Examining the Influence of Diverse Stakeholder Collaboration on Land Management & Agricultural Sustainability in the Thunder Basin Ecoregion

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Roadmap

01. *Background*

02. *Study Area*

03. *Objectives*

04. *Part I:*

Diverse perspectives in collaboration

05. *Part II:*

Changes in land use

06. *Conclusions*

Multiple use management in the American West

- U.S. public lands are managed under a **multiple use mandate**
    - Public lands can support *multiple ecosystem services:* outdoor recreation, livestock grazing, timber harvesting, watershed protection, wildlife & fish habitat
- Balancing competing uses can result in **conflict**

Addressing conflict through collaborative decision-making

Building trust

Collaboration on Thunder Basin means walking in each other's boots

Wyoming's Code of the West and "doing the right thing" are more than abstract expressions on the Thunder Basin National Grassland. They are the basis of a long-standing argument about how to manage prairie dogs. It's just that "doing the

life. With less than 10 percent of the grassland designated as locations where prairie dog habitat is the priority, there is also ample room for livestock grazing.

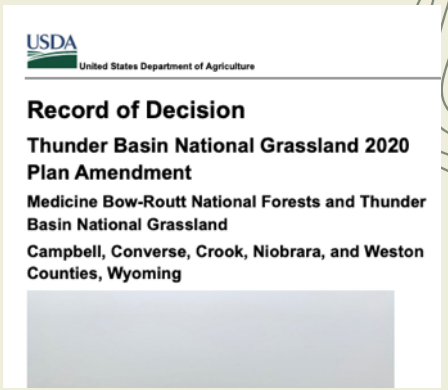
Conserving our natural heritage is as important as maintaining our agricultural history

Fostering dialogue

Generating knowledge

Thunder Basin Research Initiative

Better decisions



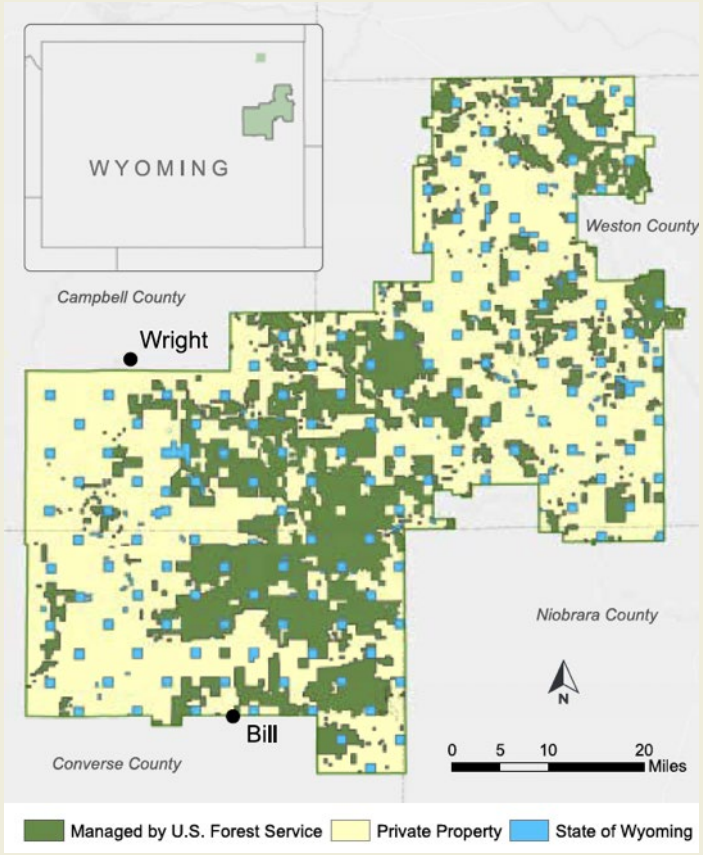
USDA United States Department of Agriculture

