Transitioning Farm Bill Programs to a Payment for Ecosystem Services Approach

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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

Scouting for insects before pesticide application

Buffer to protect water ways

Corn stalk test to improve fertilizer efficiency

Checking bird boxes

Native grasses support wildlife

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

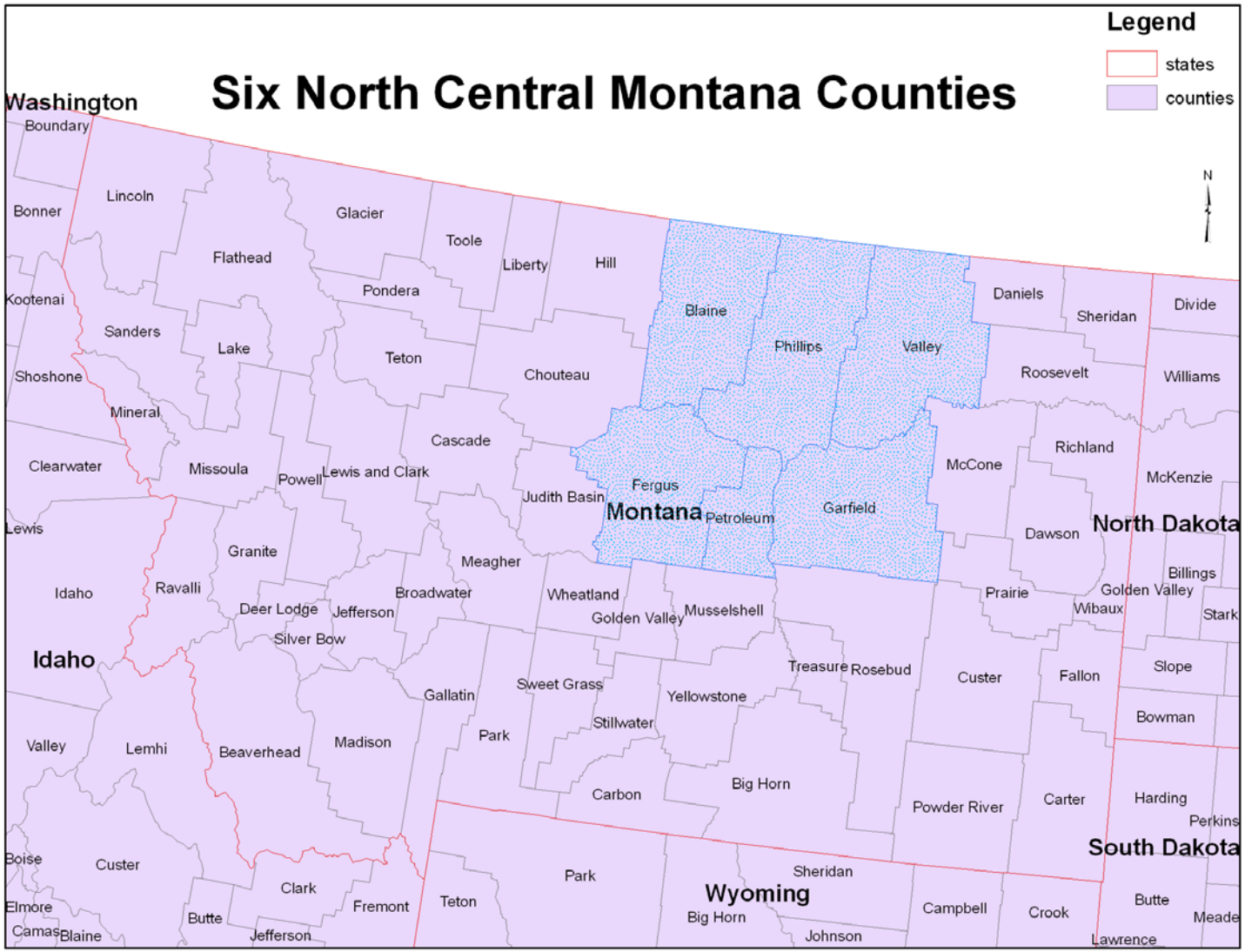
Types of practices funded by USDA

Primarily Production
- Pasture and Hay Planting
- Surface Drainage Ditch

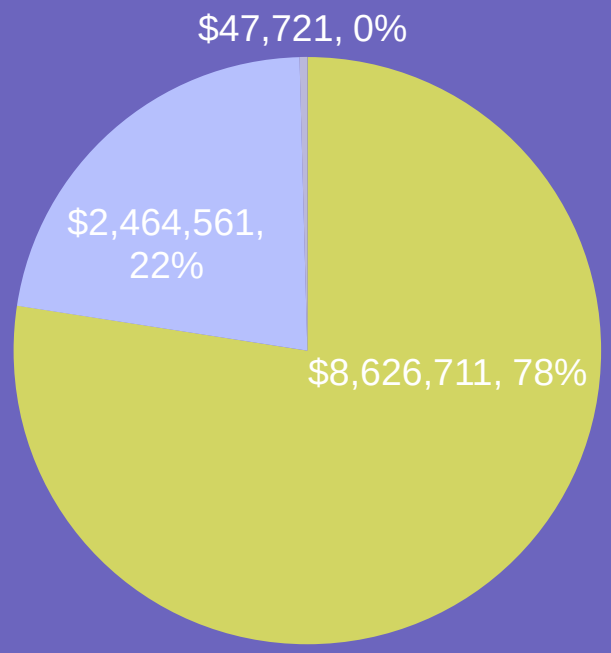
Production AND Ecosystem Service
- Riparian Fence
- Prescribed grazing

Primarily Ecosystem Service
- Restoration of Declining Species
- Upland Wildlife Habitat Management

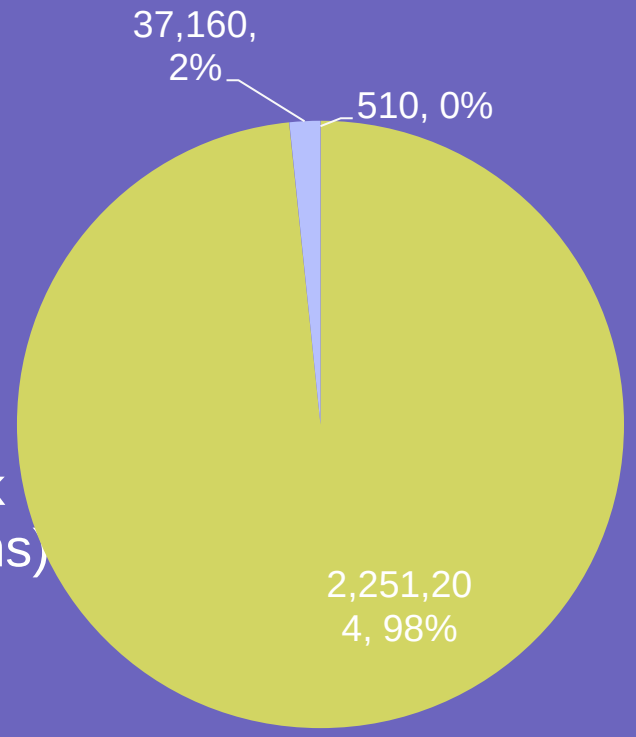
Farm Bill Programs PES


Six North Central Montana Counties
