Small Game Management

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Parks and Wildlife
Department of Natural Resources

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Small Game Manager

Small Game Facts

- >300,000 small game hunting licenses sold annually, however ½ sold as “qualifying licenses” to people who do not intend to hunt small game
- 26 species (mammals and birds) not including ducks, geese and furbearers
- Regulated by daily bag and possession limits

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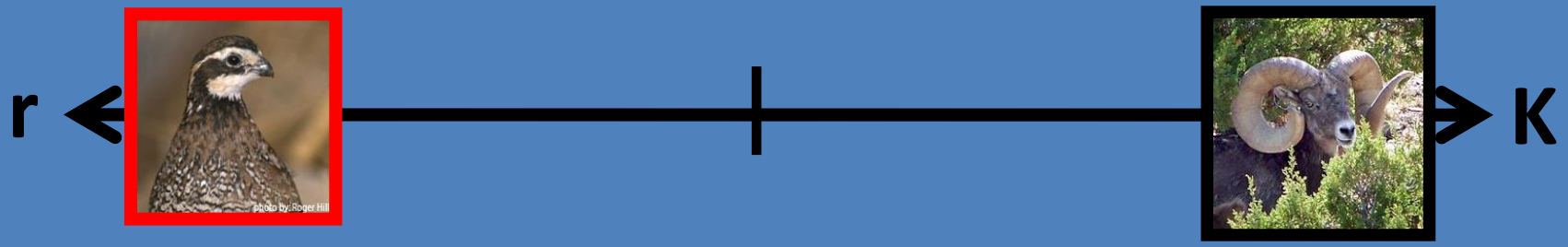
Small Game Facts

- Populations are very sustainable due to biology
- Adult mortality is a daily occurrence across the suite of species
- Great introduction to hunting & outdoors
- Longer seasons

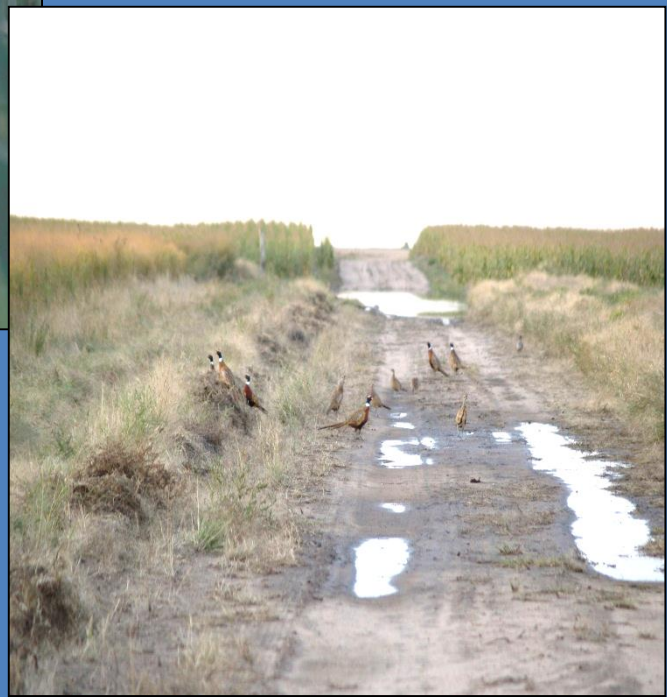
Small Game Biology

r versus K strategy



- High reproductive output
- Large broods
- Low adult survival
- Mature quickly
- Boom and bust

- Low reproductive output
- Higher adult survival
- Mature slowly
- Population trend is more stable



