

Transitioning Farm Bill Programs to a Payment for Ecosystem Services Approach

Ted Toombs

Center for Conservation Incentives

Ralph Heimlich

Agricultural Conservation Economics (ACE)



ENVIRONMENTAL DEFENSE

finding the ways that work

Maintaining ranch lands is key to conservation in the West

Ranchers are ecosystem managers.



USDA Office of Ecosystem Services and Markets



Farm Bill Programs PES

Farm Bill Programs: A “pseudo-market” for management practices, not ecosystem services



Farm Bill Programs PES

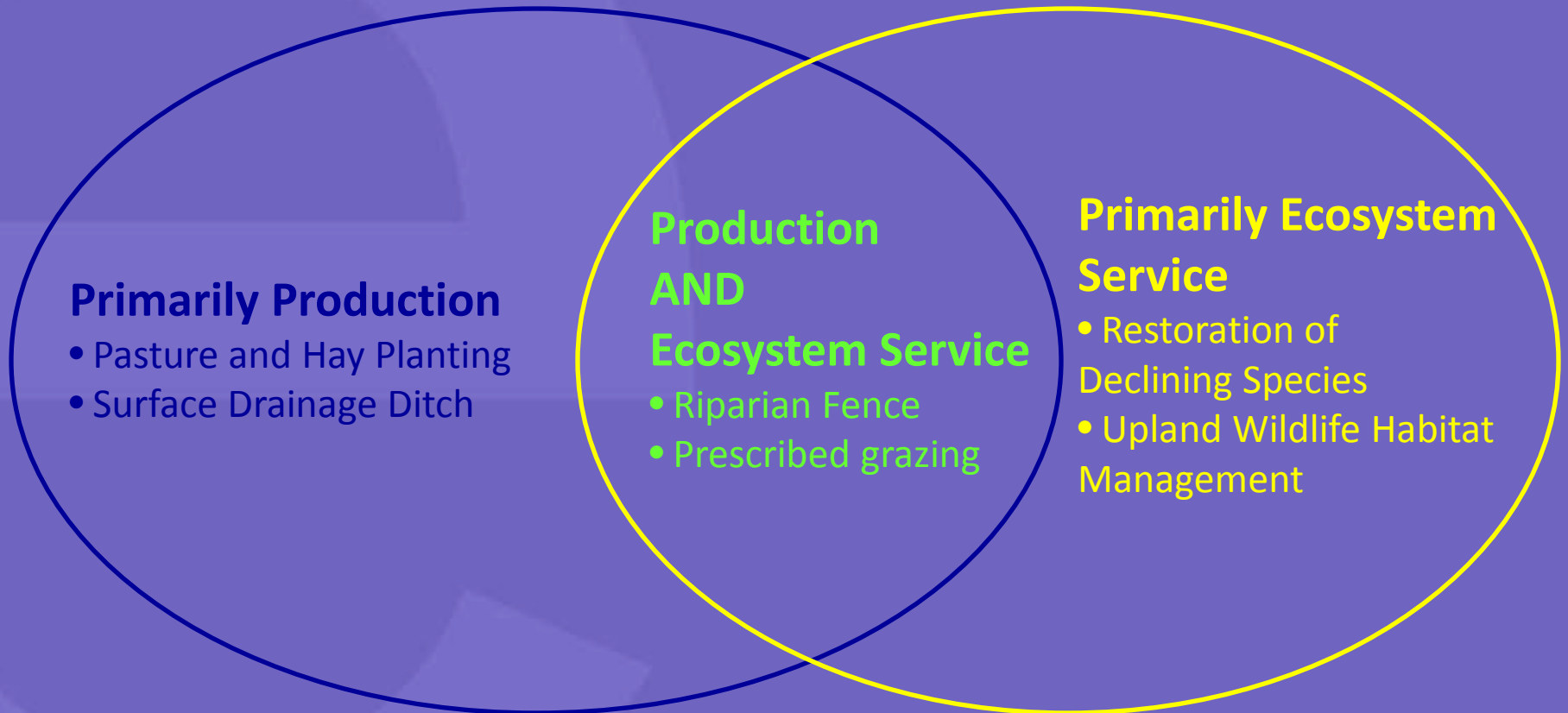
