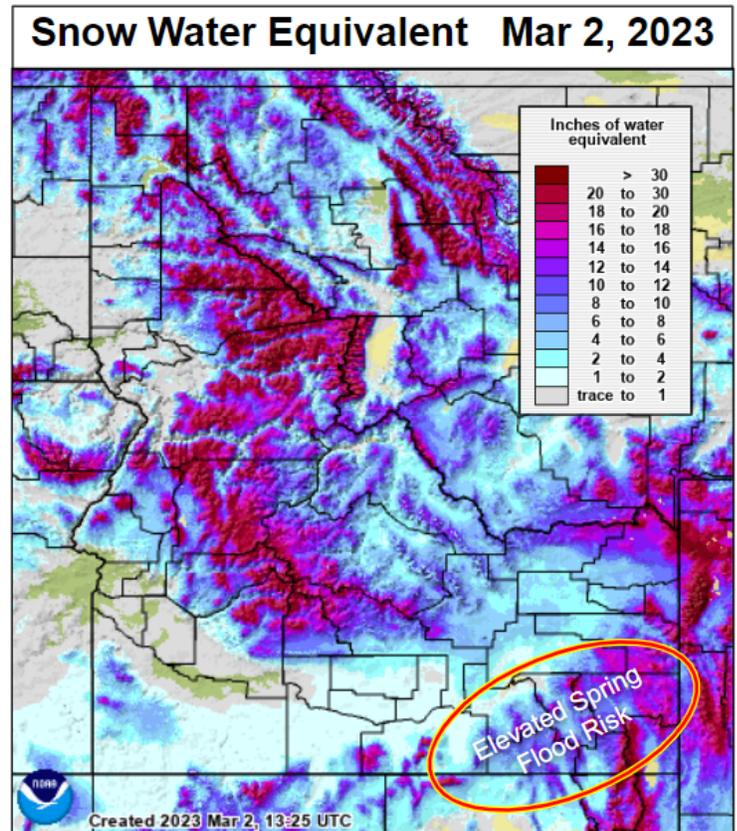


Idaho Spring Flood and Water Resources Outlook

Spring Flood Potential

The risk for spring flooding due to snowmelt is average to below average for the majority of Idaho. However, portions of eastern Idaho where above or much above normal snowpack exists, such as the Portneuf, Blackfoot, Big Wood, and Big Lost River Basins, have a higher than average risk for spring snowmelt flooding. In addition to mainstem river flood potential in the east, an above-average low level snowpack could result in sheet flooding across low-lying areas through eastern Idaho. Areas across north-central and northern Idaho generally have a below average risk due to soil moisture deficits from long and short-term dryness and slightly below normal snowpack. Low elevation snowpack across south-central, southwest, and northern Idaho is limited which lowers the risk of snowmelt flooding in these areas as well. Idaho's snowpack as a whole typically continues building through March and peaks in early April, leaving several weeks ahead of us for additional snow accumulation and potential changes to the spring flood risk.

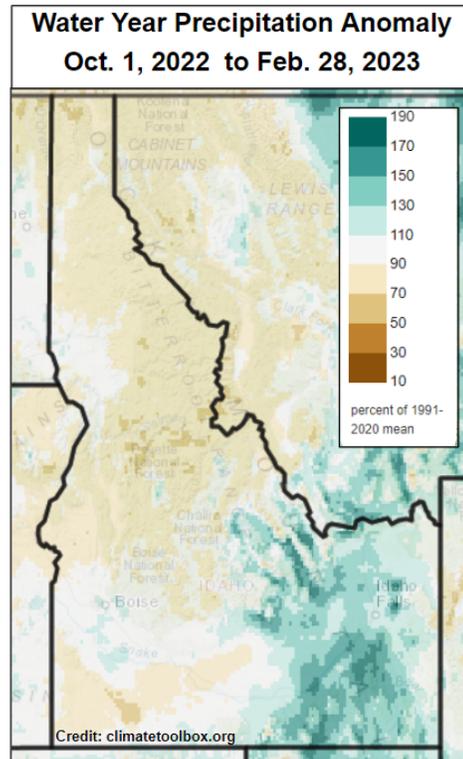
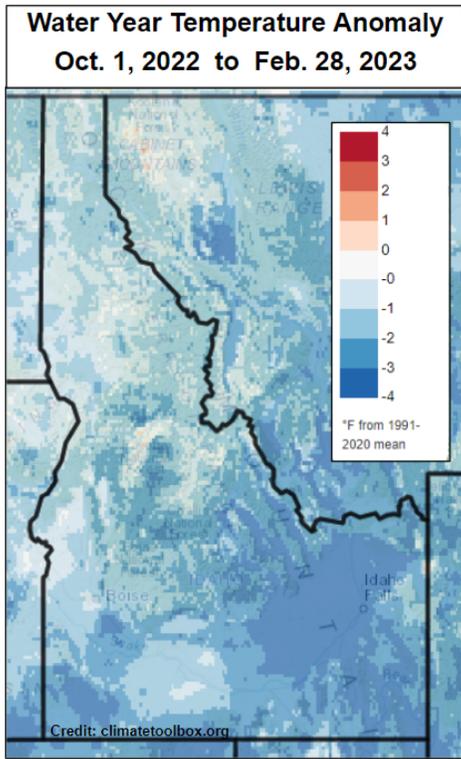