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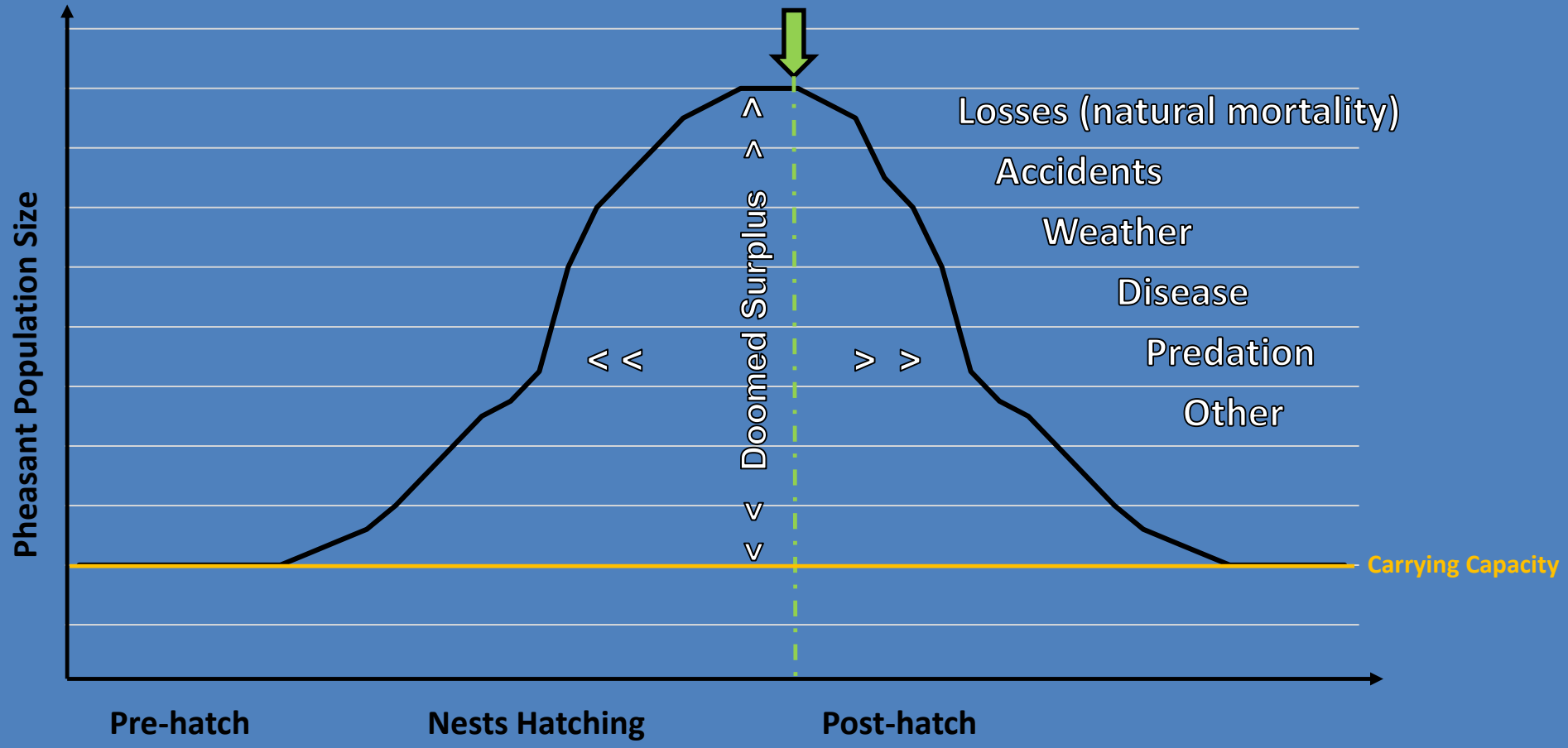
Small Game

- Biology is vastly different than big game
- Biology cues management philosophy
  - Trust the biology of small game species
    - High reproductive output
  - Unlike big game we do not estimate population size for management purposes

Principal: “Doomed Surplus”



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Principal: Compensatory Mortality