Record of Decision

Thunder Basin National Grassland 2020 Plan Amendment

Medicine Bow-Routt National Forests and Thunder Basin National Grassland

Campbell, Converse, Crook, Niobrara, and Weston Counties, Wyoming



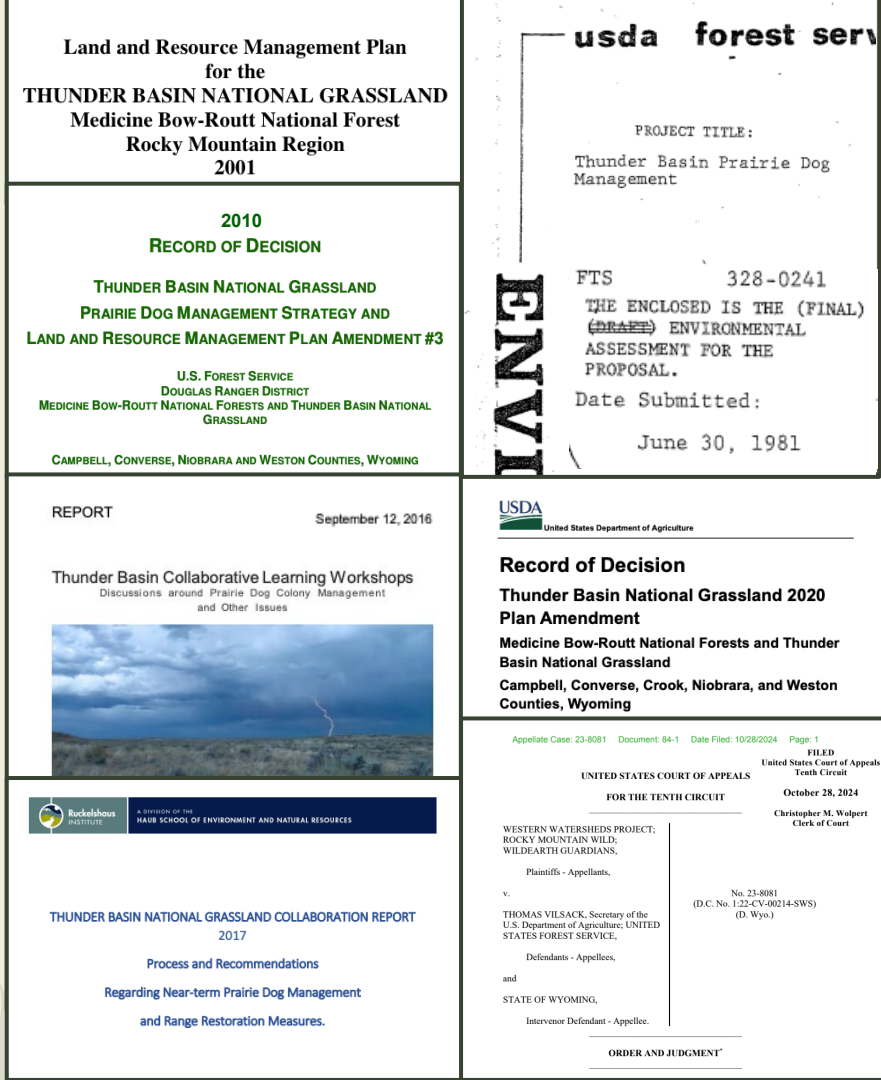
(Connell & Duchardt, 2020)

Study Area: Thunder Basin Ecoregion (TBER)

- Rangeland ecotone in northeastern Wyoming
- Multiple land uses: cattle ranching, wildlife conservation, energy extraction
- Complex land ownership patterns
  - Thunder Basin National Grassland managed by USFS

Conflict in TBER

- USFS manages Thunder Basin National Grassland for multiple uses
- Prairie dog boom-busts lead to divergence between **agriculture** and **conservation goals**
- Multiple iterations of collaborative working groups to address resource conflicts



Land and Resource Management Plan
for the
THUNDER BASIN NATIONAL GRASSLAND
Medicine Bow-Routt National Forest
Rocky Mountain Region
2001

