

ALAMITO CREEK CONSERVATION INITIATIVE

YEAR 2025

ANNUAL REPORT 2025

RIPARIAN HABITAT RESTORATION IN THE
ALAMITO CREEK WATERSHED

PREPARED BY:
**ALAMITO CREEK CONSERVATION INITIATIVE
TEAM**



Alamito Creek Conservation Initiative

Working with landowners to implement riparian habitat restoration in the Alamito Creek Watershed



▲ 1 : 1,050,000

The Borderlands Research Institute and Rio Grande Joint Venture have partnered to establish the Alamito Creek Conservation Initiative (ACCI). ACCI works directly with private landowners to implement restoration and habitat enhancement projects within the watershed. Funding is provided by the Horizon Foundation and Dixon Water Foundation, and is supplemented by existing voluntary, incentive-based cost-share programs that support conservation practices on working lands.

Restoration efforts under ACCI emphasize process- and nature-based approaches designed to mimic natural hydrologic and geomorphic processes. Complementary upland treatments, such as selective removal of invasive shrubs and placement of media lunas, aim to slow overland flow, promote sediment deposition, and facilitate vegetative recovery across riparian and upland zones.

ACCI seeks to enhance riparian function, increase watershed resilience, and support the recovery of diverse grassland and riparian plant communities.

Alamito Creek Watershed

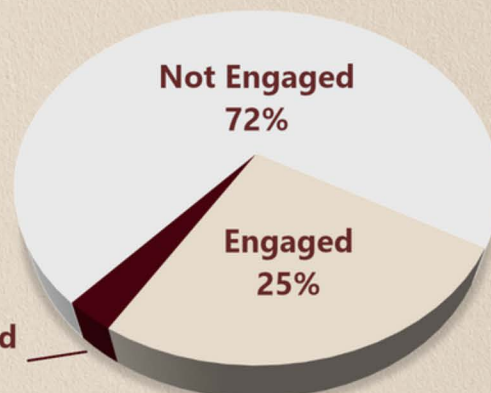
Expanding our reach across the watershed



▲ 1 : 1,050,000

In 2025, our plan was to engage as many property owners as possible across the Alamito Creek watershed. Our goal was to share the importance of Alamito Creek and the Alamito Creek Conservation Initiative, while discussing erosion concerns and potential restoration solutions. Throughout the year, we made significant efforts to meet with landowners, answer questions, and explore opportunities for nature-based solutions. By year's end, we have engaged 10 landowners representing approximately 259,359 acres within the Alamito Creek watershed. Including Alamito Creek Preserve and the Mimms Unit, our efforts have reached approximately 282,123 acres—about 28% of the watershed.

Established
3%



DEVELOPING A CONSERVATION ECONOMY FOR STREAM RESTORATION



HOW DO WE SCALE UP?

This year, ACCI initiated the design and testing of scalable in-stream filter dam structures to evaluate their feasibility for larger implementation. A primary objective was to develop cost comparisons between rock-based and wood-based structures while also assessing their durability and functional effectiveness. This effort provides valuable insight into which structure types are best suited for long-term performance.

We now have reliable estimates of both construction costs and installation methods. Additionally, because these practices are eligible for cost-share through the Natural Resources Conservation Service (NRCS), we are now able to directly compare our project cost estimates with existing NRCS payment schedules. This information is critical for planning, budgeting, and scaling future restoration efforts.

WHO DOES THE WORK?

ACCI also prioritized identifying and engaging contractors capable of building in-stream filter dam structures. We reached out to local contractors to raise awareness of stream restoration practices and to introduce low-tech process-based solutions for stream and watershed restoration.

Through this effort, we have established reliable sources for materials, including Stubbs Quarry and RH Dirt Work, as well as delivery services from RH Dirt Work and Jarrett Dirt Work and Paving. We have also identified contractors to perform this type of restoration work, including Silla Marfa, King Welding and Ranch Services, Joshua Rousselow, Lance Jarrett, and Maas Verde Landscape and Restoration.