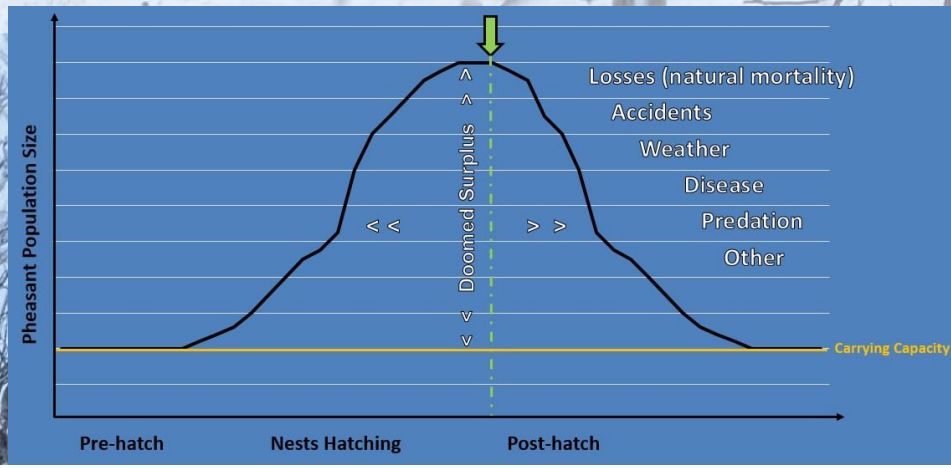
- *One source of mortality is phased out (compensated for) by another*
- Regulated hunting does not impact small game populations over the long term
- Individual agent of mortality is inconsequential
- The window of mortality is important
  - Mortality that occurs early in the biological year has a longer window to become compensatory

Principle: Law of Diminishing Returns

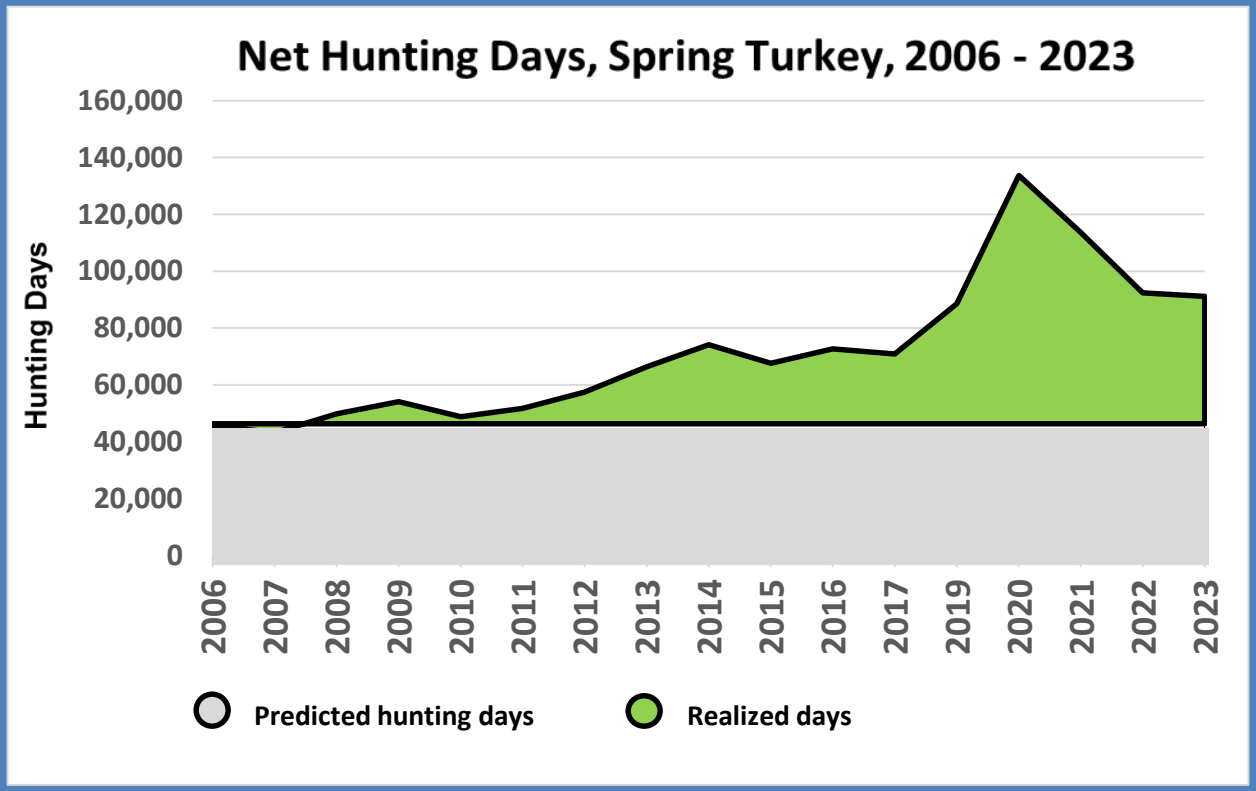
- Law of diminishing returns suggests:
  - fewer hunters as season progresses
  - relatively lower hunting success rates as season progresses
  - when populations are low, fewer hunters hunt
  - Small game hunting self-regulates
- Justification for not closing seasons during difficult periods

