

## Conversion Aversion



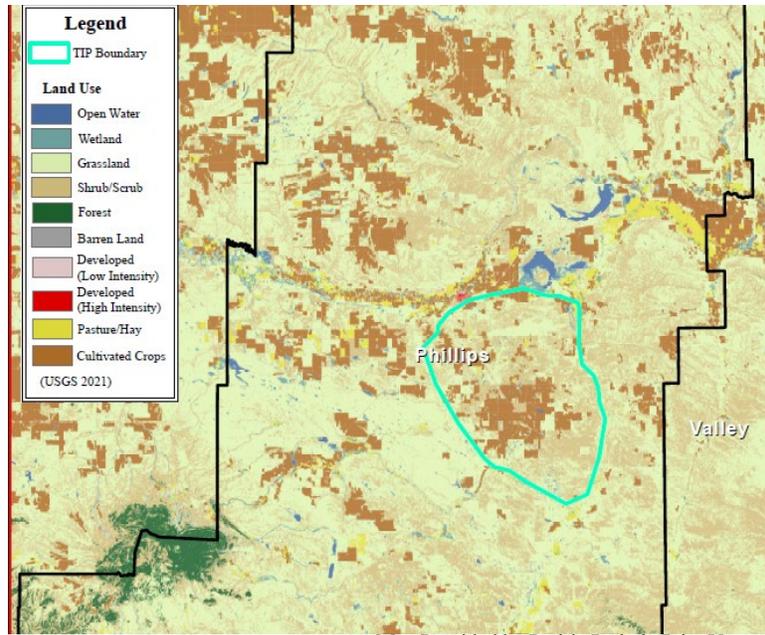
Targeted Implementation Plan

Montana Focused Conservation

Submitted By: Caitlin Gillespie

USDA-NRCS Malta Field Office

The purpose of this Targeted Implementation Plan (TIP) is to reduce limitations on livestock grazing through the installation of grazing infrastructure on acres that have been recently taken out of Farm Service Agency's Conservation Reserve Program (CRP) and/or cropland acres that have been reseeded back to perennial vegetation. The goal is to keep these at-risk lands in permanent vegetation rather than converting back to cropland. This will also decrease the land use conversion threat to wildlife like sage grouse and other upland-nesting bird species. Through strategic placement of livestock water and wildlife friendly fencing, managers will be able to better utilize these acres as grazing land. Grassland seedings and expiring/expired CRP acres will be the focus of this TIP. The primary resource concern being addressed is lack of adequate livestock water, which leaves producers with limited grazing options. Secondary concerns are reducing soil erosion and addressing degraded plant condition.



Map Provided by Prairie Pothole Joint Venture

### **Overview/Background Information:**

Historically, much of Phillips County was cropped, and in recent years many producers have turned to converting these acres back into grasslands. With programs offered like the Conservation Reserve Program and the Sage Grouse Initiative’s (SGI) Cropland Initiative, producers have more incentive to reseed acres back to grass rather than continue cropping. Long term, many factors can influence whether a producer will continue to keep those acres in grassland or if they will convert it back to cropland.

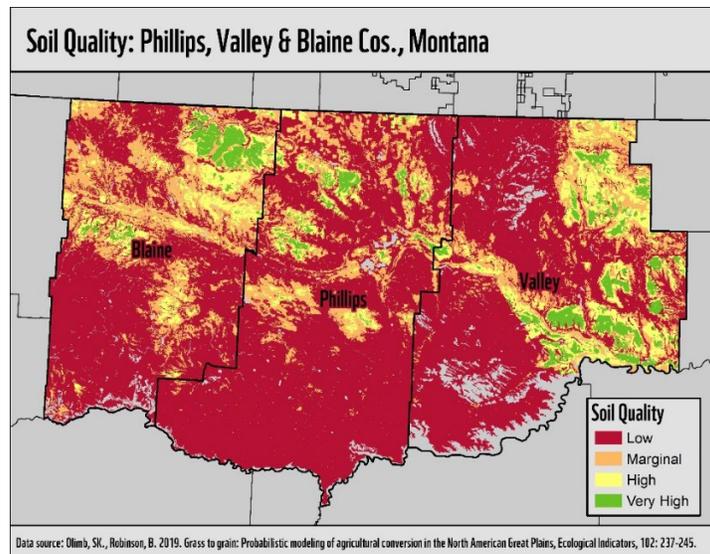
One major factor in their decision is the availability of water on these grazing lands. Most CRP acres lack water for livestock grazing as they were traditionally cropped. Without adequate livestock water, producers are also faced with a grazing distribution problem and can under/overuse certain areas of pastures. This can also cause litter build-up, especially in expired or expiring CRP fields where there has been minimal grazing for the length of the contract. By adding appropriate infrastructure like wells, pipeline systems, tanks, and wildlife friendly fence, producers will be able to improve their grazing management systems. The result will be adequate livestock water, healthier plant condition, reduced soil erosion, and overall enhanced management of the land.

