

# CHANGING RIVERS AGENDA FEBRUARY 17, 2021



## WELCOME

10:00 am—10:45 am MST

- 10:00—10:20 am **Overview and Networking**  
Rusty Lloyd, RiversEdge West
- 10:20—10:40 am [Keynote Presentation: Department of Natural Resources Perspective on Climate Resiliency](#)  
Dan Gibbs, Executive Director, Colorado Department of Natural Resources

## IMPLICATIONS OF CLIMATE CHANGE

10:40 am—12:00 pm MST

- 10:40—11:00 am [Mitigating Impacts of Climate Change at Watershed Scales](#)  
Chris Sturm, Colorado Water Conservation Board
- 11:00—11:25 am [Observed and Projected Climate Changes in the Western and Southwestern United States](#)  
Gregg Garfin, Southwest Climate Adaptation Science Center
- 11:25—11:45 am [New Findings on the Climate Sensitivity of the Water Balance of the Upper Colorado River Basin](#)  
Paul ("Chris") Milly, U.S. Geological Survey
- 11:45—12:00 pm **Follow-up Q&A/Discussion**

## BREAK

12:00 PM—1:00 pm

## ADAPTING RESTORATION TO A RAPIDLY CHANGING CLIMATE

1:00 pm—3:00 pm MST

- 1:00—1:10 pm **Introduction and Overview**  
Mark Briggs, RiversEdge West
- 1:10—1:35 pm [The Escalante River: Sustaining Hard-won Restoration in a Warmer and Drier Future](#)  
Michael Scott, Escalante River Watershed Partnership
- 1:35—2:00 pm [Strategies, Tools, and Methodologies for Effective Regional-scale Climate Adaptation](#)  
Katharine Hayhoe, Texas Tech University and ATMOS Research & Consulting
- 2:00—2:25 pm [Freshwater Ecosystems and Climate Change Adaptation](#)  
Bart Wickel, Stockholm Environment Institute
- 2:25—2:45 pm [Climate Services for Climate-Adapted Stream Restoration](#)  
Sarah LeRoy, University of Arizona
- 2:45—3:00 pm **Final Discussion**

# CHANGING RIVERS AGENDA FEBRUARY 18, 2021



## WELCOME

10:00 am—10:20 am MST

10:00—10:20 am **Overview and Networking**  
Kristen Jespersen, RiversEdge West

## CREATIVE TOOLS FOR COMMUNITY ENGAGEMENT

10:20 am—12:00 pm MST

- 10:20 — 10:40 am [Visualizing Community Input for Yampa River Management Planning](#)  
Nicole Seltzer, River Network and David Groves, RAND Corporation
- 10:40 — 11:00 am [Virtual Connections Building Towards Real World Collaborative Watershed Management in the San Juan Basin](#)  
Alyssa Richmond, San Juan Watershed Group
- 11:00 — 11:20 am [Mapping Perceived Social Values of Riparian Ecosystems: Case Study in Southeastern Arizona, USA](#)  
Roy Petrakis, U.S. Geological Survey
- 11:20 — 11:40 am [Riparian Evaluation Monitoring: Utilizing Texas Stream Citizen Science to Evaluate Riparian Health](#)  
Aspen Navarro, Texas State University
- 11:40 — 12:00 pm [Engaging the Whole Community in Restoration: Considerations for Diversity, Equity & Inclusion in Outdoor Stewardship](#)  
David Fulton-Beale and Jackie Curry, Wildlands Restoration Volunteers

## BREAK

12:00 PM—1:00 pm MST

## RESTORATION ECONOMIES PANEL: TOOLS FOR VALUING & FINANCING RESTORATION

1:00 pm—2:45 pm MST

Rivers have important economic values that restoration practitioners and policy-makers must better understand how to quantify and leverage. The panel will provide an overview of the economic benefits of healthy rivers and how to value the full suite of their ecosystem services, as well as how to protect and improve investments in river infrastructure and restoration. The session will also provide an overview of the economic value of protecting instream flows and how to attract public and corporate investment through these measures. Finally, the session will provide examples of how to successfully access private capital for natural infrastructure and creatively finance improvements to our rivers.

