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SUSTAINABILITY  
— EXCHANGE —

# Montana Grasslands Carbon Project

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# RECIPROCITY

“We are all bound by a covenant of reciprocity...that calls us to honor our responsibility for all that we’ve been given, for all that we’ve taken.”

Braiding Sweetgrass, Robin Wall Kimmerer

# ***Carbon Credit - defined***

Increase in soil biological activity that results in more carbon stored in the soil long term.

Cannot be achieved without the 5 principals of

## Additionality concept

- Needs to be something that you wouldn't have done without this motivation
- Organic matter generated and stored in the soil resulting from a change in management

## Modeled vs Measurable

- Modeled – using a scientific formula to calculate a credit by related, proven data
- Measured – using accepted field methods to measure change in soil carbon over time





# 5 Soil Health Principles

- Maintain soil cover 12 months
- Minimize soil disturbance
- Maintain living roots
- Encourage biodiversity
- Integrate grazing animals

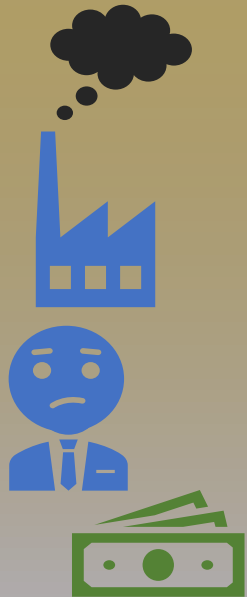




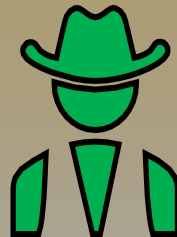
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# Catalyzing the ***REGENERATIVE*** Transformation



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# Regenerative Rule of Thumb:

- Promote Non-selective grazing
- avoid the second bite...



...AND allow adequate recovery!



## **Regenerative – non-selective grazing**

- Very little bare ground, trampled litter on soil
- Grazing animals herd-bound, move together
- High hoof, plant tissue, animal waste impact
- Rapid water infiltration, strong water retention and availability
- Deep, intricate root systems; complex soil biology; diverse plant species