Rangeland Ecosystem Services

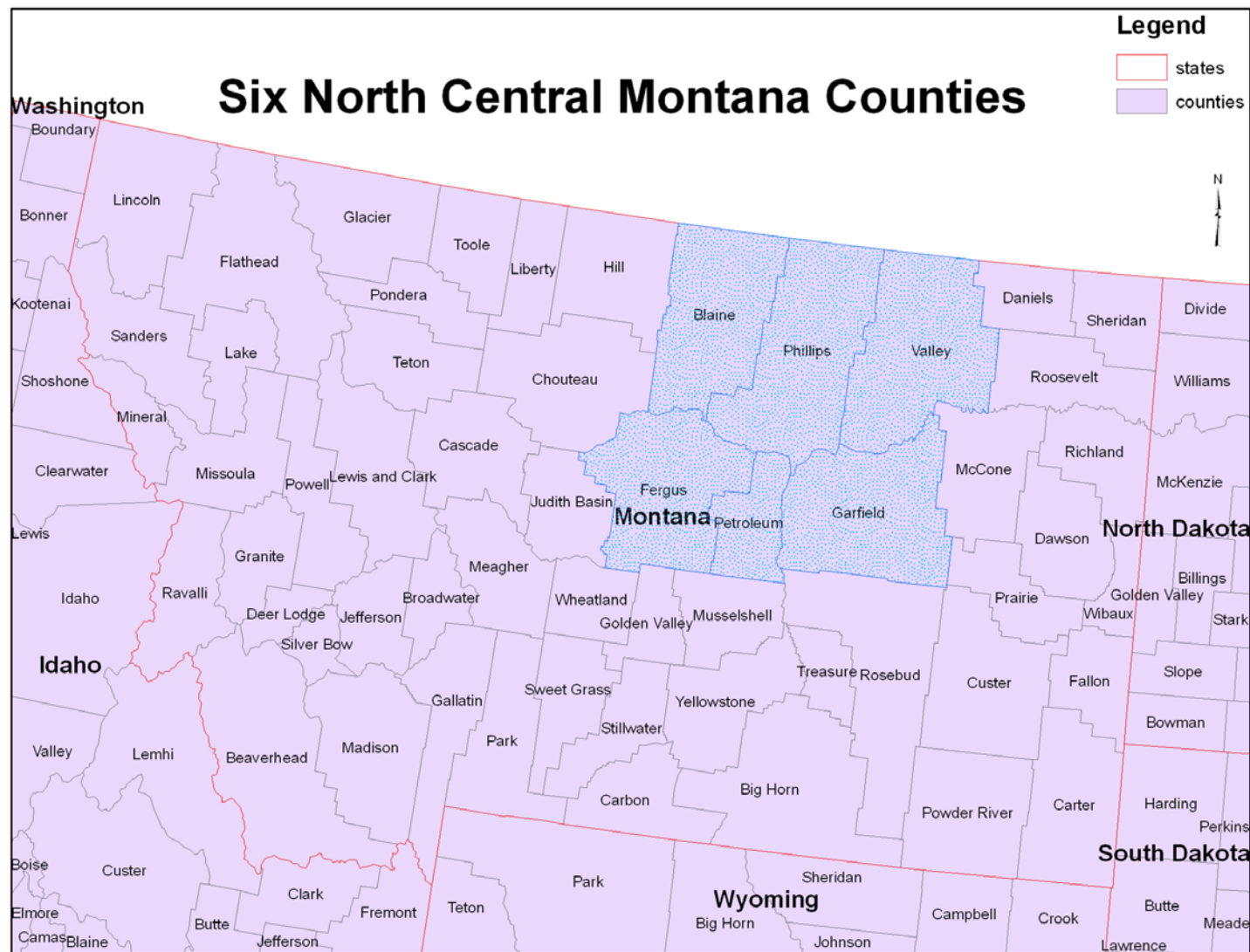
Type	Sub-category	Examples
Provisioning	livestock, fiber, genetic resources	beef, wool, elk meat, genes, pollination, water
Regulating	Air quality, climate regulation, erosion regulation, water regulation	Riparian protection, carbon sequestration, vegetative cover, aquifer recharge
Cultural	Recreation, ethical values	Open space, hiking, camping, intrinsic value
Supporting	Nutrient cycling, soil formation, primary production	Transfer of water from soil to plants to air to rain