2010
RECORD OF DECISION

THUNDER BASIN NATIONAL GRASSLAND
PRAIRIE DOG MANAGEMENT STRATEGY AND
LAND AND RESOURCE MANAGEMENT PLAN AMENDMENT #3

U.S. FOREST SERVICE
DOUGLAS RANGER DISTRICT
MEDICINE BOW-ROUTT NATIONAL FORESTS AND THUNDER BASIN NATIONAL GRASSLAND

CAMPBELL, CONVERSE, NIOBRARA AND WESTON COUNTIES, WYOMING

usda forest serv

PROJECT TITLE:
Thunder Basin Prairie Dog Management

FTS 328-0241
THE ENCLOSED IS THE (FINAL) ~~(DRAFT)~~ ENVIRONMENTAL ASSESSMENT FOR THE PROPOSAL.
Date Submitted:
June 30, 1981

REPORT
September 12, 2016

Thunder Basin Collaborative Learning Workshops
Discussions around Prairie Dog Colony Management and Other Issues

Ruckelshaus INSTITUTE
A DIVISION OF THE HAUB SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES

THUNDER BASIN NATIONAL GRASSLAND COLLABORATION REPORT
2017
Process and Recommendations
Regarding Near-term Prairie Dog Management
and Range Restoration Measures.

USDA
United States Department of Agriculture

Record of Decision
Thunder Basin National Grassland 2020 Plan Amendment
Medicine Bow-Routt National Forests and Thunder Basin National Grassland
Campbell, Converse, Crook, Niobrara, and Weston Counties, Wyoming

Appellate Case: 23-8081 Document: 84-1 Date Filed: 10/28/2024 Page: 1

FILED
United States Court of Appeals
Tenth Circuit
October 28, 2024
Christopher M. Wolpert
Clerk of Court

UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

WESTERN WATERSHEDS PROJECT; ROCKY MOUNTAIN WILD; WILDEARTH GUARDIANS,
Plaintiffs - Appellants,
v.
THOMAS VILSACK, Secretary of the U.S. Department of Agriculture; UNITED STATES FOREST SERVICE,
Defendants - Appellees,
and
STATE OF WYOMING,
Intervenor Defendant - Appellee.

No. 23-8081
(D.C. No. 1:22-CV-00214-SWS)
(D. Wyo.)

ORDER AND JUDGMENT*

Research Objectives

How is multi-stakeholder collaboration impacting multiple use management on public lands?

1. How are different stakeholder perspectives impacting collaborative decision-making?
2. How is grazing on public lands changing over time in relation to changes in federal management?

1. How are different stakeholder perspectives impacting collaborative decision-making?

01.

Semi-structured interviews (40)

With ranchers, conservation NGOs, energy industry, scientists, agency officials, land managers, local community members

02.

Focus group

With board members of Thunder Basin Prairie Grassland Ecosystem Association (TBGPEA)

03.

Qualitative analysis

To identify stakeholder goals, knowledge, relationships to TBER

04.

Thematic coding

Iterative process involving consultation with collaborators and participants

Participants described **different goals** for TBER

- Different stakeholders prioritized different types of uses & services
  - **Provisioning** services:
    - Ranch sustainability and resource extraction
  - **Supporting** services:
    - Wildlife habitat and biodiversity conservation
  - **Cultural** services:
    - Maintaining heritage and community identity

"Because it will support us and keep us ranching, I mean we'll probably keep ranching anyway, but there's others that wont … there's that story, you know, they say what do you do with a million dollars, well, I would just ranch until I was broke."

"Can you see why I might label that good? Because it is incredible wildlife habitat … it's proven by the abundant burrowing owl population, the mountain plover population, the swift fox population, on and on and on."

"It's imperative to me, that I do what I can, to preserve my livelihood, the heritage."

Different goals as a function of relation to place

Local rancher & land managers

- Emphasize **long-term, place-based relationships**
- **Provisioning** and **cultural services**

"Insiders"

- View themselves as **stewards** of local heritage & livelihoods

"So to me, the rancher, is really, we're kind of the caretaker. I mean, USFS and the Fish and Wildlife, like to say they are, and they manage the hunting, but it's really the rancher who provides the wide open space because that's what the wildlife needs."

