

RIVERSEDGE WEST'S
20TH ANNIVERSARY
HYBRID CONFERENCE

20/20 VISION

LEARNING FROM THE LAST 20 YEARS;
PLANNING FOR THE NEXT



FEBRUARY 23-25, 2022

GRAND JUNCTION CONVENTION CENTER • GRAND JUNCTION, CO

20TH ANNIVERSARY CONFERENCE
20/20 VISION
DAY ONE – AGENDA
FEBRUARY 23, 2022



12:00–1:00 pm MST **Check-in**

WELCOME

1:00–1:50 pm MST
Room: Colorado I & II

1:00–1:20

Overview

Rusty Lloyd, RiversEdge West

1:20–1:50

Keynote Presentation

Becky Mitchell, Director of the Colorado Water Conservation Board

CLIMATE CHANGE FROM 4,583 FEET

Moderated by Rusty Lloyd, RiversEdge West
Room: Colorado I & II

1:50–2:10

Weather, Climate, and Climate Change in Western Colorado

Russ Schumacher, Colorado Climate Center and Colorado State Climatologist

2:10– 2:30

A Score of Changes and More in Store

Dave Kanzer, Colorado River District

2:30 – 3:00

Climate in Context: Connecting Science and Decision-making

Kathy Jacobs, Center for Climate Adaptation Science and Solutions, University of Arizona

BREAK

3:00 pm – 3:30 pm MST

**ADAPTING YOUR GOALS & TACTICS TO
CLIMATE CHANGE**

Moderated by Mark Briggs, RiversEdge West
Room: Colorado III

3:30 – 3:40

Introduction and Overview

Mark Briggs, RiversEdge West

3:40 – 4:00

**Climate Changes Cycle of Disaster in Arid West
Impacts Watersheds for Multiple Years**

Paula Stepp, Middle Colorado Watershed Council

4:00 – 4:20

**Gathering Information on the Future of Snow and
Water for Adaptation Planning on National Forests**

Charles Luce, U.S. Forest Service

4:20 – 4:40

**Applied Adaptive Learning: The Science for
Climate Action Network**

Kathy Jacobs, Center for Climate Adaptation Science
and Solutions

4:40 – 4:50

**Discussion Tee Up: Considerations for Developing
an Effective Climate-Adapted Response**

Paula Stepp, Middle Colorado Watershed Council and
Mark Briggs, RiversEdge West

4:50 – 5:00

Final Discussion

PLANT MATERIALS

Moderated by Christine Prins, RiversEdge West
Room: Kannah/Whitewater

3:30 – 3:50

**Obtaining Plants and Seeds for Restoration
Practitioners**

Steve Plath, Gila Watershed Partnership

3:50 – 4:10

**It Starts With a Seed: Growing Capacity for
Regional Native Plant Materials through the
Southwest Seed Partnership**

Ashlee Wolf, Institute for Applied Ecology

4:10 – 4:30

**Great Basin Research Center and Seed Warehouse:
Providing Seed for Restoration and Beyond**

Kevin Gunnell, Utah Division of Wildlife Resources

4:30 – 4:50

**Introducing Populus: A Tool For Selecting Fremont
Cottonwood Candidate Trees For Restoration Using
Ecological Research Findings**

Sean Mahoney, Humboldt State University and Jaclyn
Corbin, Northern Arizona University

4:50 – 5:00

How to be Prepared When Purchasing Native Plants

Rebecca Wright and Ty Blackler, North Fork Native Plants

POSTER SESSION & STUDENT CONTEST

5:00 pm–7:00 pm MST – Includes appetizers and two free beers – Colorado I & II

20/20 VISION DAY ONE – AGENDA FEBRUARY 23, 2022



POSTER SESSION & HAPPY HOUR

5:00—7:00 pm

Join us for appetizers and drinks at the poster session and happy hour!
Discuss with poster presenters and exhibitors, catch up with familiar faces, and network with others in your field.
Each attendee receives one complimentary beer or non-alcoholic beverage. Cash bar available.

