

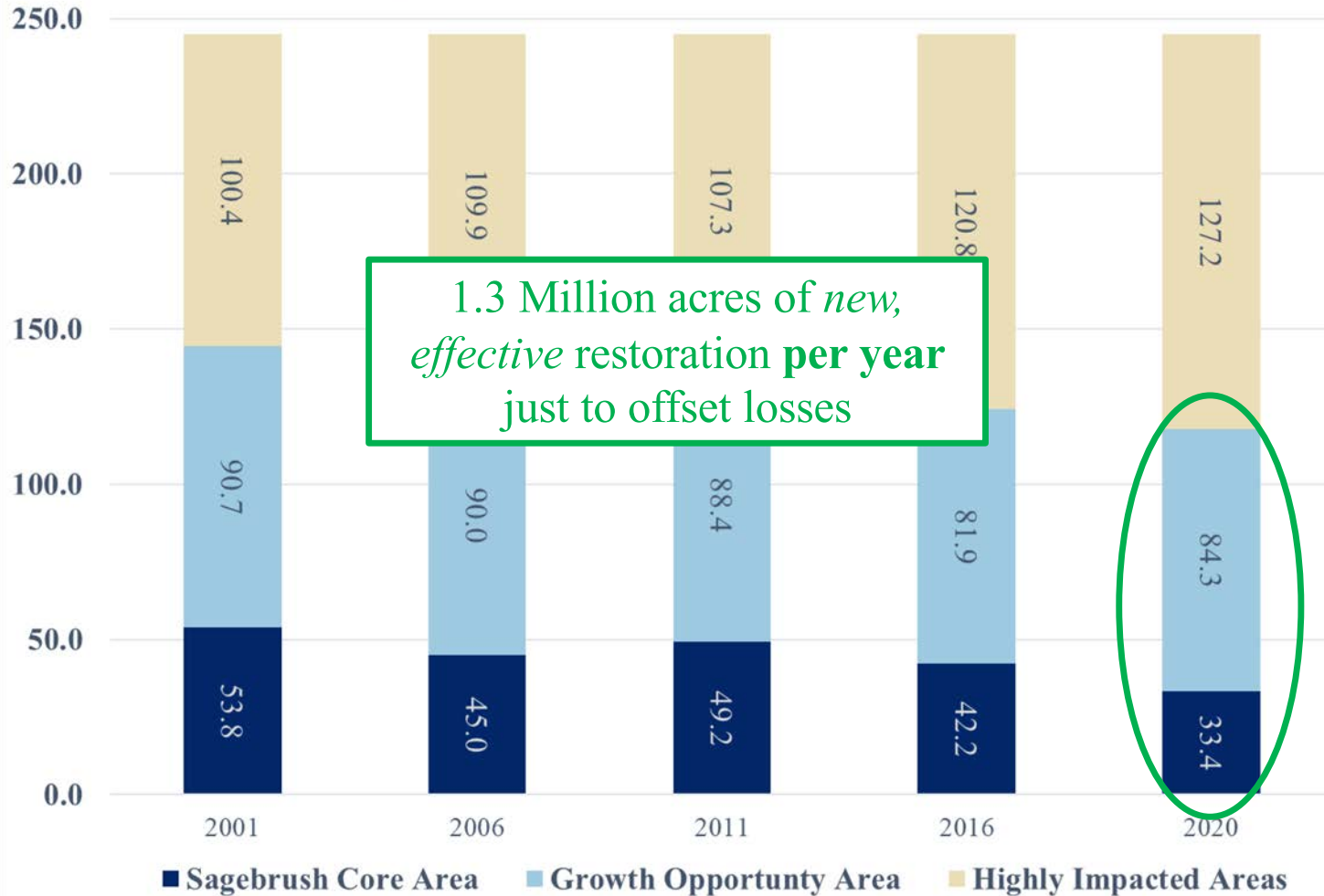
# Changing with the Range: Where are we now, where do we want to be, and how do we get there?

