

Hailey Wilmer

USDA Northern Plains Climate Hub

Hailey.wilmer@usda.gov

Digital Storytelling for Science Communication

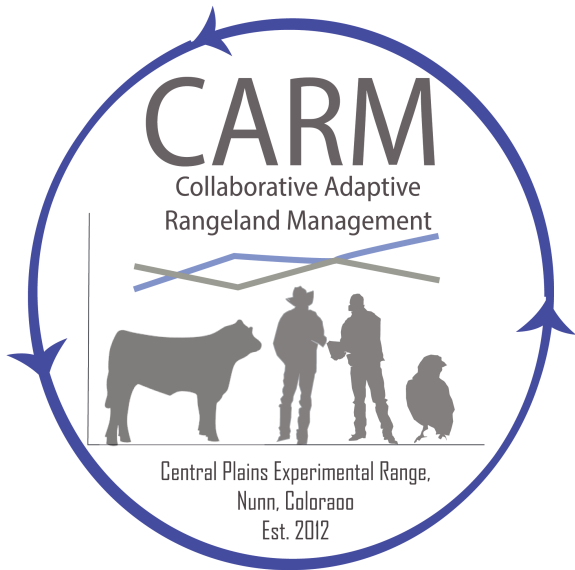
Long, long ago

(2016)

In a land far, far away

(At the Central Plains Experimental Range, Nunn, CO)

An team of rangeland researchers



**Agricultural
Research
Service**



**WARNER COLLEGE
OF NATURAL RESOURCES**

COLORADO STATE UNIVERSITY

**TEXAS A&M
UNIVERSITY.**



**UNIVERSITY
OF WYOMING**



Was busy working to address important
rangeland issues:

