



# WESTERN WATER ASSESSMENT

A NOAA RISA TEAM

## June 2024 Newsletter

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### Welcome Nels

We are excited to welcome **Nels Bjarke**, a Postdoctoral Researcher, to Western Water Assessment and CIRES. Nels's expertise is in utilizing multiple streams of hydroclimate data to build tools and datasets that improve our understanding of how climate change has historically and will continue to impact surface water availability. His primary research at WWA encompasses evaluating drought of all forms across North America and the sensitivity of the classification of drought to the non-stationarity of the climate. Nels has a M.S. in Earth and Planetary Science from the University of New Mexico and a Ph.D. in Civil, Environmental, and Architectural Engineering from the University of Colorado Boulder.



### Welcome Valentina

We are also delighted to welcome **Valentina Serrano Salomón**, a PhD student in Sociology at CU Boulder originally from Colombia. This summer she's joining the team at WWA to support a study on climate resilience for communities in Colorado's



mobile home parks, conducting community outreach and in-depth interviews with residents. Valentina's research focuses on migration and environmental sociology. Within environmental sociology, she is particularly interested in understanding how Environmental Justice (EJ) communities, especially immigrant communities, are affected by environmental hazards. She is passionate about community-based participatory research (CBPR) and qualitative methods. Valentina holds a Master's degree in Sociology from the University of Colorado Denver, where she was involved in extensive community science research on air quality with North Denver residents to understand the impacts of air pollution on their health and well-being.



## Research and Products

### Building Climate Resilience Within Mobile Home Park Communities

In spring 2024, Western Water Assessment launched a new project focusing on understanding climate risks and building climate resilience within mobile home park communities. Mobile home park residents face unique and disproportionate exposure to climate-related hazards, including heat, fires, and floods. Further, mobile home residents often are left out from many climate and disaster-related assistance programs, due to the unique housing structure of mobile home parks. Addressing the needs of mobile home park communities is key to building climate resilience and addressing climate justice needs.

Western Water Assessment received funding from the CIRES Innovative Research Program and the University of Colorado Boulder Community Impact Grant to collaborate with University of Colorado Boulder geographer **Colleen Reid** on a mixed-method study of the compound climate hazards facing Colorado mobile home communities, focusing in particular on the intersecting hazards of extreme heat and wildfire smoke.

Starting in summer 2024, this research team—led by Social Sciences Lead **Katie Clifford** and Postdoctoral Social Science Researcher **Skye Niles**—will employ in-depth interviews with mobile home residents about the impacts of extreme heat and smoke, and also will employ a pilot program on air quality monitors and temperature and relative humidity monitors within mobile homes in order to measure indoor air quality and heat exposure. This mixed-method approach will allow the team to quantify heat and smoke exposure within mobile homes, and aid in understanding the impacts of heat and smoke on the health and well-being of mobile home park residents.



## Research Article Highlight

A recent paper by an international team of authors, including Director **Ben Livneh**, addresses the mounting pressures on global water systems. The paper is titled: "Setting a pluralist agenda for water governance: Why power and scale matter." They analyzed the mounting pressures of climate change-driven droughts, escalating flood risks, environmental contamination, and over-allocation of water resources. The team critiques current water management and governance in a number of global contexts for their lack of integration across spatial and temporal scales, particularly the disconnect between surface and groundwater systems and the absence of intergenerational water planning. The authors emphasize that understanding the function and influence of power at various temporal and spatial scales is crucial for tackling complex water system challenges. They advocate for multi-scalar, reflexive, and pluralistic policy solutions to prevent ineffective or unintended outcomes. Utilizing a co-learning process, the study offers important insights for interdisciplinary research and sets a pluralist agenda for future water governance.

Read more: <https://wwa.colorado.edu/research/publications/setting-pluralist-agenda-water-governance-why-power-and-scale-matter>

## Climate Events

### Wasatch Mountains Avalanche

On May 9th, Utah recorded its first avalanche fatality of 2024, when an avalanche in the Wasatch Mountains near Salt Lake City tragically killed two backcountry skiers. The avalanche deaths were the first Utah avalanche fatalities to occur in the month of May. A cold winter storm impacted northern Utah on May 5-8 and Snowbird, the nearest SNOTEL site to the avalanche incident, reported 25" of snow with 2.9" of SWE over the four-day period. Winds during the storm were moderate to strong (40-60 miles per hour) from the west to northwest and recent wind loading likely contributed to the avalanche incident. Three backcountry skiers were finishing the ascent of a run called Big Willow Aprons by boot-packing when the first skier triggered the avalanche near the top of the ridge at 10,600'. All three skiers were carried downslope by the avalanche; one skier was partially buried, and the other two skiers were fully buried and killed. We offer our sincere condolences to the families and friends of the skiers killed.

Learn more about the event from the Utah Avalanche Center [here](#).

### Large Hailstorm in Denver Metro

On May 30th, two supercell thunderstorms rapidly formed over the Front Range and caused severe hail damage in the northern Denver metro area. Very large hail fell on the north side of Denver with hail covering roads and reaching up to 2" in diameter. Rainfall amounts from these thunderstorms



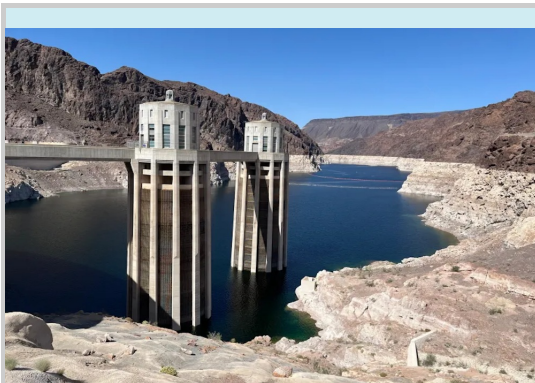
were only a quarter to a half inch in the Denver area, but storms lingered to the northeast of Denver where up to 1.3" of rain fell in Akron on 5/30-5/31.

Learn more about the event from BoulderCast [here](#).



Photo credit: Jayson Luber on X [@Denver7Traffic](#)

## WWA Features



Snowpack gets late-season boost from Colorado storms

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Researchers anticipate continued reprieve from drought for southwestern US

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UW And Ucross Announce Partnership

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California Snowpack's 'Atypical' Year Revealed in NASA Image

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article



Late-winter storms lift Upper Colorado Basin out of drought, Lower Basin not so fortunate

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10 visuals that show how climate change is transforming the West's snow and water supply

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