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**COLORADO RIVER BASIN SUPPLY AND DEMAND STUDY –  
INTEGRATED, LONG-TERM PLANNING IN THE FACE OF UNCERTAINTY**

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**ABSTRACT:** Colorado River Basin Supply and Demand Study - Integrated, Long-Term Planning in the Face of Uncertainty Armin Muniivar, Kathy Freas, Greg Gates, CH2MHill Terry Fulp, Jim Prairie, and Carly Jerla, Pam Adams, U.S. Bureau of Reclamation Les Lampe and Klint Reedy, Black and Veatch Spanning parts of the seven states of Arizona, California, Colorado, New Mexico, Nevada, Utah, and Wyoming, the Colorado River Basin is one of the most critical sources of water in the West, and the Basin States include some of the fastest growing urban and industrial areas in the United States. Water supply and demand imbalances already exist in some geographic areas in the Basin and are projected to increase in both magnitude and spatial extent in the future. Basin-wide inflow has averaged about 16.4 million acre-feet (maf) annually over the past 100 years while water use has averaged 15.3 maf since 2000. Demand for water for other uses including the environment, recreation, and Native American water rights settlements also continues to increase. Increasing demands coupled with decreasing supplies will exacerbate imbalances throughout the Basin. The Colorado River Basin Water Supply and Demand Study is focused on evaluating the water supply-demand imbalances in the Basin through 2060, assessing the risks to Basin resources, and developing and analyzing mitigation and adaptation options and strategies to resolve those imbalances. Recognition of the key future uncertainties is critical to the assessment of future imbalances and system reliability and the thorough assessment of options and strategies. Hydroclimatic variability and the potential impacts of climate change, changes in water demand, both for consumptive and non-consumptive uses, and other factors represent areas of considerable future uncertainty. The Basin Study has incorporated a robust, scenario planning approach to incorporate the key sources of uncertainty in the long-term planning of basin resources. The planning and analytical approach identifies future risks to basin resources early in the planning process and enables evaluation of future water management options and strategies that best adapt to these risks.

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