# Monitoring Dashboard for Managing Drought Risk on the Ranch

Tonya Haigh



January 27, 2022

# Making Decisions on the Ranch During Drought

- During drought, livestock grazers have lots to decisions to make
  - What drought response is needed
  - When drought response is needed
  - What conditions will trigger the response
  - How to carry out response





# Can Drought Monitoring Info Help Grazers Make Decisions Earlier or More Easily?

- What drought response is needed
- When drought response is needed
- What conditions will trigger the response

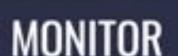
How to carry out response

Need usable monitoring tools to address these!





# https://drought.unl.edu/ranchplan/Monitor.aspx



#### Jump to:

What is my Current Drought Situation?

drought.unl.edu/ranchplan/Monitor.aspv

- Use + to open tabs, choose from dropdown boxes, and learn more.
- How Does this Year Compare to Last Year?
  - Compare the current U.S. Drought Monitor with the map one-year ago. Use drop-downs to explore other time-frames.
- What can I expect for forage production this year? Grass-Cast & State-Specific Forage Calculators
  - Learn more about Grass-Cast and explore state-specific forage calculators.
- Could I still get enough precipitation to change forage production expectations?
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- What are my options for drought management?
  - Explore drought management strategies recommended by grazing experts and resources available in your state (Great Plains).

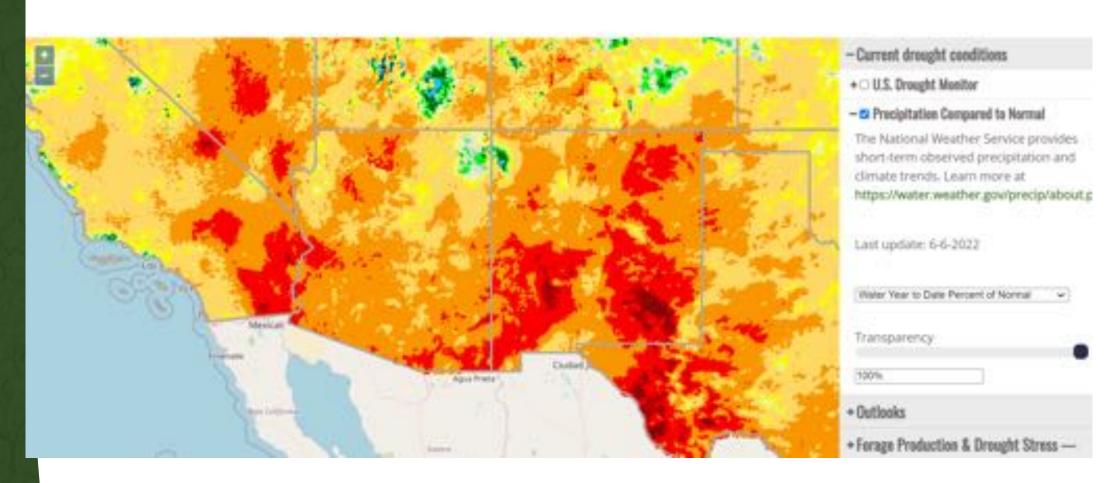






# Precipitation on Specific Dates May be a Trigger

WHAT IS MY CURRENT DROUGHT SITUATION?

