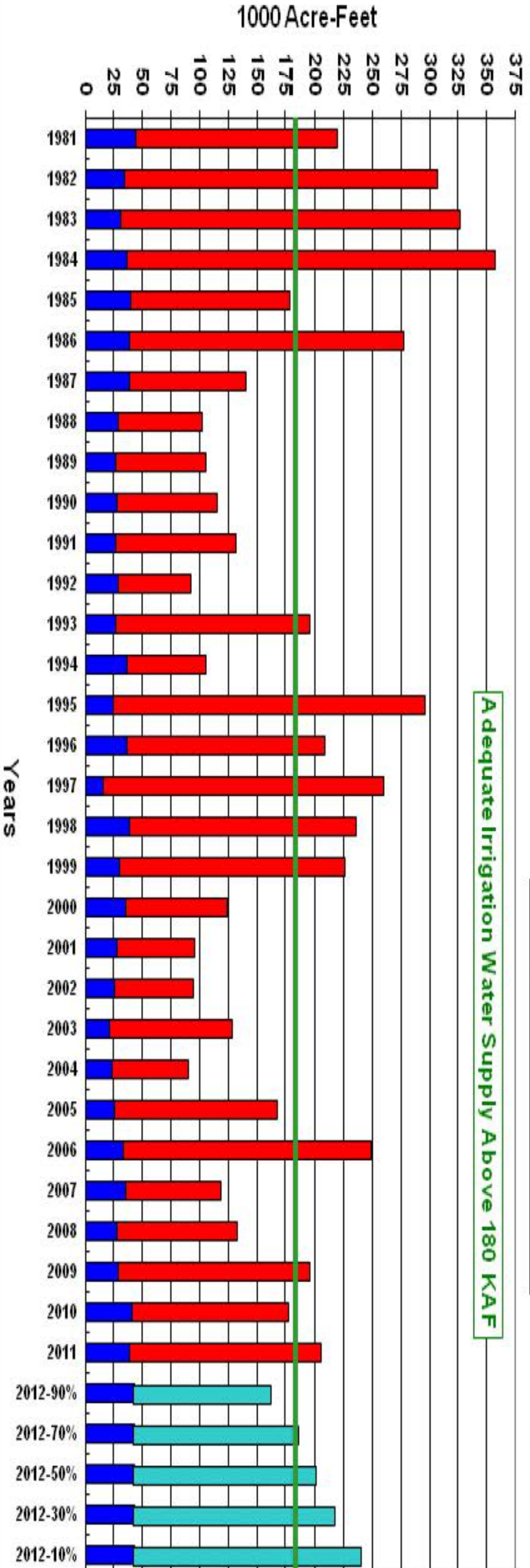
Based on Provisional SNOTEL data as of Apr 11, 2012





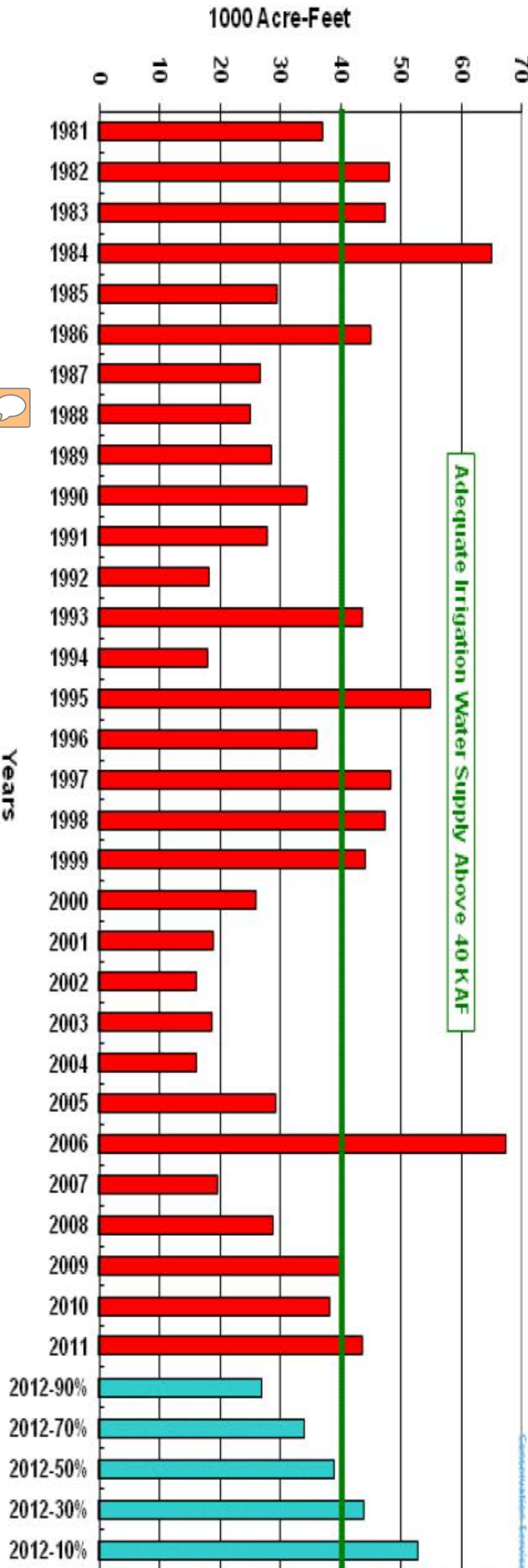
April 1 Big Lost Surface Water Supply Index (SWSI) **Big Lost River below Reservoir & Mackay Reservoir**