- 1:00 — 1:10 pm **Introduction and Overview**, Kristen Jespersen, RiversEdge West
- 1:10 — 1:30 pm [Rivers as Economic Engines](#)  
Fay Hartman, American Rivers
- 1:30 — 1:50 pm [Restoration Economies: Tools for Valuing and Financing Restoration](#)  
Molly Mugglestone, Business for Water Stewardship
- 1:50 — 2:10 pm [Unlocking Private Capital to Finance Natural Infrastructure for Healthy Ecosystems and Resilient Communities](#)  
Todd Gartner and Lizzie Marsters, World Resources Institute
- 2:10 — 2:45 pm **Discussion**



# CHANGING RIVERS AGENDA FEBRUARY 18, 2021



## POSTER SESSION & STUDENT CONTEST

3:15—4:00 pm MST

3:15 — 3:20 pm

### Overview

Shannon Wadas, RiversEdge West

3:20 — 4:00 pm

### Join us for our Poster Session and Student Contest!

Poster presenters will share their poster submissions in 5-minutes or less.

#### [The One Riverfront Commission](#)

Dave Bastian, One Riverfront Commission

#### [Soil Analysis for Restoration on the Santa Clara River](#)

Margot Mason, University of California

#### [Results of 17 Years of Monitoring at the Los Lunas Habitat Restoration Site, New Mexico](#)

David Moore, and Tori Barron, Bureau of Reclamation Technical Service Center

#### [Developing a Land Suitability Analysis for Green Infrastructure Placement in Ambos Nogales](#)

Alma Anides Morales, University of Arizona

#### [Expanding our Knowledge on the Mitochondrial Genomes of the Tamarisk Leaf Beetles, \*Diorhabda\* spp.](#)

Payton Wills, Colorado Mesa University

### *Student Contest:*

To encourage continued student development of not only their research but also their ability to present virtually, the poster session will include a contest exclusively for students.

Conference attendees will judge the student poster/presentations and vote on their choice for the top three. First, second, and third winners will receive a cash scholarship of \$150, \$100, and \$50 respectively.



# CHANGING RIVERS AGENDA FEBRUARY 23, 2021



**RiversEdge West**  
RESTORE + CONNECT + INNOVATE

## WELCOME

10:00 am — 10:20 am MST

10:00—10:20 am **Overview and Networking**  
Rusty Lloyd, RiversEdge West

## CHANGING CONDITIONS

10:20 am — 12:00 pm MST

- 10:20 — 10:40 am **The Middle Rio Grande Bosque**  
Adrian Oglesby, UNM Utton Transboundary Resources Center and Paul Tashjian, Audubon New Mexico
- 10:40 — 11:00 am [Recovery of \*Salix\* Following \*Tamarix\* Removal](#)  
Alex Goetz, University of Denver
- 11:00 — 11:20 am [A Snapshot, Repeated; Riparian Vegetation Change in Response to Altered Flow Regimes and Geomorphology, San Juan River, SE Utah](#)  
Cynthia Dott, Fort Lewis College
- 11:20 — 11:40 am [Riparian Habitat & Wildlife: What's Mycorrhizae Got to Do with It?](#)  
Lisa Markovchick, Northern Arizona University
- 11:40 — 12:00 pm **A Riverscape Network Assessment of Lahontan Cutthroat Trout Habitat**  
Wally Macfarlane

## BREAK

12:00 PM — 1:00 pm MST

## PROJECT EXAMPLES & LESSONS LEARNED

1:00 pm — 3:00 pm MST

- 1:00 — 1:20 pm [Field Work in The Time Of COVID](#)  
Dave Bastian, Canyon Country Youth Corps
- 1:20 — 1:40 pm [Wet Meadow Restoration in Gunnison Sage-Grouse Habitat Along the Gould Reservoir](#)  
Cassandra Shenk, ERO Resources Corporation and Jake Hartter, The Western Slope Conservation Center
- 1:40 — 2:00 pm [Oasis in the Desert: A Showcase of Collaborative Restoration along Wild and Scenic Fossil Creek, Arizona](#)  
Elaine Nichols, Friends of the Verde River
- 2:00 — 2:20 pm [Restoration of Longitudinal Connectivity of the Price River for the Benefit of Native Fish Species and People](#)  
Eric McCulley, RiverRestoration
- 2:20 — 2:40 pm [Goats as a Method of Weed Control in Saint Vrain State Park](#)  
Haley Stratton and Tamara Keefe, Felsburg Holt & Ullevig
- 2:40 — 3:00 pm **Discussion & Networking**



