LOW-TECH PROCESS-BASED RESTORATION OF RIVERSCAPES

Virtual Workshop

August 11-14, 2020

Four Days - Five Modules - *All Free!*

Opportunity

With COVID-19, we have all had to make adjustments to how we work. Unfortunately, this has required us to cancel our popular field workshop series this summer on Low-Tech Process-Based Restoration of Riverscapes. However, with challenges come new opportunities. We reimagined our workshop (normally capped at 50) in order to offer a virtual version open to all! Thanks to NRCS' Working Lands for Wildlife partnership, this is being offered for free to you.

Description

This virtual workshop will introduce conservationists to 'low-tech' process-based approaches for restoring streams and their associated riparian areas (riverscapes) to benefit fish, wildlife, and working lands. Participants will learn principles guiding low-tech process-based restoration and become familiar with simple, hand-built tools, including Beaver Dam Analogues (BDAs) and Post-Assisted Log Structures (PALS), intended to mimic and promote specific ecosystem processes. Participants will gain basic skills in the planning, design, and implementation phases of project development. Course content is supported by a published Design Manual.

Overview - Pick and Choose

To make participating remotely and/or from home more manageable, we have spread our curriculum out over four days with lots of time for breaks and self-paced exercises. There is no substitute for the field experience, but we will try our best to simulate some of that virtually. Everyone should take Moulde 1, but after that you can take all the modules, or just the ones relevant to you. All workshop materials, exercises and presentations will be available online for a self-paced delivery by module at any time, but the virtual workshop gathering will provide pacing, panel discussions and engagement with other professionals and participants.

- Module 1: **Introduction to Low-Tech Process-Based Restoration** - Day 1 (3/4-day)
- Module 2: **Underlying Science & Case Studies for Low-Tech** - Day 2 (half-day morning)
- Module 3: **Planning Low-Tech Process-Based Restoration** - Day 2 (half-day afternoon)
- Module 4: **Designing Low-Tech Process-Based Restoration** - Day 3 (3/4 day)
- Module 5: **Implementing Low-Tech Process-Based Restoration** - Day 4 (half-day morning)

How to Register

To register, visit: https://register.gotowebinar.com/register/4100135342905955595

Agenda

Module 1: Introduction to Low-Tech Process-Based Restoration

Tuesday, Aug 11: 10:00 AM - 4:00 PM (Mountain Time)

- Logistics, learning objectives, and introductions
- Background and purpose (*Chapter 1 - Design Manual*)
    - Background & Why we're Here - Jeremy Masestas
    - Scope of Problem - Joseph Wheaton
    - Missing Reference Condition: Stage Zero - Colin Thorne
    - What Riverscapes Could Be - Mark Beardsley
- Build your first Beaver Dam Analogue exercise (*Pocket Guide)*
- Introduction to low-tech tools (*Chapter 1 & 4 - Design Manual*)
    - Build your first Beaver Dam Analogue exercise (*Pocket Guide)*
- Guiding principles (*Chapter 2 - Design Manual*)
- Partnering with Beaver & Beaver Ecology
    - Beaver History & Biology- Ben Goldfarb (tentative)
    - Beaver Ecology & Feedbacks, plus why do beaver build dams? - Nick Bouwes
    - Why partner with beavers? - Jeremy Maestas
- Questions & plans for rest of workshop module

Module 2: Underlying Science & Case Studies for Low-Tech PBR

Wednesday, Aug 12: 9:00 AM - 12:00 PM (Mountain Time)

- Mimicking and promoting wood accumulation and beaver dam activity (*Chapter 4 - Design Manual*)
- The Three Case Studies that built confidence in LTPBR
    - Resiliency of Riverscapes - Jeremy Maestas
    - Post Assisted Log Structures Case Study: Asotin Creek - Steve Bennett
    - Beaver Dam Analogues Case Study: Bridge Creek - Nick Bouwes
- State of the Supporting Science - Ongoing & Outstanding Issues - Joe Wheaton
- Reading riverscapes (*Chapter 3 - Design Manual*)

Module 3: Planning Low-Tech PBR

Wednesday, Aug 12: 1:00 PM - 4:30 PM (Mountain Time)

- Overview of Planning & NRCS Conservation Planning Process - Jeremy Maestas
- Reading riverscapes (*Chapter 3 - Design Manual*) - Joe Wheaton
    - Virtual Field Trip: Valley bottom mapping (*Pocket Guide)*
    - Virtual Field Trip: Recognizing structural forcing in riverscapes
- Planning Phase: (*Chapter 3 - Design Manual*) - Joe Wheaton
    - Valley Bottom Mapping @ Project Scale
    - Risk Assessment
    - Condition Assessment

  - Recovery Potential
- Choosing Indicators: Connecting & Clarifying Objectives & Tying to Goals - Joe Wheaton

---

Module 4: Designing Low-Tech PBR

Thursday, Aug 13: 10:00 AM - 3:00 PM (Mountain Time)

- Design Overview (*Chapter 5 - Design Manual*) - Jeremy Maestas
- Elaborating Design
  - Leading Design with Recovery Potential - Joe Wheaton
  - Design Standards of Practice and Designing @ Complex Scale - Scott Shahveridan
  - Learning how to Design @ Structure Scale - Joe Wheaton
- Choosing Indicators
  - Putting it together with field design - Nick Weber, Scott Shahveridan and Steve Bennett
  - Documenting anticipated post-restoration conditions - Joe Wheaton

---

Module 5: Implementing Low-Tech PBR

Friday, Aug 14: 9:00 AM - 1:00 PM (Mountain Time)

- Implementation Overview - (*Chapter 6 - Design Manual; Pocket Guide*)
- Consultation and Permitting (*Chapter 6*) - Jeremy Maestas & Scott Shahverdian
- Logistics, Equipment, Materials, Safety & Post Pounding (*Chapter 6 - Design Manual; Pocket Guide*) - Scott Shahveridan & Steve Bennett
- Hands-"OFF" (sadly) Construction of various structures (*Chapter 4 - Design Manual)*
- Adaptive Management (*Chapter 3, 4 & 6 - Design Manual*)
- Workshop synthesis (review principles) & where to turn for help

---

Resources: Technical resources available at: http://lowtechpbr.restoration.usu.edu/