The TIP area is defined on the east side by Alkali Creek, the south and west side by Beaver Creek, and to the north by Old Highway 2. This area, approximately 195,000 acres, contains the highest density of expired or expiring CRP acres in all of Phillips County. Within the boundary there is roughly 11,820 acres of CRP that are expired or soon expiring from the years 2017-2025. This is also an area with 61,100 acres of crop, grassland reseeds, and 50,000 acres of public land which are all connected by native rangeland. By keeping CRP and other seeded acres in grass we can create a more continuous and intact grassland habitat.

The TIP area has a high occurrence of important wildlife species, including many priority bird and big game species (MTFWP 2015, PPJV 2017). Sustaining rangeland habitats here is a strategic investment in wildlife habitat conservation identified by agency and non-governmental organization partnerships (e.g., PPJV 2017). The TIP area supports over 11% of the upland nesting duck pairs in the county (13,139 pairs; Fig. 1e) and 67% of the TIP area supports at least one breeding shorebird species (primarily Willet; Fig. 1f). Similarly, 45–80% of the TIP area coincides with 50% core population areas for several high priority grassland birds experiencing steep population declines including Chestnut-collared Longspur, Thick-billed Longspur, and Baird’s Sparrow; additionally, 4% coincides with Sprague’s Pipit 50% core area (Fig. 1a-d). Furthermore, 46% and 24% of the TIP area coincides with important Mule Deer and Pronghorn winter ranges, respectively (Fig. 2a).

### **Resource Concern**

In Phillips County, there is a grazing management issue caused by lack of adequate grazing infrastructure, most notably: livestock water in pastures. Due to lack of water quantity, there is often a problem of under/overuse of pastures, as well as lands being converted back to crop production. This TIP focuses on these at risk acres by addressing inadequate livestock water and fencing. The map below shows areas at high risk for cultivation in green, which may already be in crop. Areas at a low risk for cultivation have the best chance of staying in perennial vegetation if grazing can be facilitated.



This TIP is directly in line with the Phillips County Local Working Group (LWG) and the Malta Field Office Long Range Plan (LRP). In the LRP “Stockwater” is identified as a number two priority resource concern (Page 69). This TIP directly addresses this issue by providing adequate livestock water to grazing lands. The LWG also identified “Grazing Management” as a number three priority resource concern. With improved livestock distribution on these lands this resource concern will be addressed. By keeping these lands in permanent

vegetation there will be a decrease in soil erosion compared to a return to cropping as well as a decreased threat of land conversion.

### **Goals and Objectives (Desired Future Conditions)**

The main goal for the Conversion Aversion TIP is to provide resources to producers that allow them to keep at-risk lands in perennial vegetation rather than converting them back to a cropping system. By providing grazing infrastructure on CRP acres and reseeds, producers will have increased opportunities to manage a grazing system. Keeping these lands in grass cover will reduce the risk of conversion and soil erosion by giving producers a profitable way to manage their land. Other benefits to keeping grasslands intact include maintaining habitat for grassland songbirds and upland-nesting gamebirds that rely on mixed grasses for nesting and cover. Transitioning CRP to more active grassland management with grazing plans is also likely to improve this habitat for some grassland bird species (PPJV 2017, NRCS 2021). For example, several priority grassland bird species that are experiencing steep population declines (Chestnut-collared Longspur, Sprague's Pipit, Thick-billed Longspur) rarely use CRP fields, preferring sparser vegetation structure (PPJV 2017).

For this TIP to be a success, livestock watering systems will be installed to address lack of suitable livestock water. The combined installation of wildlife friendly fencing will also improve grazing distribution. Practices needed to address the concern are: pumping plant (533), well (642), livestock pipeline (516), watering facilities (614), prescribed grazing (528), and wildlife friendly fence (382).

### **Proposed Alternatives and Actions**

No action alternative: There will be a continued downward trend of the Northern Great Plains prairie grassland acres. Lack of adequate livestock water will prevent proper grazing management, and without grazing infrastructure at-risk lands may be converted back to cropland, contributing to soil erosion and loss of intact grassland acres. The 2021 Plowprint Report by World Wildlife Fund (WWF) states that in 2018-2019 nearly 600 thousand acres of Northern Great Plains prairie were plowed for the expansion of row crops.

