

UW RANCHING IN THE WEST SYMPOSIUM

2024

NAVIGATING WESTERN WATERS:

Addressing Water
Challenges in Wyoming
and the West

Laramie, WY - April 22, 2024



UNIVERSITY
OF WYOMING

College of Agriculture,
Life Sciences and
Natural Resources

WELCOME

Welcome to the UW College of Agriculture, Life Sciences, and Natural Resources Navigating Western Waters Symposium. This symposium is the final session in this year's Ranching in the West Seminar Series, an outcome of UW's Ranch Management and Agricultural Leadership Program. Please join our students and faculty as we engage with Wyoming's leaders to discuss how we manage our State's most valuable natural resource.



Governor Gordon

Mark Gordon, raised on a Wyoming ranch, brings a legacy of hard work and integrity to his role as Governor. Committed to fostering a Wyoming where dreams thrive alongside tradition, he champions fiscal responsibility and transparent governance. From his tenure as State Treasurer to his current leadership, Gordon has steered the state through challenges, earning recognition as a top governor. Alongside his wife Jennie, they prioritize community welfare, exemplified by initiatives like the Wyoming Hunger Initiative. With four grown children, the Gordons embody dedication to family and Wyoming's enduring prosperity.



Kelly Crane

Kelly Crane is the Interim Dean for the College of Agriculture, Life Sciences, and Natural Resources, and the Director of the Ranch Management and Agricultural Leadership Program.

Kelly received his Ph.D. and M.S. degrees in Rangeland Ecology and Watershed Management from the University of Wyoming, and his undergraduate degree in Rangeland Resources from the University of Idaho. His academic career began at the University of Wyoming where he served as an area educator and state extension range specialist. Kelly moved from Wyoming to launch a successful rangeland consulting firm, and also served as the Rangeland Extension Specialist for the University of Idaho. In 2011, Kelly returned to Wyoming as an Associate Director for UW Extension, a position he held for nearly 10 years before his assignment as Associate Dean and Director of UW Extension. Immediately prior to his current position, Kelly was the Senior Associate Dean for the College.

SCHEDULE

Time	Session
9:00	Welcome Interim Dean, Dr. Kelly K. Crane Governor Mark Gordon Setting the Stage: Characterizing the Issues and Implications Associated with Water in Wyoming Senator Larry Hicks and Speaker Albert Sommers
10:00	Break
10:15	Perspectives from Wyoming Water Users Speaker Albert Sommers Panel Members: Tom Annear, Jack Berger, Brad Brooks, Aaron Reichl, Cory Toye
11:30	Legal and Policy Considerations for Wyoming Water Kara Brighton Fornstrom Panel Members: Chris Brown (on zoom), Michelle Bushman, Senator Larry Hicks, Pat Tyrell (on zoom)
12:30	Buffet Lunch
1:00	Wyoming Water: Brush Creek Irrigation System Video Presentation Highlighting Jeb Steward and Laura Bucholz
1:20	Showcasing UW's work on Wyoming Water Issues Eric Webster Panel Members: Daniel Adamson, Jonathan Brant, Joe Cook, Kristi Hansen, Ginger Paige
2:20	Wyoming's Approach, Future Directions Bob Budd
3:00	Closing Remarks Interim Dean, Dr. Kelly K. Crane

SPEAKERS, FACILITATORS, AND PROGRAM STAFF



Daniel Adamson

PhD Candidate in Soil Science, Department of Ecosystem Science and Management, University of Wyoming

Daniel was raised on a ranch in southern Wyoming where his interest in the unique challenges faced by western Agricultural producers was fostered from a young age. Following his BS and MS degrees in Agroecology and Agronomy from the University of Wyoming, Daniel spent four years working in northern Colorado's irrigated cropping systems as a Certified Crop Advisor. Most recently, Daniel returned to the University of Wyoming to complete his PhD in soil science by working on Wyoming's flood-irrigated mountain hay meadows—a critical forage production system for Wyoming ranches that seeks to balance water management with ranch productivity and ecosystem health.



Tom Annear

Retired Water Management Supervisor, Wyoming Game and Fish

Tom Annear has over 37 years of experience as a water management supervisor for the Wyoming Game and Fish Department. He spearheaded the state's instream flow program, coordinating 130+ water rights filings. Annear chaired the department's water rights management team, conducted pivotal aquatic impact studies, and co-founded the Instream Flow Council. He is an adjunct professor at the University of Wyoming and developed a pioneering stream ecology and water law class. A prolific author and sought-after speaker, Annear champions sustainable aquatic resource management globally. He leads efforts to establish a national training center while managing a family farm in Iowa. Annear holds degrees from Iowa State University and Utah State University.



