2023 YAMPA BASIN RENDEZVOUS

Snows, Flows, and Drought: Managing for Western Water Resilience



Thursday, June 1 | 9 a.m. - 4 p.m. & 6-7:30 p.m. Friday, June 2 | 9 a.m. - 4 p.m.

Allbright Auditorium, Colorado Mountain College, Steamboat Springs, CO



ORGANIZED BY

YAMPA VALLEY

SUSTAINABILIT

















About the Yampa Basin Rendezvous

YBR Mission: The YBR strives to be an opportunity for reflection, communication, appreciation, and collaborative, interactive learning about the Yampa Basin ecosystems, environment, weather, climate, people, and culture and their intersections for members of the Yampa Basin community as well as all the communities downstream who rely on the Yampa's water.

YBR Goals: Connect students, researchers, institutions, and community members who live and work in the Yampa River Basin to share knowledge regarding climate variability and change that has impacts on the environment, people, and the economy. Build community and encourage collaborative problemsolving and planning, and provide an opportunity for citizens and visitors to be informed about the state of the Yampa Basin and the people and plans in place and in process to protect it.

For detailed information on previous YBR conferences and speakers visit www.org/yampa-basin-rendezvous

2023 YBR Steering Committee Members:

Madison Muxworthy, Co-Chair, Yampa Valley Sustainability Council
Nathan Stewart, Co-Chair, Colorado Mountain College
Marty Ralph, Center for Western Weather and Water Extremes, UC San Diego
Sarah Jones, Steamboat Ski and Resort Corporation
Holly Kirkpatrick, Upper Yampa Water Conservancy District
Kerstin Paulsson, Center for Western Weather and Water Extremes, UC San Diego
Jenny Frithsen, Friends of the Yampa
El Knappe, Center for Western Weather and Water Extremes, UC San Diego
Nicole Seltzer, River Network

Garrett Mcgurk, Center for Western Weather and Water Extremes, UC San Diego **Halie Cunningham**, Yampatika

Welcome from the Director of the Center for Western Weather and Water Extremes

Welcome! The Center for Western Weather and Water Extremes (CW3E) is thrilled to co-host the sixth annual Yampa Basin Rendezvous. CW3E is committed to conducting innovative work on extreme weather and water events through developing research and operations partnerships that support effective policy and practices surrounding extreme weather and water events. This conference grew out of a desire to make sure that students and researchers at the Center who might be new to the west had a strong sense of the unique water issues there. The Yampa River watershed was the perfect place to do this: the community is incredibly devoted to the river and determined to protect it.



Through the years, YBR has helped foster ongoing collaborations and work. This included collaborative monitoring projects with the Yampa Valley Sustainability Council (YVSC), Colorado Mountain College (CMC), and the Upper Yampa Water Conservancy District (UYWCD), and a co-hosted internship between YVSC, CMC, and the Aspen Global Change Institute (AGCI). YBR has served to bring together researchers, scientists, policy makers, and community members to discuss water and weather topics for six years and been a platform to create lasting connections. This conference has also served to enhance observational networks in the Upper Yampa Basin. Last year, CW3E and YVSC installed a new surface meteorological and soil moisture station supported by UYWCD. This pilot station has led to the network expansion of eight additional stations across the watershed, supported by UYWCD, the Colorado Water Conservation Board, and the Colorado River District. The expansion also involves partnering with numerous additional agencies and institutions. These stations will provide key observations over the coming decades and improve our understanding of the physical processes occurring in the watershed, as well as provide critical real time observations to better constrain our understanding of how much water inflow to reservoirs can be expected from the annual snowpack.

YBR's 2023 theme of Snows, Flows, and Drought: Managing for Western Water Resilience aligns with CW3E's mission and addresses the ongoing challenges of the hydrologic environment in which the west operates, under pressures including climate change and population growth. After years of drought, this water year has shown us that we need to be prepared to handle extremely dry and extremely wet years. While this year was above average, the Colorado would require multiple years like this to overcome the broader, long-term dry situation that has developed over a decade or more. This context makes the conversation we are planning to have this year extremely timely.

This May, I had the opportunity to float the Yampa River with the Friends of the Yampa and witness the beauty and importance of this watershed firsthand, and to meet a remarkable group of leaders who manage or influence the future of this system. Seeing the river at 20,000 cfs, its highest in 10 years or longer, was exciting and encouraging. We learned about how unique this river is in terms of its still-natural cycle of spring flood and how this impacts ecosystems up and down the entire Upper Colorado River system, including as a refuge for endangered species, while also supporting vibrant regional communities.