■ Reservoir 31-Mar
 ■ Streamflow Apr-Sep



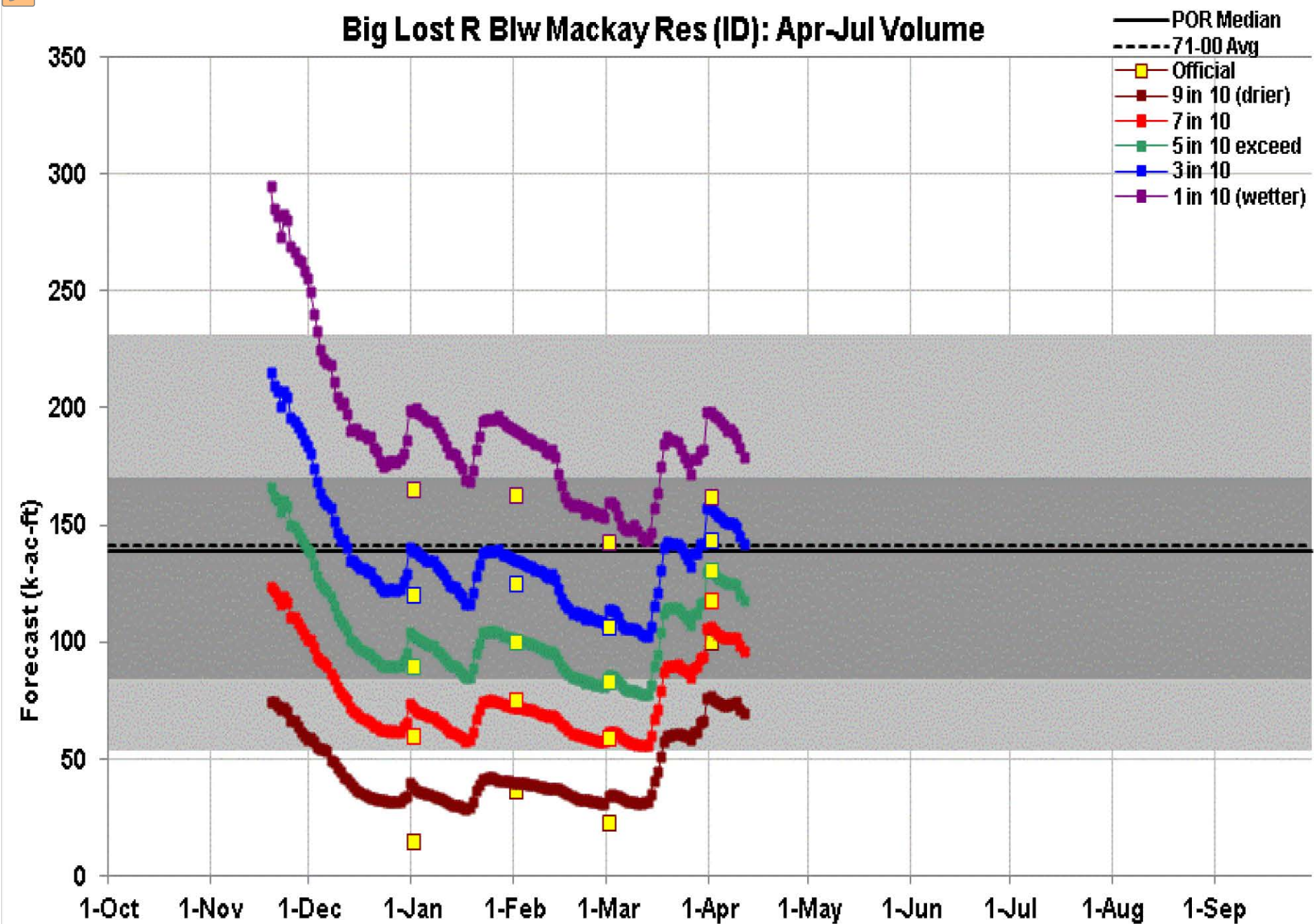
April 1 Surface Water Supply Index (SWSI) **Little Lost River below Wet Creek**

■ Streamflow Apr-Sep





Big Lost R Blw Mackay Res (ID): Apr-Jul Volume



© American Alpine Club Grand Teton Climbers' Ranch
Wed Mar 21 2012 03:49 PM
43° 42.283 | -110° 44.116 | 6668'
Exposure: 209 Camera Temp: 81.5°F

Upper Snake Basin

March 21, 2012

6,668ft elev



© American Alpine Club Grand Teton Climbers' Ranch
Thu Apr 12 2012 10:51 AM
43° 42.283 | -110° 44.116 | 6668'
Exposure: 113 Camera Temp: 73.4°F