Drought resilience

Beef production

Rangeland biodiversity

Grassland bird conservation

Adaptive management

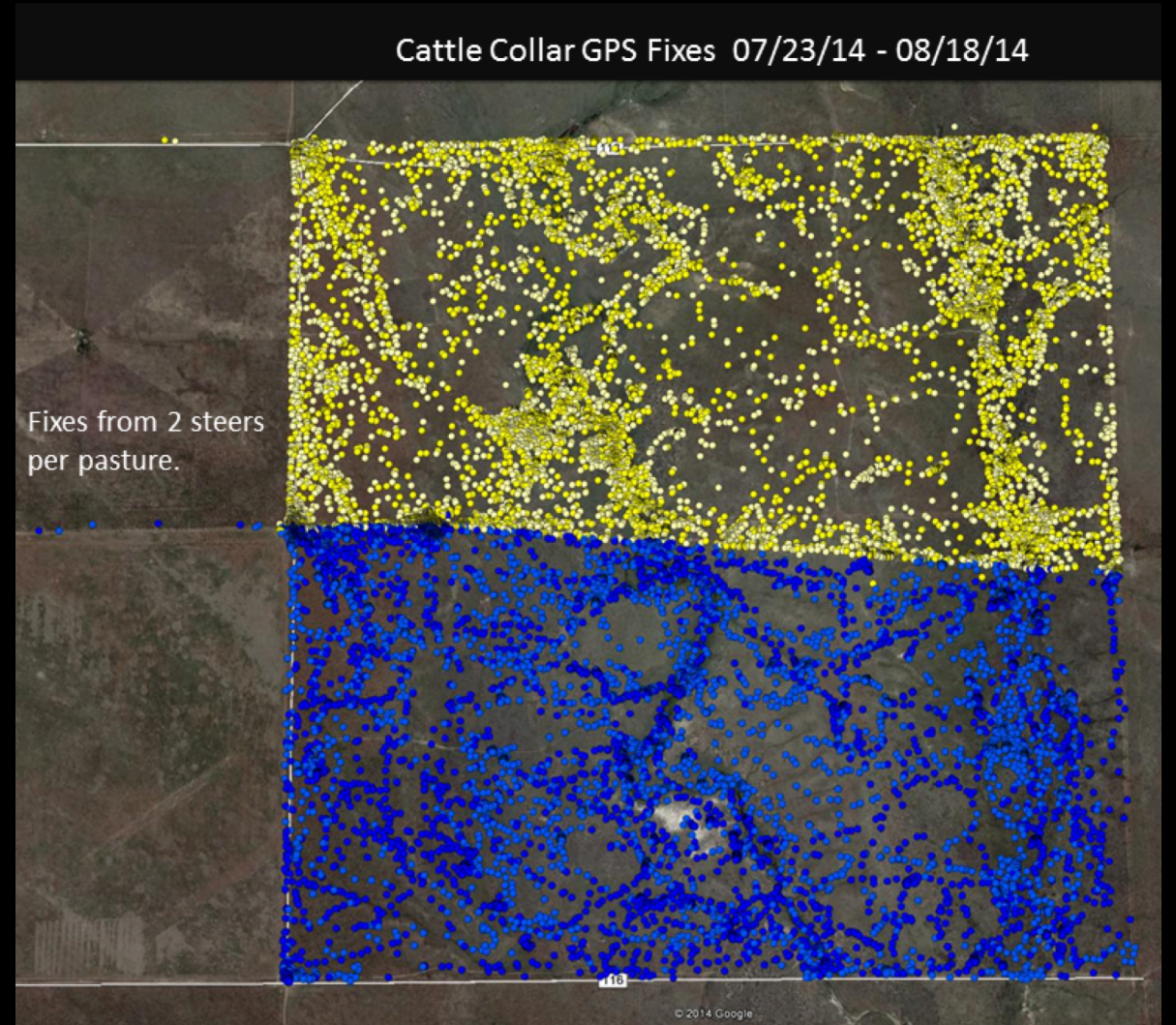
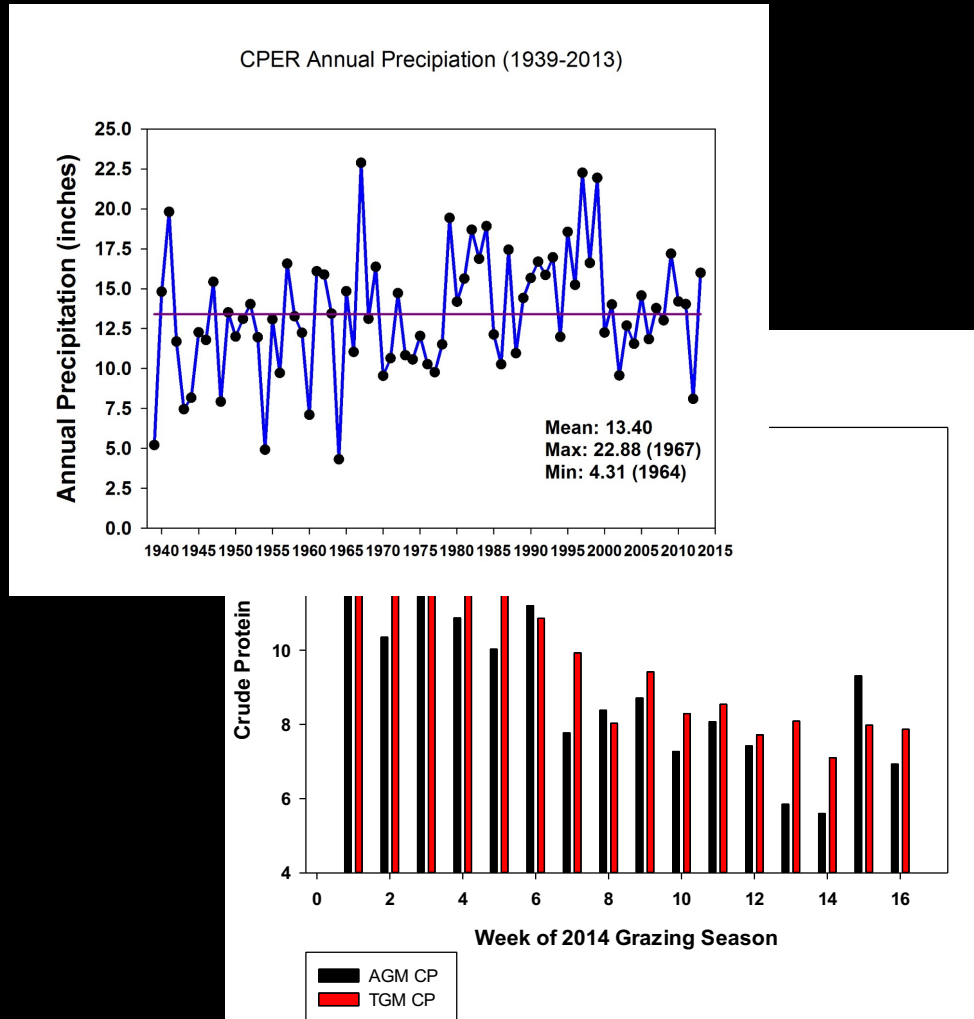
Social learning

Their work was very exciting and innovative

and had potential to improve rangeland sustainability, collaboration, and adaptation to variable weather and climate in the Northern Plains.