*Chad Boyd – USDA/ARS*



**117.7  
Million  
Acres**

**Change in Core Sagebrush Areas 1998 - 2020**

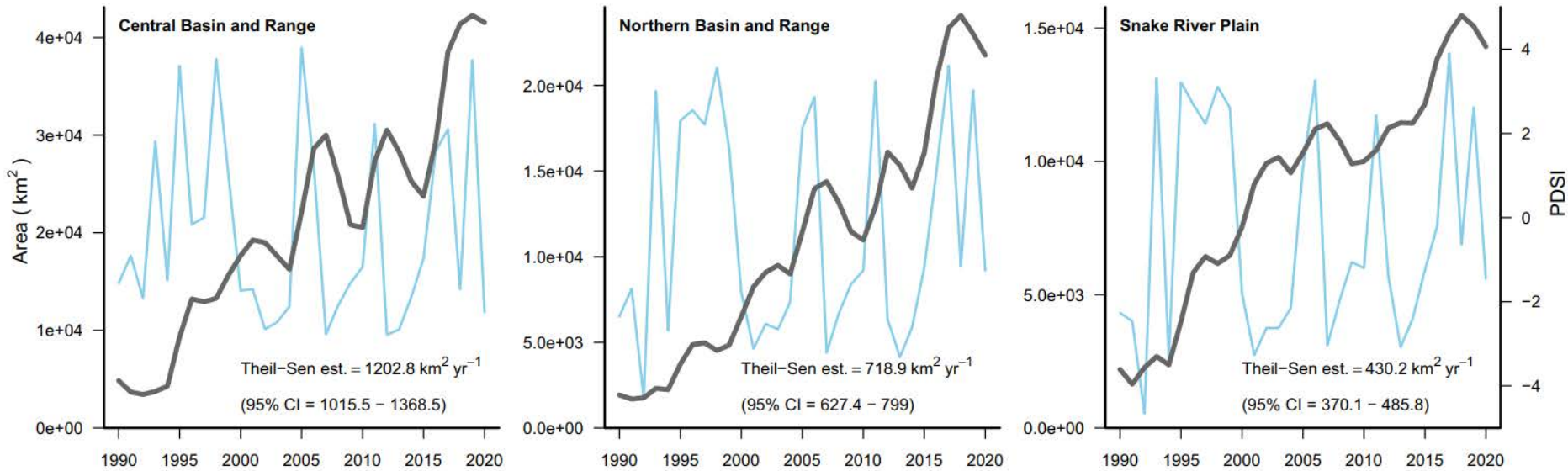


**26.8**  
Million acre  
increase in  
**Other  
Rangeland  
Areas**

**6.4**  
Million acre  
loss of  
**Growth  
Opportunity  
Areas**




**20.4**  
Million acre  
loss of  
**Core  
Sagebrush  
Areas**

# The Annual Grass Problem



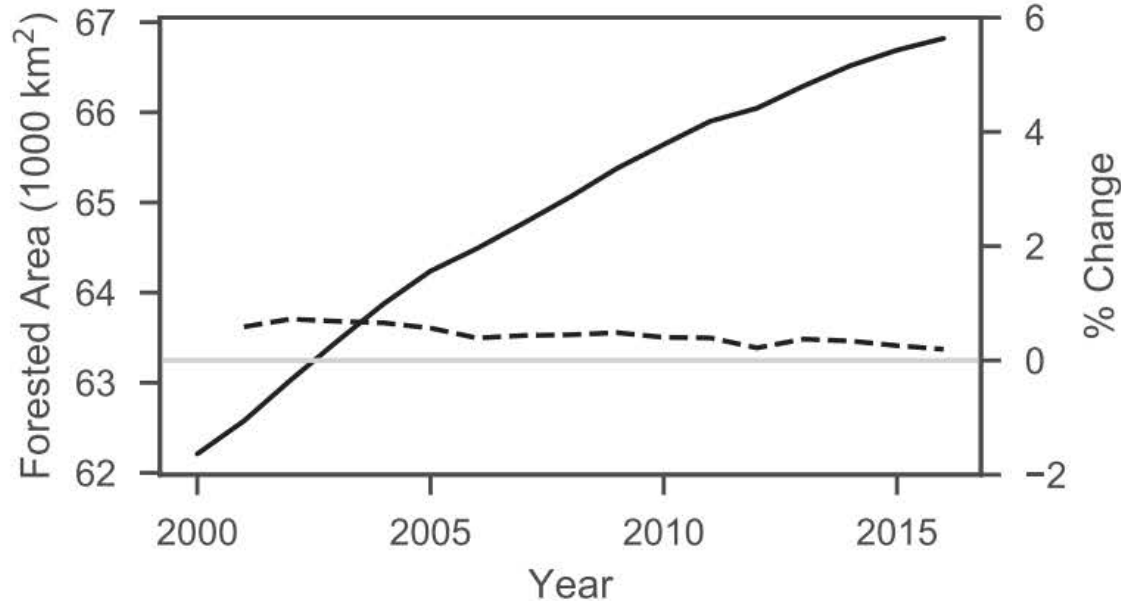
- Yearly increase in Great Basin from 1990 – 2020 = 586,387ac
- IAGs impact 19.8% of Great Basin rangeland