Upper Snake Basin

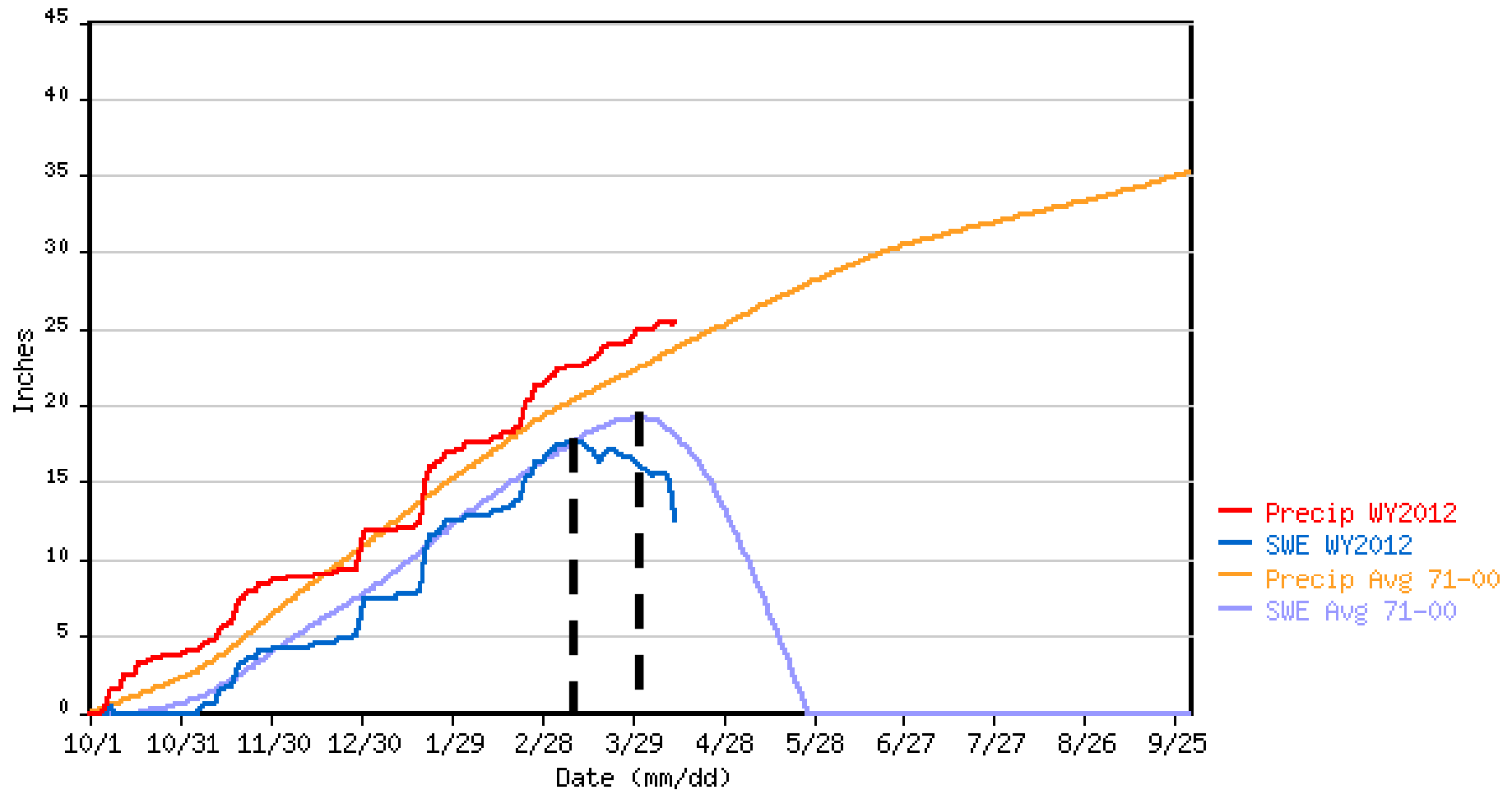
April 12, 2012

6,668ft elev



Snake River Station Water Year 2012

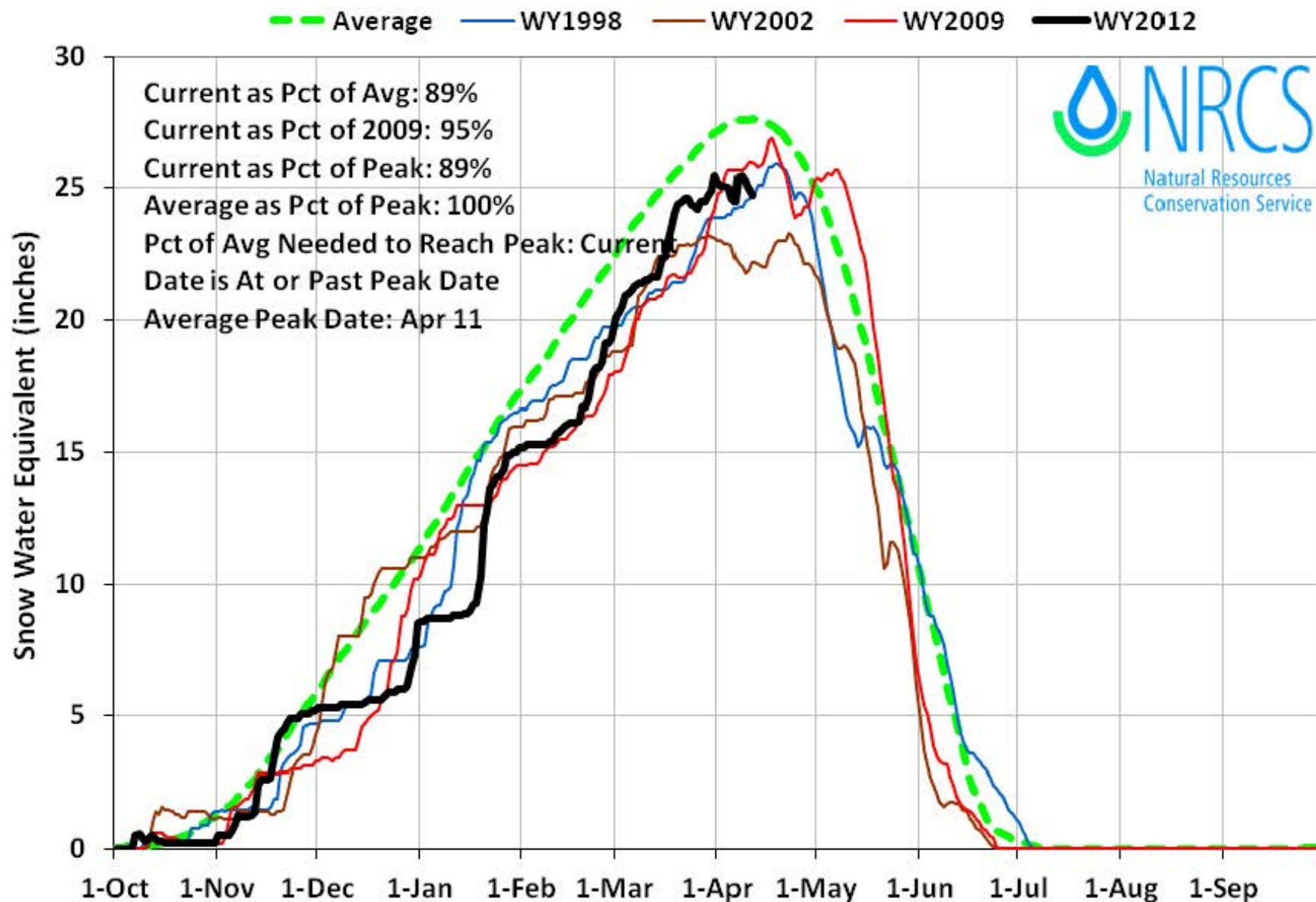
6,900ft at Yellowstone South Entrance



Melt starts ~3 weeks
ahead of normal

Snake Basin above Palisades 2012 Snowpack Comparison Graph (9 sites)