# CHANGING RIVERS AGENDA FEBRUARY 24, 2021



**RiversEdge West**  
RESTORE • CONNECT • INNOVATE

## WELCOME

10:00 am — 10:20 am MST

- 10:00—10:20 am **Overview and Networking**  
Shannon Wadas, RiversEdge West

## TOOLS, TECHNOLOGY & MONITORING

10:20 am — 12:00 pm MST

- 10:20 — 10:40 am [Applied Remote Sensing in the Middle Rio Grande](#)  
Chris Sanderson, Tetra Tech
- 10:40 — 11:00 am [A Riparian Ecosystem Data Explorer for Monitoring the Lower Colorado River: Integrated and Dynamic Web-based Delivery of Actionable Information](#)  
Pamela Nagler, U.S. Geological Survey
- 11:00 — 11:20 am [How to Use the National River Recreation Database to Plan and Execute Research and Management Objectives](#)  
James Major, River Management Society
- 11:20 — 11:40 am [IpaC – A One-stop Shop for Environmental Review](#)  
Sasha Doss, U.S. Fish and Wildlife Service
- 11:40 — 12:00 pm [Expanding the Southeast Aquatic Barrier Prioritization Tool: Assessing Aquatic Fragmentation in the Western United States](#)  
Kat Hoenke, Southeast Aquatic Resources Partnership

## BREAK

12:00 PM — 1:00 pm MST

## MONITORING & RESEARCH

1:00 pm — 3:00 pm MST

- 1:00 — 1:20 pm [Testing Methods to Improve Monitoring of Riparian Habitat Restoration Performance at Multiple Scales](#)  
Bruce Orr, Stillwater Sciences
- 1:20 — 1:40 pm [Cover of \*Tamarix\* Covaries with Regional and Local Environmental Factors to Explain the Functional Composition of Riparian Plant Communities](#)  
Annie Henry, University of Denver
- 1:40 — 2:00 pm [The Impacts of the Tamarisk Beetle on Southwestern Willow Flycatcher Habitat on the Middle Rio Grande, NM](#)  
Kristen Dillon, Bureau of Reclamation
- 2:00 — 2:20 pm [Preparing the Southwestern Willow Flycatcher for the Tamarisk Leaf Beetle in the Middle Rio Grande, NM](#)  
Ondrea Hummel and Joe Schroeder, Tetra Tech
- 2:20 — 2:40 pm [Developing Southwestern Willow Flycatcher Habitat and Ranking Metrics at Multiple Scales with a Satellite Model](#)  
James Hatten, U.S. Geological Survey
- 2:40 — 3:00 pm **Discussion & Networking**





# CHANGING RIVERS AGENDA FEBRUARY 25, 2021



**RiversEdge West**  
RESTORE • CONNECT • INNOVATE

## VIRTUAL FIELD TRIPS & DISCUSSION — WILDFIRE MITIGATION & RESTORATION

9:00 am — 11:15 am MST

9:00 — 9:05 am

### Overview

Shannon Wadas, RiversEdge West

9:05 — 9:45 am

### [Post Cameo Fire Vegetation Restoration & Lessons Learned](#)

Melissa Werkmeister, Kyle Alstatt, and Cory Lidberg, Bureau of Reclamation

Location: Near Cameo, CO

9:45 — 10:25 am

### [Fire Preparedness and Post Fire Reclamation within James M. Robb Colorado River State Park](#)

Pete Firmin, Colorado Parks and Wildlife

Location: James M. Robb Colorado River State Park in Grand Junction, CO

10:25 — 11:10 pm

### [Pine Gulch Fire Impacts and the Work that Goes into Suppression, Repair, and Restoration](#)

Kevin Hyatt, Erin Kowalski, and Marlin Deras, Bureau of Land Management

Location: Bookcliffs North of Grand Junction, CO

11:10 — 11:15 pm

### Final Discussion

## BREAK

11:15 am — 12:15 pm MST

## WORKSHOPS

12:15 pm — 4:30 pm MST

## A CLIMATE-SMART APPROACH TO RIPARIAN RESTORATION & REVEGETATION

12:15 pm — 1:45 pm MST

Marian Vernon, Point Blue Conservation Science

There is an increasing need to design and implement ecological restoration projects within the context of climate change and uncertainty about future conditions. Restoring ecological communities through revegetation provides one avenue that practitioners can use to evaluate and address potential climate impacts and associated vulnerabilities in ecological restoration projects. This workshop will provide an overview of Point Blue's climate-smart restoration framework and demonstrate how it can be used to inform the planning and design of riparian revegetation and restoration projects, drawing on examples from various riparian and wetland systems in California. Participants will learn how the concepts and principles in the framework can be applied to develop a climate-smart planting palette tailored to their local geography and restoration sites. This climate-smart planting palette approach can inform the design of revegetation projects that explicitly address climate change while also achieving additional restoration goals.

Participants will leave the workshop with an understanding of the key concepts and principles of climate-smart restoration and step-by-step guidance as to how they can develop their own climate-smart planting palette database tool for climate-adaptive riparian revegetation projects.