[Assessment Of Russian Olive As An Ecogeomorphic Agent On The Powder River](#)

Antonio Reveles-Hernandez, University of Northern Colorado

[Alternative Invasive Species Management: Manual Russian Olive Removal Along the San Juan River](#)

Elissa Rothman, Canyon Country Discovery Center

[Cottonwood Trees Vary in their Leaf Hydraulic Architecture Traits when Grown at the Extreme Hot Edge of their Range](#)

Iris Garthwaite, Northern Arizona University

[Using Ecological Connectivity as a Basis for the Watershed Integrity of Western US Waters](#)

Mark Murphy, NV5, Inc.

[Tamarisk Beetle Monitoring: Spatial and Temporal Patterns of *Diorhabda Carinulata* Abundance and Tamarisk Defoliation in Grand County, Utah, 2007-2021](#)

Tim Graham, University of Utah

[An Innovative Partnership to Address Impacts from Colorado Legacy Mining: The Colorado Abandoned Mine Collaboration](#)

Victor Ketellapper, US Environmental Protection Agency

20/20 VISION DAY TWO – AGENDA FEBRUARY 24, 2022



RiversEdge West
RESTORE + CONNECT + INNOVATE

8:00–8:30 am MST **Check-in and light breakfast**

DIVERSE STAKEHOLDER ENGAGEMENT & STEWARDSHIP

Moderated by Christine Prins, RiversEdge West
Room: Colorado III

- 8:30–8:50 [River Corridor Collaborations – Planning and Implementing Cross-Jurisdictional River Planning and Management](#)
Joel Sholtes, Colorado Mesa University
- 8:50–9:10 [The Lower Gila River Collaborative: Lessons from a Diverse Multi-Stakeholder Partnership to Bring Back the Lower Gila River](#)
Kelly Wolff, Arizona Game and Fish Department
- 9:10–9:30 [A Decade of Restoration on the Verde River](#)
Tracy Stephens, Friends of the Verde River
- 9:30–9:50 [Navajo River Improvement Project](#)
Jerry Archuleta, Natural Resource Conservation Service
- 9:50–10:10 [The Practice of Collaborative Conservation and Getting Stuff Done on the Ground](#)
Todd Graham, Ranch Advisory Partners

GROUNDWATER DEPENDENT ECOSYSTEMS

Moderated by Bruce Orr, Stillwater Sciences
Room: Kannah/Whitewater

- 8:30–8:50 [Challenges in Mapping and Evaluating Groundwater Dependent Ecosystems in California](#)
Christian Braudrick, Stillwater Sciences
- 8:50–9:10 [Water Stress in Riparian Woodlands from Groundwater Decline and Climate Change – Ecosystem Indicators at Multiple Scales](#)
John Stella, State University of New York College
- 9:10–9:30 [The Upper San Pedro: Concerted Long-Term Measures to Preserve its Riparian Treasure](#)
David Goodrich, USDA-Agricultural Research Service
- 9:30–9:50 [Developing a Preliminary Classification Schema for Groundwater Dependent Ecosystems](#)
Chad McKenna, GeoSystems Analysis, Inc.
- 9:50–10:10 [Seasonal Variation in Stomatal Sensitivity to Atmospheric Aridity Between Native and Non-native Riparian Tree Species in the Western US](#)
Susan Bush, Desert Botanical Garden

BREAK

10:10–10:40 am MST

HYDROLOGY & PLANT RESPONSE

Moderated by Christine Prins, RiversEdge West
Room: Colorado III

- 10:40–11:00 [A Tale of Two Rivers: The Role of Different Drought-Like Conditions in Promoting Vegetation Encroachment on the Lower Dolores River](#)
Cynthia Dott, Fort Lewis College
- 11:00–11:20 [Hydrologic and Geomorphic Effects on Riparian Plant Species Occurrence and Encroachment: Remote Sensing of 360 km of the Colorado River in Grand Canyon](#)
Laura Durning, Northern Arizona University
- 11:20–11:40 [Adaptive Wet Meadow Habitat Restoration in the Gunnison Basin](#)
Maxwell Sawyer, Western Colorado University

MEETING SOCIAL, ECONOMIC, & ECOLOGICAL GOALS THROUGH PARTNERING WITH CONSERVATION CORPS

Moderated by Rusty Lloyd, RiversEdge West
Room: Kannah/Whitewater

- 10:40–11:00 [Conservation Corps and Riparian Restoration: Where We Came From](#)
Sean Damitz, Program Director, Utah Conservation Corps
- 11:00–11:20 [Colorado Youth Corps and the Colorado Water Conservation Board](#)
Erik Skeie, Colorado Water Conservation Board
- 11:20–11:40 [Restoring the Land, Restoring Ourselves: Utilizing Landscape Restoration as a Method to Reconnect Indigenous Young People to the Natural World, their Cultures, and Career Pathways](#)
Chas Robles, Ancestral Lands Conservation Corps