Steamboat and the wildness of the southwest US, have special places in my heart and work. It is rewarding to see our "Rendezvous" thriving, creating opportunities for people, and the chance to connect across the everyone the Yampa touches. CW3E is committed to continuing this new tradition and to helping provide innovative research and a platform for key water conversations. I am grateful to this truly amazing community.

I hope you enjoy this fantastic gathering of diverse minds focused on water. We hope YBR can help facilitate vital discussions and serve as a platform to make key connections between researchers, policy makers and the community.

Best,

Marty Ralph

Director of Center for Western Weather and Water Extremes



DAY 1 WELCOME & PANEL 1: LOW-TO-NO SNOW FUTURE

Thursday, June 1 • 9:00-10:50 a.m.

WELCOME & INTRODUCTORY REMARKS

Joe Neguse

U.S. Representative for Colorado's 2nd Congressional District

MODERATOR

Cara Piske

Airborne Snow Observatories

SPEAKERS

Mu Xiao

Center for Western Weather and Water Extremes

Joel Atwood

Natural Resources Conservation Service

Kent Vertrees

Steamboat Powdercats and Friends of the Yampa

PANEL 2: ADAPTATION, IMPLEMENTATION AND CAPACITY

Thursday, June 1 • 11:00 a.m. - 12:20 p.m.

MODERATOR

Aireona Raschke

CSU Center for Collaborative Conservation

SPEAKERS

Daniel Boyes

Rio Grande Headwaters Restoration Project

Melanie Kilpatrick

City of Craig, Colorado

Field Excursion: Watershed, Forest Health and Wildfire

Description: Join us at the Fish Creek Falls Water Treatment Plant for a discussion on watershed, forest health and wildfire with partners from the US Forest Service, City of Steamboat Springs, Colorado State Forest Service and Mount Werner Water and Sanitation District.

Time: 1:30-4 p.m. (Includes travel time)

Location: 3310 Clearwater Trail, Steamboat Springs, CO 80487

Join us for an evening with Erica Gies:

Water Always Wins

Thriving in an Age of Drought and Deluge



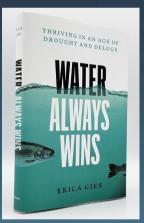
Thursday, June 1, 6-7:30 pm

Doors Open @ 5:30 pm

Allbright Auditorium Colorado

Mountain College





Register Here!



A special event co-hosted by the Yampa Basin Rendezvous & Friends of the Yampa. Join us for the 2023 State of the Yampa, keynote Erica Gies, and an afterparty film, *Wild Rivers with Tillie*. Books for sale by Off The Beaten Path. Food & cold bevies available!

















DAY 2 WELCOME & PANEL 3: PRESERVING COMMUNITIES AND CULTURE THROUGH WATER RESILIENCY

Friday, June 2 • 9-10:50 a.m.

WELCOME & INTRODUCTORY REMARKS

Carrie Besnette Hauser

Colorado Mountain College

MODERATOR

Jennifer Wellman

The Nature Conservancy

SPEAKERS

Celene Hawkins

The Nature Conservancy

Beatriz Soto

Conservation Colorado

Darwin Whiteman

Ute Mountain Ute Tribe

PANEL 4: SLOW WATER SOLUTIONS

Friday, June 2 · 11 a.m. - 12:20 p.m.

MODERATOR

Erica Gies

Author of "Water Always Wins"

SPEAKERS

Jackie Corday

Corday Natural Resources Consulting

Cheryl Cwelich

Upper Gunnison River Water Conservancy District

Field Excursion: Natural Climate Solutions

Description: Join us at Elkhead Creek Ranch for a tour of riparian restoration projects with the O'Neal family and project partners including the Yampa Valley Sustainability Council.

Time: 1:30-4 p.m. (Includes travel time)

Location: 2626 County Road 29, Craig, CO 81625



SPEAKERS

DAY 1 WELCOME ADDRESS

JC NORLING

JC is the Vice President and CMC Steamboat Springs Campus Dean. He holds a Ph.D. in Parks, Recreation, and Tourism, from The University of Utah, a M.S. in Education: Outdoor Recreation Management from Southern Illinois University and a B.A. in History from North Park University. JC is an avid outdoorsman and can be found biking, skiing, or teaching avalanche classes for the college.