Principle: Stockpiling

- **Stockpiling = things are good now, so let's defer harvest until its "*really good*" next year**
  - **Cultural tendency to do this**
  - **Fails to recognize previous principles**
  - **High loss of recreation**



Stockpiling vs. Use



- Net gain of 435,000 days from an increase in licenses

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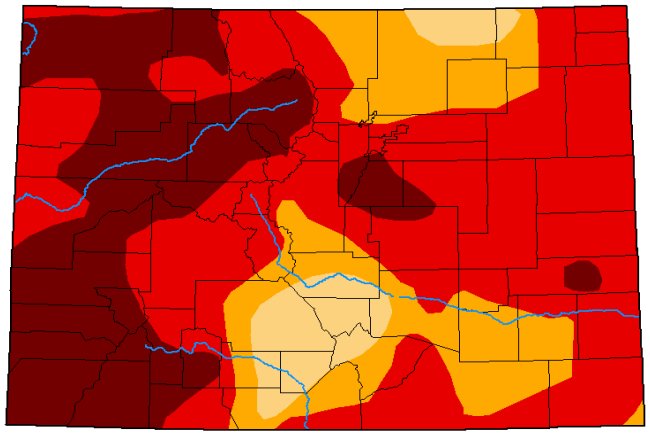
Principle: Ecological Succession

- Ecological Succession
  - Process of change in the vegetative structure of an ecological community over time
  - Species respond differently to the stages of succession