Four years into the project

the data were rolling in....



and the process was bringing people together



They were even getting some papers published....



Rangeland Ecology & Management 71 (2018) 646–657



Contents lists available at ScienceDirect

Rangeland Ecology & Management

journal homepage: <http://www.elsevier.com/locate/rama>



Original Research

Collaborative Adaptive Rangeland Management Fosters Management-Science Partnerships☆☆☆

Hailey Wilmer ^{a,*}, Justin D. Derner ^b, María E. Fernández-Giménez ^c, David D. Briske ^d,
David J. Augustine ^e, Lauren M. Porensky ^e, the CARM Stakeholder Group ¹

^a US Department of Agriculture (USDA) Northern Plains Climate Hub, Fort Collins, CO 80526, USA

^b USDA-Agricultural Research Service (ARS) Plains Area Rangeland Resources and Systems Research Unit, Cheyenne, WY 82001, USA

^c Department of Forest and Rangeland Stewardship, Colorado State University, Fort Collins, CO 80523-1472, USA

^d Department of Ecosystem Science and Management, Texas A&M University, College Station, TX 77843-2120, USA

^e USDA-ARS Plains Area Rangeland Resources and Systems Research Unit, Fort Collins, CO 80526, USA



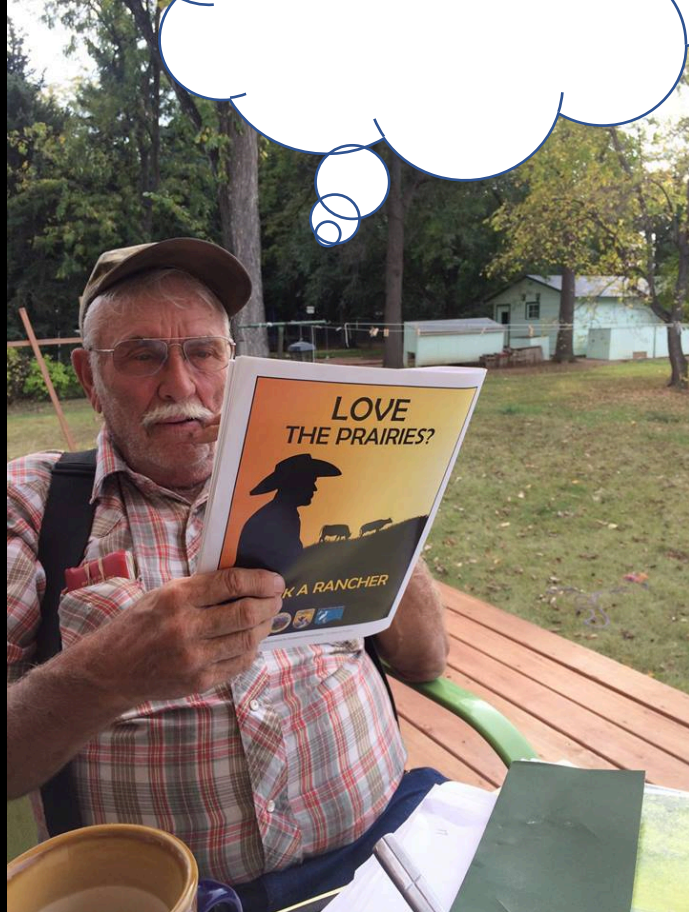
They had just one, small problem.

We have a
problem



Nobody reads papers.

I read papers



(Ok, some people read papers)



Nobody reads papers.

