

ABSTRACT

The Impact of the Retirement of Coal-Fired Power Plants on Future Consumptive Uses of Water in the Upper Colorado River Basin

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From the early 1960s through the mid-1980s ten major coal-fired electrical power generating stations were constructed in the Upper Colorado River Basin. At the peak, the plants were collectively consuming about 170,000 acre-feet per year of Colorado River water. Due to the age of these plants and a desire by the owners to reduce their carbon footprints, these plants are being shut down. The decommissioning process began in 2014 with the retirement of three of the five units on the San Juan Generating Station. In December 2019, the basin's largest plant, the Navajo Generating Station just outside of Page, Arizona was permanently shut down. By sometime in the early 2030s, probably sooner, all ten of these plants will be shuttered. Plant owners are currently assessing options for future uses of the water rights associated with the plants. The 170,000 acre-feet of annual consumption represents about 4% of the total Upper Basin uses. Although annual uses vary, based on the Consumptive Uses and Losses Reports published by the Bureau of Reclamation, total Upper Basin consumptive uses have been stable with no discernable trend since the mid to late 1980s. While projects are still being proposed that could increase future consumptive uses, the closing of coal-fired power plants and other economic and land-use trends in the Upper Basin suggest that future consumptive will remain flat or even slightly decline. Flat or declining future consumptive uses in the Upper Basin is a plausible future that will have implications for water management strategies, including demand management programs, but one that state water agencies have been reluctant to acknowledge and address.