Legend
states
counties
N
Washington
Boundary
Bonner
Lincoln
Glacier
Toole
Liberty
Hill
Blaine
Daniels
Sheridan
Divide
Flathead
Pondera
Kootenai
Sanders
Lake
Teton
Chouteau
Phillips
Valley
Roosevelt
Williams
Shoshone
Mineral
Cascade
Richland
Clearwater
Missoula
Powell
Lewis and Clark
Judith Basin
Fergus
Montana
Petroleum
Garfield
McCone
McKenzie
Dawson
North Dakota
Lewis
Granite
Meagher
Billings
Idaho
Ravalli
Broadwater
Wheatland
Golden Valley
Musselshell
Prairie
Golden Valley
Wibaux
Stark
Deer Lodge
Jefferson
Silver Bow
Idaho
Treasure
Rosebud
Custer
Fallon
Slope
Gallatin
Sweet Grass
Yellowstone
Bowman
Stillwater
Valley
Lemhi
Beaverhead
Madison
Park
Carbon
Big Horn
Powder River
Carter
Harding
Perkins
South Dakota
Boise
Custer
Clark
Park
Sheridan
Wyoming
Elmore
Butte
Fremont
Teton
Big Horn
Campbell
Crook
Butte
Meade
Camas
Blaine
Jefferson
Johnson
Lawrence