Researchers & conservation advocates

- Reflect goals for the **broader Great Plains region**
- **Biodiversity** and **ecological health**

"Outsiders"

- See themselves as **advocates** for the general American public

"That's something I have to always reiterate, 'Hey, these are public lands, these are national grasslands. They're for all Americans. Yeah, you're benefiting and you're paying $1.67 an acre. You're getting a lot, you know, so please consider these other values and these national values.'"

Participants valued different forms of knowledge

"We know that a drought is detrimental and we know that without the data…I know from practical experience because I've been here for years and years and years. I don't have to have a scientific study to tell me that."

"But there's a scientific process for a reason because we all have observer bias. And that scientific process, as you know, is there to try to extract that, separate that observer bias from the objective reality, and so I think that if I was just to say what I see, am I right? I don't know."

"It's a much different perspective when you try to work collaboratively. You have to take that ego out of the way and say, you know, I think I may have misinterpreted that data, or I didn't see your viewpoint, or because of what you asked questions about, now we have a much more robust explanation of what went on."

Ranchers & local community members

Prioritize **local knowledge** derived from:

- Multi-generational histories
- Lived experiences
- Self-collected data

Scientists & conservation advocates

Emphasize **scientific knowledge**, including:

- Peer-reviewed research
- Ecological theory

Collaboration fosters integration

Recognition of value of **diverse knowledge**

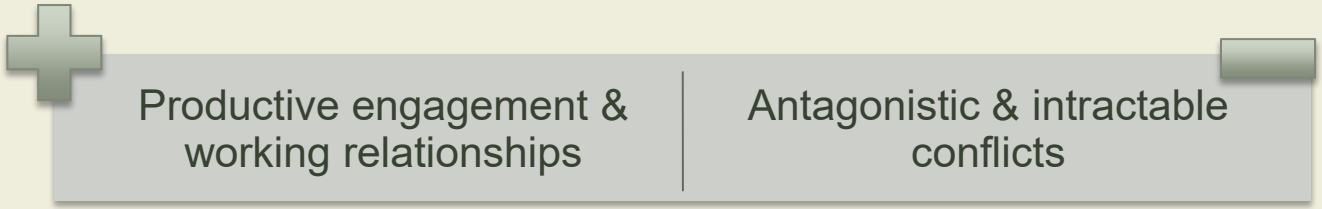
- Stakeholder engagement
- Co-produced research
- Extension & collaboration

Different**realities**of Thunder Basin

"They've become engaged in a productive way that's not just, *how do we maximize production?* It is, *how do we sustain ecosystems and livelihoods in this region?"*

Summary & Next Steps

- Conflicts arise due to **differing goals** for ecosystem services
- Diverse **knowledge systems** present both **challenges** and **opportunities** for sustainable management
- Collaboration in TBER has not **eliminated** conflict, but it has led to a **deeper understanding** of how social-ecological contexts shape experiences



- Next steps: interrogate the association between **place-based** relationships and **power** in multistakeholder collaborations

Research Objectives

How is multi-stakeholder collaboration impacting multiple use management on public lands?

1. How are different stakeholder perspectives impacting collaborative decision-making?
2. **How is grazing on public lands changing over time in relation to changes in federal management?**

Shifting approaches to federal management

1930s-1960s

Resource Extraction

- Sustained yield
- Emphasis on timber & grazing

1960s-1980s

Multiple Use

- Environmental legislation
- Balancing competing uses

1980s-2000s

Ecosystem Management

- Shifting focus to ecosystem health & biodiversity

2000s-present

Collaboration & Adaptive Management

- Increased reliance on collaboration with diverse stakeholders

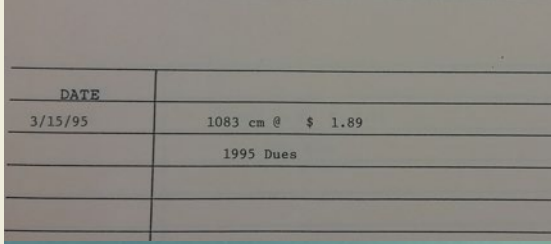
2. How is grazing on public lands changing in relation to changes in federal management?

