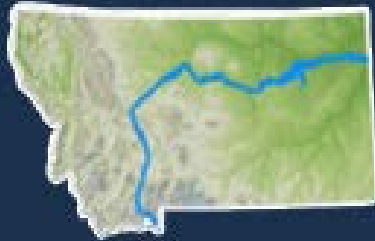


CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE COMMUNITY WORKING GROUP

Six-County Region Statistics

Prepared and compiled by:



MISSOURI RIVER
Conservation Districts Council

THE SIX-COUNTY REGION

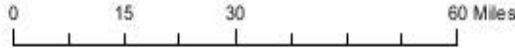
Charles M. Russell Community Working Group



Legend

- Montana Counties
- USFWS Ownership

Charles M. Russell Community Working Group



Population: 485
Land area: 1,059,116.80 ac
Pop/mi²: 0.29
Farmland: 689,752ac

Population: 4,192
Land area: 3,289,626ac
Pop/mi²: 0.82
Farmland: 2,066,540ac

Population: 7,640
Land area: 3,152,525ac
Pop/mi²: 1.55
Farmland: 1,634,642ac

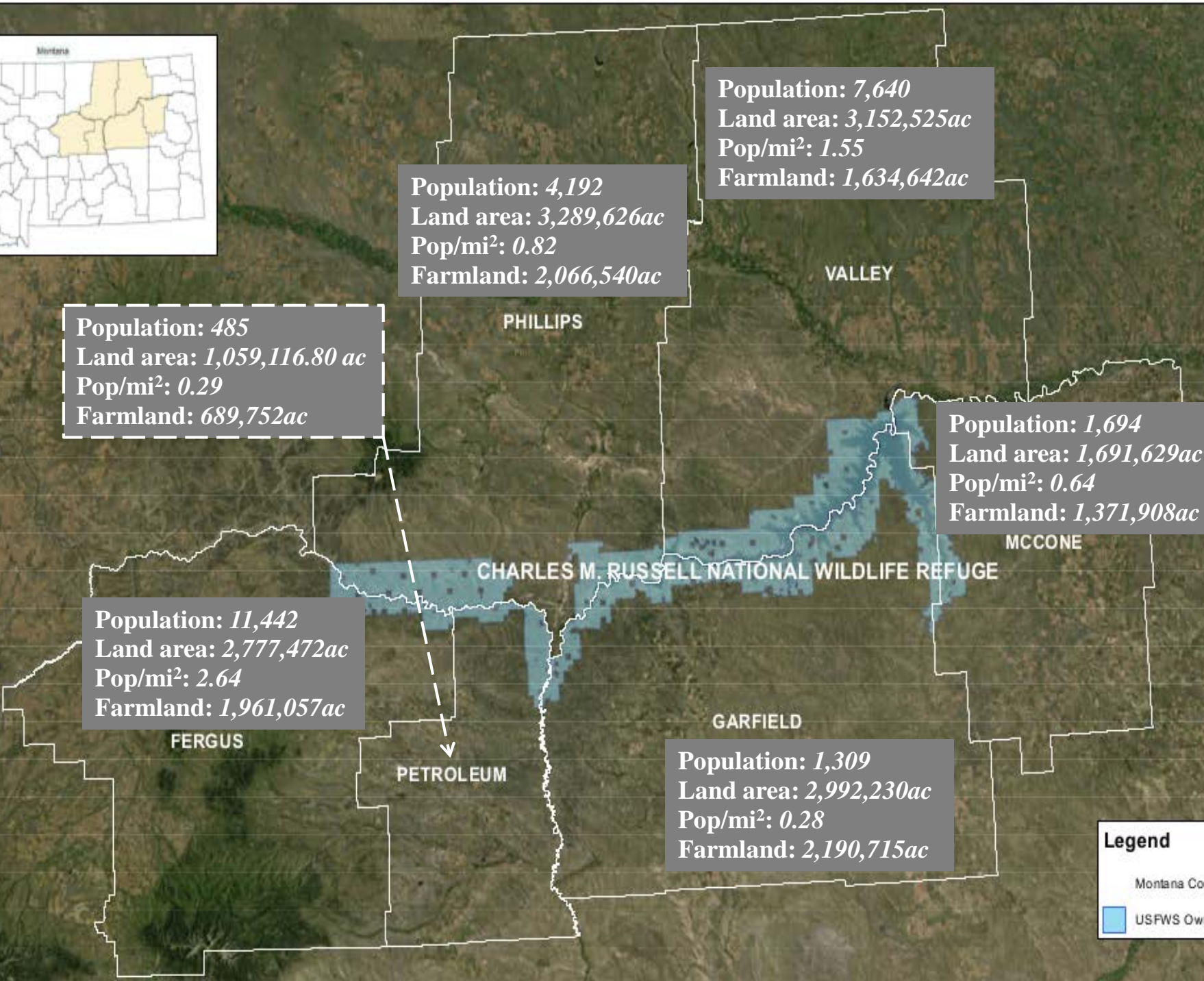
Population: 1,694
Land area: 1,691,629ac
Pop/mi²: 0.64
Farmland: 1,371,908ac

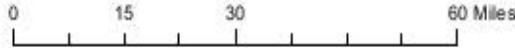
Population: 11,442
Land area: 2,777,472ac
Pop/mi²: 2.64
Farmland: 1,961,057ac

Population: 1,309
Land area: 2,992,230ac
Pop/mi²: 0.28
Farmland: 2,190,715ac

Legend

- Montana Counties
- USFWS Ownership





Agricultural lands:
 -% pasture: 76.1
 -% crops: 22.9
Sales:
 - Crops: \$12,332,000
 - Livestock: \$19,272,000
 - Total: \$31,604,000

Agricultural lands:
 -% pasture: 64.5
 -% crops: 34.0
Sales:
 - Crops: \$58,401,000
 - Livestock: \$37,399,000
 - Total: \$95,800,000

Agricultural lands:
 -% pasture: 49.8
 -% crops: 48.2
Sales:
 - Crops: \$119,097,000
 - Livestock: \$32,367,000
 - Total: \$151,464,000

Agricultural lands:
 -% pasture: 64.9
 -% crops: 30.2
Sales:
 - Crops: \$71,745,000
 - Livestock: \$73,975,000
 - Total: \$145,720,000

Agricultural lands:
 -% pasture: 81.7
 -% crops: 17.6
Sales:
 - Crops: \$27,039,000
 - Livestock: \$45,889,000
 - Total: \$72,928,000

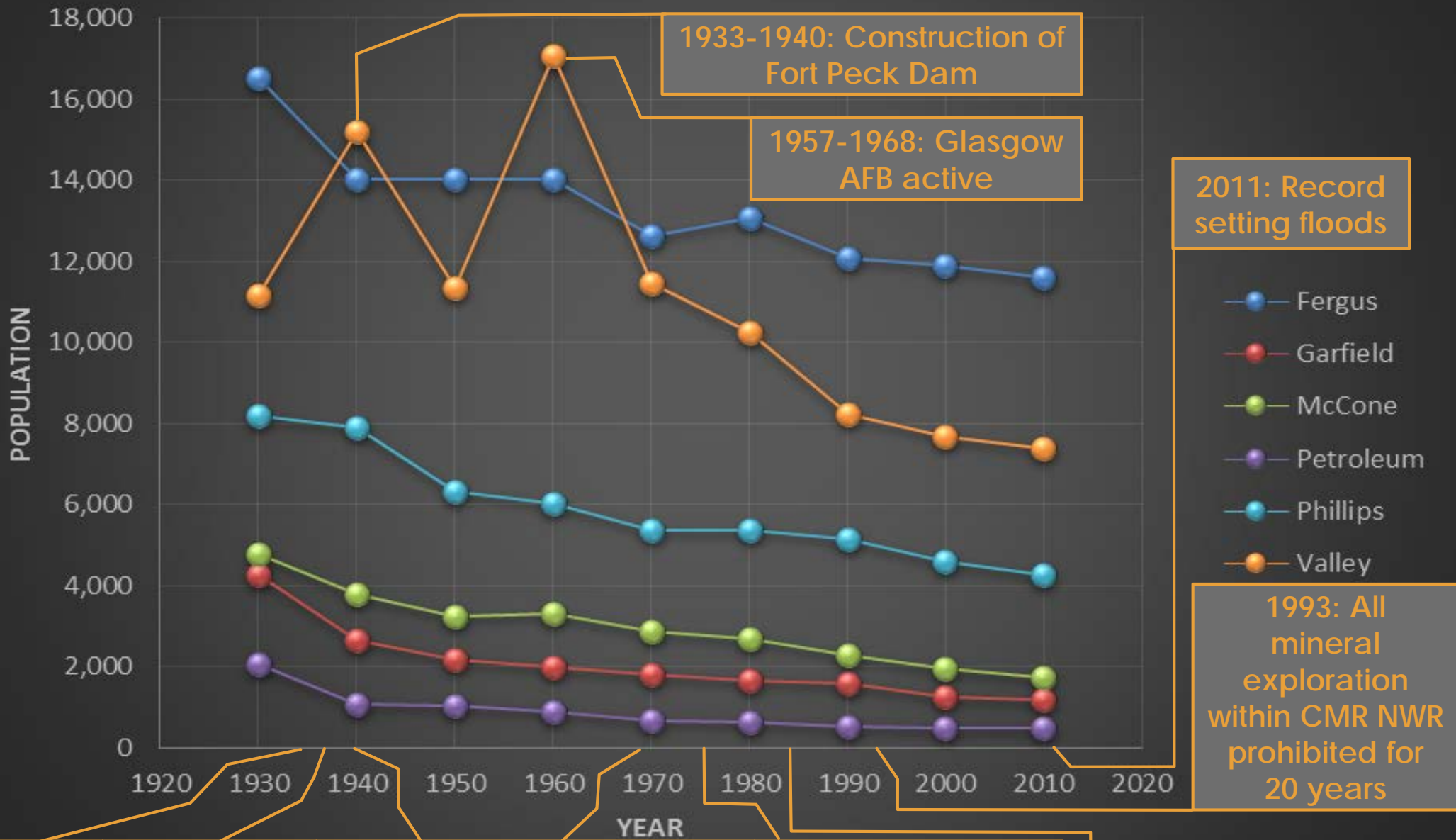
Agricultural lands:
 -% pasture: 53.5
 -% crops: 44.1
Sales:
 - Crops: \$77,755,000
 - Livestock: \$24,473,000
 - Total: \$102,228,000



Legend

- Montana Counties
- USFWS Ownership

County Population (US Census Bureau)



1934: Taylor Grazing Act

1936: CMR "Game Range" Established

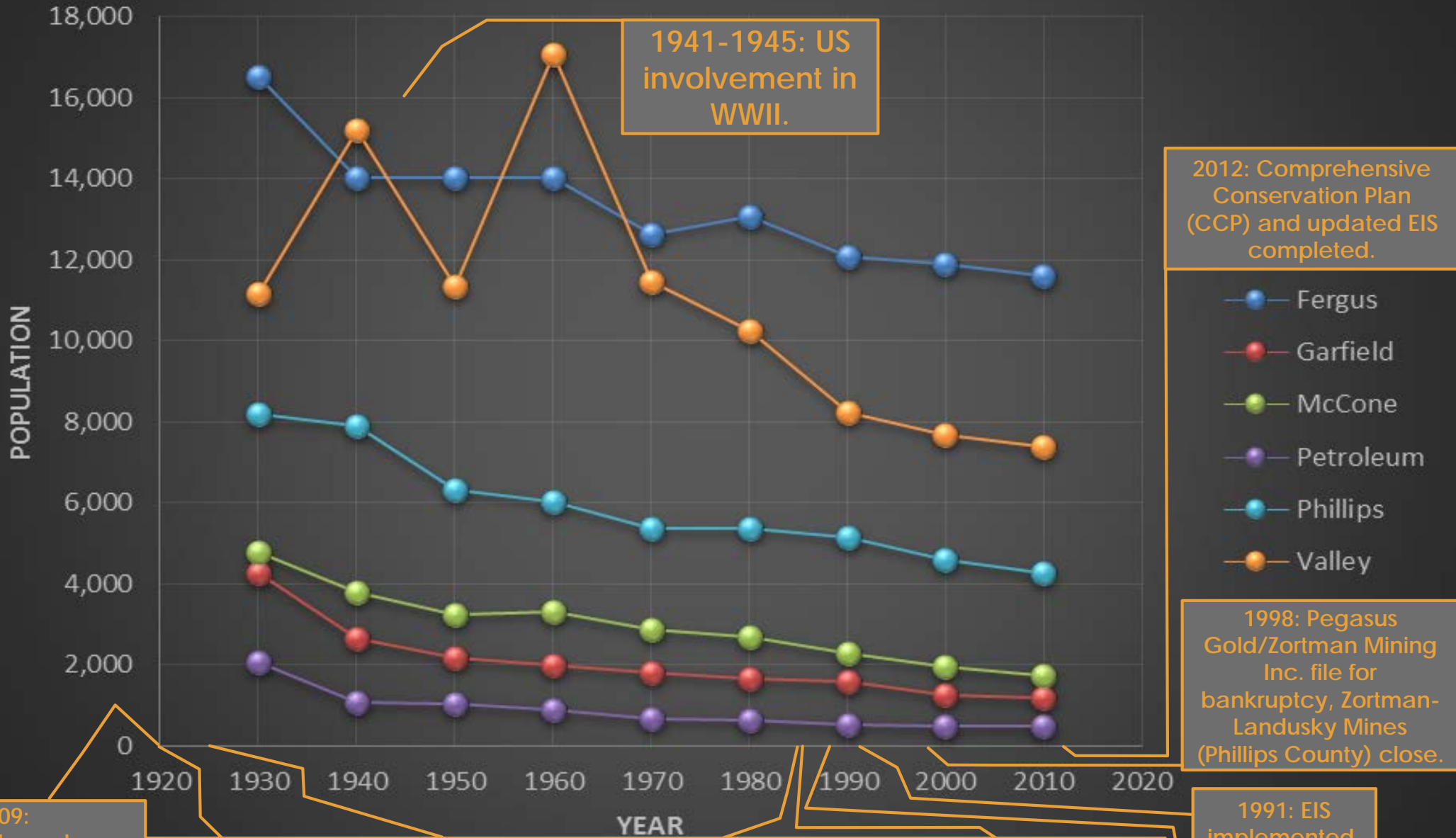
1929-1941: The Great Depression. 1933-1940: The Dust Bowl.

1969: UL Bend NWR Established

1976: CMR "Game range" becomes "National Wildlife Refuge"

1984: Petroleum County "Sodbuster" ordinance enacted (repealed in 2014).

County Population (US Census Bureau)



1909: Enlarged Homestead Act.
1916: Stock-raising Homestead Act.

1919: Oil discovered in the Cat Creek Anticline (Garfield and future Petroleum Co.)

1922: Peak oil prod.
1925: Petroleum Co. formed from Fergus Co.

1985: Conservation Reserve Program and Highly Erodible Lands Conservation (sodbuster) Program established by the Food Security Act of 1985 (U.S. Farm Bill).

1986: Refuge Environmental Impact Statement (EIS) completed.

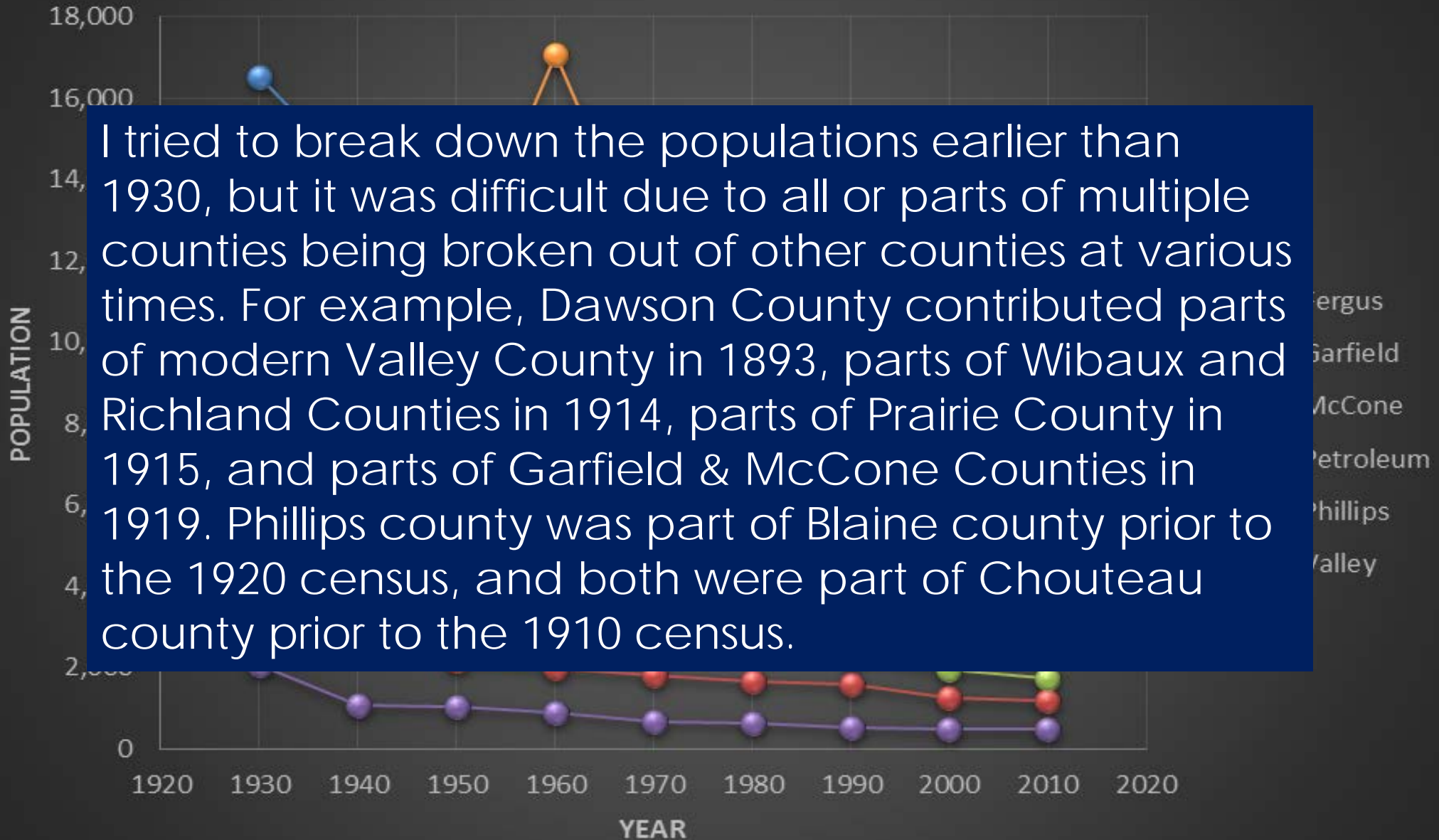
1991: EIS implemented.

1988-1989: North American drought. Costliest (\$120 billion in 2014\$) natural disaster in US history before Hurricane Katrina.

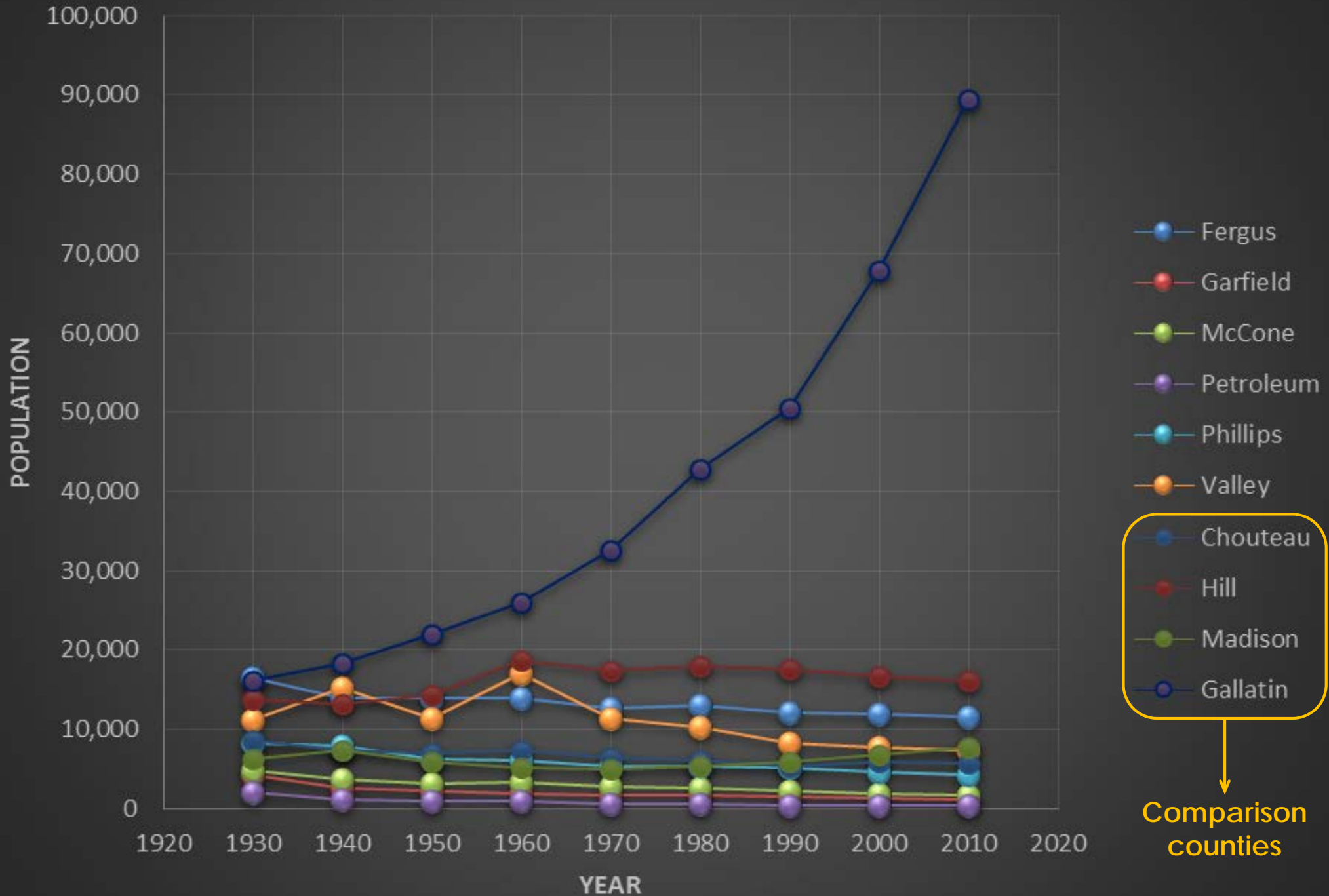
2012: Comprehensive Conservation Plan (CCP) and updated EIS completed.

1998: Pegasus Gold/Zortman Mining Inc. file for bankruptcy, Zortman-Landusky Mines (Phillips County) close.

