Stop Erosion and Restore Wet Meadows

Overview

Wet meadows play a key role by providing forage for livestock while providing a home for many species of wildlife and plants. Wet meadows act as a natural sponge by absorbing and slowly releasing water so that surrounding plants and wildlife are not as negatively impacted by drought.

As gullies or head cuts start to form, the water drains from the meadow at an accelerated rate, leading to a decrease in vegetation. If left unaddressed, this erosion can escalate to the point of losing the entire meadow. However, this issue can be effectively tackled with the use of low-maintenance, hand-built structures.

Uses

- Control erosion
- Improve wildlife habitat
- Restore soil water storage
- Develop drought resiliency
- Increase vegetation

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How do we rebuild wet meadow habitat?

Slowing water and stopping erosion is not a new land management and restoration concept. These structures are typically constructed from rock and local materials and can mostly be built using hand tools. The structures can increase the amount of water in the soil and vegetation grown by extending the growing season. They are also tools to stop and heal erosion caused by head cuts and gullies. They are often called “Zeedyk” structures after Bill Zeedyk helped popularize them in the United States. The key to improving the land is to be proactive and catch erosion opportunities early.

How do the structures work?

Strategically built rock structures stop erosion before a head cut, rill, or gully becomes too big or too expensive to fix. These structures prevent further erosion by slowing the flow of water and providing a protective layer on top of the eroding soil. They also catch sediment that eventually will rebuild the eroded area over time. Slowing water flow also allows it to soak deeper into the ground, which allows greater growth of the surrounding vegetation in the eroded area.

What does this process look like?

Head cut repair in Wyoming.

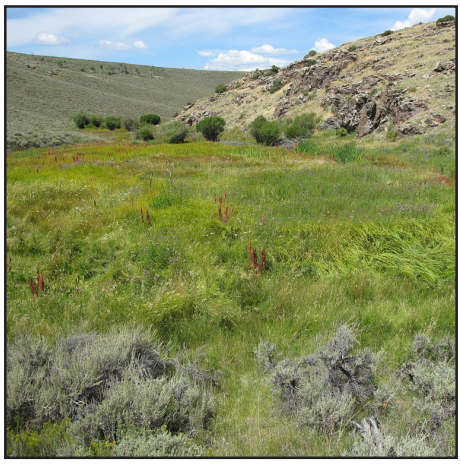
Gully before repair in Wyoming.

Meadow restoration in Colorado.

Same head cut after installation.

Similar gully after installation.

Meadow restoration 4 years later.



How long will the structures last?

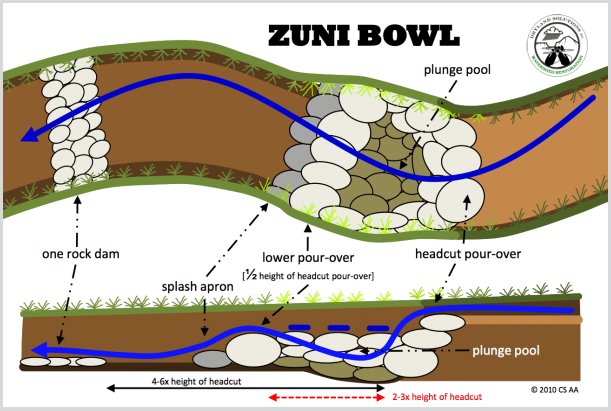
After building the structures, it is best to check on them after a rainfall to see how the water flows through them. It is important to look for any washout around the structure and any modifications that may need to occur, such as adding another layer or row of material. The process of rebuilding soil and reversing the head cut takes years.

Who benefits from restoring wet meadows?