20/20 VISION DAY TWO – CONTINUED FEBRUARY 24, 2022



HYDROLOGY & PLANT RESPONSE

Moderated by Christine Prins, RiversEdge West
Room: Colorado III

MEETING SOCIAL, ECONOMIC, & ECOLOGICAL GOALS THROUGH PARTNERING WITH CONSERVATION CORPS

Moderated by Rusty Lloyd, RiversEdge West
Room: Kannah/Whitewater

11:40–12:00

[Comparison of Russian Olive, Tamarisk, and Cottonwood Plant Traits with Implications for River Morphodynamic Trajectories](#)
Sharon Bywater-Reyes, University of Northern Colorado

11:40–12:00

[Developing Career Pathways through Restoration Work](#)
Briget Eastep, Intergovernmental Internship Cooperative

LUNCH

12:00–1:00 pm MST – Colorado I & II

FIELD TRIPS & WORKSHOPS

Choose between the following five options during conference registration (continued on the next page).
Field trips and workshops are an additional \$20:

Option 1 of 5

NAVIGATING THE INFRASTRUCTURE BILL FOR RIPARIAN RESTORATION PROJECTS

Hosted by Kristen Jespersen, RiversEdge West; Stacy Beaugh, Strategic by Nature; and Alex Funk, Theodore Roosevelt Conservation Partnership
Time: 1–4pm

Location: Grand Junction Convention Center, Room: Kannah, Dominguez, Plateau

The recently passed Infrastructure Investment and Jobs Act (H.R. 3684) contains \$4.5 billion for watershed restoration. This session will be devoted to understanding where and how that funding will be made available and will involve an interactive discussion about how practitioners can queue up their projects to be successful in vying for this funding.

***Available to in-person and virtual attendees**

Option 2 of 5

RIPARIAN RESTORATION BEST PRACTICES TRAINING

Hosted by Eric McCulley, RiverRestoration
Time: 1:00 pm–5:30 pm

Location: Grand Junction Convention Center, Room: Colorado III

This workshop will be focused on developing participants' ability and knowledge about the most effective way to implement riparian restoration projects along the rivers in the Colorado River Basin. We will discuss the critical components of successful restoration plans, the variables effecting project success, and techniques for designing and implementing successful riparian restoration projects.

The workshop will also go over some specific examples and walk through the process for developing the plan, implementing the project, and following up on the project for long-term sustainability.

Bring your computer and your project maps and we will put this knowledge to work in the final discussion session of the day!

***This workshop is not available to virtual attendees**

20/20 VISION DAY TWO – CONTINUED FEBRUARY 24, 2022



FIELD TRIPS & WORKSHOPS – CONTINUED

Option 3 of 5

THE EVOLUTION OF A RIVER CORRIDOR

Hosted by the Desert Rivers Collaborative/RiversEdge West

Time: 1:30 pm–3:30 pm

Location: Meet at the parking lot adjacent to the Western Botanical Garden—655 Struthers Ave, Grand Junction, CO 81501

Transportation is not provided but carpooling is encouraged. Alternatively, it is a 30-minute walk (1.3 miles) to the meeting location.

The Grand Valley's river corridor extends from Palisade to the Utah border; encompassing the confluence of the Gunnison and Colorado Rivers in Grand Junction, CO. These interconnected communities all depend on the Colorado and Gunnison rivers in myriad ways, and over the last 40 years, stewardship of the riparian area has led to physical restoration projects, partnerships, and ongoing efforts to improve the river corridor.

Join RiversEdge West and long-time partners for a field tour of the riverfront at Las Colonias Park and Watson Island to learn about the history and future vision for the riparian area in the Grand Valley. During this walking tour, attendees will learn about how the river corridor at Las Colonias and Watson Island, which was nearly inaccessible because of invasive plant species and certain land uses, became the birthplace of RiversEdge West (REW). Through the years, REW and our many partners continue to work towards and advocate for improvements to the riparian area to benefit people, wildlife, and overall ecosystem health.

