



## 9<sup>th</sup> Annual Airborne Snow Observatories, Inc. Workshop Agenda

September 9-13, 2024

Olympic Village Event Center at Palisades Tahoe  
1901 Chamonix Pl, Olympic Valley, CA 96146

All events will be held at Olympic Village Event Center unless otherwise noted.  
All times listed in PDT.

Virtual attendance is also available via Zoom:  
<https://us02web.zoom.us/j/87259098017>

### Monday, September 9

- 2:00-2:15pm **Welcome & Introductions: Tom Painter**, CEO, Airborne Snow Observatories, Inc.
- 2:15-3:00pm **Keynote: Erin Urquhart**, Program Manager, NASA Earth Action Water Resource Program  
*Unlocking Opportunities: Transforming Earth Science Research into Innovative Water Solutions*
- 3:00-5:00pm **ASO Technical and Program Updates**, ASO Team Leads  
5:00pm Conclusion

### Tuesday, September 10

- 8:30am Breakfast  
*Served until 10am*
- 8:50-9:00am Introductions
- 9:00-9:40am **Keynote: Mike Anderson**, State Climatologist, CA Department of Water Resources  
*Tracking Change: Information Needs to Adapt to a Warming World*
- 9:40-10:00am Break

**ASO in California Operations, Part I | 10:00-11:30am**

- 10:00-10:25am **Ramesh Gautam**, CA DWR  
*California's Aerial Remote Sensing of Snowpack Program*
- 10:25-10:50am **Katie Duncan**, Friant Water Authority  
*ASO and Water Supply Management in the Friant Division*
- 10:50-11:10am **Kaitlyn Chow & Charles Johnck**, Yuba Water Agency  
*An Average Water Year...With Exceptions*
- 11:10-11:30am **Matt Siemens**, Turlock Irrigation District  
*ASO Data Analysis and Tuolumne Watershed Forecasting*
- 11:30am-1pm Lunch on your own

**ASO in California Operations, Part II | 1:00-2:40pm**

- 1:00-1:25pm **Matt Meadows**, Kings River Water Association  
*What is Average Anyway on the Kings River?*
- 1:25-1:50pm **Stephen Ho**, Merced Irrigation District  
*ASO in Merced Watershed - Adjusting to the New Normal.*
- 1:50-2:15pm **Scott Fennema**, US District Court Water Master's Office  
*The Wet, the Dry-ish, and the Somewhere in Between: Three Years of ASO Informed Operational Forecast in the Truckee-Carson*
- 2:15-2:40pm **Harrison Forrester**, San Francisco Public Utilities Commission, Hetch Hetchy Water and Power  
*Airborne Snow Observatory Data Integration into Hetch Hetchy Water & Power Forecasting and Operations*
- 2:40-5:00pm **Open Networking and Discussions**  
*Light food and drinks provided*
- 5:00pm Conclusion

**Wednesday, September 11**

- 8:30am Breakfast  
*Served until 10am*
- 8:50-9:00am Introductions
- 9:00-9:40am **Keynote: Terry Fulp**, Former Director, US Bureau of Reclamation Lower Colorado Region  
*The Colorado River Basin - Past, Present and Future*
- 9:40-10:00am Break

**ASO in Colorado and Colorado River Basin Operations, Part I | 10:00-11:30am**

- 10:00-10:25am **Kazungu Maitaria**, Upper Colorado River Commission  
*Data-driven Decision-making in the Upper Colorado Basin: Densifying Observation Networks Through the Upper Colorado River Commission*
- 10:25-10:50am **Scott Greibling**, St. Vrain & Left Hand Water Conservancy District  
*Cold Content and Localized Flooding*
- 10:50-11:05am **Nathan Elder**, Denver Water  
*Reflections on Denver Water's Use of ASO Data*
- 11:05-11:30am **Lily Bosworth**, Colorado River Authority of Utah & **Rachel Musil**, Central Utah Water Conservancy District  
*Flakes, Flights, and Forecasts: Snowpack Measurement Enhancements in the Uinta Mountain Headwaters*
- 11:30am-1pm Lunch on your own