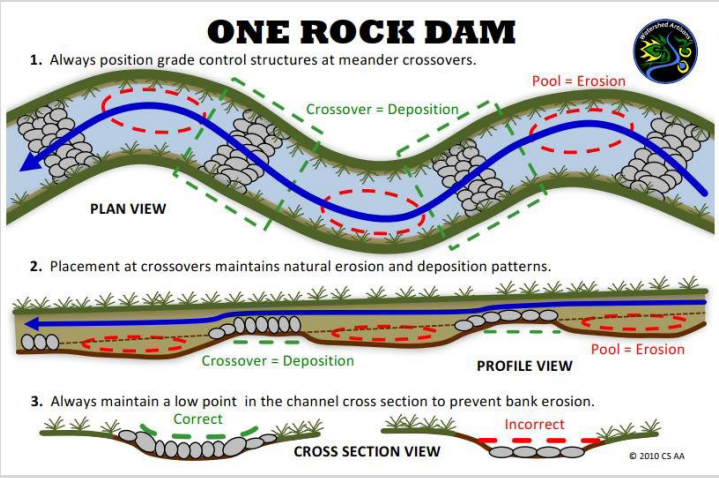
Wildlife and livestock both benefit from wet meadow restoration once the vegetation has had time to reestablish. A grazing plan is important in wet meadows so that the vegetation in the eroded zone has time to reestablish.

COMMON STRUCTURES

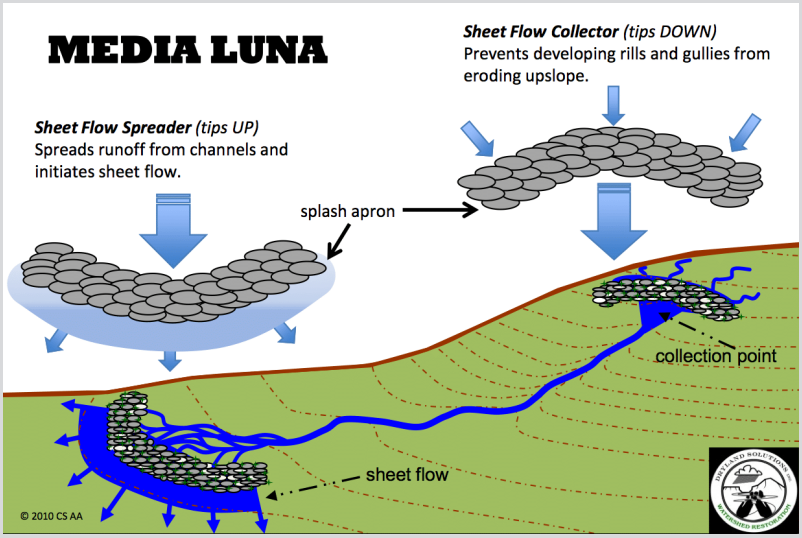
The Zuni Bowl: This structure is named after the Zuni people. It is one of the more common structures used when treating head cuts. Head cuts progress when the soil surrounding the vegetation's roots washes away. The Zuni Bowl prevents this process by slowing the water flow and preventing the soil from washing away. Zuni Bowls can be incorporated with other structures to have an even more significant effect.



One Rock Dam: Commonly used for treating gullies and grade control. The One Rock Dam is great at catching sediment and dispersing water flow. Once the sediment has built up over the One Rock Dam, another layer of rock can be added to continue the process.



Media Luna: Used to help disperse water more widely across valley bottoms. This allows water to soak into the soil and restore proper flow. The specific shape of this structure prevents rills and gullies from forming and disperses water across a wide area of space.



How is the Sheridan Community Land Trust (SCLT) involved?

SCLT is helping landowners install Zeedyk structures through project design, on-the-ground surveys, and education. SCLT has hosted volunteer days, hired contractors, and provided other resources to help landowners build these structures to restore their wet meadows.

How can I get involved?

You can make your land more drought-resilient through wet meadow restoration in several ways.

For landowners who are interested in building structures:

- Contact John Graves, SCLT Director of Conservation, at John@SheridanCLT.org
- Call the SCLT office: 307-673-4702

To volunteer for a wet meadow restoration project:

- Visit SheridanCLT.org/Volunteer to complete our online volunteer sign-up. Please check the “Conservation” box under interests. (You can check any of the other boxes, too.). You will be notified of any upcoming volunteer opportunities.

Want to conserve open space, working ranches, wildlife habitat, and clean water in Sheridan County?

- These projects rely on community support. You can help conserve what we all love in Sheridan County by making a tax-deductible gift to SCLT at SheridanCLT.org/Donate.

Volunteer **Donate** **Water & Drought** **Conservation**