County Population (US Census Bureau)

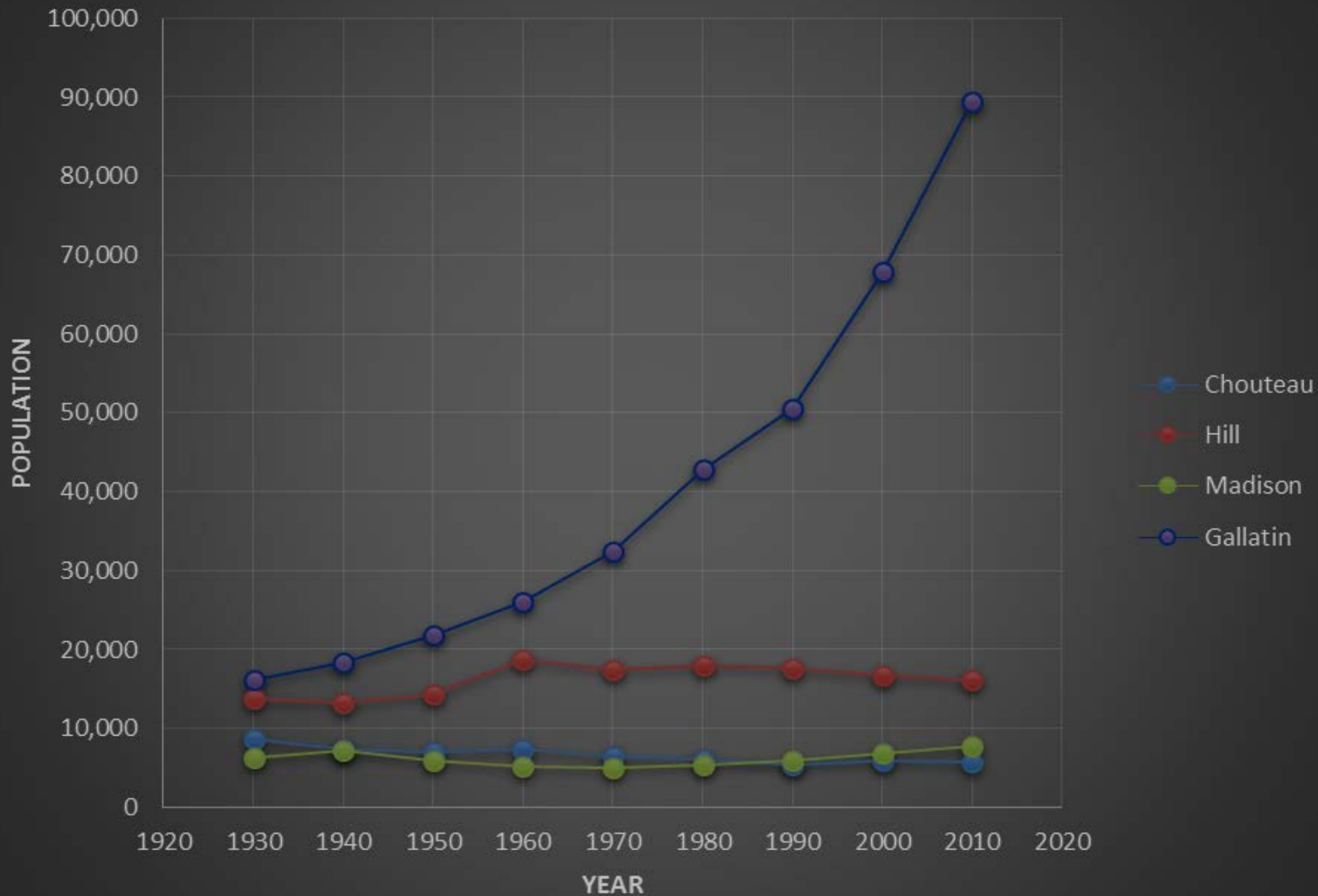


County Population (US Census Bureau)

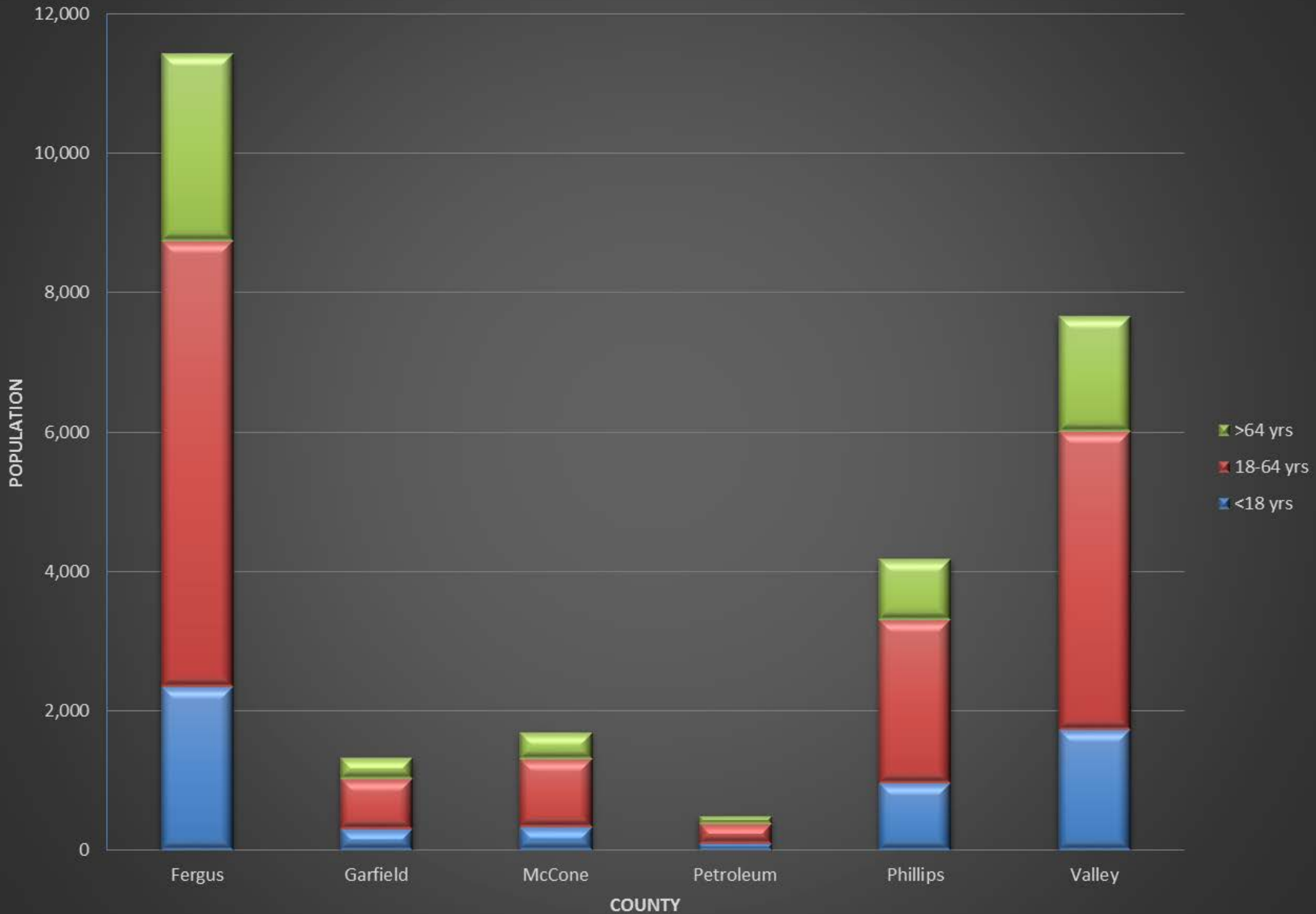


Comparison counties

County Population (US Census Bureau)

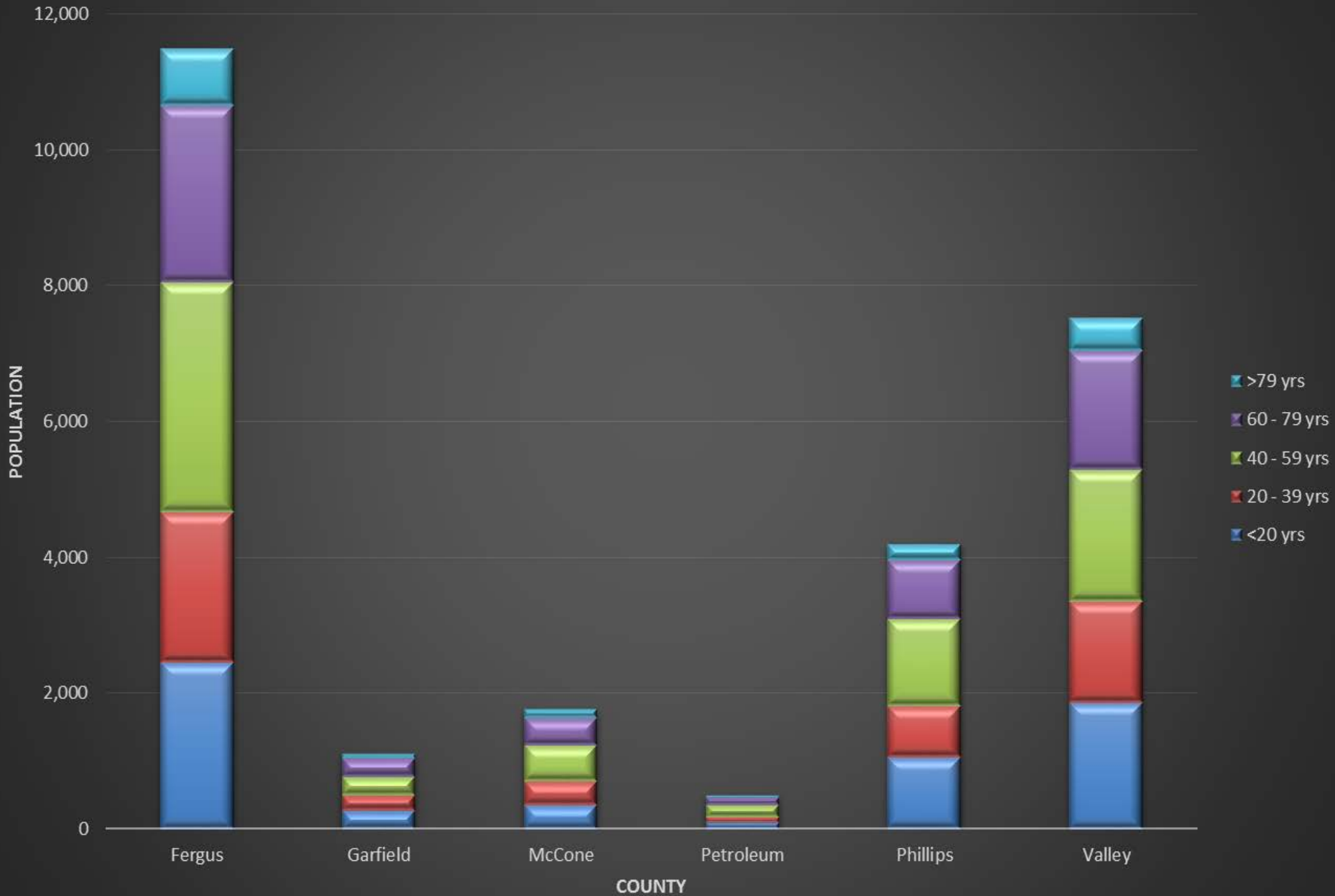


Total county population by age group (2015 estimates)



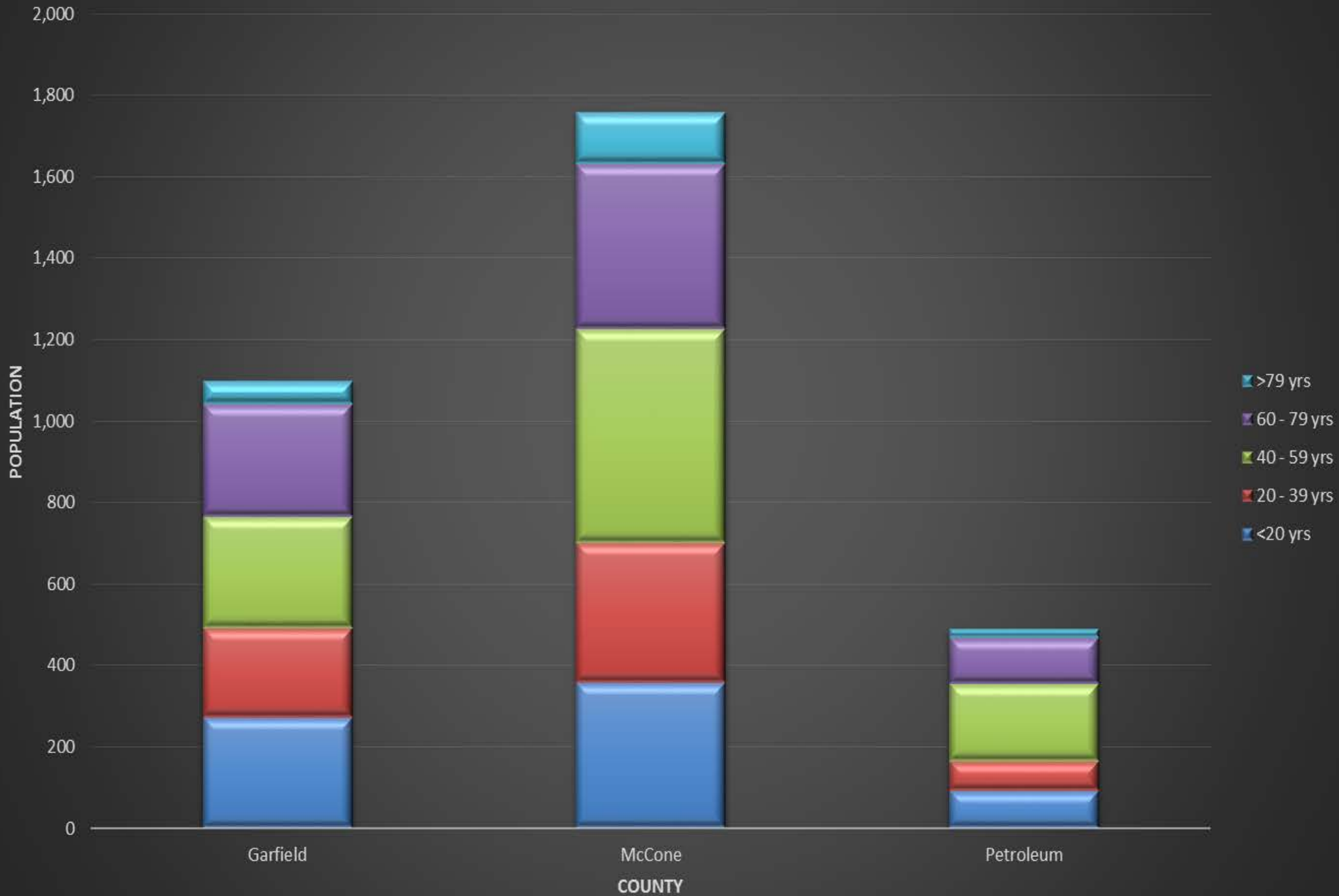
Total County Population by Age Group

(ACS 2009-2014 averages)

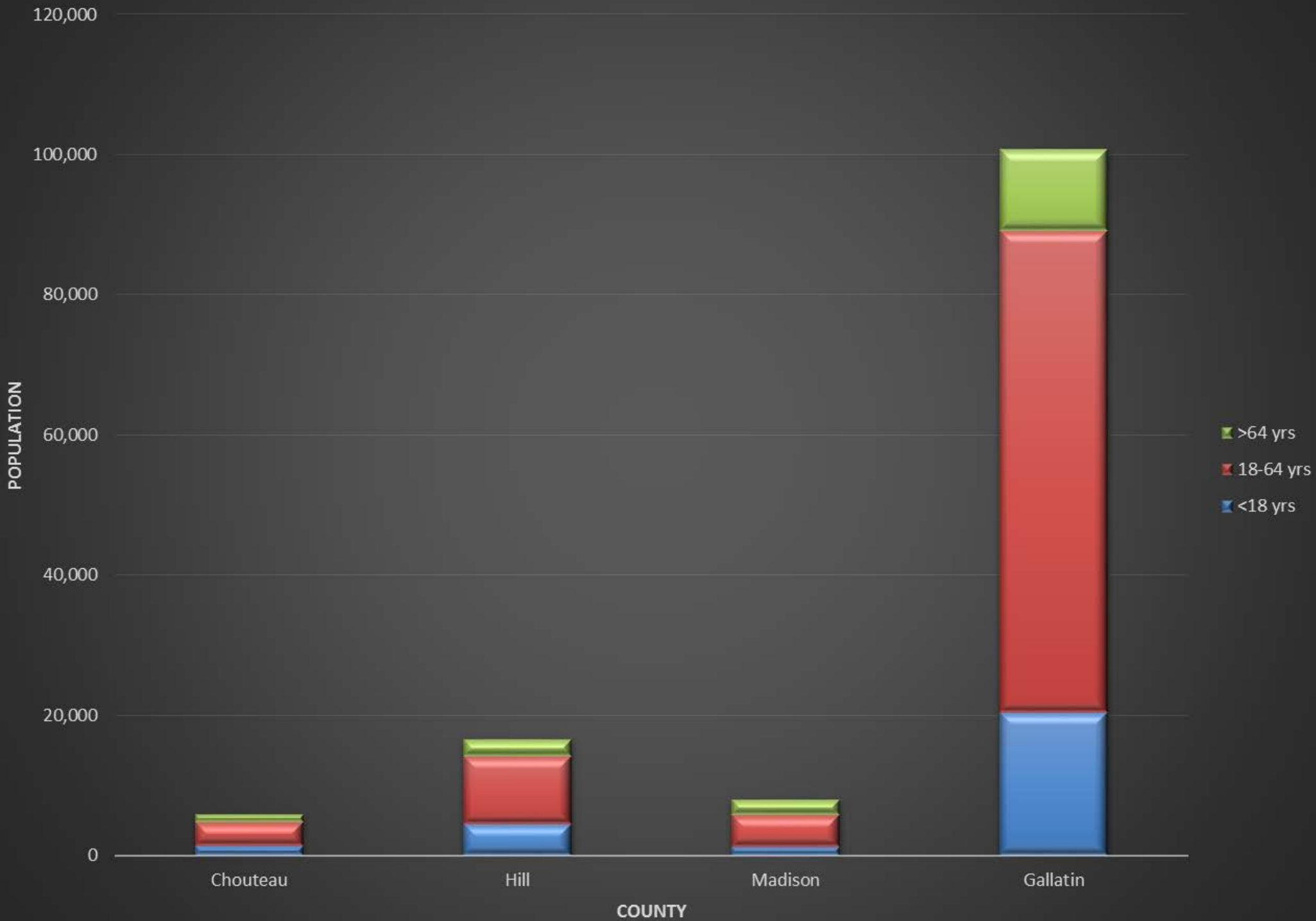


Total County Population by Age Group

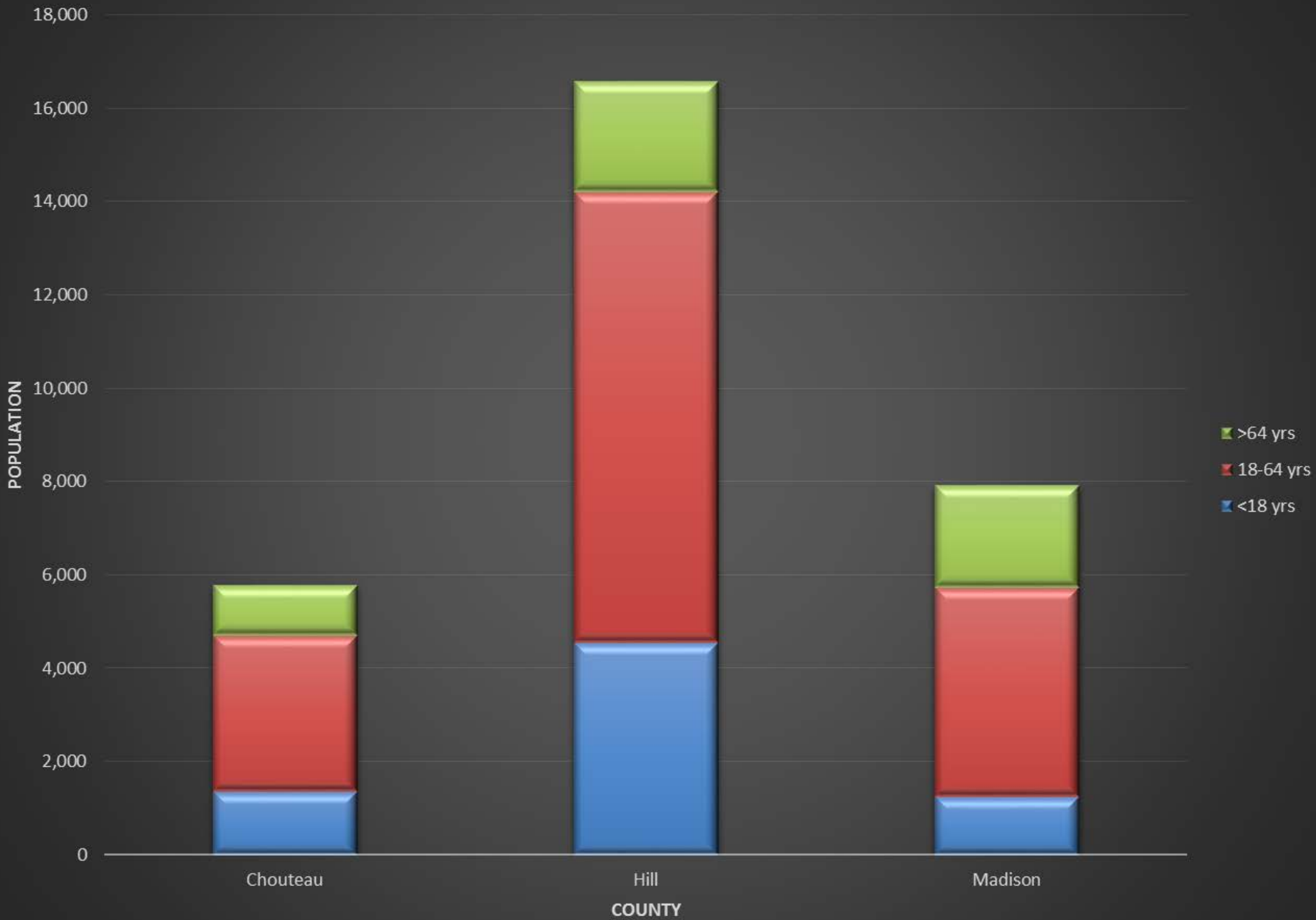
(ACS 2009-2014 averages)



Total county population by age group (2015 estimates)



Total county population by age group (2015 estimates)



Age Distribution by County (Produced with Headwaters Economics' Economic Profile System)

Age & Gender Distribution, 2014*

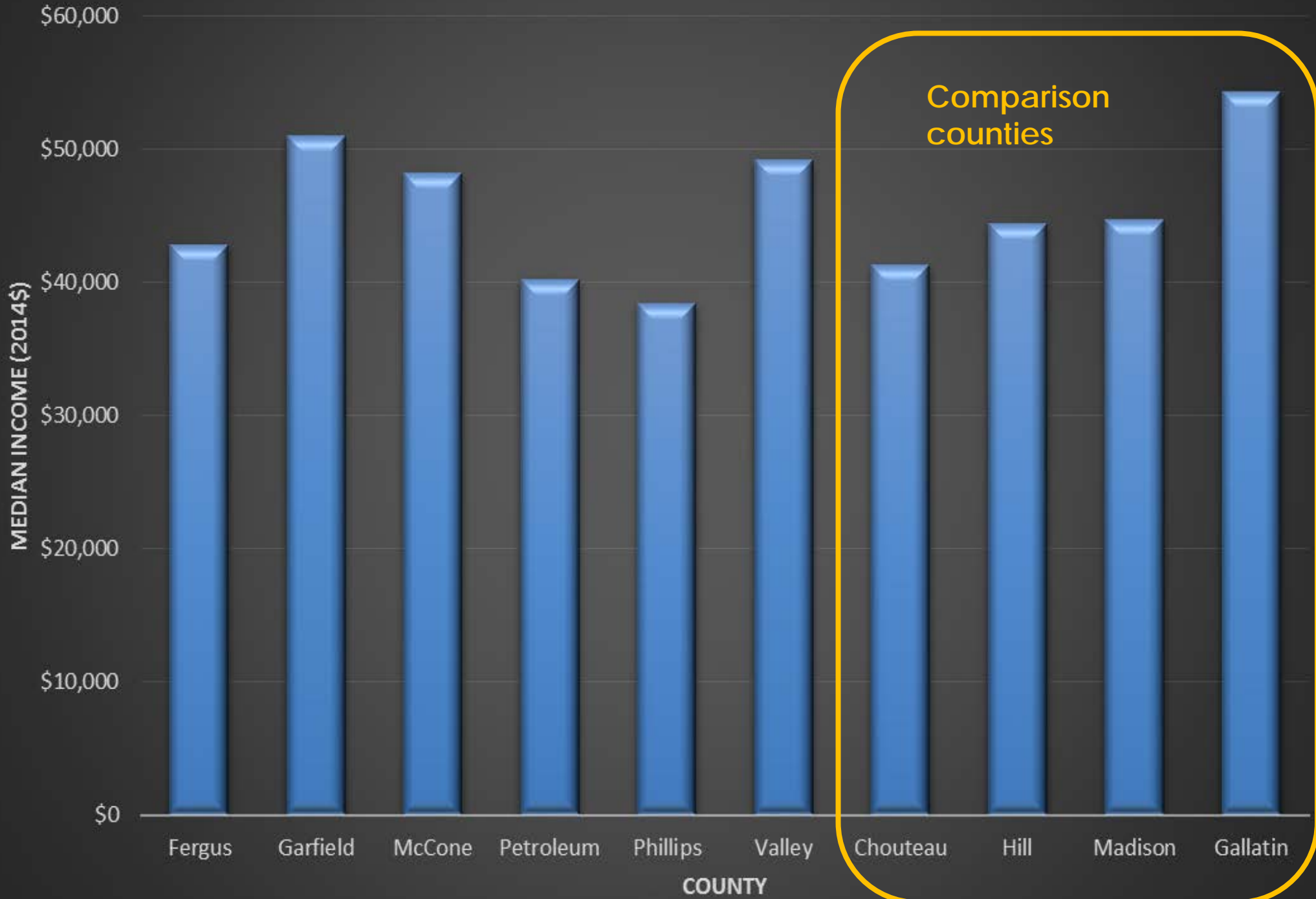
	Petroleum County, MT	Fergus County, MT	Garfield County, MT	Valley County, MT	McCone County, MT	Phillips County, MT
Total Population	489	11,496	1,097	7,518	1,758	4,194
Under 5 years	.23	565	.78	392	.113	245
5 to 9 years	.4	591	.70	563	.75	.260
10 to 14 years	.38	696	.73	432	.91	.258
15 to 19 years	.27	602	.51	470	.78	287
20 to 24 years	.20	.454	.40	.331	.59	.157
25 to 29 years	.6	578	.45	341	.107	152
30 to 34 years	.31	597	.83	368	.91	253
35 to 39 years	.17	578	.53	461	.87	.194
40 to 44 years	.49	.612	.41	.344	.61	.176
45 to 49 years	.42	675	.95	447	.96	304
50 to 54 years	.48	975	.50	592	192	385
55 to 59 years	.49	1,135	.86	548	176	420
60 to 64 years	.47	898	.89	622	.133	.241
65 to 69 years	.17	673	.119	479	.108	.220
70 to 74 years	.46	632	.42	325	.80	201
75 to 79 years	.4	.394	.26	328	.86	.203
80 to 84 years	.20	.449	.30	.225	.79	.117
85 years and over	.1	.392	.26	.250	.46	.121
Total Female	241	5,732	576	3,755	819	2,080
Total Male	248	5,764	521	3,763	939	2,114

Note to Users:

Because ACS is based on a survey, it is subject to error. The Census Bureau reports the accuracy of the data by providing margins of error (MOE) for every data point. In this report, we alert the user to the data accuracy using color-coded text in the tables: **BLACK** indicates a coefficient of variation (CV) < 12%; **ORANGE** (preceded with one dot) indicates between 12 and 40%; and **RED BOLD** (preceded with two dots) indicates a CV > 40%.

