



Wyoming Greater Sage-grouse Plan Amendments

LIVESTOCK GRAZING



OVERVIEW

- 9 BLM Field Offices across 3 Districts
- 2 National Forests and 1 National Grassland across 2 Regions
- 2 Records of Decision (1 for USFS, 1 for BLM)
- Plans and RODs address COT ID'd threats to GRSG
- Feasibility of full Implementation and mixed interpretations will be the largest challenge

CRITICAL COMPONENTS

- Both USFS and BLM rely on ESDs and Stiver et al. 2015 Habitat Assessment Framework
- Vegetation Tables are objectives- not rules
- Managers must adapt for local conditions
- Local variability and site potential are key drivers
- Grazing objectives apply in specific areas at specific times
- Grazing may be adjusted based on sage-grouse habitat objectives but it is not required. Objectives have to be specific to the area.
- There are few, if any, true “sage-grouse requirements”. Managers must adjust based on local conditions.
- Grazing adjustments should consider Cagney et al. 2010 (BLM)*; USFS guidance is unknown

BEFORE ANYTHING HAPPENS...

- *“Establishing achievable long-term goals based on state and transition models is a critical first step in synchronizing sagebrush plant community objectives with grazing management strategies” (Cagney et al. 2010, pg. 4)*
- In other words, if you have not set realistic, local, goals for both you will undoubtedly fail

MAJOR TABLE COMPONENTS

- “Requirements” vs. “Desired Conditions”
 - e.g., There are no “stubble height requirements” only “desired conditions”
- Adaptability and basis in “local variability”
 - All Desired Conditions must be based on local site variability and capability
- Application and location of data collection
 - e.g., Nesting data collected at (or near) the nest site not interstitial space

MAJOR TABLE COMPONENTS

- Data Collection: When, Where, What
 - When: Breeding/Nesting guidelines during Breeding/Nesting season (March 1 – June 15) after nesting these portions of the tables are meaningless. Same concept for Summer and Winter.
 - Where: In defined Breeding/Nesting, Summer, or Winter habitats
 - What: Preferred species, perennial grass heights, forb heights, residual heights, etc.

“LOCAL VARIATION”

- In order to determine local variability you have to have a baseline to begin with
 - ESDs should serve as the basis but are lacking in areas
 - Where ESDs are lacking...
 - Soils have to be mapped
 - Potential plant species have to be determined
 - Anomalies have to be accounted for
 - Preferred plant species have to be identified
 - Inputs have to be quantified correctly (precip, history, slope, etc.)
 - Plant community responses have to be estimated
 - Issues of scale
 - Etc.

Search

Ecological Sites

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All Ecological Sites

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View Options

Dominant Ecological Site Map

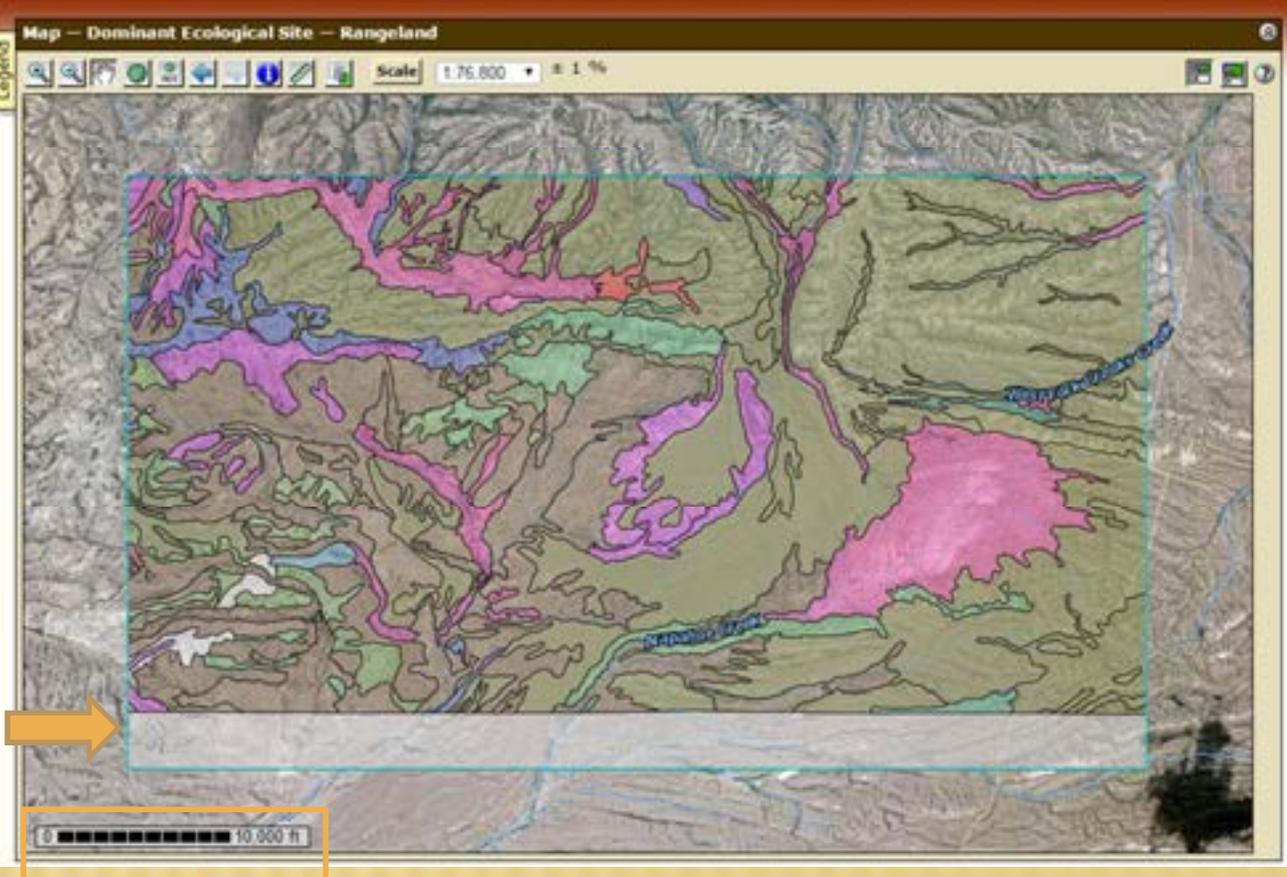
Ecological Sites by Map Unit Component Table