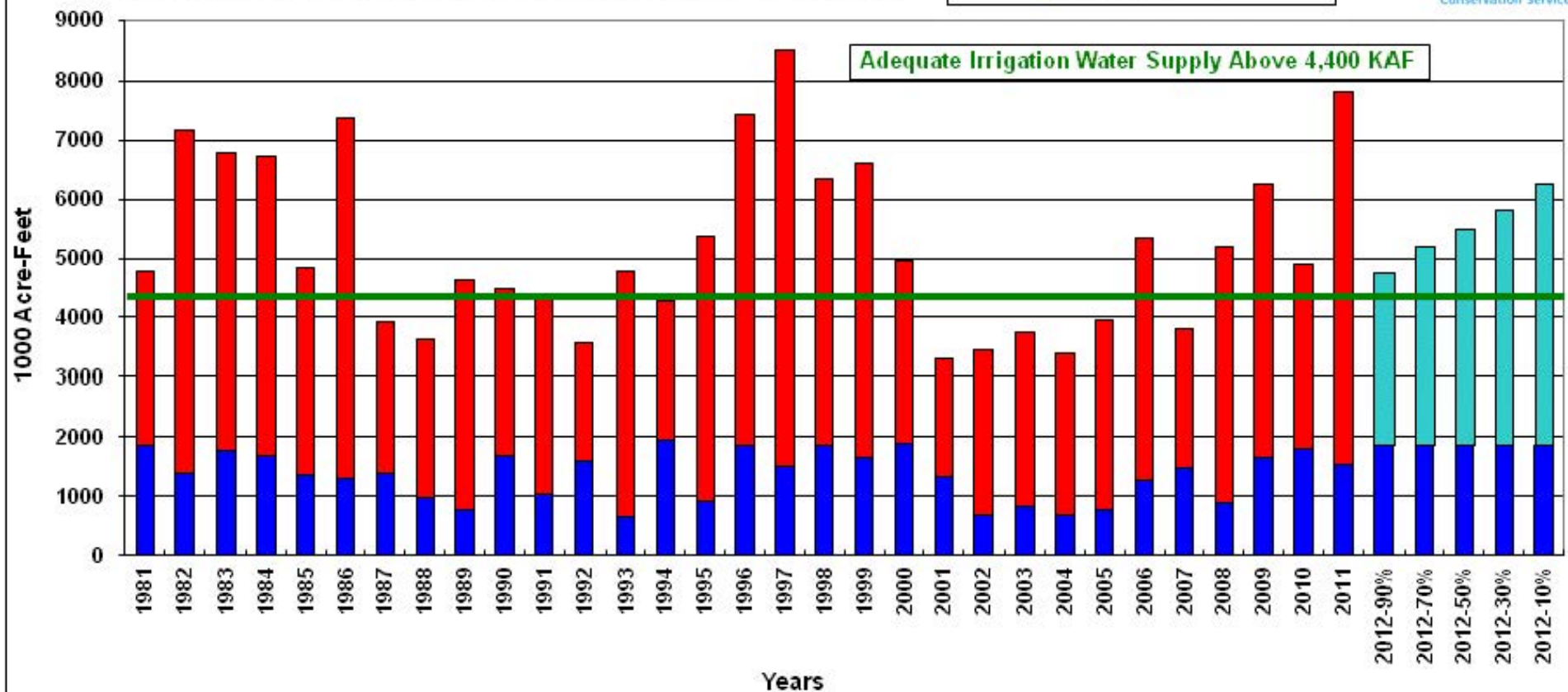
Based on Provisional SNOTEL data as of Apr 11, 2012



March 1 Surface Water Supply Index (SWSI)
Snake River near Heise & Jackson and Palisades Reservoirs



■ Streamflow Apr-Sep
 ■ Reservoir 28-Feb



Snake at Heise Apr-Sep 50% forecast

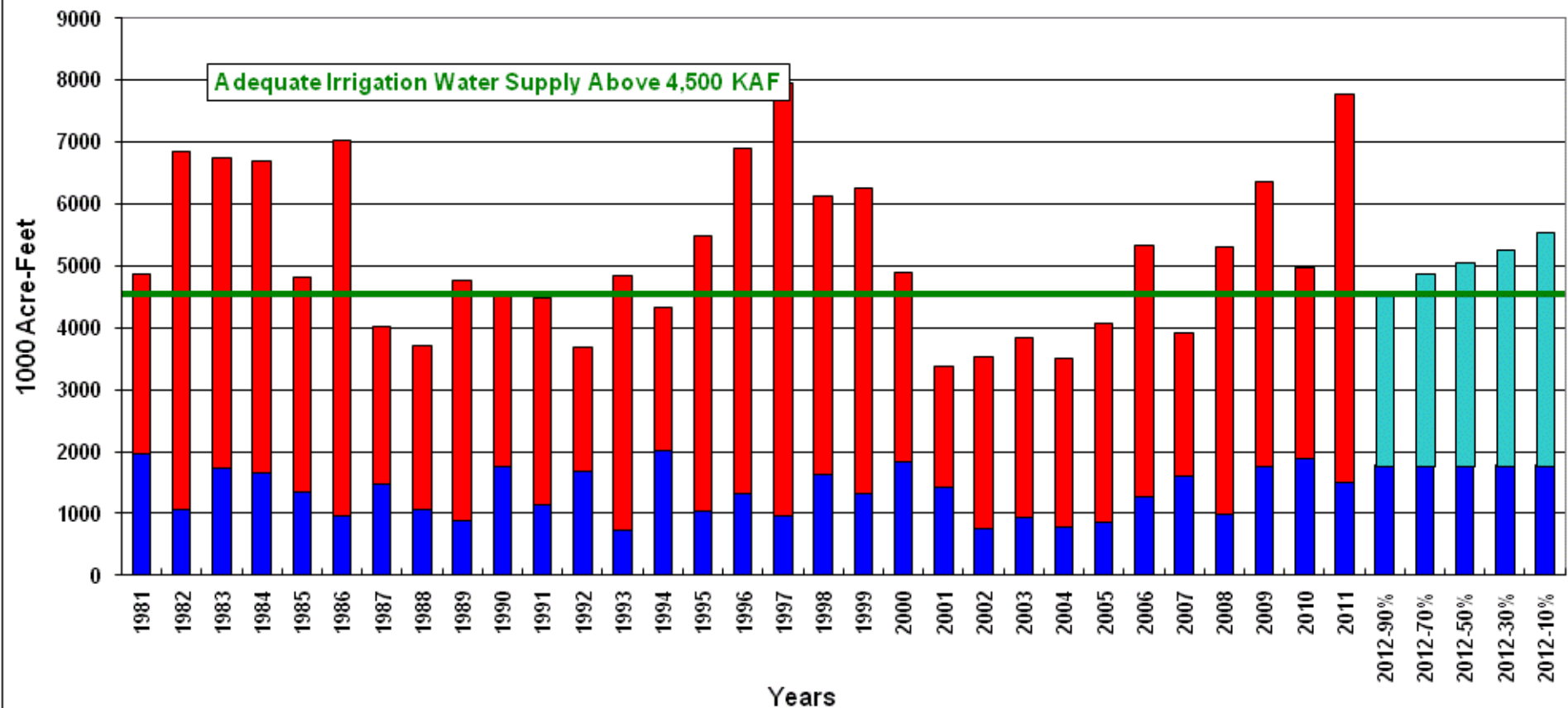
March 1, 2012

3,830 KAF

92%

April 1 Surface Water Supply Index (SWSI) **Snake above Heise & Jackson and Palisades Reservoirs**

