

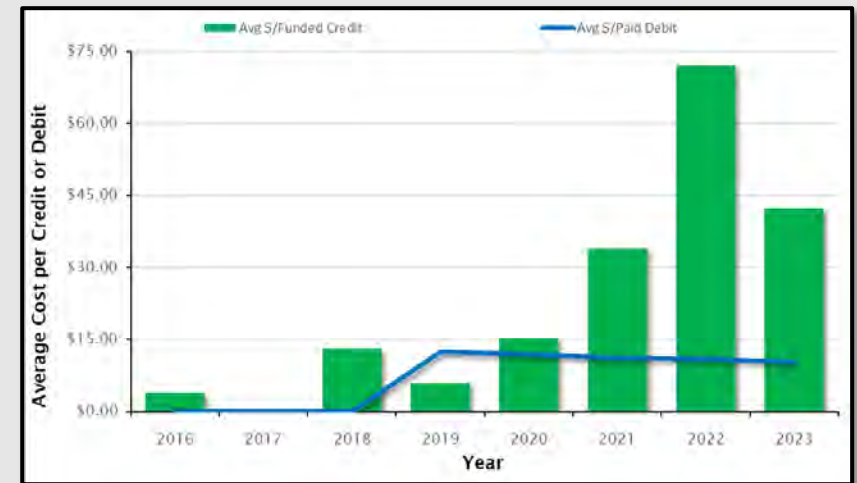
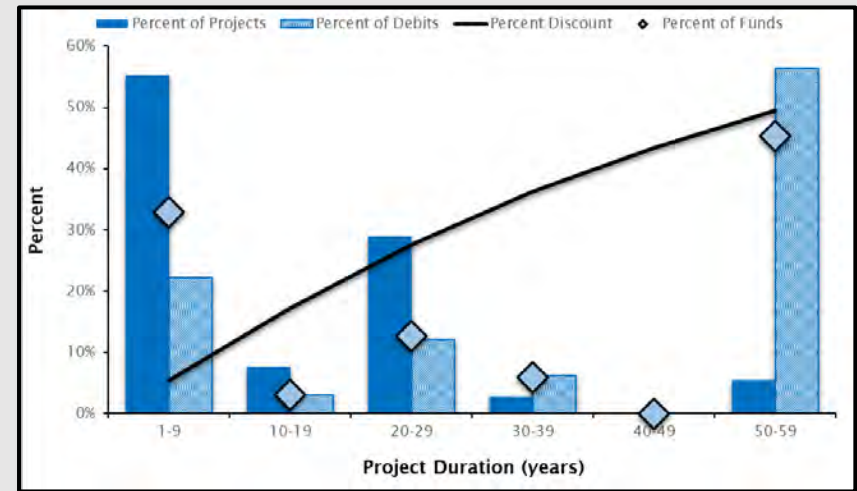
# DEBIT & CREDIT PRICING ANALYSIS

## ➤ 2023 Stakeholder Meeting

### ➤ Questions:

1. Is the Program Equitable?
2. Is the Program Economically Appropriate?
3. Is the Stewardship Account Sustainable?

### ➤ Focus Group



# Updates to the HQT Basemap

Montana Sage Grouse  
Oversight Team Meeting

07 March 2024



**MONTANA SAGE GROUSE**  
Habitat Conservation Program

# MEASURES OF SUCCESS



## Functional Acre:

- Quantity (acreage) and quality (function) of habitat
- The unit for HQT outputs which policy gets applied for the conversion to credits and debits

Credits = habitat gain

Debits = habitat loss



# MEASURES OF SUCCESS



## Benefits:

- Disturbances – all impacts (only implemented projects)
- Conservation – limited accounting for impacts from preservation projects
- No inclusion of Policy
- Excellent spatial tracking
- Minimal temporal tracking

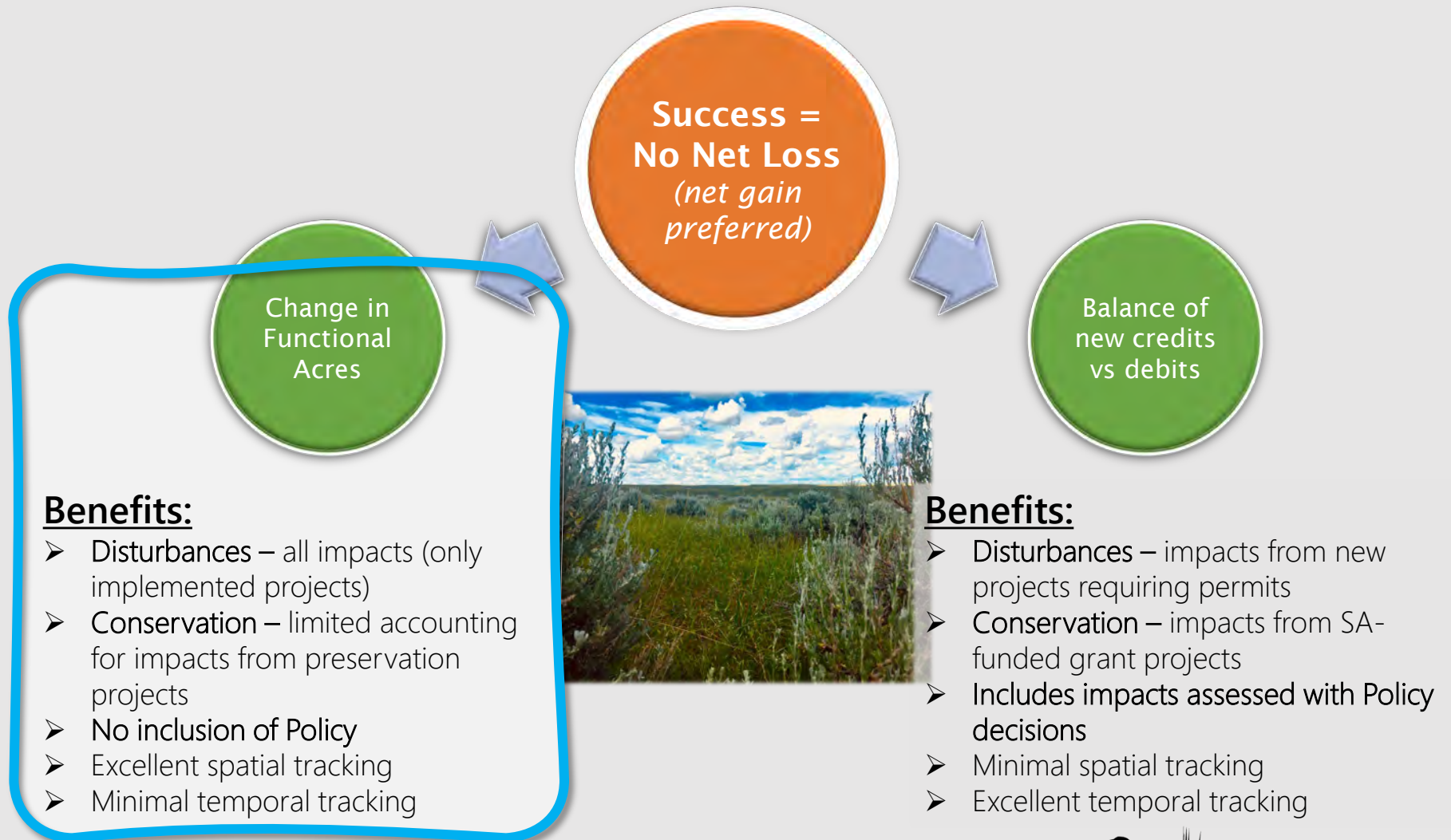


## Benefits:

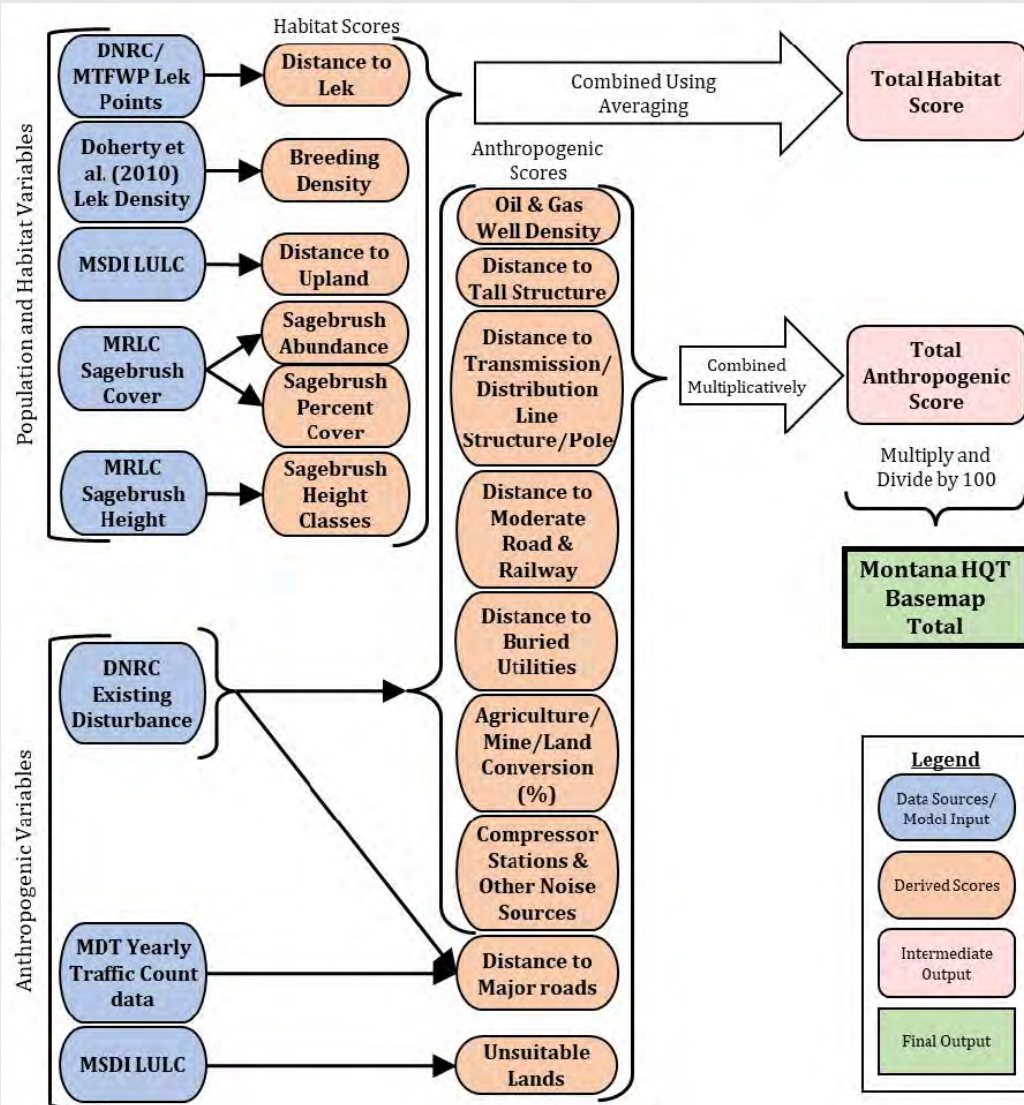
- Disturbances – impacts from new projects requiring permits
- Conservation – impacts from SA-funded grant projects
- Includes impacts assessed with Policy decisions
- Minimal spatial tracking
- Excellent temporal tracking



# MEASURES OF SUCCESS



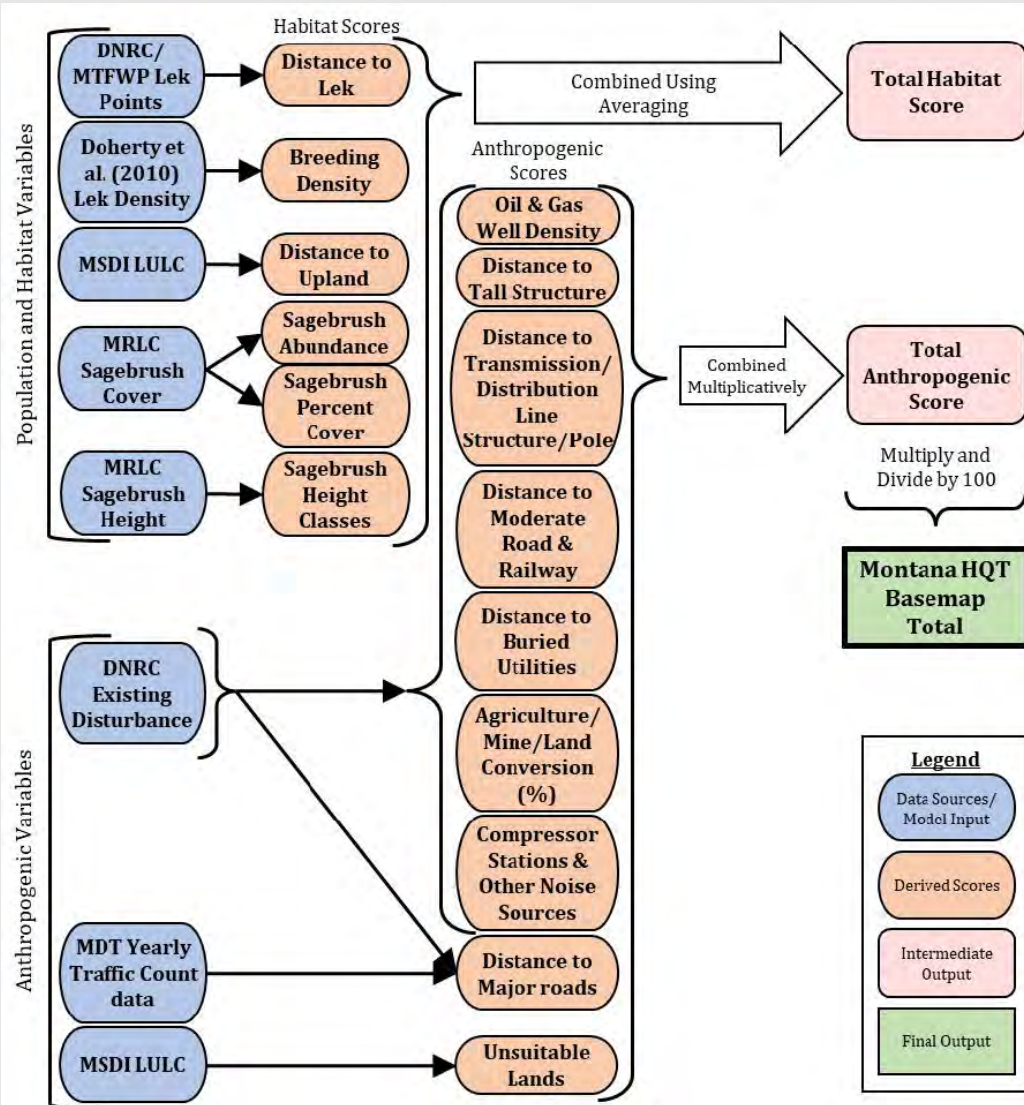
# INTRO TO THE HQT BASEMAP



Model Parameters	Data Source
<b>Population &amp; Habitat Variables</b>	
Distance to Lek	MT Dept. of Fish, Wildlife, & Parks Lek Points
Breeding Density	Doherty et al. (2010) Lek Density
Distance to Suitable Upland ( <i>from Mesic areas*</i> )	MT Spatial Data Infrastructure (MSDI) Land Use Land Cover (LULC)
*Mesic Mask layer	MSDI LULC, MT Natural Heritage Program Wetland/Riparian, US Fish & Wildlife Service National Wetlands Inventory
Sagebrush Abundance	Multi-Resolution Land Characteristics (MRLC) Shrubland Products – Percent Sagebrush & Percent Big Sagebrush
Sagebrush Percent Cover	MRLC Shrubland Products – Sagebrush Height
Sagebrush Height Classes	MRLC Shrubland Products – Sagebrush Height
<b>Anthropogenic Variables</b>	
Oil & Gas Well Density	
Distance to Tall Structure	
Distance to Transmission Structure (Lines, Structures/Poles, Substations)	
Distance to Moderate Road & Railways	MT Dept. of Natural Resources & Conservation (DNRC) Existing Disturbance
Distance to Pipelines, Fiber Optic Cables, & Other Buried Utilities	
Agriculture, Mines, & Other Large-scale Land Conversion (%)	
Compressor Stations & Other Noise Producing Sources	
Distance to Major Roads & Railways	DNRC Existing Disturbance, MT Dept. of Transportation Yearly Traffic Count data
Unsuitable Land Cover Types	MSDI LULC



