

Using sticks and stones to improve incised streams and meadows

Simple, low-tech methods help promote healthy streams and meadows by slowing runoff, spreading water, and boosting productivity

Keeping water on the landscape

Water from rain and snow is precious in the Intermountain West. Healthy streams and wet meadows are an important component of these landscapes because they spread and slow water, providing wildlife habitat, forage, and resilience to flooding, wildfire, and drought. On rangelands, healthy streams and wet meadows help people and wildlife make the most of often limited water.

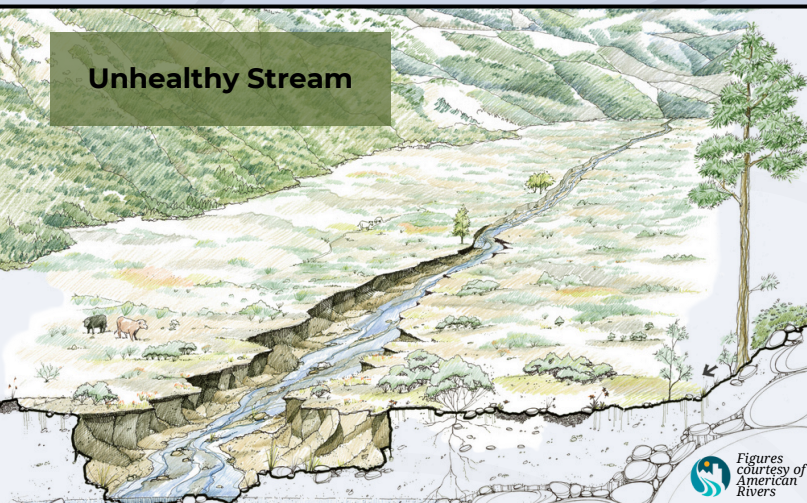
Unfortunately, many streams and wet meadows are degraded and no longer provide these benefits. The good news is that inexpensive, simple structures made of natural materials can

help restore function by improving floodplain connectivity and promoting healthy wetland vegetation.

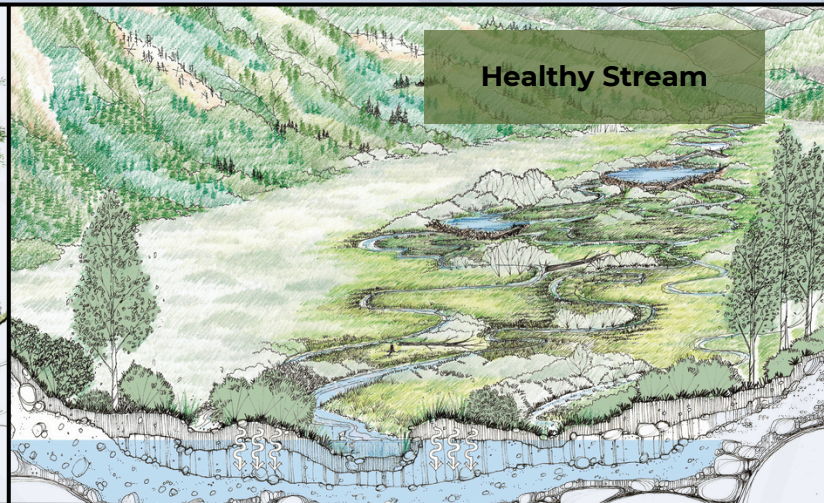
Floodplain connectivity and wetland vegetation

Healthy streams and wet meadows connect to their floodplains, spreading water into floodplain soils and supporting water-dependent wetland and riparian vegetation. Degraded streams and wet meadows that are incised or contain headcuts lose connectivity with their floodplains, resulting in loss of water storage and wetland and riparian vegetation.

Unhealthy Stream



Healthy Stream



How do we turn unhealthy streams and meadows into healthy streams and meadows?



A beaver dam analog in central Oregon slowing, ponding, and spreading water onto the floodplain at low flow. Sod, mud, and vegetation are hand-piled to mimic beaver dam activity. Posts driven into the stream channel help hold the structure in place. Photo: Nick Weber.

[Use this link](#) to learn more about BDAs and PALS and connect to practitioners doing this work in your area.

Restoring incised streams and their riparian zones BDAs and PALS

What? Impermanent structures made of natural materials, including beaver dam analogs (BDAs) and post-assisted log structures (PALS), mimic beaver activity and wood accumulation.

Where? Wadable streams and their riparian areas that are incised and disconnected from their floodplains.

Why? To reconnect streams to their floodplains, increase the footprint and duration of riparian vegetation and wet soils, and increase drought and wildfire resilience.

Rewetting meadows and stopping headcuts Zeedyk structures

What? Structures made of rocks or wood and mud, including one rock dams, media lunas, rock rundowns, and Zuni bowls, protect vegetation against erosion and slow and spread water across wet meadow soils.

Where? Wet or mesic meadows that are incised or have headcuts.

Why? To arrest headcuts, prevent meadow vegetation loss, and increase the footprint and duration of meadow vegetation and wet soils.

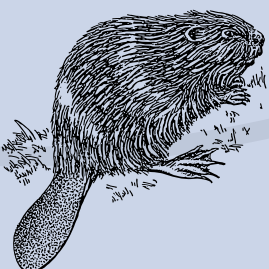


A Zeedyk structure in Carbon County, Utah. Rocks and other natural materials are used to stop headcuts by stabilizing soil around wetland vegetation roots and preventing erosion. These structures help keep water on the landscape.

[Use this link](#) to learn more about Zeedyk practices and connect to practitioners doing this work in your area.

Partnering with beavers

Beavers are nature's ecological engineers who can lend a helping hand in restoring streams and wet meadows. Although restoration can be successful without the return of beaver if structures are maintained by humans, partnering with this charismatic rodent makes sustaining beneficial outcomes of riverscape restoration much more likely to last and grow into the future. Low-tech stream restoration practices may be able to create suitable habitats for reintroduced or local beavers, who may in turn, maintain and expand structures and their benefits.



This factsheet was produced by the Intermountain West Joint Venture through our Partnering to Conserve Sagebrush Rangelands initiative.



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For copies of a print version of this document, contact mariah.mcintosh@iwjv.org.