

# STATE OF UTAH GENERAL OUTLOOK

May 1, 2011

## SUMMARY

Snowpacks are above and much above average over most of Utah with the lone exception of the area near Monticello which is below normal. Given exceptionally high snowpacks in northern Utah, a hot dry April would have been most welcome, instead April was cool and very wet leading to substantial increases in snowpacks on the Bear, Weber and Provo watersheds. Low elevation snowpacks in northern Utah are running from 250% to 750% of average with substantial amounts of snow water equivalent (10-25 inches). This is 25% to 250% **higher than 1983 levels!** This low elevation snowpack constitutes a significant hazard for high flows once the weather turns warm. Streamflows are responding quickly to even moderate energy inputs. For example – Bear Lake rose by 132,000 acre feet in April – **while snowpacks were increasing, not melting!** This inflow was from the very low elevation snowpack we don't even monitor. As perspective – during the drought years in the early 2000's, total April-July Bear Lake inflows were in the 10,000 to 20,000 acre foot range. Needless to say, water supply conditions are excellent across all basins of the state but the potential for agricultural and other inundation is high. Snowpacks in northern Utah range from 172% on the Uintahs to 210% on the Weber. In southern Utah, snowpacks range from 144% in southeastern Utah to 165% on the Virgin. April precipitation was much above normal (154%-200%) over northern Utah and above to much above average over southern Utah (132%-163%), which brings the year to date precipitation to much above normal statewide at 146%. Current soil moisture saturation levels in runoff producing areas are: Bear – 75%, Weber – 72%, Provo – 69%, Uintah Basin – 64%, SE Utah – 77%, Sevier – 74% and SW Utah – 69% of saturation. These are very high values and should lead to higher runoff efficiency. High snowpacks and high soil moisture have the potential for extremely high flows. Reservoir storage is currently at 75% of capacity statewide which is 2% more than last year at this time. General water supply conditions are much above average across the state. Streamflow forecasts range from 110% Ashley Creek nr Vernal to 385% of average for Sevier River nr Kingston. Surface Water Supply Indices range from 62% on the Bear River to 98% for the Weber Watershed.

## SNOWPACK

May first snowpacks as measured by the NRCS SNOTEL system are as follows: Bear - 200% (record high), Weber - 210%(record high), Provo - 203%(record high), Uintahs - 172%(near record high), southeast Utah - 144%, Sevier - 156%, southwest Utah - 165% and the statewide figure is 183% of average(near record high). Snowpacks in northern Utah are much higher than their April 1 values having increased substantially (2 to 5 inches of water) over the past month. Snowpacks in southern Utah had melt rates of about 50% of average over southeast Utah and the Sevier River and thankfully about normal melt rates over the southwest.

## PRECIPITATION

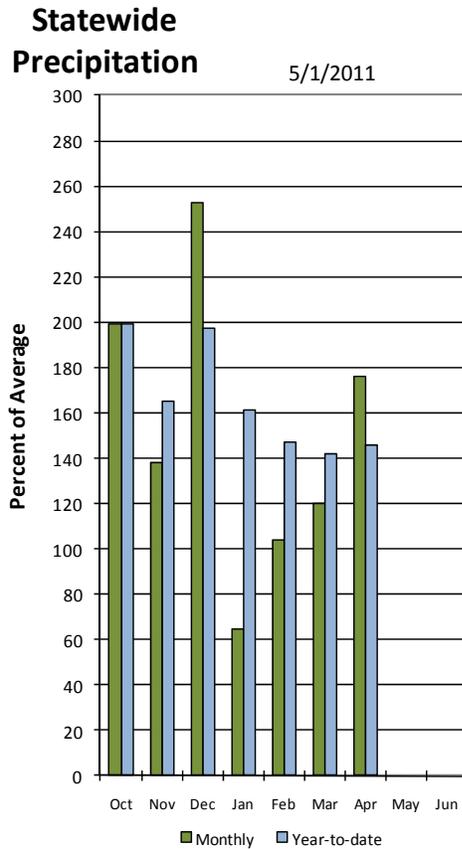
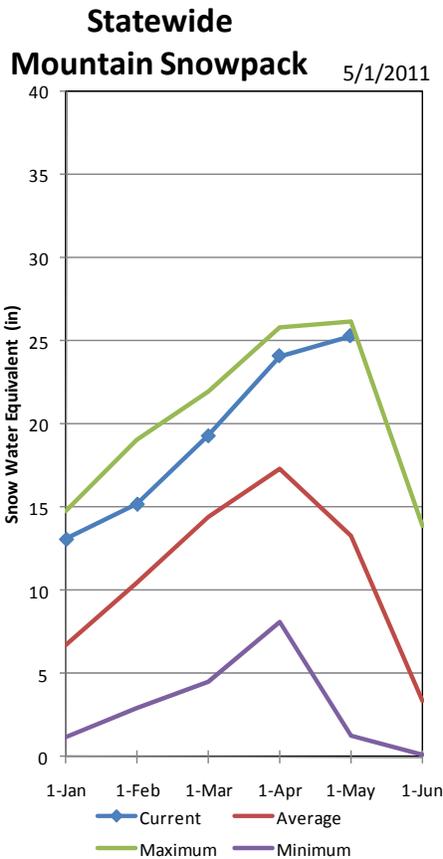
Mountain precipitation as measured by the NRCS SNOTEL system during April was: Bear – 190%, Weber – 200%, Provo – 198%, Uintahs – 154%, SE Utah – 172%, Sevier – 163%, SW Utah – 132% and the statewide figure is 176% of average. This brings the seasonal accumulation (Oct-April) to 146% of average statewide.

## RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 75% of capacity, 2% more than last year. Reservoir storage by Basin: Bear – 47%, Weber – 65%, Provo – 93%, Uintah Basin – 83%, SE Utah – 53%, Sevier – 82%, SW Utah – 89% of capacity.

## STREAMFLOW

Snowmelt streamflows are expected to be above to much above average across the state this year. Forecast streamflows range from 110% Ashley Creek Nr Vernal to 385% on the Sevier River nr Kingston. Most flows are forecast to be in the 160% to 250% range. Streamflows are responding quickly to what snowmelt has occurred as well as saturated soils. For example, the Sevier River at Kingston (provisional data) has had the second highest April flow since 1915 with just 50% of an average April snowmelt.



## May Statewide Reservoir Storage