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



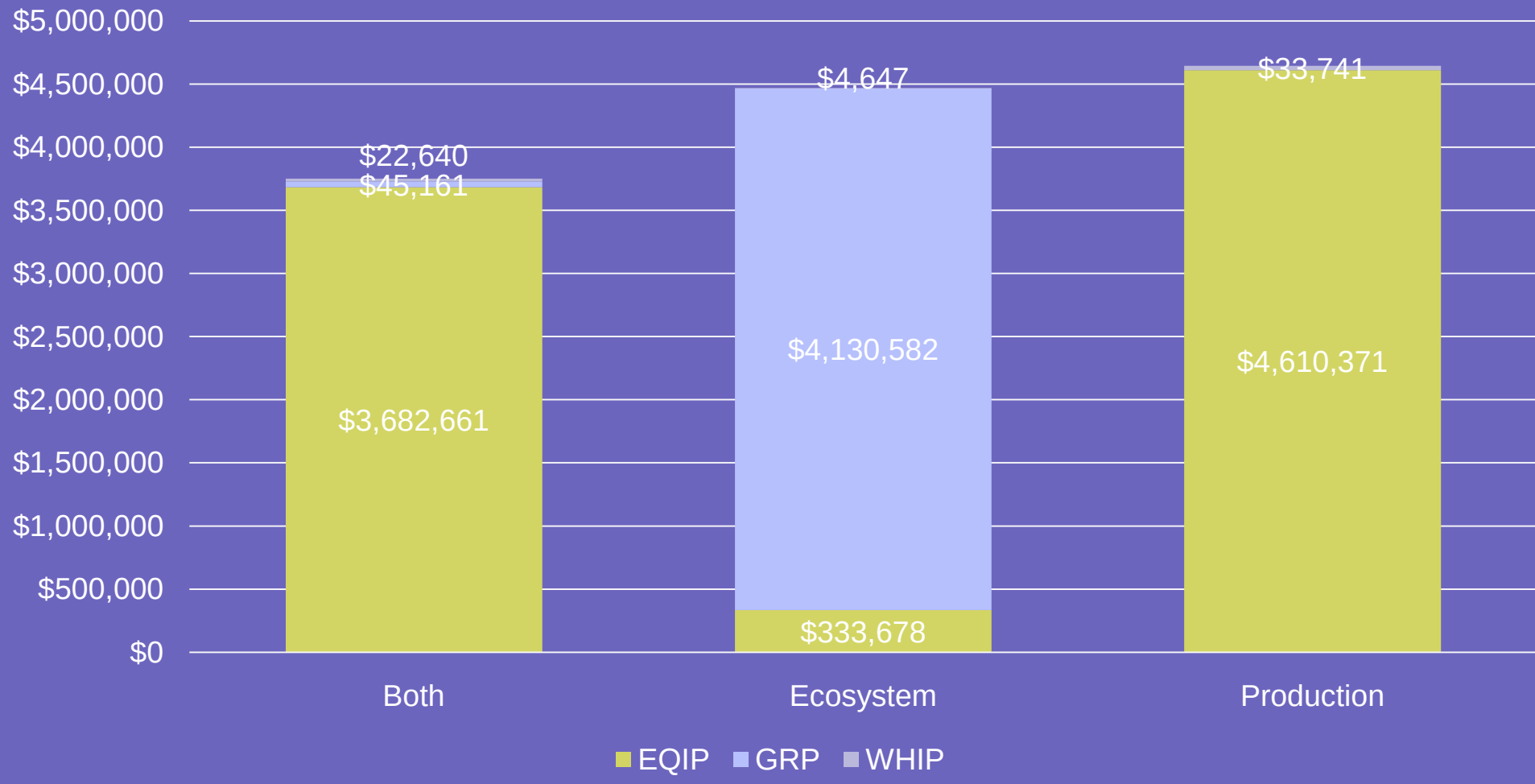
Expenditures



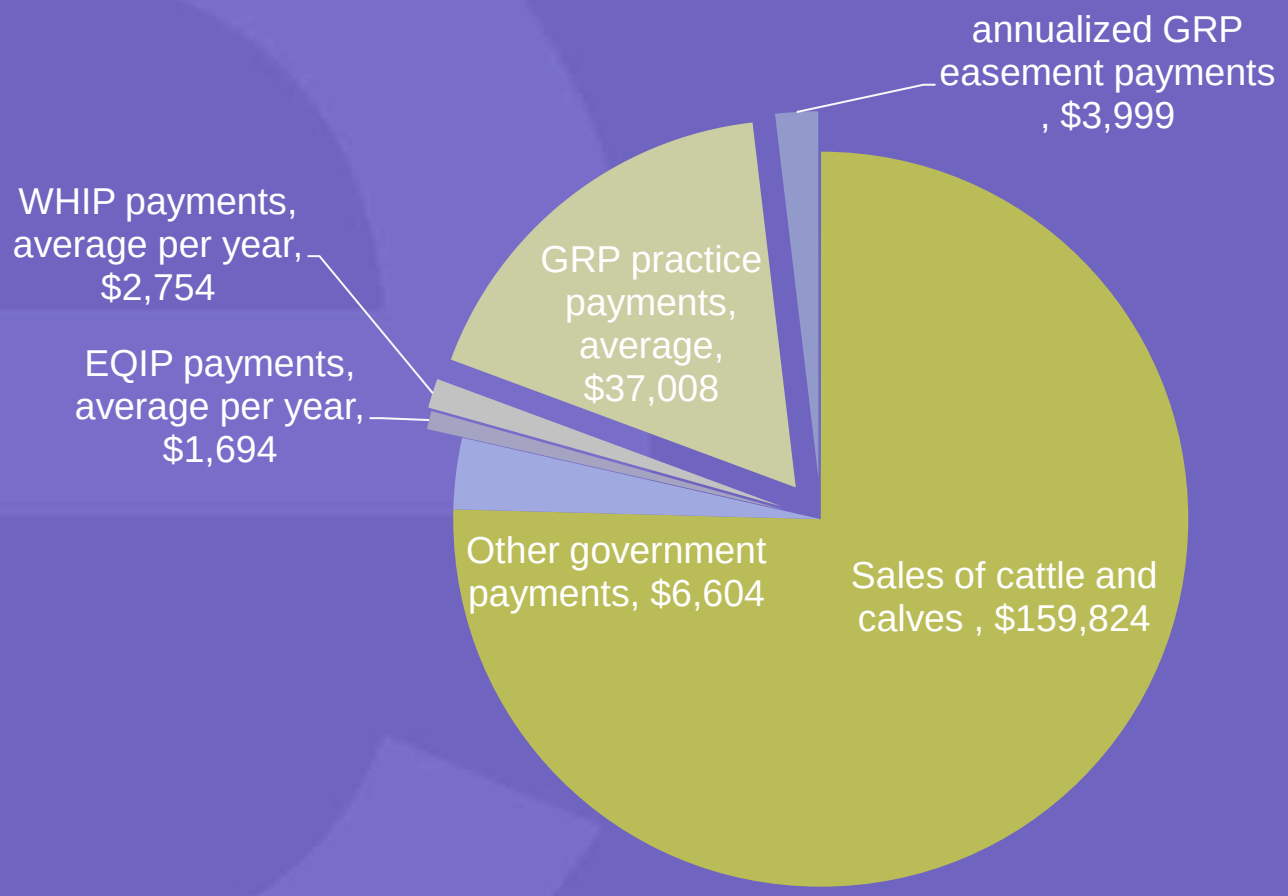
Acres