# INTRO TO THE HQT BASEMAP

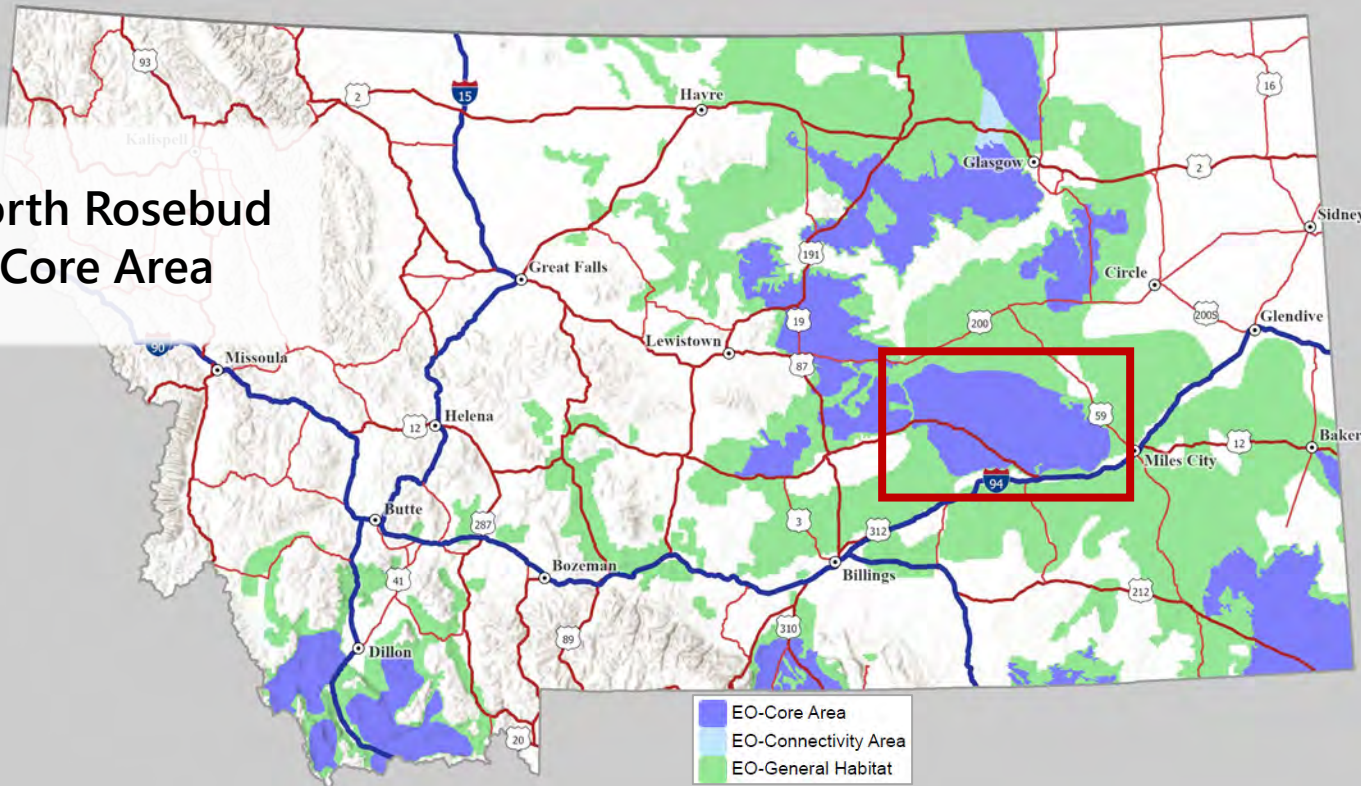


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Breeding Density	Doherty et al. (2010) Lek Density
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*Mesic Mask layer	MSDI LULC, MT Natural Heritage Program Wetland/Riparian, US Fish & Wildlife Service National Wetlands Inventory
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Sagebrush Percent Cover	MRLC Shrubland Products – Sagebrush Height
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<b>Anthropogenic Variables</b>	
Oil & Gas Well Density	
Distance to Tall Structure	
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Agriculture, Mines, & Other Large-scale Land Conversion (%)	
Compressor Stations & Other Noise Producing Sources	
Distance to Major Roads & Railways	DNRC Existing Disturbance, MT Dept. of Transportation Yearly Traffic Count data
Unsuitable Land Cover Types	MSDI LULC



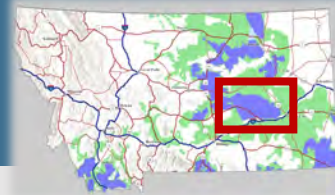
# INTRO TO THE HQT BASEMAP

North Rosebud  
Core Area





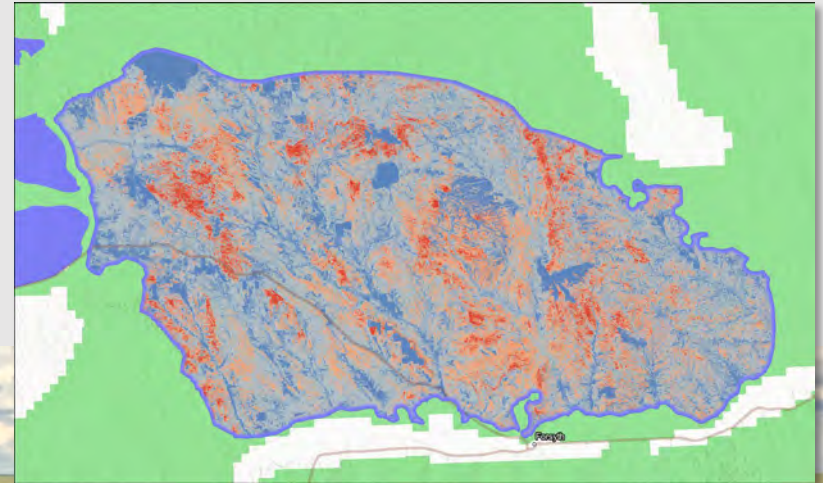
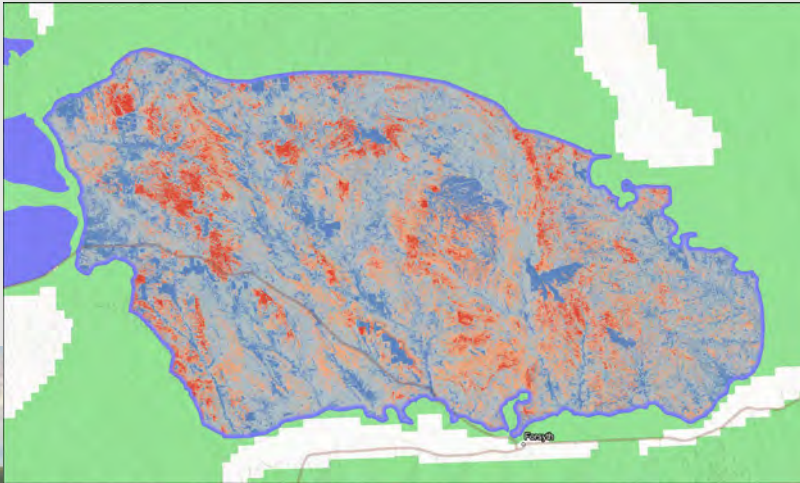
# POPULATION & HABITAT DATA



2018

Sagebrush Percent Cover

Preliminary

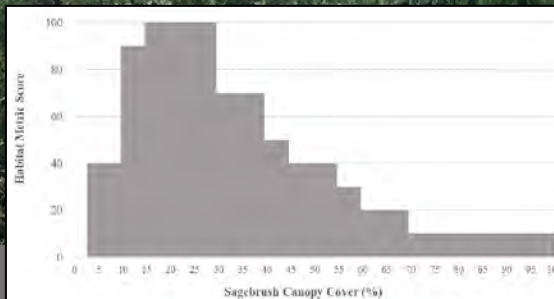


## 2015 Time-Series Trend:

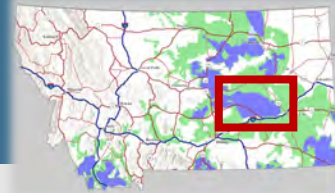
- Average Sagebrush % Cover = 8.55%
- Area  $\geq 10\%$  Sagebrush Cover = 498,678 acres

## 2021 Time-Series Trend:

- Average Sagebrush % Cover = 8.35%
- Area  $\geq 10\%$  Sagebrush Cover = 473,810 acres



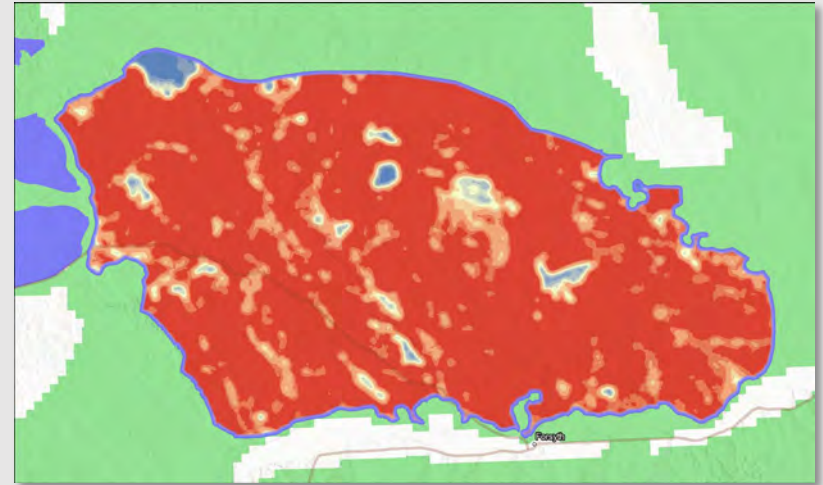
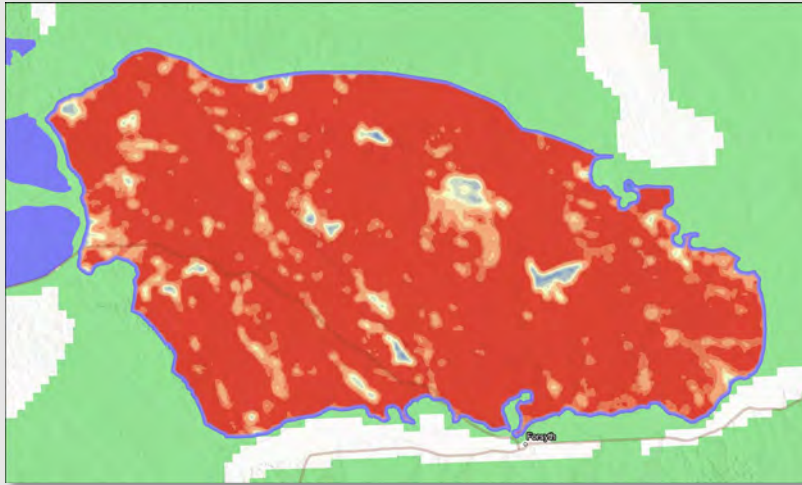
# POPULATION & HABITAT DATA



2018

Sagebrush Abundance

Preliminary

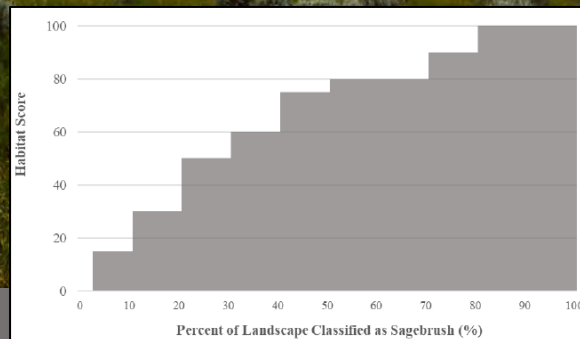


## 2015 Time-Series Trend:

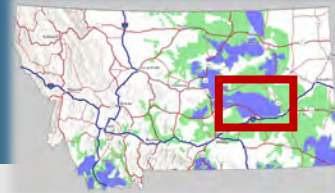
- Area with >80% of landscape classified as sagebrush = 1.35 million acres

## 2021 Time-Series Trend:

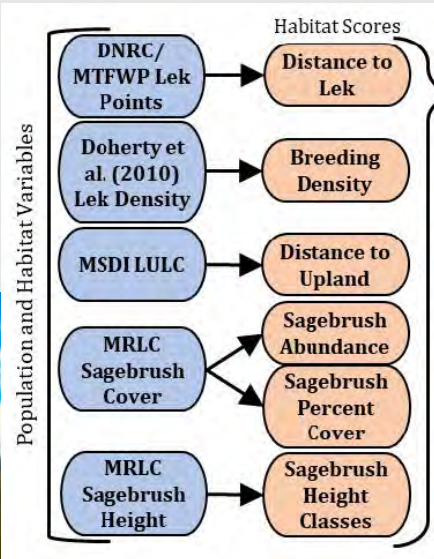
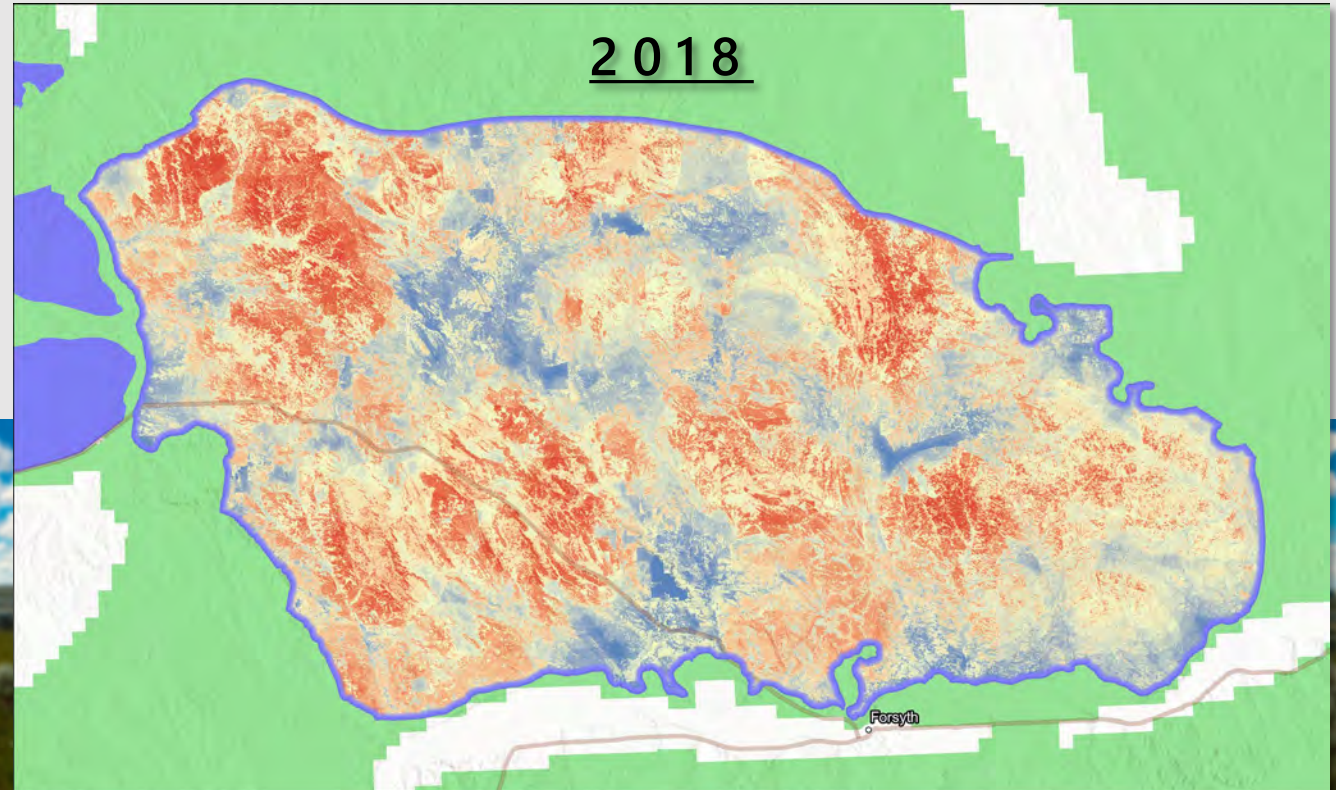
- Area with >80% of landscape classified as sagebrush = 1.30 million acres