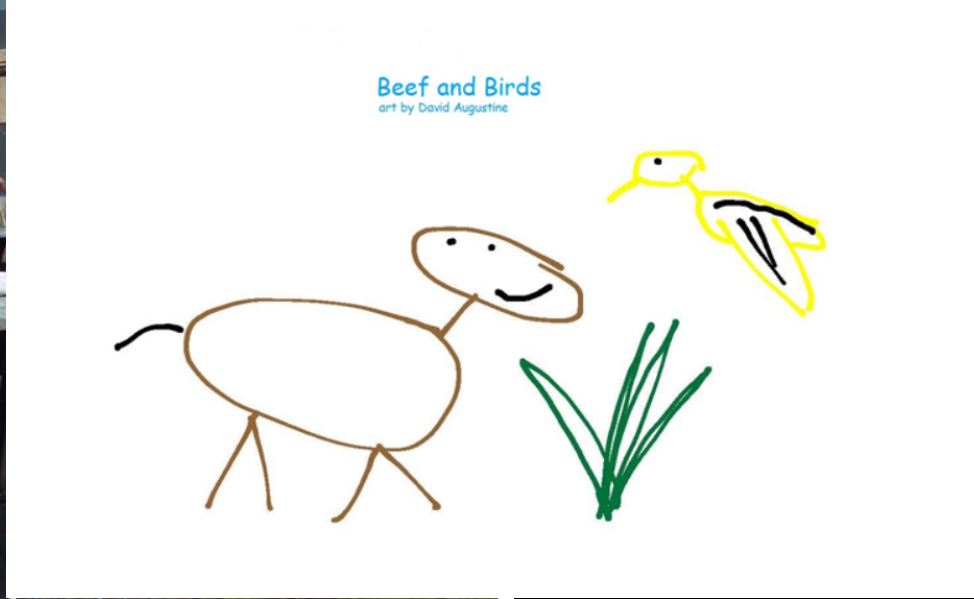
The scientists were distraught. They knew they needed to break out of the Ivory Tower

(Or the Experimental Range, that is...)

and reach a broader audience, or their research would never made an impact in manager communities.

These were clever, motivated folks,

willing to try some new approaches to getting their research out there.



They just couldn't reach a large enough audience, or get the whole story across...

Where do people go these days for information, anyway?



And that's when they realized the tool they needed was right under their noses....



But to use this tool, they needed some resources



And new partners



And who better to answer the call, than an elite team made up of Extension Professionals,



Retta Bruegger, CSU



Mitch Stephenson, UNL

and dedicated field technicians.



Jules Kray, ARS



Nick Dufek, ARS

They knew the task of getting research out into the digital universe would be a challenge

and so they came with a plan...

Step 1) Train hard



Colorado State University
EXTENSION



Video Production
Handbook
for
Short Educational Videos

Step 2) Focus on the narrative and the audience

<https://youtu.be/oP3c1h8v2ZQ>

Kurt Vonnegut
on the Shapes of Stories

0:06 / 4:36



Story Board notes for Extension Video

Note: Suggested clips for outlined points in red.

Intro (~1min)-

Theme: Why did we need an experiment like AGM?

-A vehicle for better cooperation between stakeholders... AND better incorporation of science in grassland management (?)

Rachel: ...this project was set up with three groups of stakeholders. We have the professional agencies: Forest Service, NRCS, State Land board (state land is in there).

And then we have the landowners, the ranchers, who, their interest is really about utilizing the resource to grow their cattle. And then we have the wildlife sector, so the people that recognize how important the grasslands are to providing habitat, and if we lose those grasslands, then we lose those habitats...

-Experiment with multiple land use practices and their effect on what's at stake for stakeholders (beef, birds, soil, future production, etc.).

Rachel: So the CARM project was set up with three different objectives, which the stakeholders were able to identify... (1) LIVESTOCK PRODUCTION, and ensuring that our livestock are doing well, and gaining at the gains that we need to be financially ...sustainable, (2) (the) PLANT DIVERSITY ...between structure, heterogeneity, and then the types of plants that we're growing, and how much of the plants we're growing... (3) WILDLIFE, which, you know, I've always said, rangeland... provides the majority of our wildlife, so it's always an important (sort of) objective, to me, to include--and sometimes it's really overlooked. So those three objectives, to me, are very complementary. We can't always maximize all of those objectives at every time... but I think that they work very well together.

Interview with scientist here or an on screen quote from the AGM plan?

very well together.

can't always maximize all of those objectives at every time... but I think that they work

it's really overlooked. So those three objectives, to me, are very complementary. We

wildlife, so it's always an important (sort of) objective, to me, to include--and sometimes

might be... which you know, I've always said, rangeland... provides the majority of our

Kray, Julie

One thing we'll need to mull over is the structure of the project—how do we set up? Let's assume we can make it into more detail? It seems we have different groups involved (as Rachel could ask Augustine to do the

Kray, Julie

This goes along with the section on we need CARM? Because of the

Kray, Julie

Rachel's summary is pretty good. Use images and video to represent the points quickly so that we can edit the

Kray, Julie

Consider asking Augustine to narrate or narrate?