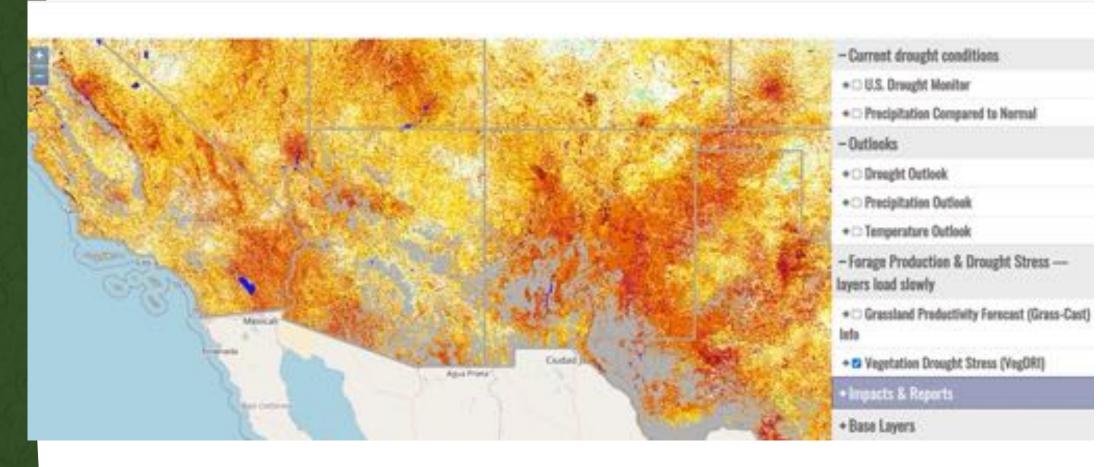






# **Vegetation Conditions - VegDRI**

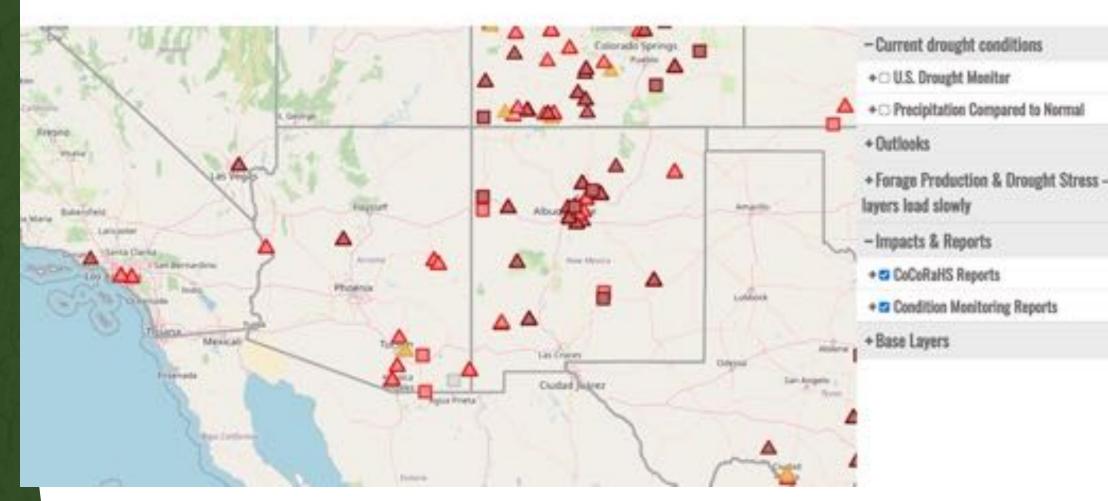
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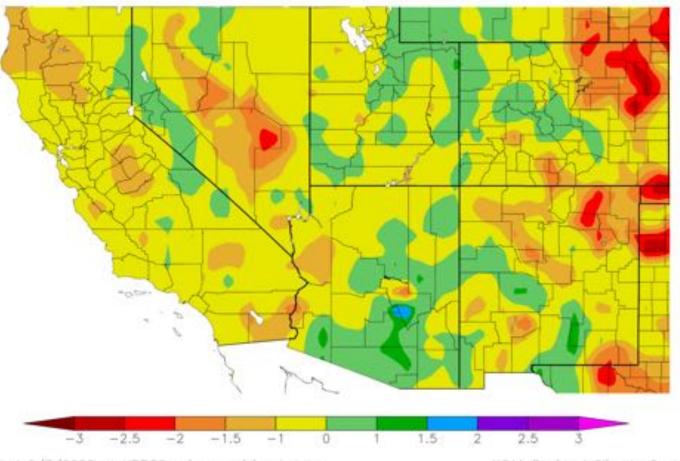




## 12 Month SPI 6/7/2021 - 6/6/2022

Additional Key Info for Southwest Grazers on Public Lands:

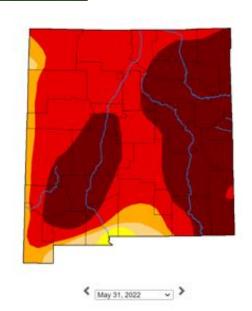
Triggers Forest
 Service
 evaluation of
 grazing allotments

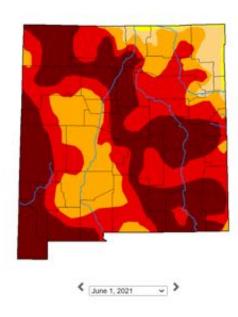






#### HOW DOES THIS YEAR COMPARE TO LAST YEAR?





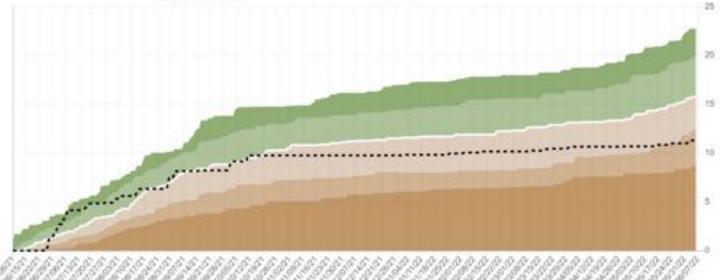
Dashboard currently allows comparison of two different time periods