Practices vs. Payment for Ecosystem Services (PES) Approaches

Category	Practices	PES
Payment for:	Management practice, assumed benefit	Environmental benefit
Valuation based on:	Cost of practice, land value	Value of benefit to society
Monitor:	Maintenance or installation of practice	Environmental condition or improvement
Agency workload:	Assess need for practices, practice standards	Assess service flows, management changes needed, effect on service flows

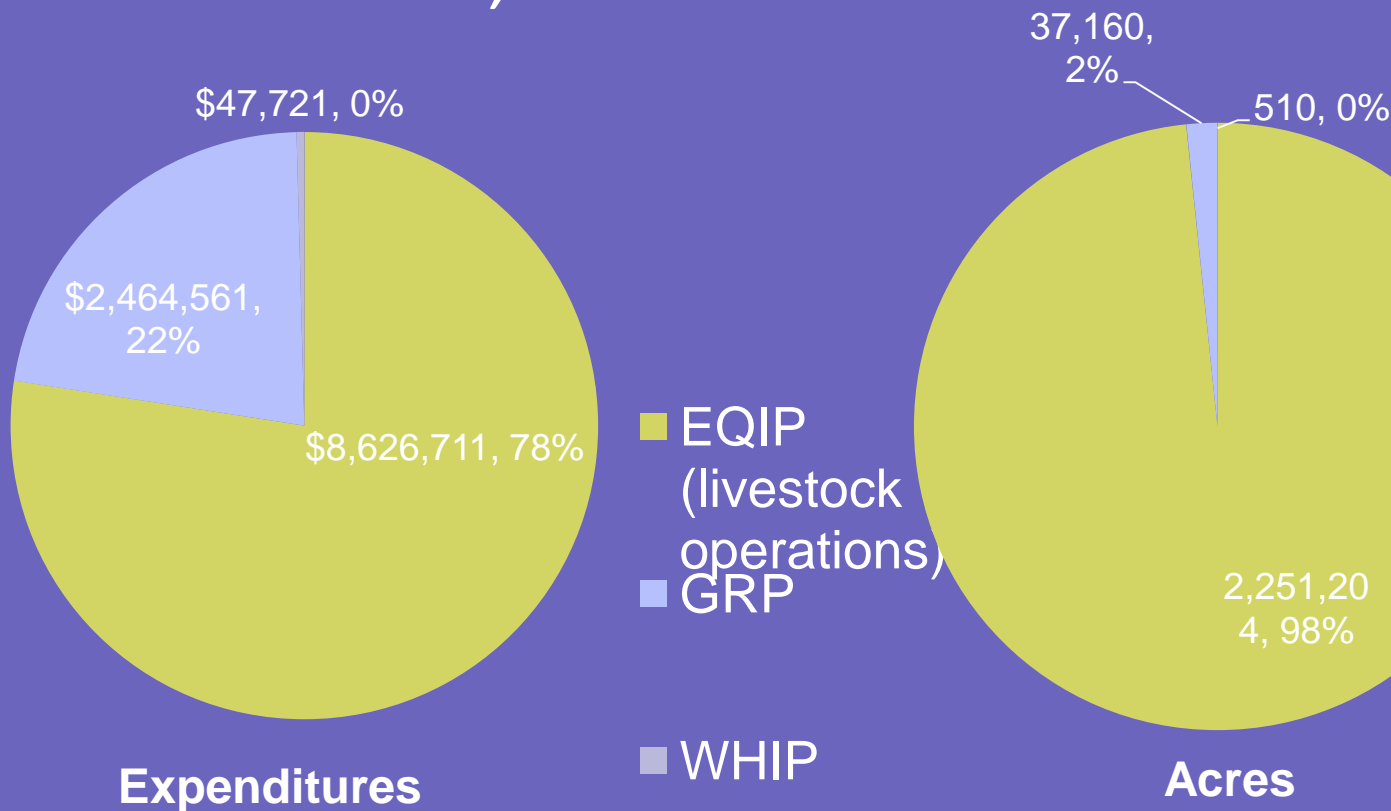
Types of practices funded by USDA





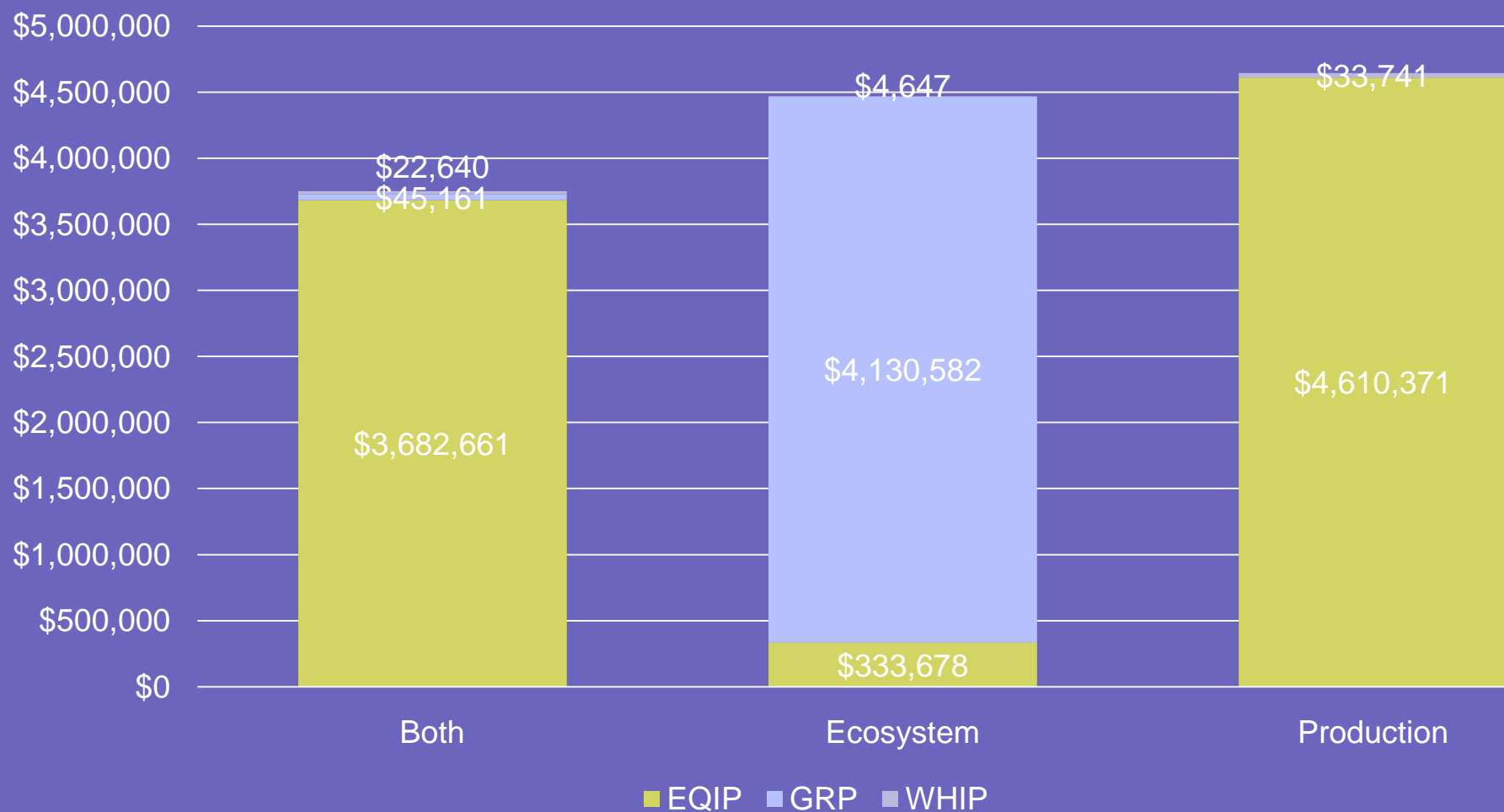


Expenditures and Acres in EQIP, GRP and WHIP, Six Montana Counties



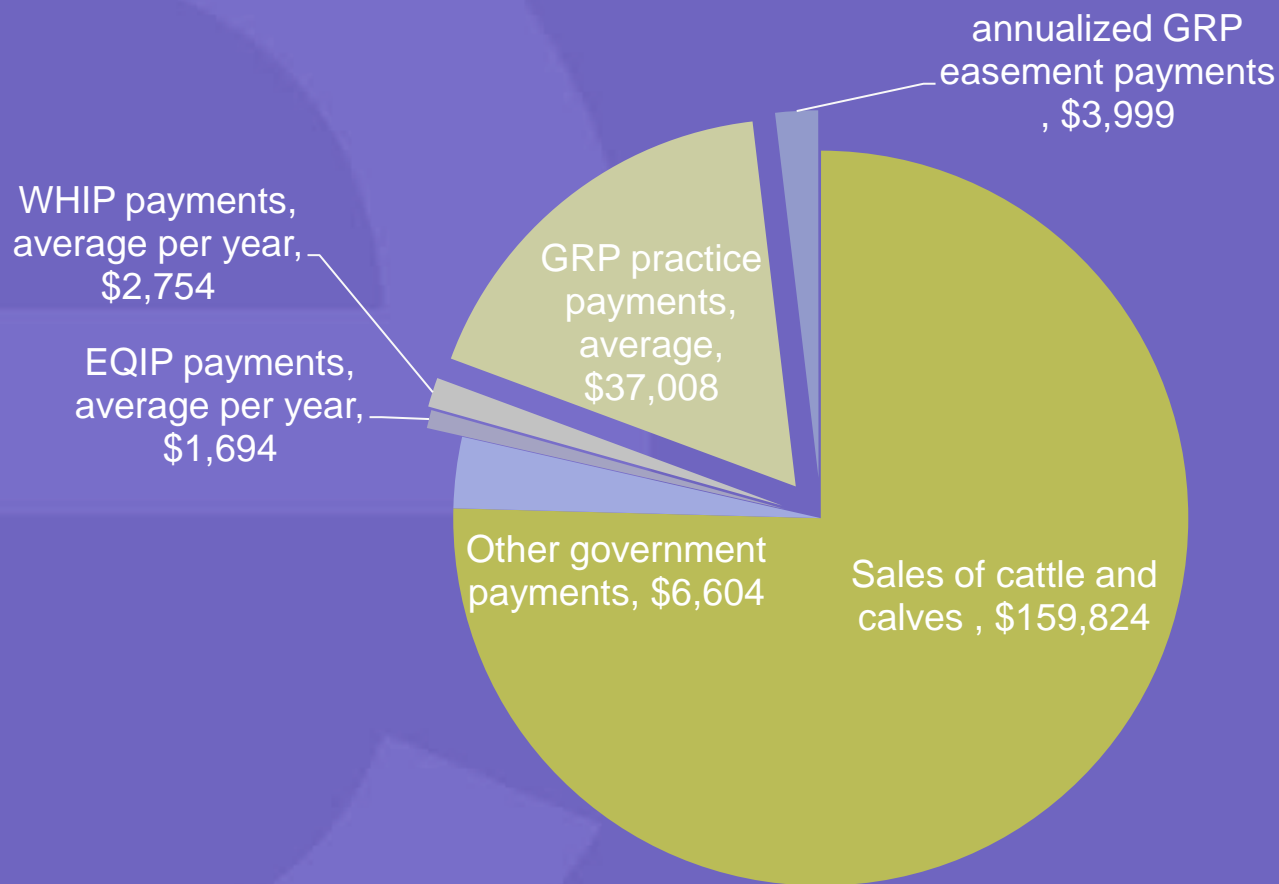


Practice Payments by Type of Practice and Program, Six Montana Counties