Alternative one: Development of livestock watering systems will provide adequate livestock water for producers to graze. Wildlife friendly fencing may also be added to enhance the grazing capabilities of pasture units. Prescribed grazing will not be contracted in this alternative and due to this there could still be the potential of degraded plant condition and impacting wildlife habitat.

Chosen Alternative: The development of livestock water and wildlife friendly fence as well as prescribed grazing allows proper grazing management. These practices will provide enhanced grazing management and overall will lead to improved plant condition, reduced soil

erosion, and improved utilization of grasslands. Infrastructure needed includes: a well, pipelines, pumps, pumping tests, tanks, and wildlife friendly fencing and grazing plans.

**Implementation**

The NRCS will accept applications for this TIP during consecutive batching periods in Fiscal Years 2023-2025. Individual contract length will not exceed five years. The first two years of the contract will be for implementation, allowing three years for management with 528 prescribed grazing. Currently, there are two producers willing and able for FY2023, with an additional three to four anticipated for the following years. The Malta Field Office staff will manage plan implementation with assistance from Glasgow-Malta Work Unit Civil Engineering Technician. System operation and maintenance is covered by NRCS standards and specifications.

Example of Expected EQIP Cost Requirement for a Typical Contract\*

Practice Code	Practice Name	Scenario Name	Amount	Payment Rate	Total
533	Pumping Plant	Electric-Powered Pump, less than or equal to 5 HP	2 HP	\$1,808.02	\$3,616.04
642	Water Well	Typical Well, 100-600 ft deep with 4 inch Casing	500 ft	\$48.16	\$24,080
614	Watering Facilities	Permanent Drinking with Storage, 1,000 to 5,000 gal	4 x 2,000 gal each	\$2.37	\$18,960
516	Livestock Pipeline	Below Frost HDPE	8,000 ft	\$2.15	\$17,200
528	Prescribed Grazing	Range, Standard, 2,500 acres or greater	5,000 acres x 3 Years	\$1.46	\$21,900
	Pumping Plant	Aquifer Flow Test**	12 Hrs	-	-
+ ~ 10% overage for inflation and minor changes				-	\$10,000
*based on FY2022 EQIP Payment Table					
**Aquifer Flow Test will be paid through a Conservation Evaluation and Management Activity					

**Total Projected TIP Cost**

TIP Year	Cost Per Year
Year 1	\$148,500
Year 2	\$170,500
Year 3	\$165,800
<b>TIP Total</b>	<b>\$484,800</b>

## **Partnerships and Other Funding Sources**

This TIP will be funded with NRCS Environmental Quality Incentives Program (EQIP) funding, with producers sharing a portion of the expense. Partner contributions will be site specific, and due to the sporadic nature of their funding cycles it is unknown exactly what they may contribute. Currently, work will be conducted with local conservation group Ranchers Stewardship Alliance (RSA). Through RSA there will be additional help from Pheasants Forever as their coordinating biologist will help present projects to RSA's Conservation Committee. RSA has been awarded and/or spent just over \$893,000 of project dollars from 2017-2021 for projects with a similar focus to this TIP across Blaine, Phillips, and Valley counties. These projects have reduced conversion risk on a total of 41,900 acres and have been almost entirely expiring CRP or grassland restorations.

Work through RSA will also be done in conjunction with U.S. Fish and Wildlife Service Partners for Fish and Wildlife (USFWS-PFW) through project implementation. USFWS-PFW has a strategic plan for the next four years to target 30,000 acres of upland enhancement for the Glaciated Plains Focus Area which encompasses the TIP boundary. They are willing to work closely with the Malta FO to identify projects, partner on cost-share if need be, and help with delivery. Implementation of this TIP would also directly contribute to conservation outcomes for USFWS priority wildlife species, including declining grassland songbirds, greater sage grouse, waterfowl, and migratory ungulates (see attached maps).

World Wildlife Fund (WWF) also has a program that is complimentary to Conversion Aversion. As part of WWF's Sustainable Ranching Initiative is the Ranch Systems and Viability Planning (RSVP) network. This program could work in conjunction with the TIP to provide monitoring data for the ranch as well as potentially help with site specific cost share. WWF could share costs of projects with NRCS or simply provide monitoring data for the producer, but the two programs share a goal of preventing the conversion of rangeland (and pasture) into cropland.

Providing mechanisms for transitioning expiring CRP lands to grass-based agriculture also aligns with the goals of the Prairie Pothole Joint Venture (PPJV) 2017 Montana State Tactical Plan, including an objective of enhancing 18,500 grassland acres through EQIP practices (PPJV 2017). The PPJV will support this TIP by providing technical assistance for evaluating outcomes via their Science Integration Specialist as well as financial and communications assistance (e.g. workshops, outreach) when possible.