Consider asking Augustine to

Kray, Julie

1_Intro

2_AND Statment1

3_AND Support1

4_AND Support2

5_BUT Statement

6_BUT Support

7_THEREFORE Statement

8_Multiple objectives

9_Learning (2)

9_Learning

10_THEREFORE Support

11_Concluding remarks

Step 3) Bring the story to life



Step 3) Bring the story to life



Step 3) Bring the story to life

<https://youtu.be/jKFCaGHQwol>

About Learning from the Land

Learning from the Land (2013-2016) was a project that took a collaborative approach to research at Colorado State University. Le

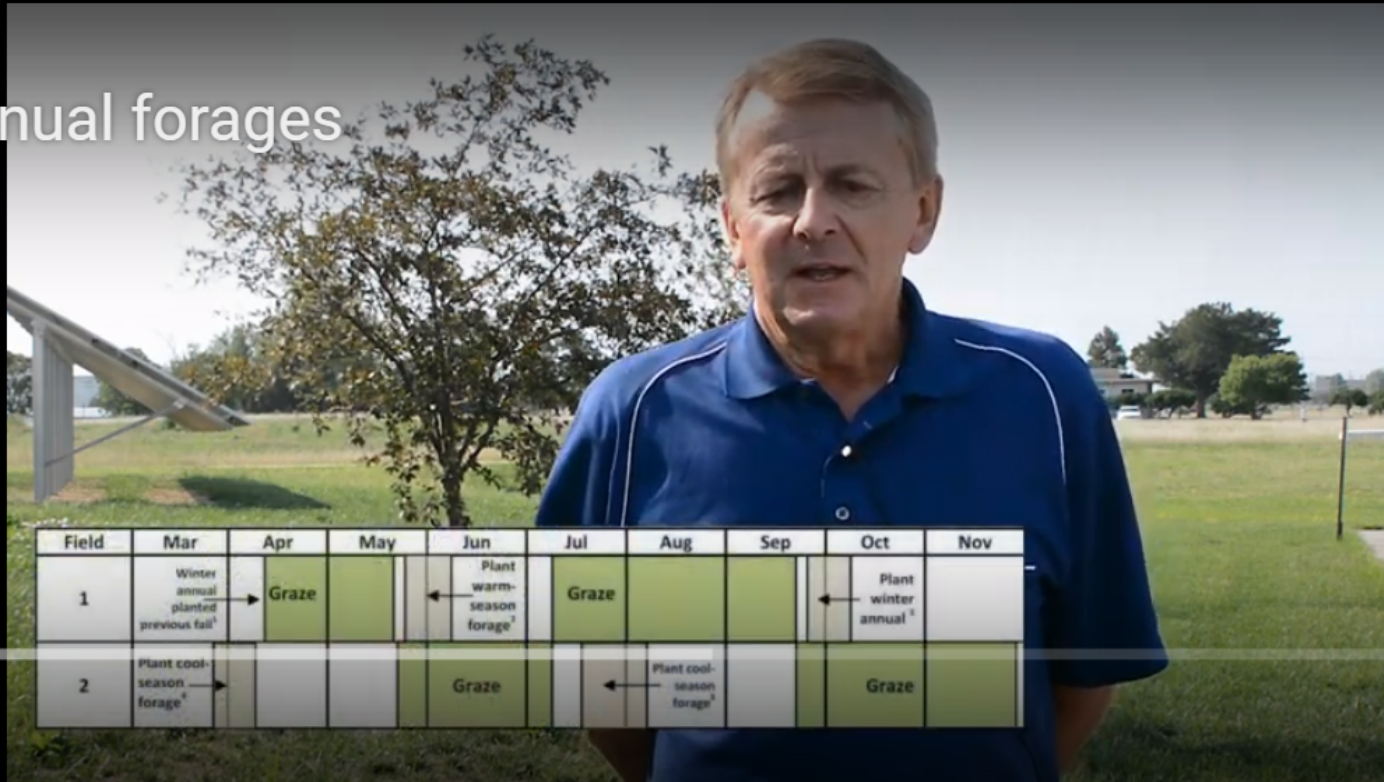


Maria Fernandez-Gimenez
Professor, Dept. of Forest & Rangeland Stewardship
Colorado State University