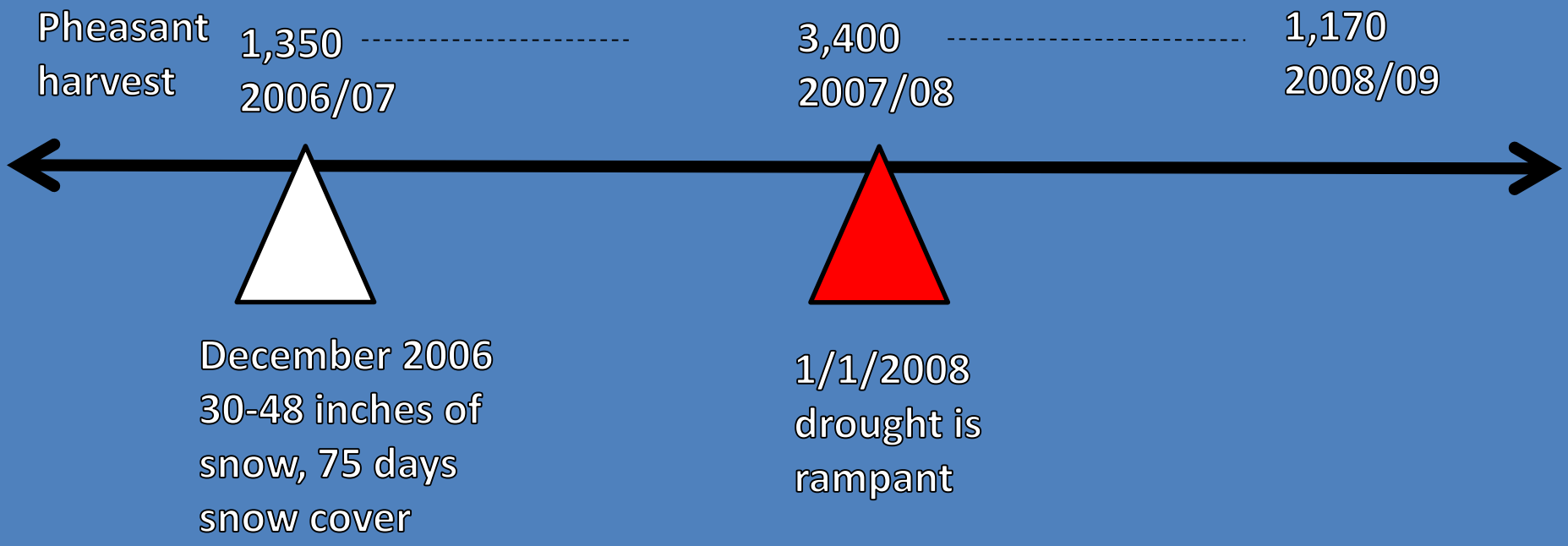
Factor: Weather

- Extreme often relegates management philosophy to secondary
- Try to mitigate with HABITAT
- Most often, little you can do
- Historical & traditional concern for small game is winter weather
- In Colorado, drought is much more impactful and frequent

