

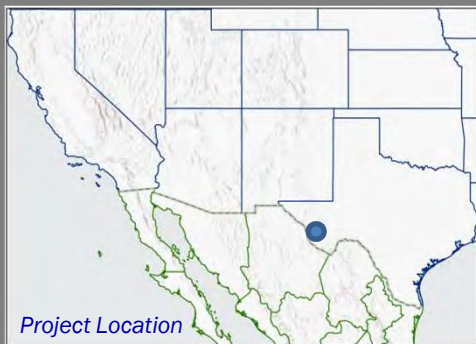
## RESTORATION

# Rotational Cattle Grazing to Restore Degraded Chihuahuan Desert Grasslands and Promote Watershed Health



The Dixon Water Foundation

As European settlement spread across the West, changes in land-use and disturbance regimes often resulted in degradation of native grasslands. The Dixon Water Foundation (the Foundation) works to promote healthy watersheds through sustainable land management. The Foundation owns the Mimms Unit ranch, which is a working cattle ranch and demonstration ranch on a high Chihuahuan Desert grassland. The ranch uses three different grazing management techniques—continuous, rotational, and exclusion—to study the use of livestock as a tool in grassland restoration.



Project Location



Cattle on Healthy Rangeland at Mimms Ranch/Terrie Wade

## KEY ISSUES ADDRESSED

Early settlers of West Texas eliminated bison herds and often brought unsustainable grazing practices. Overgrazed grasslands were converted to bare ground, creating more opportunity for precipitation to run off instead of infiltrate into soils. Increased runoff and accelerated flows erode soil that is deposited in creeks and rivers downstream. The loss of grasslands deprives wildlife of habitat and ranchers of suitable rangeland while reducing aquifer recharge and carbon sequestration. The Foundation employs grazing techniques that mimic historical bison movements, which allows for long periods of rest and recovery after short periods of heavy disturbance.

## PROJECT GOALS

- Rehabilitate grasslands to improve watershed health and to provide habitat for wildlife
- Use sustainable ranching to maintain healthy grasslands over the long term
- Provide educational and research opportunities to share information on the benefits of regenerative livestock management

## PUBLIC ACCESS AND EDUCATION

Guided field trips allow visitors to learn about grassland ecosystems and ranching practices. The ranch also hosts outside groups that share their own management stories.



*Conservationists Gather for a Grassland Restoration Discussion/  
Philip Boyd*

## PROJECT HIGHLIGHTS

**Cattle Grazing for Restoration:** The Foundation uses cattle grazing as the principle restoration technique. Portable electric fences are used to divide the rotationally grazed portions of the ranch into 25- to 30-acre pastures, through which a herd of 90-250 cattle are rotated daily. Cattle fertilize soil with their manure and break up compacted soil surfaces, allowing seeds and precipitation to infiltrate the soil.

**Monitoring for Success:** Vegetation is monitored through transect surveys by Sul Ross State University Students, in-house point monitoring by the Dixon Water Foundation, and regular visual assessments by ranch employees.

**Collaborative Partnerships:** The Foundation partners with wildlife researchers from universities and state agencies, and has worked with the Rio Grande Joint Venture, Bird Conservancy of the Rockies, The Borderlands Research Institute at Sul Ross State University, and Natural Resource Conservation Service.

**Room for Wildlife:** Restoration and conservation improves habitat quality for local wildlife such as pronghorn, for wintering migratory birds.

**Community Outreach:** The Mimms Ranch is located just on the edge of the town of Marfa, Texas, facilitating access for events, workshops, and use of the interpretive trail.

## Collaborators

- Rio Grande Joint Venture
- Bird Conservancy of the Rockies
- Borderlands Research Institute
- Natural Resources Conservation Service

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## LESSONS LEARNED

In rotationally grazed pastures, herbaceous plants have re-established and perennial grasses have expanded to cover previously bare ground around ephemeral springs and riparian areas.

Grazing animals selectively consume new growth in continually grazed pasture. This leaves less palatable plants ungrazed, causing them to become even less desirable as they age. Similarly, in enclosure pastures, ungrazed plants mature and begin to lose palatability and nutritional value. In rotational grazing pastures, new growth is heavily selected, but for shorter periods of time, allowing recovery during rest.

Stocking density and recovery periods need to be continually monitored and adjusted in desert grasslands in response to boom or bust precipitation.

Discussion with other ranchers and community members is aided by the development of interpersonal relationships and involvement in the town near the ranch.

## NEXT STEPS

- Continue to engage agencies and the public through existing methods
- Continue to present monitoring efforts and expand research collaborations with universities
- Continue to develop internship opportunities for aspiring managers to learn and be trained in these grazing techniques

## PROJECT RESOURCES

For more information on this project, contact Casey Wade: [cwade@dixonwater.org](mailto:cwade@dixonwater.org)

For additional project resources and case studies, visit the Collaborative Conservation and Adaptation Strategy Toolbox: [WWW.DESERTLCC.ORG/RESOURCE/CCAST](http://WWW.DESERTLCC.ORG/RESOURCE/CCAST)



*Cattle in the Continuous Grazing Pasture/Dixon Water Foundation*