Step 3) Bring the story to life

<https://spark.adobe.com/page/R03tFDrfBTSLo/>

ous annual forages



/ 2:07



Step 4) Fact sheet-or-Bust

<https://spark.adobe.com/page/cDD9u5v5ZeC88/>

A screenshot of a web browser displaying an Adobe Spark page. The browser's address bar shows the URL <https://spark.adobe.com/page/cDD9u5v5ZeC88/>. The page features the Adobe Spark logo in the top left corner and a "Create your own" button in the top right. The main content is a large image of a rural landscape with a barbed wire fence in the foreground and a bird perched on a wooden post. Overlaid on the image is the title "Beef & Birds" in a large, white, sans-serif font, and below it, the subtitle "CAN CONSERVATION & BEEF PRODUCTION FIND COMMON GROUND?" in a smaller, white, sans-serif font. The background image shows a vast, green field under a clear sky, with a small body of water visible in the distance.


<https://spark.adobe.com/page/R03tFDrfBTSL>
[o/](#)



Incorporating annual forages and grazed cover crops into crop/livestock systems


An on-farm, producer-led, annual forage and grazed cover crop project

And even some social media cards...



RESILIENT
Weather-Ready Ranching

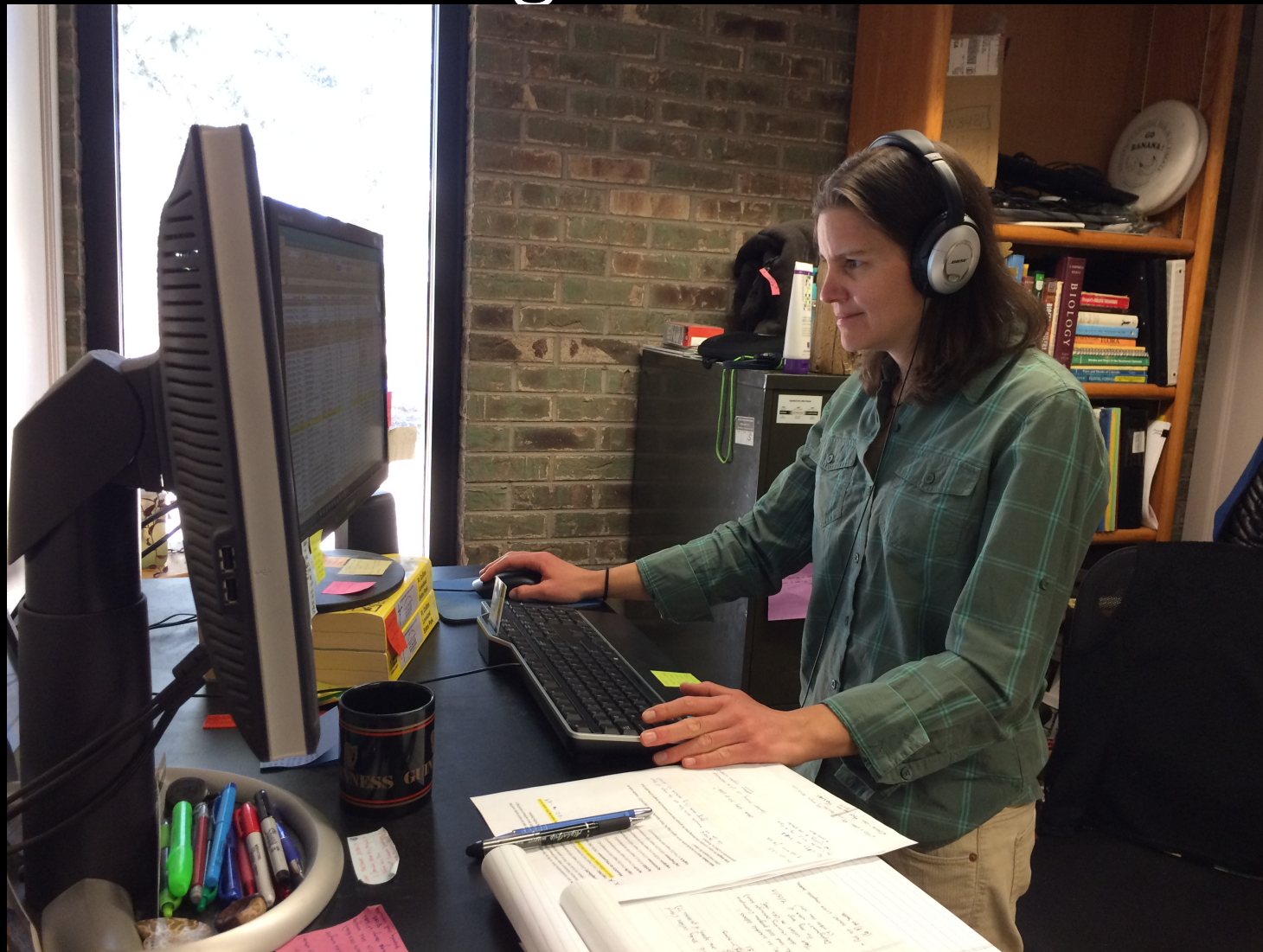
presented by

 **LIVESTOCK AND RANGE**
COLORADO STATE UNIVERSITY
EXTENSION

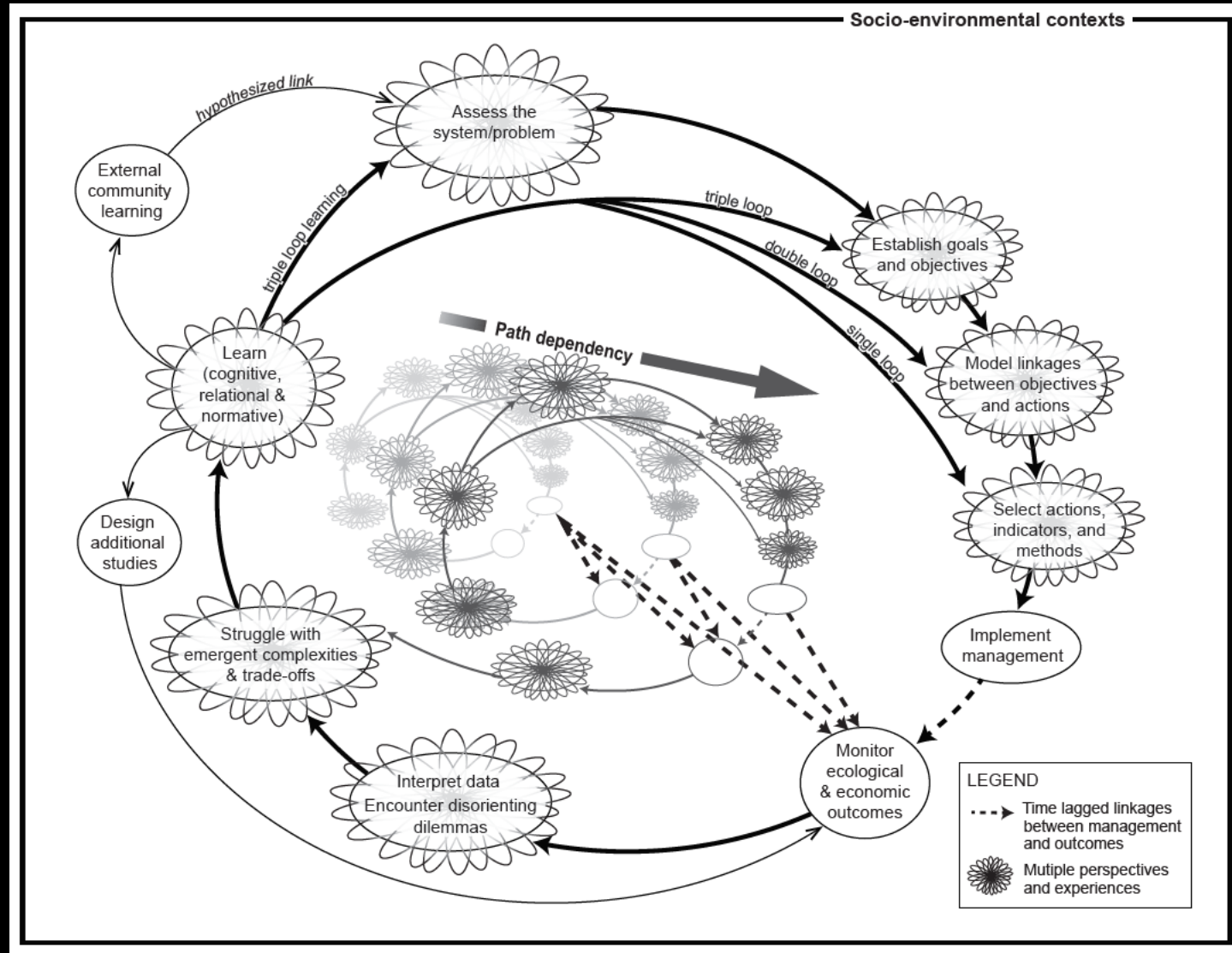
 **USDA** Northern Plains Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

learn more at rangemanagement.extension.colostate.edu

After lots of editing



and “peer-review”



and more editing...