* The data in this table are calculated by ACS using annual surveys conducted during 2009-2014 and are representative of average characteristics during this period.

Median household income



Median value of owner-occupied housing units

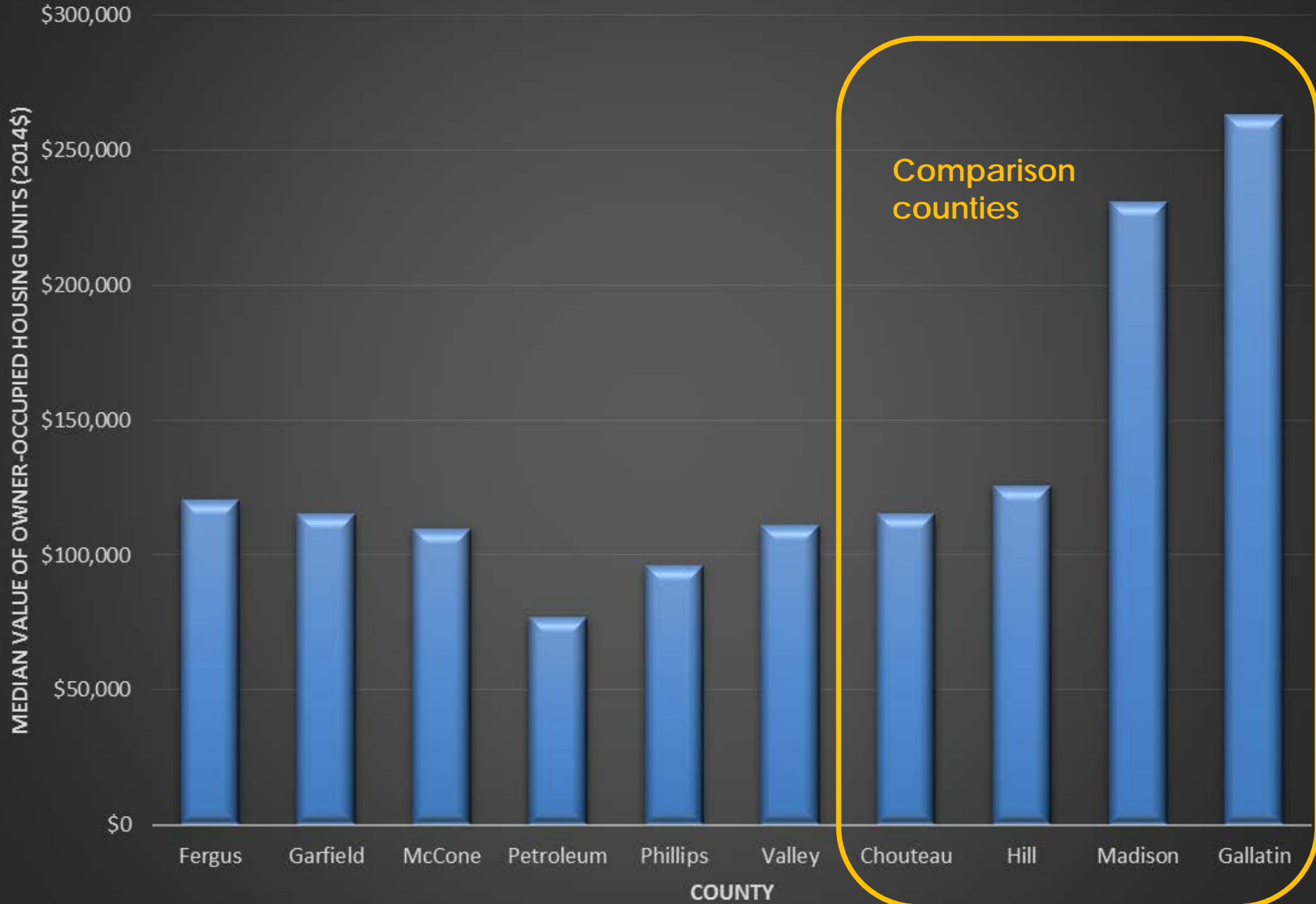


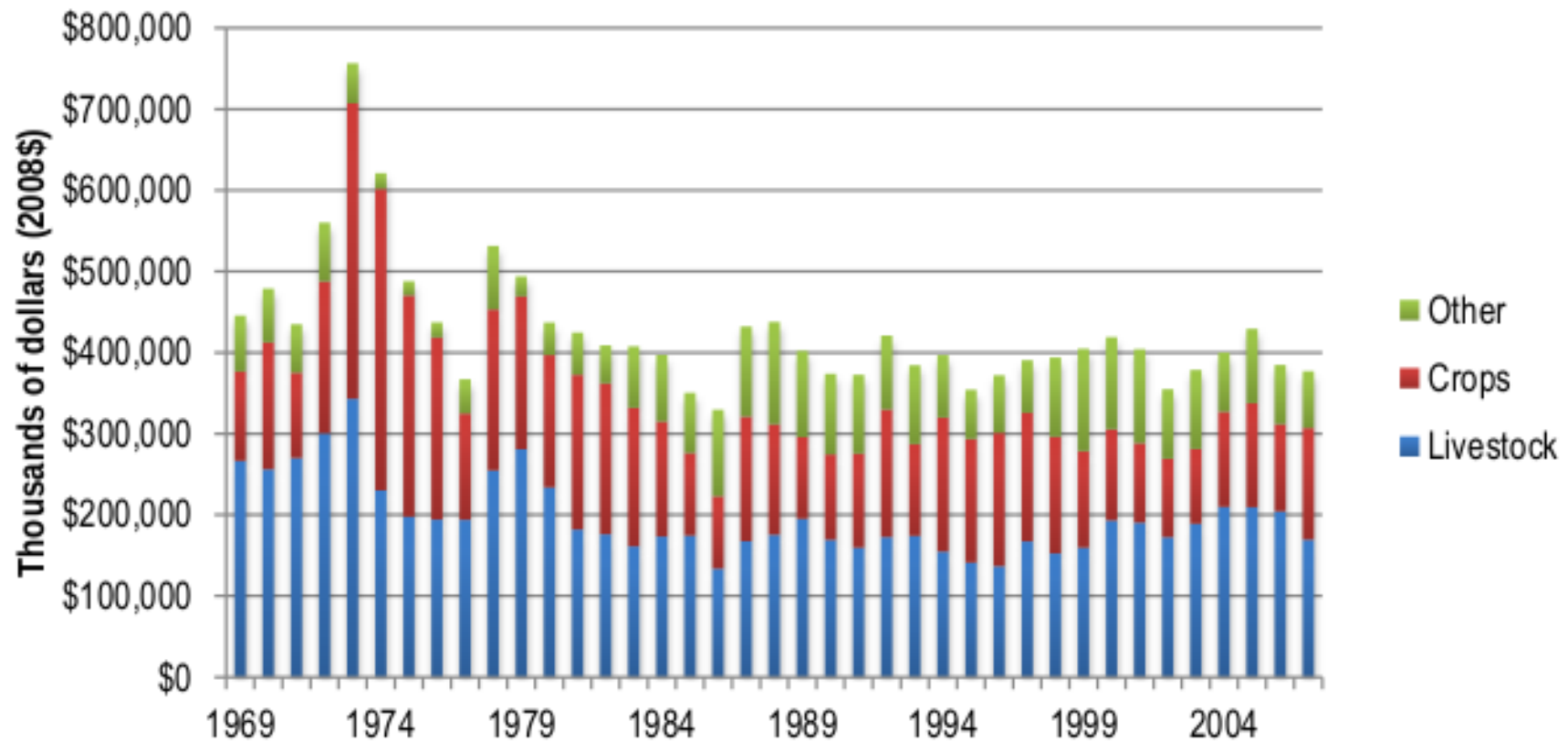
Table 3. Employment by industry for the six-county area surrounding the Charles M. Russell National Wildlife Refuge, 2007.

Industry	Industry output (\$ millions)	Employment (number of full- and part-time jobs)	Labor income (\$ millions)
Agriculture, forestry, fishing, and hunting	368.9	4,093	22.6
Mining	40.5	74	8.3
Construction	147.4	1,206	44.7
Manufacturing	184.2	618	22.8
Transportation and public utility	214.4	578	41.9
Wholesale trade	62.2	586	22.3
Retail trade	78.6	1,402	33.5
Finance, insurance, and real estate	237.3	1,129	32.1
Professional-scientific and technical services	33.3	447	17.1
Health and social services	112.3	1,688	54.4
Arts-entertainment and recreation	12.2	413	3.6
Accommodation and food services	45.6	1,026	12.6
Other services	119.0	1,887	29.2
Government (Federal, State, local, and military)	158.3	2,799	121.2
Total	1814.2	17,945	466.4

Source: Minnesota IMPLAN Group, Inc., 2007.

Note: County-level data are available for employment but are not shown because the new North American Industrial Classification System (NAICS) introduced in 2001 prevents disclosure of employment numbers for many industries in small communities.

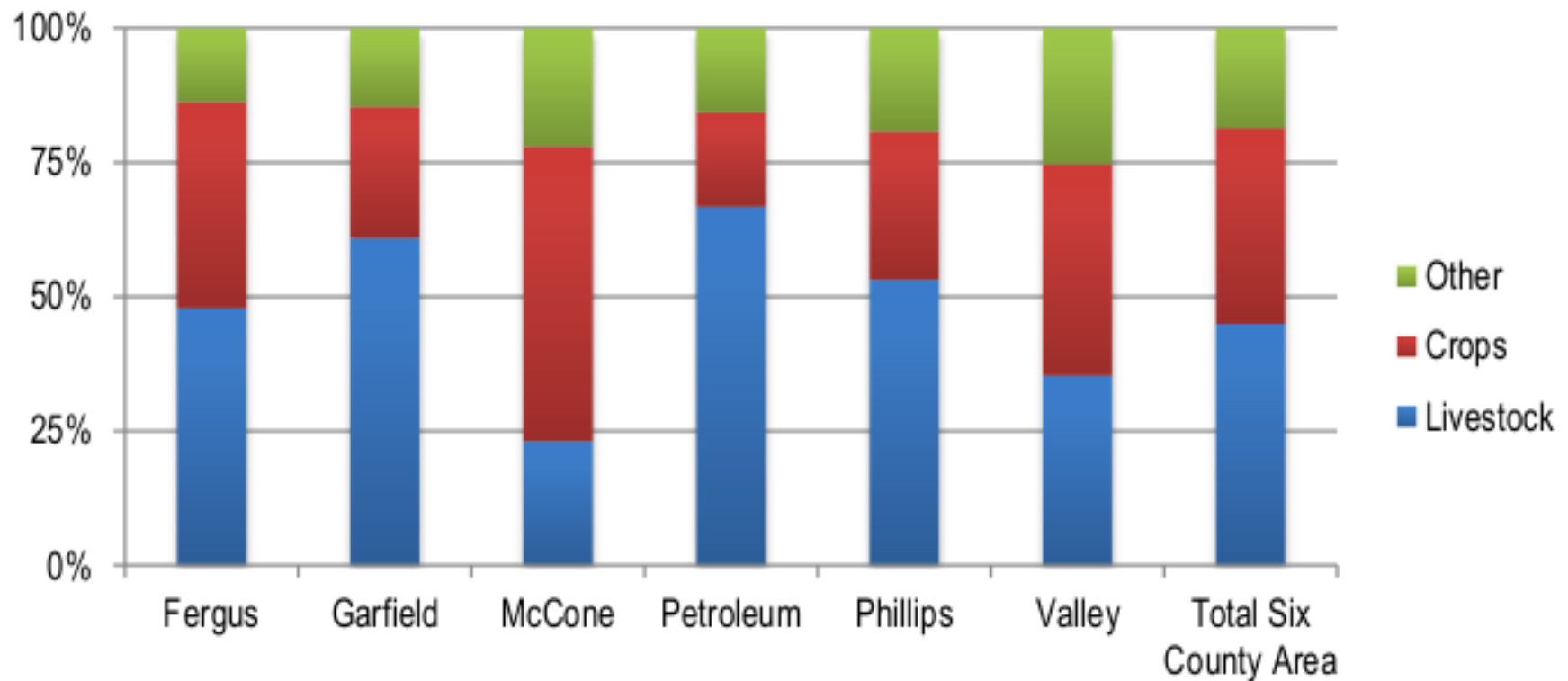
Trends in gross agricultural revenues (1969-2007)



Source: U.S. Department of Commerce, 2008. Other sources of revenue for agricultural operations include government payments, value of home consumption, machine hire and (or) custom work, rental income, and income from forest products.

Figure 3. Trends in gross agriculture revenues in the region surrounding the Charles M. Russell National Wildlife Refuge, 1969–2007.

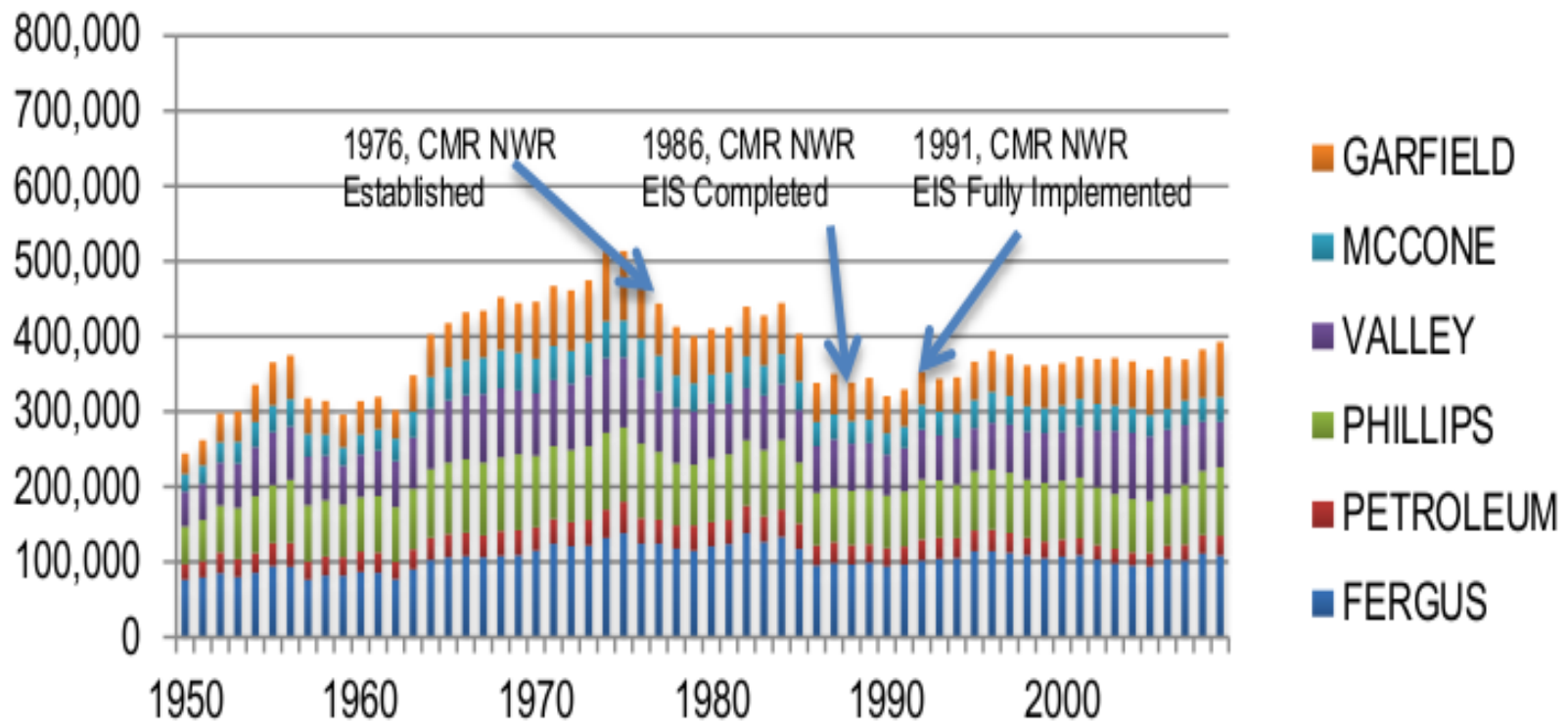
Total gross revenues from agriculture by County (2007)



Source: U.S. Department of Commerce, 2008. Other sources of revenue for agricultural operations include government payments, value of home consumption, machine hire and (or) custom work, rental income, and income from forest products.

Figure 4. Breakdown of total gross revenues from agriculture by county, 2007.

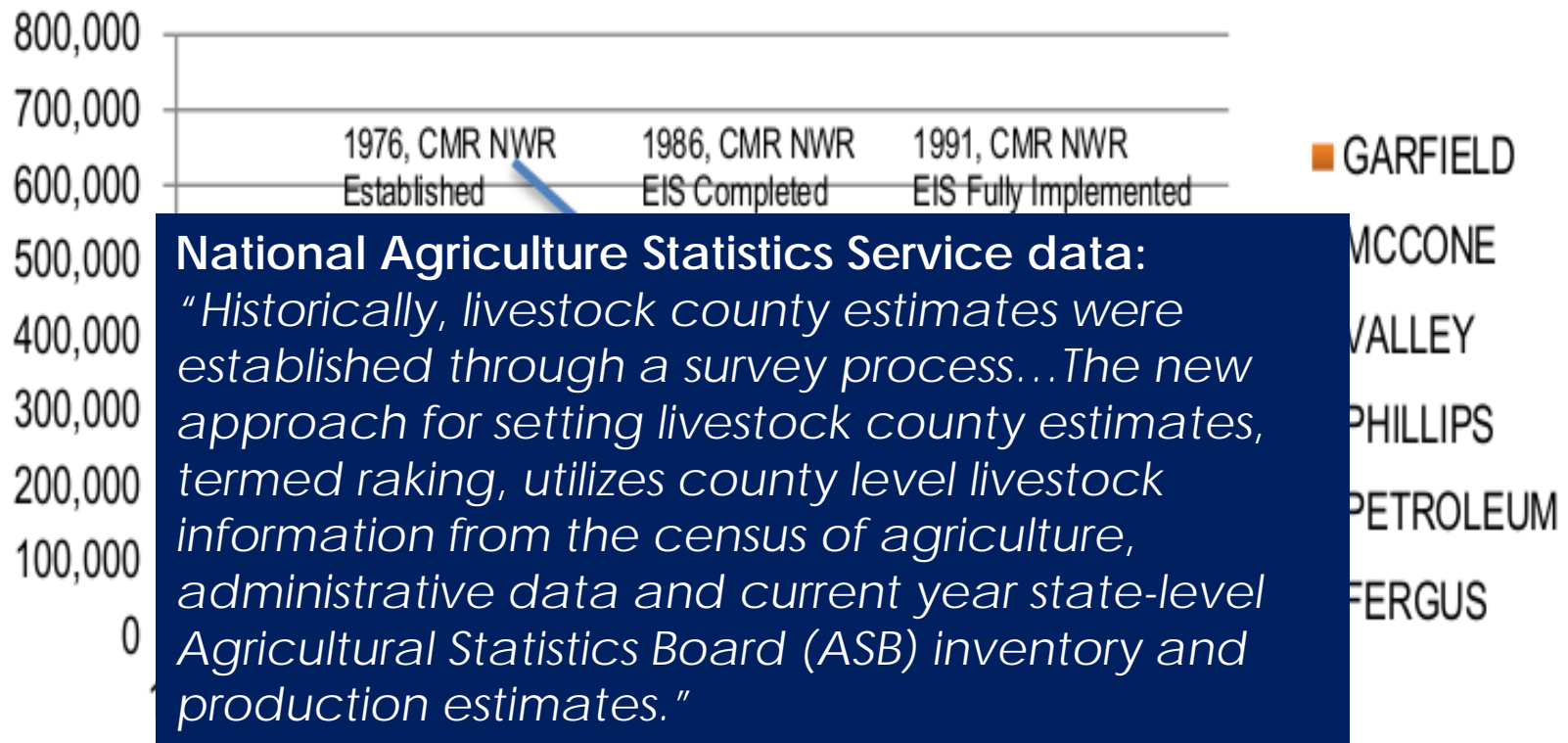
Number of Cattle per County



Source: http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp

Figure 5. Cattle inventory for six counties surrounding Charles M. Russell National Wildlife Refuge, 1950–2009.

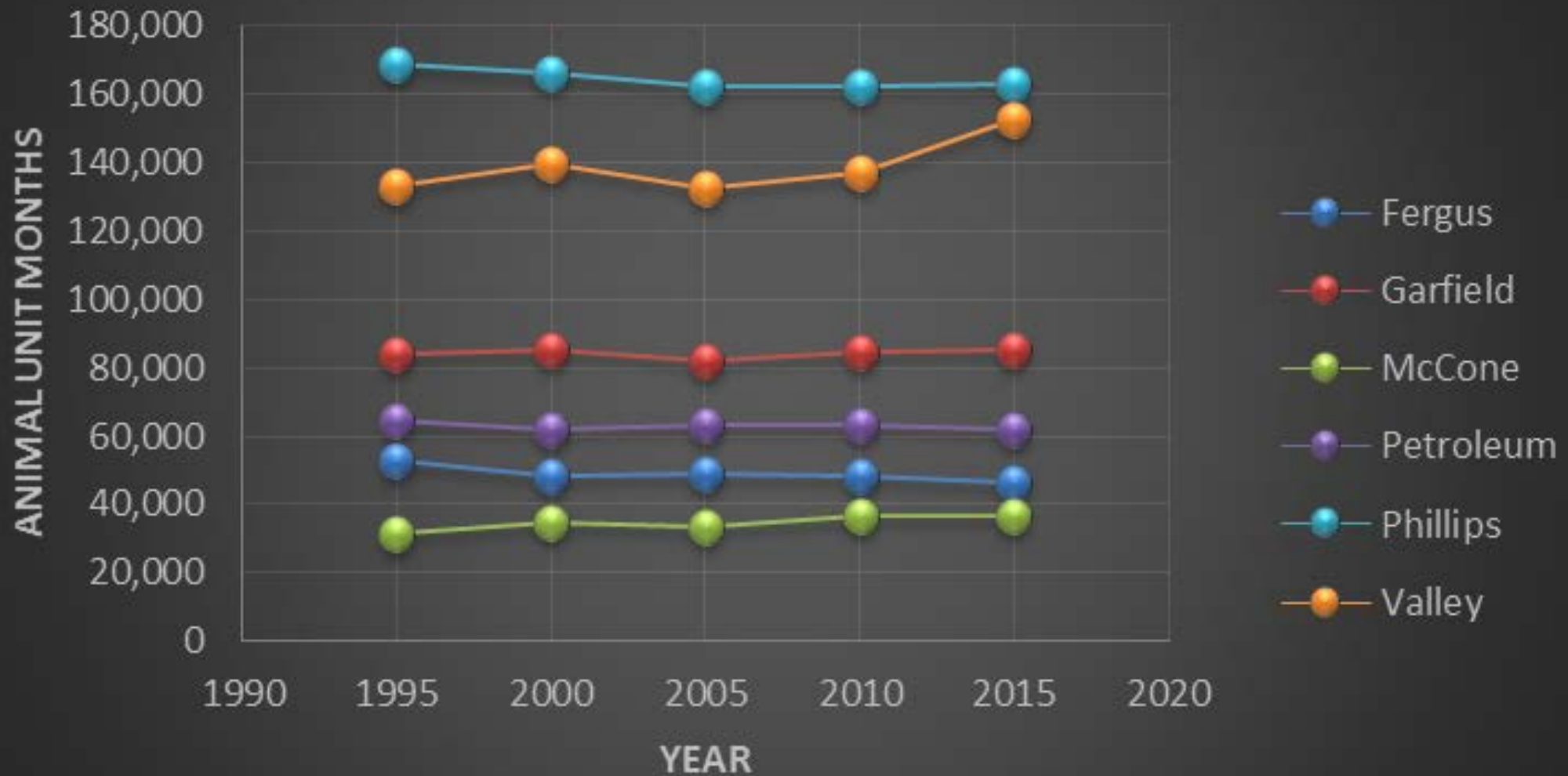
Number of Cattle per County



Source: http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp

Figure 5. Cattle inventory for six counties surrounding Charles M. Russell National Wildlife Refuge, 1950–2009.