The primary factors in the development of spring flooding are the occurrence of persistent above normal temperatures, and rain on snow precipitation events. Even if mainstem rivers do not reach flood stage, smaller creeks and streams can still overflow their banks. Under the right scenario, spring flooding is possible even for areas that have low snowpack. Additionally, wildfire burn scars can have a significant impact on local flood potential during spring snowmelt.

Temperature and Precipitation

The 2023 Water Year started off warm and quite dry across Idaho. October precipitation was well below normal for the majority of the state while much above normal temperatures prevailed. Large scale weather pattern changes brought several good storms and below normal temperatures to Idaho in November and December. This resulted in a good start to the early season snowpack. However, water year precipitation continued to lag across much of the state and by the end of December only 60 to 80 percent of normal had occurred across south-central and far southwest Idaho, the Salmon and Clearwater Basins in north-central Idaho, and northern portions of the panhandle. Most of Idaho received well below normal precipitation in January and February with the exception of eastern Idaho where precipitation was normal to well above normal. January

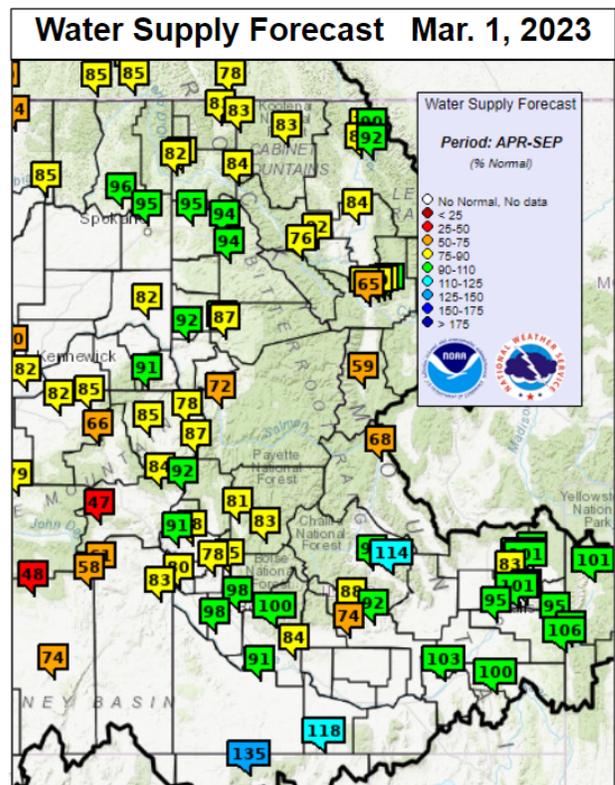
temperatures were normal to below normal across central and southern Idaho and a little above normal across the Idaho panhandle. February temperatures were below normal across the entire state. As of March 1, water year precipitation ranged from 90 to 140 percent of normal across most of southern Idaho. Meanwhile, the Snake River headwaters in western Wyoming and most of the central mountains and northern Idaho ranged from 50 to 90 percent of normal. The driest areas of the state were the Salmon River and Lemhi River Basins in north central Idaho where water year precipitation was less than 50 percent of normal in places.



Water Supply

National Weather Service water supply forecasts for April through September 2023 call for near normal runoff volumes for most eastern Idaho watersheds. Meanwhile, forecasts vary considerably across southwest, central and northern Idaho.

