

2024 ARKANSAS RIVER BASIN WATER FORUM

29 YEARS IN THE MAKING



MARCH 6 AND 7, 2024

Otero College Student Center, Banquet Room
2001 San Juan Avenue, La Junta, CO 81050

THANK YOU TO OUR SPONSORS FOR MAKING THIS FORUM POSSIBLE

EMBRACE THE PAST, LOOK TO THE FUTURE



ARKANSAS RIVER BASIN
WATER FORUM

WEDNESDAY, MARCH 6

7 AM REGISTRATION & CONTINENTAL BREAKFAST

WELCOME

Jim Baldwin, Otero County Commissioner

8 AM KEYNOTE SPEAKER

Kate Greenberg, Commissioner Colorado Department of Agriculture

PLENARY SESSION

75th Anniversaries: Arkansas River Compact Between Kansas & Colorado and John Martin Reservoir Completion

9 AM This session will look at the rich history of the Arkansas River Compact and John Martin Reservoir, including two U.S. Supreme Court cases and an historic flood. The audience will gain historical insight into the conflicted interstate relationship between the States, an understanding of how both the Compact and John Martin Reservoir came to be, and how the relationship may look going forward. Both were the result of conflict and cooperation between Colorado and Kansas. Questions will be accepted by Kevin Salter who provided technical support for the State of Kansas and David Robbins who served as counsel of record for the State of Colorado in the U.S. Supreme Court case of Kansas v. Colorado.

- Moderator: Lisa Pace, Colorado Springs Utilities
- Kevin Salter, Kansas Division of Water Resources
- David Robbins, Hill and Robbins, P.C.

10 AM BREAK WITH REFRESHMENTS

CONCURRENT SESSION 1A

Building Resilience: Helping Water Users through Investments in Irrigation Modernization Projects in the Lower Arkansas Valley

Location: Banquet Room

The Lower Arkansas Valley Water Conservancy District (LAVWCD) has been instrumental in helping agricultural water users improve their efficiency through several projects to modernize the irrigation infrastructure in the valley. By modernizing both on and off-farm water conveyance and application systems, water users benefit from greater control of water movements and application and the valley benefits from targeted implementation of these projects with the goal of improving water quality and avoiding state regulation. However, on and off-farm improvements, such as center pivot sprinklers or ditch linings, do obligate water users to comply with rules set by the State to avoid injuring other water rights holders dependent on the in-efficiencies of historic water uses.

Lower Ark gives water users implementing an improvement a cost-effective and simple compliance option through the District's Rule 10 plans. In this session, we will cover Lower Ark's current and future projects helping irrigators modernize their infrastructure as well as show how this can be done in compliance with the irrigation improvement rules.

- Moderator: John Knapp, Knapp Farms
- Brad Lubbers, Lower Arkansas Valley Water Conservancy District
- Blake Osborn, Lower Arkansas Valley Water Conservancy District
- Kenan Diker, Colorado Department of Public Health & Environment

CONCURRENT SESSION 1B

Evaluation Alternative Forages in the Upper Colorado River Basin for Drought Tolerance and Regional Adaptability

Location: Ed Stafford Theater

Panelist will describe the research on possible alternative forage crops, including Kernza® varieties of intermediate wheatgrass, sainfoin, and silflower. They will convey the goals and preliminary findings of a project designed to determine their ability to sustain production under limited irrigation conditions and recover when normal irrigation resumes, providing insights into their potential as drought-resilient alternatives for agriculture in the Upper Colorado River Basin.

The presenters will describe a trial farm-scale establishment of the identified alternative forages in various elevations of the Upper Colorado River Basin and report on practical insights that can inform and support agricultural producers in adopting more drought-resilient alternatives.

- Moderator: Dr. Tessa Peters, The Land Institute
- David Poss, U.S. Department of Agriculture
- Dr. Perry Cabot, Colorado State University
- Hunter Doyle, The Land Institute

CONCURRENT SESSION 1C

Protecting & Enhancing the Land Resource during a Water Transfer

Location: Banquet Room

Colorado has a history of agricultural water purchases by other users, primarily municipalities, and converted to urban uses. Much has been written about the intricacies of water quantity, diversions, storage, economics, and water quality. There is not much literature on the revegetation of lands with irrigation (agricultural) water removed from the area.