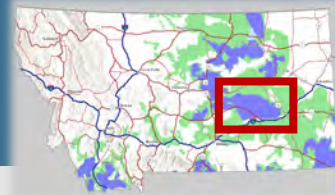
# POPULATION & HABITAT DATA



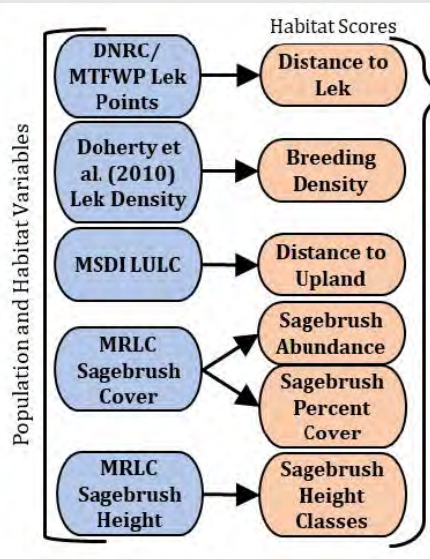
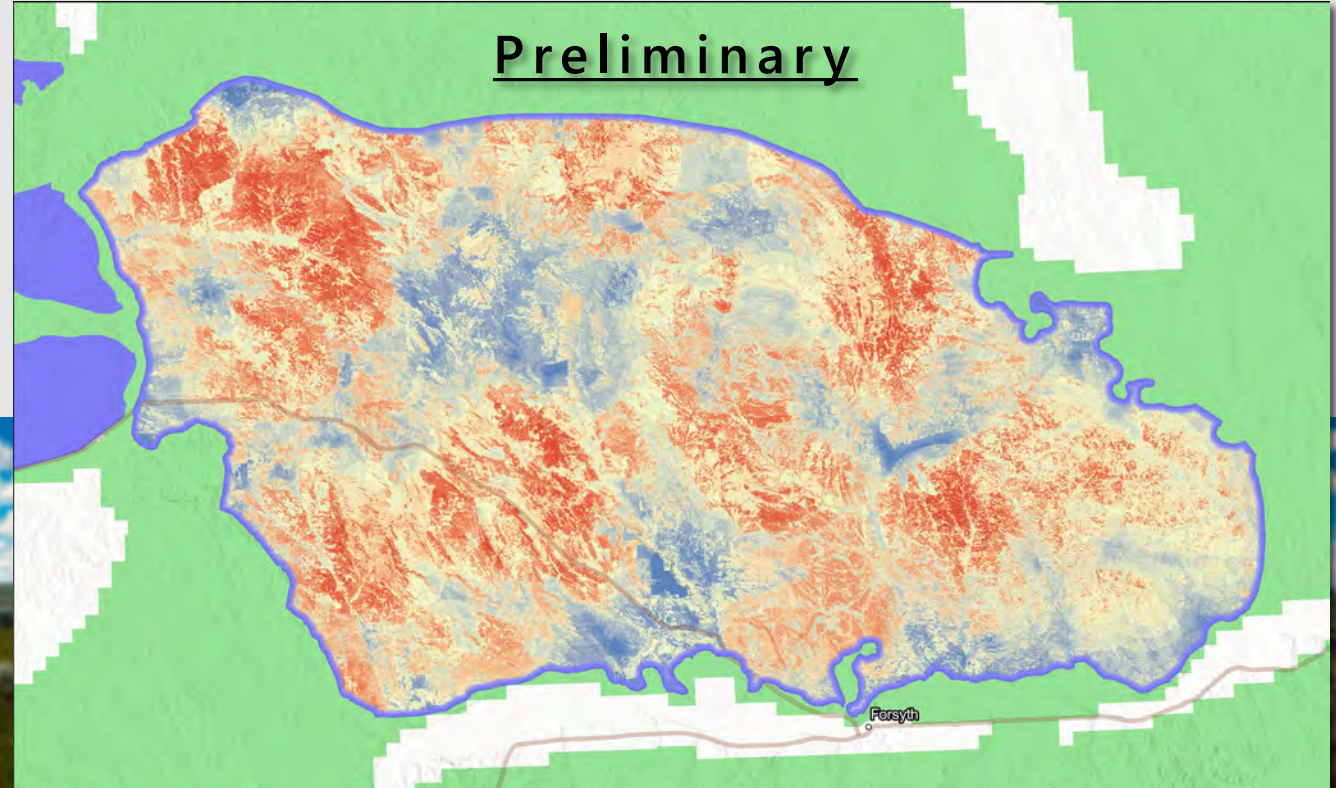
## Population & Habitat Score



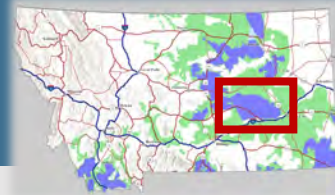
# POPULATION & HABITAT DATA



## Population & Habitat Score



# ANTHROPOGENIC DATA



2018

Anthropogenic Score

Preliminary

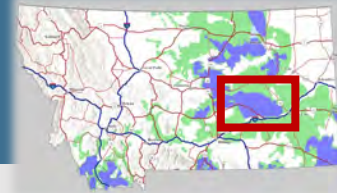


2015 NAIP

2021 NAIP



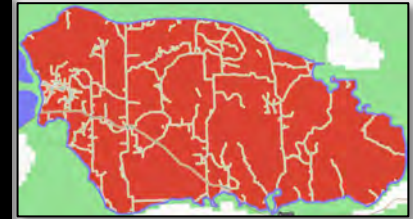
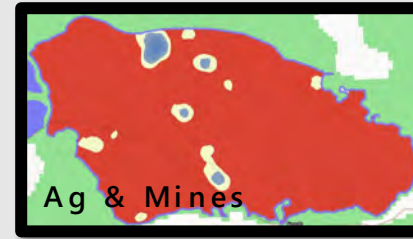
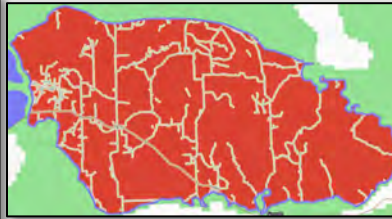
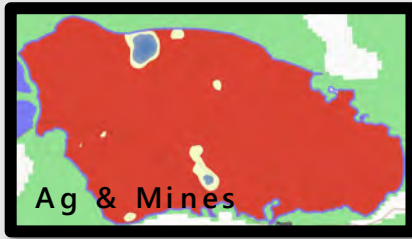
# ANTHROPOGENIC DATA



2018

Anthropogenic Score

Preliminary



## 2015 NAIP:

### ➤ Disturbance Metrics:

- Agriculture & Mines = 36,412 acres
- Minor Roads = 4,802 acres (942 miles)
- Oil & Gas Well Pads = 196 wells

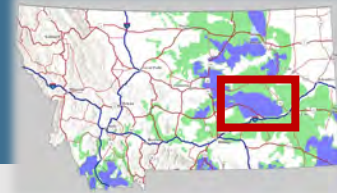
## 2021 NAIP:

### ➤ Disturbance Metrics:

- Agriculture & Mines = 38,095 acres
- Minor Roads = 4,821 acres (948 miles)
- Oil & Gas Well Pads = 206 wells



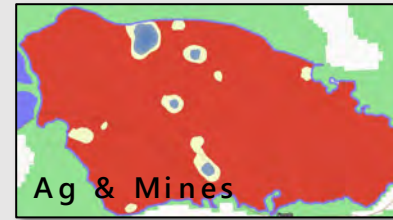
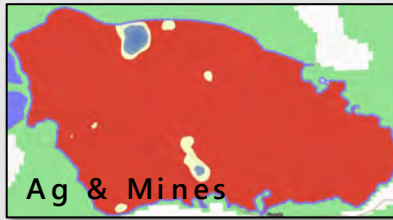
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2018

Anthropogenic Score

Preliminary



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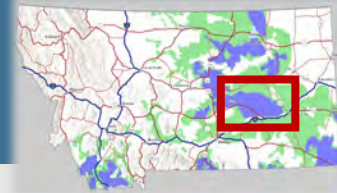
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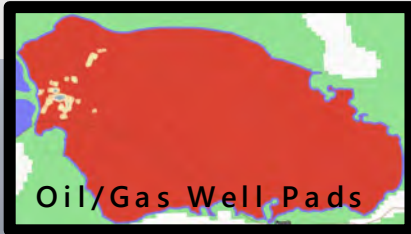
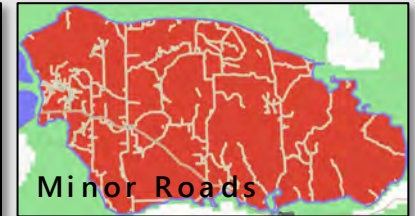
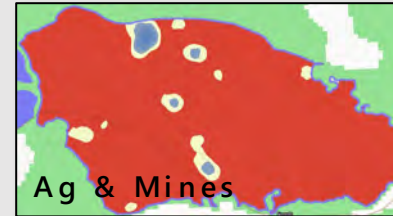
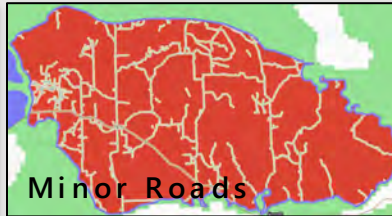
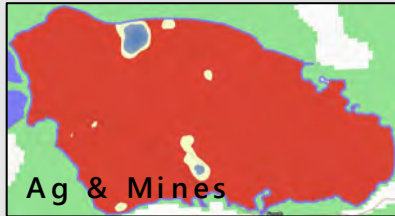
# ANTHROPOGENIC DATA



2018

Anthropogenic Score

Preliminary



## 2015 NAIP:

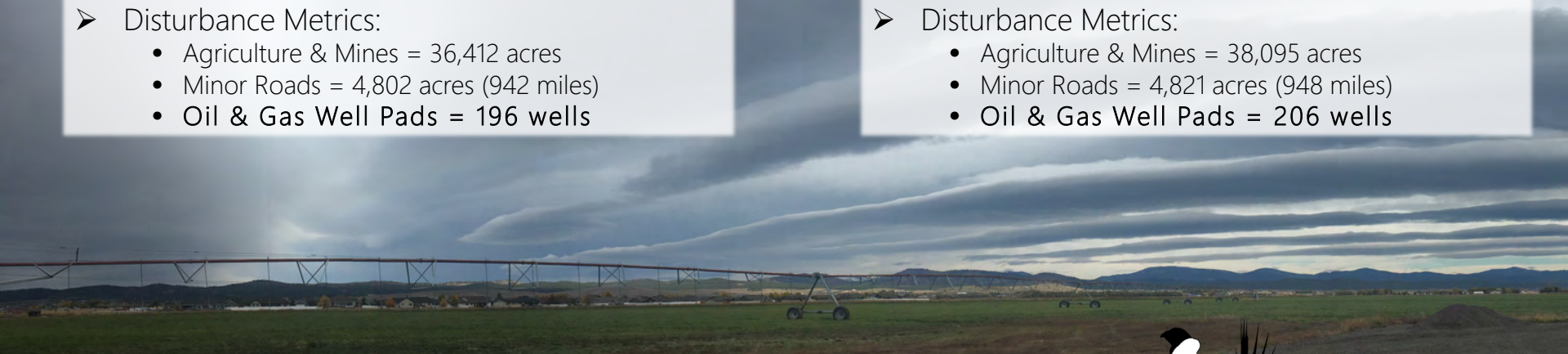
### ➤ Disturbance Metrics:

- Agriculture & Mines = 36,412 acres
- Minor Roads = 4,802 acres (942 miles)
- Oil & Gas Well Pads = 196 wells

## 2021 NAIP:

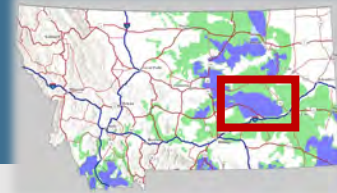
### ➤ Disturbance Metrics:

- Agriculture & Mines = 38,095 acres
- Minor Roads = 4,821 acres (948 miles)
- Oil & Gas Well Pads = 206 wells





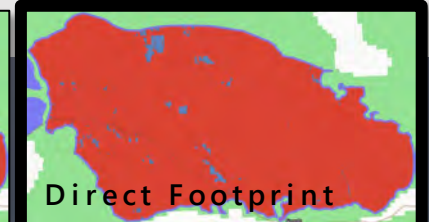
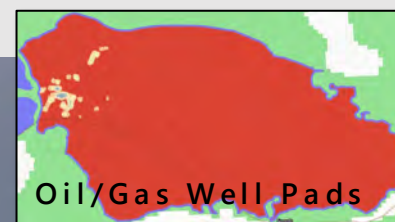
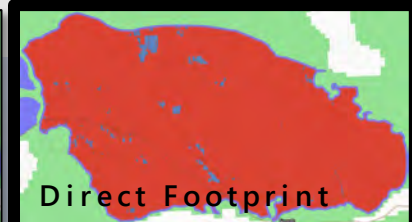
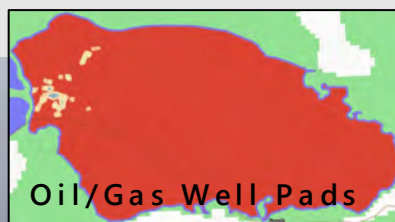
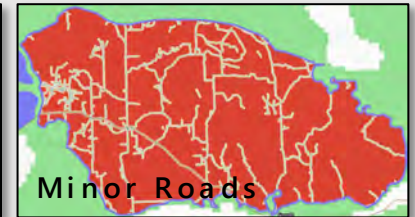
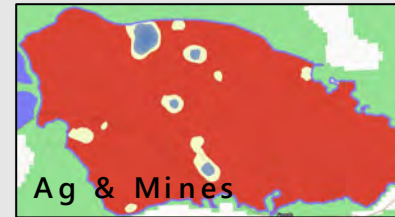
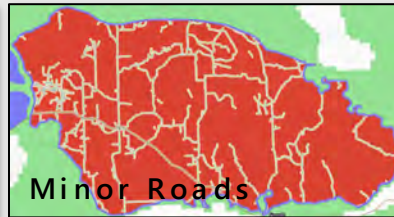
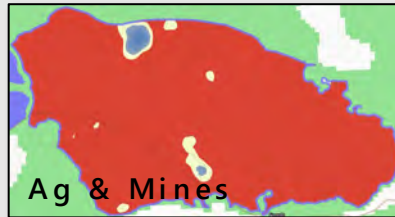
# ANTHROPOGENIC DATA



2018

Anthropogenic Score

Preliminary



## 2015 NAIP:

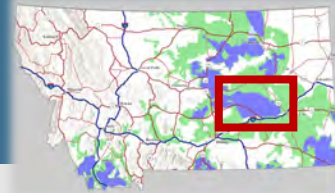
- Disturbance Metrics:
  - Agriculture & Mines = 36,412 acres
  - Minor Roads = 4,802 acres (942 miles)
  - Oil & Gas Well Pads = 196 wells
- Total Disturbance = 42,310 acres
- Percent of Core Area disturbed = 2.3%

## 2021 NAIP:

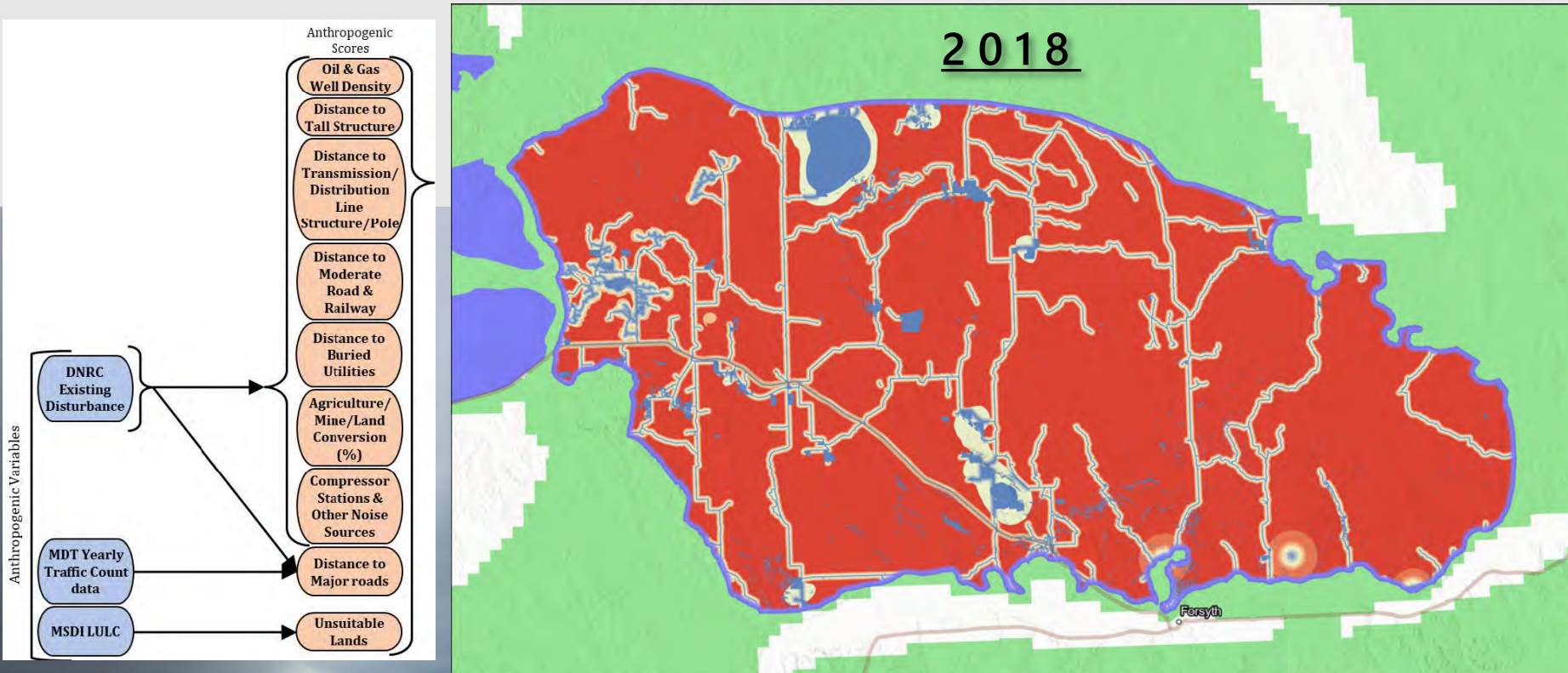
- Disturbance Metrics:
  - Agriculture & Mines = 38,095 acres
  - Minor Roads = 4,821 acres (948 miles)
  - Oil & Gas Well Pads = 206 wells
- Total Disturbance = 43,990 acres
- Percent of Core Area disturbed = 2.4%



