2019 Idaho Snowpack and Water Supply Outlook

January 11, 2019

NRCS - Idaho Snow Survey

Danny Tappa & Ron Abramovich
2018

2019

Percent of Median Snowpack
January 1, 2018
Basin-wide Snow Water Equivalent as a Percentage of the 1981 to 2010 Median

Above
Median Snowpack
Below

Provisional Data - Subject to Revision

200
25 50 100 150

This map is prepared by the USDA-NRCS Idaho Snow Survey Office.
Updates & New Products

- Interactive Map (iMAP)
- Basin Comparison & Projection Graphs
- Site Comparison & Projection Graphs

Search: “Idaho Snow Survey”
Network Status

Offline:
1) Shanghai Summit (NF Clearwater)

*Network-wide intermittent data transmission issues past 2 weeks*
<table>
<thead>
<tr>
<th>Reservoir (s)</th>
<th>Percent of Capacity December 31, 2018</th>
<th>Percent of Capacity December 31, 2017</th>
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<tr>
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<td>65</td>
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<td>Boise System</td>
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<td>71</td>
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<td>Palisades &amp; Jackson</td>
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<tr>
<td>Little Wood</td>
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<td>71</td>
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<td>Ririe</td>
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Sorted by change from 2018 to 2017
<table>
<thead>
<tr>
<th>Forecast Point</th>
<th>Percent of Average</th>
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<tbody>
<tr>
<td>Apr - Jul Period</td>
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<tr>
<td>Boise nr Boise</td>
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<td>Boise River near Twin Springs</td>
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<td>Mores Creek Near Arrowrock</td>
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<td>SF Boise at Anderson Ranch Dam</td>
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<td>Camas Creek at Blaine</td>
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<td>Big Wood River at Hailey</td>
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<td>Big Wood blw Magic Dam</td>
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<td>Big Lost blw Mackay Resv.</td>
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<td>Snake River nr Heise</td>
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<td>Mar - Jul Period</td>
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<td>Salmon Falls Creek</td>
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<td>Feb - Jul Period</td>
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<td>Owyhee River near Gold Creek</td>
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<td>Owyhee River Near Rome</td>
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<tr>
<td>Owyhee River below Owyhee Dam</td>
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<tr>
<td>BASIN or REGION</td>
<td>SWSI Value</td>
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<tr>
<td>-------------------------</td>
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<tr>
<td>Spokane</td>
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<td>Weiser</td>
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<tr>
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<td>Bruneau</td>
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<tr>
<td>Owyhee</td>
<td>0.2</td>
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<td>Bear River</td>
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**SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION**

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<tr>
<td>99%</td>
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<td>75%</td>
<td>63%</td>
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<td>37%</td>
<td>25%</td>
<td>13%</td>
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- Much | Below | Near Normal | Water Supply | Normal | Above | Much |
# SNOTEL Snowpack & Precipitation Summary

**for January 10, 2019**

<table>
<thead>
<tr>
<th>Region or Basin</th>
<th>January 10 SWE as % of Median</th>
<th>Percent of Seasonal Peak</th>
<th>January 1-10 Precipitation Compared to Normal for Month</th>
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<tbody>
<tr>
<td>NORTHERN PANHANDLE REGION</td>
<td>94</td>
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<tr>
<td>SPOKANE BASIN</td>
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<td>PAYETTE BASIN</td>
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<td>BOISE BASIN</td>
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<td>BIG LOST BASIN</td>
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<td>LITTLE LOST, BIRCH BASINS</td>
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<td>MEDICINE LODGE, BEAVER, CAMAS</td>
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<td>SNAKE BASIN ABOVE PALISADES</td>
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<td>WILLOW, BLACKFOOT, PORTNEUF</td>
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<td>SNAKE BASIN ABOVE AMERICAN FALLS</td>
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<td>BRUNEAU BASIN</td>
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<td>OWYHEE BASIN</td>
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<tr>
<td>BEAR RIVER BASIN</td>
<td>90</td>
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</table>

SWE = Snow Water Equivalent

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**Total Precipitation Anomaly: 01 Jan 2019 - 09 Jan 2019**

Period ending 7 AM EST 09 Jan 2019
Base period: 1981-2010
(Map created 10 Jan 2019)
As of Jan 1, 2019 about a 70% Chance of Adequate Supplies

Surplus Threshold a volume greater than 950 KAF with a flow greater than 1,800 cfs for 8 or more days meets the surplus threshold.
These graphs are from this web page:

Historic Data

Historical Snow Indexes and Snow Graphs for Idaho Basins
January Boise Basin 7 Station Snow Index for Years 1961 - 2018
Atlanta, Dollarhide, Graham, Jackson, Mores Creek, Trinity Mountain, Vienna Mine

10th lowest since 1961
3 out of 17 years snowpack returned to normal levels by April 1

January 1 Median 12.1
February 1 Median 18.7
March 1 Median 23.5
April 1 Median 27.6

USDA

Inches of Snow Water

Years
As of Jan 1, 2019
50% Chance of Adequate Supplies
< 10% of surplus
Surplus Above 2,200 KAF
Note increase in forecast skill level during January as we progress from being 40% of the way thru winter on Jan 1 to 60% on Feb 1.

2019 Jan 1 Boise River near Boise Daily Water Supply Forecast

2019 Boise River near Boise: Apr - Jul Volume
NRCS Monthly Forecasts are Squares

2018 Apr-July Volume
90% of Normal 1,140 KAF

2019 - based on irrigation demand of 1,500 KAF and Mar 31 combined projected reservoir storage of 630 KAF
64% of average or 870 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
Recreation Information:
Salmon River Basin
- MF Salmon Snowpack 6th lowest since 1964
- Salmon River at White Bird ~75% of average
8th lowest since 1961
2 out of 17 years snowpack returned to normal levels by April 1
As of Jan 1, 2019 ~20% Chance of Adequate Supplies

Adequate Irrigation Supply Above 180 KAF
As of Jan 1, 2019 a 70% Chance of Adequate Supplies
15th lowest since 1961

5 out of 21 years snowpack returned to normal levels by April 1

January Snake River Basin above Jackson Lake 5 Station Snow Index for Years 1961 - 2018

Grazzy Lake, Lewis Lake Divide, Snake River Station, Thumb Divide, Two Oceans

- January 1 Snow Water
- April 1 Snow Water

- January 1 Median 12.5
- February 1 Median 17.6
- March 1 Median 21.6
- April 1 Median 25.6
Bear River Basin - Surface Water Supply Index

- Bear Lake Storage & April – September Runoff
- After lake fills, it provides adequate supplies for 3+ years

Jun 1 Historic and Forecasted Surface Water Supply
Bear River Basin

- Full Lake 1,302 KAF
- 6 years
- 3 years
- 5 years
- 3+ years

Adequate Irrigation Supply Above 280 KAF
Think Snow!!