Suzy Hutton

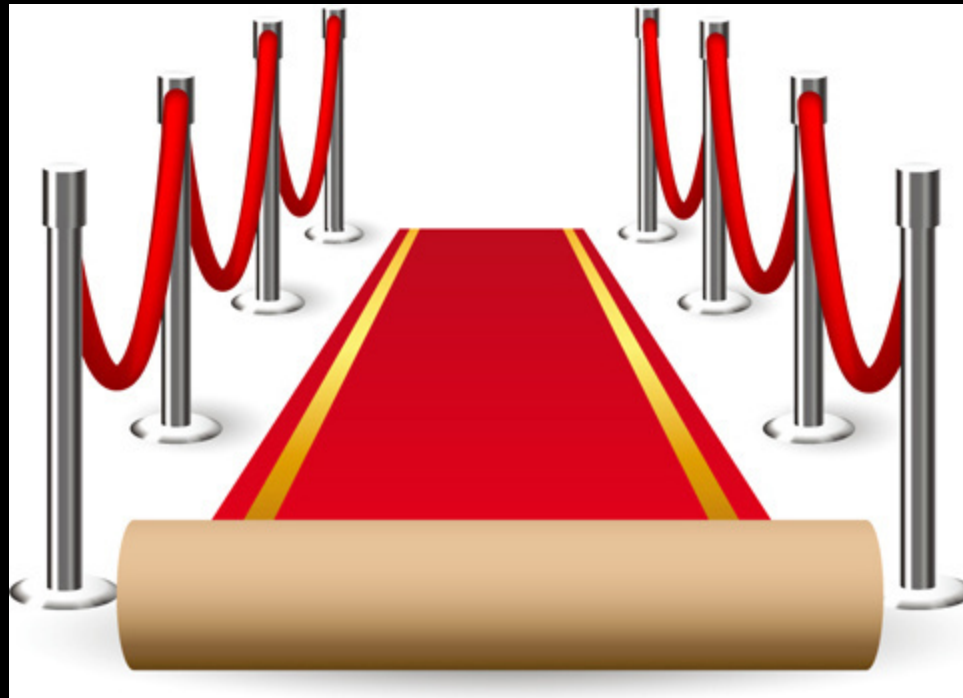


JoAnn Littlefield



Mark Rose

the evening of the world premier finally arrived....





Audiences raved!

2,000+ views

TOMATOMETER ?



96%

 **Western Landowners**
@VoiceofWLA

Can #

Published to Pasture... Collaborative Adaptive Rangeland Management

Posted on [January 31, 2019](#) by [morgan.treadwell](#)

In 2018, Wilmer and others published "Collaborative adaptive rangeland management foster management-science partnerships" in Rangeland Ecology and Management ([check it out here](#)). I really valued this paper, because fostering management-science relationships is what Extension is all about!

This paper is a case study, based on qualitative social data collected from meeting notes and interview transcripts recorded from ranchers and agency representatives in a Collaborative Adaptive Rangeland Management (CARM) study. In this synthetic assessment, they explored to what extent participation in the CARM experiment enabled adaptive decision making by a group of rangeland stakeholders (landowners, agencies, non-profit, etc..).

The specific objectives of this study were to 1) document how diverse stakeholder experiences and knowledge (meaning their socially constructed theories and justifications for rangeland management knowledge) contribute to the CARM project, 2) evaluate how co-produced knowledge informed management decision making through three grazing seasons, and 3) explore the implications of participation in the CARM experiment for rangeland stakeholders.

Terri Tucker Schulz, Larry Howery and 25 others 2 Comments 35 Shares



The End

Resources

- Olson, R. (2015). *Houston, we have a narrative: why science needs story*. University of Chicago Press.
- National Storytelling Network: <https://storynet.org/>
- Adobe Spark <https://spark.adobe.com/>
- Esri Story Map <https://storymaps.arcgis.com/en/>
- Gross L, Hettinger A, Moore JW, Neeley L (2018) Conservation stories from the front lines. PLoS Biol 16(2): e2005226. <https://doi.org/10.1371/journal.pbio.2005226>
- CSU Handbook for Short Extension Videos: <https://extension.colostate.edu/docs/comm/video-handbook2.pdf>