As economic growth, population expansion, and climate change place more pressure on the resources provided by the Colorado and Gunnison Rivers, the planning and management of these resources between a patchwork of land managers and landowners become increasingly important. The Grand Valley River Corridor Initiative (RCI), a project that REW and partners are working on, aims to fill the void of a central coordinating entity by developing a vision and plan for the river corridor that includes input from diverse stakeholders, land managers, and land owners. RCI will draw from federal, state, and local plans that exist within the Grand Valley that address natural resources, endangered species habitat, land use and economic development, transportation, and recreation. This initiative aims to be a resource and guide for river corridor stakeholders, fostering collaboration on future river centric endeavors leading to informed decision making.

During this tour, multiple short presentations will illuminate historical projects and partnerships, provide tangible lessons for restoration in urban areas, and discuss efforts of the River Corridor Initiative that envision what the river corridor can look like in the future.

***This workshop is not available to virtual attendees**

Option 4 of 5

PALISADE INSECTARY TOUR

Hosted by Dan Bean, Colorado Department of Agriculture

Time: 2:00 pm–3:30 pm MST

Location: Meet at the Palisade Insectary at 2pm—750 37 8/10 Rd, Palisade, CO 81526

Transportation is not provided but carpooling is encouraged.

Meet at the Colorado Department of Agriculture's (CDA) Palisade Insectary for a short walking tour and site visit to Riverbend Park. The Palisade Insectary has long been a promoter of the use of biological control in weed and insect pest management and is home to about 20 different species of biological control agents.

Join us for a closer look at these insects and the unique rearing processes, as well as general information on past and future efforts by the CDA's Biological Pest Control Program.

***This workshop is not available to virtual attendees**

20/20 VISION
DAY TWO – CONTINUED
FEBRUARY 24, 2022

FIELD TRIPS & WORKSHOPS – CONTINUED

Option 5 of 5

SOUTHWEST WILLOW FLYCATCHER, TAMARISK LEAF BEETLE & TAMARISK HABITAT, WHAT GIVES!

Hosted by Matt Johnson, Northern Arizona University

Time: 1:00 pm–5:00 pm

Location: Grand Junction Convention Center, Room: Whitewater/Escalante/Adobe

This workshop will present and discuss the issues involving Southwestern Willow Flycatcher challenges surrounding the tamarisk beetle and its effect on tamarisk habitat, currently a primary habitat for flycatchers. Workshop topics will discuss what flycatcher habitat shifts occur when tamarisk habitat is depleted by the beetle, drought, and restoration efforts. The workshop will also explore riparian restoration challenges when replacing tamarisk habitat and where restoration efforts are successful. Presentations include:

Update on APHIS Southwestern Willow Flycatcher Conservation Program

Kai Caraher

Southwestern Willow Flycatcher and Tamarisk Beetle Status and Habitat Restoration Efforts along the Virgin and Lower Colorado Rivers

Mary Anne Mcleod and Christian Edwards

Impacts of Diorhabda on Southwestern Willow Flycatcher Habitat - Middle Rio Grande, NM

Kristen G. Dillon and David Moore

Upper Gila River, AZ, Tamarisk Leaf Beetle and Possible Impacts on a Southwestern Willow Flycatcher Population

Matthew Johnson and Jennifer Holmes

Southwestern Willow Flycatcher Range Wide Model Application and Managerial Uses

James Hatten

Southwestern Willow Flycatcher Occupancy Modeling and Application for Long term Monitoring

Charles Yackulic

Tracing the Monitoring and Evaluation of Tamarix Control and its Outcomes in the American Southwest: A Systematic Review and Meta-Analysis

Alexander Goetz, Eduardo González, Mayra Vidal, Patrick Shafroth, Annie Henry, Anna Sher

Tamarisk Beetle Species Meet Again in Southwest Willow Flycatcher Habitat

Zeynep Ozsoy, Amanda Stahlke, Levi Jamison and Matthew Johnson

Fungal Endophyte Communities Are Similar In Composition But Have Different Effects On A Native And An Invasive Plant Species

Alexandra Schuessler, Ron Deckert, Kevin Hultine, Catherine Gehring

Estimates Using Two Methods of Vegetation- Indexed and Energy- Balanced Over Riparian Zones: A Case Study of Colorado River Delta