# CHANGING RIVERS AGENDA FEBRUARY 25, 2021



## WORKSHOPS CONTINUED

### MYCORRHIZAL FUNGI & RESTORATION IN THE SOUTHWESTERN US\*

2:00 pm — 4:30 pm MST

Lisa Markovchick, Catherine Gehring, and Scott Baker, Northern Arizona University

Most plants benefit from associations with mycorrhizal fungi that inhabit plant roots, and improve plant resiliency in exchange for photosynthate. The abundance and diversity of mycorrhizal fungi can be altered by disturbances including fuel reduction activities, fire, drought, tree mortality, invasive vegetation, site history, climate change, and grazing.

In this workshop, we explore what is known about:

1) interactions between various types of disturbance and mycorrhizal fungi, 2) how restoring mycorrhizal fungi can support native vegetation and the wildlife it harbors, 3) when restoration projects should consider reintroductions of native mycorrhizal fungi in tandem with native plantings, 4) factors to consider in pairing native vegetation, mycorrhizal fungi, and local site conditions, and 5) the most feasible technique for mycorrhizal restoration.

The workshop will focus on mycorrhizal fungi that inhabit plant roots, but will touch briefly on other types of native fungi that restoration and land management practitioners may also want to consider in their planning. The workshop will include short talks and discussions, a demonstration of the easiest mycorrhizal restoration method, and prepare land managers to collaborate with mycologists and implement the best techniques for their own restoration projects.

### MONITORING WORKSHOP\*

2:00 pm — 4:30 pm MST

Ben Bloodworth and Mark Briggs, RiversEdge West

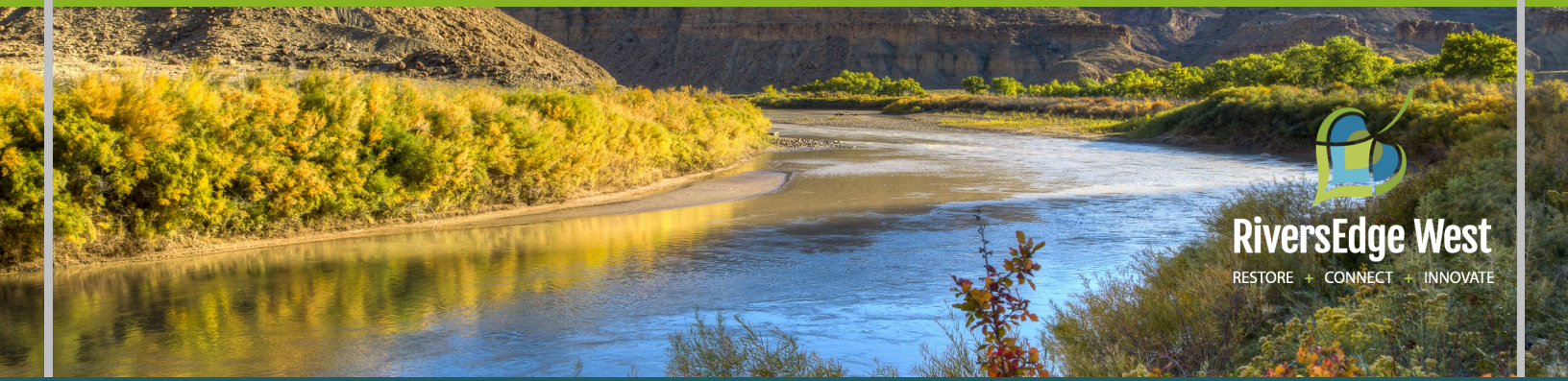
This workshop will focus on all things monitoring and will attempt to be a “hands-on” experience for attendees, despite the fact that the setting will be anything but hands-on! Initial presentations will encompass not only the need for monitoring, but design and implementation suggestions for rapid and long-term vegetation monitoring.

Other videos and presentations will focus on developing monitoring protocols for bird communities, conducting tamarisk beetle monitoring, and utilizing technologies like UAVs and LiDAR to enhance monitoring opportunities. The use of handheld tablets for remote collection of field data will be demonstrated, as will the development of easy-to-use GIS tools, like drop-down menus, to support simplified field data collection.

Finally, a discussion based on the monitoring needs of southwestern willow flycatcher, their habitat, and the movement of tamarisk beetle populations, will serve to both summarize the morning’s presentations as well as chart a path for such monitoring efforts moving forward.

*\*Attendees may attend the Climate-Smart Approach to Riparian Restoration & Revegetation Workshop as well as either the Mycorrhizal or Monitoring Workshop (the Mycorrhizal and Monitoring Workshop are concurrent).*





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