■ Streamflow Apr-Sep
 ■ Reservoir 31-Mar



Snake at Heise Apr-Sep 50% Forecast

March 1, 2012	3,830 KAF	92%
April 1, 2012	3,290 KAF	79%
Difference	540 KAF	-13%

Bear Lake

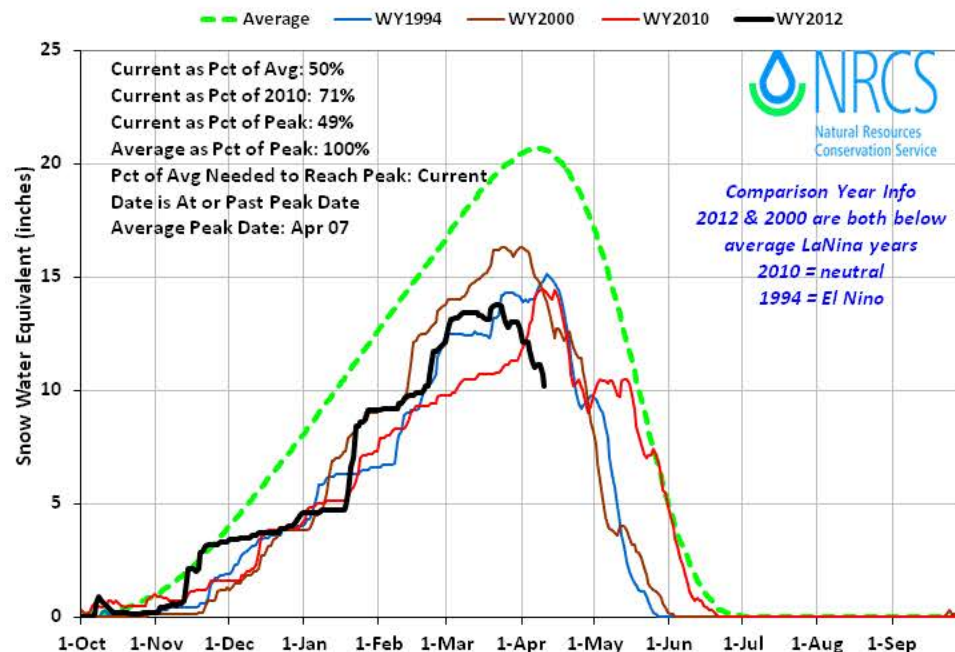
March 17, 2012





Bear Basin 2012 Snowpack Comparison Graph (15 sites)

Based on Provisional SNOTEL data as of Apr 10, 2012

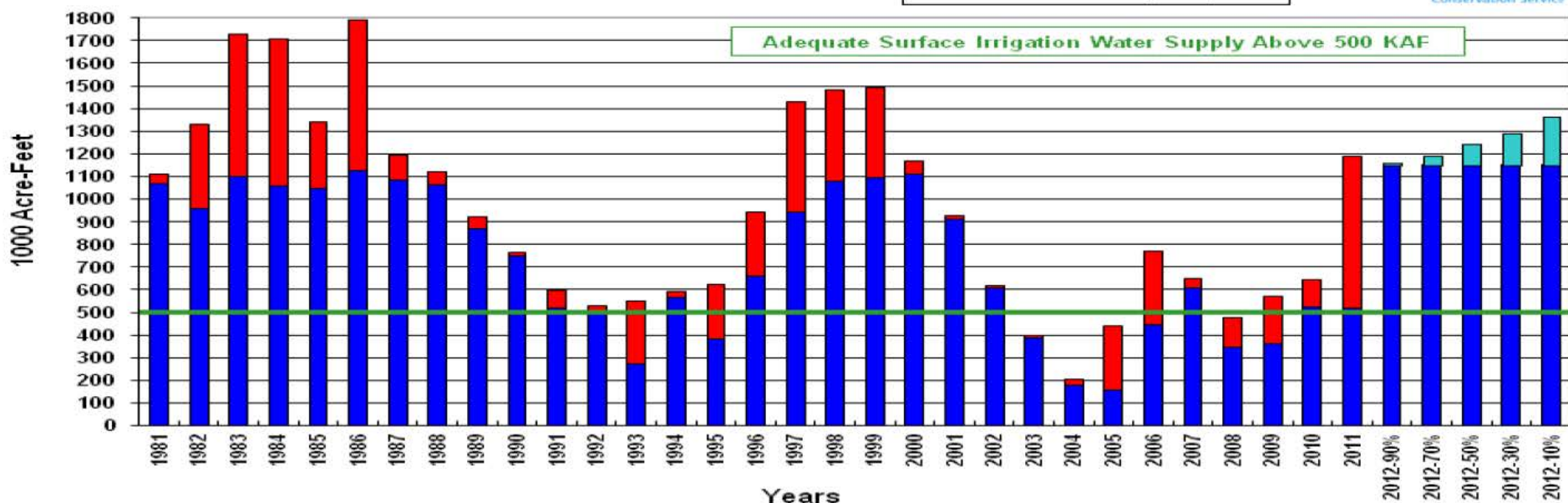


April 1 Bear River Surface Water Supply Index (SWSI) Bear River at Stewart Dam & Bear Lake