# The Wildfire Problem

- Increase in prevalence of wildfire in the West
  - Area burned =  2.8-fold
  - Number of fires =  1.6-fold
  - Fire size =  1.8-fold
- Federal suppression budget increased 600% in past 3 decades (currently \$2.4B/yr)



# The Conifer Problem



**Figure 8.** Forested area (i.e.  $\geq 10\%$  cover) over time (solid line, left axis) and the percent annual change (dashed black line, right axis).

Yearly increase in Intermountain West from 2000 – 2016 =  
1,138,670ac

**117.7  
Million  
Acres**

**Change in Core Sagebrush Areas 1998 - 2020**



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# How do we get there?

- Annual grass zone
  - Sufficient PC resistance to annuals and resilience to fire
- Conifer zone
  - Direct intervention to limit expansion and reclaim impacted habitats

# How do we get there?

- Annual grass zone
  - Sufficient PC resistance to annuals and resilience to fire
    - Annual grass treatments
    - Perennial restoration
    - Fuels and fire management treatments
- Conifer zone
  - Direct intervention
    - Mechanical treatments
    - Fire



# How do we get there?

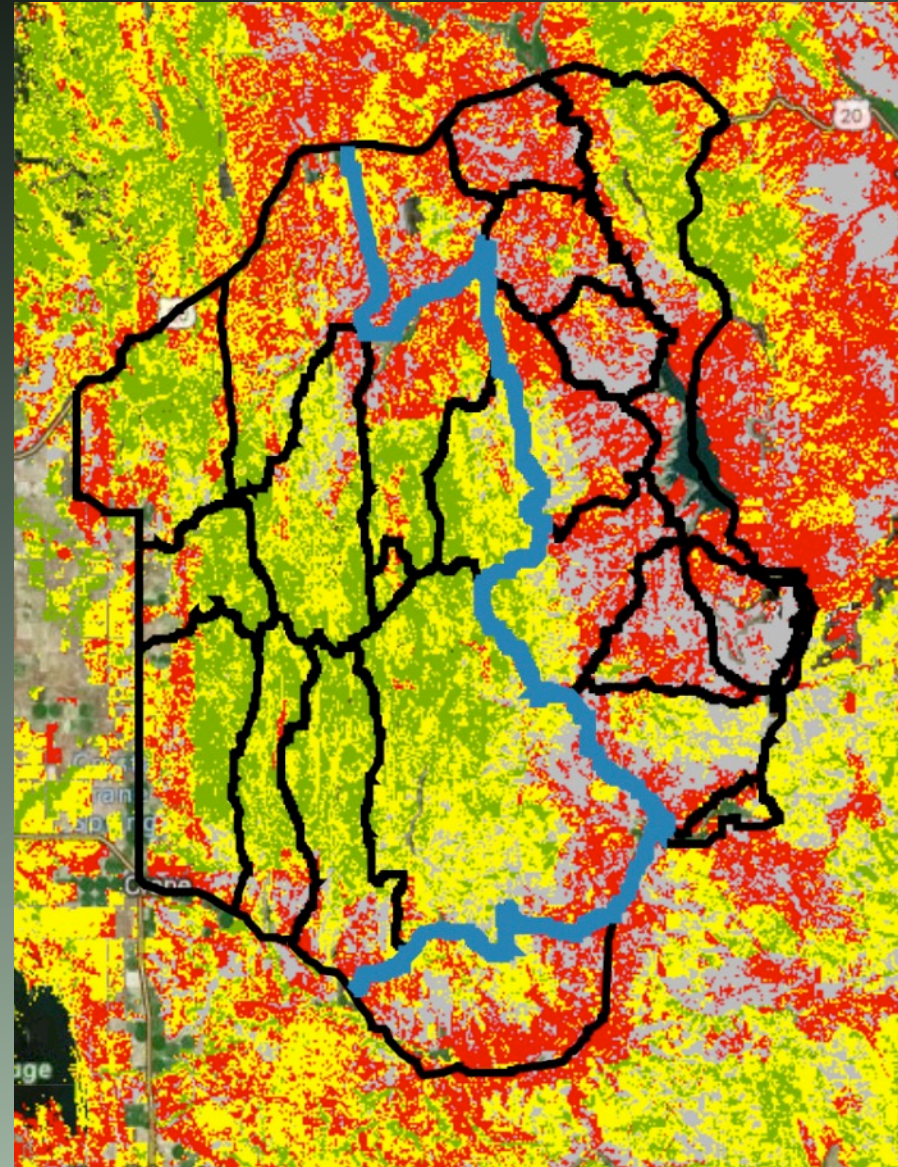
- Annual grass zone
  - Sufficient PC resistance to annuals and resilience to fire
    - ✓ Annual grass treatments
    - ✓ Perennial grass restoration
    - ✓ Fuels and fire management treatments
- Conifer zone
  - Direct intervention
    - ✓ Mechanical treatments
    - ✓ Fire