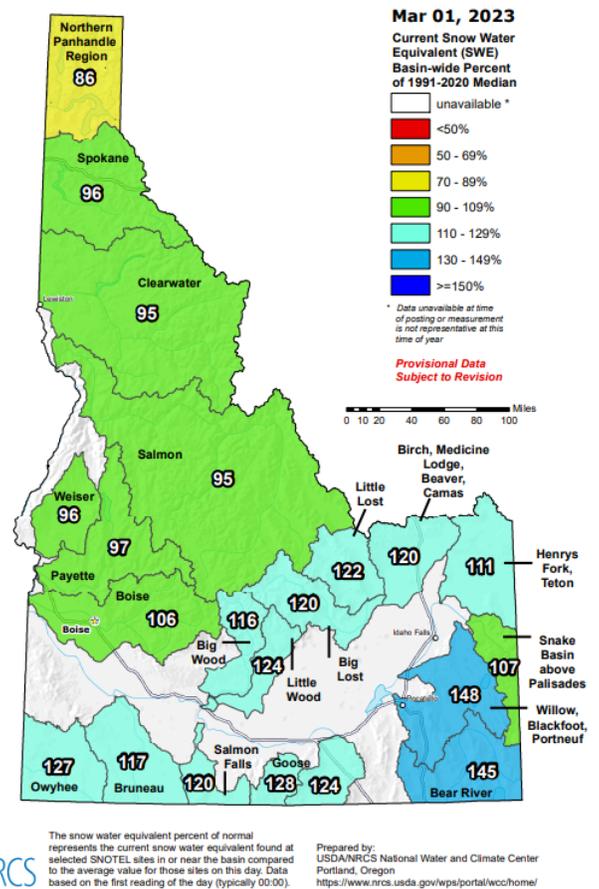
Forecasts for most of eastern Idaho, the Snake River Headwaters, and southern Idaho along the Nevada border are generally 95 to 115 percent of normal. For the rest of southwest Idaho and the central mountains, including the Boise and Payette River systems, forecasts range from 75 to 100 percent of normal. Salmon River Basin forecasts are for 70 to 80 percent of normal while northern Idaho forecasts are at 80 to 95 percent of normal.



Snowpack

Below normal temperatures and a series of storms in November and December resulted in a good start to the early season snowpack across Idaho. By the end of December the snowpack was above normal for almost the entire state, especially in southern Idaho where percentages were 140 to 160 percent of normal. January and February were dominated by a drier weather pattern which caused snowpack percentages to trend down closer to normal or even below normal for some river basins in central and northern Idaho. Southeast Idaho basins such as the Portneuf, Blackfoot, Willow, and Bear were the exception where snowpack remained well above normal. As of March 1, snowpack percentages generally increase from north to south across the state with most river basins in southern Idaho ranging from 120 to 145 percent of normal while central and northern Idaho basins range from 85 to 100 percent of normal. Idaho snowpack as a whole typically builds through March and peaks in early April.

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

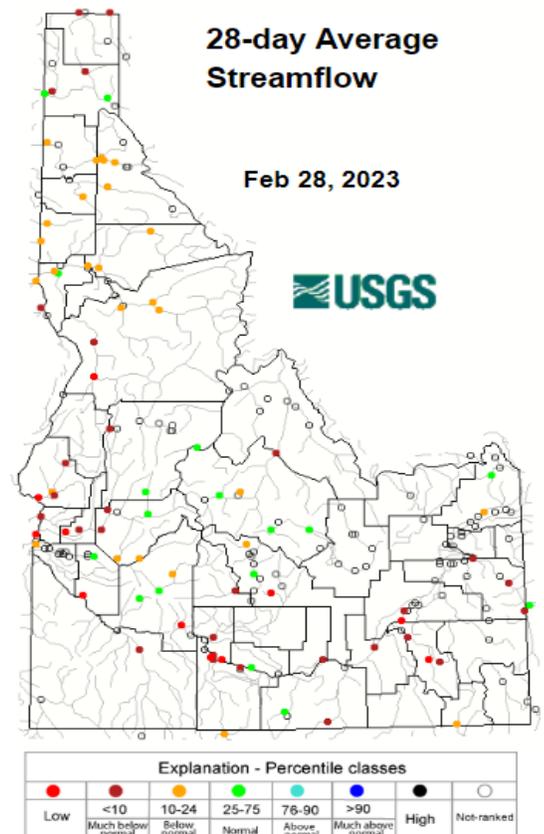


Reservoirs

As of March 1, Bureau of Reclamation reservoir storage in the Upper Snake Basin was at 46 percent of capacity and 95 percent of average. Owyhee Reservoir was at 19 percent of capacity and 35 percent of average. The Boise Reservoir System was at 59 percent of capacity and 115 percent of average. The Payette System was at 59 percent of capacity and 94 percent of average. Weather patterns, irrigation demand, and flood control needs will drive reservoir operations over the next several months. Wet spring weather or extended periods of above normal temperatures resulting in rapid snowmelt and large reservoir inflows could result in significant fluctuations in reservoir discharge and downstream river levels.

Observed Streamflow

Observed runoff so far this water year has been below average statewide, and particularly low on the St. Joe and Coeur d'Alene Rivers in northern Idaho where runoff has only been around 40 to 50 percent of normal. February



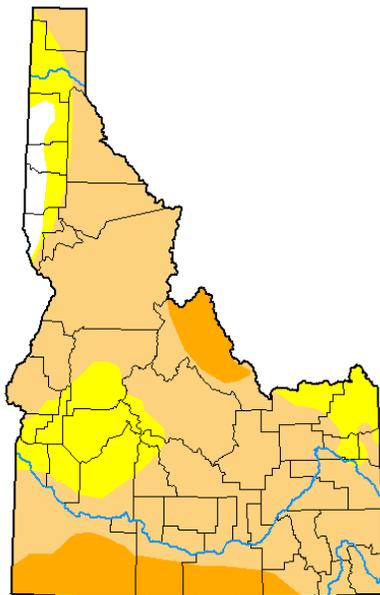
runoff was much below normal for the mainstem Snake River in southern Idaho, and across portions of the Salmon River Basin, west-central mountains, and northern Panhandle.

