Since 2000, drought conditions in the Colorado River Basin have led to significant decreases in water storage in several key Colorado River reservoirs. The Seven Basin States, through their Commissions, are developing Drought Contingency Plans (DCP) (one for the upper basin, and another for the lower basin) to address the possibility of mitigating the reservoir levels at Lakes Powell and Mead from declining below critical elevations that would trigger water shortage provisions. Hydropower would also be impacted by shortages.

An agreement has been reached in the Upper Basin (Wyoming, Utah, New Mexico and Colorado). The primary goal of the Upper Basin strategy is to maintain sufficient water levels at Lake Powell during drought conditions to preserve water deliveries and power generation. Lake Powell is the largest reservoir and largest source of hydropower generation in the Upper Basin and singularly controls deliveries of Colorado River water to the Lower Basin. The Upper Basin States have agreed on a strategy that primarily calls for increased deliveries to Lake Powell by releasing water from higher elevation reservoirs, in excess of normal releases but consistent with all Records of Decision, to ensure Lake Powell remains above its dead pool level and water can be released. Shifting of water from different reservoirs may impact power generation ability in the higher reservoirs as well as impact water deliveries in subsequent years. Power from Lake Powell is delivered to 135 customers across Arizona, Colorado, New Mexico, eastern Nevada, Utah, and Wyoming. Power contracts extend through 2057.

The Lower Basin states (California, Nevada and Arizona) have had more difficulty reaching an agreement, particularly due to Arizona legislation and now concerns from the Imperial Irrigation District (IID) in California regarding funding for the cleanup of the Salton Sea. The Bureau of Reclamation Commissioner Brenda Burman required that an agreement be reached by January 31, 2019. Unfortunately this deadline was not met and additional pressure was set by the Commissioner via a Federal Register Notice requiring input from each State’s Governor by March 19th. On March 18th the States satisfied this deadline by signing a letter of intent and agreement to sign the DCP in the following days, without IID’s signature.

Lake Mead water releases in the lower basin are part of the Boulder Canyon project (Hoover Dam). WAPA is obligated to deliver wholesale energy to approximately 45 customers in southern California, Arizona, and Nevada, and the available capacity is highly dependent on the elevation of Lake Mead. If power is insufficient to support customer electrical capacity entitlements, each customer’s capacity entitlement would be reduced or increased on a pro-rata basis to align with the available capacity at any given time. Electric service contracts provide for the marketing of power through September 30, 2067.

Water demands in the Lower Colorado River Basin and hydropower operations of the Parker-Davis Project (PDP) in Arizona are directly impacted by upstream releases from Hoover Dam. Power from the PDP is currently marketed to 37 customers in southern Nevada, Arizona and southern California.
supplying the electrical needs of more than 300,000 people. All firm power contracts are effective through September 30, 2028.

WAPA is engaging with Reclamation and state representatives to represent hydropower interests in discussions about the drought contingency plan to fully understand the impacts on hydropower costs and the Colorado River Basins Power Marketing Fund. The focus of the interpretation of that data has been and will continue to be understanding the overall impact to the cost of hydropower if a DCP is triggered and for the subsequent years when recovering from drought mitigation measures.