Scientists, engineers, and technicians across the West gathered in McCall, Idaho the week of January 10 for the 62nd annual West Wide Snow Survey Training School. Training included snow sampling, avalanche recognition, outdoor survival, and emergency care to help them safely conduct snow surveys. Professional instructors from the “Learn to Return” Alaska survival school and the Alaska Avalanche School offered a wealth of knowledge and skills that formed the core of the course. As part of the training, students were required to build a snow cave and spend the night in it. The overnight snow bivouac gives participants the opportunity to practice their outdoor survival skills. Pictured above is Nick Studebaker, first time snow surveyor and new employee from the NRCS Sandpoint Field Office, in front of the snow shelter that he constructed and slept in. About 45 participants from NRCS, other federal and state agencies, private utility companies and Soil and Water Conservation Districts attended and all survived the night out. Snow fell throughout the bivouac day, with an additional 4 inches overnight, so it was a very realistic exercise.
2011 Mountain Snowpack Change between January 1 and February 1

Period 1971 to 2000

Percent Change
- >30
- 16 to 30
- 6 to 15
- No Change
- -15 to -6
- -30 to -16
- <-30
- No Survey

Prepared by
USDA, Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
http://www.nwc.noaa.gov
Today’s snow water content as % of seasonal peak ranges from: 53% in Little Wood & Big Lost to 84% in Bear River.
Last 60 days precipitation & SNOTEL Water Year-to-date precipitation ranges from 90-95% in: Big Wood, Big Lost & Payette to 130% in Bruneau, Salmon Falls & Bear.
<table>
<thead>
<tr>
<th>Region or Basin</th>
<th>January Precipitation % of Average</th>
<th>Feb 1 - 13 Precipitation as % of Monthly Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPOKANE</td>
<td>137</td>
<td>27</td>
</tr>
<tr>
<td>CLEARWATER BASIN</td>
<td>139</td>
<td>35</td>
</tr>
<tr>
<td>SALMON BASIN</td>
<td>84</td>
<td>18</td>
</tr>
<tr>
<td>WEISER BASIN</td>
<td>66</td>
<td>6</td>
</tr>
<tr>
<td>PAYETTE BASIN</td>
<td>70</td>
<td>8</td>
</tr>
<tr>
<td>BOISE BASIN</td>
<td>72</td>
<td>7</td>
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<td>BIG WOOD BASIN</td>
<td>49</td>
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<td>23</td>
<td>2</td>
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<tr>
<td>BIG LOST BASIN</td>
<td>27</td>
<td>4</td>
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<tr>
<td>LITTLE LOST, BIRCH BASINS</td>
<td>76</td>
<td>19</td>
</tr>
<tr>
<td>MEDICINE LODGE, BEAVER, CAMAS BASINS</td>
<td>64</td>
<td>23</td>
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<tr>
<td>HENRYS FORK, TETON BASINS</td>
<td>74</td>
<td>18</td>
</tr>
<tr>
<td>SNAKE BASIN ABOVE PALISADES</td>
<td>86</td>
<td>26</td>
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<tr>
<td>WILLOW, BLACKFOOT, PORTNEUF BASINS</td>
<td>92</td>
<td>11</td>
</tr>
<tr>
<td>GOOSE BASIN</td>
<td>87</td>
<td>23</td>
</tr>
<tr>
<td>SALMON FALLS BASIN</td>
<td>86</td>
<td>26</td>
</tr>
<tr>
<td>BRUNEAU BASIN</td>
<td>70</td>
<td>24</td>
</tr>
<tr>
<td>OWYHEE BASIN</td>
<td>54</td>
<td>7</td>
</tr>
<tr>
<td>BEAR RIVER BASIN</td>
<td>87</td>
<td>23</td>
</tr>
</tbody>
</table>
Change in Spring and Summer Streamflow Forecasts from January 1 to February 1, 2011

Period 1971 to 2000

Percent Difference

- > 30
- 16 to 30
- 6 to 15
No Change
- 15 to -6
- 30 to -16
< -30
No Forecast

Prepared by USDA, Natural Resources Conservation Service National Water and Climate Center Portland, Oregon
http://www.wo.cnrsc.usda.gov
February 1, 2011
50% Exceedance
Summer Streamflow Forecasts
Idaho

State Boundary
Major Basins
Percent of Average
> 180
150 - 179
130 - 149
110 - 129
90 - 109
70 - 89
50 - 69
25 - 49
< 25
Not Forecast

Map based on provisional data
## 2011 Idaho Surface Water Supply Index (SWSI)