Basic Options

Ecological Site Type: Rangeland

View All Ecological Sites Info

R032XY304WY - Clayey (Cy) 10-14" East Precipitation Zone
R032XY322WY - Loamy (Ly) 10-14" East Precipitation Zone
R032XY328WY - Lowland (LL) 10-14" East Precipitation Zone
R032XY344WY - Saline Upland (SU) 10-14" East Precipitation Zone
R034AC150WY - Sandy (Pinedale Plateau)
R034AY122WY - Loamy (Green River - Great Divide Basins)
R034XY304WY - CLAYEY (10-14SE)
R034XY308WY - COARSE UPLAND (10-14SE)
R034XY318WY - IMPERVIOUS CLAY (10-14SE)
R034XY322WY - LOAMY (10-14SE)
R034XY326WY - LOAMY OVERBOW (10-14SE)



MAJOR TABLE COMPONENTS

- BOTTOM LINE: The tables and heights are meant as objectives - not rules. They **MUST** be adjusted for local realities.*
 - BLM Table 2-2 states: *“All Desired Conditions will be dependant on site capability and local variation...”* (9 Plan ROD, pg. 31)
 - USFS Livestock Grazing Guideline 37 states: *“...adjust grazing management to move towards desired habitat conditions...consistent with the ecological site potential.”* (WY ROD, pg. 103)**

THE PROCESS - USFS

- The USFS will use a “*phased-in approach within 18-24 months after signing of the ROD*” and may take “*up to 36 months...for permit modification and full implementation*” (Rocky Mtn ROD, pg. 65)
 - 1st Phase: “*habitat mapping that identifies GRSG habitat and an evaluation of allotments (i.e. specific pastures and riparian/mesic areas). The Habitat Assessment Framework protocol...will be used*” (Rocky Mtn ROD, pg. 65)
 - 2nd Phase: “*term grazing permits of affected allotments will be modified with new grazing guidance by the 2017 grazing season...and no later than 2018*” (Rocky Mtn ROD, pg. 65)

THE PROCESS - BLM

- *“Within PHMAs, all BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress towards meeting the habitat objectives [for GRSG]” (9 Plan ROD, MD LG 4, pg. 46)*
- *The BLM will “evaluate land health standards achievement in PHMAs...and, where not achieved, determine if existing grazing management practices...are significant factors in failing...” (9 Plan ROD, MD LG 1, MD LG 5, pg. 45)*

THE PROCESS - BLM

- The BLM will “*prioritize (1) the review of grazing permits/leases...to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in SFAs followed by PHMAs outside of SFAs. In setting workload priorities, precedence will be given to existing permits/leases...not meeting Land Health Standards, with focus on those containing riparian areas...*” (9 Plan ROD, MD LG 5, pg. 47)