■ Reservoir 31-Mar
■ Streamflow Apr-Sep



Adequate Surface Irrigation Water Supply Above 500 KAF



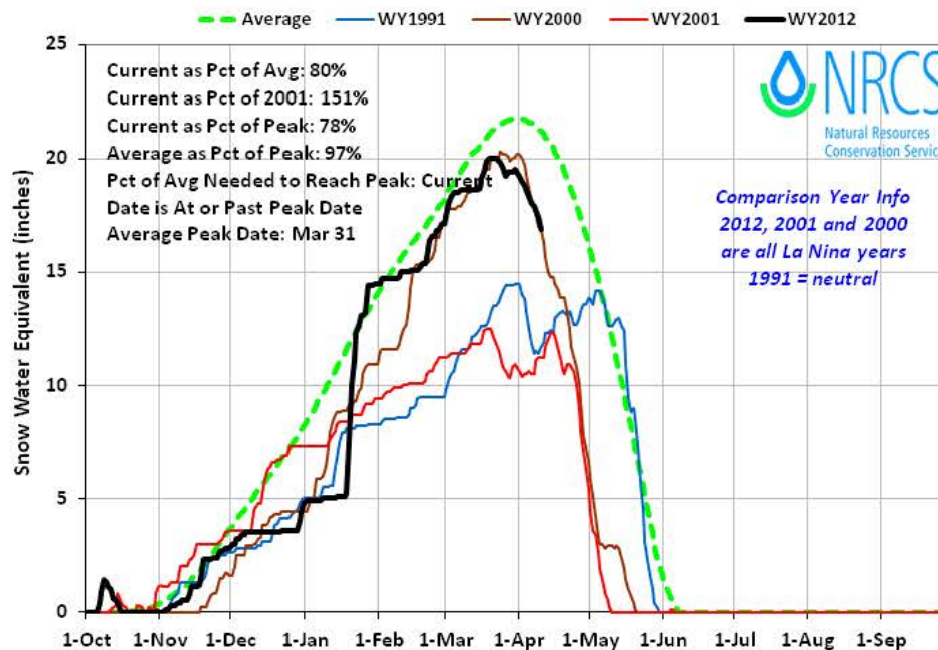
Oakley Reservoir

August 2011

March 31, 2012 41.6 KAF
August 31, 2011 36.3 KAF

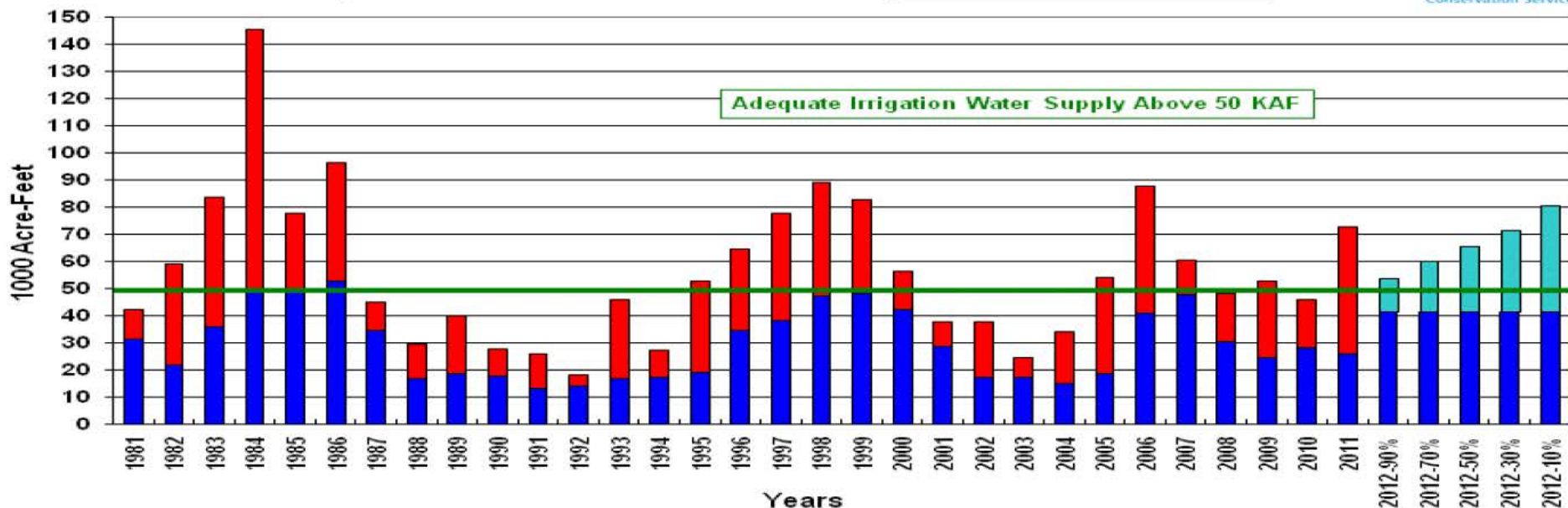
Oakley Basin 2012 Snowpack Comparison Graph (3 sites)

Based on Provisional SNOTEL data as of Apr 10, 2012



April 1 Oakley Surface Water Supply Index (SWSI) Oakley Inflow & Reservoir

Streamflow Apr-Sep
 Reservoir 31-Mar



Salmon Falls January 2012

Jun 2011 149 kaf

Mar 2012 89 kaf

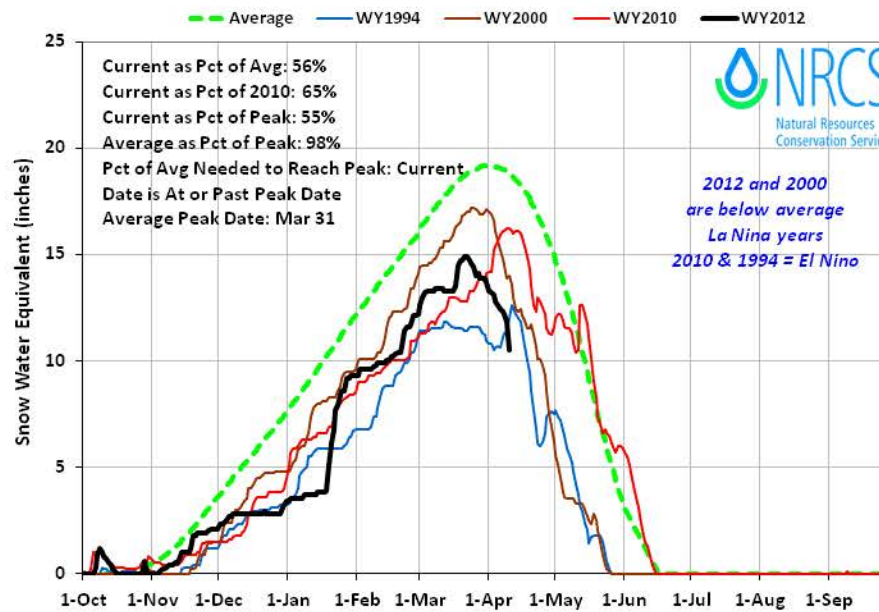
Jan 2002 12 kaf





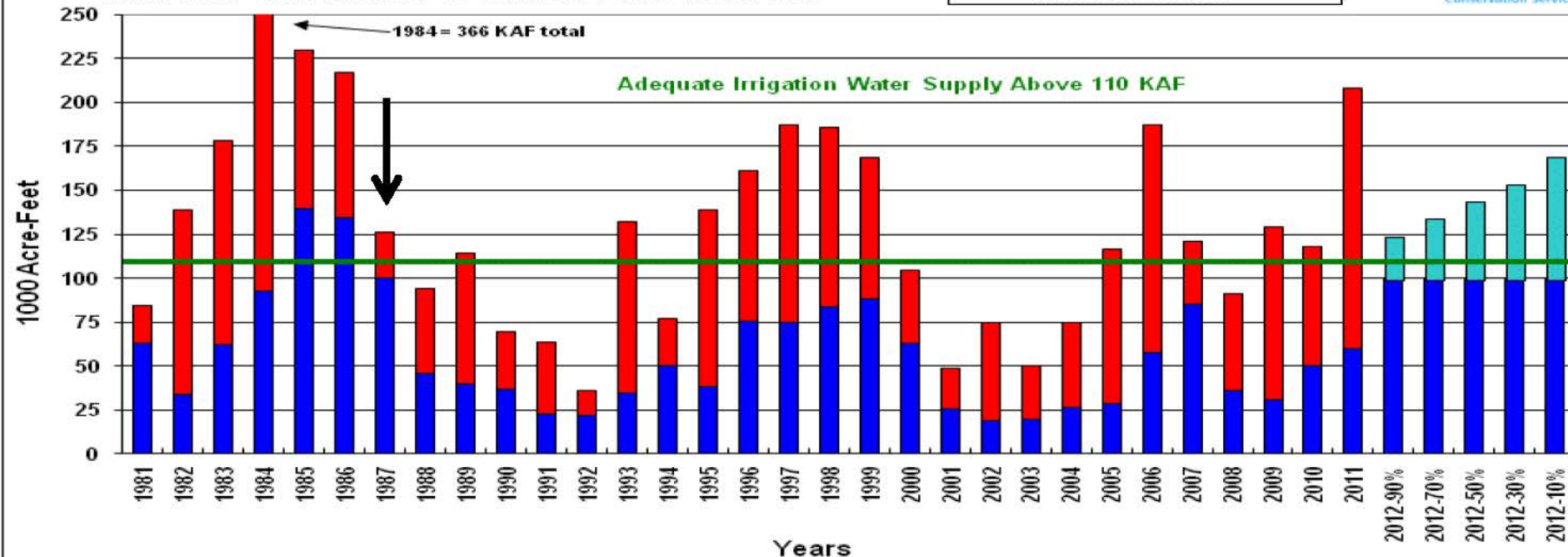
Salmon Falls Basin 2012 Snowpack Comparison Graph (5 sites)

