Projected Climate-Change Impacts on Colorado Water

From Colorado River Water Availability Study & Joint Front Range Climate Change Vulnerability Study

Fact Sheet by the Rocky Mountain Climate Organization, May 2012

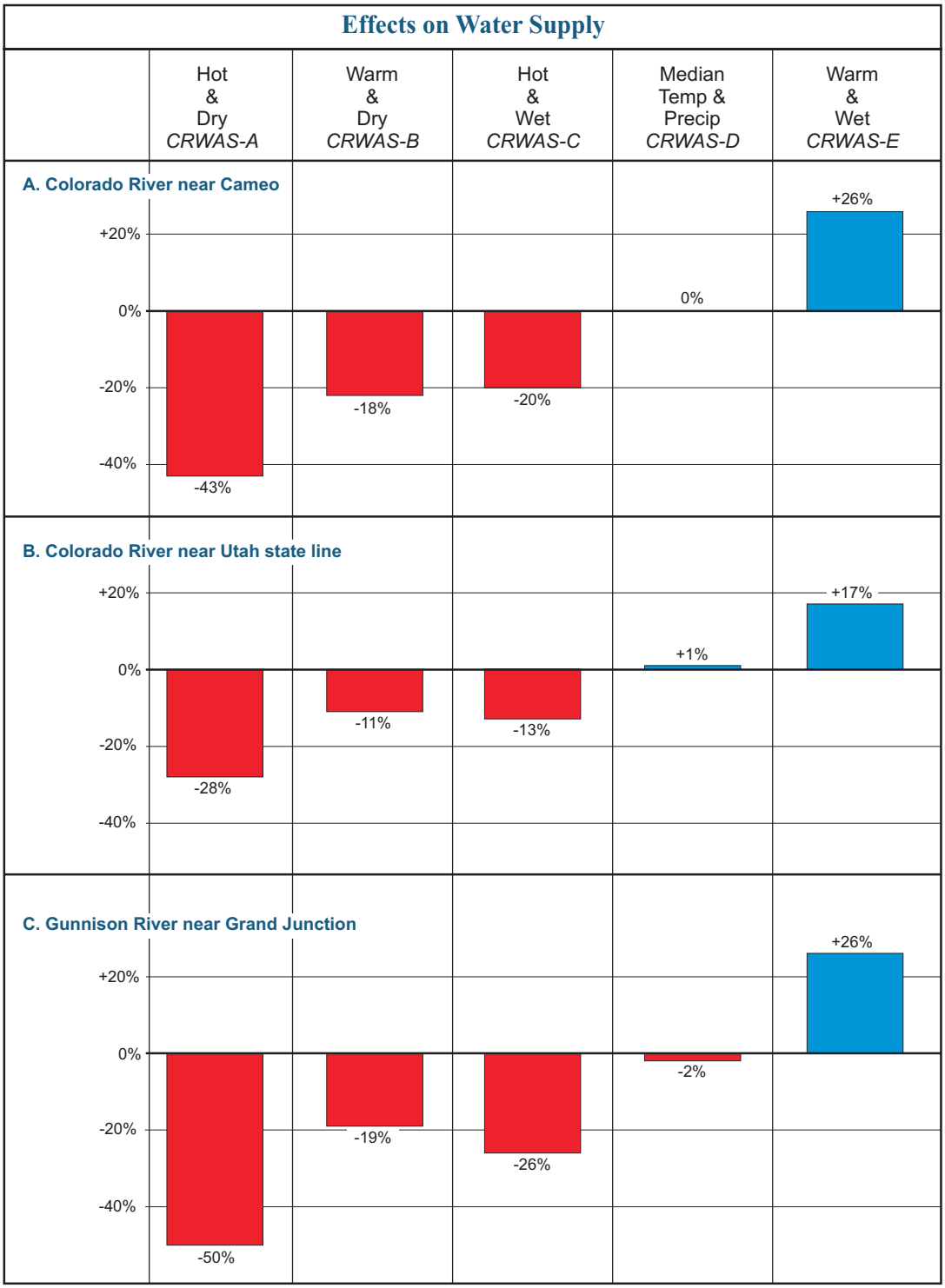

Figure 1. Projected changes in water supplies in Colorado in 2040 (representing projections for 2025-2054), compared to 1950-2005, from the Colorado River Water Availability Study (CRWAS) (figures 1A-1F) and the Joint Front Range Climate Change Vulnerability Study (JFRCCVS) (figures 1G-1I). Results from five climate models (the same in both studies, although labeled differently), chosen to be representative of current climate projections, and either one hydrology model (CRWAS) or two models (JFRCCVS, see page 3). Comparisons are to historic flows after diversions and reservoir operations (CRWAS) or to historic flows before diversions and reservoir operations (JFRCCVS).