# The spatial context of strategy

- The geography of ecological condition



# The mathematics of strategy

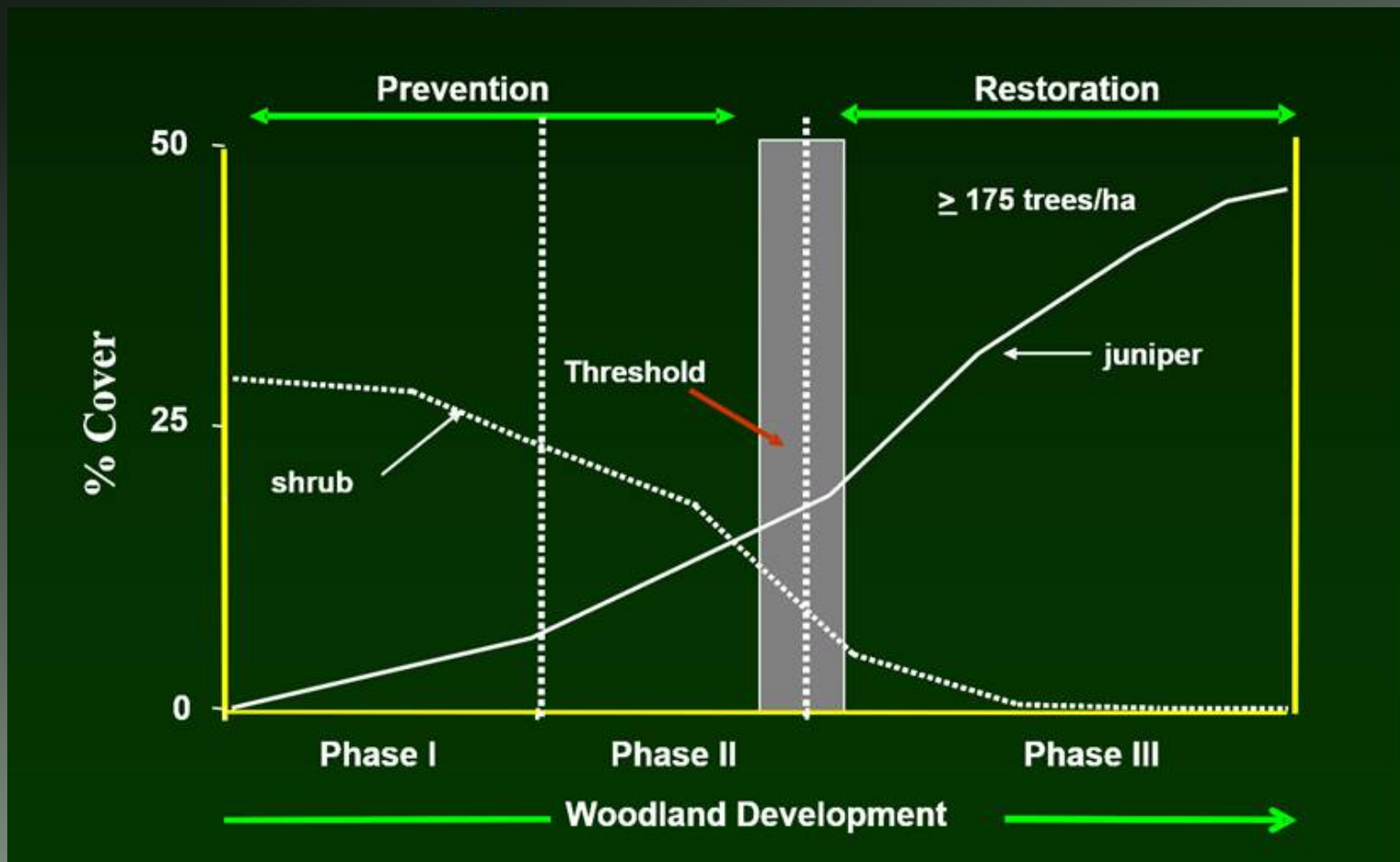
- Annual grass zone
  - **Prevention** = core areas with relatively low R&R
  - **Restoration** = core areas/GOA with relatively high R&R