Jack Berger

Rancher and President, Wyoming Stock Growers Association

Jack Berger is the president of the Wyoming Stock Growers Association and the immediate past president of the Wyoming Natural Resource Foundation. He brings over two decades of experience in conservation and agriculture. Berger has been a District

Supervisor for the Saratoga-Encampment-Rawlins Conservation District since his appointment in 2004 and is deeply involved in the stewardship of Wyoming's natural resources. He is actively engaged in the Carbon County Stock Growers and Wyoming Stock Growers Association, also contributing as a board member of the NCBA and participating in the South-Central Sage Grouse working group. With a Bachelor of Science in Ranch Management from the University of Wyoming, Berger and his family manage cow/calf operations across state, federal, and deeded lands in the Saratoga area.



Jonathan Brant

Director/VO Smith Professor, Department of Civil and Architectural Engineering and Construction Management, University of Wyoming

Jonathan Brant is a licensed professional engineer specializing in environmental engineering. He holds a tenured full professorship at the University of Wyoming's Department of Civil and Architectural Engineering and Construction Management. Brant also directs the Center of Excellence in Produced Water Management (CEPWM) at UW. He earned his B.S. in Civil Engineering from the Virginia Military Institute in 1998, followed by Master's (2000) and Doctoral (2003) degrees in Civil Engineering from the University of Nevada, Reno. His research delves into physicochemical separation processes for water and wastewater, focusing on desalination and solids separation using membrane processes, nanocomposite membranes, and magnetically enhanced treatment systems for resource recovery and water reuse.



Kara Brighton Fornstrom

Director of the Center for Energy Regulation & Policy Analysis, University of Wyoming

Kara Brighton Fornstrom is a graduate of the University of Wyoming and the University of Nebraska-Lincoln College of Law. She started her professional journey in the Water Division of the Wyoming Attorney General's Office, where she contributed to pivotal North Platte River litigation. She co-founded Hageman & Brighton, PC in 2000 and dedicated her practice to water and natural resource matters. In 2013, Governor Mead appointed her to the Public Service Commission, and she assumed the chairmanship upon reappointment by Governor Gordon in 2019. In 2022, she transitioned to the Southwest Power

Pool as Director of State Regulatory Policy, where she championed electricity market expansion in the Western Interconnection. In December 2022, Kara assumed the role of Director at the Center for Energy Regulation and Policy Analysis, School of Energy Resources, University of Wyoming.



Brad Brooks

Director, City of Cheyenne Board of Public Utilities

With nearly 25 years of dedicated service, Brad Brooks is an esteemed figure at the City of Cheyenne Board of Public Utilities. Currently serving as

Director, Brad has showcased versatility by previously holding roles such as Engineering and Water Resources Manager, Operations and Maintenance Manager, and Construction Project Coordinator. Prior to his tenure with the city, Brad amassed 13 years of experience in private consultancy, contributing his expertise to a multitude of civil engineering projects. Armed with a Bachelor of Science in Civil Engineering from the University of Nevada at Reno, Brad is a respected member of various professional organizations and actively represents municipalities on the Wyoming Colorado River Advisory Committee. Alongside his wife Renee, Brad has been a proud Cheyenne resident since 1995, raising four sons – Cole, Lane, Carter, and Nolan.



Christopher Brown

Senior Assistant Attorney General, Water and Natural Resources Division

Christopher M. Brown oversees the Water Section at the Wyoming Attorney General's Office, where

he directs legal representation for key agencies including the Wyoming State Engineer's Office, Wyoming Board of Control, and Wyoming Water Development Commission. Graduating with honors from the University Of Wyoming College Of Law in 2002, Chris offers extensive expertise in water law. He provides daily counsel to the State Engineer's Office on statewide water matters and navigates national water issues impacting Wyoming. As the primary legal advocate for interstate river compacts, including those concerning the Colorado River, he ensures Wyoming's interests are protected. Chris holds roles in prominent water organizations and contributed to Wyoming's defense in the Montana v. Wyoming case before the United States Supreme Court.



Laura Bucholz

Wyoming Rancher and President of the Gretchen Swanson Family Foundation

Laura Bucholz, a resilient Wyoming rancher and President of the Gretchen Swanson Family Founda-

tion, honors her late husband's legacy with unwavering commitment. Despite his passing in 2006, she continues his work through initiatives like the Brush Creek project, fostering sustainable land management. Bucholz's dedication extends to academic realms, generously supporting the University of Wyoming's water management research. Her profound influence bridges the gap between practical ranching and progressive environmental stewardship. Bucholz embodies the spirit of perseverance and philanthropy, leaving an indelible mark on both the ranching community and the broader landscape of conservation efforts in Wyoming.