- EQIP (livestock operations)
- GRP
- WHIP

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

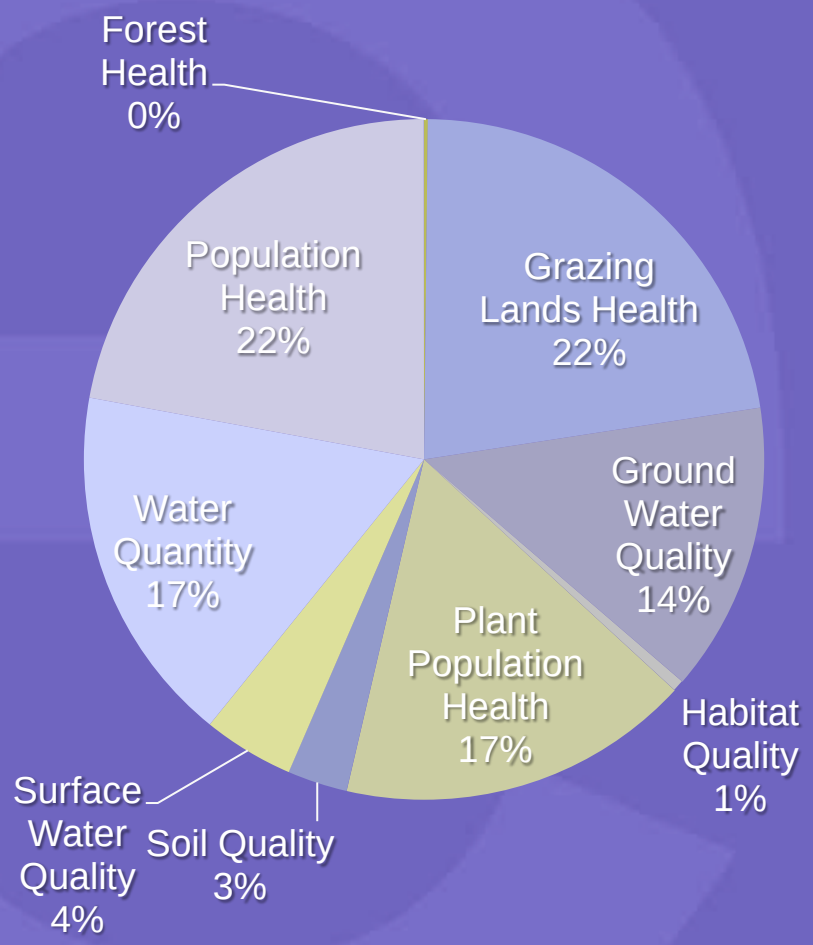


Phillips County Average Ranch