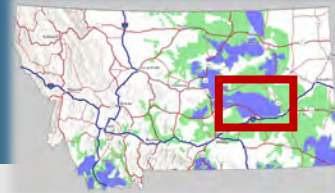
# ANTHROPOGENIC DATA



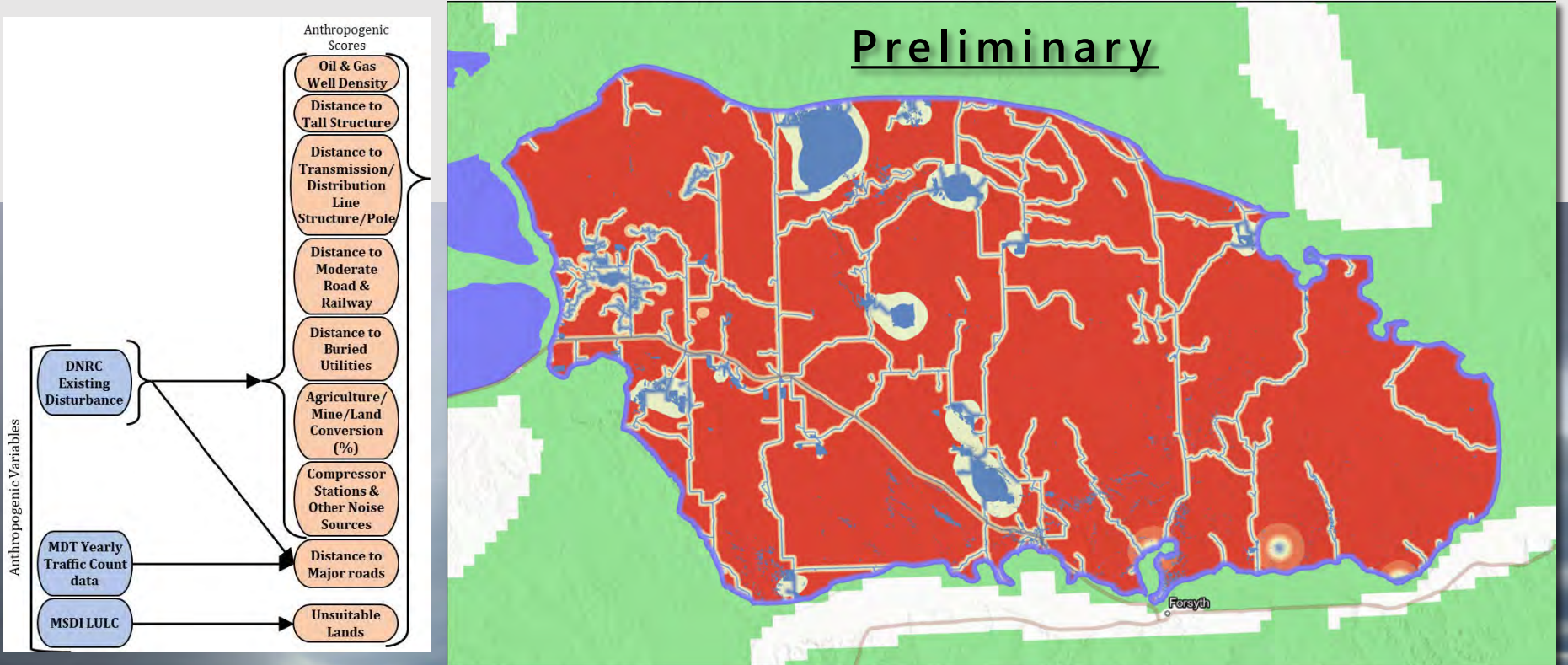
## Anthropogenic Score



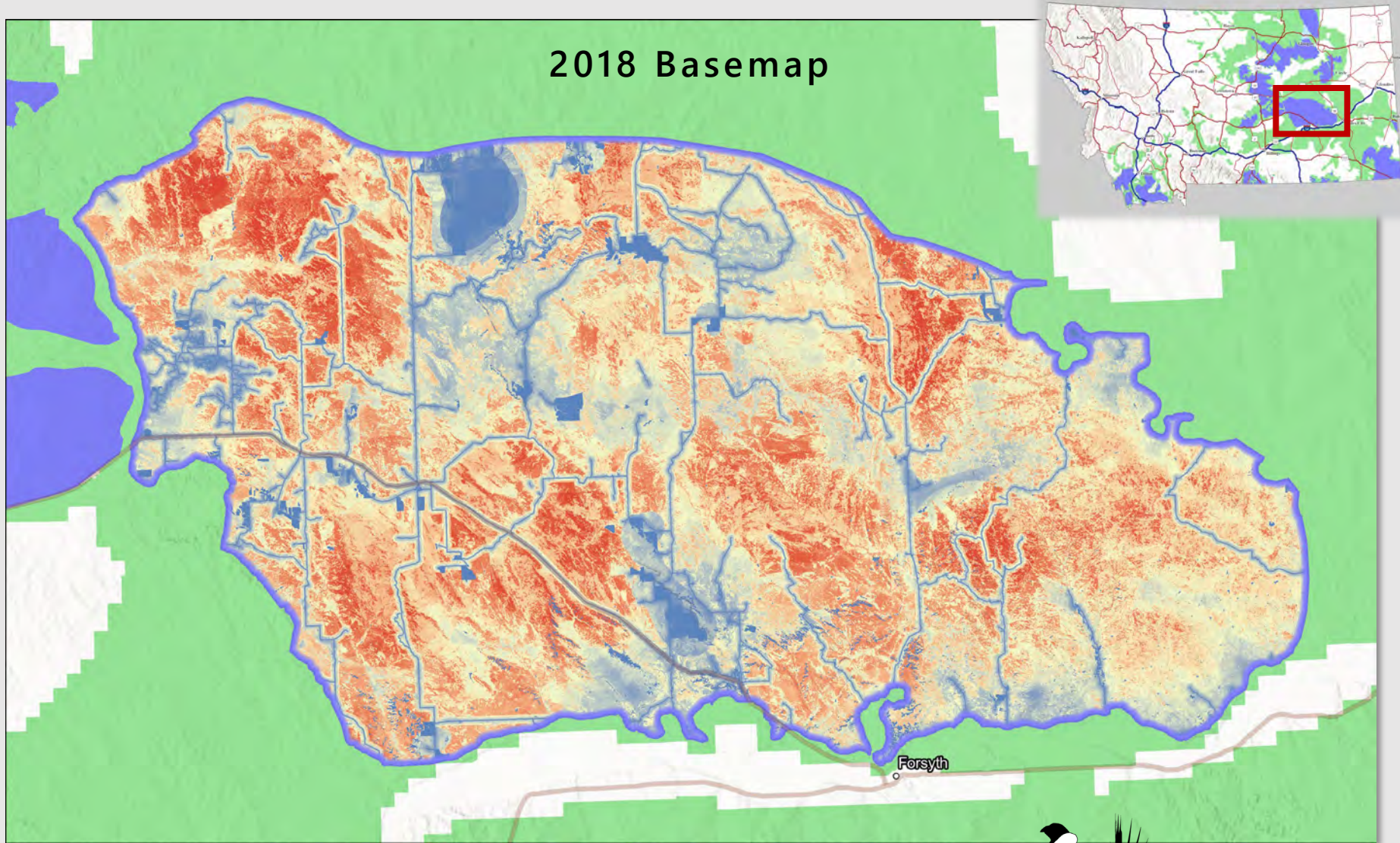
# ANTHROPOGENIC DATA



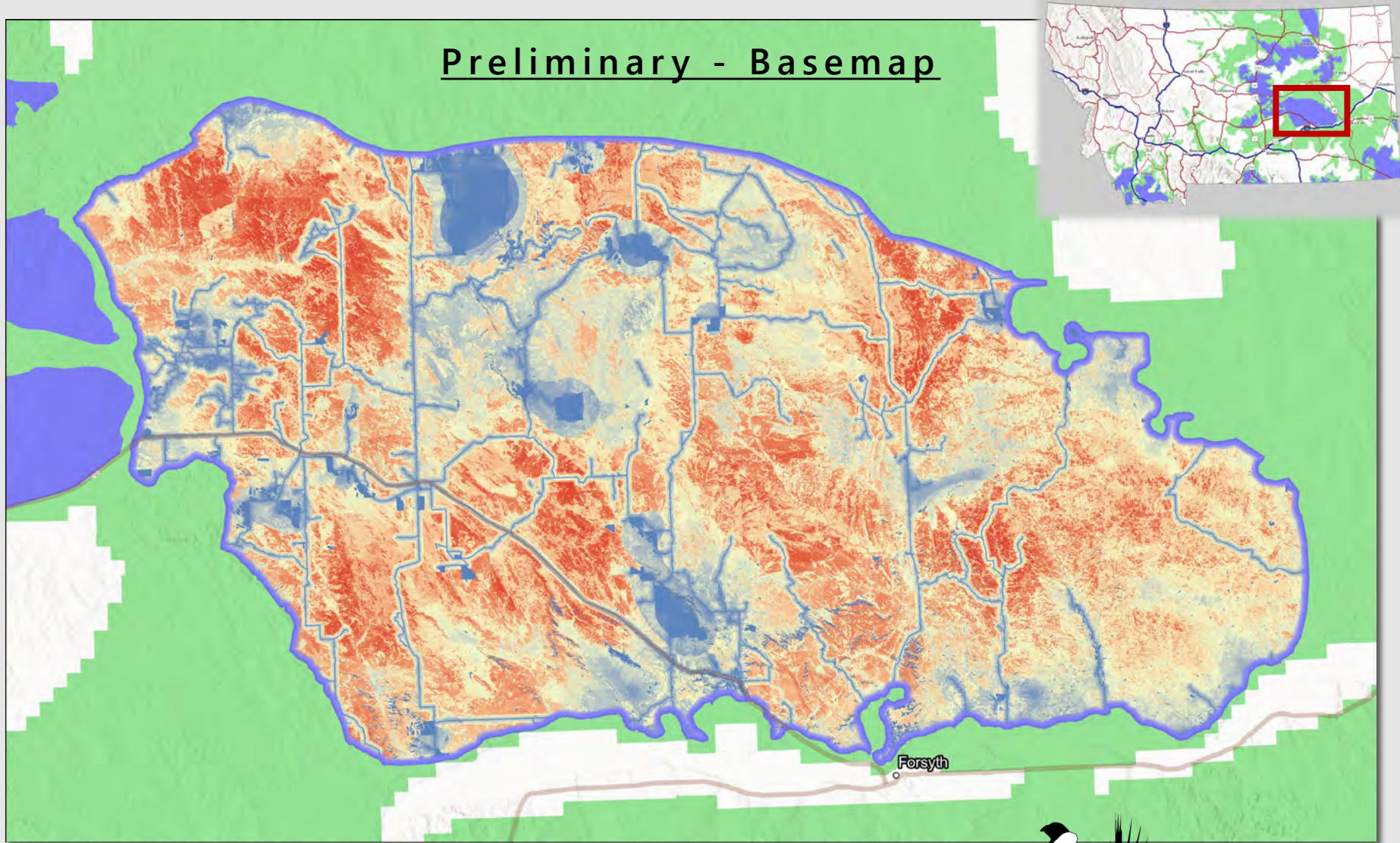
## Anthropogenic Score



# HQT BASEMAP VERSIONS – PRELIM

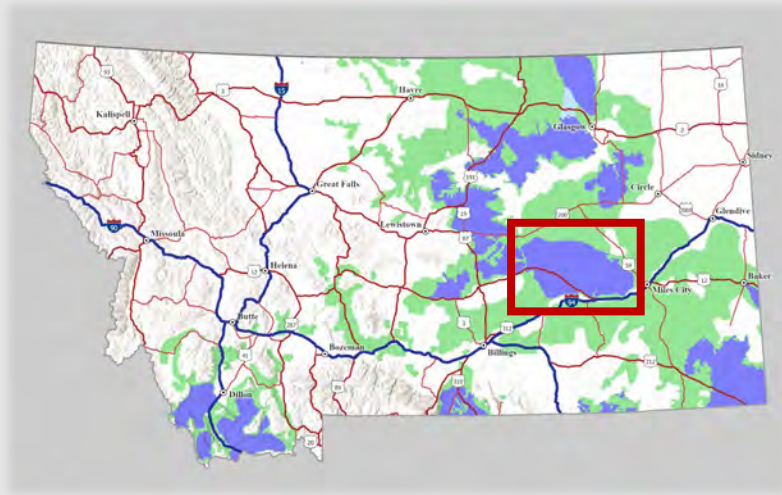


# HQT BASEMAP VERSIONS – PRELIM



# NEXT STEPS

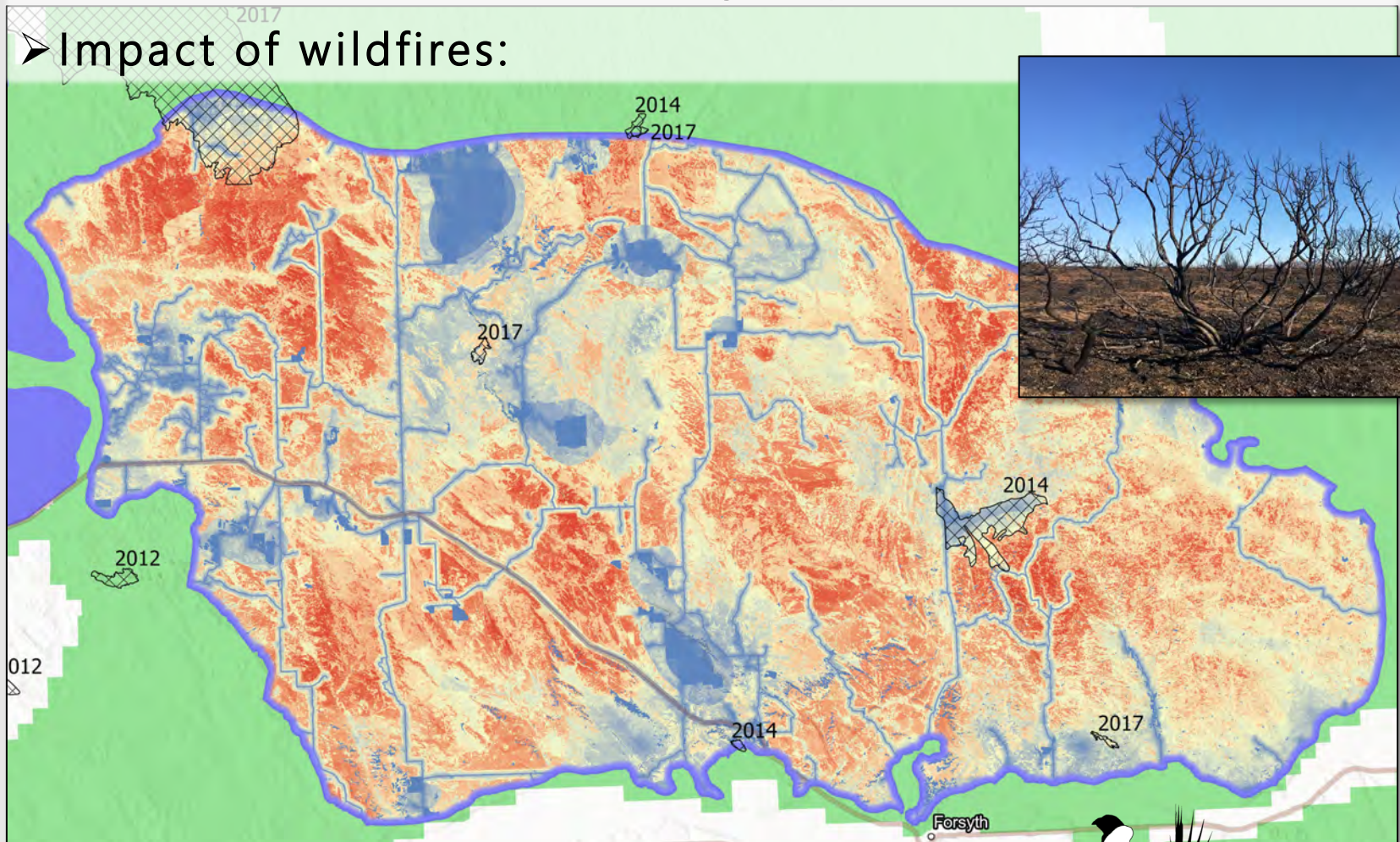
➤ Establish stakeholder focus group



# NEXT STEPS

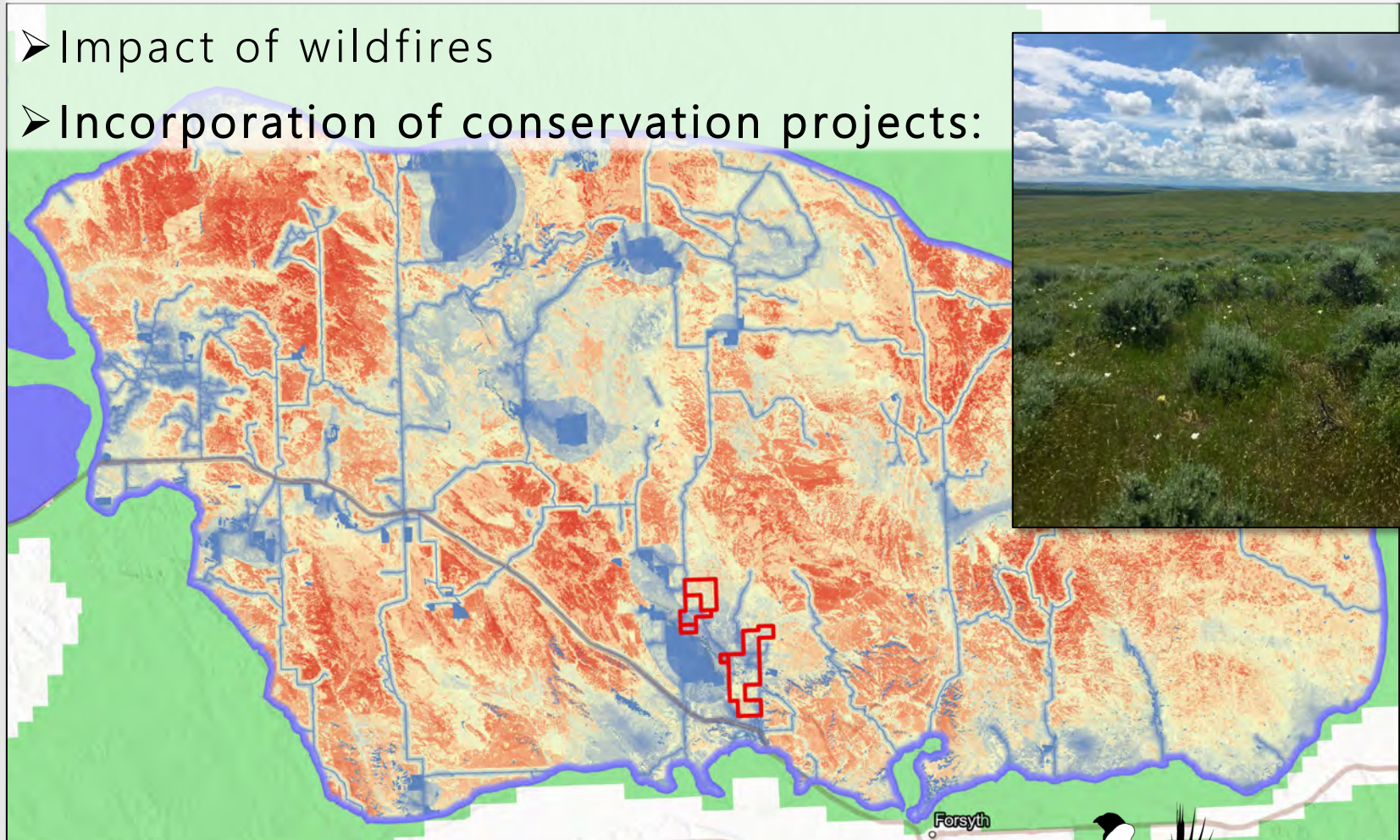
➤ Establish stakeholder focus group

➤ Impact of wildfires:



# NEXT STEPS

- Establish stakeholder focus group
- Impact of wildfires
- Incorporation of conservation projects:







**MONTANA SAGE GROUSE**  
Habitat Conservation Program

**MONTANA SAGE GROUSE HABITAT  
CONSERVATION PROGRAM**  
2023 Annual  
Report

*JANUARY 1  
THROUGH  
DECEMBER 31,  
2023*

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# 2023 Statistics

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## 298 Development Projects

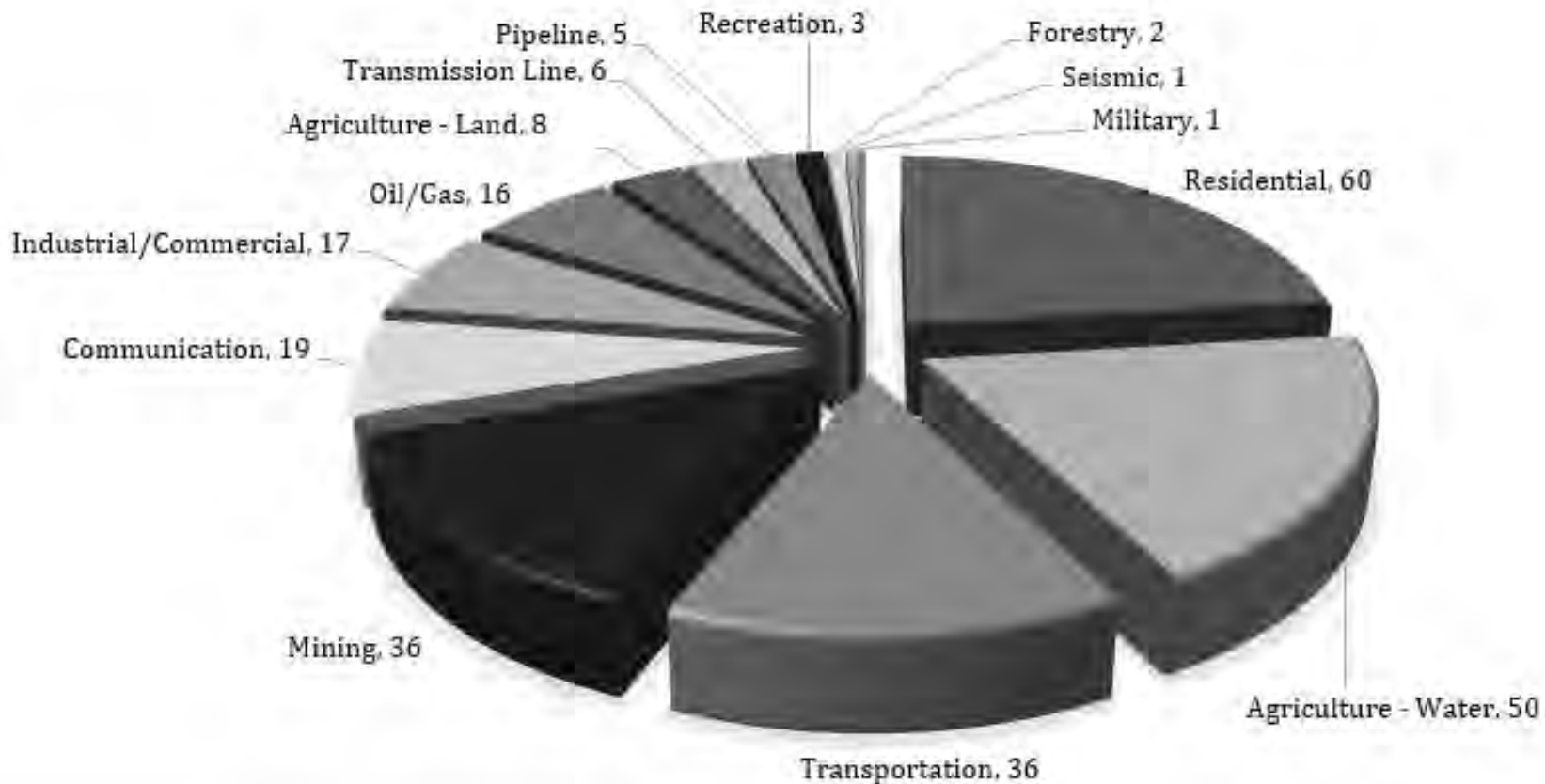
- 228 General Habitat
- 67 Core Area

## 16 Conservation Projects

- 1 Stewardship Grant
- 1 Permittee Responsible
- 14 Conservation Type

Review time - 2.2 days

## Completed Projects By Project Type



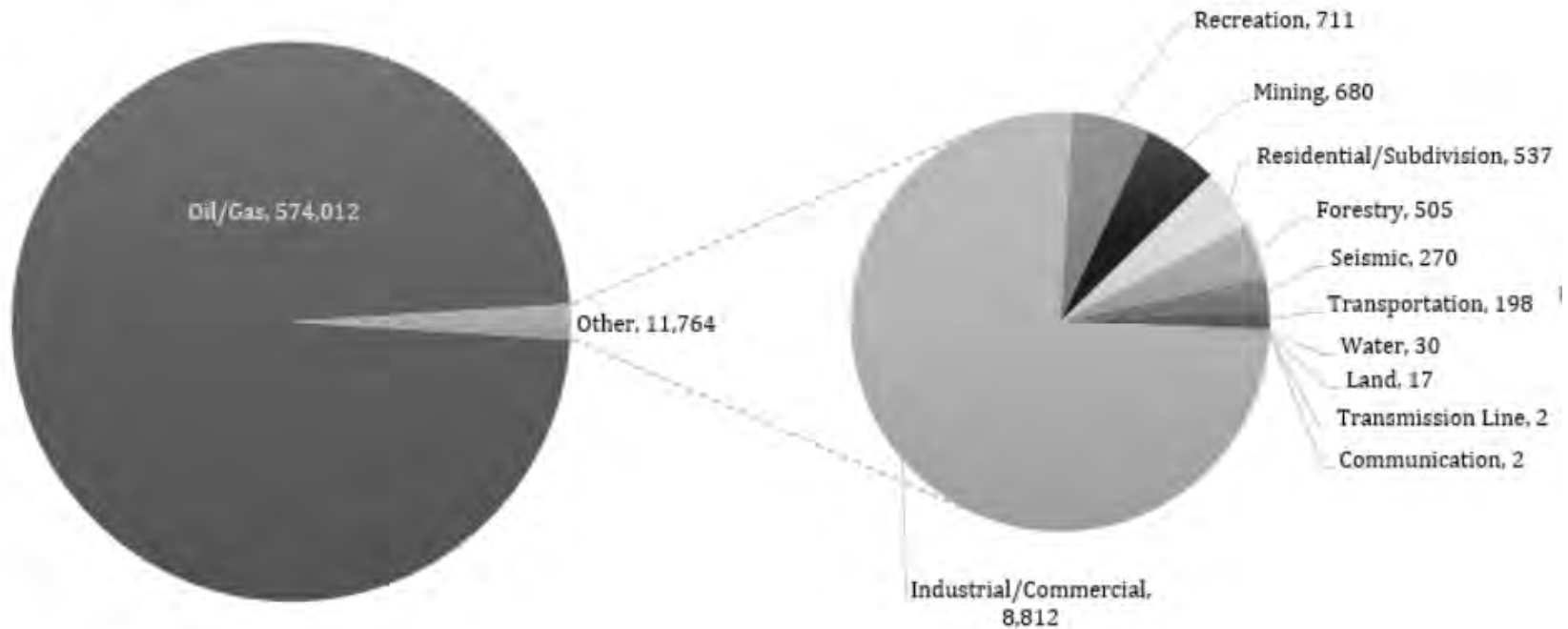
# Mitigation Obligation

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Completed review of 260 projects

- **211 of those projects – no mitigation**
  - 41 Exempt through EO exemption
  - 73 Except through Policy exemption
  - 22 Exempt through MSGOT Policy Exemption
  - 24 Exempt through Statutory Exemption
  - 51 No HQT Required
- **49 projects assessed mitigation**