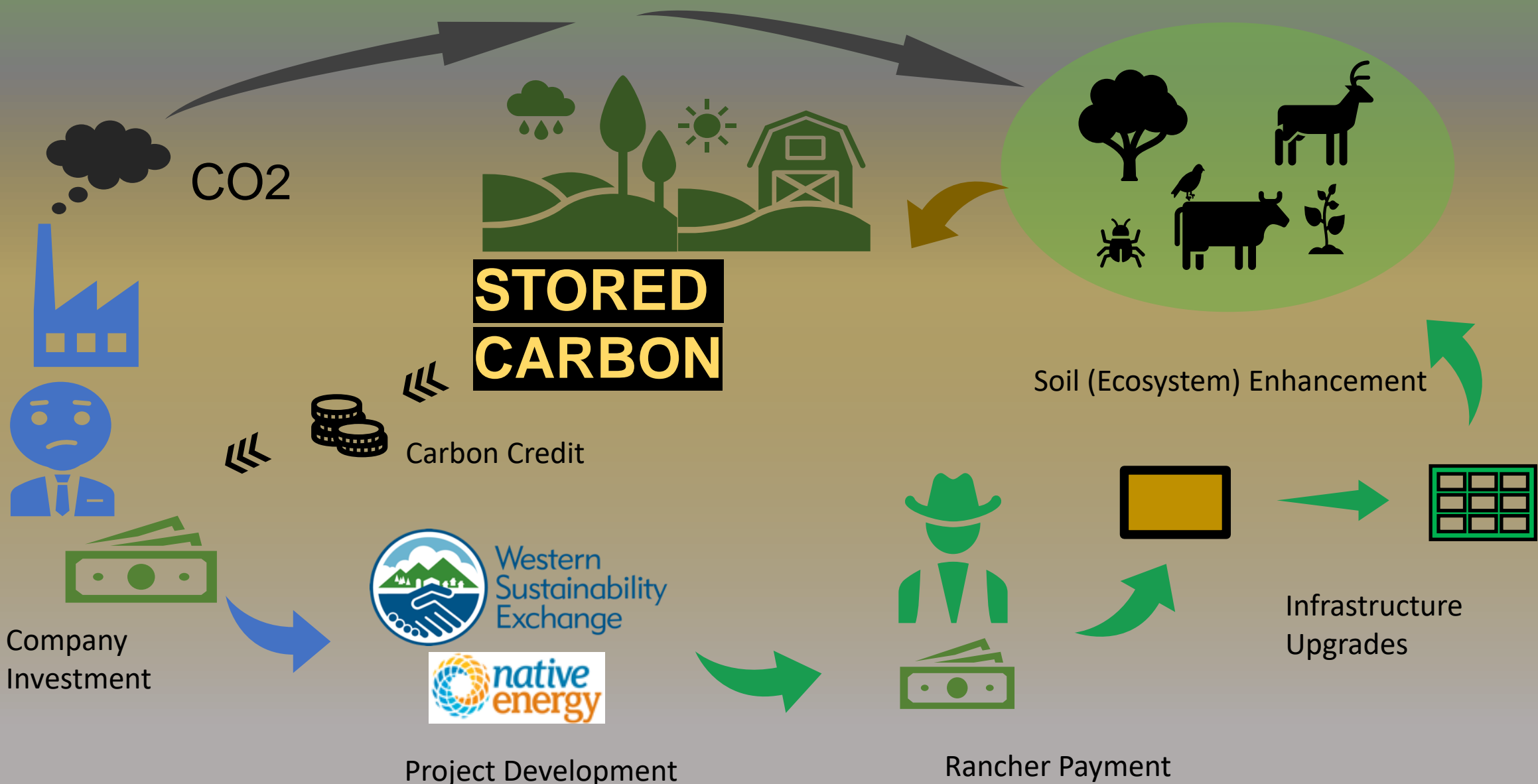
## **Conventional – selective grazing**

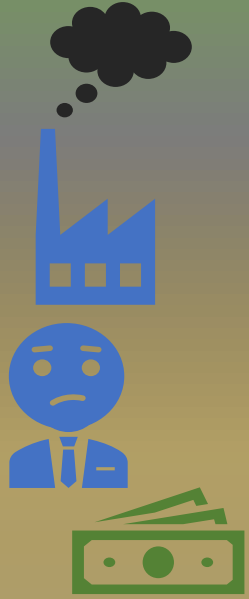
- More bare ground, little “wasted” plant material
- Grazing animals highly dispersed
- Low hoof, plant tissue, animal waste concentrated
- Low water infiltration, water-holding capacity
- Shallow roots, spacious distribution; little biotic life; preferred plant species grazed out





# Grasslands Carbon Trading Diagram





**DEMAND:** Companies, other entities, individuals wish to purchasing carbon credits

- Sincerely concerned about their impact on the environment
- Committed to make an investment to improve the situation
- Need to be assured that those dollars are creating an additive benefit
- Require documentation that that additionality is in fact taking place



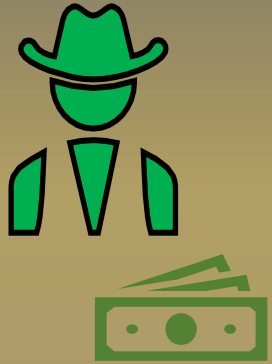
## Companies:

- Voluntary market – most companies strongly committed to long-term internal and external sustainability

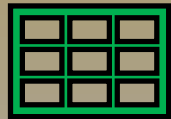


*At Xanterra, “Legendary Hospitality” is the heart of our business and how we care for our guests. “[With a Softer Footprint](#)” focuses on how we reduce our environmental impact through our sustainable business practices.*

**SUPPLY:** Producers willing to alter grazing system and livestock management to sequester carbon



- Progressive ranchers, made paradigm shift
- Significantly increase Stock-Days/Acre (SDA's)
- Frequent moves; adequate rest/recovery periods