BLM Billed Use By County



TOTAL AUM BY COUNTY (2008)

Table 7. Total Animal Unit Months (AUM) by county, 2008.

County	Total annual AUMs of feed needed	U.S. Fish and Wildlife Service		Bureau of Land Management		Montana Department of Natural Resource Conservation		Other	
		AUMs	Percentage of total AUMs	AUMs	Percentage of total AUMs	AUMs	Percentage of total AUMs	AUMs	Percentage of total AUMs
Fergus	711,113	857	0.1	58,943	8.3	31,160	4.4	620,153	87.2
Garfield	466,606	7,088	1.5	91,961	19.7	32,784	7.0	334,773	71.7
McCone	248,911	2,601	1.0	40,135	16.1	18,951	7.6	187,224	75.2
Petroleum	166,607	501	0.3	65,302	39.2	13,017	7.8	87,787	52.7
Phillips	509,972	6,020	1.2	120,801	23.7	37,475	7.3	345,676	67.8
Valley	432,244	4,514	1.0	143,975	33.3	44,208	10.2	239,547	55.4
Total	2,535,452	21,581	0.9	521,117	20.6	177,595	7.0	1,815,159	71.6

Calculated as [(Cattle and Calves inventory/2) x 12 months] + [(Sheep and Lamb inventory/5) x 12 months].

Dependency: agency AUMs and (or) Total AUMs of Feed Needed.

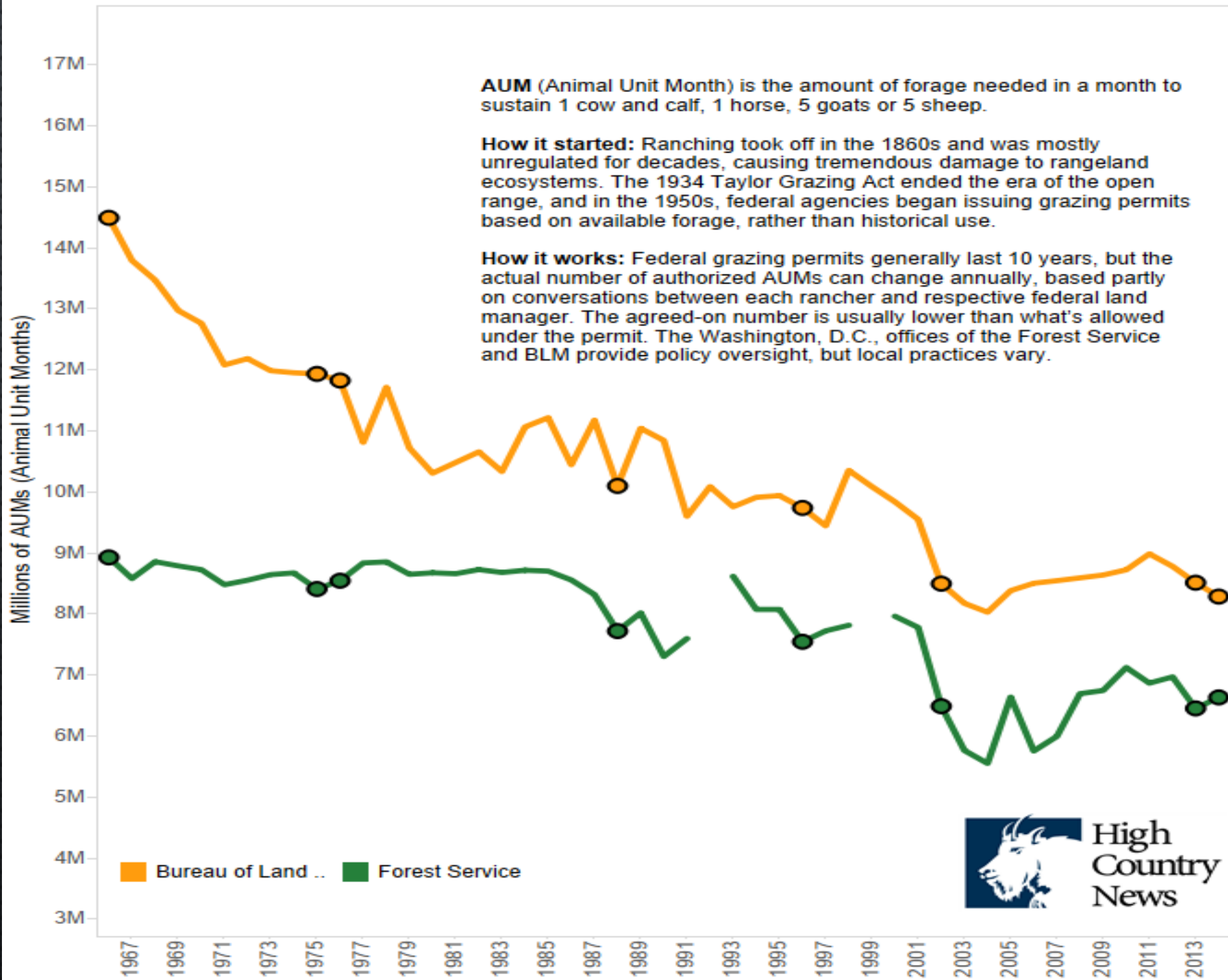
FWS numbers: 10-year annual average.

BLM Source: Rhodes, B.J., (April) 2009.

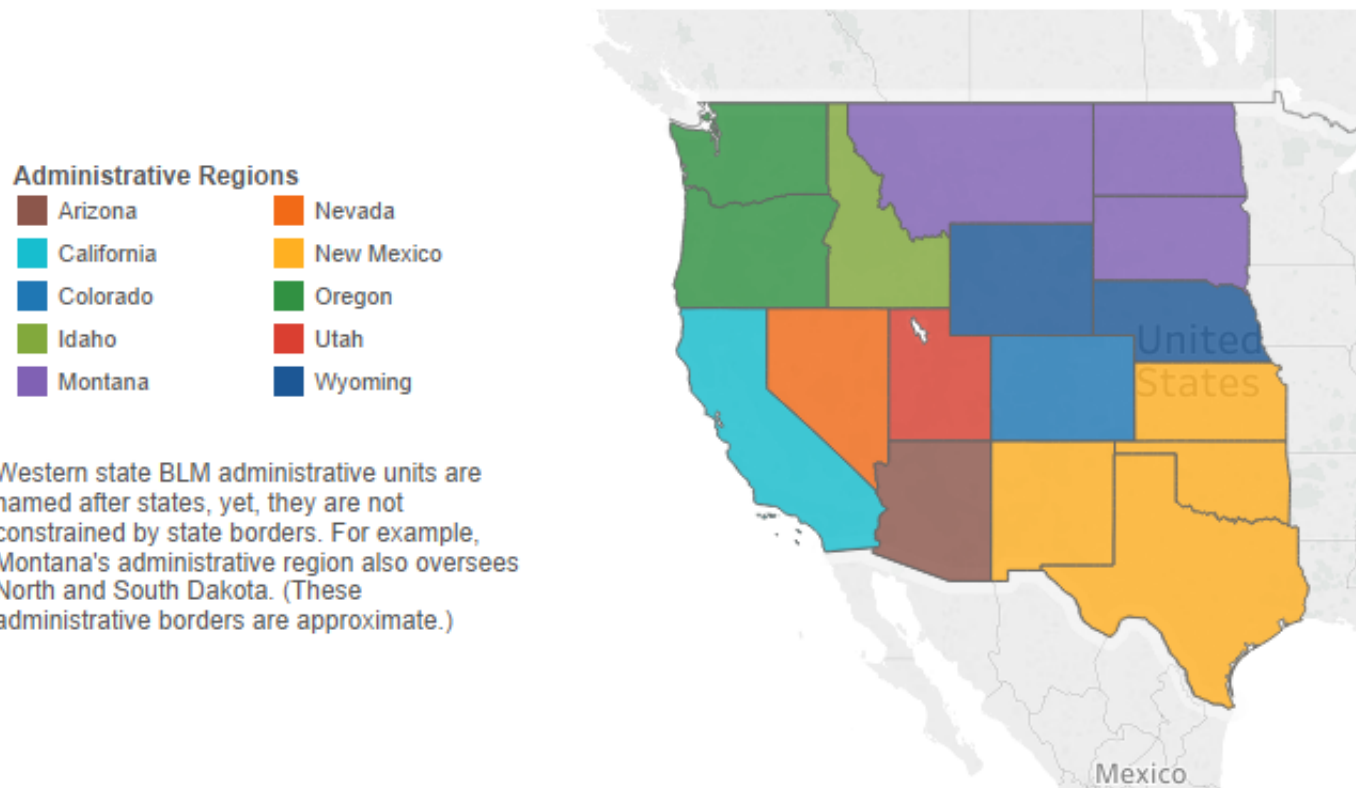
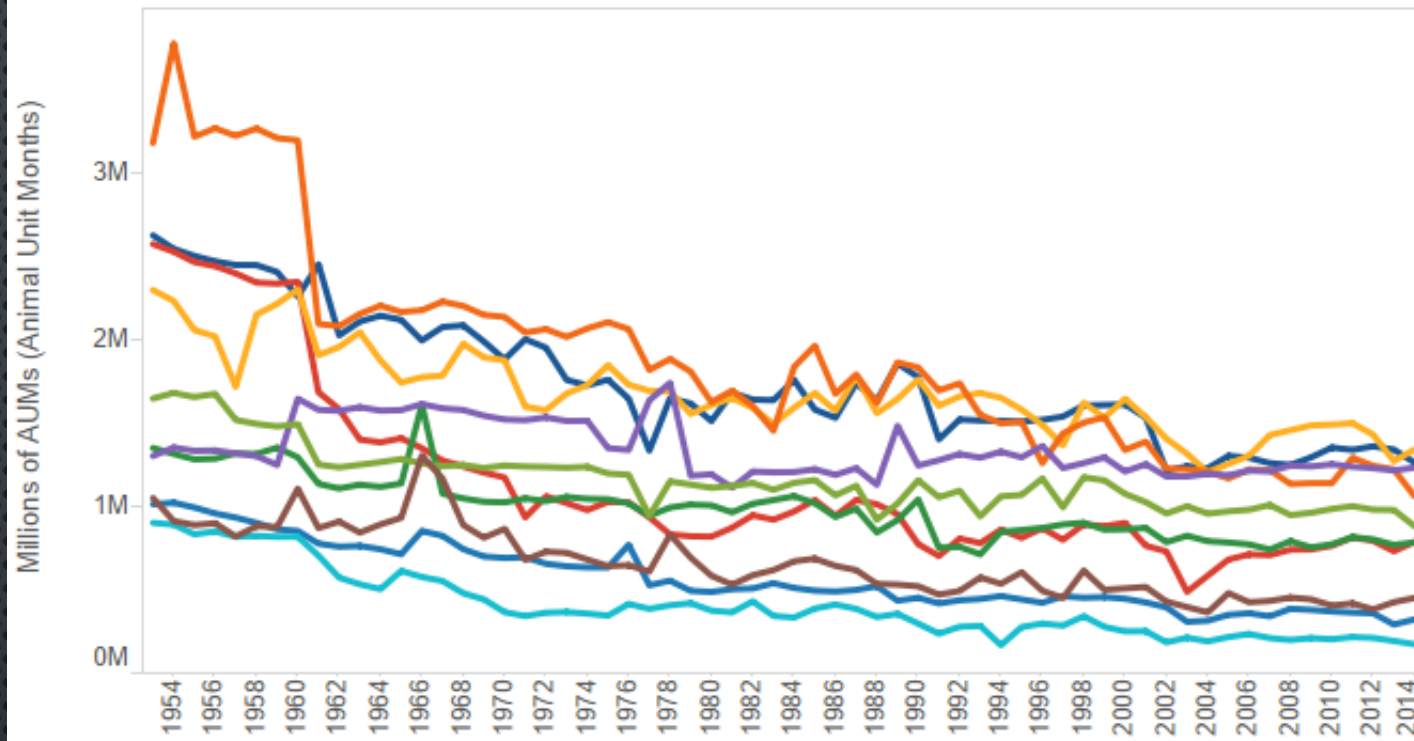
DNRC Source: Rooney, C., (April) 2009.

Other: are private and (or) other lands—not on Federal or State lands. This is actually an underestimate, the Ag Census is the physical number at the end of December, not the annual average.

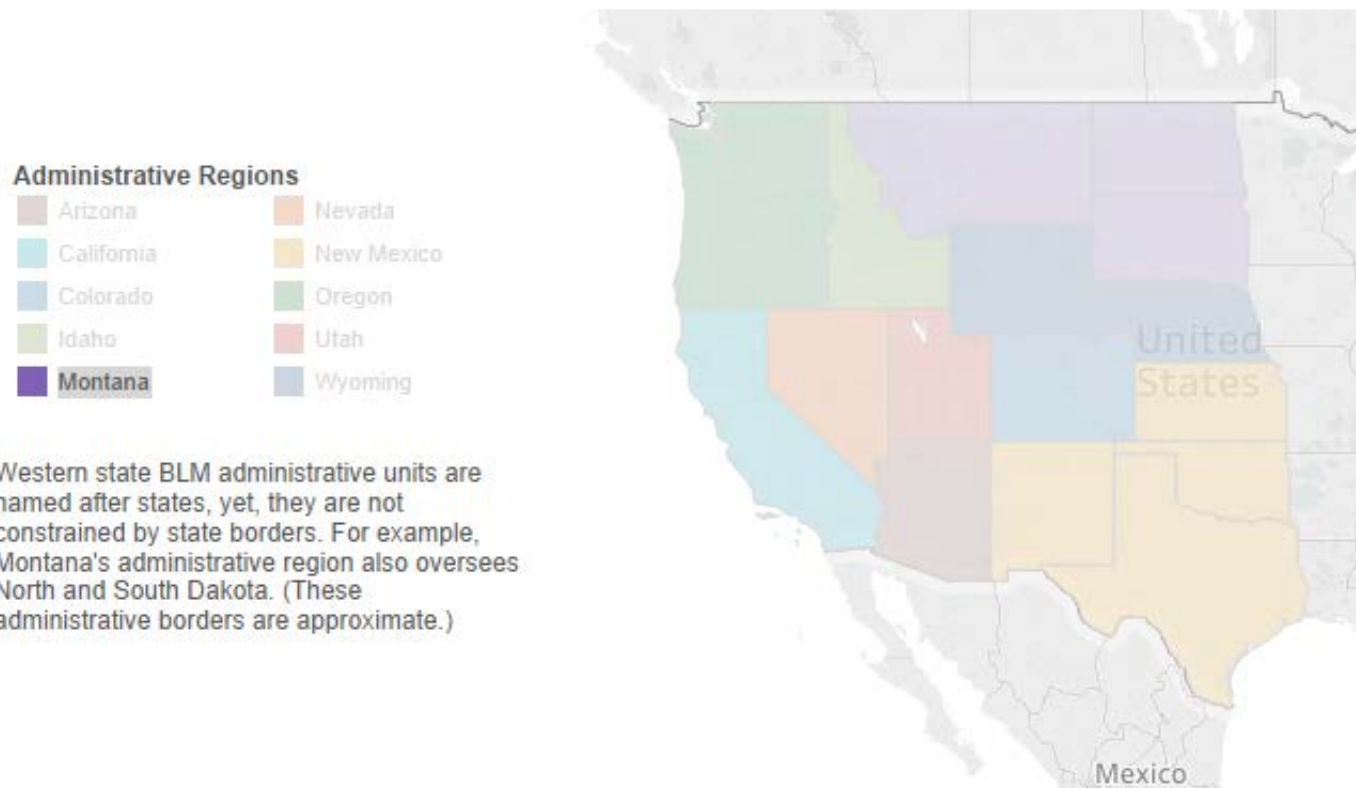
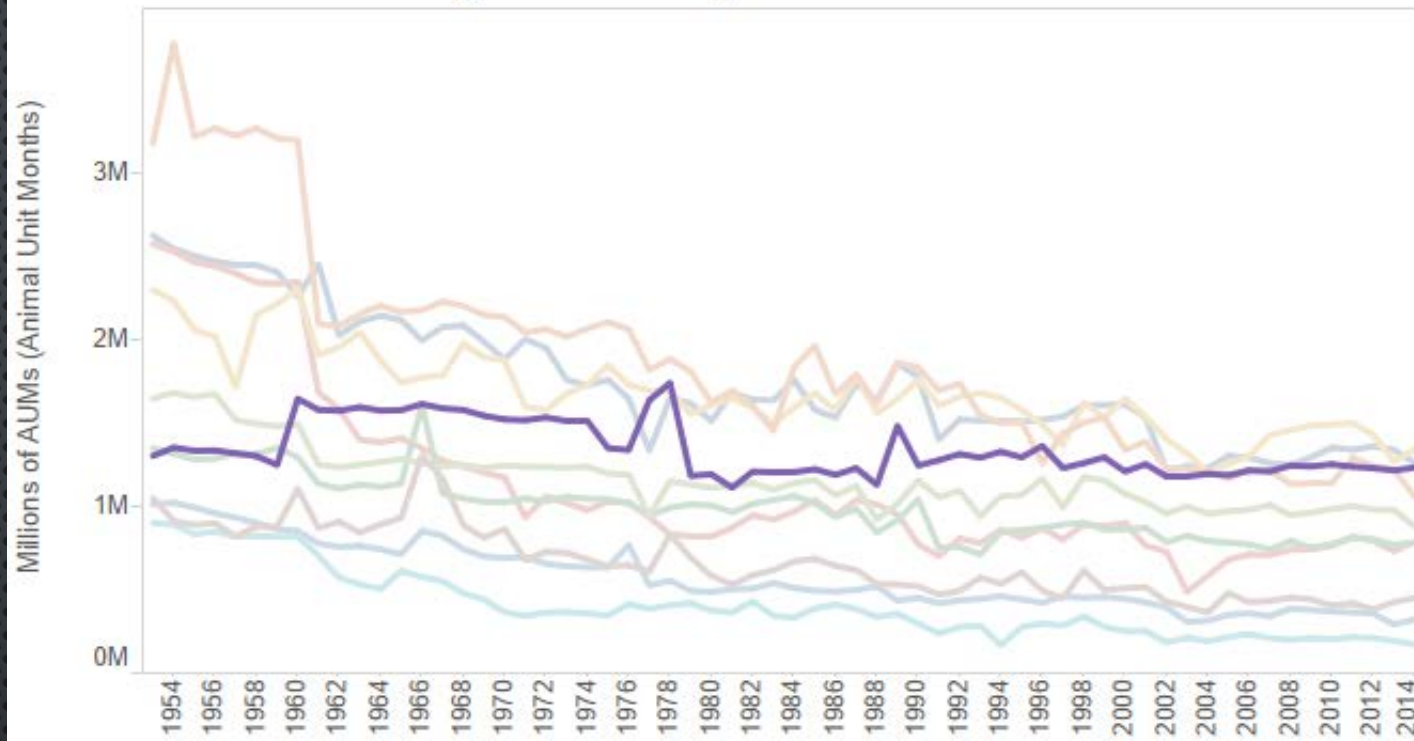
Fifty years of Westwide grazing on BLM and Forest Service Land



Grazing on BLM land by state from 1953-2014



Grazing on BLM land by state from 1953-2014



Western state BLM administrative units are named after states, yet, they are not constrained by state borders. For example, Montana's administrative region also oversees North and South Dakota. (These administrative borders are approximate.)