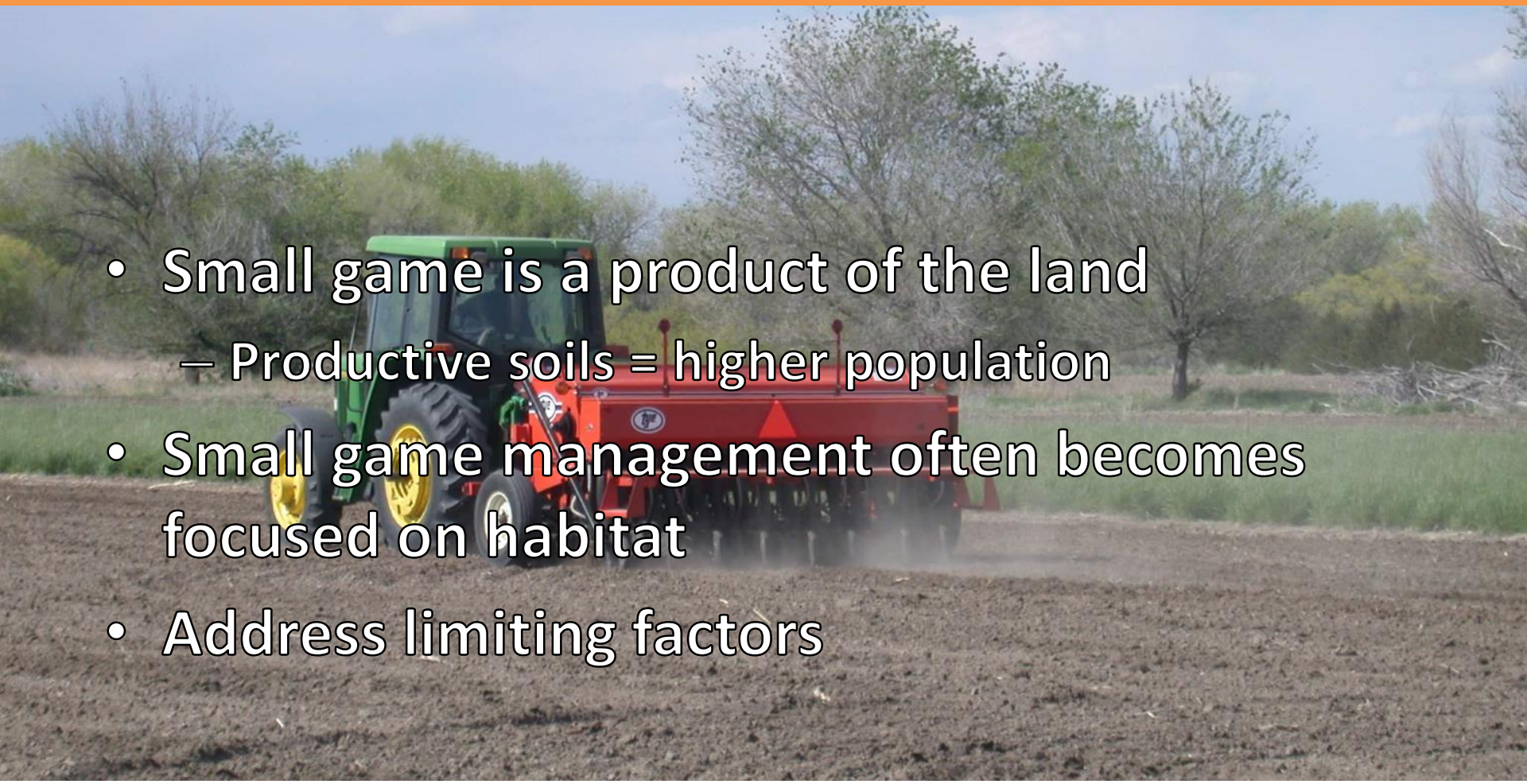
CO drought index, Dec. 2020



Drought and Pheasants



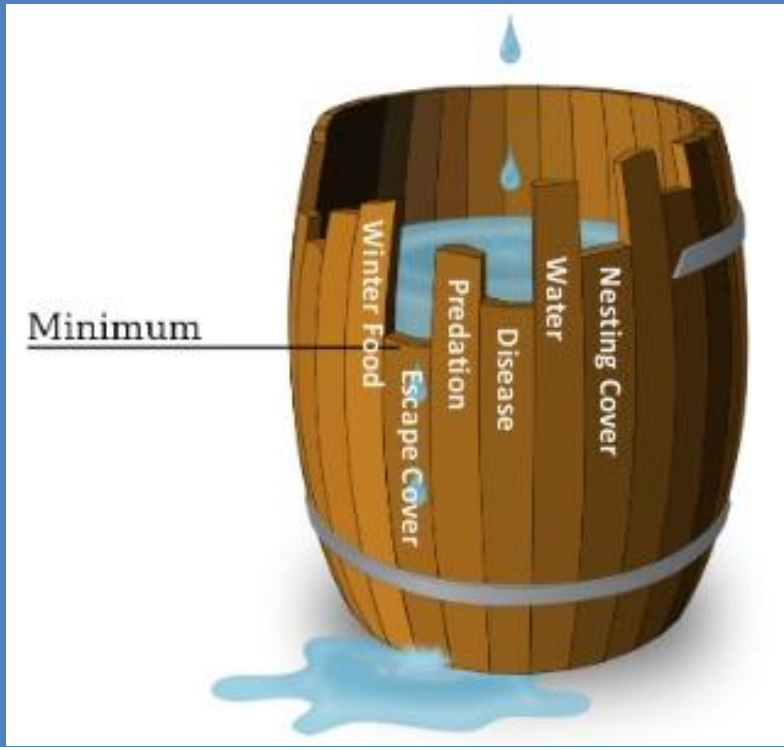
Principle: Habitat



- Small game is a product of the land
  - Productive soils = higher population
- Small game management often becomes focused on habitat
- Address limiting factors