$$\text{Acres of effective conservation} = \frac{\text{Acres applied}}{\text{Prob. of success (0 to 1)}}$$

*Avoid the action bias!*

# The efficiency of strategy

- Conifer zone



# Strategic management is hierarchical

- Open decision space
- Closed decision space

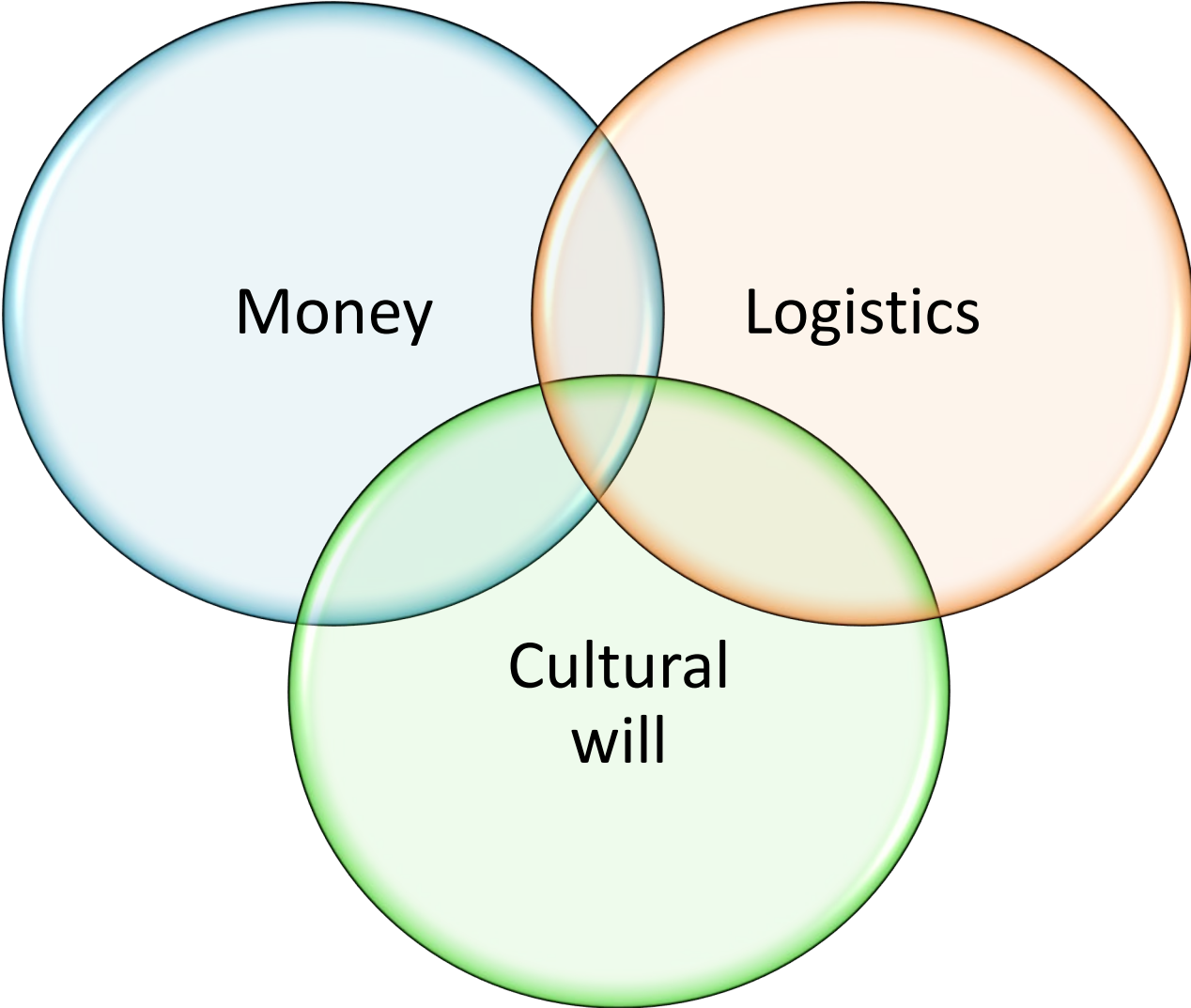


# What's the good news?

- Rangeland analysis platform
- Sagebrush conservation design
- Oregon Geographic Strategy
- Tech-based tools







Money