Other partnership contributions may come in the form of outcome delivery, workshops, data, as well as outreach. The Nature Conservancy (TNC) works closely with RSA and has permanent easement programs in place that work to prevent conversion. They could potentially be another funding source for cost share on projects.

## **Anticipated Outcomes and Progress Evaluation**

In the end, producers need to be able to be profitable on their land. By implementing these practices, we can take land that cannot be efficiently grazed and allow producers to make a profit from grass rather than plowing and making a profit from crop. Progress will be measured by acres of grazing land that are provided with adequate livestock water. Improvement of grazing management will allow for proper utilization of pastures and opportunities to rest native rangeland. Monitoring, primarily site-specific photo points, will be used to show change over time. Partners may also be able to contribute to ranch monitoring to show benefits to grassland bird species, sage grouse, and big game as well as to livestock. Allowing acres to be grazed and kept in grass production versus being returned to the crop is the overarching end goal. Keeping acres in perennial vegetation should keep soil erosion near zero for a grassland system compared to the greater losses on cropping systems. The Wind Erosion Prediction System (WEPS) will be used to document potential rates of soil erosion reduced to trace amounts.

Without this TIP it is likely that much of the area would be converted back to crop production based off local data. Conversion risk is particularly high for the expired and expiring CRP lands targeted in this TIP. On average, expired/expiring CRP acres in the TIP area have two times greater risk of conversion per acre (0.44/acre) than all the land in Phillips County (0.22/acre; Fig. 1). Additionally, the tillage of grasslands within the Great Plains has continued at a rate of four football fields per minute. This means an area the size of Bozeman, MT would be tilled in only 39 minutes, increasing soil erosion and lessening carbon sequestration. If the entirety of the TIP boundary could stay in perennial vegetation there would be 91,143 metric tons of carbon dioxide sequestered. This equates to the emissions of 8.95 million gallons of diesel being consumed according to the Comet Planner tool and the EPA Calculator website. While it is likely some acres within the boundary will stay in crop production, adding livestock water will allow more acres to remain in perennial vegetation and be grazeable. Year one of this TIP will address approximately 10,000 acres of private and public grazing land that will also impact acres of expiring CRP and grassland restoration projects.

Although individual grassland bird species vary in their response to land-use change (e.g., CRP to range), if all CRP (current and expired) in the TIP area was transitioned to working grasslands, current models predict a 10% increase in abundance for several high priority grassland birds (Baird's Sparrow, Chestnut-Collared Longspur, and Sprague's Pipit; (Fields et al. 2018). This translates to an estimated increase of approximately 1.8 priority grassland birds for every 1 acre of CRP transitioned to working grasslands. Phillips County also contains some of the most productive breeding duck habitat in the Montana portion of the Prairie Pothole Region. Preventing conversion of expiring CRP to crop in the TIP area will ensure approximately 5,600 breeding duck pairs, or 5% of all upland-nesting ducks in Phillips County, will have access to productive upland nesting cover.

### **Education and Outreach**

The more partners that become involved in this TIP and the more opportunity there is for education and outreach. As projects are presented to RSA there is ongoing education between partners and the producer about what options may be available for cost-share, monitoring, and data collection.

Outreach will also be a large portion of what partners are able to contribute. PPJV has the potential to use funding to increase outreach among the community and to piece together how this TIP aligns with the goals of multiple organizations. RSA and the local chapter of Pheasants Forever could host workshops, trainings, and assist producers in data collection. World Wildlife Fund could provide whole ranch data and monitoring for producers through RSVP which would give a large scale before and after effect of conservation on their property. All in all, partners will be a driving force in outreach and education and vital part in the success of this TIP.