Abbasi, Neda, Hamideh Nouri, Sattar Chavoshi Borujeni, Pamela Nagler, Armando Barreto-Muñoz, Kamel Didan, Christian Opp, & Stefan Siebert

First Tracking of Riparian Vegetation Health And Water Use Using Two Evapotranspiration Methods: A Comparison of Remotely Sensed Evapotranspiration VI and Ssebop Products in the Riparian Corridor of The Lower Colorado River Delta

Nagler, Pamela, Neda Abassi, Ibrahima Sall, Gabriel Senay, Matthew Schauer, Armando Barreto-Muñoz, & Kamel Didan

Tamarisk Leaf Beetles and Tamarisk Habitat, A Longer Look Back to Improve Guesses of What's Ahead

Tim Graham

Establishing a Long-term Sentinel Vegetation Monitoring Site: A brief overview of methods, types of data collected, analysis, and cost¹

Mark Briggs

Riparian Vegetation Responses to Tamarisk Biocontrol in the Context of Southwestern Willow Flycatcher Habitat

Patrick Shafroth, Eduardo Gonzalez, Annie Henry, Alexander Goetz, Mayra Vidal, and Anna Sher

**Available to in-person and virtual attendees.*

EVENING SOCIAL AT RAMBLEBINE

5:00 pm

Ramblebine Brewing Company – 457 Colorado Ave – 15% of proceeds will be donated to RiversEdge West

20/20 VISION DAY THREE – AGENDA FEBRUARY 25, 2022



- 8:00–8:30 am MST **Check-in and light breakfast**
- 8:30–8:45 **Welcome & RiversEdge West Short Film**
RiversEdge West Staff

CONNECTING THE UPPER & LOWER WATERSHED

Moderated by Rusty Lloyd, RiversEdge West
Room: Colorado I & II

- 8:45–9:15 [How Rivers and Floodplains Work – and How They Work Better Together](#)
Colin Thorne, Wolf Water Resources
- 9:15–9:45 [Floodplain Reunification – The River Restoration Frontier](#)
Janine Castro, U.S. Fish and Wildlife Service
- 9:45–10:05 [Partnering with Beaver to Restore Wetland](#)
Jessica Doran, EcoMetrics
- 10:05–10:25 [Wildfire Ready Watersheds](#)
Chris Sturm, Colorado Water Conservation Board

BREAK

10:25–10:55 am MST

ON-THE-GROUND LESSONS LEARNED & TECHNIQUES

Moderated by Mark Briggs, RiversEdge West
Room: Colorado III

- 10:55–11:15 [Lessons Learned from Riparian Restoration](#)
Eric McCulley, RiverRestoration
- 11:15–11:35 [Adapting Restoration Techniques to Meet Climate Challenges on the Gila River](#)
Alexia Osornio, Gila Watershed Partnership of Arizona
- 11:35–11:55 [Unauthorized Human Use Impacts on Riparian/Stream Restoration](#)
Linnea Spears-Lebrun, SWCA
- 11:55–12:15 [Vegetation Establishment to Promote Dust Control Using Natural Physical Barriers and Surface Hydrology at the Salton Sea, CA](#)
Chris Sanderson, Tetra Tech
- 12:15–12:35 [Lessons Learned for Riparian Habitat Restoration Along the Rio Grande in Southern New Mexico and West Texas](#)
Elizabeth Verdecchia, International Boundary and Water Commission

RIPARIAN RESTORATION IN A WARMING WORLD

Moderated by Kevin Hultine, Desert Botanical Garden
Room: Kannah/Whitewater

- 10:55–11:15 [Riparian Vegetation Response to High Intensity Fire and Flood Disturbance in Two Montane Canyons in the Jemez Mountains, New Mexico](#)
Patrick Shaforth, U.S. Geological Survey
- 11:15–11:35 [Provenance of a Riparian Shrub Changes Traits but Not Flood Response Under a Common Climatic Setting](#)
Emily Palmquist, U.S. Geological Survey
- 11:35–11:55 [Interaction of Tamarisk Legacy Soil and Climate Change on Fremont Cottonwood](#)
Julia Hull, Northern Arizona University
- 11:55–12:15 [Hydroclimatic Variables for Predicting Riparian Habitat Suitability](#)
Brad Butterfield, Northern Arizona University
- 12:15–12:35 [Tradeoffs Between Leaf Thermoregulation and Hydraulic Safety in Warm- Versus Cool-adapted Ecotypes in the Foundation Tree Species *Populus fremontii*](#)
Kevin Hultine, Desert Botanic Garden