JOE NEGUSE

Representative Joe Neguse has served as the Congressman for Colorado's 2nd District in the U.S. House since being first elected in November 2018. He currently serves as Chair of the Democratic Policy and Communications Committee (DPCC), the No. 5 elected position in House Leadership, and is the first Coloradan to serve in senior leadership in over 85 years. During his three terms in the House, the Congressman has earned national praise for his ability to craft and enact legislation, and as the former Chairman of the Public Lands Subcommittee, has been identified as one of the most

effective legislators in Congress. He has had 22 pieces of legislation signed into law, by presidents of both political parties, and has been recognized nationally as one of the most bipartisan lawmakers in the country, including through his role as Co-Chair of the Bipartisan Wildfire Caucus. He currently serves as a member of the Natural Resources, Judiciary, and Rules Committees. An attorney and civic leader, Rep. Neguse also served six years on the University of Colorado Board of Regents, where he earned his undergraduate degree, *summa cum laude*, and Juris Doctorate.

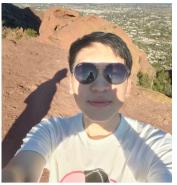
PANEL 1: LOW-TO-NO SNOW FUTURE

CARA PISKE

Cara Piske (she/her) is an Operations Scientist at the Airborne Snow Observatories, where she helps process snow distribution data that aids our understanding of water resources in the West. She moved back home to the Yampa Valley in the fall of 2022 after completing a Master's degree in Hydrologic Science from the University of Nevada Reno (UNR). Her Master's thesis examined how vegetation impacts snowpack accumulation and retention in the Sierra Nevada. Prior to her time at UNR, Cara studied surface water dynamics and fluvial geomorphology in Vermont while obtaining



a BS in Earth Sciences at Dartmouth College. After college, she made her way back west to pursue her passion for understanding water resources in more arid climates, studying hydrology-related topics in Minnesota, Oregon, and Idaho along the way.



MU XIAO

Dr. Mu Xiao serves as a research hydrologist at CW3E. He earned his master's degree in civil and Environmental Engineering from University of Washington. He received his Ph.D. degree in the Department of Geography at University of California, Los Angeles. The major research area of his doctoral study is hydrology and water resources. He has been doing extensive modeling work in the field of land surface hydrology. His research interest is examining the pattern and function of terrestrial hydrology in the climate system, as well as identifying signal of hydroclimatic changes pertaining to natural

variability and anthropogenic impacts. His prior research work includes exploring the characteristics and impacts of large-scale droughts in the Western United States, assessment of climatic controls on changes in surface water storage, and evaluation the changes in role of mountain snowpack in surface hydrological processes under the warming climate.

JOEL ATWOOD

Joel Atwood is a hydrologist at the NRCS Snow Survey - Colorado Data Collection Office. In his six years with the snow survey, he has worked to modernize the SNOTEL network within the Colorado Data Collection Office with advances in programing, telemetry, and sensors. Additionally, he leads a team in quality controlling data, developing products, and maintains the Colorado Snow Surveys website. He holds a BA in education from Eastern Washington University, a BS in Geology from the University of Washington, and a Masters in Hydrology from the University of Arizona.





KENT VERTREES

Kent Vertrees currently works with the Friends of the Yampa (FOTY) as the Recreation and Education Coordinator and has been a long-time board member and active volunteer with FOTY since the late 90s. As the acting recreational representative to the Yampa/White/Green Basin Roundtable, Kent has participated in many local, regional, and statewide planning efforts. He is an Adjunct Professor at the CMC's Alpine campus, teaching river, and canyon orientation courses, and his "real job" is managing owner and the Master of Chaos at Steamboat Powdercats, NW Colorado's only

snowcat skiing operation. In his spare time, Kent is focused on raising his two daughters with his wife Jules, and celebrating most everything that is NW Colorado.