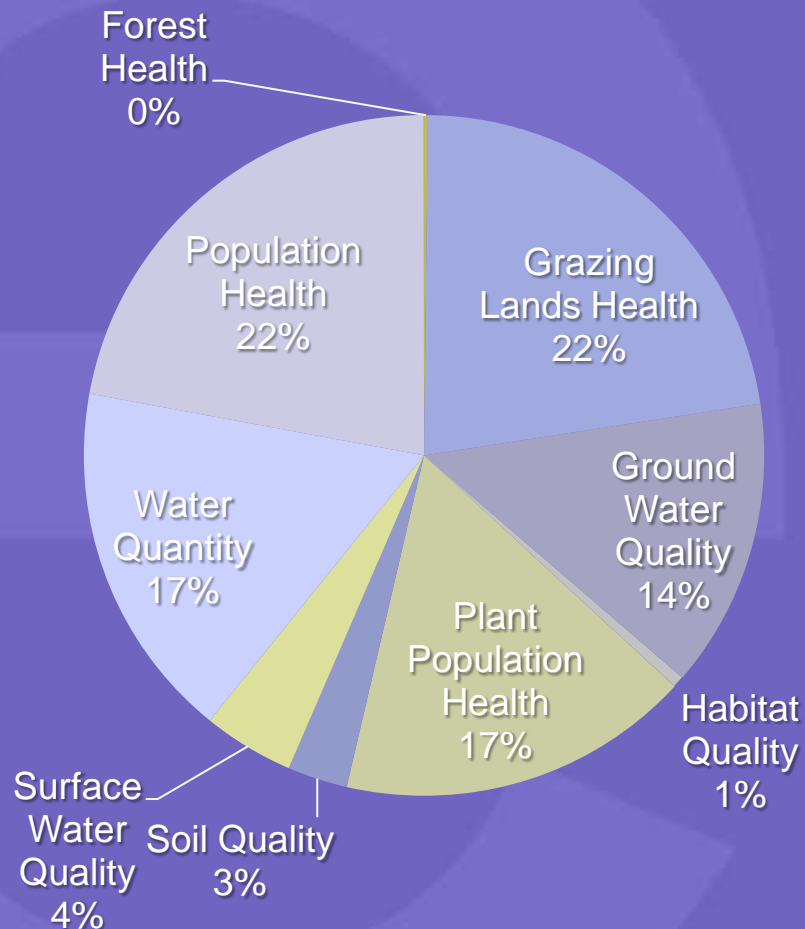
Phillips County Average Ranch



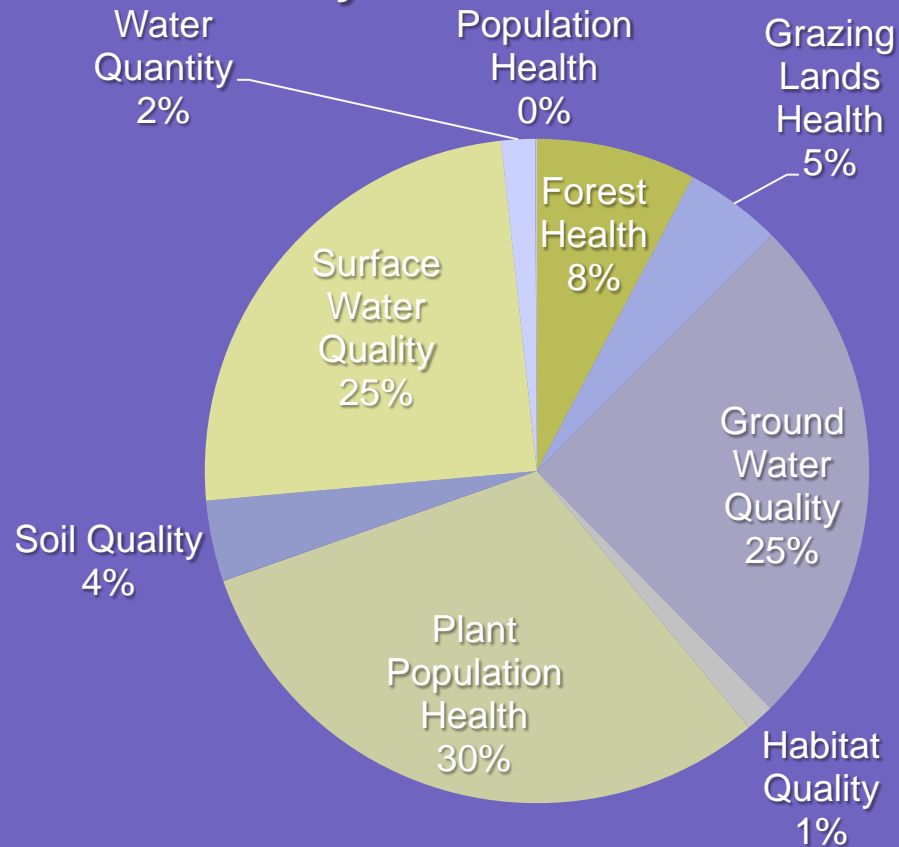


Distribution of Payments in Two Markets

Conservation Practices Market



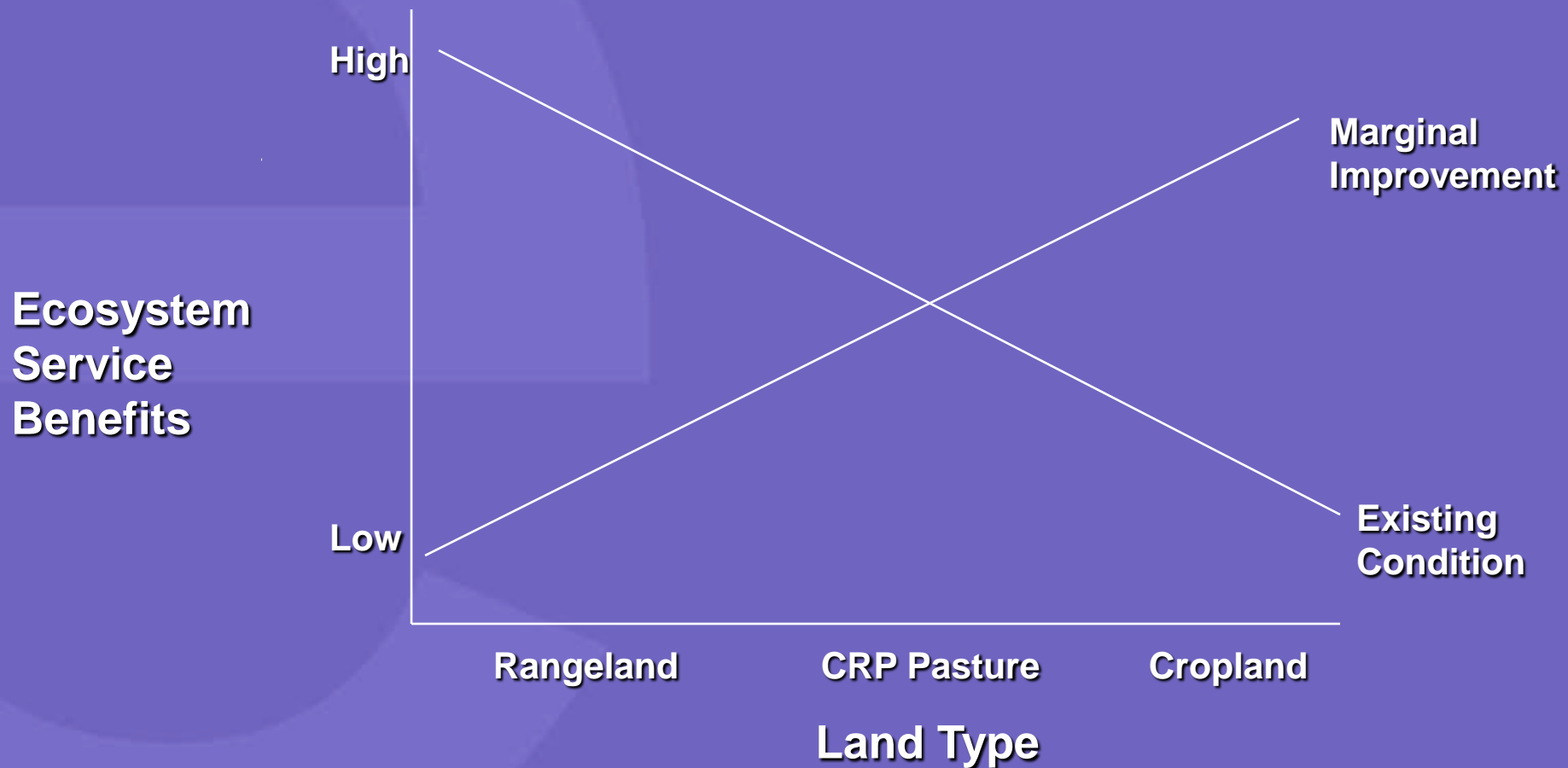
Ecosystem Services Market



Condition vs. Improvement

Pseudo Market	Practices	PES
Focus on Condition	Pay for maintenance of existing practices	Pay for maintenance of existing service flows
Focus on Improvement	Pay for installation of new practices	Pay for changes to create or improve service flows

Ecosystem Service Benefits by Land Type



Overall Considerations

Which ecosystem services?

How to quantify service flows?

How to value service flows and changes?

What services are demanded? How much to supply?

Government's role?

Existing condition or marginal improvement?



Rancher Considerations

Mutually beneficial
management?

Access to new
markets?

Ranch business
decision-making?

Do ranchers want to
be ES managers?

How to become
involved?



Questions ?



Ted Toombs
Regional Director
Center For Conservation Incentives
Environmental Defense Fund
Boulder, CO
Phone: 303-447-7210
ttoombs@edf.org