Based on Provisional SNOTEL data as of Apr 10, 2012



April 1 Surface Water Supply Index (SWSI) Salmon Falls Creek near San Jacinto & Salmon Falls Reservoir

Streamflow Apr-Sep
Reservoir 31-Mar



Owyhees

Looking west towards
Owyhee Reservoir from Succor Creek area

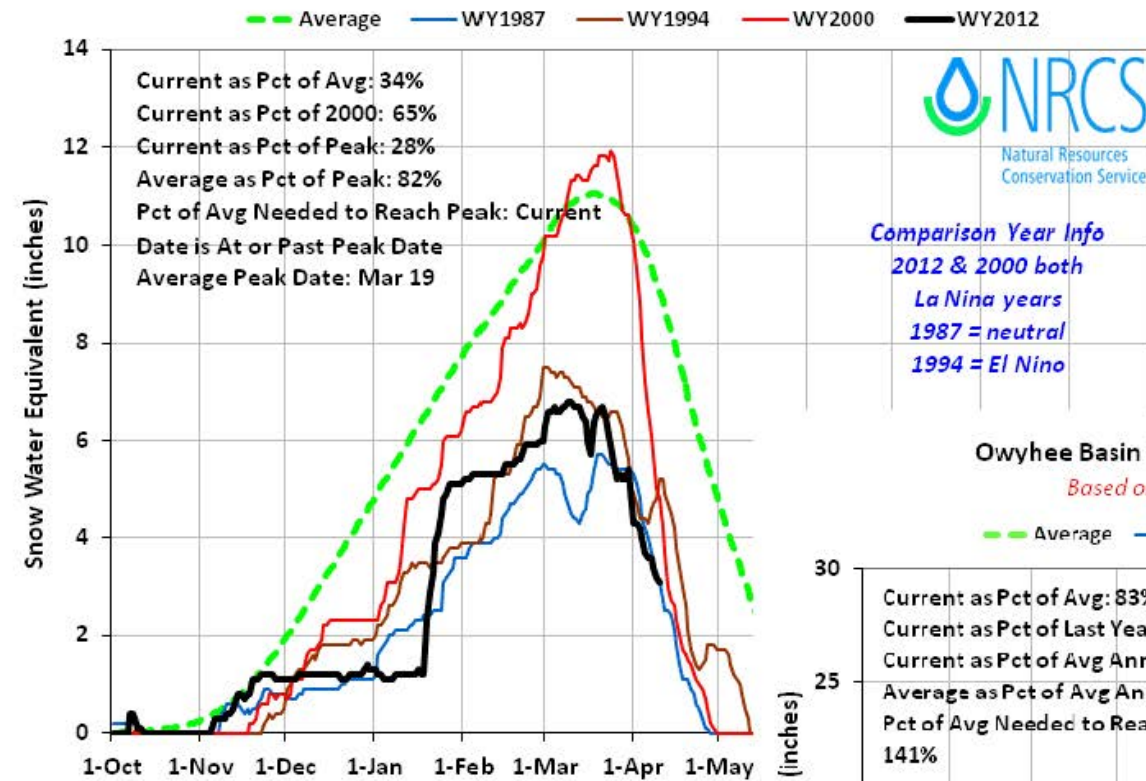
An aerial photograph of a vast, flat, snow-covered landscape. The terrain is a mix of white snow and dark, textured patches, possibly rocks or low-lying vegetation. In the lower right quadrant, a single red marker is visible, consisting of a vertical pole with several horizontal rungs. The text is overlaid in the bottom left corner.

April 3, 2012
Owyhee / Malheur
Aerial Snow Course Flight
Found
17 or 19 markers snow free



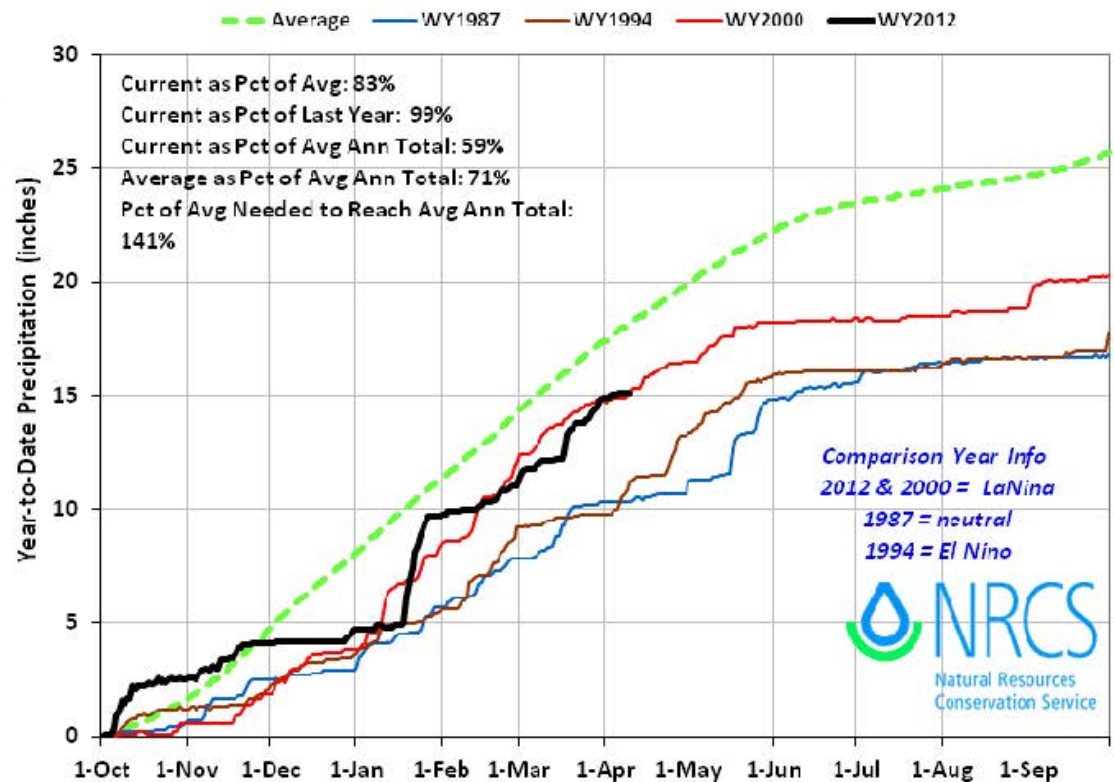
Owyhee Basin 2012 Snowpack Comparison Graph (7 sites)