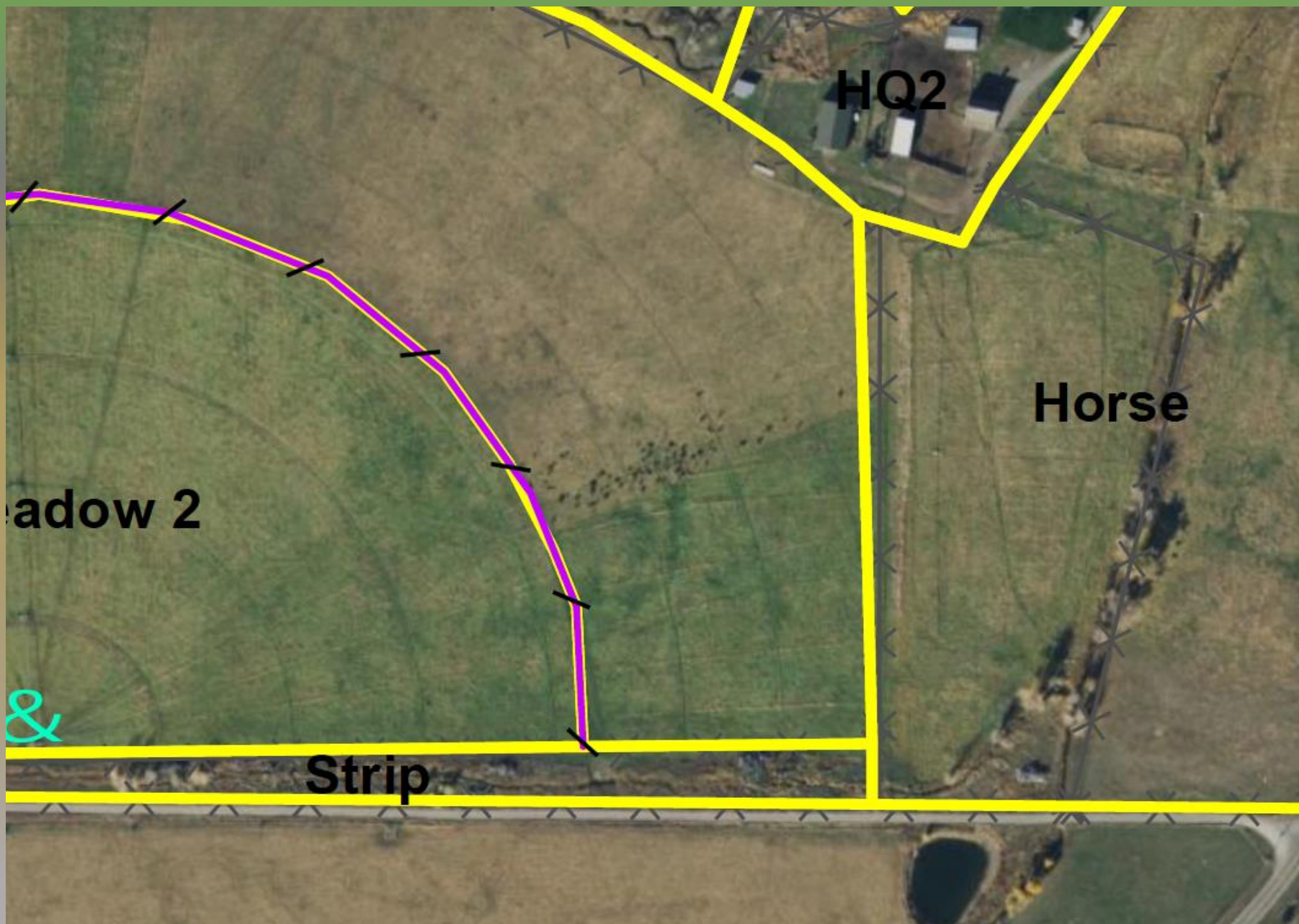
Subdivide pastures, expand water, combine herds



Non-selective grazing, herd instinct, and rest are KEY!



