# Update: Big Game Corridors

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New Mexico D

Stewart Liley Santa Fe, NM January 10, 2025



### **Big Game Migration Projects**

18 herds mapped and published

Volumes 2, 3, 4 of: Ungulate Migrations of the Western US (USGS report)

Collaborative effort

> WEST (consulting for BLM projects), Navajo Nation, Santa Ana Pueblo, NMSU/USGS, Tesuque Pueblo

Herds mapped ➢ Mule deer: 10

- > Elk: 7
- Pronghorn: 1





Ungulate Migrations of the Western United States, Volume

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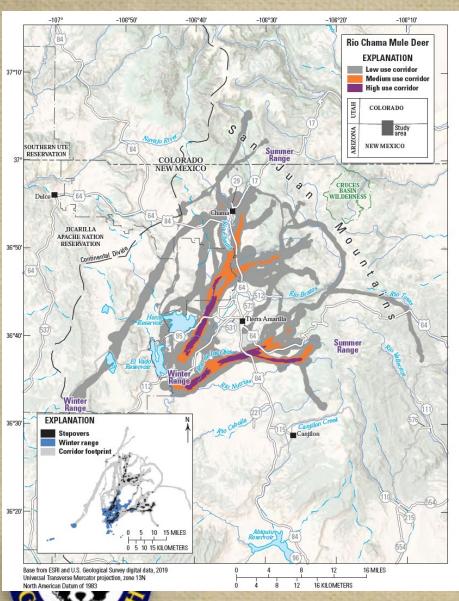
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#### Rio Chama (mule deer)

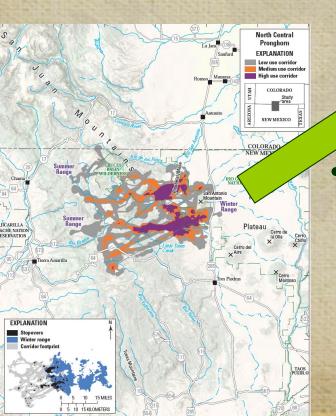
- Reported data
  - Migration pathway (timing, length)
  - Possible barriers
  - Stopover timing
  - Winter range summary

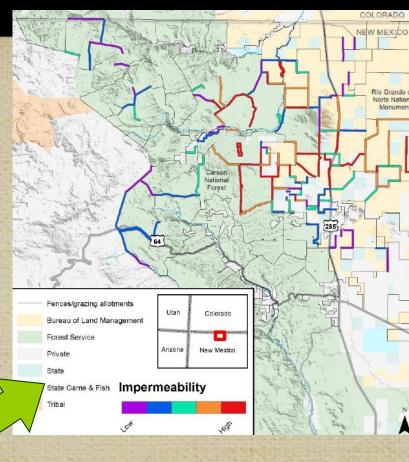


	New Mexico   Mule Deer 53
Mexico   Male Deer	Models derived from:
nama Mule Deer	<ul> <li>Migration: 160 sequences from 59 individuals (89 spring sequences, 27 fail sequences)</li> </ul>
e Rio Chama mule deer herd hat one of the highest-	<ul> <li>Winter 116 sequences from 57 individuals</li> </ul>
populations of any head in New Mexico. The head	Corridor and Dispower Summary
s from north-central New Mexico along the Continental	Migration start and end dates (median):
and through the San Juan Mountains, with some sals moving to summer ranges in southern Colorado	<ul> <li>Spring: April 23 to May 5</li> </ul>
11,500 ft 12,399-3,505 mJ elevation: fig. 340. These	<ul> <li>Fall: October 27 to November 7</li> </ul>
guest through a meanic of private, public, and Acardla	Average number of days migrating:
Nation Reservation lands. The herd winters south	<ul> <li>Spring: 15 days</li> </ul>
t of Heron Reservoir and El Vado Reservoir in habitat na primerily of sambrush steppe, graeslands, piezon-	Fall: 7 days
ng primarity of capetoon cuppe, grannade, parjon- mens, and osk woodlands. The mule deer use two	Mirrorion corridor learth:
minution corndors. One corndor follows the Roo	- Miss: 8.02 mi (12.91 km)
	<ul> <li>Mean 18 21 mi (22 M km)</li> </ul>
gloweys 84 and 64. The shorter consider initially follows	<ul> <li>Mex: 31.07 mi (50.01 km)</li> </ul>
os Ojos hefore hunching into separate considors north th of U.S. Hathway 64, Interspersed agricultural lands	Minution corridor area.
a Rio Chama and U.S. Highways \$1 and 61 may serve	<ul> <li>202,285 acres (81,882 ha) (low use)</li> </ul>
our sites for some make door during their spring mayn-	<ul> <li>31.672 acres (12.817 hs) (medium use)</li> </ul>
ndeross pine, mixed conifer, and Popular seemaloider	<ul> <li>10.210 screet (4.132 ha) (high use)</li> </ul>
g appea) forests characterize the corridors and stopovers aid-elevation inducators. As the Rio Chama male deer	<ul> <li>Stongerer area: 21.477 arres (8.691 ha)</li> </ul>
and elevation and some per All the state Channa must deter	
montane meadows until reaching their high-elevation	Winter Range Summary
range, which country of mixed coulder and arpen for-	Winter start and end dates (median):
allenges the head faces include crossing U.S. Highways 54, increasing density of browing subdivisions in some	<ul> <li>November 11 to April 24</li> </ul>
ng the routes, and Imcont, especially taller imcont that	- Winter length (mean) 163 days
ex caused paup.	<ul> <li>Winter range (30 percent contout) non: 38,991 acres (15,779 ha)</li> </ul>
I Copture and Data Collection	
mple size: 67 adult female mule deer	Other Information
location frequency Approximately 2-12 boars	Project contact:
oject duration: 2020-2021 nalivnja	<ul> <li>Omin Davavaei (omin davavaei ()dgf nm gev), Deer Program Manager, New Mexico Department</li> </ul>
	of Game and Fish
erridor, stopower, and winner range analysis: BBMM st and others, 2009); corridor analysis also used Fixed	Data analyst
Variance (see appendix 1 for further description)	<ul> <li>Croig Reddell, ODS Analyst, New Mexico State University</li> </ul>
dimention of migration periods NSD (Bunnefeld ers. 2011)	
	Photograph Seen Journe Grein, New Mexico State University)
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#### Northcentral pronghorn