### **Ranking/ Prioritization Screening**

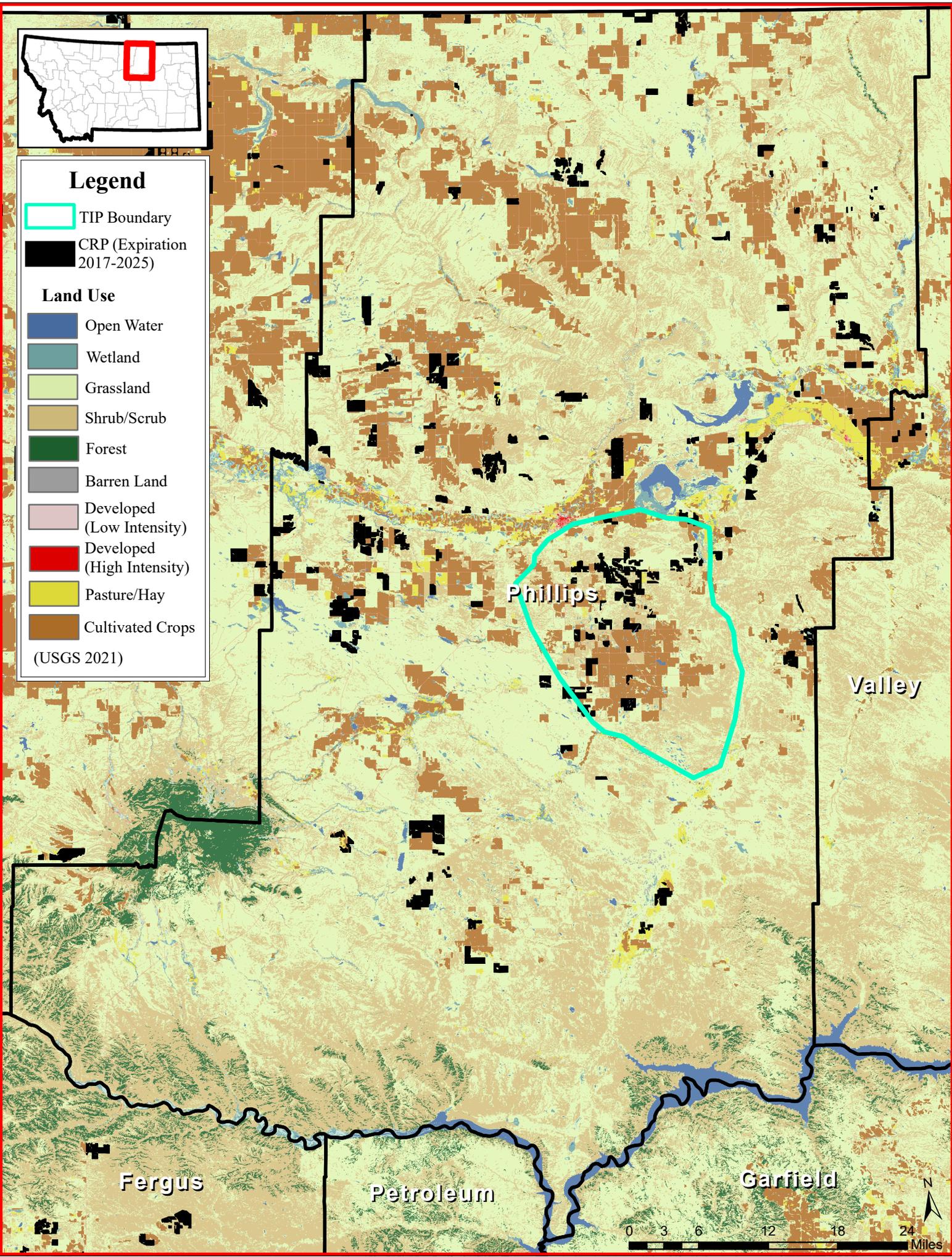
Project Ranking (200 points)

1. Are the acres expired or expiring CRP? (Within the last 10 years)
2. Are the acres part of a grassland restoration project (re-seeding) in the last 10 years.
3. Are the offered acres contiguous with more than 100 acres of native range?
4. Is the participant willing to contract 528 on pasture and/or native range?
5. Are the acres contiguous with other CRP or previously seeded acres?
6. Are the offered acres grazeable, but lack adequate livestock water and fencing?



### Legend

- TIP Boundary
  - CRP (Expiration 2017-2025)
  - Land Use**
    - Open Water
    - Wetland
    - Grassland
    - Shrub/Scrub
    - Forest
    - Barren Land
    - Developed (Low Intensity)
    - Developed (High Intensity)
    - Pasture/Hay
    - Cultivated Crops
- (USGS 2021)