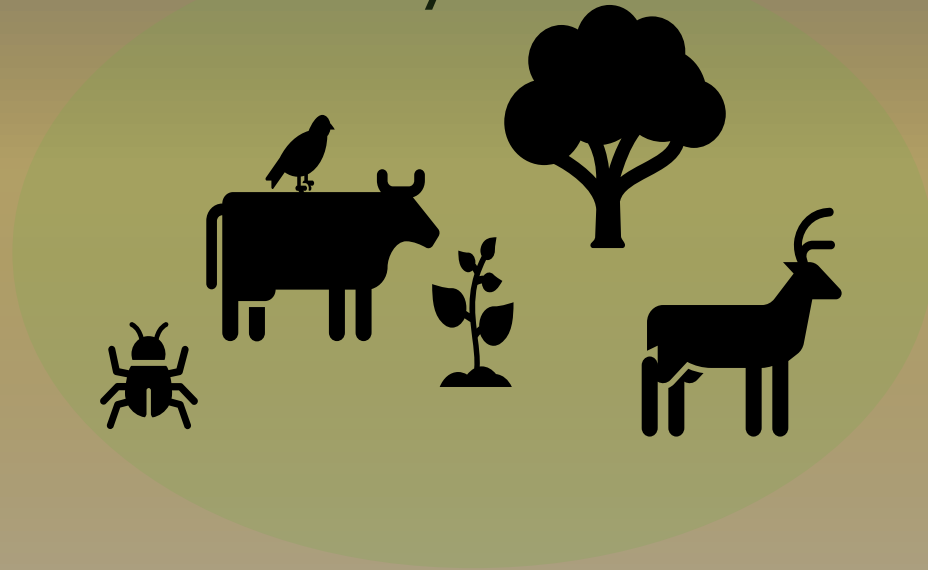






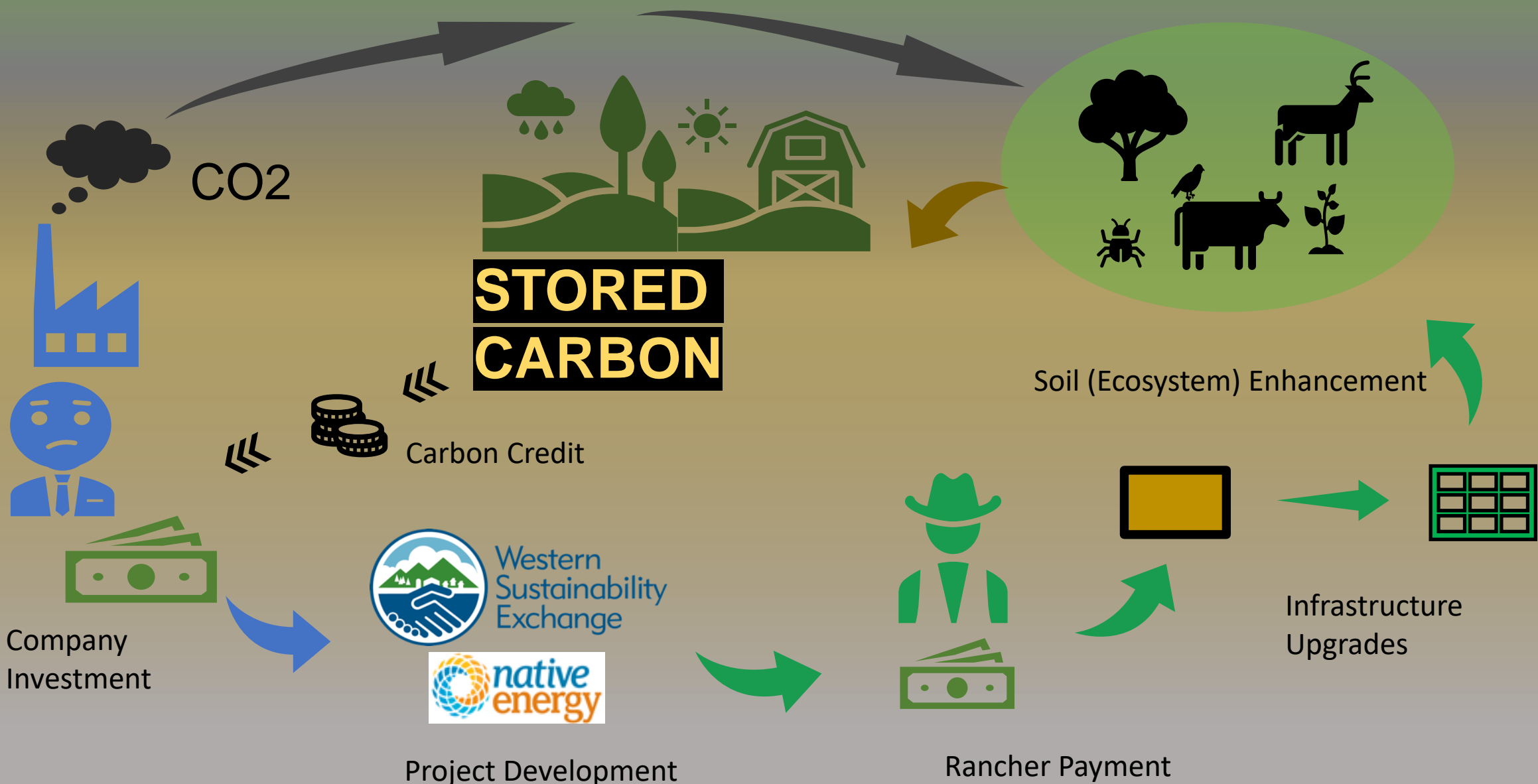
# Soil Biome Function

Regenerative grazing mimics historic patterns of migrating, herd-dependent wild animals, returning biodiversity and vitality



The return of a healthy SOIL BIOME results in Carbon Sequestration

# Grasslands Carbon Trading Diagram





- RESOURCES:

- <https://www.outsideonline.com/2418122/how-carbon-offsets-work>
- <https://www.xanterra.com/stories/parks/montana-welcomes-back-the-prairie-grass/>
- NativeEnergy website, <https://nativeenergy.com/your-projects/>
- WSE Website, <https://www.westernsustainabilityexchange.org/soil-carbon>
- Braiding Sweetgrass, by Robin Wall Kimmerer, published by Milkweed Editions, 2013

THANK YOU!

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Western Sustainability Exchange

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