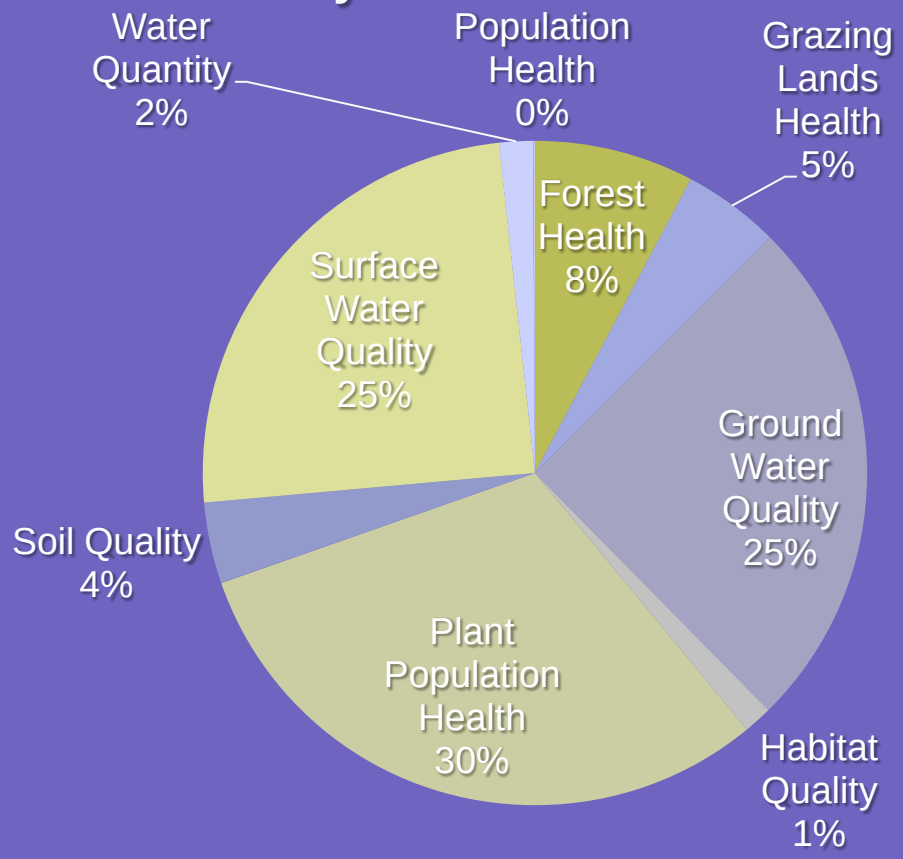


Distribution of Payments in Two Markets

Conservation Practices Market



Ecosystem Services Market

