

## **Idaho's 2007 Summary and 2008 Water Supply Outlook Report as of October 17, 2007**

The outlook for the new water year and next year's water supply begins optimistically as most of our Idaho SNOTEL sites have already received above normal precipitation in the first half of October. The mountains have started receiving rain and snow and the weather forecast calls for more weather across the Pacific Northwest! Soil moisture sensors at our SNOTEL sites are responding to the recent precipitation during this month. However, with one of the driest summers on record, the soils will need more rain to satisfy the soil moisture deficit before the onset of the winter snowpack. If this scenario fails to happen, then some of the snowmelt water next spring will be consumed by the underlying soil matrix before flowing into streams and reservoirs.

Each watershed responds differently and certainly not linearly to fall moisture, magnitude of winter snowpack and spring precipitation. For example, the Boise Basin historically needs 1,500,000 acre-feet of streamflow and reservoir storage for adequate irrigation supplies based on our Surface Water Supply Index. With reservoir storage at minimal amounts after the dry 2007 summer, projected reservoir storage for next year will only provide about one-third of the required irrigation amount. The other two-thirds or about 1 million acre-feet is needed from this winter's snowpack and its ability to produce streamflow. For the Boise basin, a snowpack of 85% of average on April 1 is needed to produce the required 1 million acre-feet, a runoff volume of 68% of average. This is based on historical records and the fact that last year's snowpack that was 62% of average on April 1, yielded only 48% of average streamflow. With carryover reservoir storage even less in the upper Snake basin, the carryover storage will only provide 20% of next year's irrigation supply. The remaining 3,600,000 acre-feet, which is the normal runoff amount, is needed from this winter's snowfall. Again, based on history or those worst case scenarios where an average snowpack yielded below average streamflow in drought years, a snowpack greater than 112% is need on April in the upper Snake basin. This provides some leverage in case a dry spring occurs like in 2007 or a gradual snowmelt allows more water to infiltrate into the ground. A snowpack of 78% of average on April 1 is needed in the Little Wood basin to provide adequate irrigation supplies, while elsewhere, a snowpack 105 to 135% of average snowpack is needed from the Bear River to the Big Wood basin. If snowpack levels are much below these thresholds, then water users will be betting on spring precipitation to make up the difference. This full report on amounts needed and summary of the past year's runoff is available on the Idaho Snow Survey Water Supply web page at: <http://www.id.nrcs.usda.gov/snow/watersupply/>

On a positive note, the Climate Prediction Center has confirmed La Nina conditions in the equatorial Pacific, which is usually associated with a wet pattern for the Pacific Northwest. Note that the key word is "usually" and that it is too early to count on the precipitation that the Pacific Northwest greatly needs for all water demands but if the current weather patterns hold, our outlook will be much more promising than what occurred in 2007.