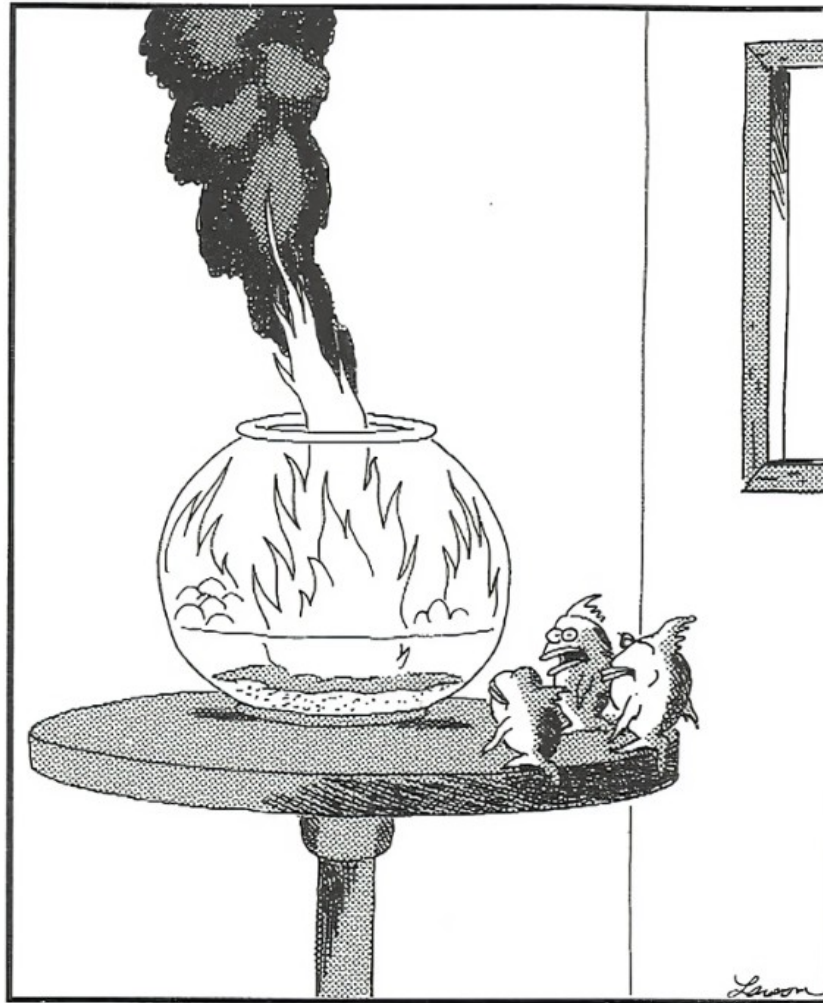
Logistics

Cultural  
will

# What does strategic success look like?

1) When we as managers pause at the strategic level before jumping to tactics and actions on the ground

2) When we change our definition of success from the project level to a strategic vision and scale reflective of the largest extent of our management area of influence



“Well, thank God we all made it out in time. ...  
’Course, now we’re equally screwed.”