PANEL 2: ADAPTATION, IMPLEMENTATION AND CAPACITY

AIREONA BONNIE RASCHKE

Aireona Raschke is an interdisciplinary conservation biologist who is focused on the dynamics of collaborative and community-based natural resource management efforts. In particular, she is interested in finding solutions for current capacity and funding shortfalls for collaborative work, as well as the role of community building and culture in the collaboration conservation field. She is currently the assistant director of practice for the Center for Collaborative Conservation, where she directs the Western Collaborative Conservation Network and is otherwise focused on building out the



Center's engagement projects and research agenda. Previous to this, she was the program director for an on-the-ground collaborative conservation initiative called the Central Arizona Conservation Alliance working in Maricopa County on building a regional network of high-quality habitat across the urban and rural landscape.

There she led a partnership of more than 60 organizations working on joint, cross-jurisdictional habitat restoration, invasive plant management, and public engagement projects. She also has her Ph.D. in the nexus of biology and society with a focus on the role of nature-based tourism on conservation and social outcomes in the





DANIEL BOYES

Daniel Boyes is the Executive Director of the Rio Grande Headwaters Restoration Project (RGHRP), a small watershed group based out of Alamosa, CO. RGHRP works with a diverse group of local partners, including private landowners, ditch companies, and state and federal agencies to plan and implement river restoration projects. RGHRP's projects range from large-scale irrigation infrastructure improvements on the mainstem Rio Grande to low-tech process-based restoration in the Rio Grande's headwaters. Daniel spends his free time mountain biking and exploring southern

Colorado. Before moving to the San Luis Valley, he spent five years working in stream ecology and environmental education across the West.

MELANIE KILPATRICK

Melanie Kilpatrick serves the City of Craig as the Executive Assistant to the City Manager, Grants Administrator, and as the Project Manager for the Yampa River Corridor. Melanie has a B.S. in Business Management with a background in marketing and the creative arts. Melanie represents the City of Craig on the Yampa River Fund Board and Steering Committee. A native to the Yampa Valley, Melanie has a genuine passion for Northwest Colorado, river recreation/stewardship and adventuring with her family.



DAY 1 FIELD EXCURSION



JULIE BAXTER

Julie Baxter is the Water Resources Manager for the City of Steamboat Springs. She coordinates water rights and supply planning, water conservation, watershed and stream protection, and water quality permit compliance for the City. She serves on boards for the Yampa River Fund and the Yampa/White/Green Basin Roundtable. Prior to joining the City, Julie worked as a consultant on the Steamboat Springs Yampa River Stream Management Plan, for FEMA's RiskMAP program, on projects supporting Colorado agencies following the 2013 flood disaster, and assisting local

governments with sustainability planning projects. She managed the hazard mitigation planning program for FEMA Region 8 for five years. She holds a Master in Community and Regional Planning from the University of Oregon and a Bachelor of Science in Natural Resources from the University of Michigan.

TYLER GILMAN

Tyler Gilman has called Steamboat home since graduating from the University of Vermont with a Bachelor of Science in Natural Resources in 2011. Drawn by the Western lifestyle and his love of skiing, biking and all things outdoors, Steamboat has provided the perfect work/life balance. He has certifications as a Class A Water Treatment Operator, Class 4 Water Distribution Operator and Class 4 Wastewater Collections Operator. When he is not at work, you can find him exploring the backcountry on skis, bike or hiking with his wife Alex, daughter Finley, son Beckett and trusty dog Skip.





JOHN TWITCHELL

John Twitchell is a Society of American Forester Certified Forester and SAF Fellow. He has worked in both state and private forestry in New Hampshire, Alaska, and Colorado. He has been a forester with the Colorado State Forest Service since 1998. He managed the Colorado State Forest until 2005 and has supervised the Steamboat Springs Field Office since that time. John assists in the management of state, private lands and federal lands throughout Northwest Colorado in his current position as a Supervisory Forester. John has had the opportunity to fight fire across the west as a wildland

firefighter for the CSFS for over twenty-five years of his career. He also worked through the Mountain Pine Beetle epidemic over a similar period of time. These experiences have shaped his views as a proponent of managing forests across ownership boundaries to achieve social and environmental objectives at a meaningful scale. He has worked extensively with the Good Neighbor Authority and other collaborative mechanisms to help achieve these objectives.

MICHAEL WOODBRIDGE

Michael Woodbridge is the District Ranger for the Routt National Forest's Hahns Peak/Bears Ears Ranger District in Steamboat Springs, CO. In his job with the Forest Service he manages approximately half a million acres of National Forest System land for multiple uses. He has extensive experience in land management, policy, communications and government/legislative affairs. Michael moved to the area in 2021 and has been with the Forest Service since 2014. He is an avid outdoor recreationist, engaging in mountain biking, rock climbing, skiing, backpacking,



hunting, fishing, etc. Michael loves spending time in the mountains and sharing it with his wife, two daughters and dog.

