Rain on Snow up to 7,000 - 8,000 feet in Clearwater Basin above Dworshak Reservoir
Jan 26, 2015

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USDA NRCS Snow Survey
Boise, Idaho
Westwide SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average

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

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

Feb 12, 2015

SNOTEL Water Year (Oct 1) to Date Precipitation Records

NOTE: Until further notice, record calculations are based on period of record through water year 2012; water years 2013 and 2014 are not analyzed.

Water Year (Oct 1) to Date Precipitation Records
- New High
- Near High
- Near-Record
- New-Low
- Near-Low

Provisional data subject to revision
### Feb 1 – 13 Precipitation as % of Feb Monthly Total

<table>
<thead>
<tr>
<th>Location</th>
<th>Precipitation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panhandle</td>
<td>121%</td>
</tr>
<tr>
<td>Spokane &amp; Clearwater</td>
<td>74%</td>
</tr>
<tr>
<td>Salmon &amp; Weiser</td>
<td>82%</td>
</tr>
<tr>
<td>Payette, Boise Big Wood</td>
<td>93%</td>
</tr>
<tr>
<td>Little Wood &amp; Big Lost</td>
<td>90%</td>
</tr>
<tr>
<td>Little Lost &amp; Birch</td>
<td>67%</td>
</tr>
<tr>
<td>Mud Lake &amp; Henrys Fork</td>
<td>45%</td>
</tr>
<tr>
<td>Snake abv Palisades</td>
<td>62%</td>
</tr>
<tr>
<td>Raft &amp; Goose</td>
<td>70%</td>
</tr>
<tr>
<td>Willow, Blackfoot &amp; Portneuf</td>
<td>49%</td>
</tr>
<tr>
<td>Bear</td>
<td>55%</td>
</tr>
<tr>
<td>Salmon Falls &amp; Owyhee</td>
<td>47%</td>
</tr>
<tr>
<td>Bruneau</td>
<td>22%</td>
</tr>
</tbody>
</table>

**Map:**

- **Legend:**
  - 0: Light green
  - 50 - 70: Green
  - 150 - 170: Dark green
  - 150 - 200: Yellow
  - 200 - 300: Light orange
  - 300 - 400: Orange
  - > 400: Dark orange

- **Note:**
  - The map shows the total precipitation anomaly from February 1 to February 10, 2015, as a percentage of the February monthly total.
Daily Mean Temperature Anomaly: 01 February 2015 - 10 February 2015
Period ending 7 AM EST 10 Feb 2015
Base period: 1981-2010
(Map created 11 Feb 2015)
Daily Mean Temperature Anomaly: 01 December 2014 - 16 December 2014
Period ending 7 AM EST 16 Dec 2014
Base period: 1981-2010
(Map created 17 Dec 2014)
Feb 1 Panhandle Snowpack varies with elevation, many snow courses in the lower 10%ile.

Feb 1 CDA Snow Index (Lookout & Mosquito Ridge) shows the 26.1” which is lowest since 2005 & 5th lowest since record starts in 1961.

6.6 “ of SWE at Benton Springs Snow Course, 4,920 feet, in Priest River is 5th lowest since record starts in 1937

Lowest years:
1977
2005
1942
1981
1979
1976 and 2015
SWE as of Feb 13

Clearwater Basin
Selway 115%
Locsha 96%
NF Clearwater 81%
Clearwater Basin 85%

Salmon abv Salmon 115%
Lemhi 115%
MF Salmon 101%
SF Salmon 94%
Little Salmon 81%
Salmon Basin 106%
Mud Flat SNOTEL site melted out Feb 10 previous earliest melt-outs:

Mar 1, 1981
Mar 8, 1992
Mar 27, 2001
Mar 4, 2014

2014 Apr-Jul runoff 14% avg

Is the snowmelt peak past?
2015 Boise River near Boise: Apr - Jul Volume
NRCS Monthly / mid-Monthly Forecasts are Squares

Jan 31 combined storage is 602 AKF

2014 Apr-July Runoff
85% of Normal 1075 KAF

2015 - based on irrigation demand of 1,500 KAF and projected Mar 31 combined reservoir storage of 625 KAF

64% of average or 875 KAF for Apr-Sep is needed for marginally adequate surface irrigation supply

SNOTEL Sites used: Atlanta Summit, Trinity Mountain, Dollarhide Summit, Vienna Mine, Galena and Galena Summit