20/20 VISION
DAY THREE – CONTINUED
FEBRUARY 25, 2022

LUNCH

12:35–1:35 pm MST — Colorado 1 & II

FOCUSING ON FISH: CONNECTING RIPARIAN ZONES, FLOWS, AND INSTREAM HABITAT

Moderated by Matthew Breen, Utah Division of Wildlife Resources
Room: Colorado III

- 1:35–1:55 [Native Fish Need a Natural Flow Regime, Not More Water Development \(No Duh\)](#)
Phaedra Budy, Utah State University
- 1:55–2:15 [Riparian Land Cover Classification to Guide Conservation and Restoration of the Lower White River, Utah](#)
William Macfarlane, Utah State University
- 2:15–2:35 [Effective Conservation and Restoration of Desert Riverscapes Must Include Conservation of In-Stream Flows: What can we learn from a Case Study from the White River, Utah](#)
Casey Pennock, Utah State University
- 2:35–2:55 [Hobble Creek Delta Restoration 15 Years Later: Larvae, Leaves, and Lessons Learned](#)
Melissa Stamp, Utah Reclamation Mitigation and Conservation Commission
- 2:55–3:15 **Final Discussion**

SCIENCE, TECHNOLOGY, & MONITORING

Moderated by Mark Briggs, RiversEdge West
Room: Kannah/Whitewater

- 1:35–1:55 [Trends in Evapotranspiration and Drought in a Dozen Riparian Restoration Sites in the Colorado River Delta in Mexico](#)
Pamela Nagler, U.S. Geological Survey
- 1:55–2:15 [Comparison of Actual Evapotranspiration Estimates Using Two Methods of Vegetation-Indexed and Energy- Balanced Over Riparian Zones: A Case Study of Colorado River delta](#)
Neda Abbasi, University of Göttingen – Germany
- 2:15–2:35 [Automated Soil and Groundwater Monitoring to Support Adaptive Management of Actively Managed Riparian Restoration Areas](#)
Lindsey Bunting, GeoSystems Analysis, Inc.
- 2:35–2:55 [Tools for Restoration Feasibility Planning at the Lower San Pedro Wildlife Area \(LSPRWA\): Vegetation and Soil Assessment, LiDAR Data, Groundwater-Surface Water Model](#)
Chad McKenna, GeoSystems Analysis, Inc.
- 2:55–3:15 [Home And Garden: Transplanted Cottonwood Trees Show Plasticity In Leaf Hyperspectral Reflectance Across An Environmental Gradient](#)
Jaclyn Corbin, Northern Arizona University

BREAK

3:15–3:45 pm MST

20/20 VISION
DAY THREE – CONTINUED
FEBRUARY 25, 2022



20/20 PERSPECTIVE

Moderated by Rusty Lloyd, RiversEdge West
Room: Colorado I & II

- 3:45–4:10 [**The History and Future of Biocontrol in Riparian Areas, the 20/20 Perspective**](#)
Dan Bean, Palisade Insectary – Colorado Department of Agriculture
- 4:10–4:35 [**Stream Management Plans in Colorado: Progress at 5 Years**](#)
Nicole Seltzer, River Network
- 4:35–4:55 [**What Makes Collaborative Partnerships Strong and Long Lasting? Lessons-Learned from Collaborative Partnerships**](#)
Rusty Lloyd & Kristen Jespersen, RiversEdge West

CLOSING REMARKS & PRIZE GIVEAWAY

Room: Colorado I & II

- 4:55–5:05 **Parting Thoughts**
Rusty Lloyd, RiversEdge West

**PLEASE FILL OUT THE EVALUATION FORM (IN THE CONFERENCE APP)
AND RETURN YOUR NAME TAG TO THE REGISTRATION DESK.**

RIVEREDGE WEST ANNUAL CONFERENCE
THANK YOU EXHIBITORS



RIVEREDGE WEST ANNUAL CONFERENCE

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