This growing network of material suppliers and skilled contractors enables ACCI to plan and implement scalable restoration projects efficiently and effectively.

WHAT KIND OF INSTREAM RIPARIAN STRUCTURE WORKS BEST?

2025 ACCI COST RATES

Structure	Cost/ft
Rock structures	\$40.00
Cottonwood limbs	\$79.07
Brush weirs	\$54.56
Pine post pattern	\$36.40
Cedar stays pattern	\$43.90
Pine posts woven	\$26.80
Cedar stays woven	\$19.04
Avg cost per linear foot	\$42.82

2025 NRCS COST RATES

Restoration of rare and declining habitat (Code 643)

Structure	Cost	per Unit
Beaver dam analogs	\$37.14	foot
Rock structures	\$642.21	cubic yard



**CEDAR STAYS
WOVEN PATTERN**



**COTTONWOOD
LIMBS**



**ROCK
STRUCTURES**



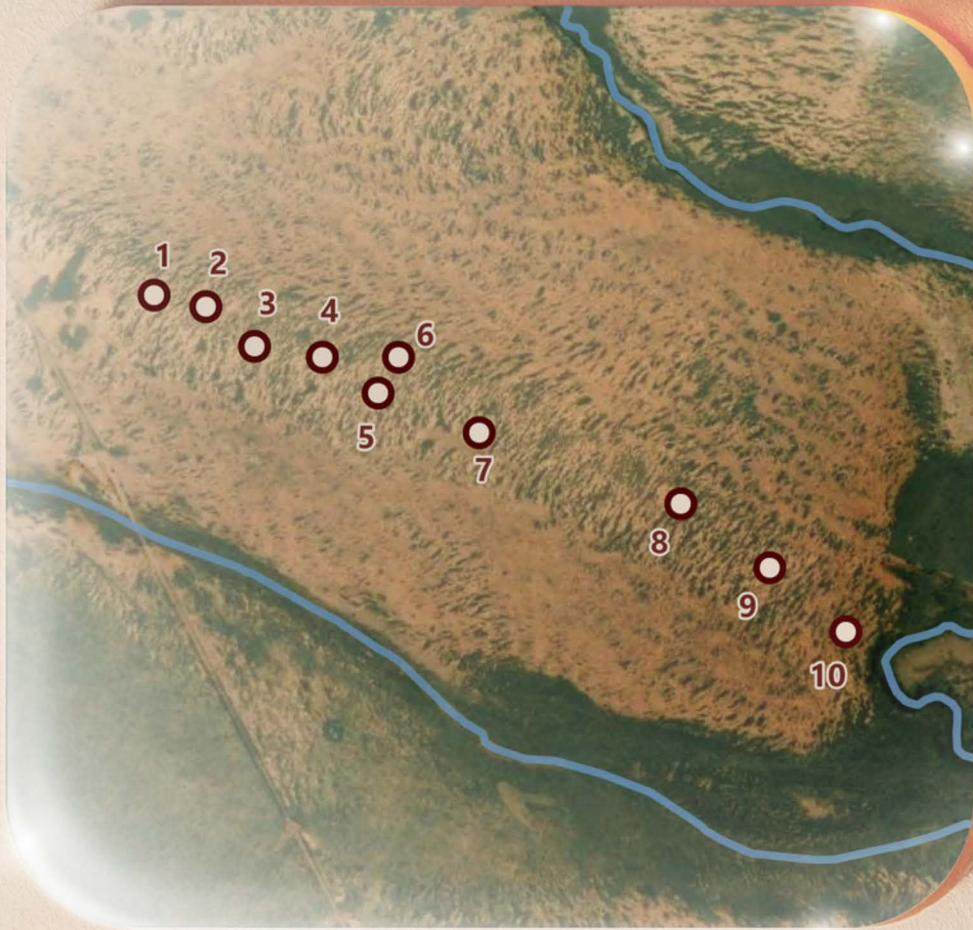
CEDAR STAY PATTERN



**PINE POST
PATTERN**

Mimms Unit

Media lunas



▲ 1 : 10,000

Dixon Water Foundation, BRI, and RGJV partnered to construct 10 media lunas (upland sheet flow management structures) in April 2025. Structures were placed on the Mimms Unit of the Dixon Water Foundation, near the confluence of South Fork Alamito Creek and Duncan Draw in an area with a high percentage of bare ground and evidence of erosional sheet flow. The work was completed with assistance from 10 Sul Ross State University student volunteers.