Based on Provisional SNOTEL data as of Apr 10, 2012



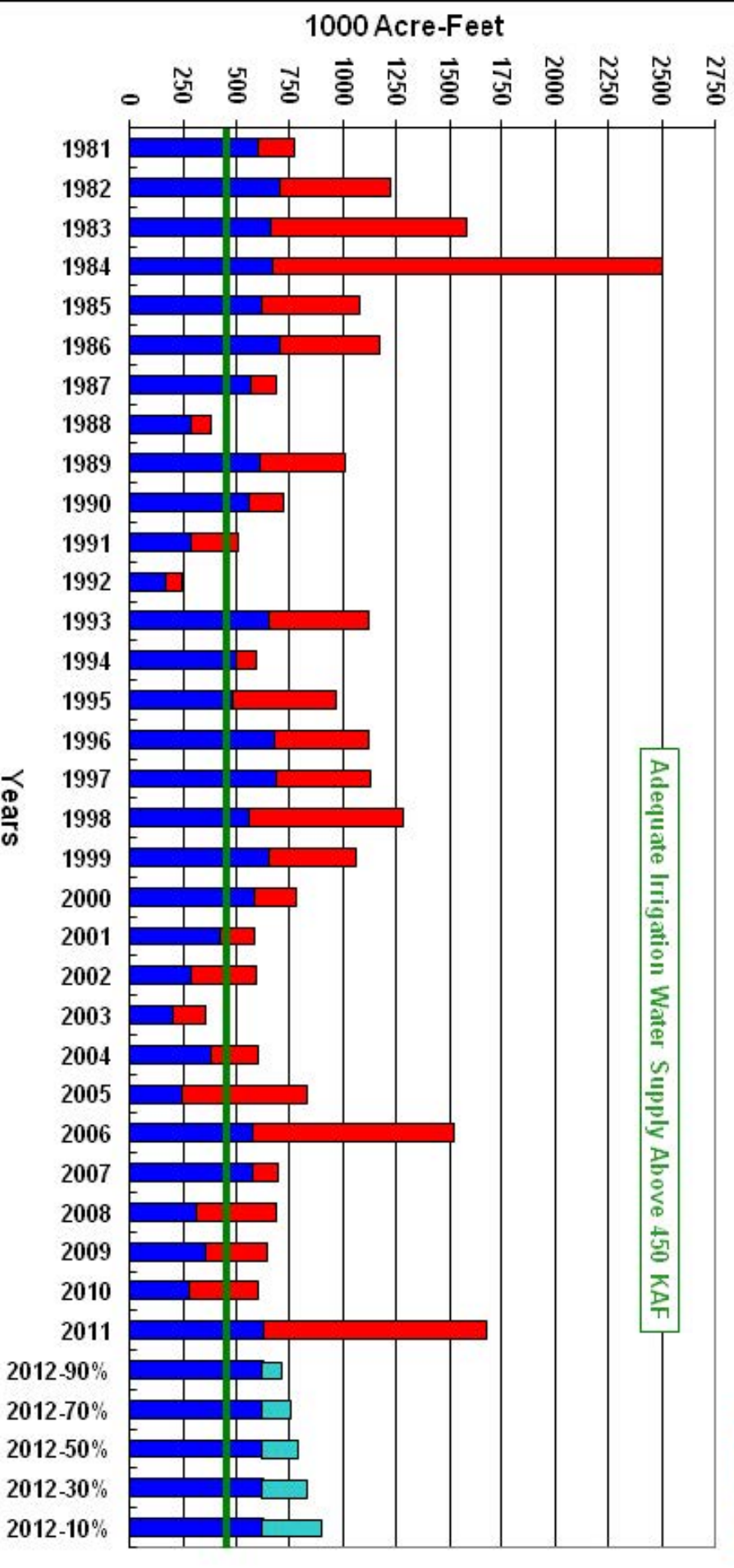
Owyhee Basin 2012 Precipitation Comparison Graph (7 sites)

Based on Provisional SNOTEL data as of Apr 10, 2012



April 1 Surface Water Supply Index (SWSI) Owyhee River below Dam & Reservoir

■ Streamflow Apr-Sep
■ Reservoir 31-Mar



Reservoir Storage as of March 31, 2012 was 624 KAF

<i>BASIN or REGION</i>	<i>SWSI Value</i>	<i>Most Recent Year With Similar SWSI Value</i>	<i>Agricultural Water Supply Shortages Occur When SWSI is Less Than</i>
Northern Panhandle	2.7	2002	NA
Spokane	2.3	2006	NA
Clearwater	2.5	2009	NA
Salmon	0.4	2010 / 1998	NA
Weiser	0.7	2010	NA
Payette	0.9	2008	NA
Boise	1.7	1998 / 1995	-1.8 to -2.1
Big Wood	1.4	2011	0.6 to 0.0
Little Wood	1.1	2005	-1.6 to -2.6
★ Big Lost ★	0.9	2011	0.5 to -0.2
★ Little Lost ★	0.9	2010	1.5 to 0.7
Teton	-0.9	2005	-3.7 to -3.9
Henrys Fork	0.0	2010	-3.4 to -3.6
Snake (Heise)	0.6	2010	-1.3 to -1.6
Oakley	1.7	2011	0.0 to -0.5
Salmon Falls	1.4	1996	-0.8 to -1.3
Bruneau	-0.9	2002	NA
Owyhee	0.1	2005	-3.0 to -3.5
Bear River	1.7	2011	-3.0 to -3.4

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