DAY 2 WELCOME ADDRESS



CARRIE BESNETTE HAUSER

Since 2013, Dr. Carrie Besnette Hauser has served as President and CEO of Colorado Mountain College. Previous to CMC, Hauser held leadership roles at the Kauffman Foundation, Metropolitan State University of Denver and the Daniels Fund. Hauser is currently chair of the Colorado Parks and Wildlife Commission, a member of the El Pomar Northwest Regional Council, and serves on the Great Outdoors Colorado (GOCO) and Vail Valley Foundation boards of directors. Hauser has also been a long-time board member of American Rivers.

PANEL 3: PRESERVING COMMUNITIES AND CULTURE THROUGH WATER RESILIENCY

JENNIFER WELLMAN

Jennifer Wellman is The Nature Conservancy's Freshwater Project Director in NW Colorado and leads irrigation diversion modernization, climate adaptation, and riparian improvement projects throughout the Upper Colorado River watershed, including the Yampa, White, and Dolores Rivers. She brings over 20 years of managing projects in community-driven river restoration, working in collaboration with numerous Tribes, the Maybell Irrigation District, the Upper Colorado River Endangered Fish Recovery Program and agencies such as the Bureau of Land Management, Natural



Resource Conservation Service, Bureau of Reclamation, US Army Corps of Engineers, US Fish and Wildlife Service, National Park Service, US Forest Service, the Colorado River District.



CELENE HAWKINS

Celene Hawkins is a conservation professional and attorney with experience in Colorado River and Tribal water and natural resource management. She serves as The Nature Conservancy's Colorado River Tribal Partnerships Program Director, where she leads the Conservancy's efforts to effectively and ethically partner with Tribal Nations and Indigenous peoples on freshwater conservation projects in the Colorado River Basin. Celene serves on the leadership team of the Water and Tribes Initiative and served two terms on the Colorado Water Conservation Board in her personal capacity (2017–2023). Celene enjoys living near the Animas River in Durango, Colorado with her family.

BEATRIZ SOTO

Beatriz Soto has been at the intersection of community building, social justice and working towards a stable climate for the past two decades. She is an award-winning architect with a LEED certification, who has worked on a variety of energy related – high performance projects; has also led and created professional and workforce development workshops in US and Mexico. She is former Director of Defiende Nuestra Tierra for The Wilderness Workshop, co-founding member of Voces Unidas de las Montañas, and is currently the Director of Protegete, a statewide initiative from



Conservation Colorado, who has the mission to elevate Latino driven solutions to protect our lands, water, air and fight for environmental and climate justice. Beatriz was appointed to serve on the Colorado Environmental Justice Action Task Force representing Disproportionately Impacted Communities in Congressional District 3, the recommendations set forward by the taskforce have currently been endorsed by Gov. Polis and will begin to be implemented across state agencies. She was also a proud member of the US delegation at the World Forestry Congress in Seoul, South Korea in 2022, where her work elevating diverse and minority voices in conservation and the future of the US mountain west resort economies was shared at a global scale.



DARWIN WHITEMAN

Darwin Whiteman Jr. is an elected Councilman Representative of the Ute Mountain Ute Tribe. He is currently serving his 2nd 3-year term on the Tribal Council and fills the role of Ute Mountain Ute Tribe Treasurer. In this role, Councilman Whiteman serves as the Custodian of the monies over which the tribe has Jurisdiction and control and helps in developing financial growth and tribal economy. In addition to Tribal Council duties, Whiteman is also a member of the Native American Bank Board, Native American Finance Officers Association, and the Southwest Regional Bureau of Indian Affairs Budget Committee.