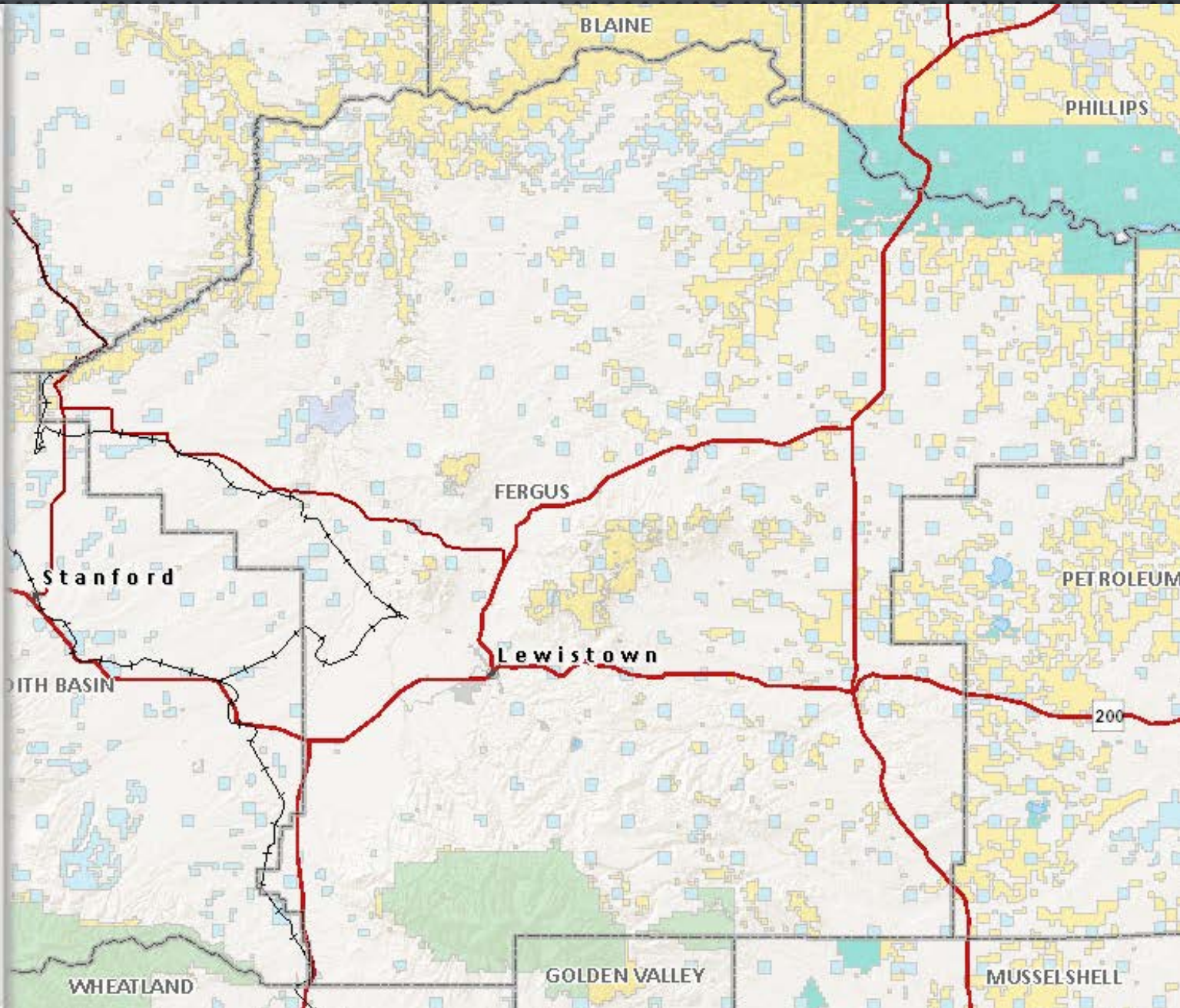
Land Ownership Distribution by County

(Maps generated using Montana Cadastral, Charts generated from Montana Natural Heritage Program Land Management Summary Data)

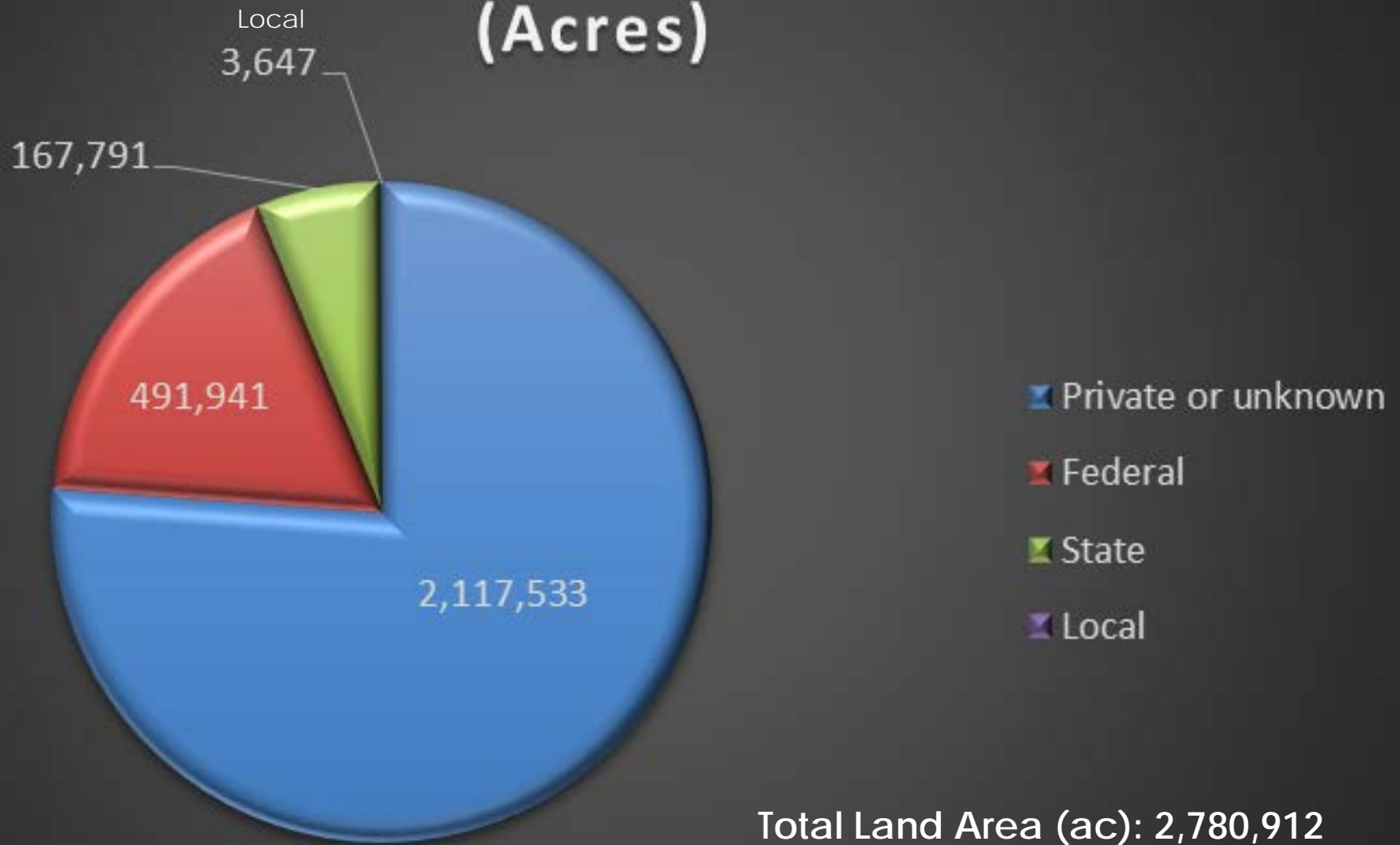


Land Ownership Legend

- NonPublicLand
- Bureau of Land Management
- Bureau of Reclamation
- US Fish and Wildlife
- National Park Service
- US Forest Service
- US Dept of Agriculture
- Defense Dept/Army Corp of Engineers
- State of Montana Misc.
- Montana State Trust Land
- Local Government
- Tribal
- Bureau of Indian Affairs Trust Land
- Unresolved Ownership



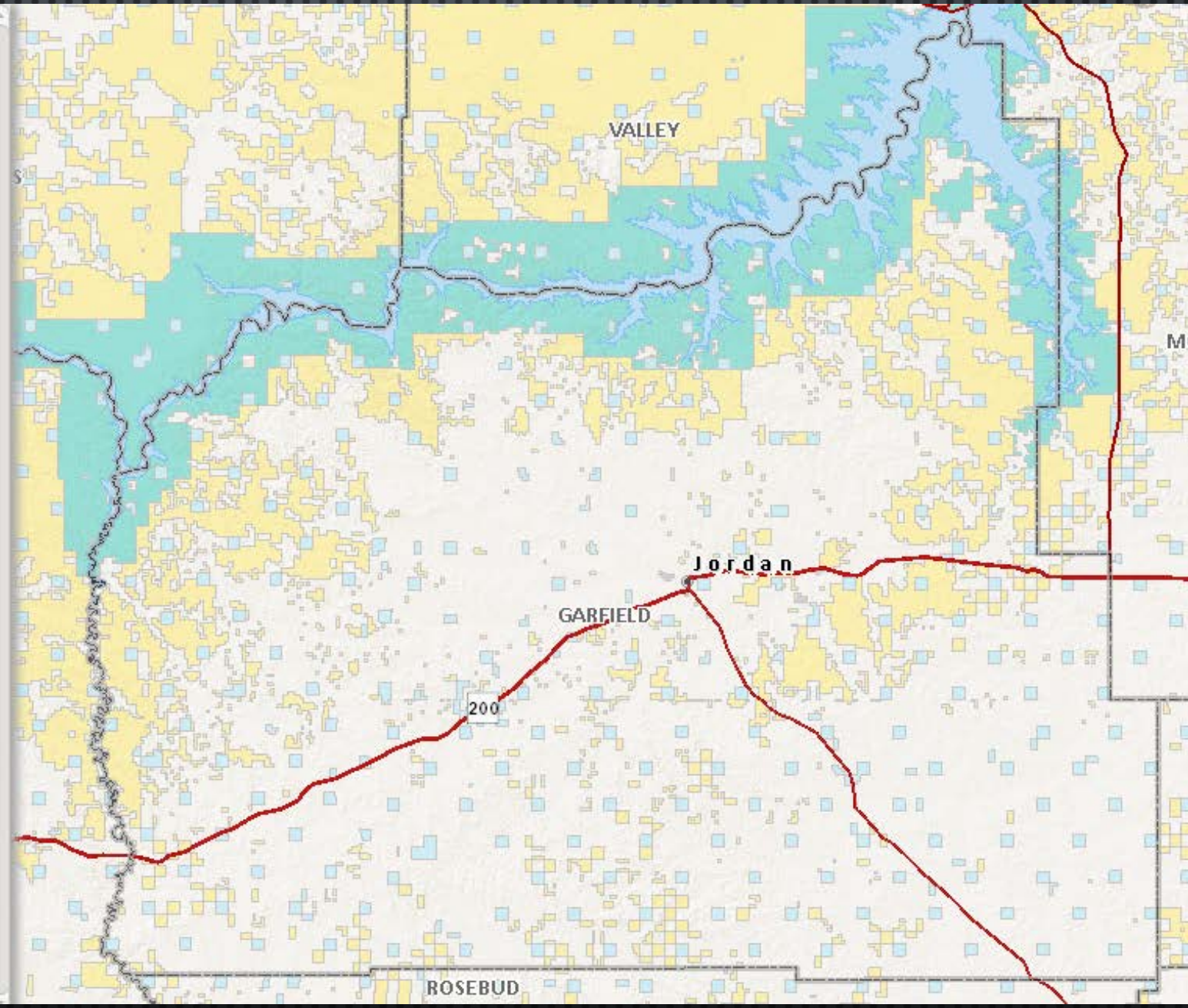
Fergus County Land Ownership (Acres)





Land Ownership Legend

- NonPublicLand
- Bureau of Land Management
- Bureau of Reclamation
- US Fish and Wildlife
- National Park Service
- US Forest Service
- US Dept of Agriculture
- Defense Dept/Army Corp of Engineers
- State of Montana Misc.
- Montana State Trust Land
- Local Government
- Tribal
- Bureau of Indian Affairs Trust Land
- Unresolved Ownership



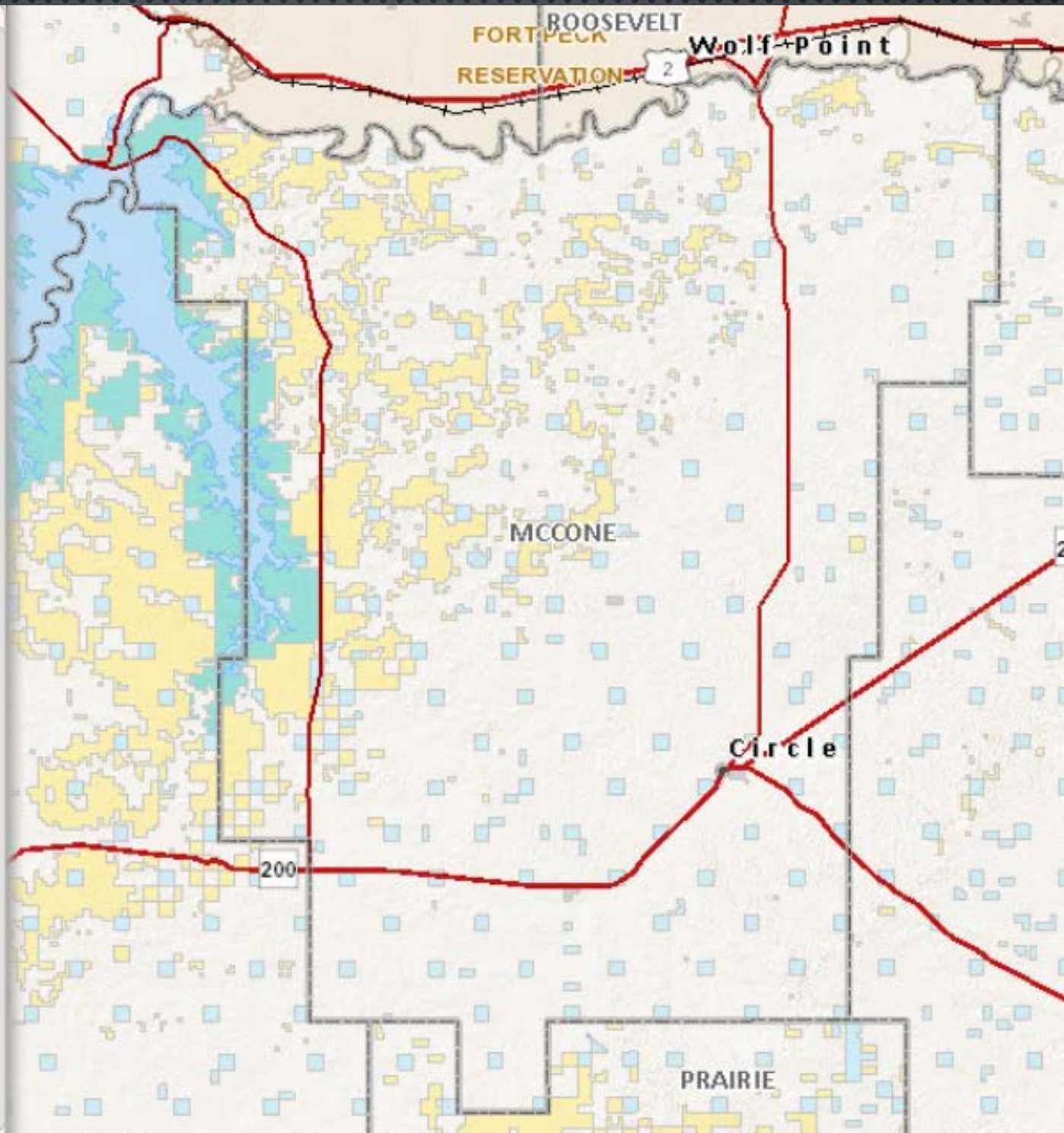
Garfield County Land Ownership (Acres)



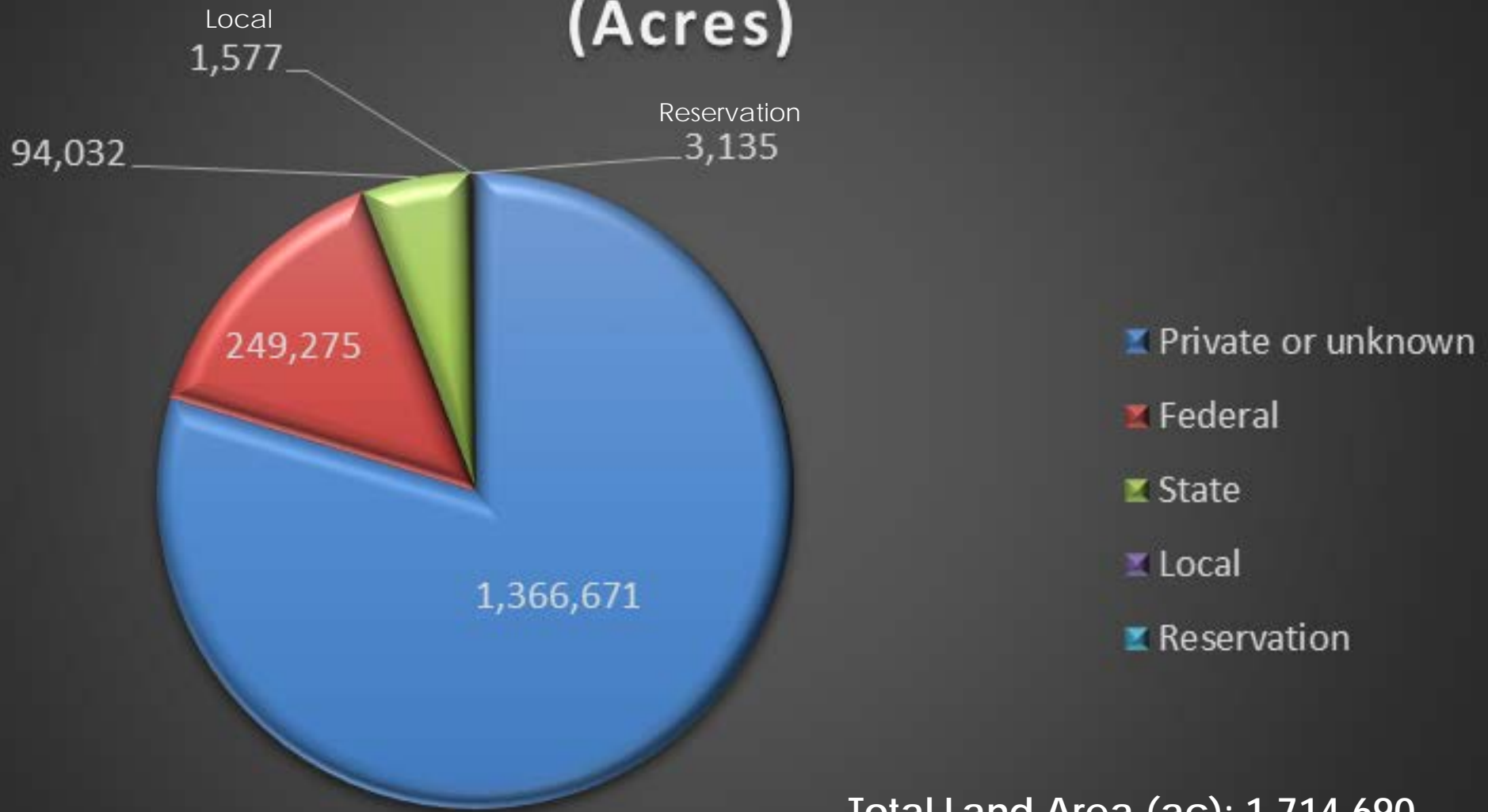


Land Ownership Legend

- NonPublicLand
- Bureau of Land Management
- Bureau of Reclamation
- US Fish and Wildlife
- National Park Service
- US Forest Service
- US Dept of Agriculture
- Defense Dept/Army Corp of Engineers
- State of Montana Misc.
- Montana State Trust Land
- Local Government
- Tribal
- Bureau of Indian Affairs Trust Land
- Unresolved Ownership



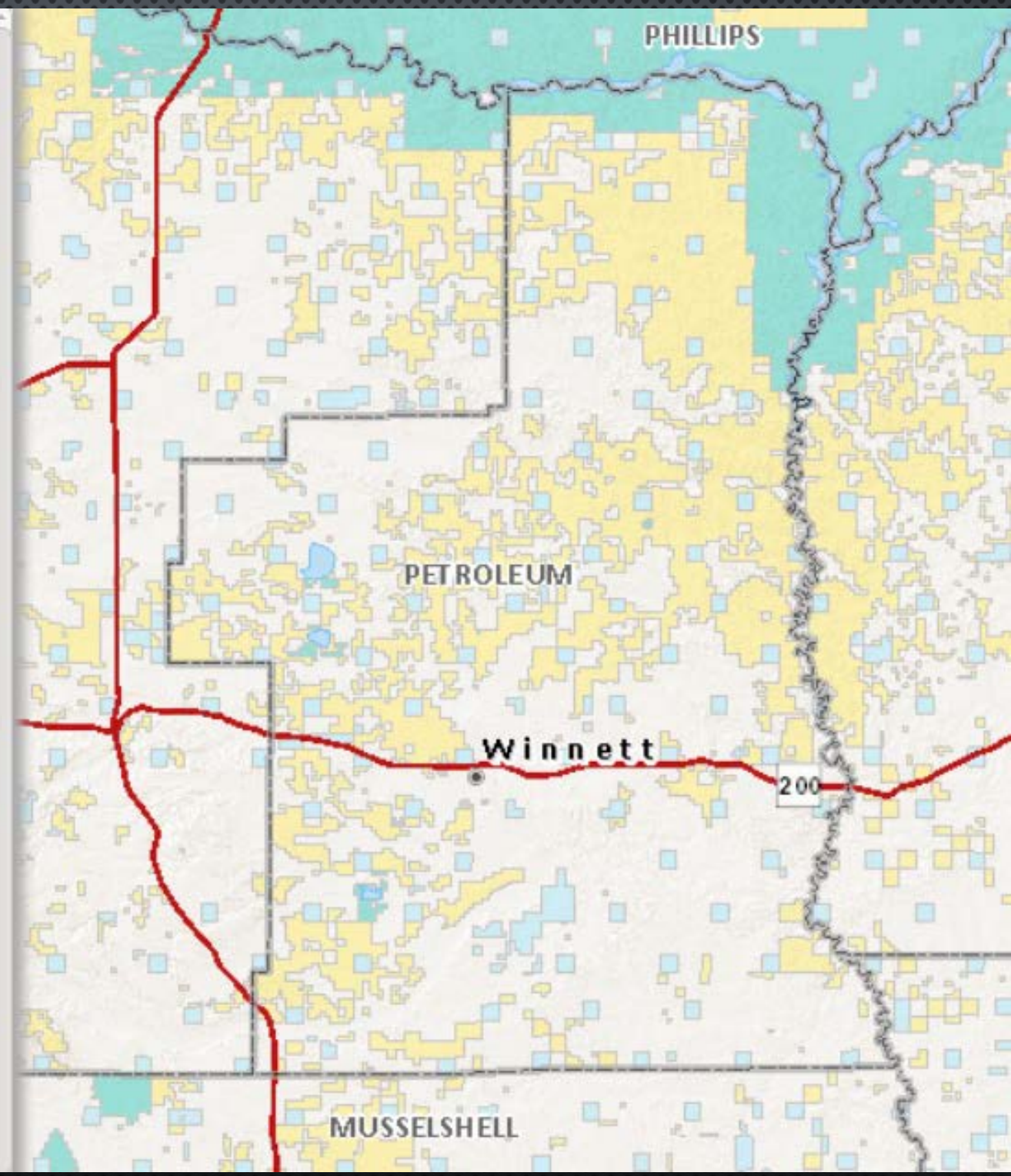
McCone County Land Ownership (Acres)



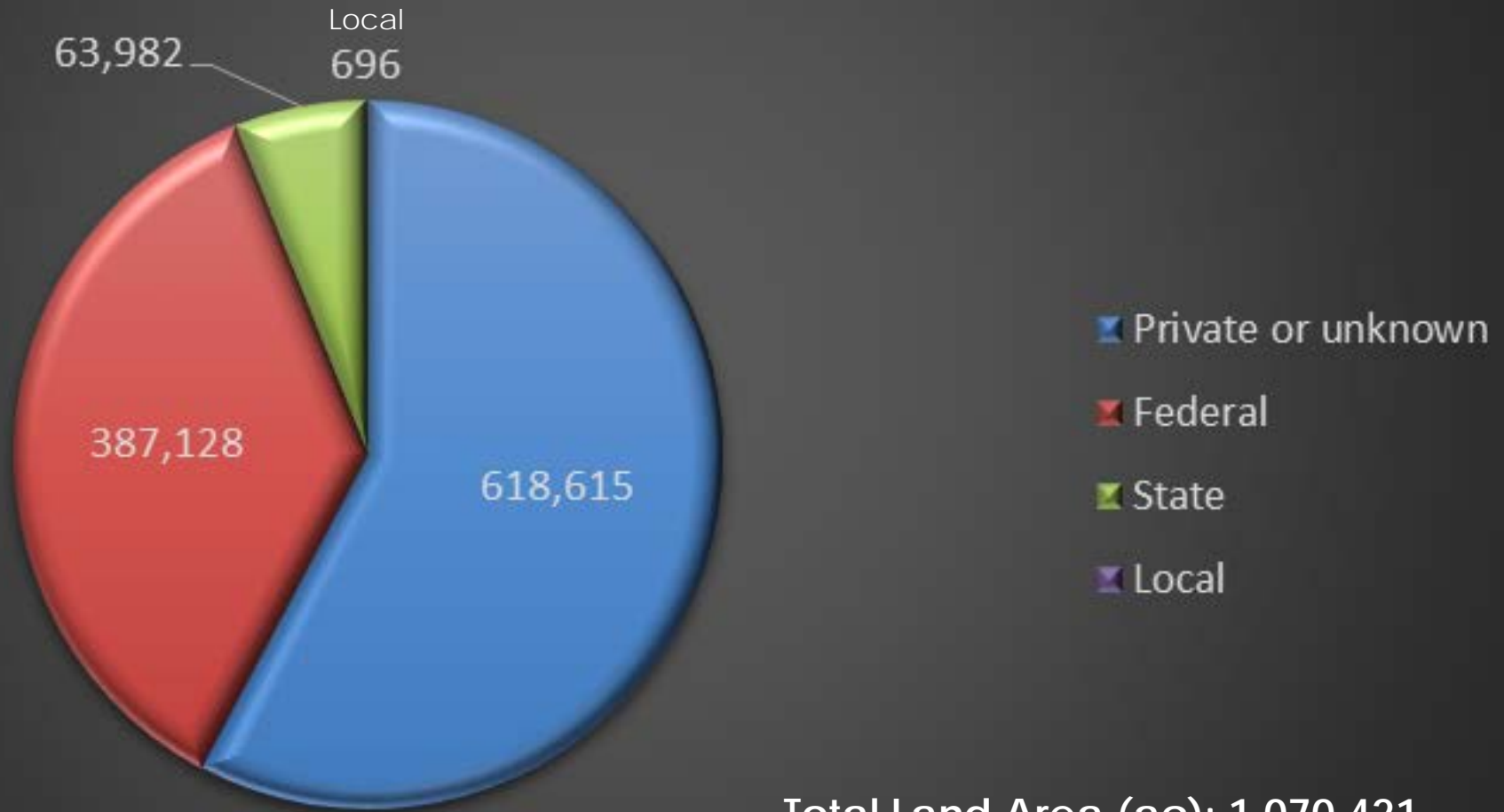
Total Land Area (ac): 1,714,690

Land Ownership Legend

-  NonPublicLand
-  Bureau of Land Management
-  Bureau of Reclamation
-  US Fish and Wildlife
-  National Park Service
-  US Forest Service
-  US Dept of Agriculture
-  Defense Dept/Army Corp of Engineers
-  State of Montana Misc.
-  Montana State Trust Land
-  Local Government
-  Tribal
-  Bureau of Indian Affairs Trust Land
-  Unresolved Ownership



