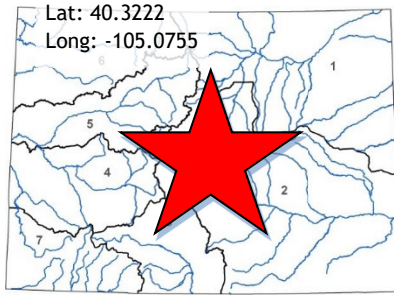




Water Plan Grant Application



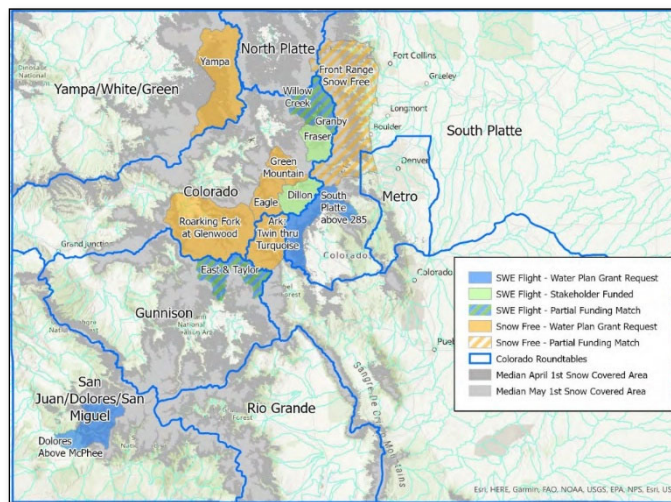
D E T A I L S	
Total Project Cost:	\$2,587,400
Water Plan Grant Request:	\$1,877,400
Recommended Amount:	\$1,877,400
Other CWCB Funding:	\$0
Other Funding Amount:	\$710,000
Applicant Match:	\$160,000
Project Type(s):	Study
Project Category(Categories):	Storage & Supply
Measurable Result:	Statewide water supply quantification

L O C A T I O N	
County/Countries:	Statewide
Drainage Basin:	Several

The Colorado Airborne Snow Observatories (CASO) workgroup comprised of a variety of water users throughout the state and sponsored by the WSRF grant program identified this project as crucial for the expansion and study of snow remote sensing flights in order to establish a sustained statewide program. This study will build on the work of the workgroup and will include providing snow remote sensing flights, holding workshops among stakeholder groups to study optimal data utilization, developing flight-informed streamflow forecasts, and comparing forecasting methods. It will also study the local-state-federal partnership model critical to implementing a statewide program.

The proposed technology has been shown to be the most accurate method at the watershed scale for estimating Snow Water Equivalent (SWE; the liquid depth of water stored in the snowpack). It uses paired airborne LIDAR and imaging spectrometer sensors coupled with a snow dynamics model to measure snow depth and albedo. This data can then be used to determine both SWE and snow albedo, which controls snowmelt rate, at high resolution across large river basins. This provides watershed-scale snowpack measurements with detail and accuracy capable of supporting valuable decisions by water managers. Ultimately, these measurements provide an accurate volume of water remaining in the snowpack for a given watershed at the time of flight, which can then be used to more accurately forecast streamflow and seasonal runoff.

Funding Recommendation: Staff is recommending a grant of \$1,877,400 from the Storage and Supply category of funding. This is approximately 73% of the project costs. The project will meet the Water Plan measurable result of adding new supply to meet the Municipal and Industrial gap by providing more accurate water supply forecasts to inform basin-wide operations for users, and provide more sound decisions related to compact compliance.



Water Plan Grant - Data Sheet