PANEL 4: SLOW WATER SOLUTIONS

ERICA GIES

Erica Gies is an award-winning independent journalist who writes about water, climate change, plants and critters for Scientific American, The New York Times, Nature, The Atlantic, The Guardian, National Geographic, The Economist, Washington Post, bioGraphic, Wired, and more. Her stories hail from North America, especially California and British Columbia, and the wider world. In a quest for commonalities that bind us and innovations that inspire, she has reported from many intriguing places: Iraq, Peru, Cambodia, India, Syria, Kenya, China, Qatar, Laos, the United



Kingdom, Guyana, Vietnam, France, and Indigenous nations and territories, including those belonging to Navajo (Diné), Kwiakah, Makushi, Kitasoo/Xai'xai, 'Namgis, Heiltsuk, and Native Hawaiian peoples. Her book, Water Always Wins: Thriving in an age of drought and deluge, is about what she calls "Slow Water" innovations that are helping us adapt to the increasing floods and droughts brought by climate change. Growing up in the San Francisco Bay Area, she spent childhood vacations camping and hiking in state and national parks and swimming in any body of water she came across. She remains an ardent fan of critters, plants, hydrology, wilderness, and hiking. Erica lives in Victoria, British Columbia, and in San Francisco, with her partner and her half-wild, half-lovebug tabby cat.



JACKIE CORDAY

Jackie Corday, owner of Corday Natural Resources Consulting, is a land and water conservation lawyer with over two decades of collaborating with numerous local, state, and federal agencies and nonprofits to solve challenges to natural resource issues with a focus on stream and watershed health. Jackie was previously the head of Colorado Parks and Wildlife's Water Resources Section in Denver and moved to Montrose in late 2019 to begin her consulting company. American Rivers hired her to coordinate the efforts of the Colorado Healthy Headwaters Working Group, a

statewide collective of stream restoration experts, scientists, agency, academic, and nonprofit staff who are working together to amplify headwater restoration in Colorado. She has done extensive research on the benefits of low-tech process-based restoration and common implementation barriers, including water rights and social issues. She also works with Audubon on restoration policy issues and researching the river health information gaps and how to address them. Jackie obtained her undergrad degree from Humboldt State University in Environmental Biology and her J.D. from University of Oregon School of Law with a focus on environmental law.

CHERYL CWELICH

Cheryl Cwelich is a Water Resource Specialist for the Upper Gunnison River Water Conservancy District (UGRWCD) and coordinates the Gunnison Basin Wet Meadow & Riparian Restoration Collaborative with public and private partners. Her passion for water resource management began while working for Colorado Parks & Wildlife as a seasonal park ranger for three seasons on the Arkansas River. After a stint in land conservation and conducting a three-year river use study on the Slate River in Crested Butte, CO, Cheryl joined the UGRWCD staff in January 2022 to take a deeper dive on



improving ecohydrology health and function through wet meadow restoration. Cheryl has a bachelor's degree from Western Colorado University, graduating summa cum laude with an emphasis in Water Policy and Resilience.

She is an avid outdoorswoman, directing the Gunnison River Festival, part-time ski patrolling at Monarch Ski

Resort and loves spending time exploring nature with friends and family.

DAY 2 FIELD EXCURSION

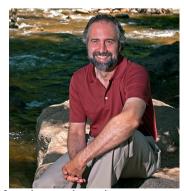


TIM AND LAINE O'NEAL

Tim and Laine O'Neal, owners of the Elkhead Creek Ranch, are participating in a 10-year river restoration project led by the National Resources Conservation Service, Trout Unlimited and the Yampa-White-Green Basin Roundtable. The O'Neal family ranch sits just below Elkhead Reservoir on the borders of Routt and Moffat counties. They have a perfect view of Bears Ears Peak and abundant flora and fauna, and they take their stewardship role seriously. Together they are working to reduce bank erosion, protect riparian habitat and enhance river productivity. In addition to the river project, they have implemented sustainable grazing methods. Their steers are rotated often, giving the grasses and soil time to rest and regenerate. Sustainability, longevity, and stewardship are at the forefront of Elkhead Creek Ranch.

TIM SULLIVAN

Tim Sullivan has more than 30 years of leadership experience in international, national, and local conservation efforts. He currently serves as Resilient Land and Water Director at Yampa Valley Sustainability Council. Prior to this, Tim was the Climate Director for the North American Region of The Nature Conservancy where he oversaw work in all 50 states to develop a climate change program including work on state-level policy; land-based emissions mitigation and adaptation; and communication and outreach projects. His other positions have included State



Director for The Conservancy's Colorado Chapter, Conservation Initiatives Director for the Colorado program at TNC, and Regional Director for the Environmental Defense Fund. Tim holds an undergraduate degree in Biology and History from Cornell University and a Master's degree in Conservation Biology from the Yale School of Forestry and Environmental Studies.