Bob Budd

Executive Director, Wyoming Wildlife and Natural Resource Trust

Bob Budd serves as the Executive Director of the Wyoming Wildlife and Natural Resource Trust,

dedicated to enhancing wildlife habitats and the natural resource heritage of Wyoming. Before spearheading the WWNRT program, Budd managed Red Canyon Ranch and directed land management for The Nature Conservancy in Wyoming, focusing on ecological processes and economic production. With a Master of Science in Range Management and Bachelor of Science degrees in Agricultural Business and Animal Science from the University of Wyoming, Budd's expertise extends globally, addressing natural resource issues in North America, China, and Africa. His contributions include developing management plans and serving on various committees and commissions. Additionally, Budd is a prolific author, with his third book, "Otters Dance," receiving acclaim for its exploration of natural resources and ranching. He resides in Cheyenne and Glendo, Wyoming, with his wife Lynn.



Michelle Bushman

Deputy Director and General Counsel, Western States Water Council

Michelle Bushman serves as the Deputy Director and General Counsel at the Western States Water Council, established in 1965 by Western States Governors to address water policy issues in arid regions. Appointed members, including state engineers and attorneys general, advise on water management. Michelle, who joined in 2015, navigates complex policy topics such as jurisdictional disputes, federal water rights, and drought response. Her background in geology from Brigham Young University informs her work, with a focus on groundwater dynamics. A J. Reuben Clark Law School graduate, she brings seven years of civil litigation experience to her role. Michelle, rooted in Western heritage, is dedicated to securing sustainable water resources for future generations.



Joseph Cook

Assistant Director/Assistant Research Scientist, University of Wyoming Center for Irrigation Science and Management

Joseph Cook, an engineering graduate from France in Agriculture, Environment, and Agribusiness, joined the University of Wyoming in 2016. He has a master's degree in Hydrology and delved into resolving water rights conflicts within the Brush Creek irrigation system, spanning approximately 25,500 acres. Through scientific prowess and problem-solving acumen, he facilitated ground-level solutions, fostering unprecedented cooperation among ranchers in Wyoming's contentious watersheds. Now serving as an assistant research scientist at the University, Cook extends his expertise to projects in the Upper Colorado River basin, focusing on consumptive water use and conservation measures. He aspires to replicate his success statewide and spearheads efforts to establish a Center for Irrigation Science and Management, leveraging the Bucholz Irrigation Excellence Fund initiated in 2023.



Kristi Hansen

Associate Professor and Extension Water Resource Economist, University of Wyoming

Dr. Kristiana Hansen is an Associate Professor and Extension Water Resource Economist in the

Department of Agricultural & Applied Economics at the University of Wyoming. Dr. Hansen's research is in water resource economics, community resilience to weather/climate variability, and wildlife habitat conservation policy. Her Extension program seeks to inform and improve regional decision-making in water management and allocation. Current research projects include water markets in the western U.S.; and analysis of the risks and impacts of different ways that Wyoming and other upper Colorado River Basin states could meet their obligations to downstream states under the Colorado River Compact.



Larry Hicks

Wyoming Senator

Larry S. Hicks, a Republican, serves as the Wyoming State Senate majority leader, representing District 11 since 2011. With Albany and Carbon Counties under his jurisdiction, Hicks leads legislative endeavors since January 10, 2023. His academic journey includes a B.S. in crop science from the University of Wyoming, an M.S. in Agronomy from Montana State University, and Ph.D. coursework in Agronomy from UW. Prior to his political career, he honed expertise as a natural resources coordinator. Hicks' legislative impact extends across committees like Management Council, Agriculture, and State Lands.



Ginger Paige

Professor of Watershed Hydrology and Water Resource Extension Specialist, University of Wyoming

Ginger Paige, a Professor of Watershed Hydrology and Water Resource Extension Specialist at the University of Wyoming, boasts a rich academic journey. With a B.A. in Political Science from Colorado College, an M.S. in Soil Physics from the University of Massachusetts, and a Ph.D. in Watershed Management from the University of Arizona, her expertise spans interdisciplinary domains. Transitioning from a 12-year tenure as a research hydrologist at USDA-ARS in Tucson, AZ, Ginger brings a wealth of experience in rangeland hydrology and stakeholder engagement. Her career is marked by prolific research, securing funding from esteemed agencies like USDA, NSF, and NASA Space Grant, and mentoring graduate students, numbering 17 as chair.