Colorado water law statute (CRS 37-92-305(4.5) (a)), enacted in 1992, requires terms and conditions for permanent water transfers that include “reasonable provisions designed to accomplish the revegetation and noxious weed management of lands from which irrigation water is removed.” A number of decrees in the Arkansas Valley were reviewed to see just how the revegetation and weed management is accomplished. Revegetation and weed control are vital for controlling soil erosion, protecting off-farm infrastructure, and increasing the value of land by planting a permanent vegetative cover. After reviewing several decrees and discussing revegetation with various stakeholders, a set of recommendations were developed to aid in the revegetation of lands where irrigated water has been removed and converted to other beneficial uses.

In regard to revegetation, Aurora conducted the most extensive and effective revegetation efforts in Colorado related to water transfers on the Rocky Ford Ditch lands. In addition to the fully successful revegetation, the City introduced a creative “continued farming program” to partner with farmers with irrigation improvements, and consumptive use reductions in cropping to keep farmlands in production that would have been dried up and revegetated. The City of Aurora continues to manage the revegetated lands to protect the revegetation with appropriate grazing programs.

- Moderator: Jack Goble, Lower Arkansas Valley Water Conservancy District
- Gerry Knapp, Valley Resources & Water Management
- Richard Rhoades, Range and Reveg LLC
- Rick Kienitz, Aurora Water

11:15 AM

CONCURRENT SESSION 1D

Harmony Unveiled: The Transformative Impact of Project Partnering & Beyond on Colorado's Waterways and Community Development

Location: Ed Stafford Theater

This presentation will delve into the transformative impact of the Complete Creeks initiative within the City of Colorado Springs. These major waterways represent more than just channels for stormwater; they have evolved into corridors that protect not just people, property, and the environment but restore natural areas, encourage the return of wildlife, and are sources of aquatic health. Beyond their ecological significance, these waterways also create educational and recreational opportunities for residents by providing safe access to the water and extending the City's trail system.

The presentation will explain the success of project partnering, highlighting the symbiotic relationship between nature, infrastructure, and community development. Waterways connect the city to nature through community engagement, and the integration of art and culture helps beautify infrastructure and creates a sense of wonder and surprise.

Join us as we explore the journey of these waterways, weaving together environmental conservation, recreational opportunities, STEM-based outdoor classroom activities, and smart urban planning.

- Jerry Naranjo, Naranjo Civil Constructors
- Jerry Cordova, Colorado Springs Stormwater Enterprise

12:00 PM

BREAK

12:15 PM

BOB APPEL: FRIEND OF THE ARKANSAS AWARD

Presented by Bill Tyner, 2023 "Friend of the Arkansas" Award Recipient

12:30 PM

LUNCHEON**AFTERNOON TOURS**

Bent's Old Fort

Location: 35110 CO 194, La Junta

Please note: There is a 1/2 mile walk from the parking lot to the Fort. If you need assistance, please let us know. ARBWF1994@gmail.com Attendees will learn about the importance of water and how it was integral to the success of Bent's Old Fort. Experience firsthand what life was like in the 1830s and 1840s. For much of the fort's 16-year history, it was the only major permanent white settlement on the Santa Fe Trail between Missouri and the Mexican settlements. The fort provided explorers, adventurers, and the U.S. Army a place to get needed supplies, wagon repairs, livestock, good food, water and company, rest, and protection in the vast "Great American Desert." The Tour Guide will explain the importance of the Fort being built close to the Arkansas river and the many ways the river was used. Attendees will tour the various water-related features of the fort including the well room & icehouse. The Guide will describe the important various cultural stories related to the Fort and water. For example, Fort dwellers would collect wild mint and make a summer drink much like a "mint julep," except they called it a "hailstorm". BE SURE TO DRESS FOR INCLEMENT WEATHER; JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE.

1:30 PM

1:30 PM

Arkansas Valley Research Center Tour

Location: 27901 County Road 21, Rocky Ford

Dr. Mike Bartolo and Dr. Lorenz Sutherland will host a tour that illustrates new innovations in water quality research data collection and advancements in collecting high quality automated real time meteorological measurements. A.J. Brown and Lane Simmons, Colorado State University Research Associates will demonstrate various innovations in environmental data collection from commercial and self-developed sensors for conducting water quality research in the Arkansas Valley coupled with spatial mapping software and drone technology.

In addition, innovations in collecting high quality detailed weather data will be demonstrated. The Colorado Agricultural Meteorological nETwork (CoAgMET) operates a network of agricultural weather stations around the state of Colorado. The meteorological measurement data from these stations is used to calculate evapotranspiration (ET) values to model water use for various crops. The Colorado Climate Center at Colorado State University manages these automated weather (CoAgMet) stations. In the Lower Arkansas Basin seven CoAgMet stations are used in administration of the Arkansas River Compact. In addition, CoAgMET data are used by farmers and ranchers, various state/federal agencies, and researchers, for water supply and drought monitoring efforts. BE SURE TO DRESS FOR INCLEMENT WEATHER; JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE.