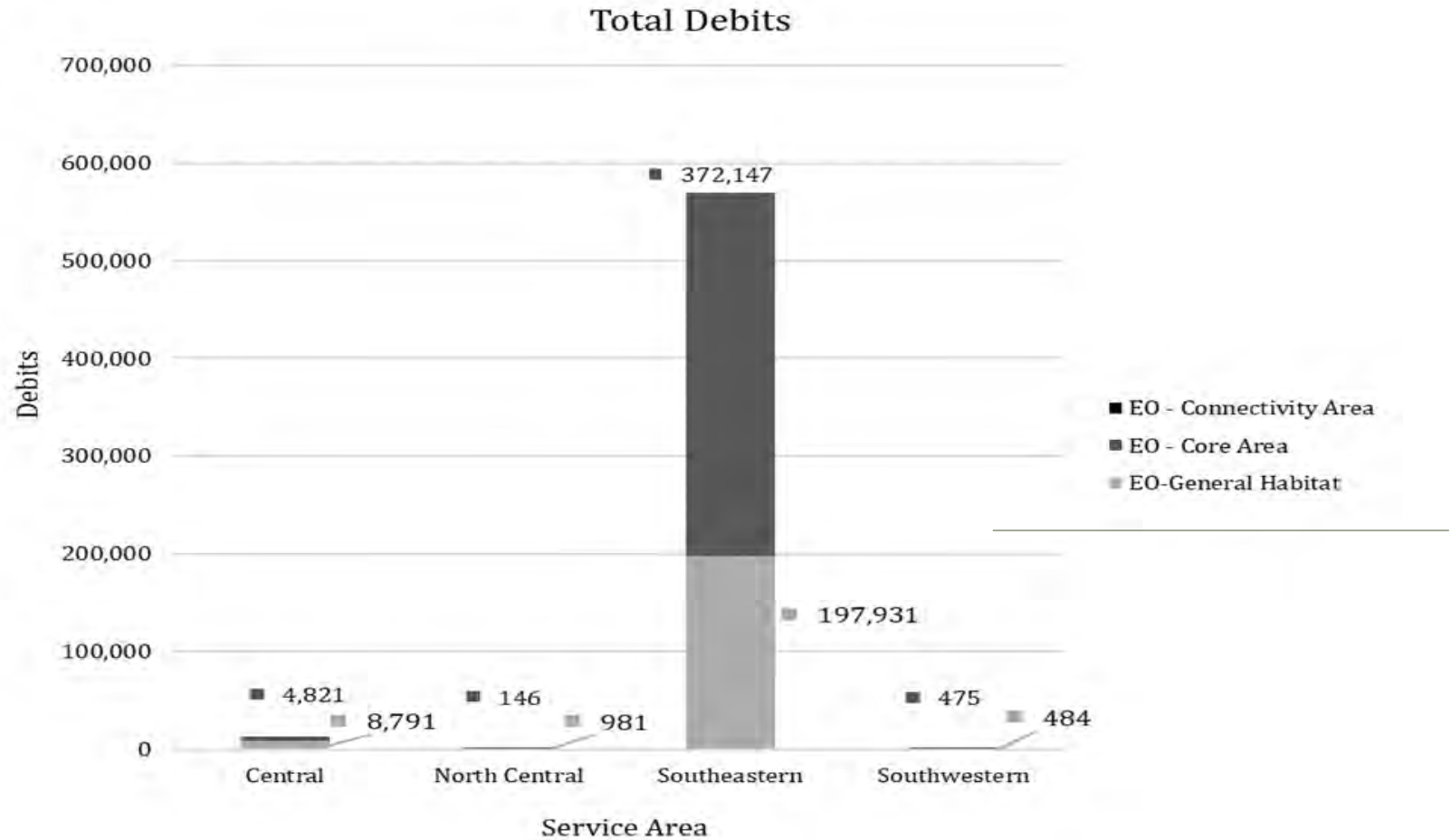
# Debits Created by Project Type



## Debits Created by Project Type

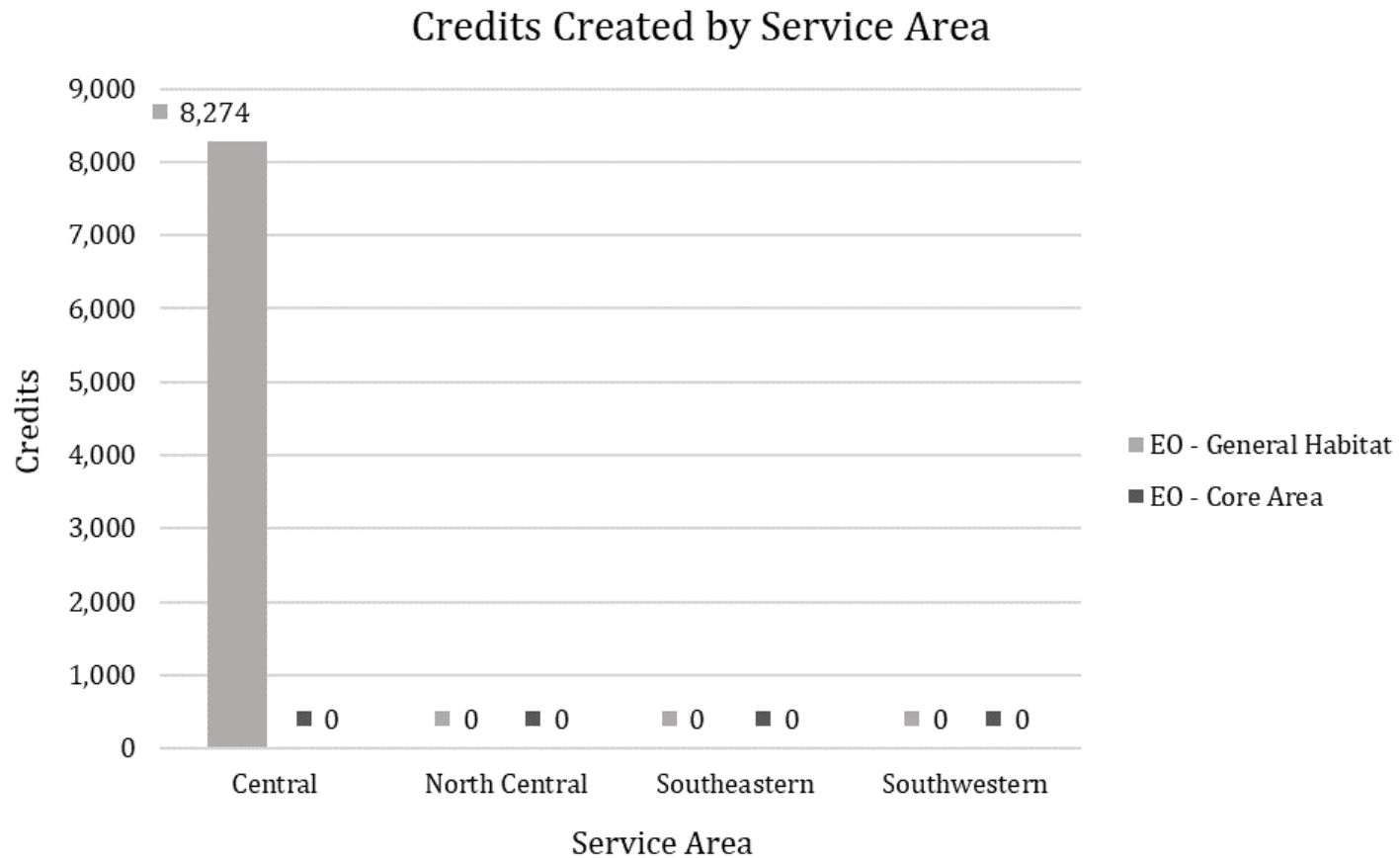
<b>Project Types</b>	<b>Total Debits</b>
Communications (n=1)	2
Forestry (n=1)	505
Industrial/Commercial (n=12)	8,812
Land (n=2)	17
Mining (n=7)	680
Oil/Gas (n=11)	574,012
Recreation (n=3)	711
Residential/Subdivision(n=3)	537
Seismic (n=1)	270
Transmission Line (n=2)	2
Transportation (n=5)	198
Water (n=1)	30