MIMMS UNIT



MEDIA LUNA #3

APRIL 2025

A view of newly constructed media luna #3 looking north. Photo taken by Nick Loveland with Rio Grande Joint Venture in April 2025.

MEDIA LUNA #3

JULY 2025

A view of the same media luna looking west after monsoon rains. Photo taken by Phillip Boyd in July 2025.



MEDIA LUNA #3

OCTOBER 2025

Overhead shot looking south with workshop participants. Photo taken during Restoring West Texas Streams workshop by Shelby Loveland in October 2025.

Penitas Ranch

Instream structures



▲ 1 : 25,000

In fall 2025, twenty-one rock filter dams were installed in a tributary of Alamito Creek on the Penitas Ranch. The project targeted a deeply incised drainage where accelerated runoff and sediment loss had reduced hydrologic function. By slowing and spreading flows, capturing sediment, and initiating the gradual aggradation of the streambed, these structures are expected to enhance water retention and stabilize upstream inputs. Over time, these improvements will contribute to healthier hydrologic function within the broader Alamito Creek system.

PENITAS RANCH TRIBUTARY INSTREAM STRUCTURES



Alamito Creek Preserve

Matonoso Creek instream structures



▲ 1 : 27,000

In spring 2025, forty-three rock and wood structures were installed within Matonoso Creek between RM 169 and its confluence with Alamito Creek. These natural infrastructure are designed to promote natural process recovery within a degraded riverscape by slowing water velocities, capturing and storing sediment, increasing water retention within the riparian aquifer, and improving both riparian and instream habitat. Together, these changes help attenuate floodwaters and strengthen the system's overall resilience to drought. Monitoring efforts began during installation and continue through a suite of activities that track geomorphic change, water quality and quantity, vegetative cover, and habitat responses across the project reach.

MATONOSO CREEK INSTREAM STRUCTURES



RIPARIAN RESTORATION EFFECTIVENESS MONITORING

HOW ARE RESTORATION EFFORTS IMPROVING HABITAT AND HYDROLOGIC FUNCTION?

Our monitoring toolkit employs remote sensing, groundwater monitoring, vegetation surveys, avian monitoring, and stream morphology measurements to quantify the success of our conservation efforts over time.