Summers House Greenhouse & Hirakata Farms

Location: Greenhouse, 23144 HWY 10, La Junta & Hirakata Farms, 22161 County Road CC, Rocky Ford

Micah and Natalia Summers will host a tour of their greenhouse operations. Their mission is to grow greens and to glorify God. All of the summerhouse greens are grown hydroponically in a nutrient rich pesticide free, controlled and enclosed soilless greenhouse. They are very excited to share delicious greens with the local community. Come learn how they grow greens without soil and with little water.

Glen and Mike Hirakata will host a tour of their farm production packing facility. Hirakata Farms is a fifth-generation family business committed to bringing customers safe and quality produce. Their families have been working the land around Rocky Ford for 98 years. Today they farm 1200 acres and ship their produce throughout Colorado and the surrounding regions. They are dedicated to using water and other natural resources wisely to ensure that future generations can benefit. "We consider ourselves stewards of this land that we are so very fortunate to farm." The farm started in the early 1900's when Tatsunosuke Hirakata came to the United States from Japan. Upon arrival, he went to work for the railroad, which eventually brought him to Colorado, and he settled in Rocky Ford. Soon after he and his son Keiji began farming, building what is now Hirakata Farms and raising various crops. One item in particular we all know is the renowned Rocky Ford Cantaloupe. Today, Michael and Glenn Hirakata run the farm and continue to carry on the tradition of their ancestors. BE SURE TO DRESS FOR INCLEMENT WEATHER; JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE.

La Junta Waste Water Treatment Plant

Location: 1021 East 3rd Street, La Junta

Gage Mayo, WWTP Operator and Tom Seaba, Director of Water/Wastewater will host a tour of the new Wastewater plant. The hosts will discuss the plant's current capability and its built-in features for future treatment. Attendees will also learn what challenges rural areas face concerning wastewater treatment. BE SURE TO DRESS FOR INCLEMENT WEATHER; JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE.

**UNTIL THE LIGHTS GO OUT!
PERCOLATION AND RUNOFF SOCIAL EVENT**

Location: Inspiration Field, 612 Adams Avenue, La Junta, CO 81050

SPONSORED BY THE ARKANSAS RIVER CONSERVATION COOPERATIVE

Plan on joining for us for a delicious dinner and drinks for only \$20. You won't find a better deal in La Junta, plus this is one of the most fun events of our Forum. ARBWF has designated that all proceeds from this event go towards supporting our scholarship fund. Paid guests are welcome to join us. You don't want to miss this! Please register to attend.

5 PM

EMBRACE THE PAST, LOOK TO THE FUTURE

THURSDAY, MARCH 7



**ARKANSAS RIVER BASIN
WATER FORUM**

7 AM

REGISTRATION & CONTINENTAL BREAKFAST

WELCOME

Dr. Kim Zant, Otero College President

8 AM

KEYNOTE SPEAKER

Robert Sakata, Agricultural Water Policy Advisor, Colorado Department of Agriculture

9 AM

PLENARY SESSION

Navigating the Waters: Insights into Division 2's Priority Administration, Futile Call Doctrine, and Pond Management Program

The Colorado Division of Water Resources exists to administer the waters of the State to maximize lawful beneficial use, ensure that dams and water wells are properly constructed and safe, and provide information about water resources to the public. Division 2 staff administers the water of the State within the Arkansas River Basin in accordance with the priority system, an interstate compact and U.S. Supreme Court decree, the Colorado Revised Statutes, Colorado court decrees and State Engineer rules and regulations. Division 2 staff invites you to come learn and have a conversation about several administrative areas of focus happening now in Division 2 including Priority Administration, a more restrictive application of the Futile Call Doctrine and the Pond Management Program.

- Moderator: Becky Crotty, Colorado Attorney General's Office
- Rachel Zancanella, DWR Division 2 Engineer
- Bethany Arnold, DWR Assistant Division 2 Engineer
- Cassidy Davis, Water Accounting and Technology Specialist

10 AM

BREAK WITH REFRESHMENTS

CONCURRENT SESSIONS 2A

Canal Operations in the Lower Arkansas River Valley

Location: Banquet Room

Water is the most vital resource in the Lower Arkansas Valley and is the economic driver in the valley as it supports the success of the local agricultural system. To get irrigation water to farmers and ranchers, ditch systems are utilized to deliver water to various shareholders. It is more than just a simple task to manage and operate a ditch, especially along the Lower Arkansas River where the river is constantly "on call." This session will provide extensive knowledge and understanding of how three different canal companies operate, not only on their own but also how they affect each other.

