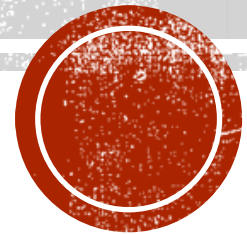


# AGRICULTURAL CARBON CAPTURE IN WESTERN NORTH DAKOTA

North Dakota Natural Resources Trust



# WHERE IT ALL BEGAN

- *The Badlands Advisory Group was formed in August 2016 after Covenant Consulting Group (CCG) released a stakeholder assessment detailing the opinion and perceptions of western North Dakotans on oil development in the Badlands.*

Daryl Dukart

• County Commissioner

Blaine Hoffmann (former)

• Oil Industry

Josh Demorrett (current)

• Oil Industry

Bill Schaller

• NDGFD

Vicky Steiner

• Legislator

Gene Veeder

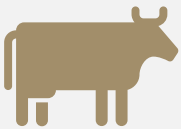
• Rancher





## Bakken Development and Working Lands Program I & II

Fence  
Water  
Developments  
Grass Seeding  
Cover Crops  
Grazing  
Associations/Forest  
Service



## Grazing Resiliency in the Bakken I & II

Fence  
Water  
Developments  
Grass Seeding  
Cover Crops

# NORTH DAKOTA OUTDOOR HERITAGE FUND





# GOALS OF THE BDWLP AND GRB

- Increase grazing lands quantity and quality
- Provide support to enhance grazing systems
- Create wildlife habitat through establishment of new cover and enhancement of existing cover
- Enhance outdoor recreation opportunities
- Reclamation of previously disturbed sites





# OIL AND GAS RESEARCH GRANT

## Objective:

- **Partner with industry and landowners to demonstrate how cattle ranching, energy development and carbon capture can be aligned to provide sustainable growth for the energy industry, ranchers, and wildlife of North Dakota**



# OIL AND GAS RESEARCH GRANT

## Research will:

- Measure net carbon uptake in grazing lands in western North Dakota
- Collect environmental data important to modeling carbon uptake & extrapolating across space and time

## Data will:

- Demonstrate how restored and managed grazing lands will support western North Dakota agriculture, a resilient energy industry, and increase carbon utilization now and in the future



# OIL AND GAS RESEARCH GRANT

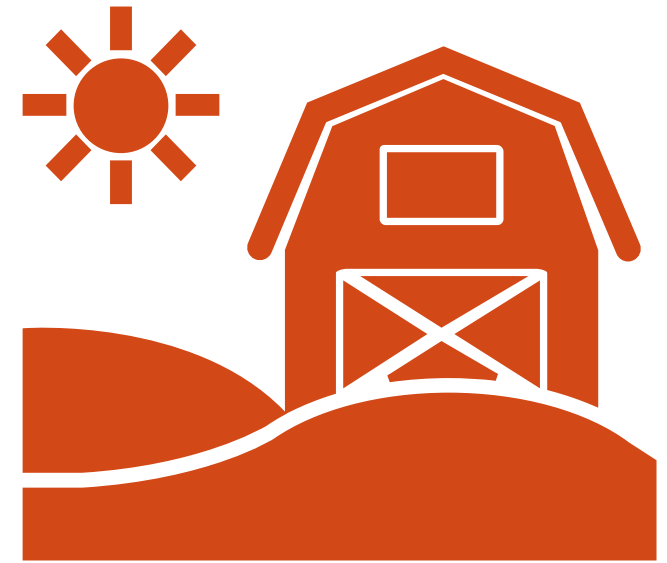
- **Key Points**

- Grassland ecosystems play an essential role in drawing down atmospheric CO<sub>2</sub>
- Positive effects of grazing on C sequestration have been reported for Florida and New Zealand grasslands
  - Data not available for western North Dakota
- This project will positively affect the oil industry and ranching communities
  - Enhance oil and gas portfolios
  - Compliment mechanical efforts in the state
  - Improve natural resources
  - Potentially provide a carbon market for grassland management



# HOW IS THIS DIFFERENT?

- **Soil Carbon**
  - Limited to inventories of soil carbon (tons per acre) at specific points in time, rather than rates of ecosystem carbon uptake (tons per acre per day or year) for an entire ecosystem
- **Atmospheric Carbon**
  - Linked directly to grazing lands management by providing rates of annual carbon capture, plant productivity, and water losses in real time over a 100-acre land area
- **Both are Valuable**





# A LANDOWNER PERSPECTIVE

- *“This research is a unique collaboration between energy and cattle ranching communities that will show how well-planned grazing systems can serve both industries by capturing carbon and improving soil health.” – Gene Veeder, North Dakota Rancher*
- *“Ranchers want to know ways they can manage livestock to add the most value in terms of carbon and other ecosystem services. If they alternate season of grazing, for example, how will this change the system under these conditions? If there is a monetary benefit to conservation practices, more would participate. If, for example, the price of carbon moved from 15 to 50 dollars, producers would stand in line to learn more about adopting practices that improve carbon.” – Lewis Heaton, North Dakota Rancher*



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**THANK YOU**