# Debits by Service Area

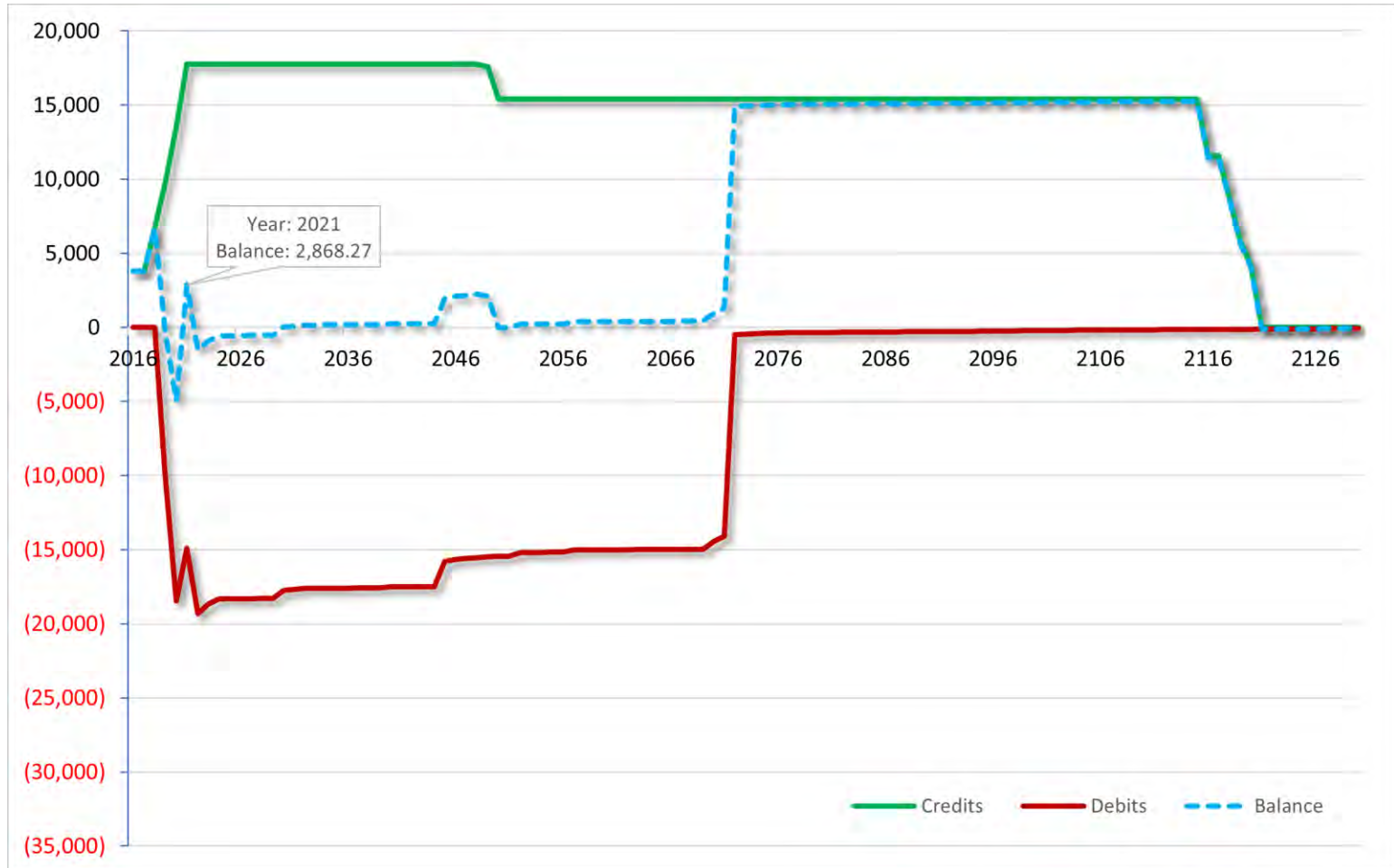




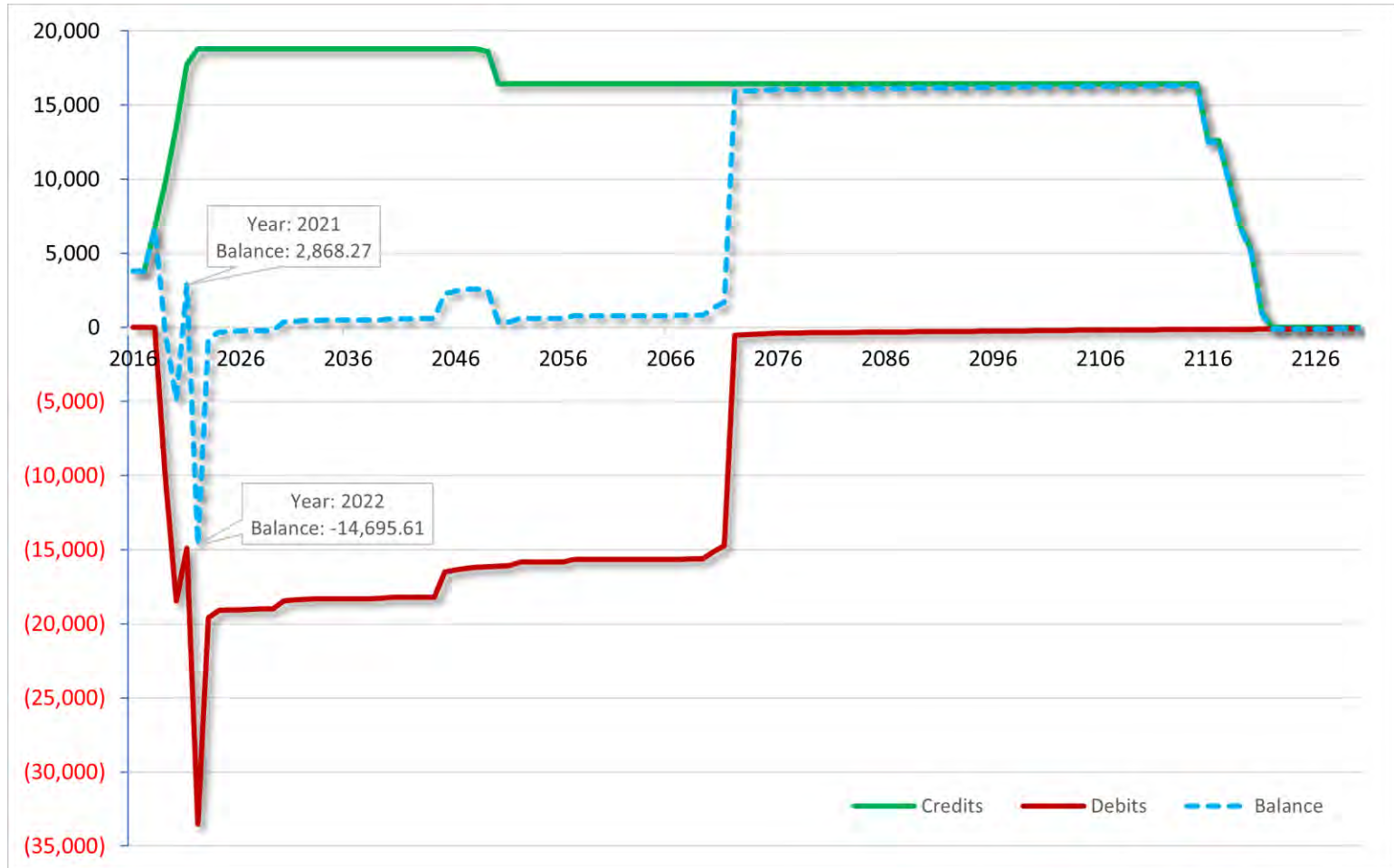
# Conservation Credits



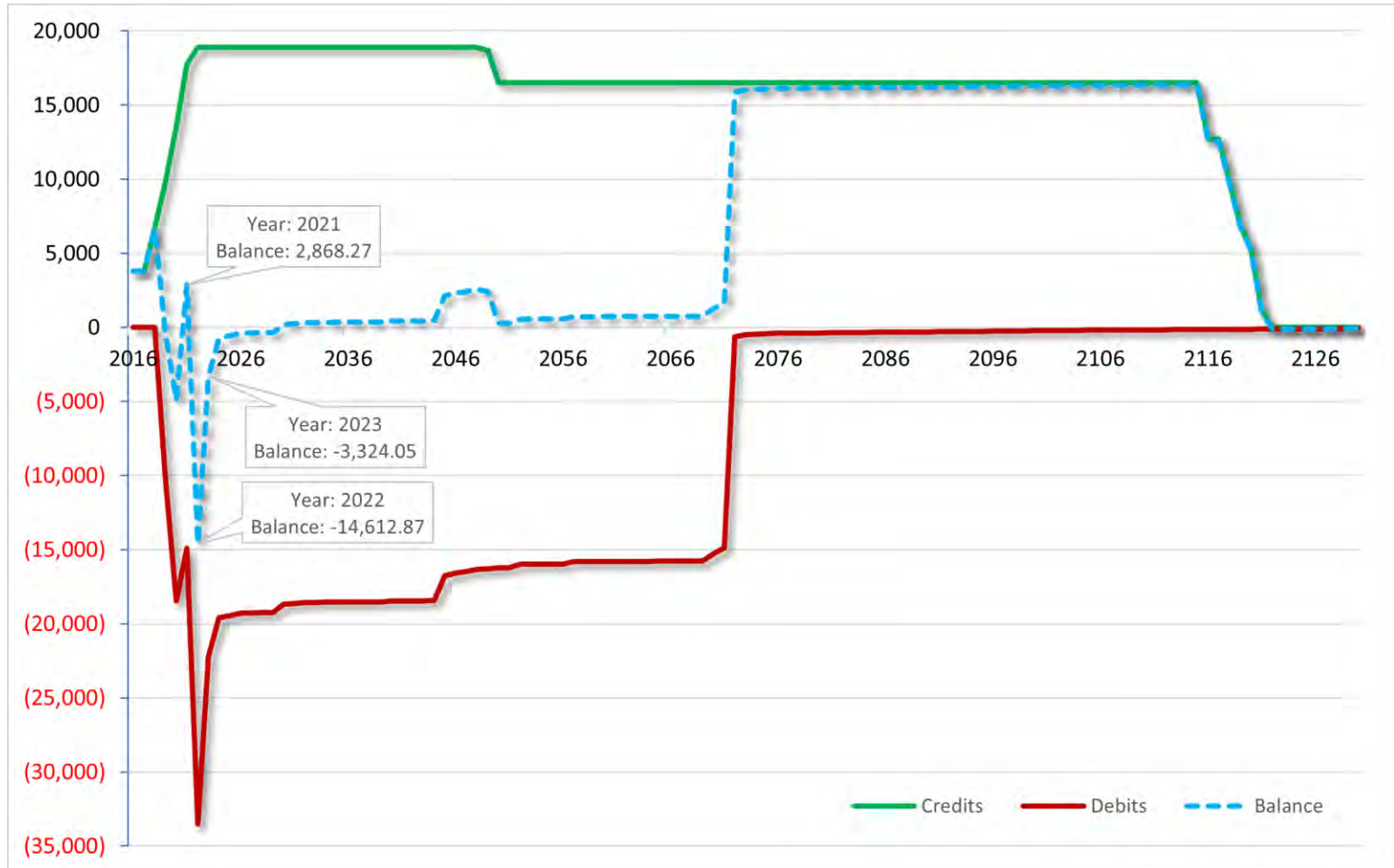
# 2021 Debit Credit Balance



# 2022 Debit Credit Balance



# 2023 Debit Credit Balance



# Montana's Greater Sage- Grouse

## Grants Update



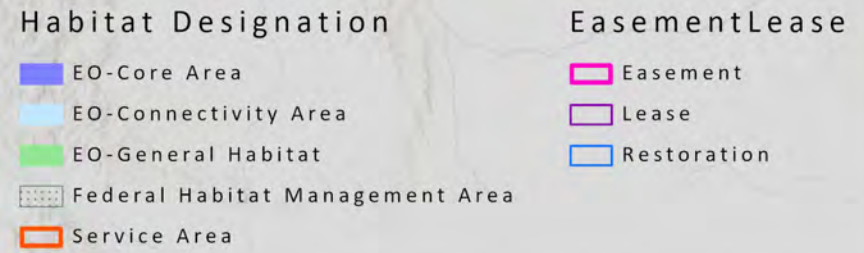
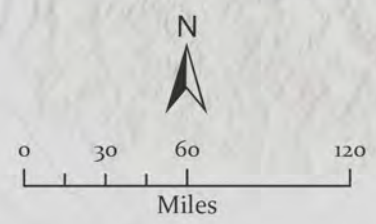
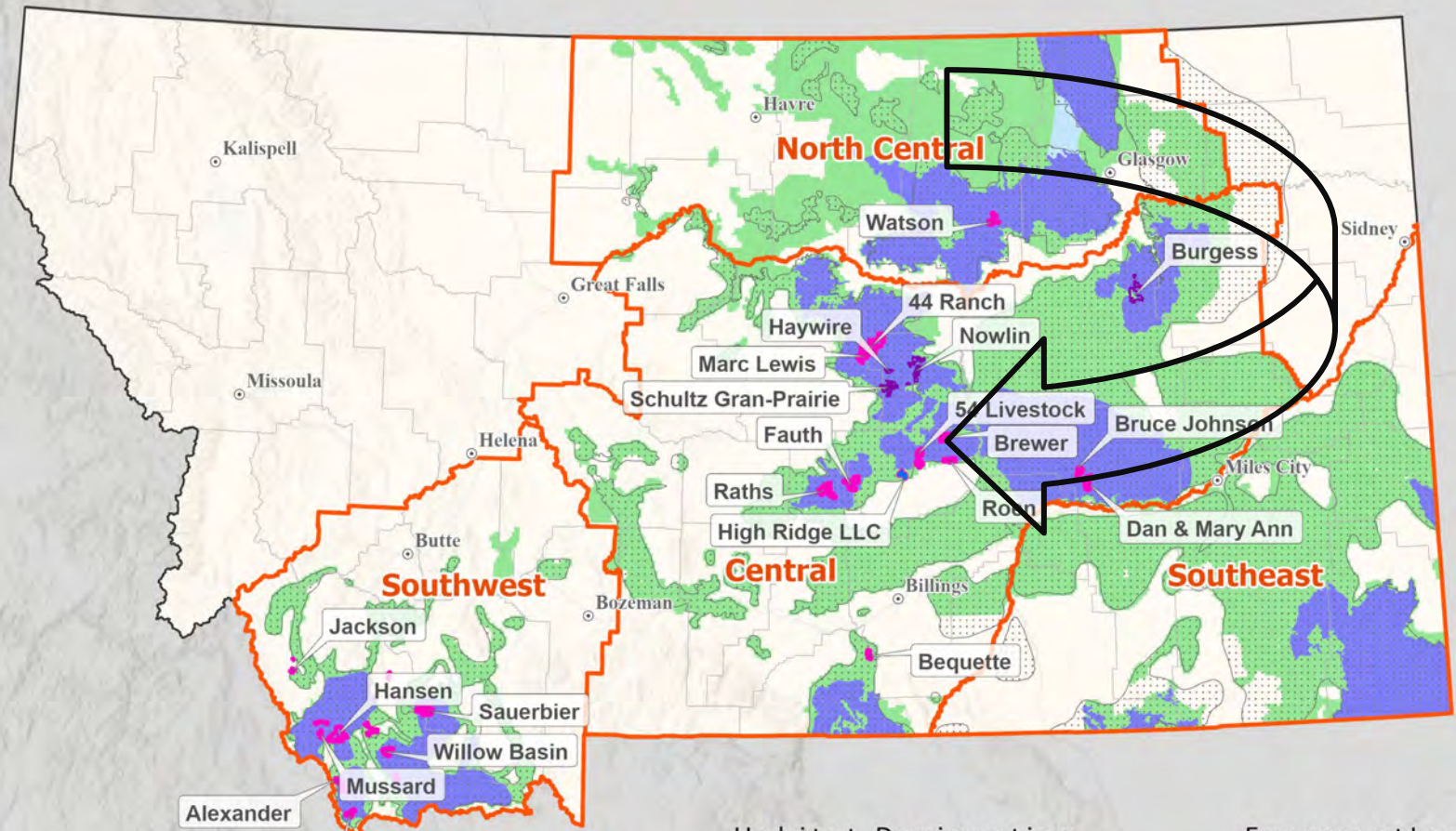
**MONTANA SAGE GROUSE**  
Habitat Conservation Program

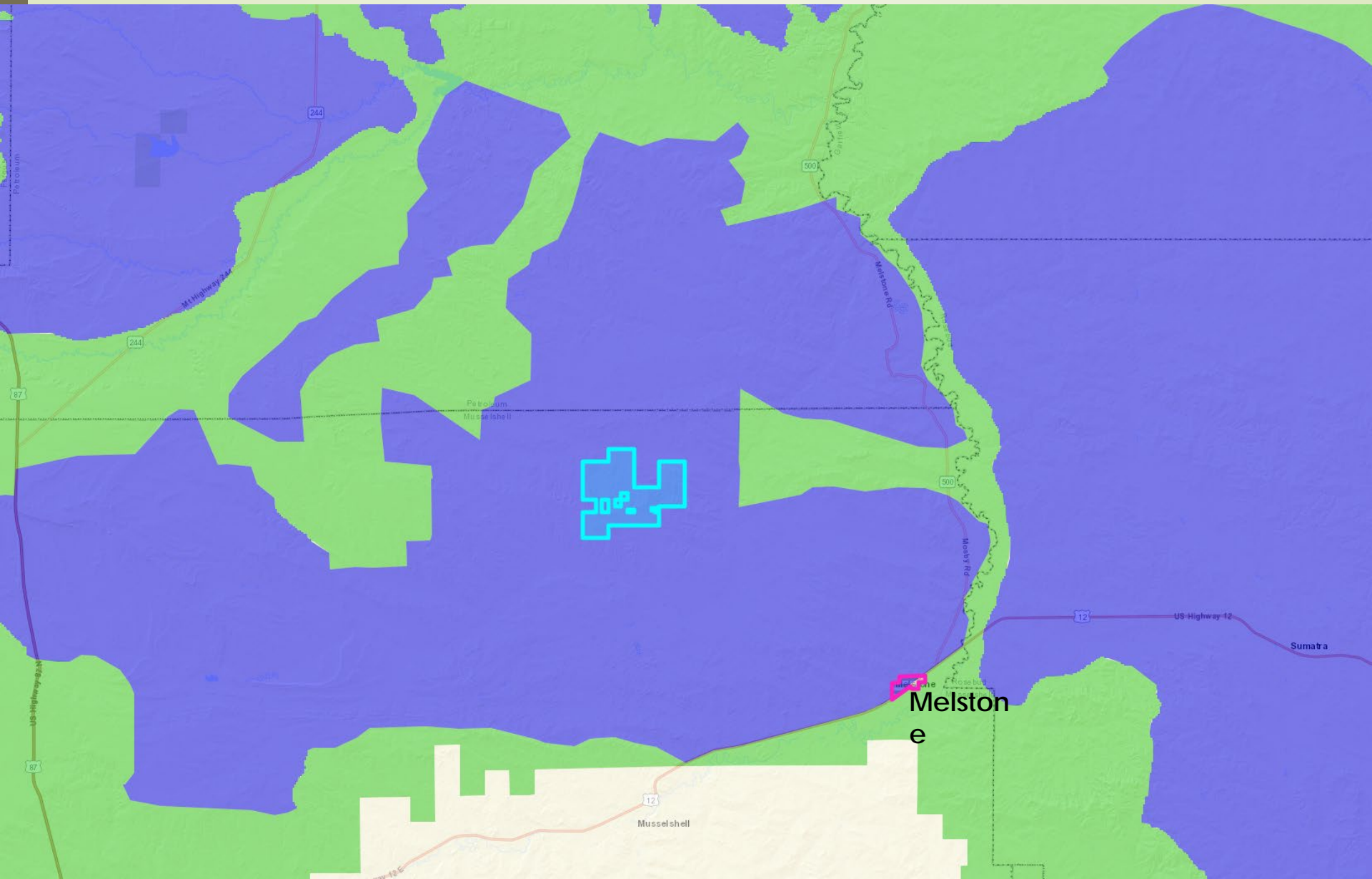