01. Digitize 80+ years of USFS grazing allotment management records for allotments in TBNG

02. Extract data on livestock type, # of head, season of use, estimate of forage consumed in Animal Unit Months (AUM)

03. Create time-series of use to quantify changes in grazing intensity over time

04. Next steps: identify factors that are driving change using process-tracing techniques



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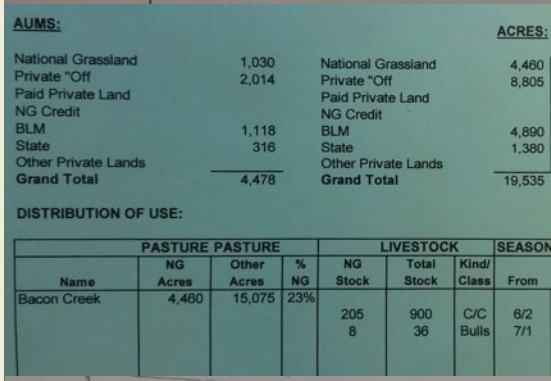
3/15/95	1083 cm @ $ 1.89
	1995 Dues



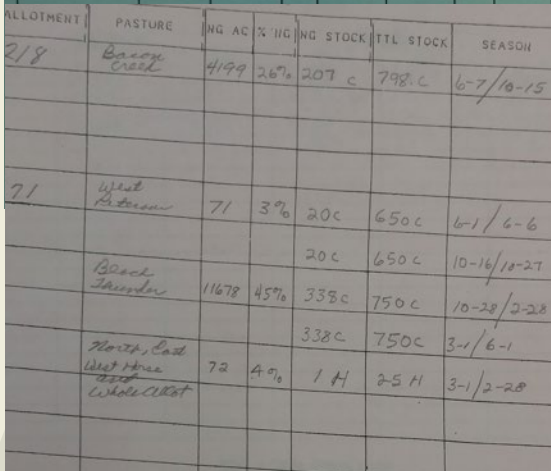
AUMS:

National Grassland	1,030	National Grassland	4,460
Private "Off	2,014	Private "Off	8,805
Paid Private Land		Paid Private Land	
NG Credit		NG Credit	
BLM	1,118	BLM	4,890
State	316	State	1,380
Other Private Lands		Other Private Lands	
Grand Total	4,478	**Grand Total**	19,535

ACRES:

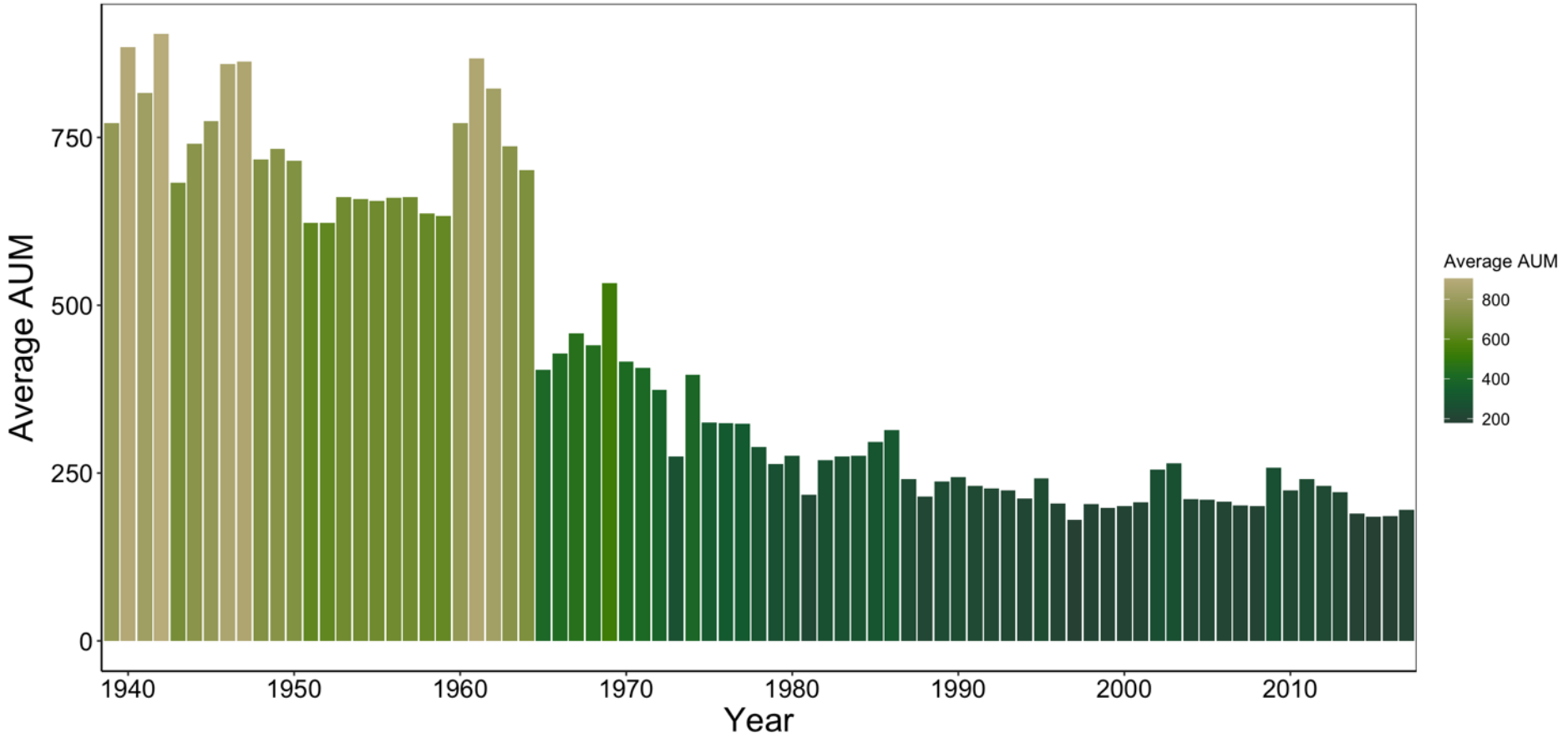
DISTRIBUTION OF USE:

	PASTURE PASTURE			LIVESTOCK			SEASON
Name	NG Acres	Other Acres	% NG	NG Stock	Total Stock	Kind/ Class	From
Bacon Creek	4,460	15,075	23%	205 8	900 36	C/C Bulls	6/2 7/1



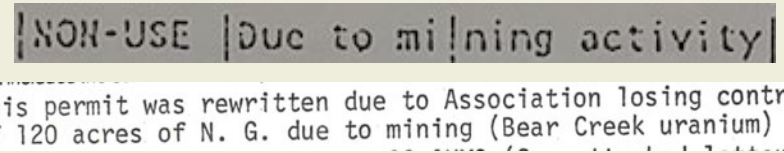
ALLOTMENT	PASTURE	NG AC	% NG	NG STOCK	TTL STOCK	SEASON
2/8	Bacon Creek	4199	26%	207 c	798 c	6-7/10-15
71	West Peterson	71	3%	20c	650c	6-1/6-6
				20c	650c	10-16/10-27
	Bacon Thurston	11678	45%	338c	750c	10-28/2-28
				338c	750c	3-1/6-1
	North, East West Horse and Whole Allot	72	4%	1 H	2.5 H	3-1/2-28