Learn the basics of what happens when a ditch is "in" or "out," if the canal company operates in "runs" or operates as an "open ditch," the timing of a canal using their winter water storage and project water, and the daily decisions the Board of Directors have to make to ensure the success of their shareholders.

- Moderator: Jessica Mills, Lower Arkansas Valley Water Conservancy District
- Curtis Sniff, Fort Lyon Canal Company Superintendent
- Darren Grap, Rocky Ford High Line Canal Company Superintendent
- Casey Williams, Catlin Canal Company Assistant Superintendent

10:15 AM

CONCURRENT SESSIONS 2B

The Arkansas Valley Conduit: A Dream Becomes Reality

Location: Ed Stafford Theatre

For nearly a century, the cities, towns and rural communities east of Pueblo in the Arkansas Valley have been anticipating a solution to drinking water supply and quality. The Arkansas Valley Conduit was a key part of the Fryingpan-Arkansas Project Act of 1962. In addition to bringing water into the Arkansas River basin from the Colorado River basin, the Fry-Ark Project built three storage reservoirs in the Arkansas River basin and promised to construct municipal water delivery lines. The 2024 Arkansas River Basin Water Forum presentation will include a short historical video to acquaint people with the history of the AVC Project. Mr. Rieker will provide an update on the federal side of the project. Mr. Woodka will talk about the role of the District's Water Activity Enterprise, which is helping to construct this epic water delivery system. We're sure you'll enjoy this presentation, and equally sure that the people of Southeastern Colorado will enjoy the benefits of this fresh new source of water.

- Chris Woodka, Southeastern Colorado Water Conservancy District
- Jeffery Rieker, Bureau of Reclamation

11 AM

BREAK

CONCURRENT SESSIONS 2C

Ag Water Law 101

Location: Banquet Room

An educational presentation discussing basic water law as it impacts irrigation water rights and water rights due diligence investigations. This presentation is designed to help agricultural water users become sophisticated participants in water rights transactions, including alternative transfer methods and conservation easements.

- Cassidy Woodard, Bushong and Holleman P.C.

11:15 AM

CONCURRENT SESSIONS 2D

Regional Resources Planning Group Arkansas River Basin Water Quality Study

Location: Ed Stafford Theater

The RRPg was established to identify regional opportunities, to implement plans, and to safeguard, preserve and develop for present and future generations the water available for diversion and use within the Arkansas River Basin. The current RRPg project builds upon the existing USGS network of monitoring sites to evaluate Specific Conductance (SC), Total Dissolved Solids (TDS), and select ions. These water quality constituents will be analyzed for trends spatially and over time. This information will be available via an on-line dashboard providing "real-time" data regarding current water quality conditions throughout much of the Arkansas River.

- Annie Berlemann, Colorado Springs Utilities
- Lisa Miller, US Geological Survey

12:00 PM

BREAK

ARBWF SCHOLARSHIP RECIPIENTS ACKNOWLEDGEMENT

Jorge "Santiago" Ramirez Nunez - CU Boulder, PhD Student

Santiago is studying impacts to streamflow regimes due to urbanization along the Colorado Front Range. He is also researching rainwater harvesting for more efficient lawn and garden irrigation in urban settings. Santiago is bilingual and has volunteered in Mexico, focusing on water conservation and nature-based solutions in that area.

Leah Mickelson - Oregon State University E-Campus, Undergraduate

Leah's focus is on conservation, resources, and sustainability. She is currently in an internship with River Science and River Watch in Canon City. She has assisted Canon City High School students in understanding the importance of water quality and conservation. Leah worked as a rafting guide on the Arkansas River.

Madelena Fetter - Colorado State University, Undergraduate

Madelena's focus is on hydrology and data science (collection, analysis and compelling presentation of data). She is very active in her community outside of academics and is passionate about outreach and education concerning water. Madelena worked as a rafting guide on the Cache la Poudre River.

12:30 PM

LUNCHEON

AFTERNOON TOURS

Innovative Water Technologies

Location: 29625 Industrial Park Road, Rocky Ford

Jack Baker, President and founder of Innovative Water Technologies will host this tour. Mr. Baker will demonstrate ways that they work with small drinking water systems around the world, to get safe drinking water to people that need it most. IWT currently has over 700 systems installed in 30 countries. Mr. Baker will also illustrate how these compact and portable water filtration systems are manufactured.