# Perpetual Conservation Easement Updates

# Sage Grouse Stewardship Account Awarded Grants

As of December 31st, 2023





Melstone

Musselshell

Petroleum,  
Musselshell II

Sumatra

Melstone

12

500

244

244

87

87

12

US Highway 244

Westmore Cr.

500

Mosby Cr.

US Highway 12

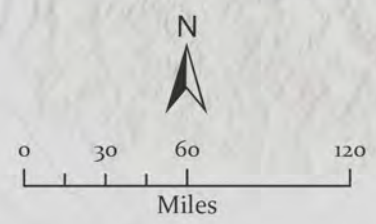
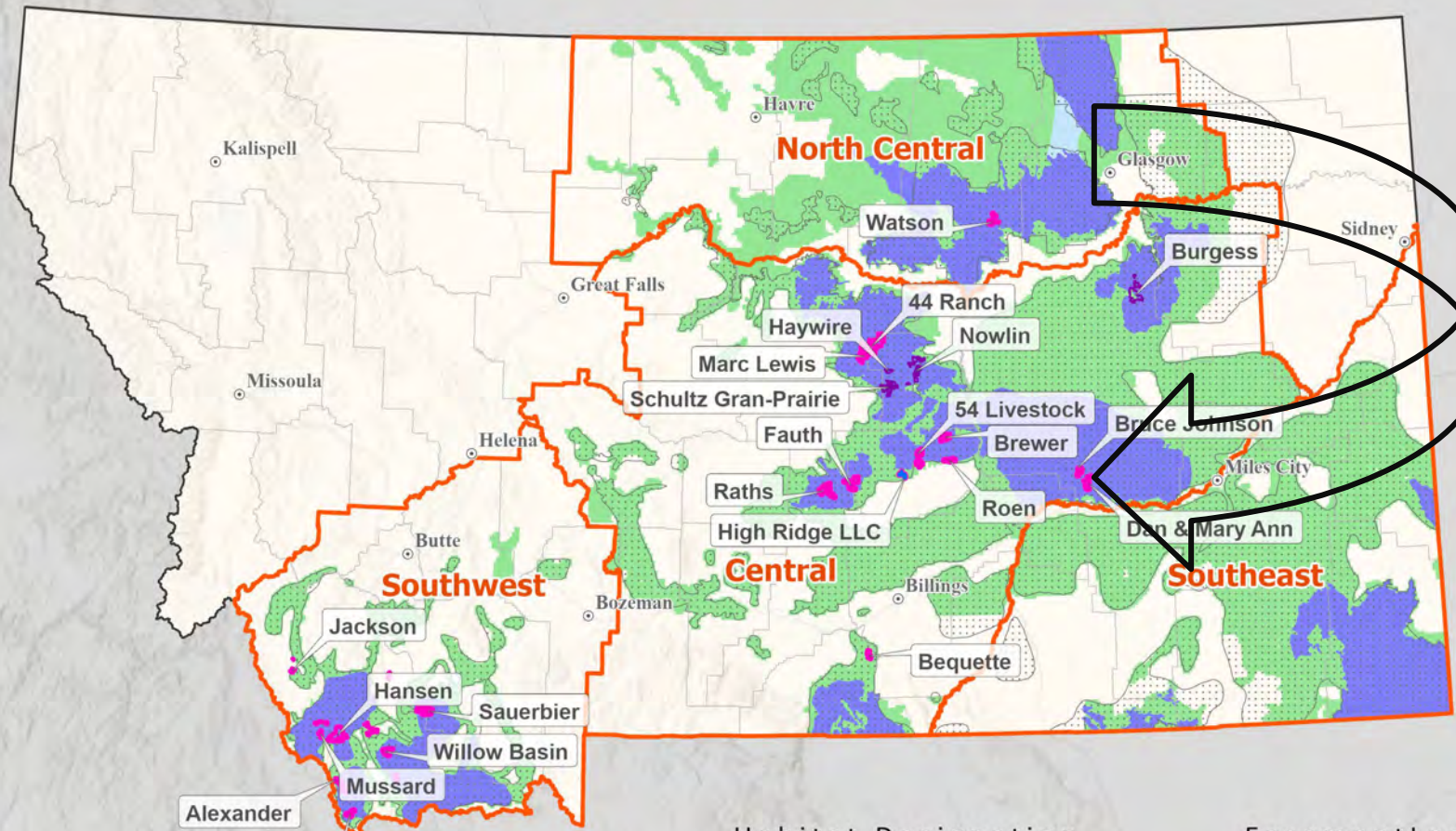
US Highway 87

146



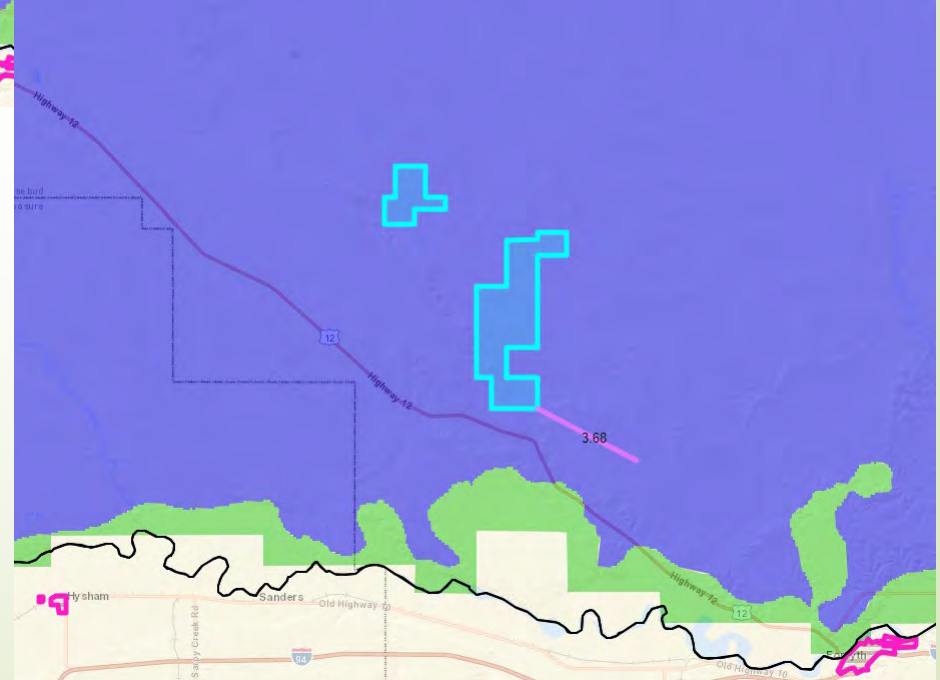
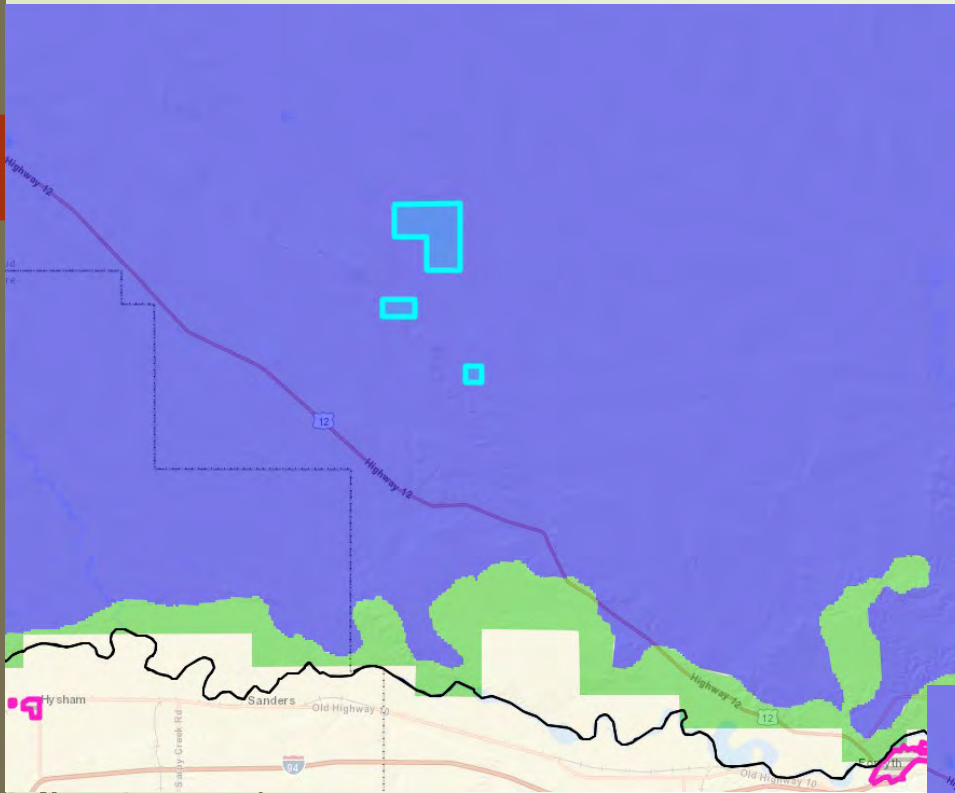
# Sage Grouse Stewardship Account Awarded Grants