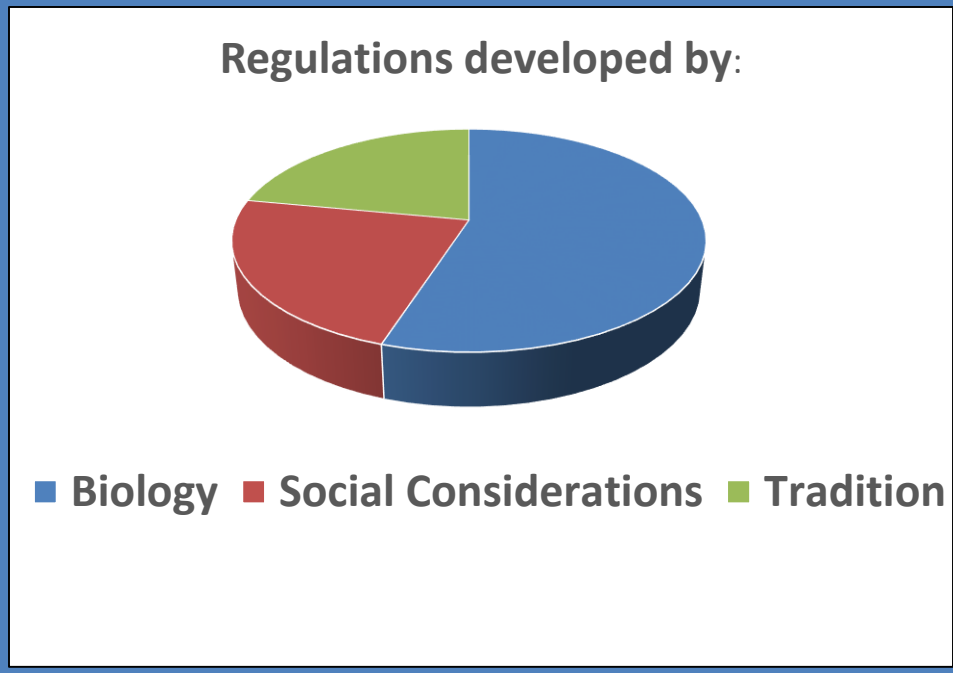
Habitat Keys

- The water in the barrel represents the number of pheasants the habitat can support
- The factor in shortest supply is the target for habitat improvement
- Most often, the limiting factor is not food



Regulations

- Regulations support the biology of the species in question
- Social considerations & tradition plays a huge role
- Tendency to over-regulating instead of trusting biology



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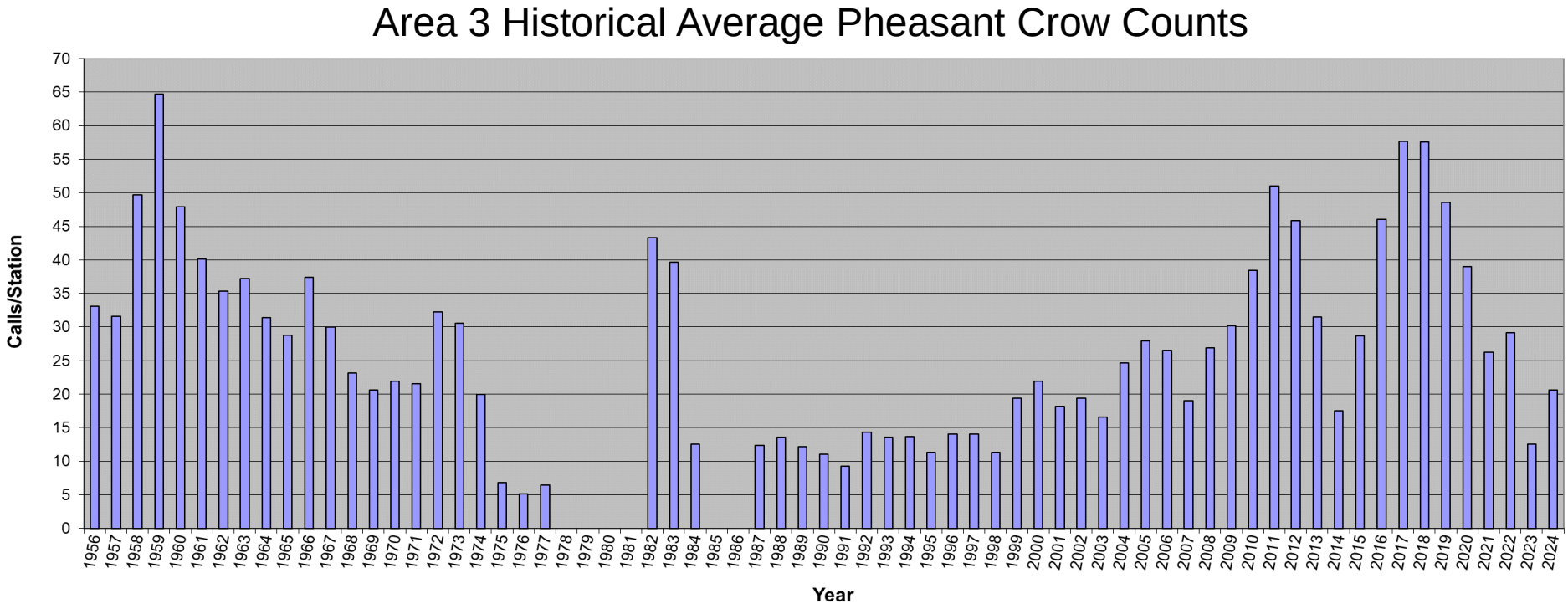
Surveying Populations