#### **ASO in Colorado Operations, Part II | 1:00-2:40pm**

- 1:00-1:25pm **Erik Skeie**, Colorado Water Conservation Board  
*CASM Part III: The Search for More Money*
- 1:25-1:50pm **Emily Carbone**, Northern Colorado Water Conservancy District  
*Year One of the SNOFO in the Upper Colorado Headwaters*
- 1:50-2:15pm **Craig Cotten**, Colorado Department of Natural Resources  
*Forecasting Challenges in Southern Colorado*
- 2:15-2:40pm **Sonja Chavez & Beverly Richards**, Upper Gunnison River Water Conservancy District  
*The Case for Continued Use of ASO Data in the Upper Gunnison River Watershed*
- 2:40-5:00pm **Open Networking and Discussions**  
*Light food and drinks provided*
- 5:00pm Conclusion

## **Thursday, September 12**

- 8:30am Breakfast  
*Served until 10am*
- 8:50-9:00am Introductions

#### **ASO in Science & Research | 9:00-10:00am**

- 9:00-9:15am **Adrian Harpold**, University of Nevada, Reno  
*Improving Long-Term Water Resource Planning with Lidar-Driven Hydrological Modeling*
- 9:15-9:30am **Michelle Hu**, University of Utah

- Informing Process-based Modeling with Satellite Remote Sensing:  
Assessing Improvements Against in Situ and ASO Observations*
- 9:30-9:45am **Noah Molotch**, University of Colorado Boulder, Institute of Arctic & Alpine Research  
*Enhancing Regional-Scale Snow Water Equivalent Distribution Estimates with Airborne Snow Observatories Data: Future Perspectives on Satellite Data Integration*
- 9:45-10:00am **Amy Clark**, Northumbria University  
*Forest Canopy Effects on Simulated Sub-canopy Snow in an Operational Snow Balance Model*
- 10:00-10:10am Break

**ASO in Modeling & Forecasting | 10:10-11:30am**

- 10:10-10:25am **Eli Boardman**, Mountain Hydrology LLC  
*Wyoming 2024: Glaciers, Snow, and Streamflow Forecasts in a Wind-Dominated Environment*
- 10:25-10:55am **Lauren Alkire, Devon Eckberg, & Jacob Kollen**, CA Department of Water Resources  
*SnowTrax: Purpose, Overview, and New Features*
- 10:55-11:15am **Mark Robertson**, M3Works  
*In the Works: Wind Redistribution, Albedo, and a Look Back at WY2024*
- 11:15-11:30am **Olivia Cramer**, Turlock Irrigation District  
*Model Refinement Utilizing ASO Data*
- 11:30am-1pm Lunch on your own

**ASO in Modeling & Forecasting | 1:00-2:15pm**

- 1:00-1:25pm **Cody Moser**, NOAA-NWS Colorado Basin River Forecast Center  
*CBRFC Experimental Forecasts Using ASO Data*
- 1:25-1:50pm **Gus Goodbody**, USDA Natural Resources Conservation Service  
*NRCS Snow Survey and Water Supply Forecasting Program: Efforts Toward Integration of Spatially Distributed Snow Water Equivalent Products*
- 1:50-2:15pm **Peter Fickenscher**, NOAA-NWS California-Nevada River Forecast Center  
*CNRF Water Supply Forecasts & ASO Data*
- 2:15-3:30pm **Open Forecasting Discussion**  
*Light food and drinks provided*
- 3:30pm Conclusion

**Dinner | 5:40-10:00pm**

- 5:40pm **Aerial Tram Rides Begin** for High Camp Dinner

*The tram runs to and from High Camp every 15 minutes starting at 5:40pm and ending at 10:00pm*

6:00pm

**Cocktail Hour** at High Camp

7:00pm

**Buffet Dinner** at High Camp

*Open bar from 6pm - 8pm, cash bar from 8pm -10pm*

## Friday, September 13

10:00am-12pm **ASO Aircraft Viewing** at Truckee Airport