As of December 31st, 2023



- | Habitat Designation |                                 | Easement/Lease |             |
|---------------------|---------------------------------|----------------|-------------|
|                     | EO-Core Area                    |                | Easement    |
|                     | EO-Connectivity Area            |                | Lease       |
|                     | EO-General Habitat              |                | Restoration |
|                     | Federal Habitat Management Area |                |             |
|                     | Service Area                    |                |             |

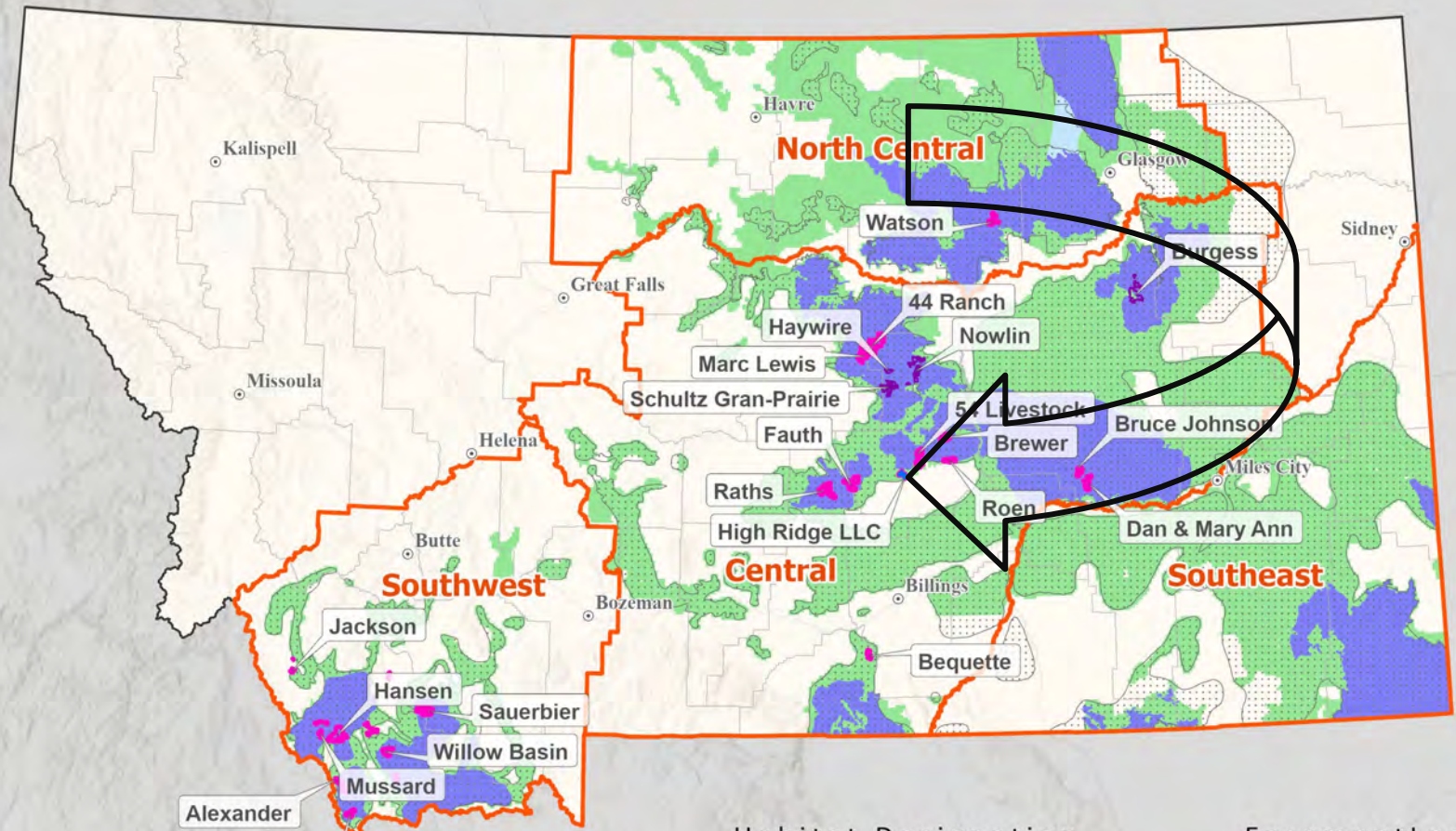
## Bruce Johnson Parcels



## Dan and Mary Ann Johnson Parcels

# Sage Grouse Stewardship Account Awarded Grants

As of December 31st, 2023

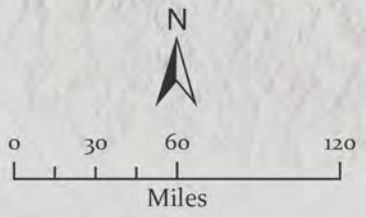


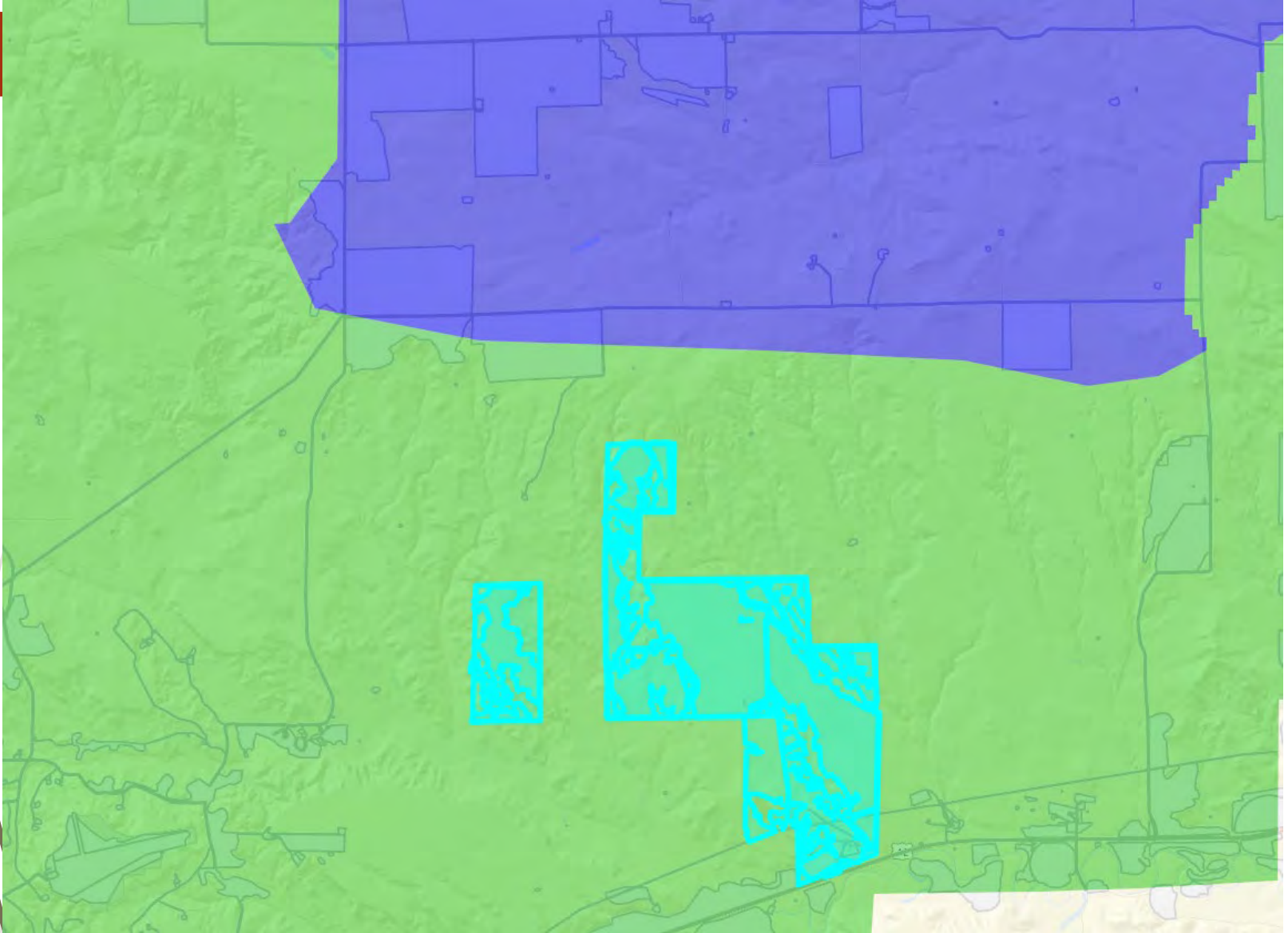
## Habitat Designation

- EO-Core Area
- EO-Connectivity Area
- EO-General Habitat
- Federal Habitat Management Area
- Service Area

## Easement/Lease

- Easement
- Lease
- Restoration



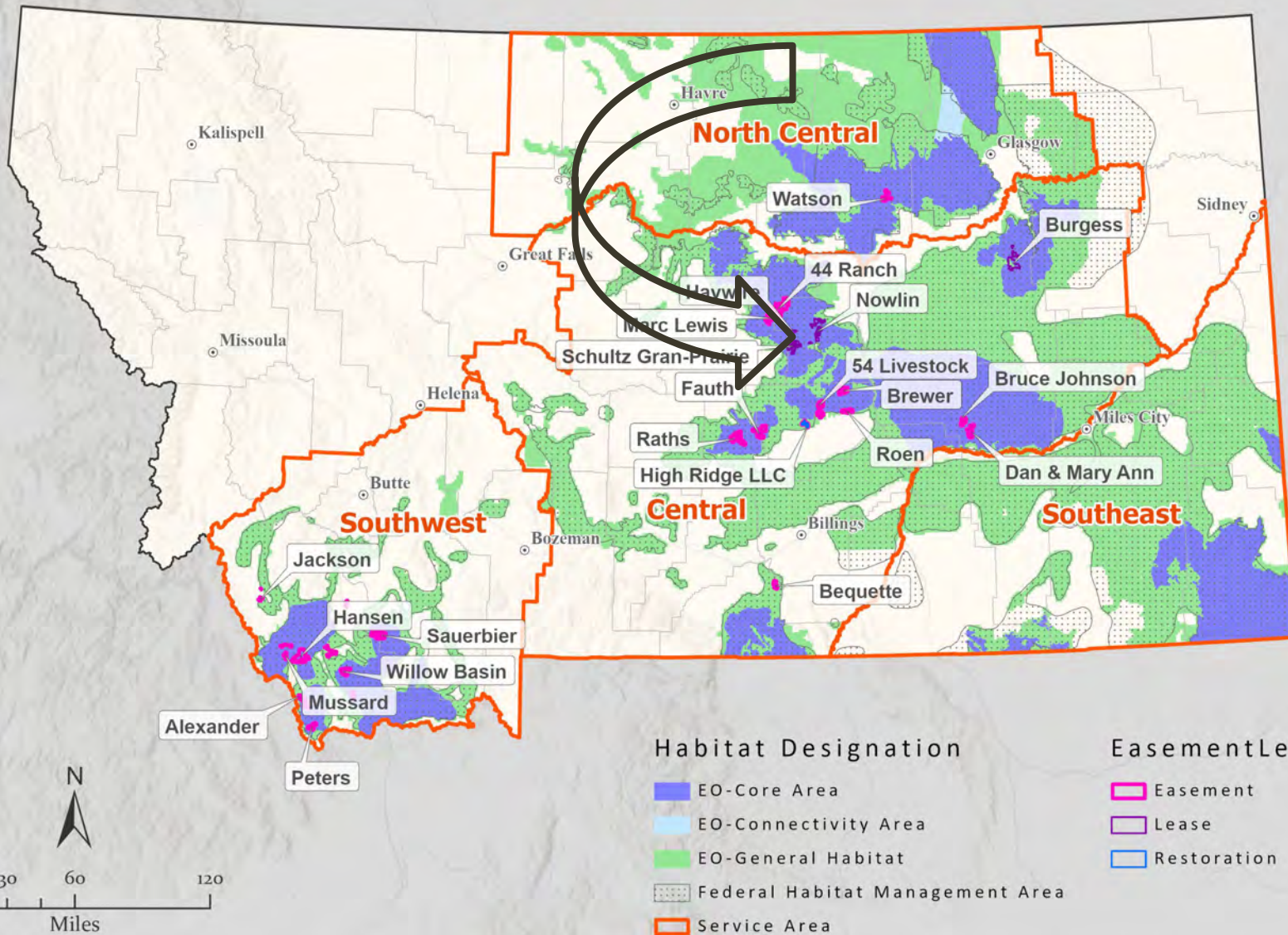




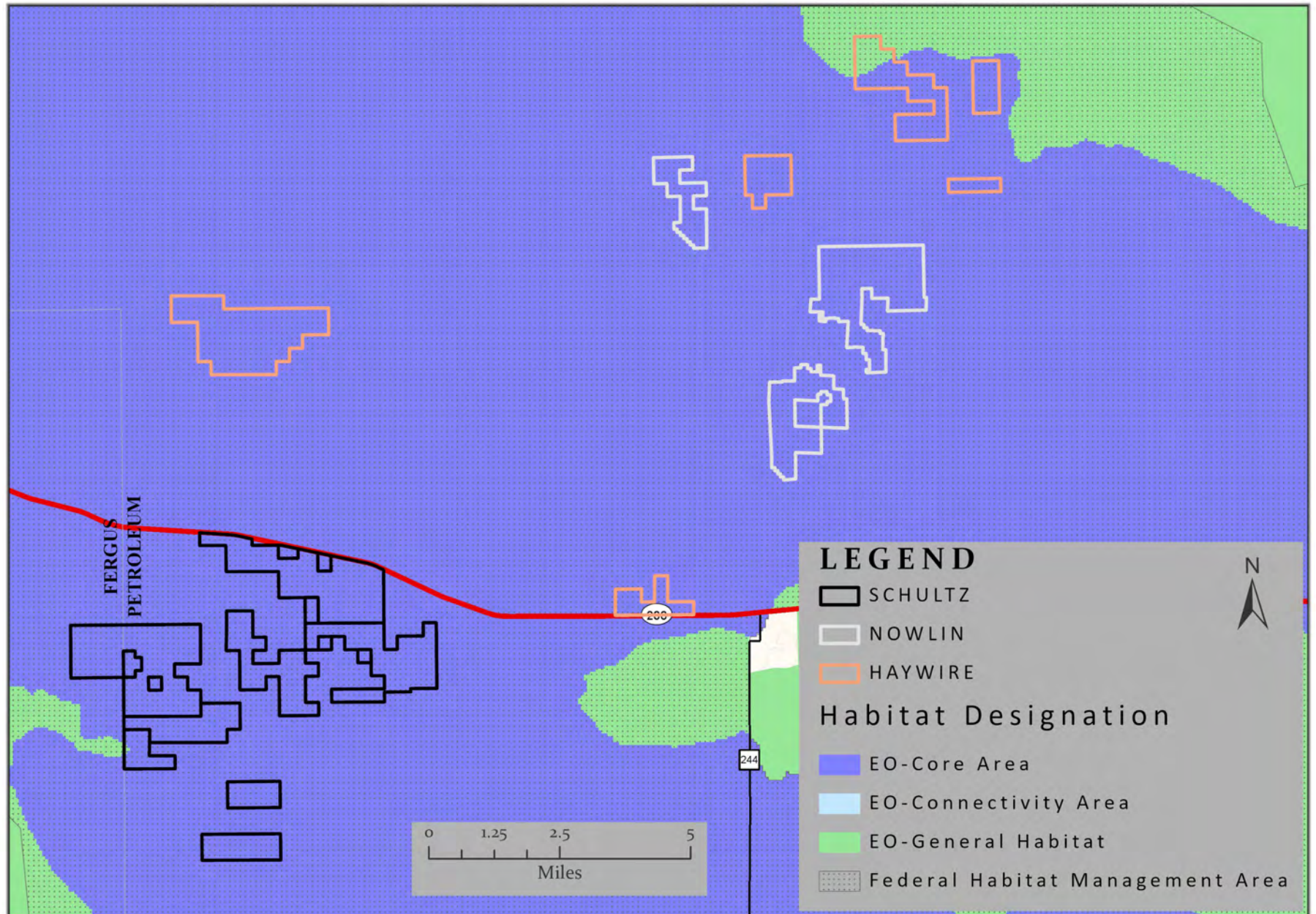
# Conservation Lease Updates

# Sage Grouse Stewardship Account Awarded Grants

As of December 31st, 2023



# Sage Grouse Schultz, Nowlin, & Haywire Grants



[Sagegrouse.mt.gov](http://Sagegrouse.mt.gov)



**MONTANA SAGE GROUSE**  
Habitat Conservation Program