WORKSHOP MADE POSSIBLE BY

WORKSHOP LEAD

- Renee Chi, the NRCS Utah State Biologist, is the workshop lead organizer.

LOCAL PARTNERS & SPONSORS

We are grateful to our local workshop partners who provided matching resources and funds, as well as venues. In particular, thanks to Rhett Boswell from the Utah Division of Wildlife Resources helped put together the Cedar City field sites and venues. Thanks also to Tyler Thompson and Daniel Eddington from the Utah Watershed Restoration Initiative for helping fund the workshop.

WORKSHOP MADE POSSIBLE BY:

Thanks to the generous support of the Natural Resource Conservation Service’s Sage Grouse Initiative and Working Lands for Wildlife Initiative, a grant through Pheasants Forever to Utah State University’s Restoration Consortium and Joe Wheaton’s ET-AL lab are able to deliver a series of workshops to NRCS conservationists and their partners throughout the west. This series was envisioned by Jeremy Maestas (NRCS/SGI) and is possible thanks to partner matches by various local organizations in each state (see each state page) and matching funds from Utah State University.
INSTRUCTION TEAM

Jon Wheaton (USU, Anbranch Solutions)
Jeremy Maestas (NRCS, West NTSC)
Nick Bouwes (USU, ELR, Anbranch Solutions)
Steve Bennett (USU, Anbranch Solutions)
Scott Shahverdan (USU, Anbranch Solutions)
Jay Wilde (Diamondback W Ranch)
INTRODUCE YOURSELF

• Name
• Where you Reside
• Your Affiliation
• What you Call Yourself

• Ever built a BDA, PAL or Zeedyk structure? If so, where?
• What’s your Restoration Role

Some numbers (25+):

• 8 NRCS
• 5 UDAF
• 2 Farm Bill
• 3 Pheasants Forever
• 2 BLM
• 3 UDWR
• 2 TU
• 1 Wild Utah
• 2 OAEC
WORKSHOP HANDBOOK

• Has what we’ll need for reference in field and some classroom discussion (diagrams, forms, maps, etc.)
• Does not have lecture slides…
• Because we have condensed field portion to have more time in field, we’re putting more of content into
WORKSHOP AGENDA

DAY 1 - Restoring Process and Function in Riparian Areas
- Mainly class room (8 to 6)
  - 8 AM - 10:00ish - Classroom Session - Introductions.
  - Background & Context. Reading the Riparian Landscape
  - 10:00ish to 2:00ish - Field Tour
  - 2:00 - 6:00 - Classroom Session - Restoring Processes & Function in Riparian
  - 7:00 - 9:00 - Informal Evening Social & Dinner @ Herm's Inn
  - with evening by Jay Wilde (rancher)

DAY 2 - Implementing Low-Cost Structures as Restoration Tools
- Mainly field (7:30 to 5)
  - 7:30 AM - Meet at Station Creek Field Site
  - 7:30 - 1:30 - Design & Construction in Station Creek, ID
  - 1:30ish to 2:00 - Travel to Birch Creek, ID
  - 2:00 to 5:00 - Synthesis Discussions on the Creek - Regulatory Context in Utah: Where to Go From Here
  - 5:00 - Departures from the Field

http://beaver.joewheaton.org/nrcs---utah.html
Find:

- Slides
- Links/Videos/Literature
- Notebook (as PDF)
LOTS OF EXISTING RESOURCES

BEAVER RESTORATION GUIDEBOOK

The Pollock et al. (2018) version 2 of the beaver restoration guidebook is a good source of basic information on beaver-based restoration techniques.


HAND-BUILT STRUCTURES FOR RESTORING DEGRADED MEADOWS IN SAGEBRUSH RANGELANDS

For those interested in the Zeedyk techniques, particularly for ephemeral and intermittent washes, the NRCS just prepared Range Technical Note No. 40.