Phillips

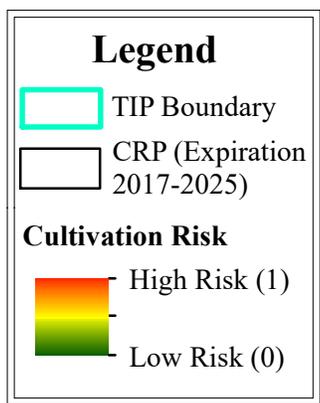
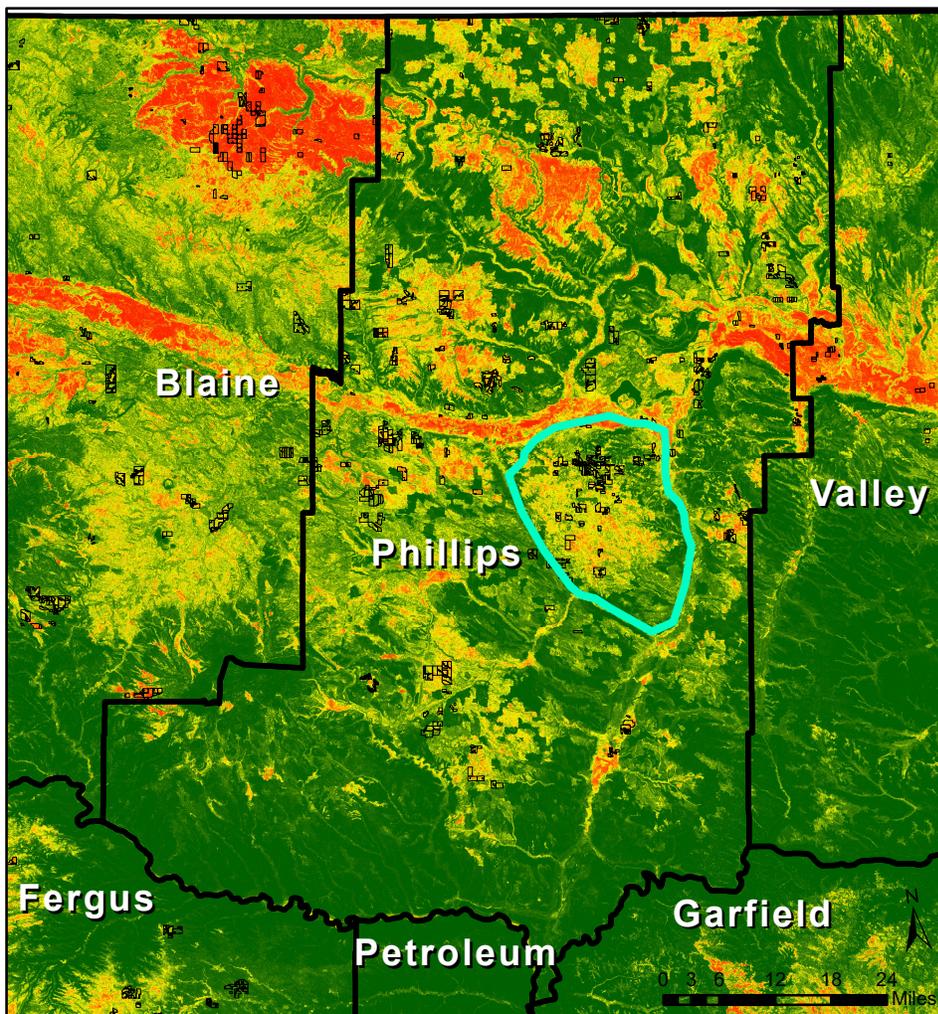
Valley