Average AUM by year for 15 allotments in TBNG 1939-2017

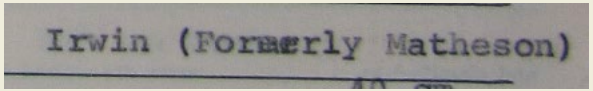


Drivers of change on TBNG allotments

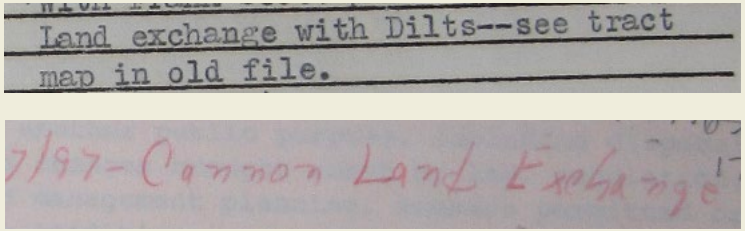
Shifts to mining



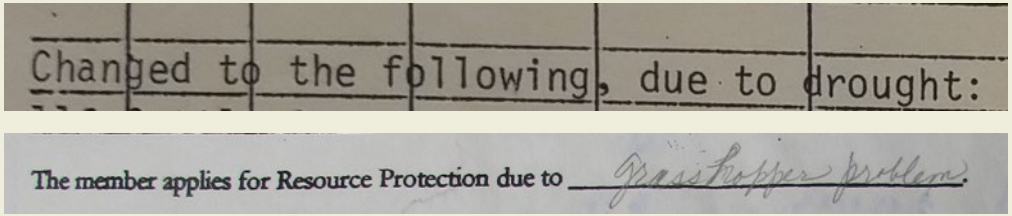
Changes in permittee



Land swap / exchange



Biophysical factors



Indirect effects of changing management paradigms

- Federal acres taken out of use for grazing
- Annual stocking rates vary in relation to rancher decision-making
- Decentralized role of managing agency
- Collaboration evident in flexibility for adaptive management

Summary & Next Steps

- Grazing, represented by # of AUM, has **declined over time** in TBER
    - Decline reflects **increased multiple use management** rather than reduced permitted stocking rates
- Transition to **collaborative stewardship** creates a more decentralized role for managing agency
    - Permittees leverage **local knowledge** for **flexible** and **adaptive** management decisions
- Next steps
    - Work with community partner to consolidate dataset for TBNG grazing allotments
    - Complete process-tracing to identify drivers & determine their relative impact
    - Continue work on diverse stakeholder collaboration and investigate role of power dynamics

Looking back, moving forward…

01. Changing dynamics of grazing as agencies balance competing demands

02. Collaboration beyond participation to address differences in values and knowledge

03. Progress is fragile and requires balance of trust, accountability

04. Future work to understand evolving management strategies for sustainable use

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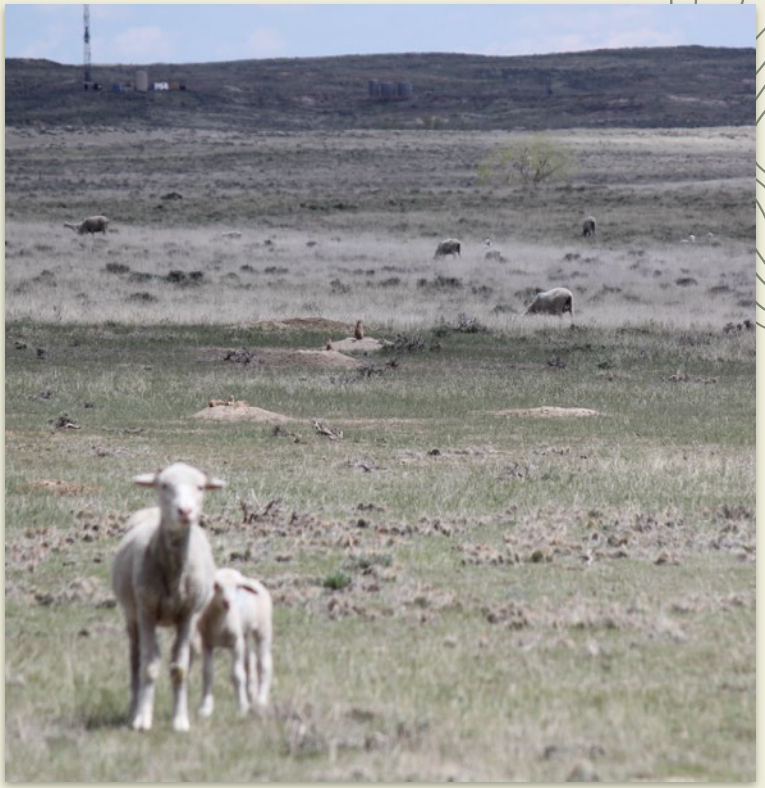
USDA National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

Thunder Basin Research Initiative

Thanks!

Do you have any questions?



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