- Numerous specific counts
  - Lek counts are useful for monitoring population status
  - whistle counts, pheasant crow counts, brood counts, road-side mail carrier surveys, gobbler surveys, etc.
- NONE give a population number
  - The importance of these is the contextual TREND that informs population performance across the long term

The Value of Surveys



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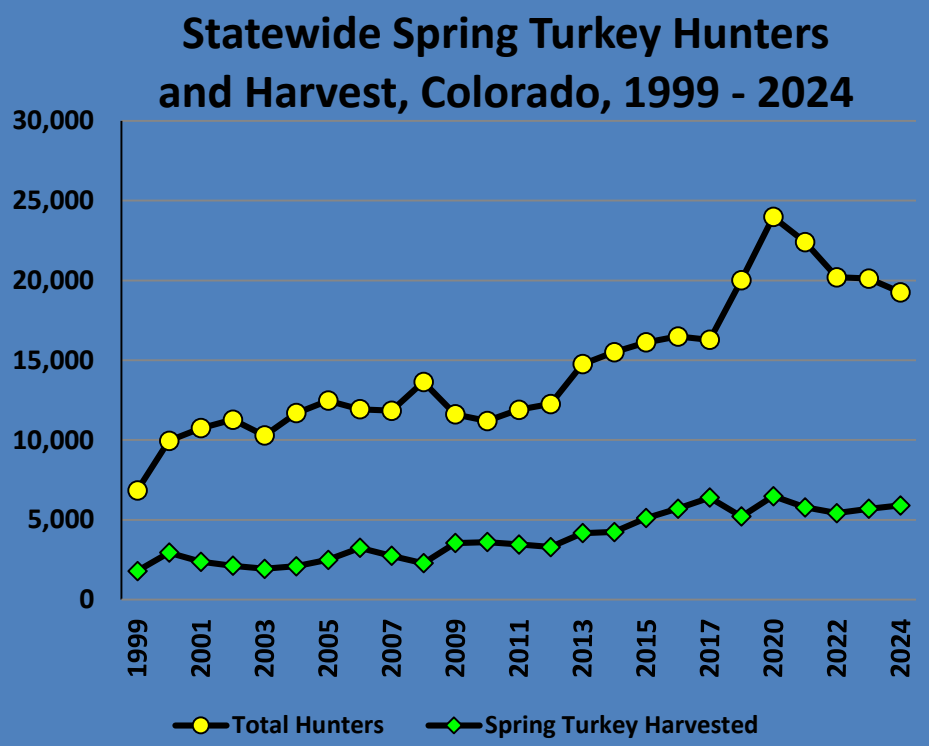
Harvest Surveys

- Voluntary surveys (live operator, email, texting, formerly mail)
- Limitations and biases
  - Low response rate
  - Identifying the correct sample to contact
- Produce harvest estimates with precision estimates, for instance: 2024 Spring Turkey harvest = 5,903 $\pm$ 556 (5372 – 6486)

Assessing Harvest

- Bottom line: harvest trend serves as a surrogate for population trend
- For small game, we do not need more
- Instead, precise harvest estimates is the goal



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Questions?

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