Aaron Reichl

Vice President of Technology and Business Development, Genesis Alkali

Since 1996, Aaron has been an integral part of FMC's Alkali Chemicals Division in Green River, Wyoming (now Genesis Alkali), leveraging his BS in Chemical Engineering from MIT. Progressing from a process engineer, he assumed diverse engineering and production leadership roles within the Green River Trona facility. Presently, as the VP of Technology & Business Development, his expertise shapes the division's trajectory. Aaron also contributed significantly as the Technology Director for FMC's Lithium Division. Beyond corporate realms, he actively engages in academic and civic spheres, serving on the Chemical Engineering Advisory Board at the University of Wyoming, presiding over the Wyoming Mining Association, and participating in governmental committees like the Governor-appointed Colorado River Advisory Committee and the Joint Powers Water Board (Green River, Rock Springs, Sweetwater County).



Albert Sommers

Wyoming Speaker of the House

Albert Sommers comes from a family of early homesteaders in the Green River Valley and is a life-long resident of Sublette County. After graduating with honors from the University of Wyoming in 1981 with a Bachelor of Science in Electrical Engineering, he returned to manage the family ranch. Albert and his family have been recognized with prestigious conservation awards such as the Leopold Conservation Award and the Bucholz Conservation Award. Currently serving his sixth term in the Wyoming House of Representatives, he holds the position of Speaker of the House. He championed the establishment of the Wyoming Colorado River Advisory Committee and actively serves on it.



Jeb Steward

Water Rights Consultant

Jeb Steward, a former Wyoming House of Representatives member from District 47 (2007-2013), is a Republican known for his advocacy on wind energy taxation. From ranch work at Silver Spur Ranch to owning Baggott Rocks Repair, Steward's diverse background shapes his stance on wind tax. He is also passionate about irrigation and has been a significant contributor to the success of the Brush Creek Irrigation System.



Cory Toye

Wyoming Water Policy Director, Trout Unlimited

Cory Toye is Trout Unlimited's Wyoming Water Policy Director, spearheading restoration initiatives statewide. With expertise in water legislation, he navigates policy matters for TU in Wyoming. Since 2015, Cory has steered ongoing feasibility studies on Demand Management in the Colorado River, focusing on projects in the Upper Green River. Based in Lander, Wyoming, he works to ensure the state's water resources are protected for future generations.



Pat Tyrrell

Wyoming State Engineer

Pat Tyrrell, a Wyoming native hailing from Cheyenne, boasts a diverse career journey entrenched in the private sector until his appointment as State Engineer in January 2001. He emerged as a stalwart figure within the Wyoming Water Association, previously serving as both a board member and President. During his tenure as State Engineer, Pat assumed pivotal roles representing Wyoming, notably as Commissioner to the Upper Colorado River Commission and on committees such as the North Platte Decree Committee and the Colorado River Basin Salinity Control Forum. Following his retirement in April 2019, Pat maintained his dedication to Wyoming's water management landscape through Tyrrell Resources LLC, offering expert consultation primarily within the state.



Eric Webster

Associate Dean/Director of the Agricultural Experiment Station, University of Wyoming

Eric Webster earned a B.S. in Agronomy and Soils from Auburn University in 1987, an M.S. in Weed Science in 1990 and a Ph.D. in Weed Science from Mississippi State University in 1995. He worked at the University of Arkansas and Louisiana State University before joining the University of Wyoming in 2021 as Associate Dean for Research and Director of the Wyoming Agricultural Experiment Station. He has briefly served as Interim Director of the University of Wyoming Extension in 2023. Throughout his career, he made significant contributions to research, advising 23 graduate students and publishing over 600 articles. He has also been the recipient of many prestigious awards.

The Ranching in the West Leadership Symposium

is an outcome of the Ranch Management and Agricultural Leadership Program (RMAL).

RMAL is a new program at the College of Agriculture, Life Sciences, and Natural Resources.

This innovative program fosters a foundational and working knowledge of animal production, agricultural business operations, forage production, and rangeland and soil management. In addition, it will provide critical competencies in the arenas of leadership, communications, human resources management, and technology. The curriculum purposely integrates experiential learning, professional networking, internships and engagement with industry professionals.

The Ranch Management and Agricultural Leadership Program will be ready for the entering class of 2024. This is an interdisciplinary, college-wide program which engages all of our academic departments. Future components of the degree will be delivered in conjunction with the UW College of Agriculture, Life Sciences, and Natural Resources faculty, UW Extension personnel, and industry professionals.

A special thank you to the hard-working staff in CALSNR that helped put this program together.



David Keto
Manager,
Communications and
Technology



Hannah Korsmeyer
Senior Office Associate



Patty Leatherwood
Office Associate



Pepper Jo Six
Director of External
Relations



Lindsay Stewart
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Randall Violett
Associate Director of
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Agricultural Leadership
Program



Kelly Wiseman
Coordinator of College
Affairs

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