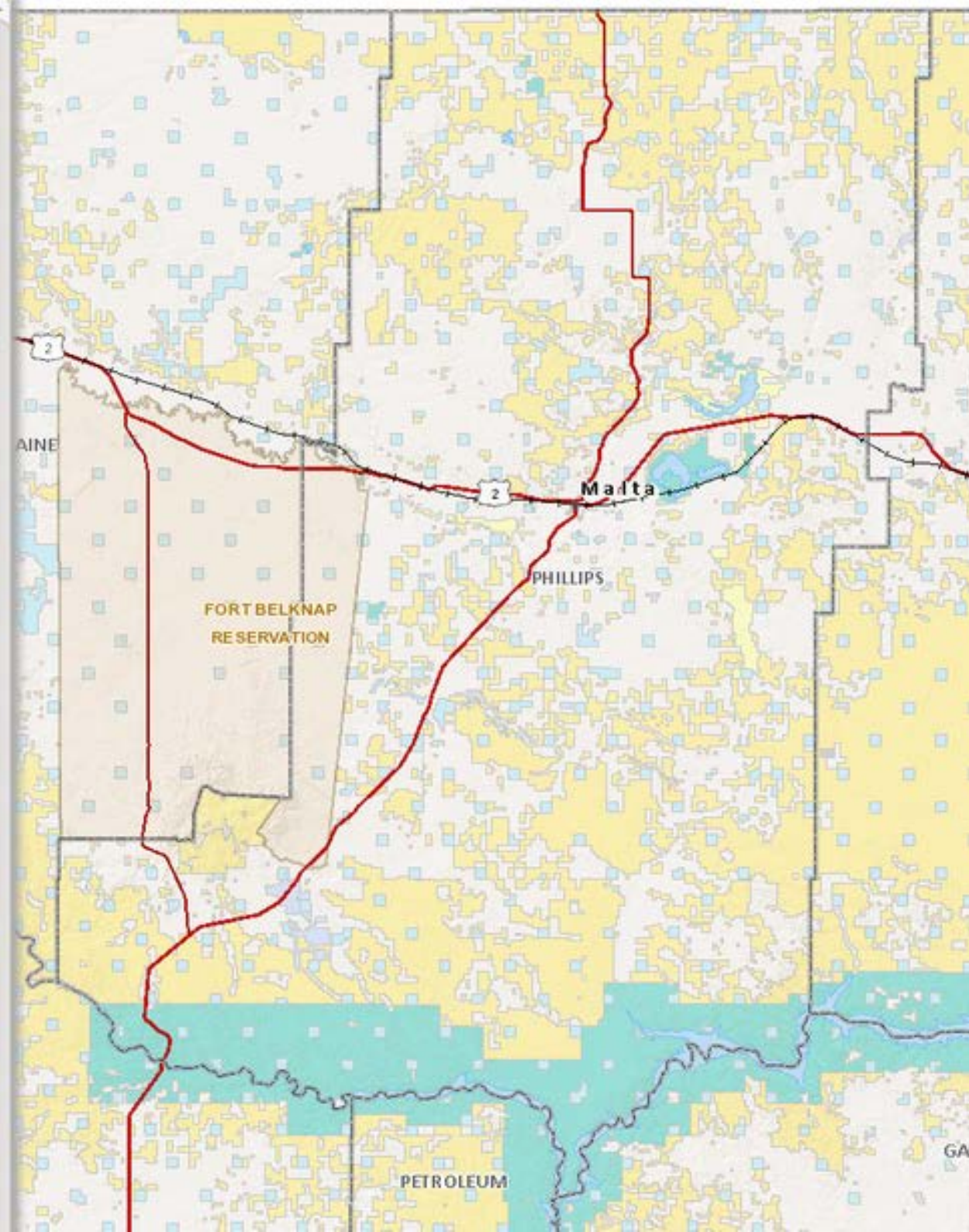
Petroleum County Land Ownership (Acres)



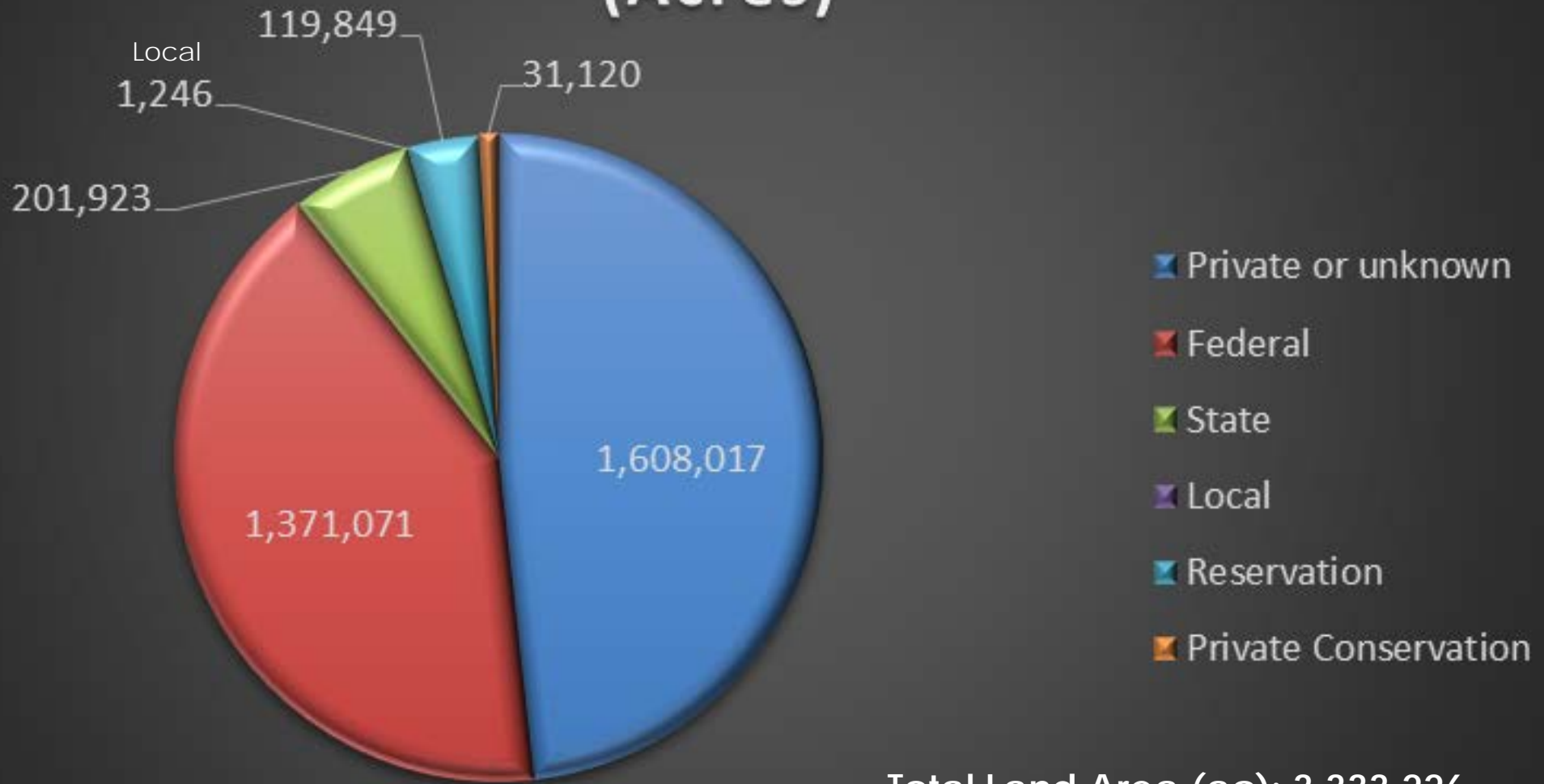
Total Land Area (ac): 1,070,421

Land Ownership Legend

- NonPublicLand
- Bureau of Land Management
- Bureau of Reclamation
- US Fish and Wildlife
- National Park Service
- US Forest Service
- US Dept of Agriculture
- Defense Dept/Army Corp of Engineers
- State of Montana Misc.
- Montana State Trust Land
- Local Government
- Tribal
- Bureau of Indian Affairs Trust Land
- Unresolved Ownership



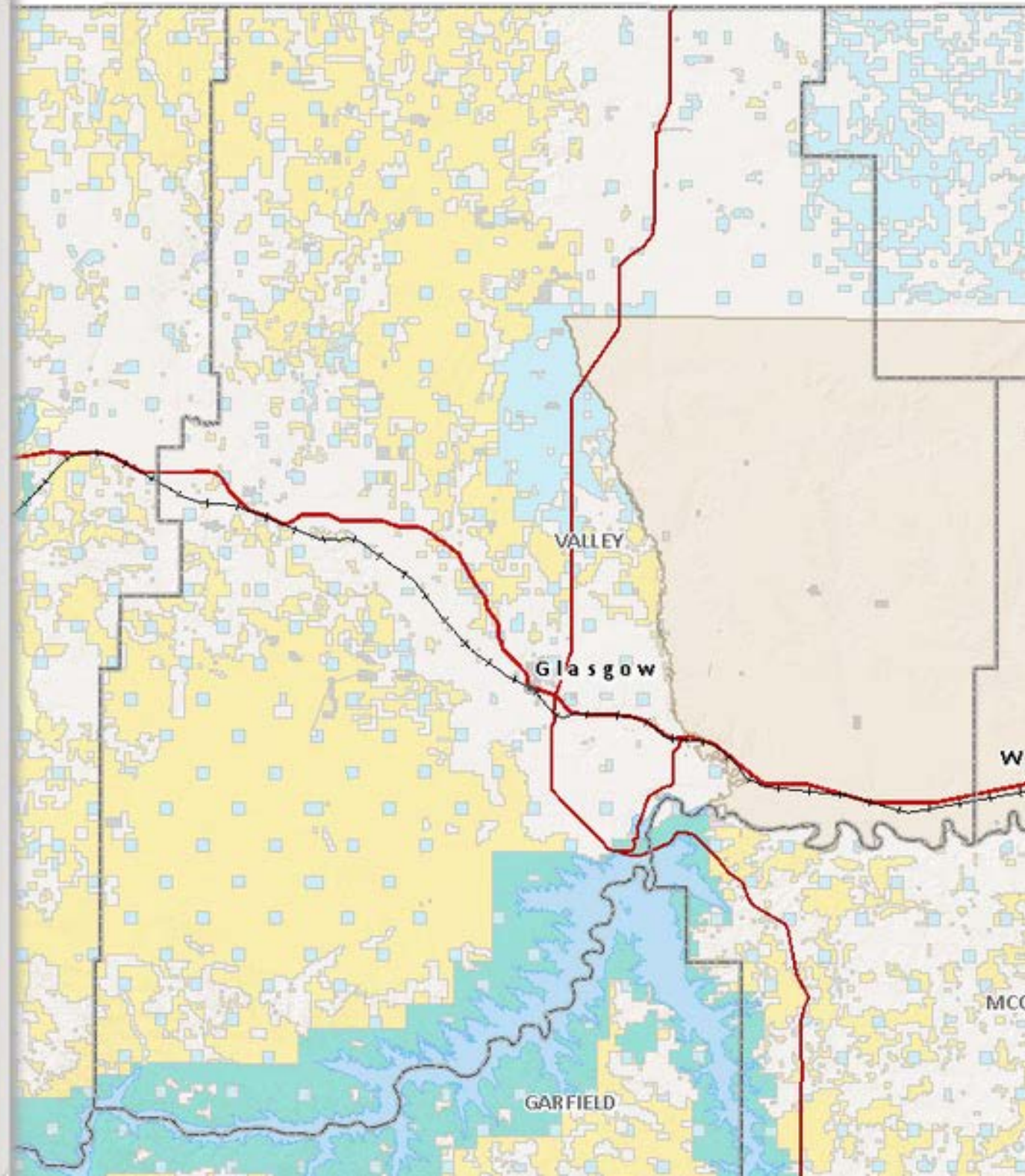
Phillips County Land Ownership (Acres)



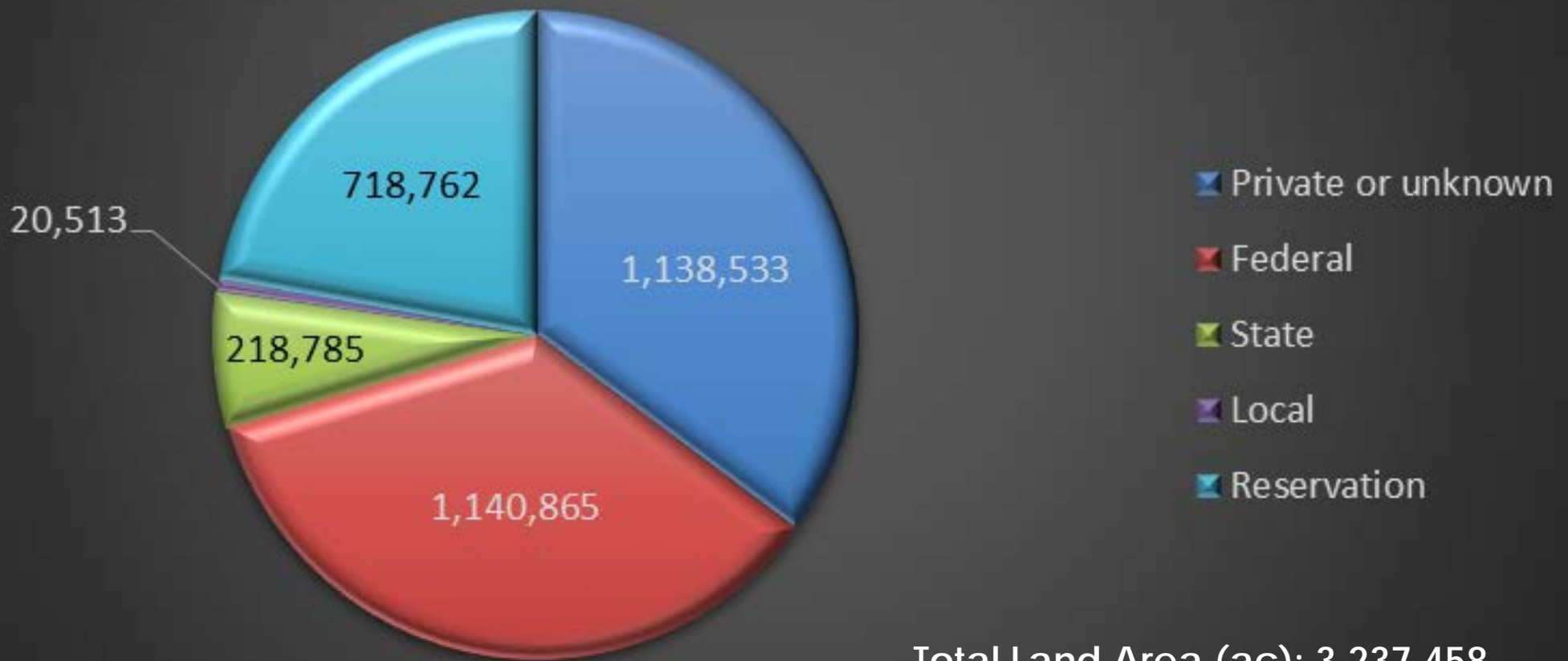
Total Land Area (ac): 3,333,226

Land Ownership Legend

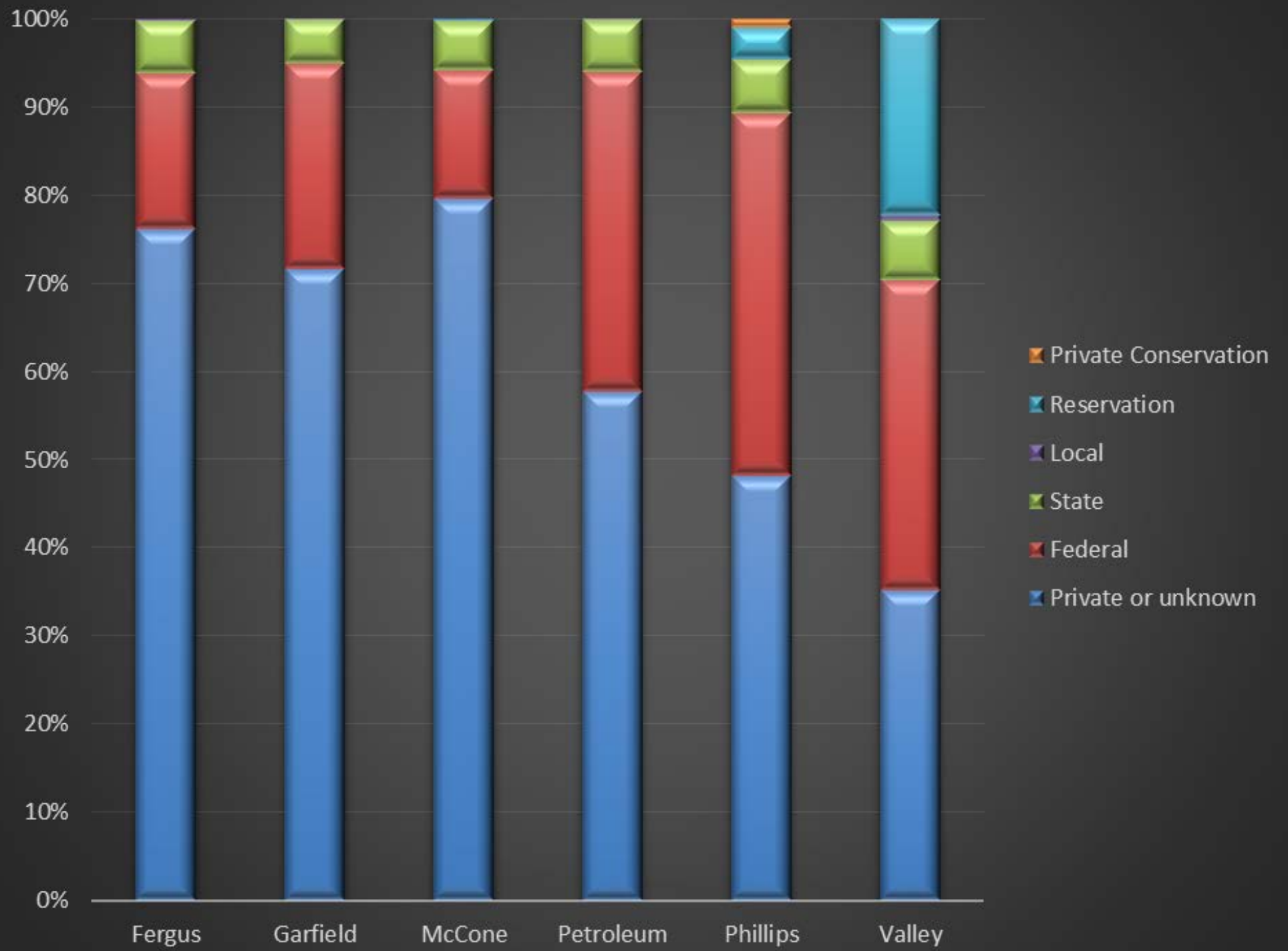
- NonPublicLand
- Bureau of Land Management
- Bureau of Reclamation
- US Fish and Wildlife
- National Park Service
- US Forest Service
- US Dept of Agriculture
- Defense Dept/Army Corp of Engineers
- State of Montana Misc.
- Montana State Trust Land
- Local Government
- Tribal
- Bureau of Indian Affairs Trust Land
- Unresolved Ownership



Valley County Land Ownership (Acres)



Land Ownership Percentage

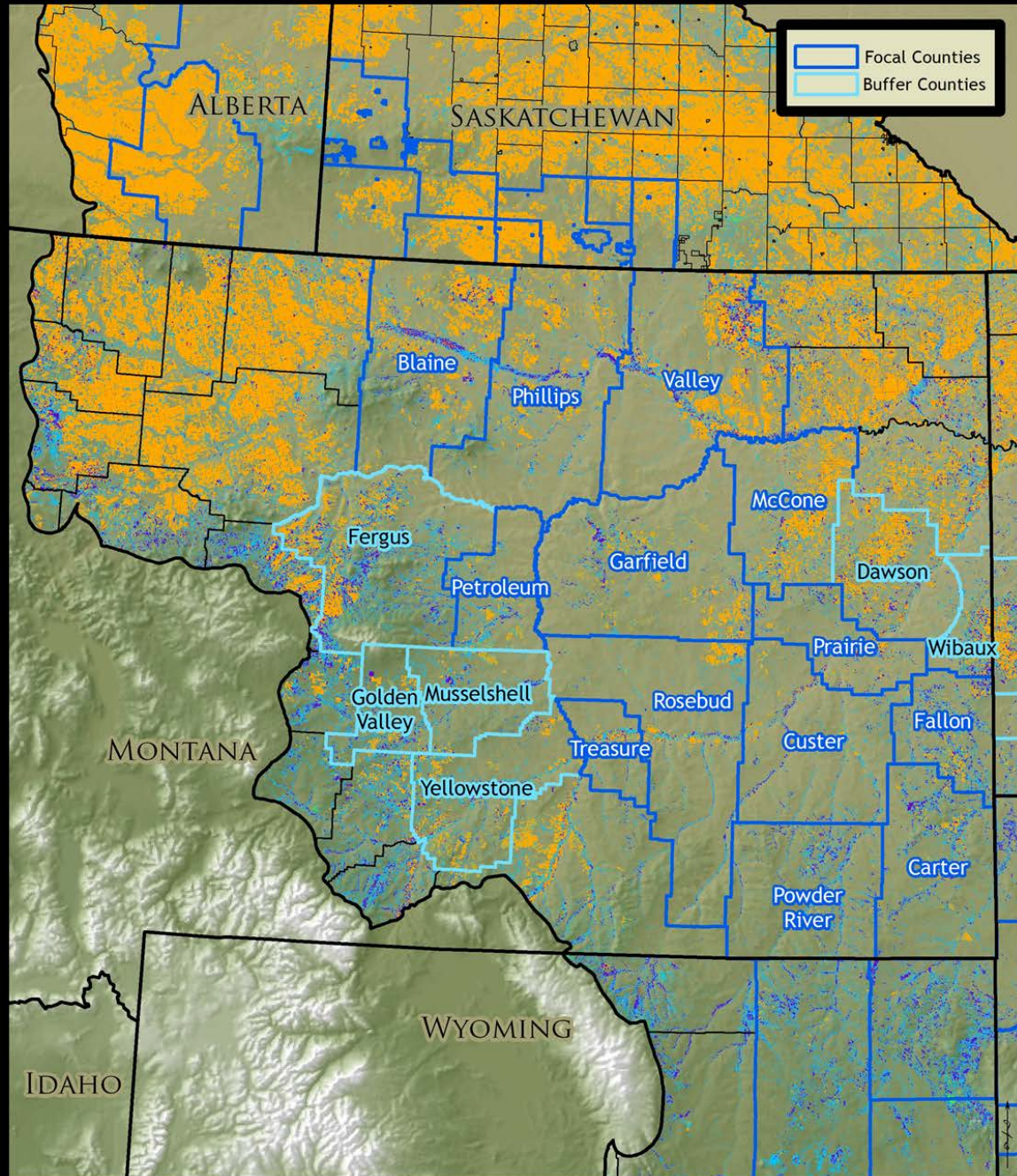


Land Under Conservation Easement



NATURAL LANDSCAPES, SAGE GROUSE
DISTRIBUTION, & CONSERVATION PRIORITY AREAS

NORTHERN GREAT PLAINS PLOWPRINT (2013)