"Barrier behavior analysis"

- Used to identify which fence segments may be obstructing movement
- Will benefit other terrestrial species

Río Grande del Norte National Monument

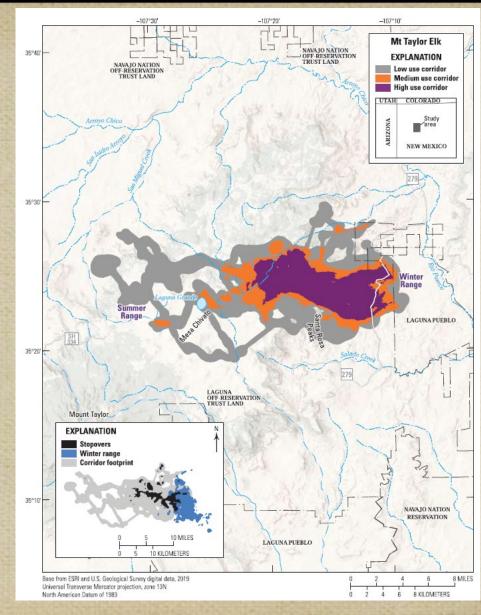
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## Mt. Taylor elk







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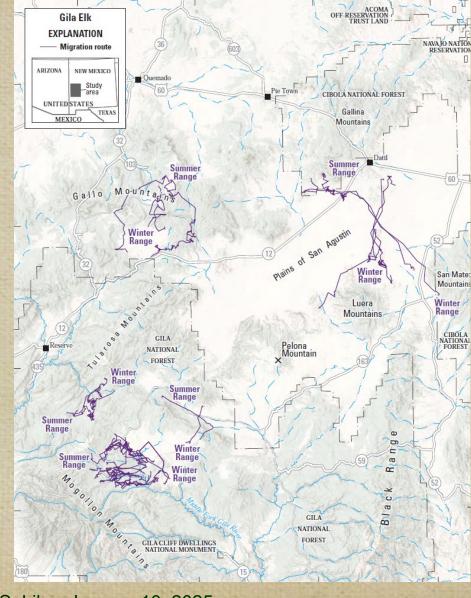
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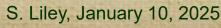
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## Gila elk

- Not all herds migrate
  - Hundreds of collars on Gila elk
  - Mostly non-migratory
  - Only 3% of Gila elk migrated
  - Elk movement data can be used to target management efforts





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## Ongoing work





• **NMDGF Goal:** target more arid regions where big game make important seasonal movements in response to precipitation patterns

#### Current & upcoming projects

- Mule deer
  - Southern Pecos, Mt. Taylor)
- Pronghorn movement
  - BLM/NMSU/NMDGF: Bootheel
  - DOD/NMDGF/NMSU: Southeastern NM
  - Wildlands/Tribal/NMDGF: pronghorn near solar development NW
- Sand conveyer project & deer movement response
  - Developer sponsoring work to identify changes in movement after installation

## Key takeaways

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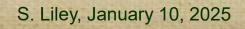
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#### Collaborative efforts key

- Many entities fund work and have data or expertise
  - BLM, NMSU, USGS, Tribal Nations, Consultants, DOD
- Future \$\$ available to expand work (WAFWA grant 2025-2027)
  - Benefits to other species
- More work to be done
  - No data DOES NOT mean migration is not occurring or an area is not important







#### Questions?



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