



## **A Multi-sector Drought Vulnerability Assessment for the State of Colorado**

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A Drought Vulnerability Assessment was conducted for the State of Colorado to inform the State Drought Mitigation and Response Plan. The approach developed examines drought vulnerability in a flexible and comprehensive manner intended to determine the vulnerability to state assets and various sectors to drought on a jurisdictional (i.e. county) level. Previous vulnerability studies performed as part of state drought plans have struggled to quantify the impacts of drought. This project was scoped to go beyond previous work and develop a methodology to evaluate drought impacts not only to state assets and agriculture, but to other economic sectors within Colorado. Interrelationships between sectors that either alleviate or compound drought impacts were assessed and quantified, and the capacity to manage future incidents by adapting to the hazard was assessed. The vulnerability assessment includes an assessment of the impacts of climate change on water availability for agriculture and municipal water supply. The approach developed here is a hybrid quantitative and qualitative approach. Very little of this type of work has been done to date in drought vulnerability work. Impacts of drought to state assets and sectors were identified through literature reviews, previous drought impact reports for the state of Colorado, and interviews with sector representatives. A spreadsheet-based tool was developed to tabulate impact data in a transparent and easy-to-edit way, and to incorporate qualitative impact information obtained from interviews and previous reports. Results of the assessment were analyzed spatially and used to make recommendations for drought planning and mitigation.