**For January and February 2011**

<table>
<thead>
<tr>
<th>BASIN or REGION</th>
<th>January SWSI Value</th>
<th>February SWSI Value</th>
<th>February SWSI Value Based on 90% Exceedance Forecast</th>
<th>Agricultural Surface Water Supply Shortage May Occur When SWSI is Less Than</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPOKANE</td>
<td>---</td>
<td>1.2</td>
<td>----</td>
<td>NA</td>
</tr>
<tr>
<td>CLEARWATER</td>
<td>0.3</td>
<td>1.4</td>
<td>----</td>
<td>NA</td>
</tr>
<tr>
<td>SALMON</td>
<td>-0.1</td>
<td>0.0</td>
<td>----</td>
<td>NA</td>
</tr>
<tr>
<td>WEISER</td>
<td>0.2</td>
<td>-0.4</td>
<td>----</td>
<td>NA</td>
</tr>
<tr>
<td>PAYETTE</td>
<td>0.2</td>
<td>0.2</td>
<td>-2.0</td>
<td>NA</td>
</tr>
<tr>
<td>BOISE</td>
<td>1.2</td>
<td>0.8</td>
<td>-1.8</td>
<td>-1.8</td>
</tr>
<tr>
<td>BIG WOOD</td>
<td>1.2</td>
<td>0.2</td>
<td>-1.6</td>
<td>0.1</td>
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<tr>
<td>LITTLE WOOD</td>
<td>1.0</td>
<td>0.4</td>
<td>-1.8</td>
<td>-1.9</td>
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<tr>
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<td>-2.6</td>
<td>0.0</td>
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<tr>
<td>LITTLE LOST</td>
<td>0.2</td>
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<td>-2.6</td>
<td>0.6</td>
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<tr>
<td>HENRYS FORK</td>
<td>0.9</td>
<td>0.7</td>
<td>----</td>
<td>-3.3</td>
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<tr>
<td>SNAKE – HEISE</td>
<td>1.4</td>
<td>1.4</td>
<td>0.8</td>
<td>-1.8</td>
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<tr>
<td>OAKLEY</td>
<td>0.4</td>
<td>0.2</td>
<td>-2.0</td>
<td>-0.6</td>
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<tr>
<td>SALMON FALLS</td>
<td>2.4</td>
<td>1.2</td>
<td>-0.6</td>
<td>-1.4</td>
</tr>
<tr>
<td>BRUNEAU</td>
<td>3.3</td>
<td>1.8</td>
<td>-1.0</td>
<td>NA</td>
</tr>
<tr>
<td>OWYHEE</td>
<td>2.2</td>
<td>0.6</td>
<td>-0.6</td>
<td>-3.5</td>
</tr>
<tr>
<td>BEAR RIVER</td>
<td>-0.6</td>
<td>-0.6</td>
<td>-1.2</td>
<td>-2.8</td>
</tr>
</tbody>
</table>

### SWSI Scale, Percent Chance of Exceedance, and Interpretation

<table>
<thead>
<tr>
<th>SWSI Scale</th>
<th>Percent Chance of Exceedance</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>99%</td>
</tr>
<tr>
<td>3</td>
<td>97%</td>
</tr>
<tr>
<td>2</td>
<td>95%</td>
</tr>
<tr>
<td>1</td>
<td>90%</td>
</tr>
<tr>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>-1</td>
<td>37%</td>
</tr>
<tr>
<td>-2</td>
<td>25%</td>
</tr>
<tr>
<td>-3</td>
<td>13%</td>
</tr>
<tr>
<td>-4</td>
<td>1%</td>
</tr>
</tbody>
</table>

- **Much Below**
- **Below Normal**
- **Near Normal**
- **Above Normal**
- **Much Above**
Of the 18 above average years on Feb 1, only one (2004) did not reach average Apr 1 levels.
2011 Snake River near Heise: Apr - Jul Volume
NRCS Monthly / mid-Monthly Forecasts are Square!

Runoff 2010 73% of Normal, 2598 KAF

SNOTEL Sites used: Base Camp, Blind Bull, Cottonwood Ck, Lewis Lake, Snake River Sta, Slug Creek, Thumb Divide and Willow Ck
February 1 Bear River Surface Water Supply Index (SWSI)
Bear River at Stewart Dam & Bear Lake

Adequate Surface Irrigation Water Supply Above 500 KAF

Streamflow Forecast
Feb 1 = 134%
Feb 14 = 132%
Big Wood River above Hailey 7 Station Snow Index for Years 1961 - 2011
Chocolate Gulch, Dollarhide, Galena, Galena Summit, Hyndman, Lost-Wood Divide, Vienna Mine

NRCS
Natural Resources Conservation Service

February 1 Snow Water
April 1 Snow Water

Inches of Snow Water

March 1 Average 17.6
February 1 Average 13.5
April 1 Average 21.3

Years
Big Wood River at Hailey: Apr-Jul Volume
NRCS Monthly / mid-Monthly Forecasts are Squares

Updated
February 11, 2011

Runoff 2010 76% of Normal, 194 KAF

Streamflow Forecast
Feb 1 = 92%
Feb 14 = 89%

SNOTEL Sites used: Hyndman, Lost Wood Divide, Chocolate Gulch, Dollarhide Summit, Galena, Galena Summit
As of Tuesday, February 08, 2011:
SWE Percent of Average: 85
SWE Percent of Seasonal Peak: 55
Percent Needed to Reach Seasonal SWE Peak: 127

2011 Spring Rains
2011 Big Lost River below Mackay Reservoir: Apr - Jul Volume, NRCS Monthly / mid-Month Forecasts are Squares

- Daily Guidance Forecast
- Monthly Forecasts
- 2010 Runoff in %
- Skill (r^2)

Runoff 2010 77% of Normal, 109 KAF

Streamflow Forecast
Feb 1 = 87%
Feb 14 = 75%

Updated February 14, 2011

SNOTEL Sites used: Bear Canyon, Garfield RS, Swede Peak, Hyndman, Lost-Wood Divide and Stickney Mill
Southside Snake Basins Snowpack January 1, 2011

Southside Snake Basins Snowpack February 1, 2011
Sherwin SNOTEL El. 3200
Snow Water Equivalent

- Average SWE
- 2009 SWE
- 2010 SWE
- 2011 SWE

Inches of Water Content

12419000: Spokane R near Post Falls, ID

1974 Jan-Jan volume was 389%, 1249.2 KAF, Average is 321.2 KAF
Inside a snow shelter
Questions / Comments
Average Runoff for Apr-Sep
1971-2000 = 39 KAF
1981-2010 = 34 KAF
13% decrease

Adequate Irrigation Water Supply Above 40 KAF