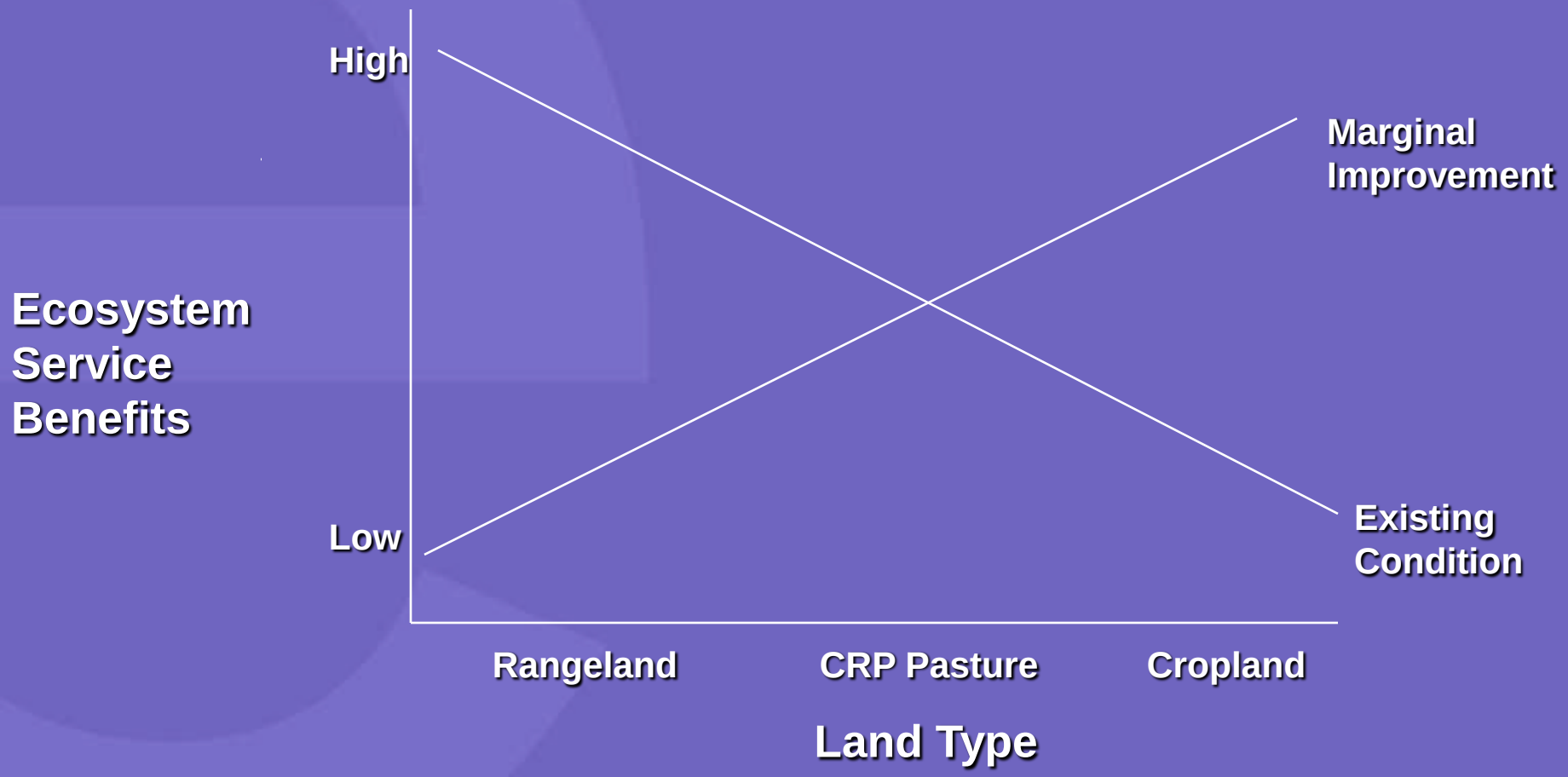


Farm Bill Programs PES

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 ?

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