Matonoso Creek

Riparian Restoration Effectiveness Monitoring



Remote Sensing
UAV Grid



▲ 1 : 43,000



Groundwater
Pressure Transducers



▲ 1 : 25,500



▲ 1 : 25,000

Vegetation
Transects



▲ 1 : 21,750

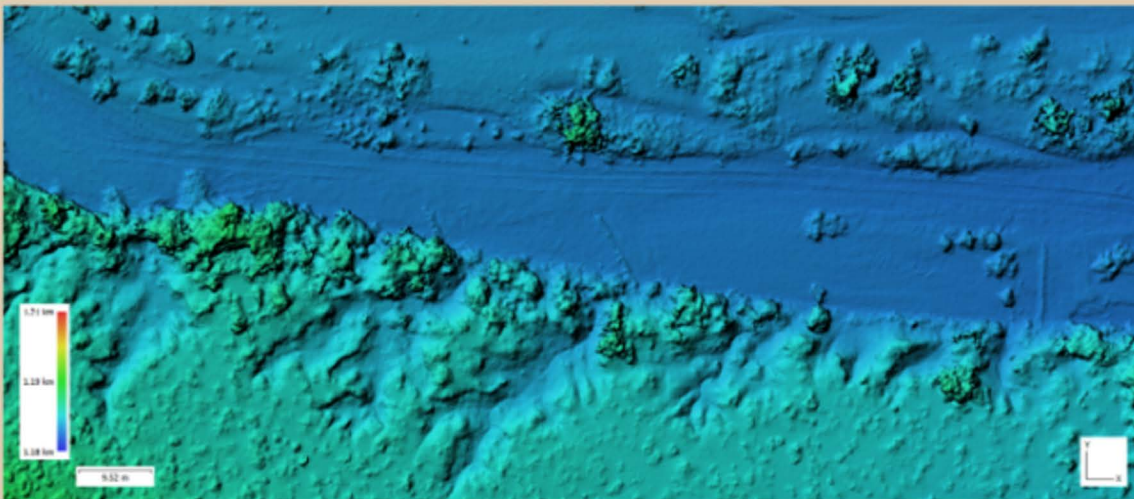
Avian
Autonomous Recording Units



RIPARIAN RESTORATION EFFECTIVENESS MONITORING

REMOTE SENSING

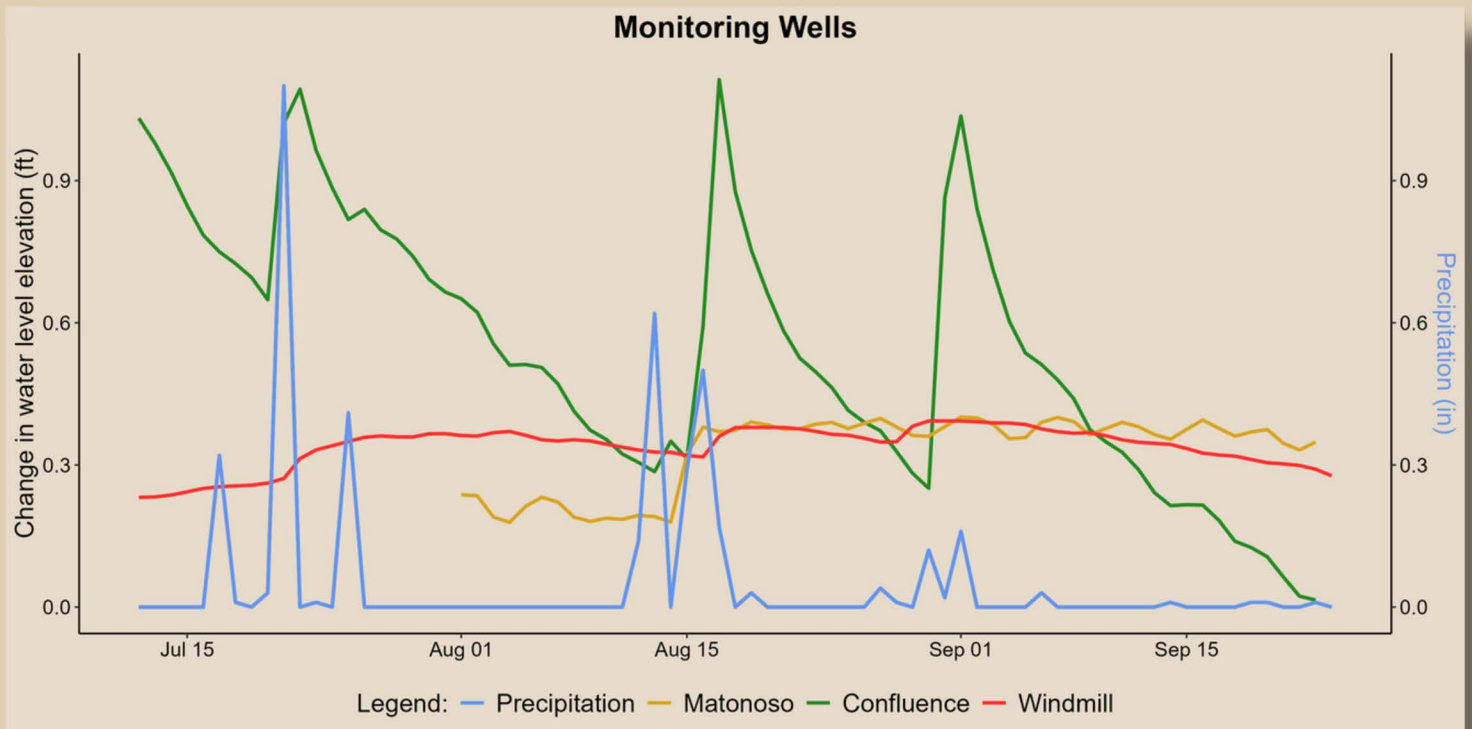
Remote sensing data has been collected as of Fall 2025 at Alamito Creek Preserve. A model is being constructed that will allow us to observe both vegetative and geomorphic changes along the project site. Additionally, cross-sectional stream area measurements have been collected via in-person RTK surveys and desktop modeling. This data will help complement and validate the remote sensing data and inform how the active channel, stream sinuosity, and floodplain connection change over time.