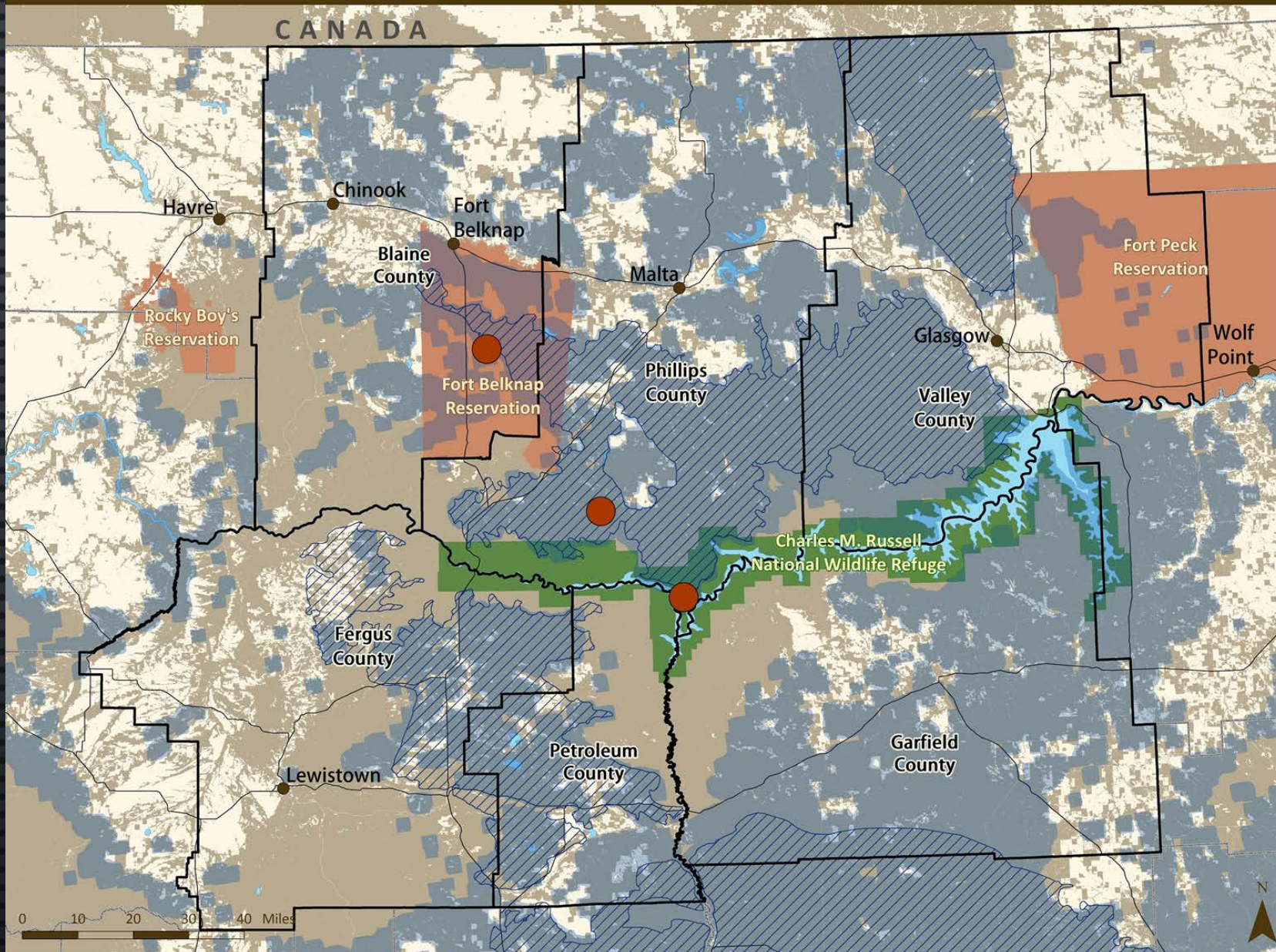


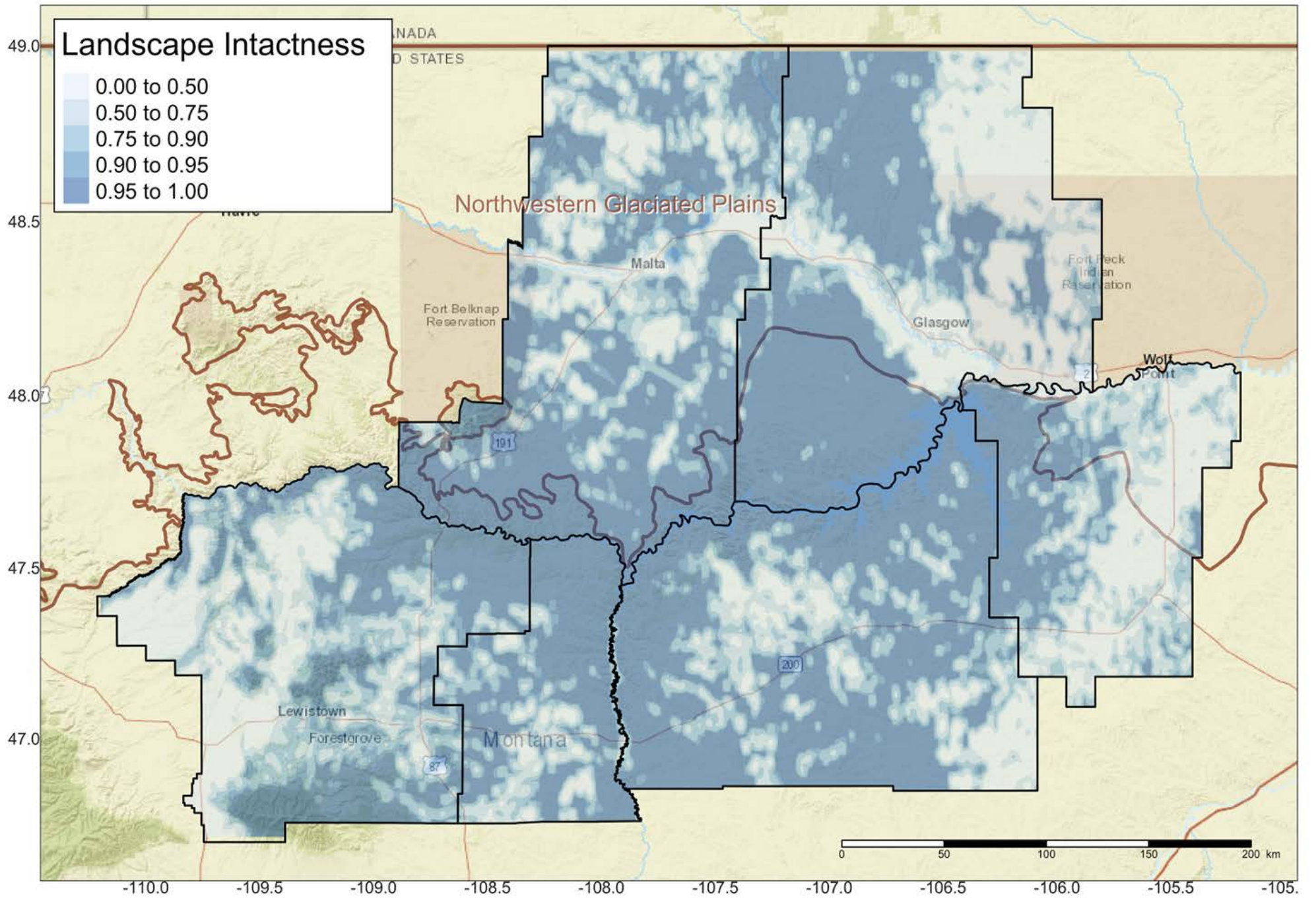
Focal Counties
 Buffer Counties

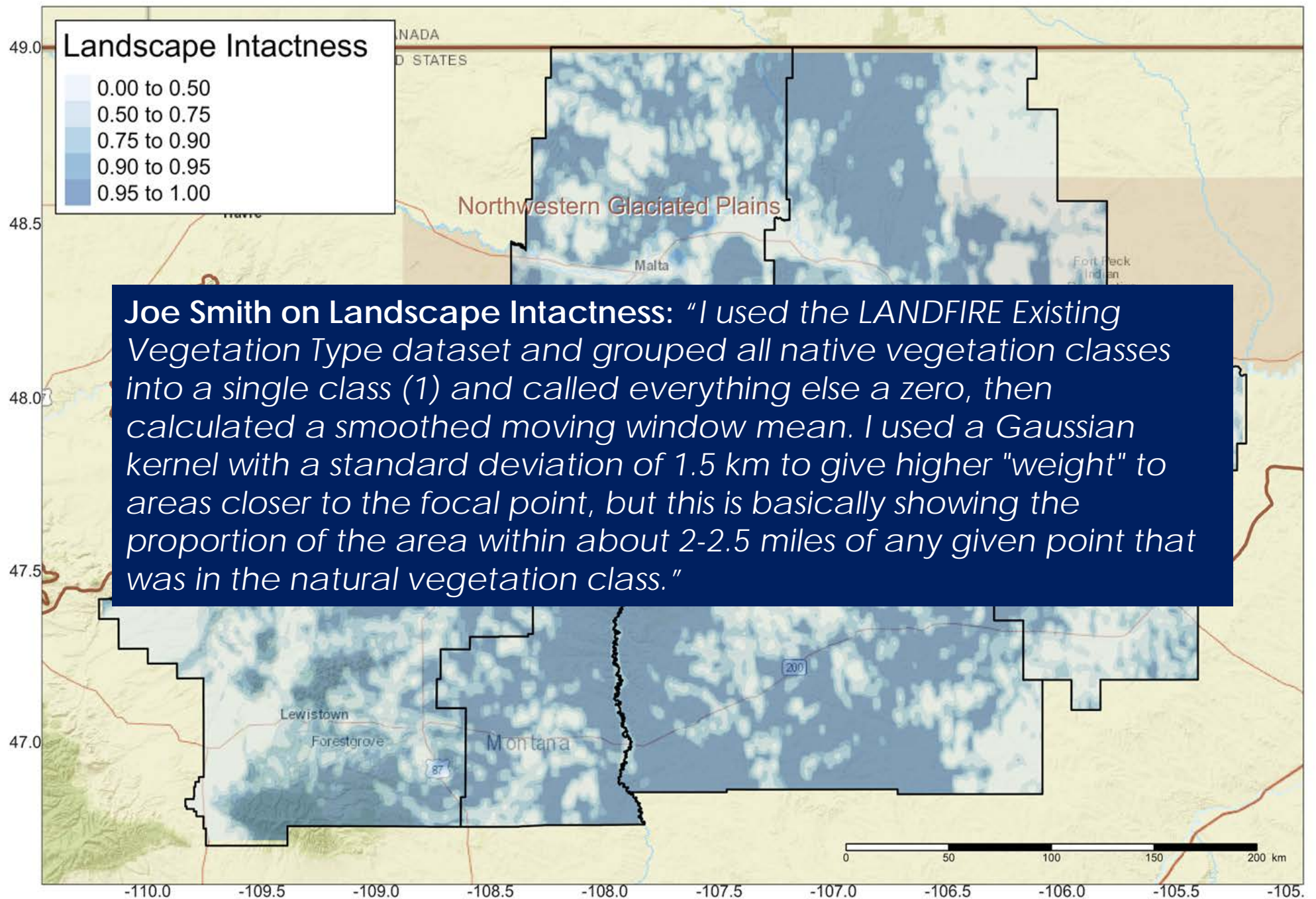
PLOWPRINT
COMPOSITION

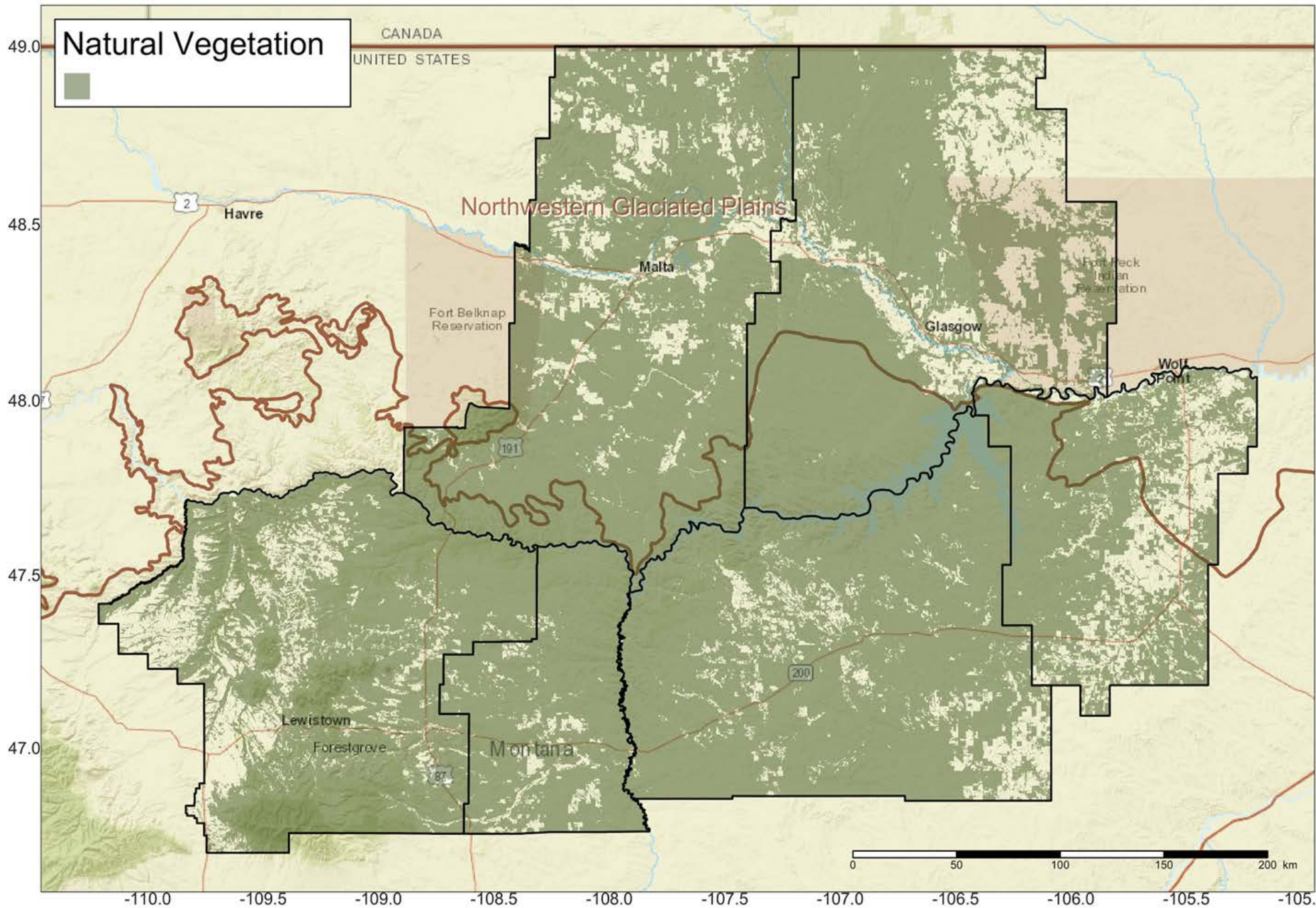
- Crop/
Fallow
- Alfalfa/
Hay (US)
- Wetlands/Shrub-
lands/Grasslands
- Developed/
Barren
- Forest

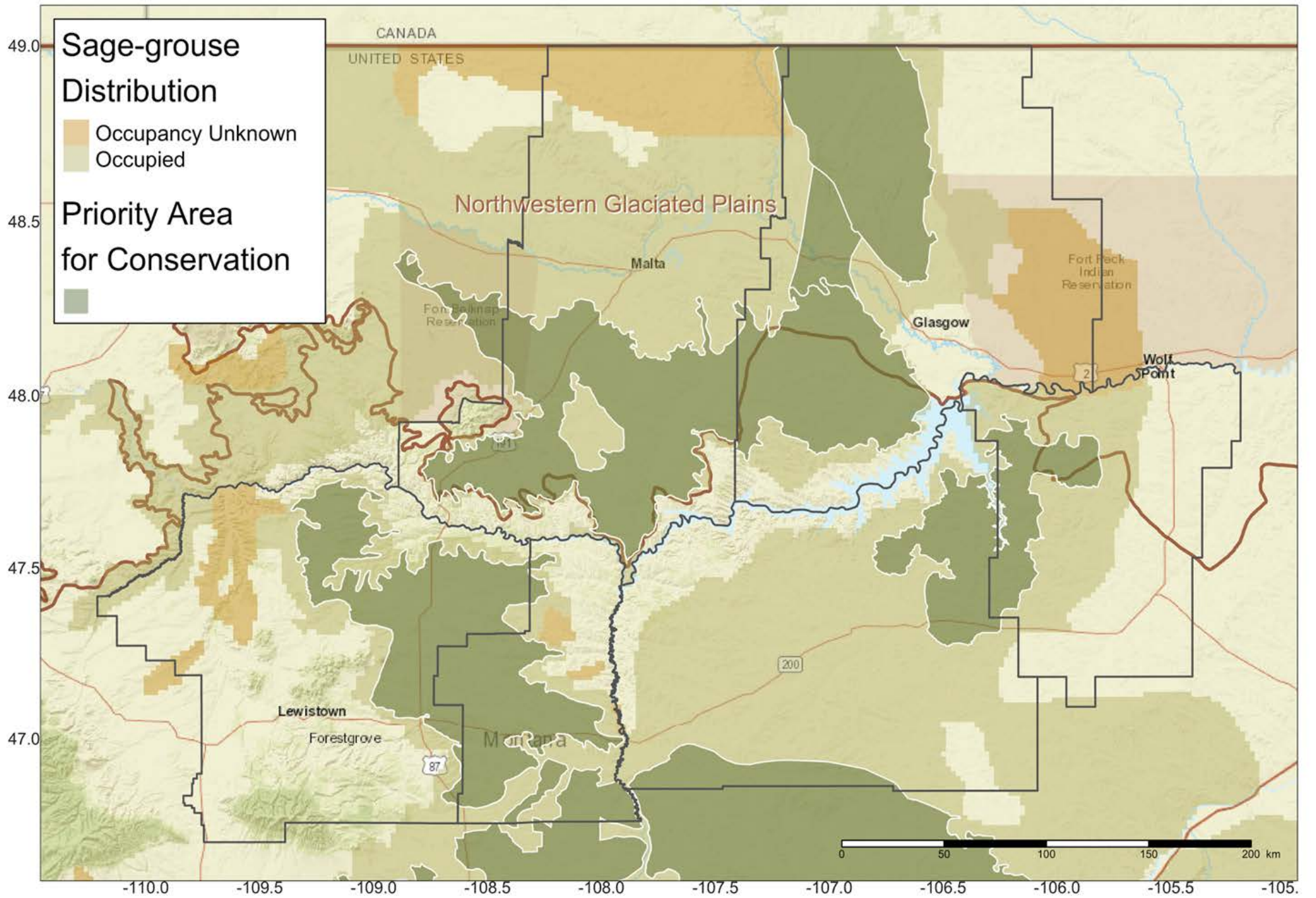
Plowprint layer was developed using 2008-2013 CDL data in the U.S. and 2009-2013 AAFC data in Canada. Pixels in agriculture or fallow agriculture status in each year were aggregated to one data layer that shows the maximum footprint of agriculture over that time period. Composition based on land cover in the 2013 CDL.

