ABSTRACT

TITLE:	Colorado River Basin Allocation in the Era of Climate Change: The Role of GIS for Water Conservation Management
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ABSTRACT: Climate change has many implications for the Colorado River and the millions of people the lifeline supports. Allocation and water management in the arid west seems to be increasingly complex, as climate change, coupled with population growth, add another perplexing aspect for water managers. Average predictions for Colorado River flows range anywhere between a 6%-20% decrease by 2050, despite the water stored in Lake Powell and Lake Mead, which are already are far below average historic levels. GIS (Geographic Information Systems) and remote sensing technologies have been evolving since the 1970s and are serving as vital tools for sharing, visualizing, analyzing, and manipulating spatial data. GIS technology create excellent mechanisms for water managers, scientists, politicians, and the public interests groups with consistent information on temperature data, precipitation, snowpack, soil types, land use and a multitude of other factors, which determine the health and survival of the river. GIS is a critical device that needs to be utilized for conservation of vital water resources in the Colorado River Basin.