Figure 1, continued.

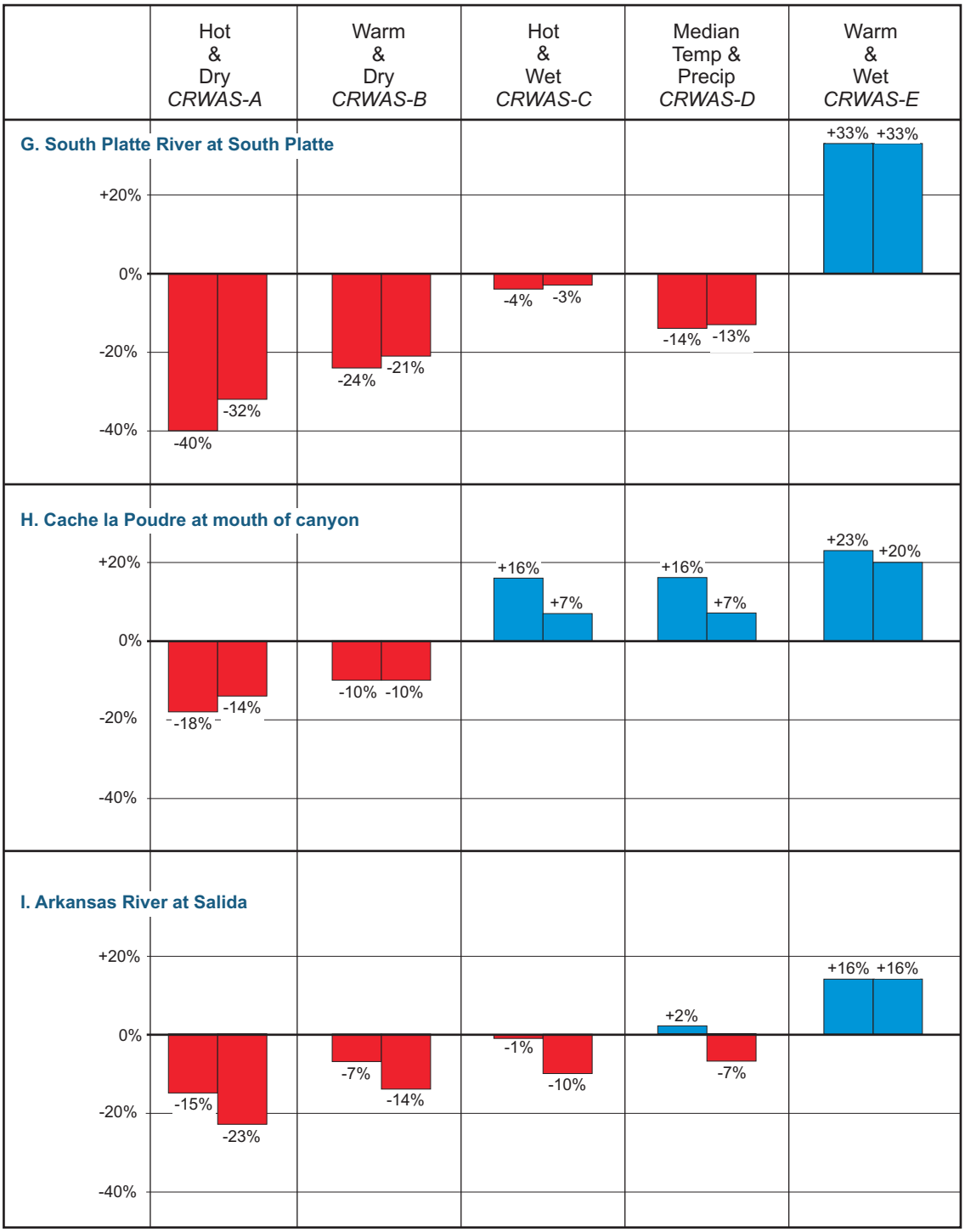

Figure 1, continued. In figures 1G-1I above, representing JFRCCVS projections, the left bar in each column shows projections using the Sacramento hydrology model and the right bar shows projections using the WEAP hydrology model.

