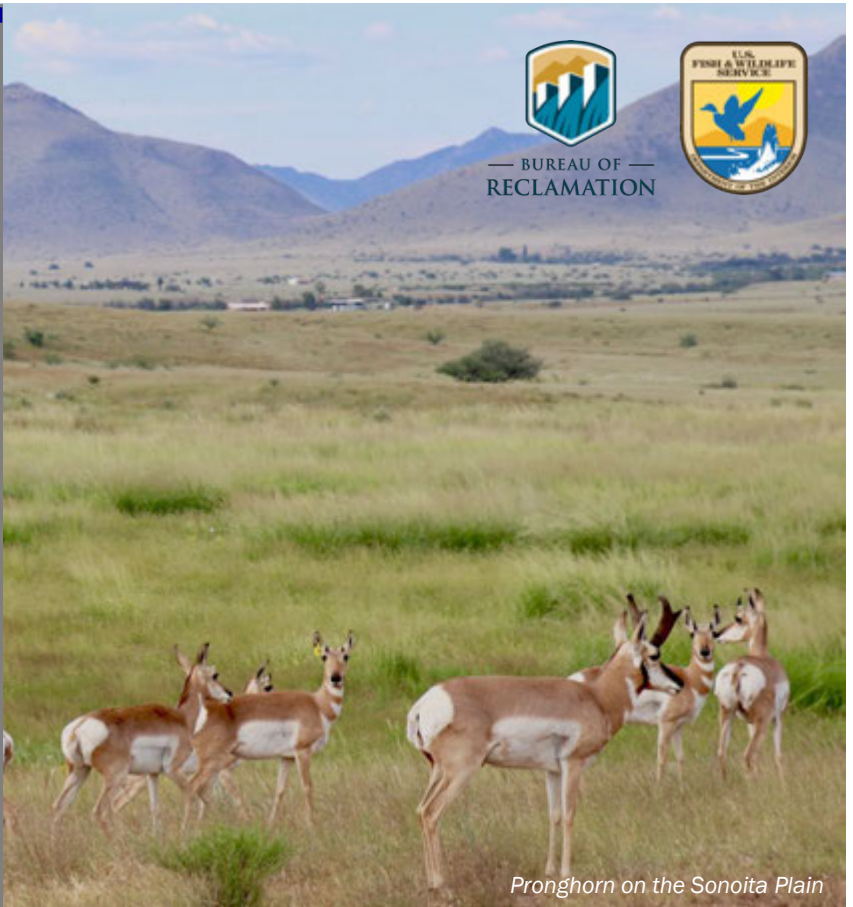


HABITAT CONNECTIONS

Increasing Habitat Connectivity and Permeability for Pronghorn in Southeastern Arizona



Pronghorn (*Antilocapra americana*), once native to southeastern Arizona, were extirpated by 1944 due to large-scale habitat conversion to shrubland, fence and roadway fragmentation, and unregulated subsistence hunting. Between 1945 and 2019, Arizona Game and Fish Department reintroduced 663 pronghorn and successfully re-established 6 sub-populations. In 2010, Arizona Antelope Foundation (AAF) and their partners have engaged in a multi-year, landscape-level initiative to increase the numbers of pronghorn across 675,000 acres of pronghorn habitat and improve habitat connectivity and permeability on 191,800 acres.



BUREAU OF RECLAMATION



KEY ISSUES ADDRESSED

This project addresses several challenges to the management of native and reintroduced pronghorn populations across southeastern Arizona, southern New Mexico, and western Texas. Fawn survival rates are low due to seasonal drought and direct fawn-coyote predation (up to 90%), and pronghorn does are restricted to fawning within 1-mile of available water. Large swathes of grassland habitat have been lost or degraded due to encroachment by shrubs, including mesquite, and urbanization. Pronghorn are unable to pass under or over traditional 5-wire roadway and livestock fences, which genetically isolates sub-populations and restricts access to habitat and water. Furthermore, there is a lack of landowner and public awareness of pronghorn habitat requirements during their life cycle.

PROJECT GOALS

- Improve habitat connectivity and access to available water sources through strategic fence modifications
- Improve habitat quality through grassland restoration and addition of water sources

THRIVING POPULATIONS

Between 2011 and 2016, the pronghorn count on the Sonoita Plain increased from fewer than 100 to over 300 animals.



Pronghorn Translocated to the Sonoita Plain from Prescott Valley

PROJECT HIGHLIGHTS

Actionable Science: Fence inventories and classification were conducted, and high-resolution satellite imagery was used to find pronghorn trails. GPS collars on released pronghorn recorded movements, identified key travel corridors, and prioritized fence removal and modification.

Fence Modifications: Prioritized fences between large blocks of habitat were removed or modified by replacing the bottom strand of barbed wire with a smooth wire 16 to 18 inches above the ground. Volunteers, ranchers, and contractors completed the fence modifications.

Grassland Restoration: 7,874 acres of grasslands invaded by woody plants have been restored through prescribed burning, mesquite removal, and herbicide treatments.

Partnerships: Diverse collaboration between multiple non-governmental organizations, private landowners, and government agencies allowed unique resource pooling and capacity to accomplish a diverse projects across a landscape where 60% of pronghorn rely on private lands.

Collaborators

- National Fish and Wildlife Foundation
- Arizona Game and Fish Department
- Arizona Department of Transportation
- Numerous other federal and state agencies
- Multiple non-governmental organizations
- Tombstone High School
- Local ranchers and landowners

Lead Author: Amanda Webb, University of Arizona, September 2020.
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Photos courtesy of Betty Dickens



LESSONS LEARNED

The team observed an estimated 30% increase in habitat occupied for at least part of the year, and water accessibility in previously water-limited pastures. The area used for fawning also increased by an estimated 30% due to the addition of water points in previously dry segments of individual pastures. As pronghorn herd ranges expand, their movements and attempts to access habitat are used to determine additional fences in need of modification.

Lasting relationships with landowners, communication, and shared project incentives were at the core of the success of this project. It was also essential to have an experienced Field Manager dedicated to building relationships with landowners. One or two days of work by 35 volunteers allows modification of 2 to 3 miles of fence line.

NEXT STEPS

- Survey pronghorn populations by sub-population every year to estimate total counts, and continue tracking collared pronghorn
- Continue developing a GIS database to support pronghorn and multi-species conservation
- Continue partnership and project development as opportunities and funding permit
- Support the continued development of two conservation easements on private lands that provide key pronghorn habitat connectivity

PROJECT RESOURCES

Contact Glen Dickens, CWB (gbdickens@comcast.net). Final project report: <https://azantelope.org/Grant-Report/>

For additional project resources and Case Studies, scan the QR code below or visit the CCAST website:

WWW.DESERTLCC.ORG/RESOURCE/CCAST



Pronghorn in Front of Grubbed Mesquite