Boise Basin 2015 Snow Water with Non-Exceedence Projections [10 sites]
Based on Provisional SNOTEL data as of Feb 11, 2015
<table>
<thead>
<tr>
<th>BASIN or REGION</th>
<th>SWSI Value</th>
<th>Most Recent Year</th>
<th>Agricultural Water Supply Shortage May Occur When SWSI is Less Than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Panhandle</td>
<td>Not Available</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Spokane</td>
<td>-1.8</td>
<td>1995</td>
<td>NA</td>
</tr>
<tr>
<td>Clearwater</td>
<td>1.3</td>
<td>2006</td>
<td>NA</td>
</tr>
<tr>
<td>Salmon</td>
<td>2.3</td>
<td>2009</td>
<td>NA</td>
</tr>
<tr>
<td>Weiser</td>
<td>-1.6</td>
<td>2004</td>
<td>NA</td>
</tr>
<tr>
<td>Payette</td>
<td>-0.9</td>
<td>2000</td>
<td>NA</td>
</tr>
<tr>
<td>Boise</td>
<td>0.7</td>
<td>2008</td>
<td>-1.5</td>
</tr>
<tr>
<td>Big Wood</td>
<td>-0.2</td>
<td>2010</td>
<td><strong>0.6</strong></td>
</tr>
<tr>
<td>Little Wood</td>
<td>-0.2</td>
<td>2010</td>
<td><strong>-1.3</strong></td>
</tr>
<tr>
<td>Big Lost</td>
<td>-0.2</td>
<td>2008</td>
<td><strong>0.6</strong></td>
</tr>
<tr>
<td>Little Lost</td>
<td>-0.5</td>
<td>2008</td>
<td><strong>1.3</strong></td>
</tr>
<tr>
<td>Teton</td>
<td>0.2</td>
<td>2010</td>
<td><strong>-3.9</strong></td>
</tr>
<tr>
<td>Henrys Fork</td>
<td>-0.8</td>
<td>2010</td>
<td><strong>-3.2</strong></td>
</tr>
<tr>
<td>Snake (Helse)</td>
<td>1.6</td>
<td>2006</td>
<td><strong>-1.5</strong></td>
</tr>
<tr>
<td>Oakley</td>
<td>-0.2</td>
<td>2000</td>
<td>0.4</td>
</tr>
<tr>
<td>Salmon Falls</td>
<td>-1.0</td>
<td>2008</td>
<td><strong>-0.8</strong></td>
</tr>
<tr>
<td>Bruneau</td>
<td>0.0</td>
<td>2008</td>
<td>NA</td>
</tr>
<tr>
<td>Owyhee</td>
<td>-3.3</td>
<td>2013</td>
<td><strong>-3.2</strong></td>
</tr>
<tr>
<td>Bear River</td>
<td>-0.5</td>
<td>2014</td>
<td><strong>-3.7</strong></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>SWSI</th>
<th>Percent Chance of Exceedance</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>99%</td>
<td>Much Below Normal</td>
</tr>
<tr>
<td>-3</td>
<td>97%</td>
<td>Below Normal</td>
</tr>
<tr>
<td>-2</td>
<td>75%</td>
<td>Near Normal</td>
</tr>
<tr>
<td>-1</td>
<td>63%</td>
<td>Above Normal</td>
</tr>
<tr>
<td>0</td>
<td>50%</td>
<td>Normal</td>
</tr>
<tr>
<td>1</td>
<td>37%</td>
<td>Above</td>
</tr>
<tr>
<td>2</td>
<td>25%</td>
<td>Much Above</td>
</tr>
<tr>
<td>3</td>
<td>13%</td>
<td>Much</td>
</tr>
<tr>
<td>4</td>
<td>1%</td>
<td>Much Above Normal</td>
</tr>
</tbody>
</table>
Big Lost Basin 2015 Snowpack Comparison Graph (3 sites)
Road as Provisional SNOTEL data as of Feb 11, 2015

Current as Pct of Normal: 156%
Current as Pct by Date: 156%
Current as Pct of Peak: 67%
Normal as Pct of Peak: 66%
Pct of Normal Needed to Reach Peak: 106%
Normal Peak Date: Apr 09

2015 is a mild El Nino.
2010 and 2003 were El Nino,
while 2014 was neutral.

2015 NRCS Monthly Forecasts are Squares
99% of the average Apr-Sep runoff is needed for marginally adequate surface irrigation supply

2014 April-July Runoff 40% of Normal 49 KAF

Big Lost River Basin

Water Supply (1000 Acre-Feet)

Years

Adequate Irrigation Supply Above 180 KAF
Need above 70% of average runoff

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 E1 Niño or short range weather forecasts, or a variety of other factors considered in the official forecasts. This product is not meant to replace or supersede the official forecasts produced in coordination with the National Weather Service. Science Contact: Cara.a McCarthy@pam.usda.gov www.wcc.nrcs.usda.gov/wisdaty_forecasts.html
Need above 100% of average runoff
2015 Salmon Falls Creek: Mar - Jul Volume
NRCS Monthly are Yellow Squares

Updated February 12, 2015

2015 -- based on irrigation demand of 110 KAF and projected March 31 reservoir storage of 20 KAF, 106% of average runoff or 90 KAF for Mar-Sep is needed for marginally adequate surface irrigation supply

SNOTEL Sites used: Bear Creek, Seventy-Six Creek, Pole Creek, Wilson Creek and Draw Creek.

Salmon Falls Basin 2015 Snowpack Comparison Graph (5 sites)
Based on Provisional SNOTEL data as of Feb 11, 2015

2015 is a mild El Nino, 2010 and 2008 were El Nino years while 2014 was neutral.
Trinity and the road to Trinity Mountain SNOTEL site Feb 11, 2015

Questions?

Thanks for fixing the snow reader! We appreciate your hard work!