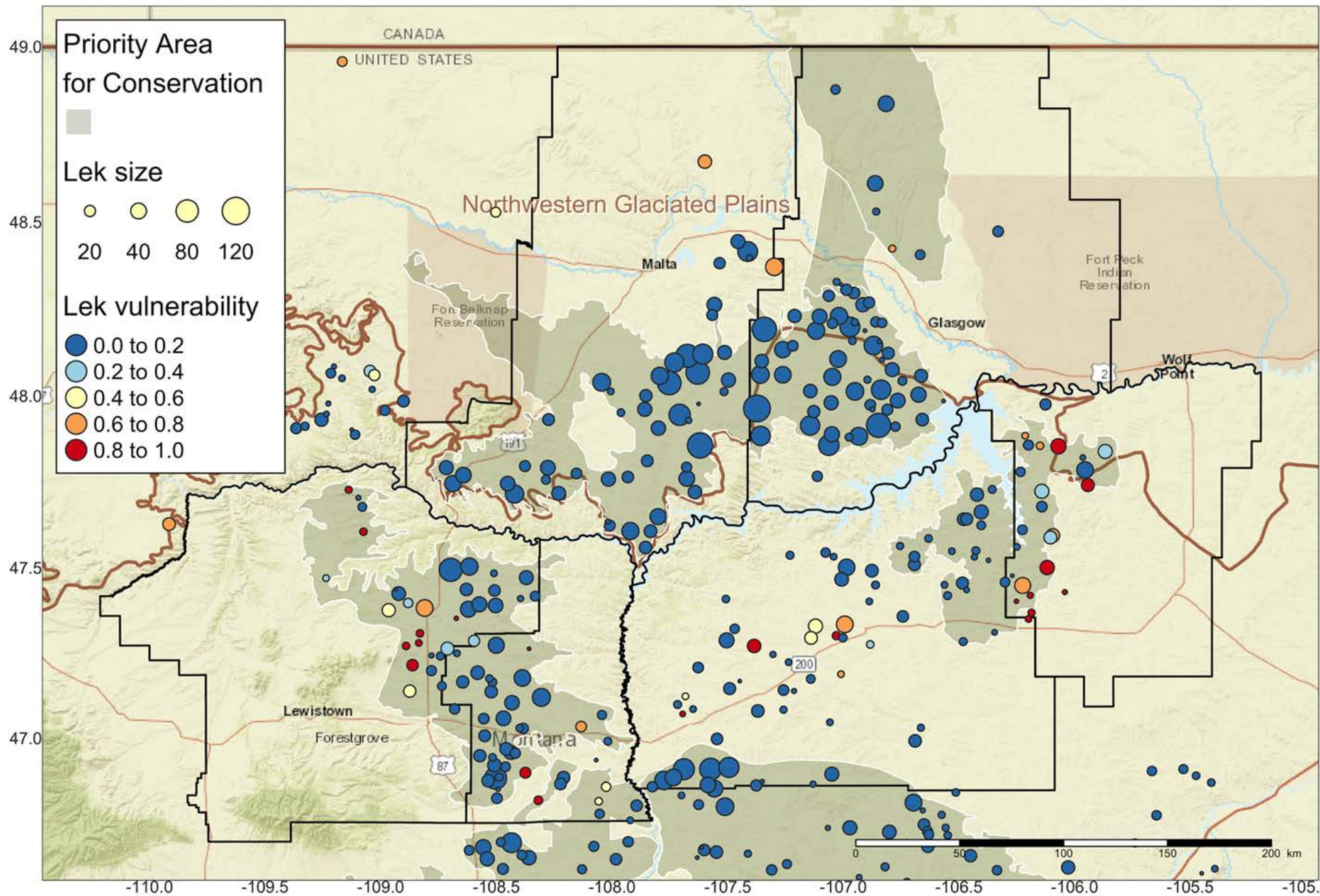




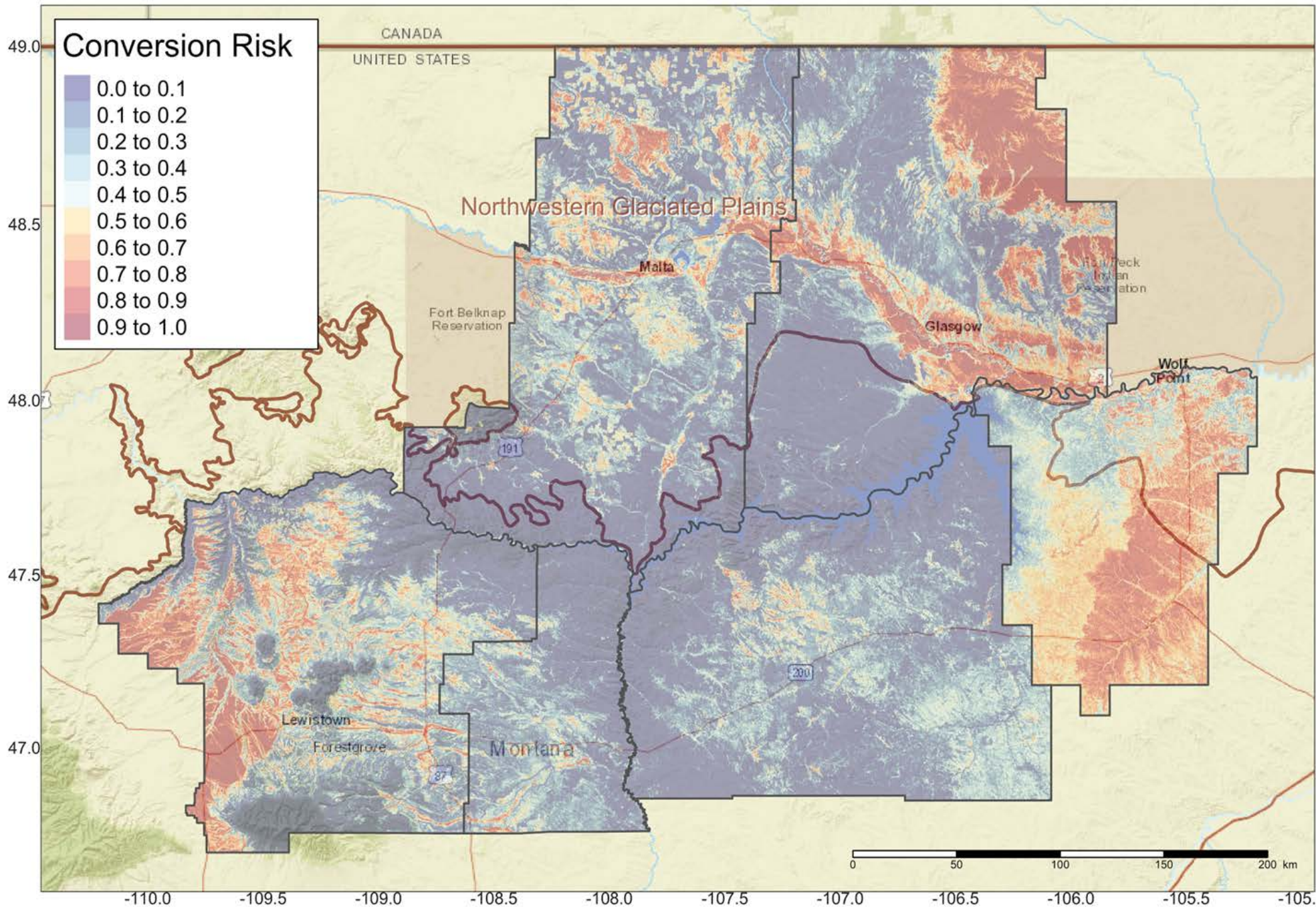


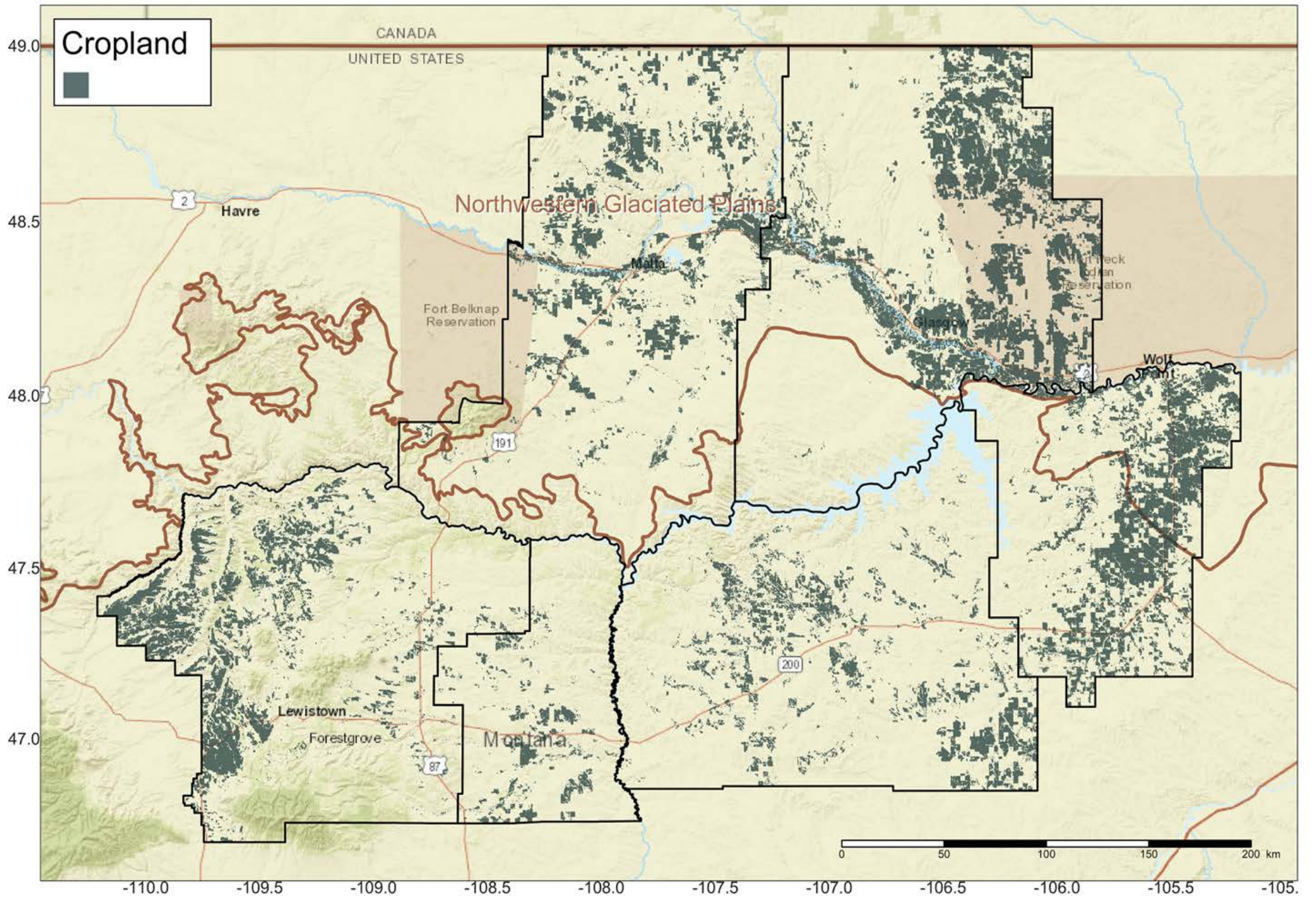




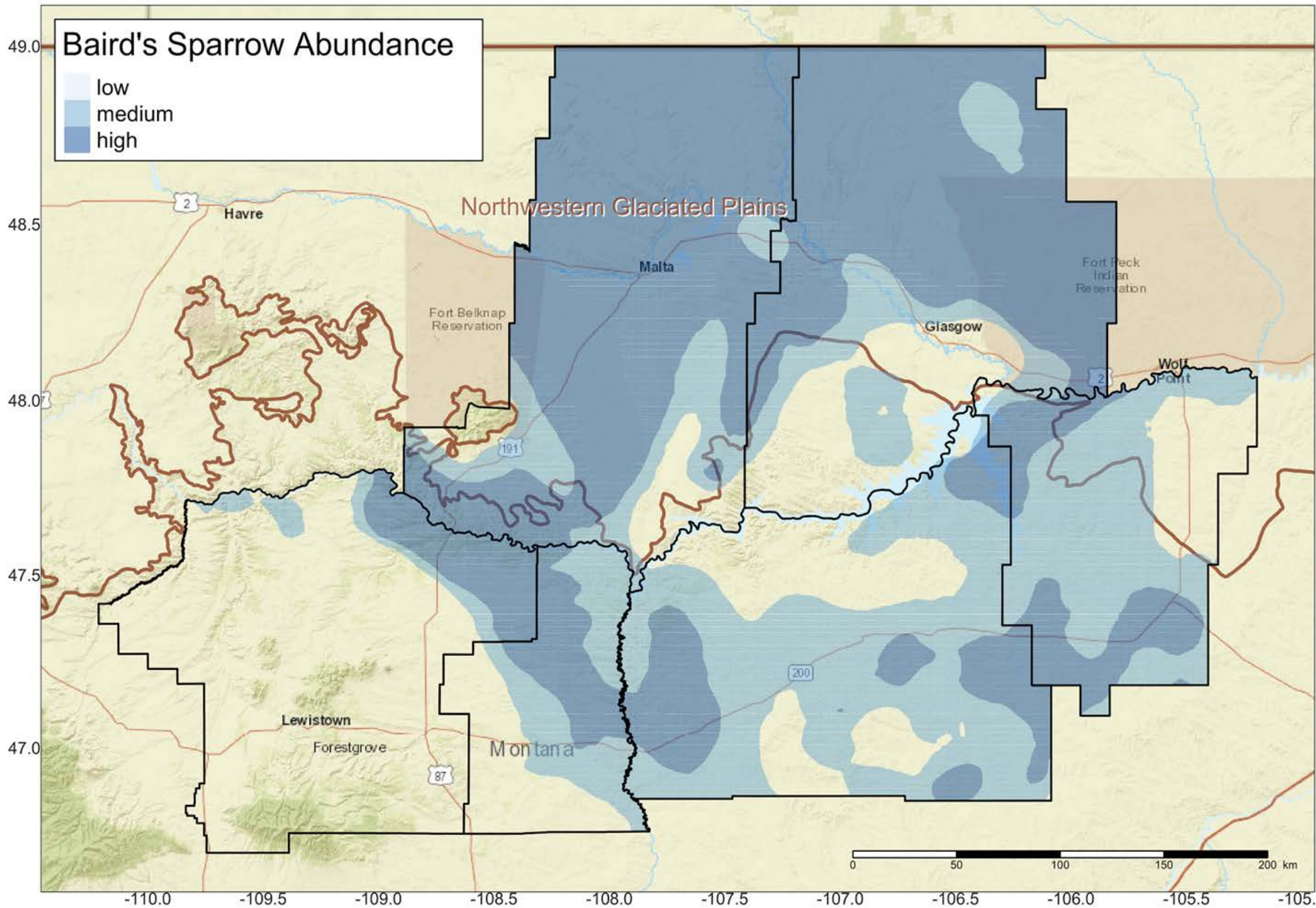


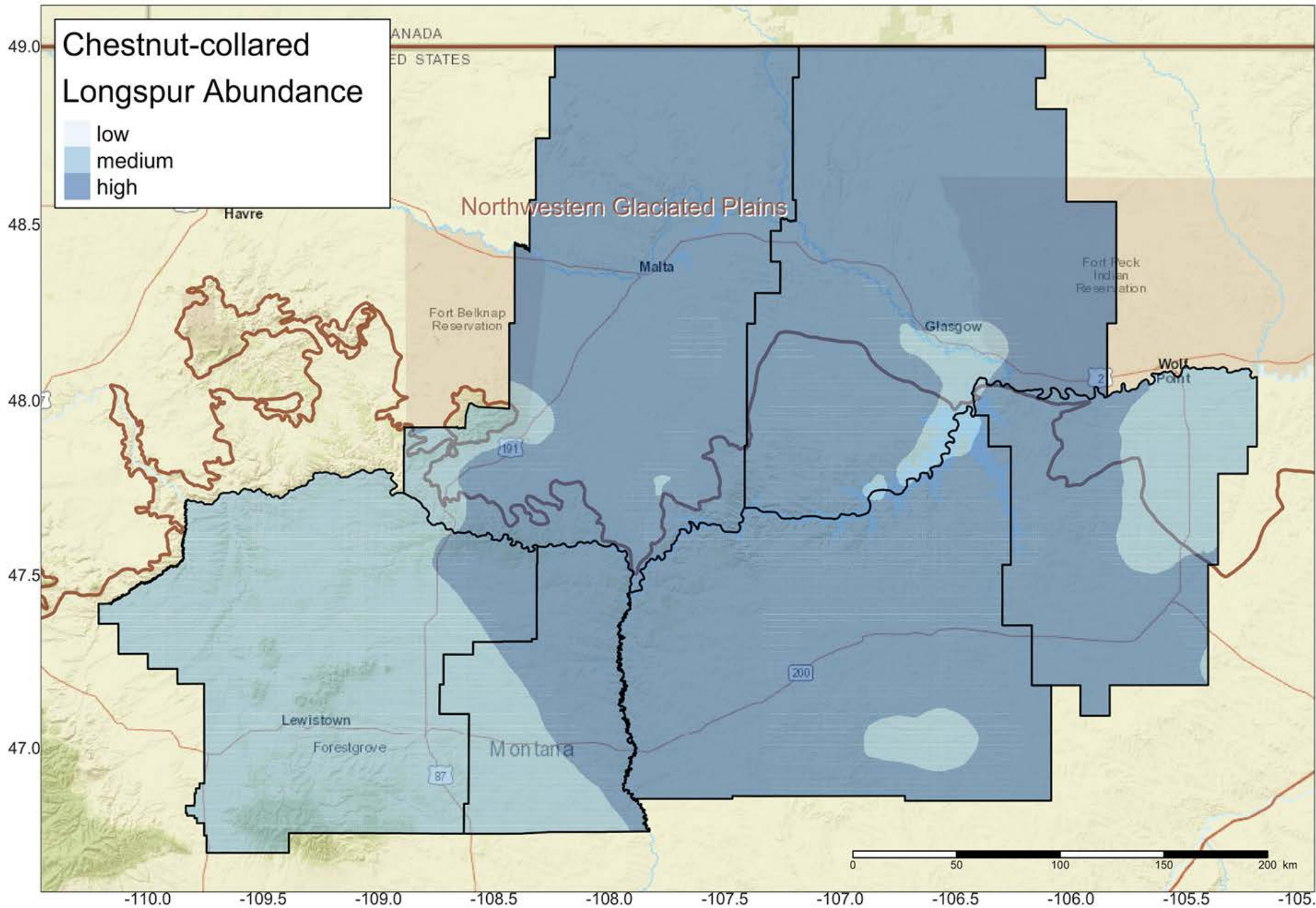
CONVERSION RISK AND CURRENT CROPLAND

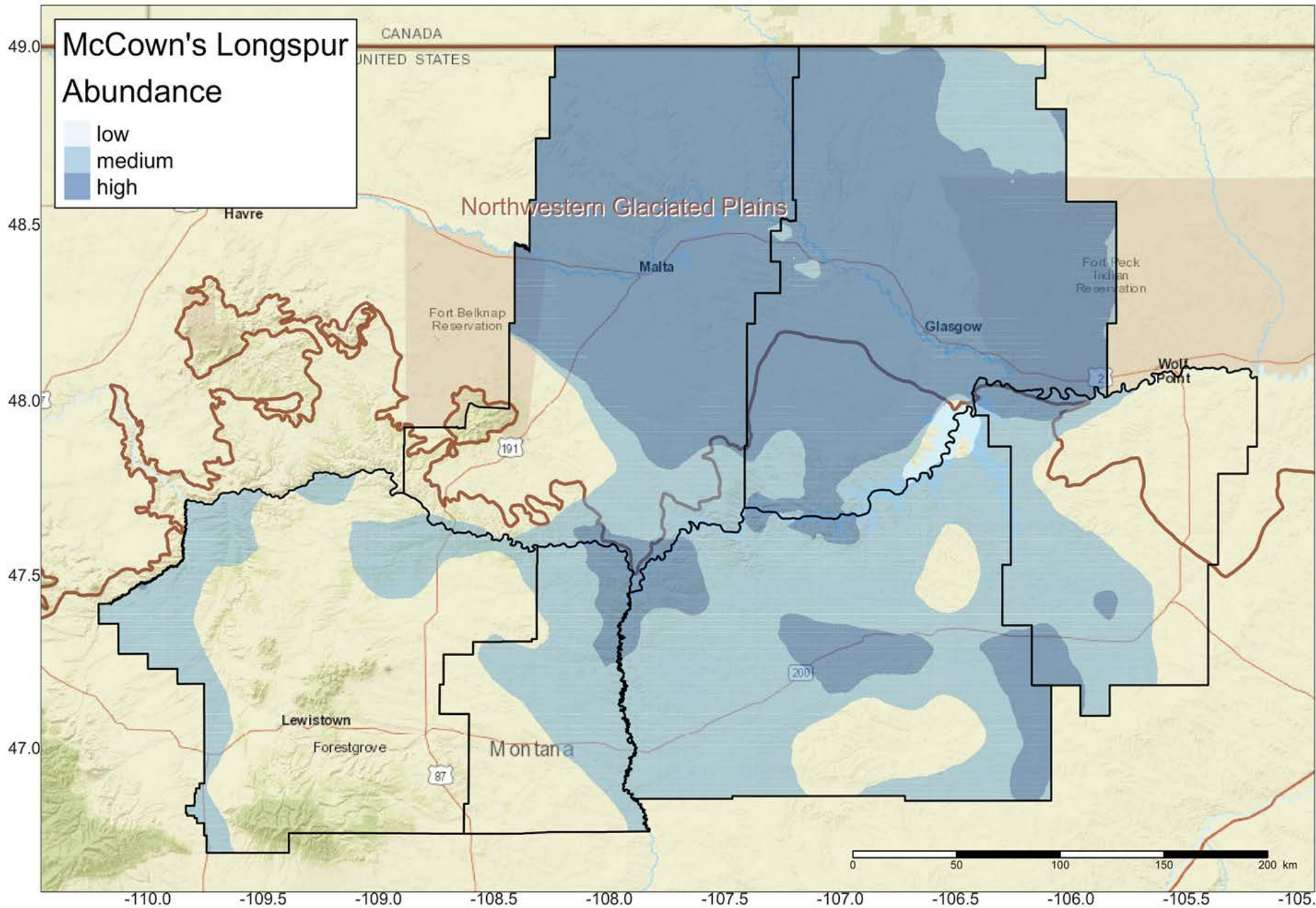


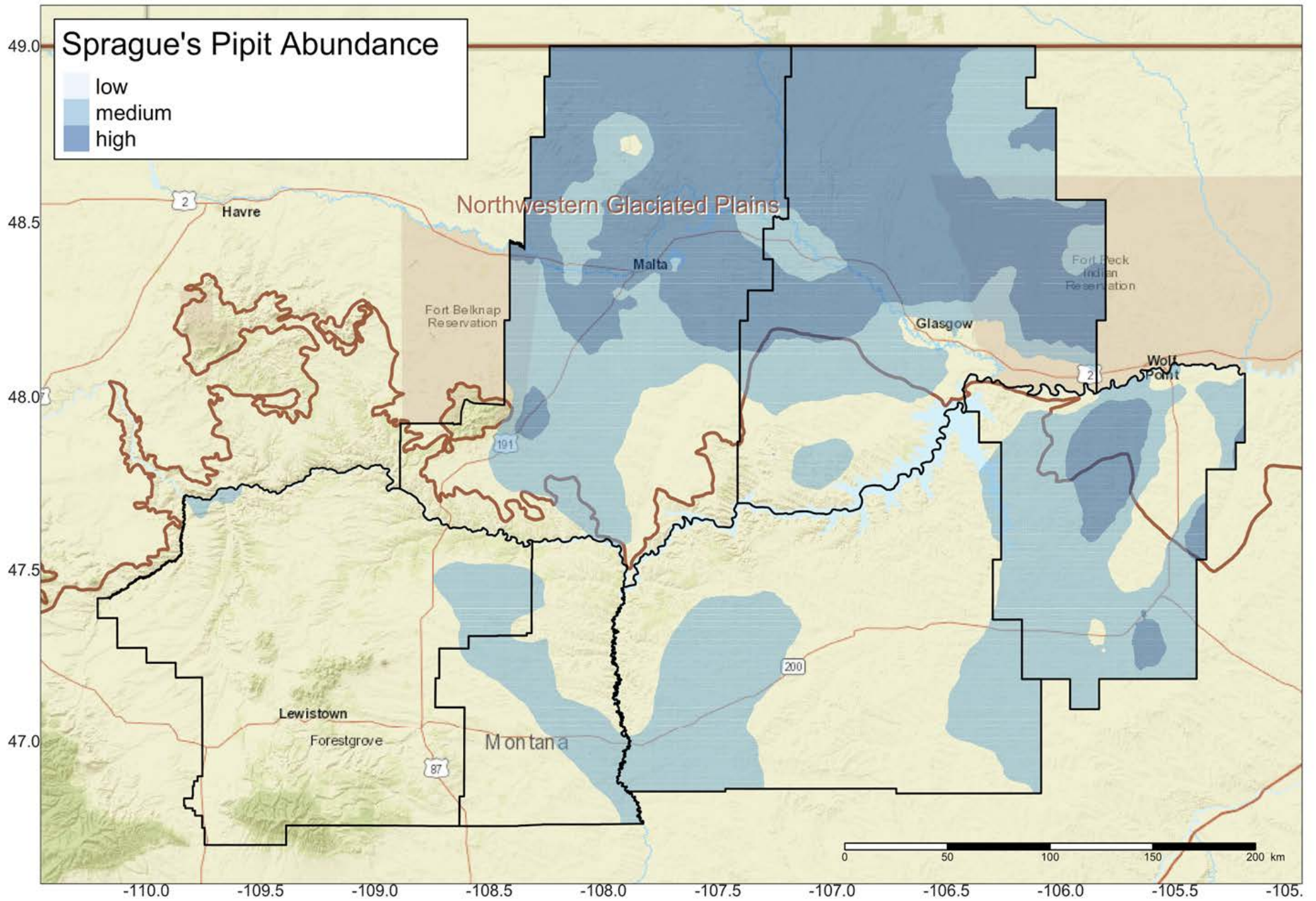


SONGBIRD DISTRIBUTION

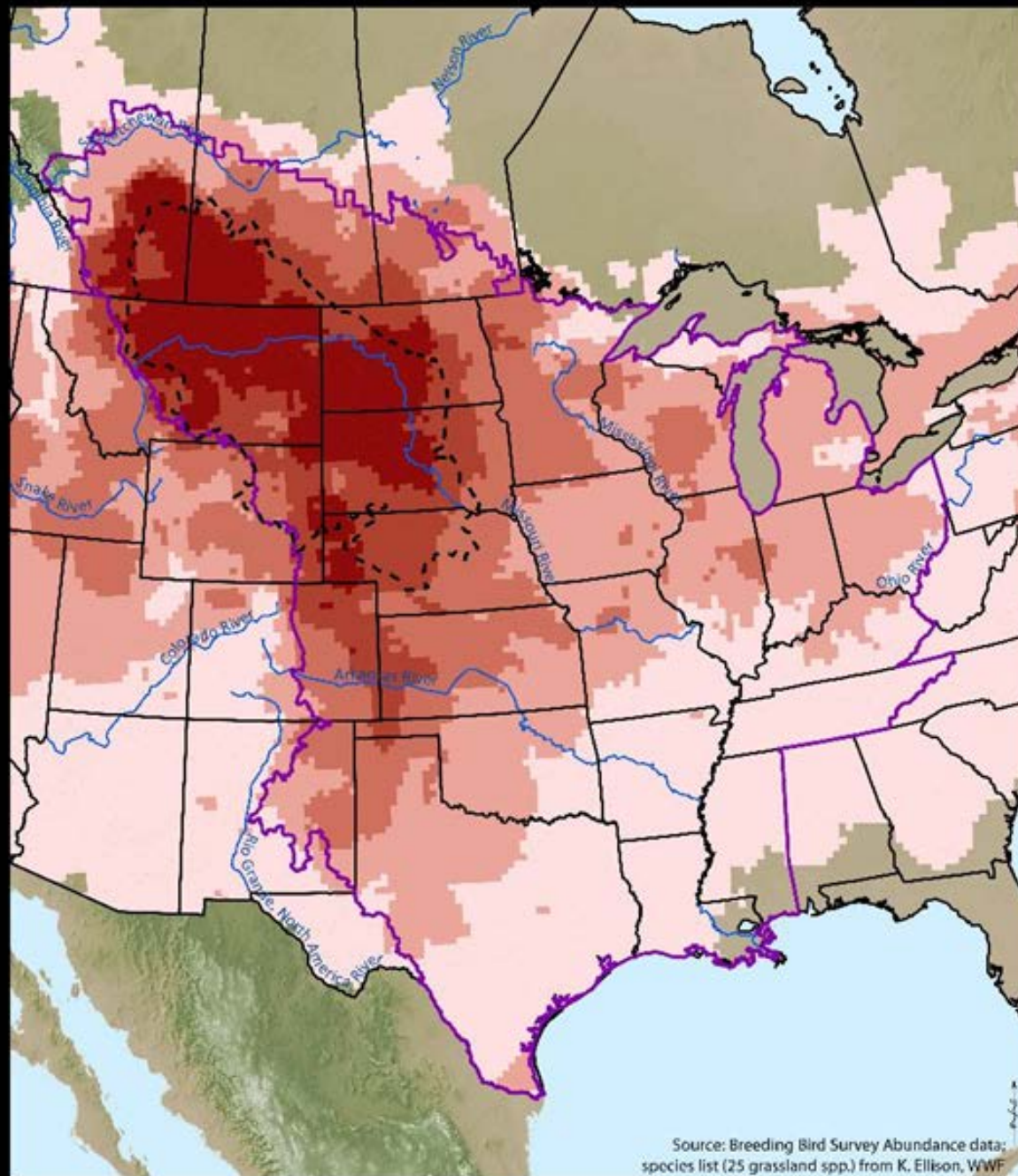






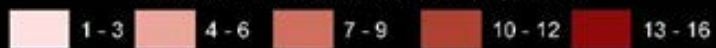


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BIODIVERSITY

Number of Grassland Bird Species



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