RIPARIAN RESTORATION EFFECTIVENESS MONITORING

GROUNDWATER MONITORING

Three continuously logging water-level transducers are installed at Alamito Creek Preserve: two in shallow drive-point wells and one in a repurposed windmill well. These allow us to monitor groundwater responses to rainfall events and assess increases in hydraulic residence time resulting from our restoration projects.



Hydrograph showing precipitation data (blue) compared to water-level data from three monitoring wells at Alamito Creek Preserve from July 1, 2025 to September 30, 2025.

RIPARIAN RESTORATION EFFECTIVENESS MONITORING

VEGETATION MONITORING

A standardized riparian vegetative monitoring protocol has been developed and implemented on Matonoso Creek. This protocol was adapted from our Grassland Effectiveness Monitoring to facilitate ease of data collection, analysis, and comparison. These plant surveys focus on key indicators such as species composition, plant density, percentage of bare ground, and overhead canopy cover. After piloting this protocol at Alamito Creek Preserve, we are now preparing to implement it at additional project sites throughout the watershed.



RIPARIAN RESTORATION EFFECTIVENESS MONITORING

AVIAN MONITORING

Six autonomous recording units (ARUs) have been deployed at Alamito Creek Preserve for acoustic monitoring of bird species presence and absence. Analysis of these data will be conducted in collaboration with Sul Ross State University (SRSU) to assess bird community composition and habitat use in response to restoration efforts. In addition, riparian breeding bird surveys have been conducted for two consecutive years to complement and validate the ARU data.



COMMUNICATION AND COORDINATION

ACCI MONTHLY MEETINGS

ACCI meetings are held on the first Monday of each month and include participants from the Rio Grande Joint Venture, Borderlands Research Institute, Texas Parks and Wildlife, and the Dixon Water Foundation. We strive to hold ten or more ACCI meetings each year. Partners and guest participants are invited to attend as appropriate, depending on meeting topics and project needs.

In addition, the ACCI Coordinator meets twice annually with funders to stay informed of conservation priorities, receive feedback, and demonstrate continued commitment to the goals of the Alamito Creek Conservation Initiative.

TEAM BUILDING

In May 2025, the ACCI team traveled to San Antonio, Texas, to tour the Edwards Aquifer Authority Field Research Park, located adjacent to Cibolo Creek within the recharge zone of the Edwards Aquifer. This trip served as both a team-building and educational opportunity for ACCI. Our goal was to collaborate with a group of conservation professionals implementing similar water stewardship and erosion control practices.

The restoration and management practices observed at the research park demonstrate strong potential for improving soil health, increasing soil water-holding capacity, enhancing infiltration, and reducing sediment transport in surface runoff. These concepts directly support the goals of restoration work being implemented through ACCI.