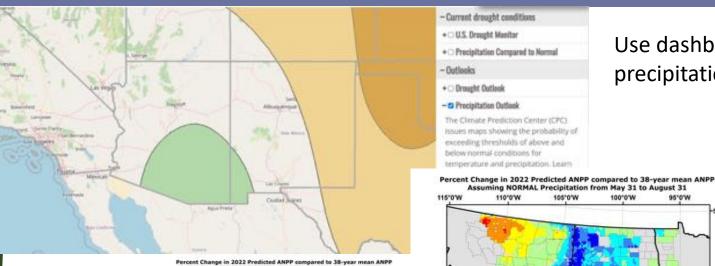




MyRAINge Log allows comparison of current precip for year compared to historical averages

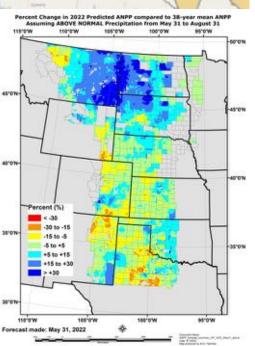


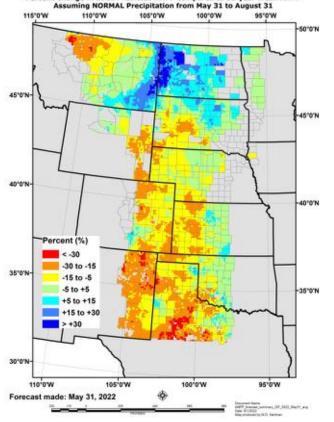
#### WHAT CAN I EXPECT FOR FORAGE PRODUCTION THIS YEAR? GRASS-CAST & STATE-SPECIFIC FORAGE CALCULATORS

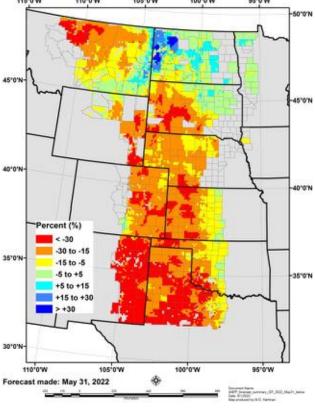


Use dashboard to inspect 3-month precipitation outlook

Use outlook to explore possible futures for forage productivity







Percent Change in 2022 Predicted ANPP compared to 38-year mean ANPP

Assuming BELOW NORMAL Precipitation from May 31 to August 31





## WHAT'S THE LIKELIHOOD OF GETTING ENOUGH PRECIPITATION TO CHANGE FORAGE PRODUCTION EXPECTATIONS?

#### Critical Precipitation Months for Forage Production

Research shows that the months in gray are most important for receiving precipitation that affects forage growth. After this time, precipitation does not greatly change forage production expectations for the current year.

		Oct	Nov	Dec	jan	Feb	Mar	Apr	May	jun	jul	Aug	Sep
Northern & Central Plains	Smart et al. (2019)												
Colorado Plateau	Schwinning et al. 2004												
Rocky Mountains	Personal communication — reference needed												
Southwest (AZ & NM)	Personal communication — reference needed												





Warm-season grass production based on Monsoon season

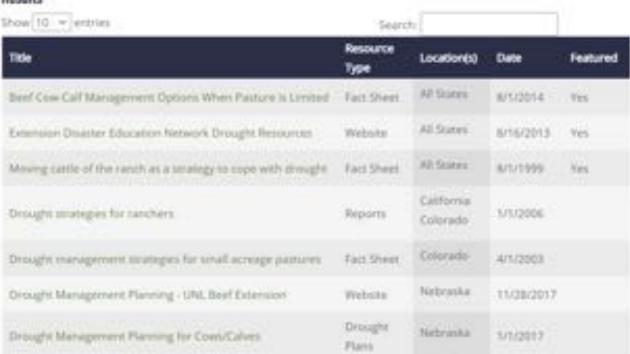
### WHAT ARE MY OPTIONS FOR DROUGHT MANAGEMENT?

Find resources and suggestions for adjusting forage supply and demand strategies during drought.

- · Hay Exchange (most states)
- Drought Management Strategy Library
- Resources by State
- . Learn about other ranchers' drought management plans
- Learn more: https://drought.unl.edu/ranchplan/DuringDrought.aspx

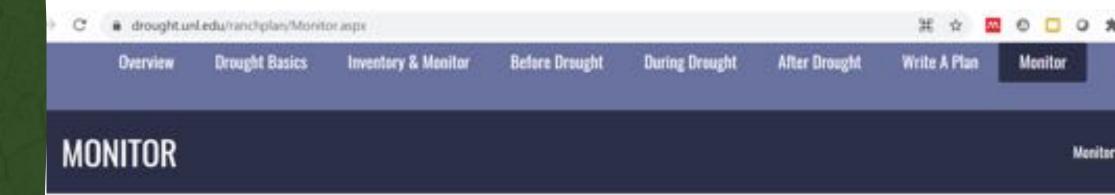












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Provide Feedback



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