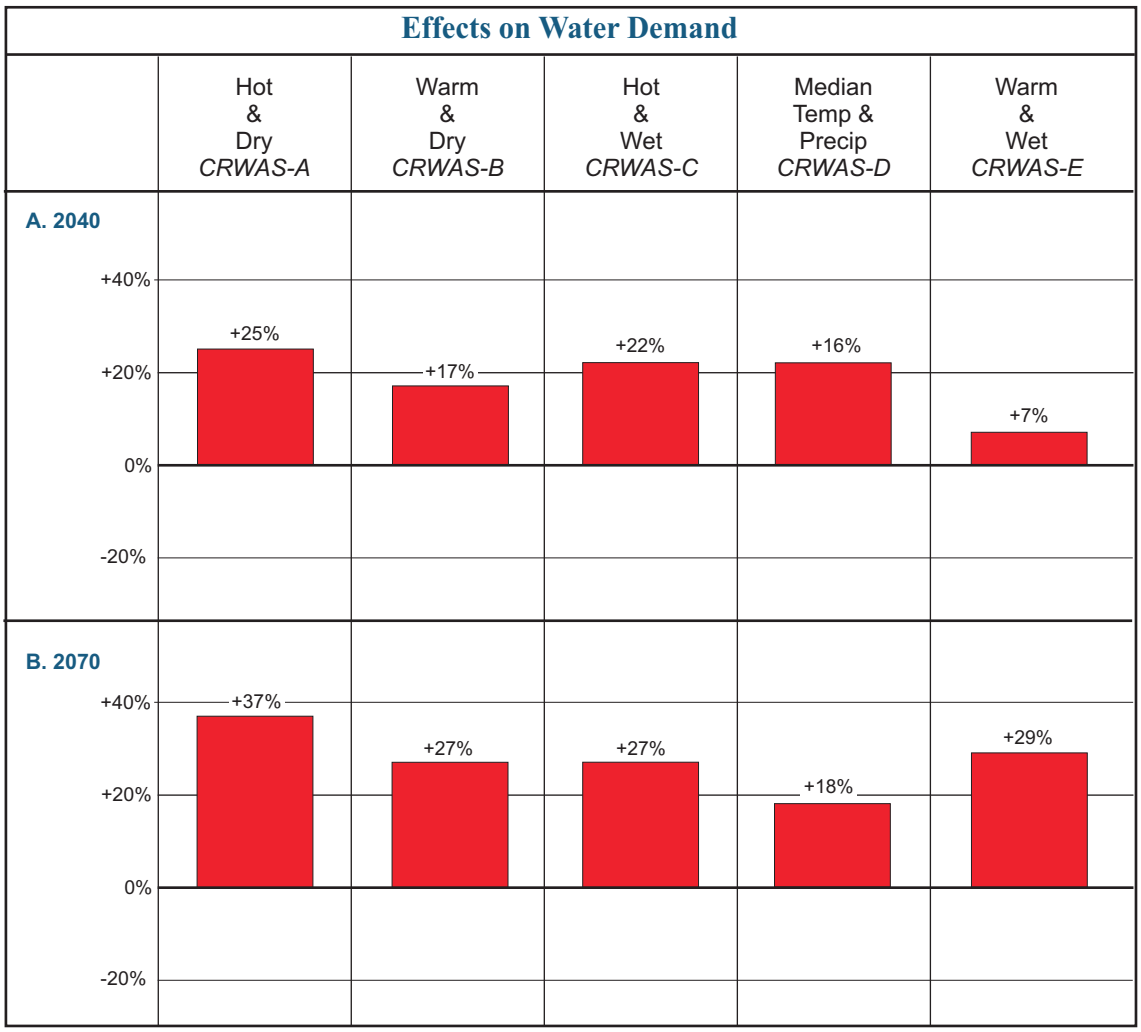

Figure 2. Pojected changes in Western Slope crop irrigation requirements in 2040 (representing projections for 2025-2054) (Figure 2A) and in 2070 (Figure 2B), compared to 1950-2005, from the Colorado River Water Availability Study (CRWAS). Changes reflect modeled effect of projected temperature and precipitation changes on the maximum amount of water crops could consume if given a full water supply, minus the projected contribution of precipitation to crop water consumption, and allowing for changes in growing season length.