ACCI OUTREACH IN 2025

- **April 22-25** | The ACCI team built media lunas with the help of volunteers at the Mimms Unit in Marfa. (10 media lunas were built on an upland site to slow sheet flow erosion).
- **May 27-29** | Edwards Aquifer Authority (ACCI team building and educational event in San Antonio)
- **June 5** | Jared Schniers (BRI) and Jeff Bennett (RGJV) presented at the Agave Festival in Marfa about stream restoration and the Alamito Creek Conservation Initiative. We also presented the rainfall simulator to the group to showcase the importance of capturing water on the land and preventing erosion and soil loss.
- **June 9** | Held a riparian restoration field day for conservation partners. This included a ranch visit to the Alamito Creek Preserve and Mimms Ranch. ACCI provided lunch for about 30 participants.
- **July 23** | Presented rainfall simulator and discussed erosion control practices to the Youth Wildlife camp at the Balmorhea State Park
- **August 26** | Demonstrated the rainfall simulator for the Far West Texas County Extension Agents. Presented to 12 County Extension Agents about erosion control methods during a field tour at the O2 Ranch
- **September 23** | Biologists with the Texas Parks and Wildlife Department toured the riparian restoration practices at the Alamito Creek Preserve and Mimms Ranch. 10 TPWD biologists within Region 1 attended this field day
- **October 9** | Presented about ACCI at the Texas Section of the Society for Range Management meeting at the Mimms Ranch
- **October 17** | Student Volunteers from SRSU assisted in wetland vegetation management and toured a riparian restoration site in Casa Piedra
- **October 22** | RGJV, BRI, and the Dixon Water Foundation partnered in a Restoring West Texas Streams Workshop in Marfa. This was a collaborative workshop for low-tech watershed solutions. ACCI provided lunch for about 45 participants

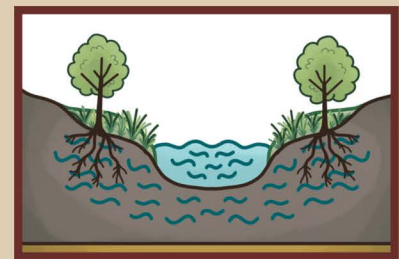
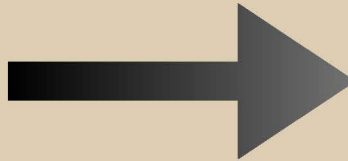
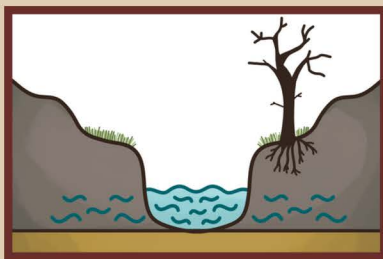


WHAT'S NEXT IN 2026

RIPARIAN PROJECTS ARE PLANNED FOR THE FOLLOWING RANCHES IN THE ALAMITO CREEK WATERSHED

- Barlite Ranch
- Howard Ranch
- McGuire Ranch
- Mimms Ranch

FUTURE PARTICIPATION FROM OTHER RANCHES IS ANTICIPATED



TEXAN BY NATURE CONSERVATION WRANGLER PROGRAM

ACCI WILL APPLY FOR THE CONSERVATION WRANGLER PROGRAM
TEXAN BY NATURE REACHED OUT TO ACCI ABOUT THIS OPPORTUNITY

Program includes:

- 12-18 months of tailored support
- Promotion via social media, newsletters, blogs, website, etc.
- Professional content production in the form of videos, collateral, and messaging
- Program management and impact reporting
- Connections to technical, expert, and industry support
- Recognition and participation in the annual Conservation Summit



THE ACCI TEAM IS IMMENSELY GRATEFUL TO
OUR PARTNERS AND FUNDERS WHO MAKE THIS
WORK POSSIBLE. WE ARE LOOKING FORWARD
TO ANOTHER GREAT YEAR IN 2026.



THANK YOU FOR ALL THE SUPPORT!

THE HORIZON
FOUNDATION



CONSERVING THE LAST FRONTIER