Available at: https://www.sagegrouseinitiative.com/starter-guide-for-healing-incised-meadows-with-hand-built-structures-in-sagebrush-country/

For more details on:
- Beaver translocation
- Living w/ Beaver Mitigation
- Hand-Built Zeedyk structures

But not much on scaling up... on BDAs, HDLWD, etc. OR design
The chapters include:

- **Chapter 1** – Background and Purpose
- **Chapter 2** – The Role of Meals and Exercise in Restoring Healthy Lifestyles for Riverscapes
- **Chapter 3** – Impairments: what are they, how did we get here, and how can cheap and cheerful help?
- **Chapter 4** – Condition Assessment
- **Chapter 5** – Overview of Cheap & Cheerful Recipes – a growing list
- **Chapter 6** – Planning & Prioritization For Working in the Right Places Effectively
- **Chapter 7** – Design Principles for Cheap & Cheerful Restoration
- **Chapter 8** – Permitting Cheap & Cheerful Restoration
- **Chapter 9** – Construction & Implementation
- **Chapter 10** – Adaptive Management
- **Chapter 11** – Beaver Dam Analogues
- **Chapter 12** – High Density Large Woody Debris
- **Appendices** – Case Studies

The manual is nearing completion and will be available later this Summer (2018) at: [http://beaver.joewheaton.org/restoration-manual.html](http://beaver.joewheaton.org/restoration-manual.html)
WANT CREDIT?

- FREE – Professional Credit (just a certificate of completion) – check the box on sign in form & we’ll email you a PDF
- Or, 1.5 CEUs through Utah State University:

MAKE IT COUNT

Participation in the workshops is free. However, participants can receive 1.5 Continuing Education Units from Utah State University for $95. Note, that this course can count as elective credit towards the new Graduate Restoration Certificate.

Email: restoration@usu.edu
EQUIPMENT & WADERS?

- Waders are not mandatory, but recommended
- If you don’t have a pair, we’ve got some extras
- Waders MUST be clean and decontaminated

WHAT TO BRING

Participants will be out in the field, building in-stream structures by hand. We will be walking and exploring creeks, doing hand work, and exposed to the elements.

In July, in southern Utah we should be prepared for blistering heat or maybe even a stay monsoon.

In September, in Logan, we might have pleasant Autumn weather, or even an early snow shower.

The bottom line is we will be exposed to the elements, so prepare for anything (i.e. pouring rain, snow, blistering heat). We recommend lots of layers, and work clothes. Absolutely no sandals or flip-flops!

For field tour you will want:
- Closed toed work boots or wading boots.
- Hat/sunglasses
- Waders (breathable chest waders recommended; hip waders can suffice; if you can’t get your own, please contact us ahead of time with your shoe size and height; we have a few extra we can bring)
- Water Bottle
- Sun Screen
- Bug spray (we will be working in an area with ticks)
- Something to write on (e.g. clipboard or field notebook) and something to write with (pencil or pen)
- Camera/Phone (optional)

For the construction exercises on Day 1 & Day 2, we will provide safety gear and protective equipment, but you may choose to bring your own (if you have them):
- Work gloves
- Hard Hat (for all construction activities)
- Ear protection (for post pounder)
- Safety glasses

A change of clothes for the field may be advisable.

BRING YOUR GEAR BOTH DAYS TO FIELD!
MEALS & SNACKS

• Please bring water in field (we’ll have extra)
• Lunches provided for you both days
• Dinner tonight is @ 7PM @ Herm’s Inn

Meals compliments of:
1435 Canyon Road, Logan, UT

Drinks compliments of:
DAY 2 MEET @ 7:30 AM @ STATION CREEK

53 min (38.6 miles)
via US-91 N
52 min without traffic

Logan
Utah

- Head north toward E 300 N
  - 49 ft
- Turn left onto E 300 N
  - 230 ft
- Turn right after KeyBank (on the left)
  - Continue to follow US-91 N
  - Pass by Sizzler (on the left in 1.2 mi)
  - Entering Idaho
    - 27.6 mi
- Slight right onto ID-34
  - 4.4 mi
- Turn right onto E Riverdale Rd
  - 1.0 mi
- Turn right to stay on E Riverdale Rd
  - 2.6 mi
- Slight right onto E Station Creek Rd
  - Destination will be on the left
    - 3.2 mi

Unnamed Road
Preston, ID 83263

• [https://goo.gl/maps/fDuhTt3trtE2](https://goo.gl/maps/fDuhTt3trtE2)
ACKNOWLEDGING ‘WE’...

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- Jordan Gilbert (USU)
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