Drought

Long and short-term precipitation deficits along with extreme summer and early fall heat have allowed varying degrees of drought to persist across the state. Temperature and precipitation patterns for the remainder of winter and this spring will determine whether or not drought conditions improve or deteriorate.

U.S. Drought Monitor Idaho

February 28, 2023
(Released Thursday, Mar. 2, 2023)
Valid 7 a.m. EST



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

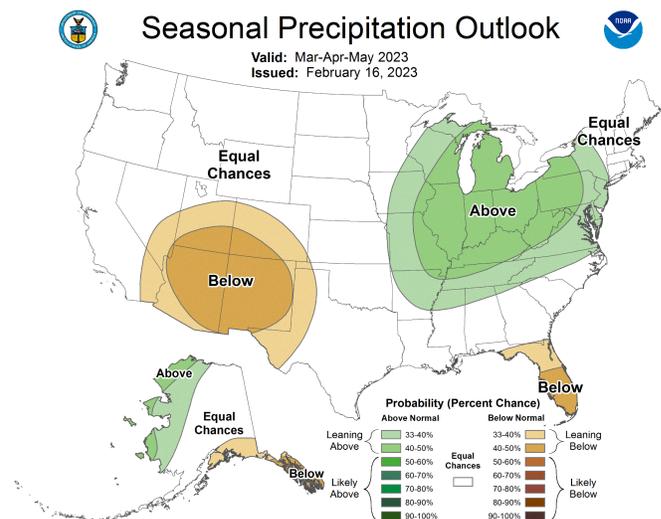
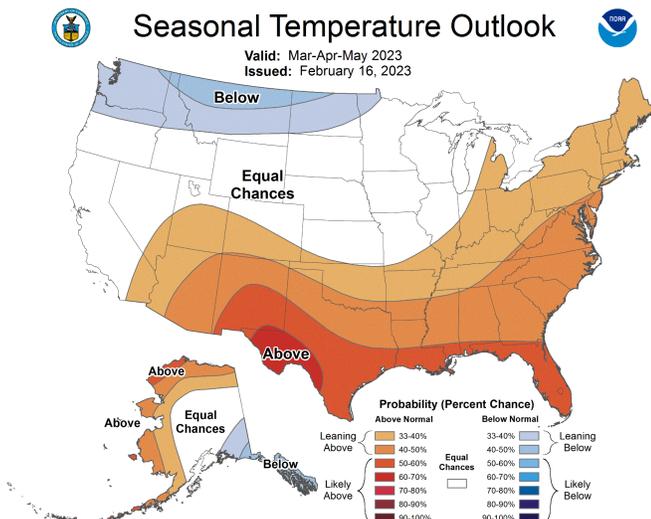
Richard Heim
NCEI/NOAA



droughtmonitor.unl.edu

Seasonal Outlook

The outlook for March through May favors below normal temperatures across northern Idaho and equal chances of either below, above, or normal temperatures across southern Idaho. The precipitation outlook calls for equal chances for either below, above, or normal precipitation.



On-line Resource

Water Supply Volume Forecasts...

National Weather Service-Northwest River Forecast Center www.nwrfc.noaa.gov/ws/

National Weather Service-Colorado Basin River Forecast Center

www.cbrfc.noaa.gov/

Snowpack Information...

National Weather Service-Northwest River Forecast Center

www.nwrfc.noaa.gov/snow/

National Weather Service-National Operational Hydrologic Remote Sensing Center

www.nohrsc.noaa.gov/

USDA-Natural Resources Conservation Service

www.nrcs.usda.gov/wps/portal/nrcs/main/id/snow/

Reservoir Storage...

Bureau of Reclamation Reservoir Storage

www.usbr.gov/pn/hydromet/select.html

USDA-Natural Resources Conservation Service

www.nrcs.usda.gov/wps/portal/nrcs/main/id/snow

Drought Information...

U.S. Drought Portal

www.drought.gov

Peak Flow Forecasts...

Northwest River Forecast Center

www.nwrfc.noaa.gov/peak/

Colorado Basin River Forecast Center

www.cbrfc.noaa.gov/rmap/peak/peaklist.php

Temperature and Precipitation Outlook...

Climate Prediction Center

www.cpc.ncep.noaa.gov/