THE PROCESS – BLM

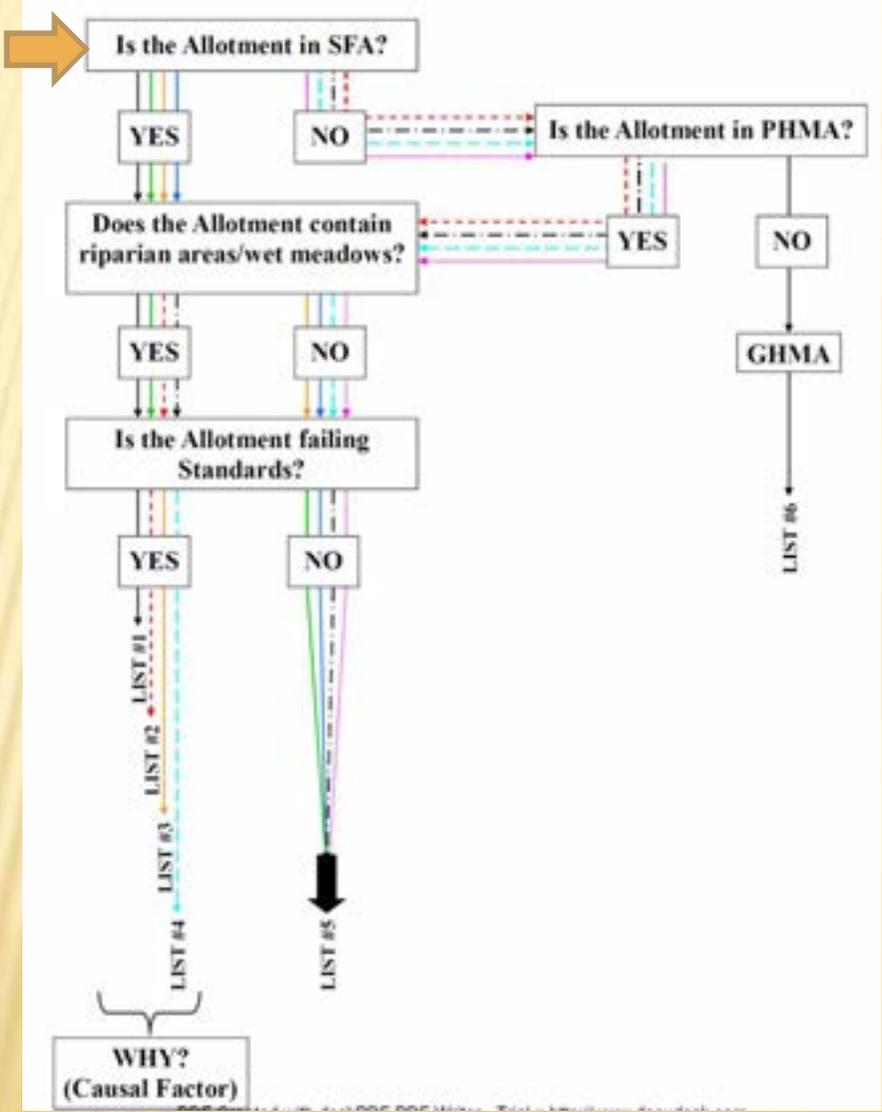
- BLM allotments will then be *“prioritized for field checks to help ensure compliance with terms and conditions of the grazing permit”* starting with *“...those within SFAs, followed by those within PHMAs, and focusing on those containing riparian areas, including wet meadows...”* (9 Plan ROD, MD LG 5, pg. 46)
 - *“Field checks”* would only occur after a permit has been changed (new Terms and Conditions)
 - How do CCA’s fit into this?

THE PROCESS

- I/M/C Allotment? (BLM)
- In or out of SFA/PHMA?
- 3rd and 4th Order Habitat Selection as described in Stiver et al. 2015
- Determine site potential and cross-reference to Stiver et al. 2015 for preferred species
- Determine if the allotment is meeting or progressing towards Standards and/or SG objectives
 - If it is not, why? Causal factor/Cagney et al. 2010 (BLM)