Fergus

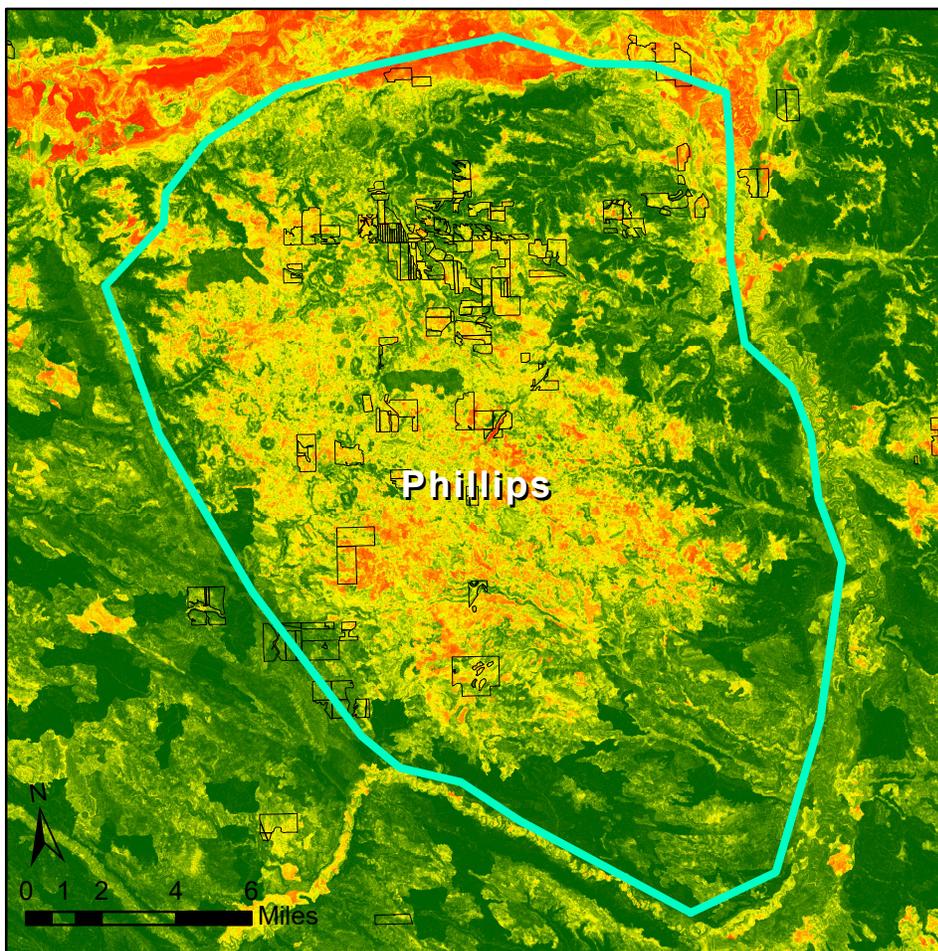
Petroleum

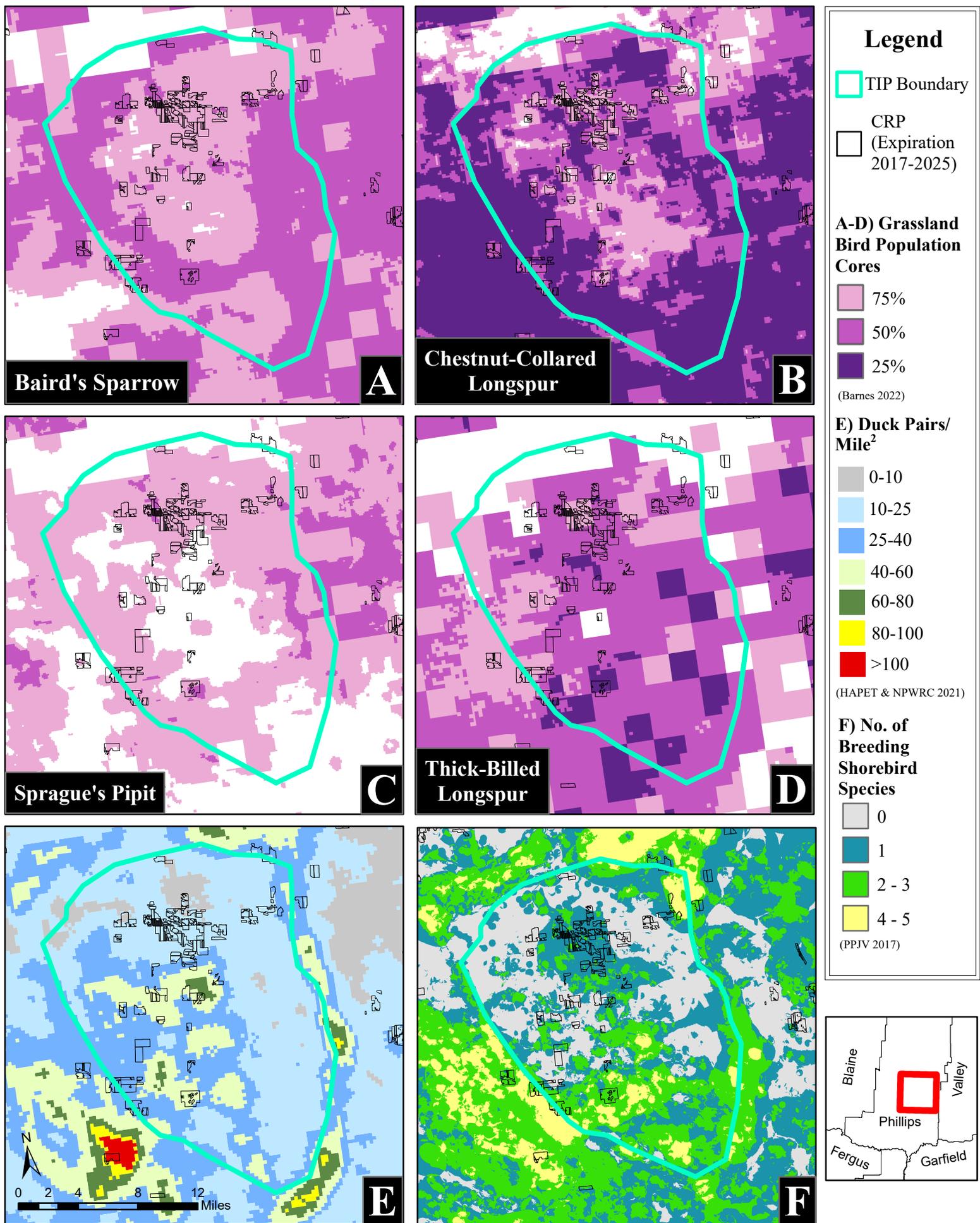
Garfield



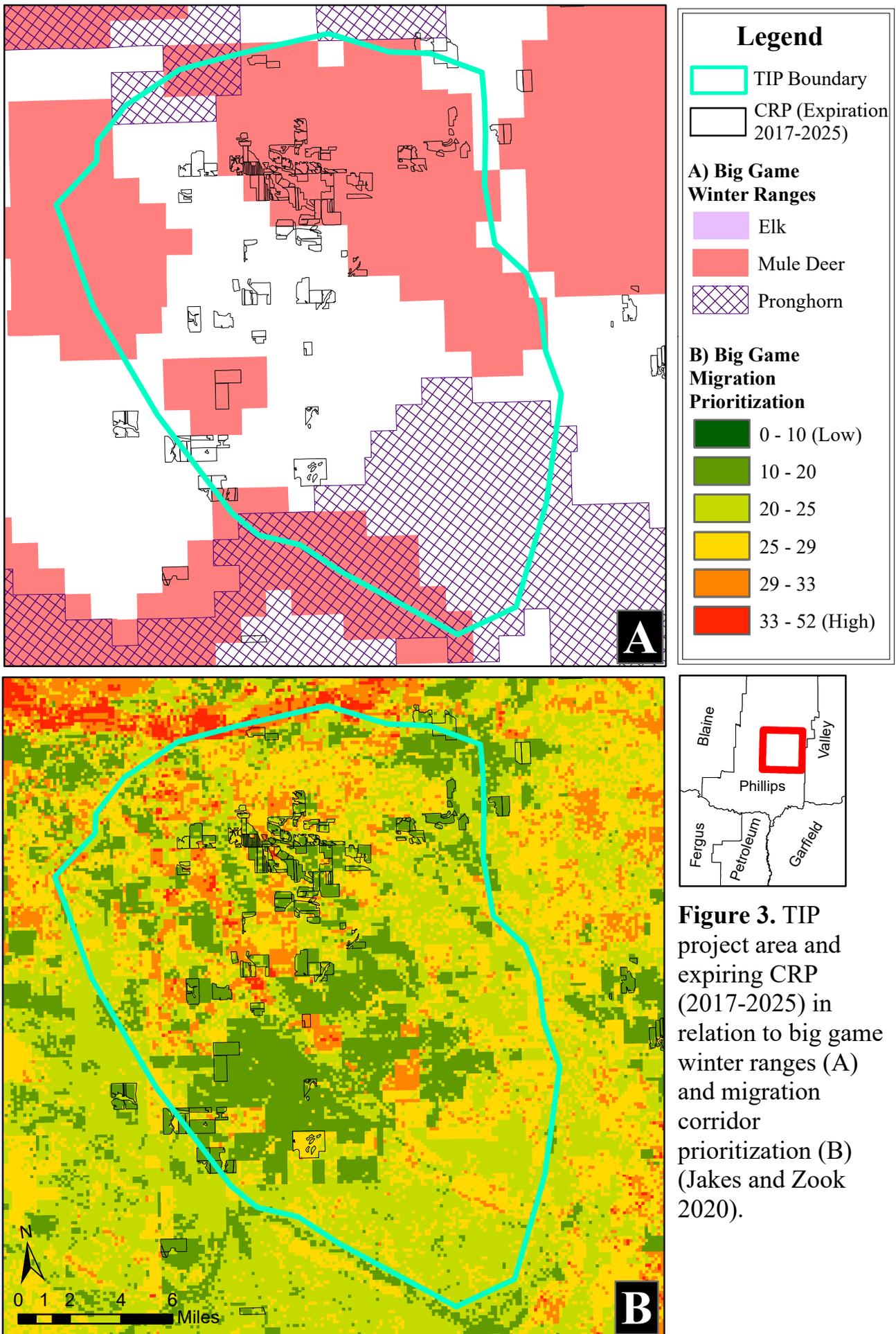


**Figure 1.** Phillips county, TIP project area, and expiring CRP (2017-2025) in relation to cultivation risk (suitability for cropping based on climate, soils, and topography; Evans 2015).





**Figure 2.** TIP project area and expiring CRP (2017-2025) in relation to priority grassland bird population core areas (A-D), breeding duck pairs per square mile (E), and number of breeding shorebird species (F).



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