

A Review of the 2015 Water Year in Colorado

Nolan Doesken, Zach Schwalbe and Noah Newman,
Colorado Climate Center, Department of Atmospheric Science, Colorado State University

Abstract. After the September floods of 2013, most of Colorado enjoyed a good year in 2014 with temperatures, precipitation and snowfall generally near the long-term average for much of the state. This resulted in adequate to excellent water supplies and relatively comfortable conditions. Water year 2015 (October 1, 2014 -- September 30, 2015) got off to a good start with fairly generous autumn precipitation. But as winter progressed, mountain snowpack accumulation lagged behind normal expectations. By the time of the 2015 CSU Hydrology Days conference last spring, water supply concerns were growing, especially over the Upper Colorado River Basin. Unseasonably warm early spring temperatures in March and April kick started earlier than average snowmelt. Then, major changes in weather patterns took place in mid April. From 16 April into early June 2015, major slow--moving storms crossed Colorado almost every week. By May and June, drought concerns were abruptly replaced by flood threats. Wet weather continued into midsummer but then gave way to a very dry finish to the growing season for much of the state. The South Platte and Arkansas River basins ended up with much above average streamflow for the year while the Colorado and Rio Grande, which had earlier in the year been predicted to have very low streamflow, both ended up with near average runoff for the year. Evapotranspiration rates were low during the cloudy, wet late spring and early summer, but returned to near normal later in the growing season thanks to a warm and dry finish to the growing season in August and September. The story of the 2015 Water Year, as well as a peek into the first 6 months of WY2016 will be presented. The remarkable "Miracle May" --will be described.