
News Release

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Kip K. Allander

775-887-7675

kalland@usgs.gov

Greg Pohl

775-674-7523

Greg.Pohl@dri.edu

Ryan McClymont

503-251-3237

rmcclymont@usgs.gov

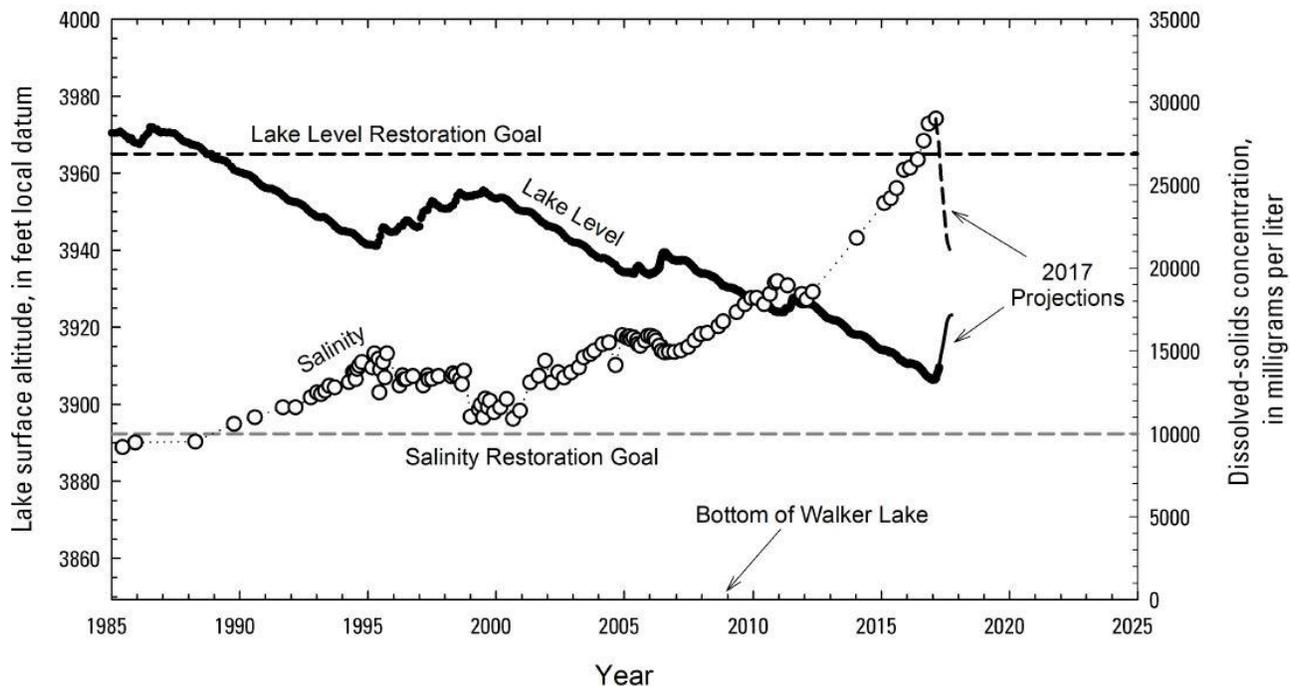
2017 Snowmelt Runoff Signals Good News for Walker Lake but Raises Flooding Concerns Along Walker River

CARSON CITY, Nev. – The U.S. Geological Survey, in collaboration with the Desert Research Institute and the Walker Basin Conservancy have produced estimates for potential river flows and changes to Walker Lake from the 2017 snowpack melt.

The USGS model simulations indicate that high flows will be present for the Schurz Community and may persist through mid-July before starting to abate. Although this reach of the river is dry during most summers, it appears that flows could last into October this year.

“Although the threat of spring and summer flooding along Walker River is a major concern, the projected prolonged period of high flows will have a positive benefit for Walker Lake,” said USGS hydrologist Kip Allander.

The simulations suggest that Walker Lake will rise by as much as 15 to 18 feet this year, the most in a single year in recorded history. The lake began receiving inflows on Feb. 5 and has already risen 4 feet so far this year. Moreover, inflows of fresh water to Walker Lake should cause a corresponding decrease in the lake’s salinity, in the form of dissolved solids concentration, by approximately 8,000 milligrams per liter, reducing the lake’s salinity to about 21,000 mg/L. Walker Lake was at 33 percent capacity at the beginning of the year with respect to the target restoration volume of 2.8 million acre-feet, and model simulations indicate the lake’s restoration capacity may increase to 50 percent by the end of this season’s runoff.



“The projected increase in Walker Lake levels and decrease in lake salinity is good news for the Walker River Basin Restoration program. It provides an improved starting point for our restoration efforts and goals to restore Walker Lake to a viable fishery and stopover point for migratory birds,” said Jeff Bryant, Executive Director for the Walker Basin Conservancy, the nonprofit leading the efforts to restore Walker River and Walker Lake ecosystems. “However, we know that years like this don’t happen often and Walker Lake’s ecologic survival ultimately depends on a steady inflow of fresh water.”

The DRI computer model simulations indicate runoff from the East and West Walker River Basins could last well into the summer. Downstream flows in Smith and Mason Valley’s will be very high at times, with flows also lasting well into the summer. Fortunately, diversions of water for agricultural use, as well as infiltration into aquifers in these two valleys will help reduce downstream flows during peak periods of melt.

“The USGS and DRI modeling effort in the Walker Basin as well as official forecasts generated by the National Weather Service indicate record or near record volumes are likely this year on both forks of the river,” said Tim Bardsley, a hydrologist with the California Nevada River Forecast Center of the NWS. “Evaluation of our forecasts for the biggest historic runoff years indicate that water resources managers should certainly not rule out the higher end of the forecast range this season, especially in the East Walker basin where an elevated groundwater table could lead to further enhanced runoff efficiency.”

The runoff projections were developed using computer models of the Walker River Basin hydrologic system developed over the last 10 years for the purpose of understanding impacts of water management actions on groundwater conditions, river flows and lake levels.

“Although forecasting seasonal snowmelt runoff was not the original purpose of these physically based models, we realized that they were well suited for this purpose, and that we could assist water forecasters, managers, and local communities to determine potential runoff amounts and associated increases in Walker Lake levels,” explained Greg Pohll, a hydrologist from DRI researching Walker River Basin water issues.

Pohll and his fellow hydrologists cautioned that their model projections are based on a number of assumptions regarding operation and management of the reservoirs as well as future weather conditions. While use of these models for projecting seasonal runoff is informative, it is also still experimental. Official seasonal runoff forecasts are produced by both the Natural Resources Conservation Service and the NWS.

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