IWT is dedicated to researching and developing products for water treatment and purification around the world in commercial applications, humanitarian initiatives, and disaster relief efforts. IWT custom manufacture UF Packaged Drinking Water Plants for small public water systems that can manage 5,000 to 250,000 gallons of water per day. These are complete drinking water plants, on a skid, ready to install.

IWT has also designed and manufactured the patented SunSpring Hybrid, an innovative solar and wind powered water purification system invented at IWT. It is the only hybrid water plant that is Healthymagination validated by GE. Products like SunSpring have global applications for helping solve the world's water crisis. In addition, the SunSpring Mini is an ultra-filtration portable drinking water system with five power options developed for First Responders and the US Military. BE SURE TO DRESS FOR INCLEMENT WEATHER, JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE.

Rocky Ford State Wildlife Area

Location: County Road 805, Rocky Ford

Rocky Ford State Wildlife Area is a 1,100-acre property located northeast of Rocky Ford, Colorado, south of Colorado Highway 266, on the north side of the Arkansas River. The site has been owned and managed by Colorado Parks and Wildlife for wildlife and recreation purposes since 1954. The Rocky Ford SWA lands are situated along natural water drainage ways to the Arkansas River and provide habitat, food, and water sources to many native species of animals and fish.

The Rocky Ford SWA habitat areas are comprised of a combination of both natural and manmade features that are utilized to direct and convey drainage water across the property to the Arkansas River while promoting and maintaining conditions that are favorable to targeted wildlife species as habitat. Take a tour with experts to explore the features and habitats at this unique wildlife oasis in the lower Arkansas valley. BE SURE TO DRESS FOR INCLEMENT WEATHER &/OR MUDDY CONDITIONS; JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE.

Barn Owl Precision Agriculture

Location: 27901 County Road 21, Rocky Ford

BREAKING NEWS - LOCAL CRAZY MAN FARMS WITH TINY ROBOT TRACTORS!

Barn Owl Precision Agriculture was founded in 2017 as Barn Owl Drone Services. After moving back home to La Junta, Colorado they reconnected with the community and neighbors and saw the challenges facing farmers. They wanted to help, so they combined strengths and experiences to develop systems that support small and midsize farmers. In the beginning they used drones and other imagery to help get field data to farmers for faster decision making. Now, they combine that imagery with autonomous micro-tractors to act and create savings in inputs, labor, and time.

Being from rural Colorado has given them a unique opportunity to gain experience and grow with local farmers. The tour will demonstrate BOPA robot automation. In addition, an explanation will be provided of swarm and modelbased robotics. Artificial intelligence and computer vision applications will also be shown. BE SURE TO DRESS FOR INCLEMENT WEATHER; JACKETS AND STURDY FOOTWEAR. PLEASE CARPOOL IF POSSIBLE

1:30 PM

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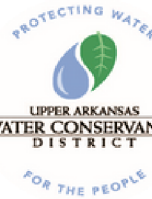
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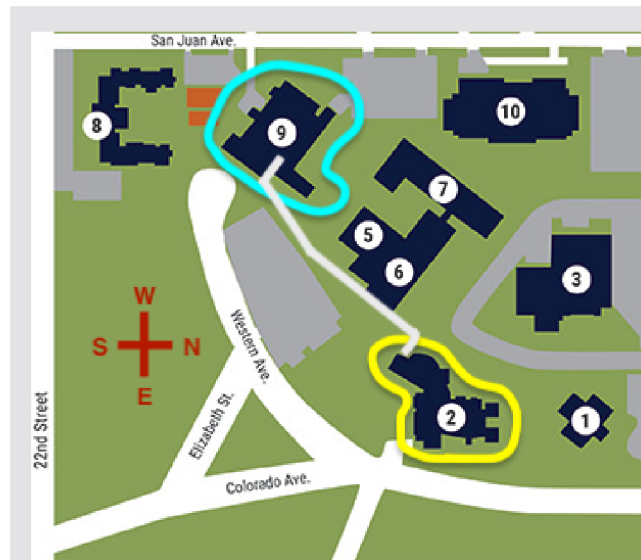
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Reservoir Sponsors \$500



Campus Legend

- 1. McDonald Hall & Administration
- 2. Humanities Center & Theatre
- 3. McQuinn Center Gym & Fitness Center
- 4. Koshare Indian Museum & Kiva
- 5. Wheeler Library & Learning Commons
- 6. Wheeler Hall
- 7. Life Sciences
- 8. Women's Residence Halls
- 9. Student Center & Rattler's Den Food Court