PRIORITIZATION- BLM

I/M/C



PRIORITIZATION - BLM

1. Prioritize Allotments (MD LG 5)

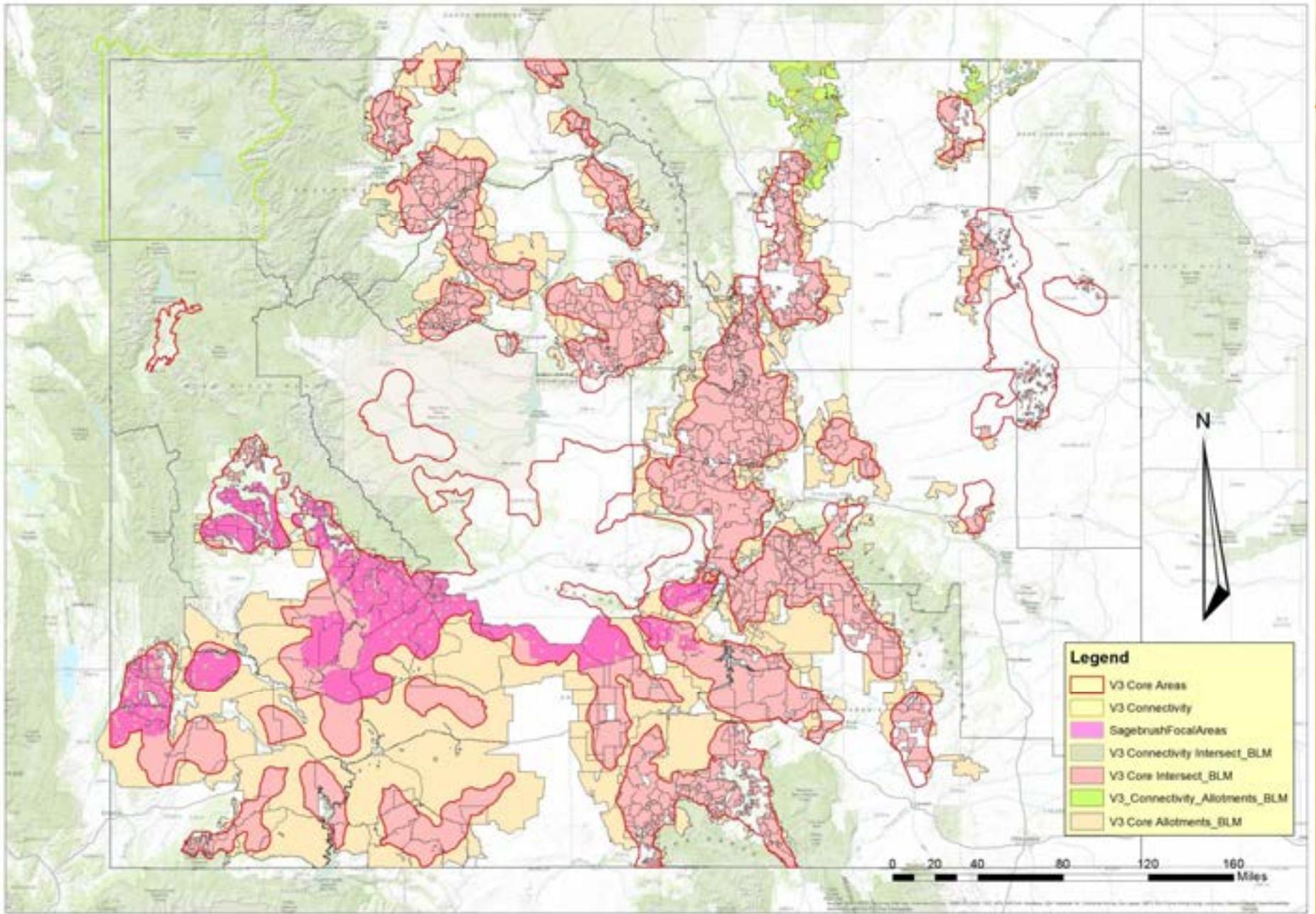
- a. Is the allotment classified as I, M, or C?
- b. Is the allotment in SFA? PHMA? (MD LG 5)
 - i. Entirely or Partially "within"? (MD LG 5)
- c. Does the allotment contain riparian areas or wet meadows? (MD LG 5)
- d. Is the allotment failing standards? (MD LG 5)
 - i. Causal Factor? (CFRs)
 - ii. Has a Hard or Soft trigger been tripped? (MD SSS 13)
 1. Has a causal factor determination been completed? (MD SSS 13)
 - iii. Would changes in livestock grazing result in positive impacts to habitat? (MO 10)
 1. Have all options been considered? (MD LG 1)
 2. Is livestock grazing "balanced" correctly? (MD LG 10)
 3. Is modification necessary prior to renewal? (MD LG 5)
- e. Is NEPA current on the allotment? (MD LG 4)
 - i. Does the NEPA document for modification contain defined responses that allow Adaptive Management? (MD LG 4)

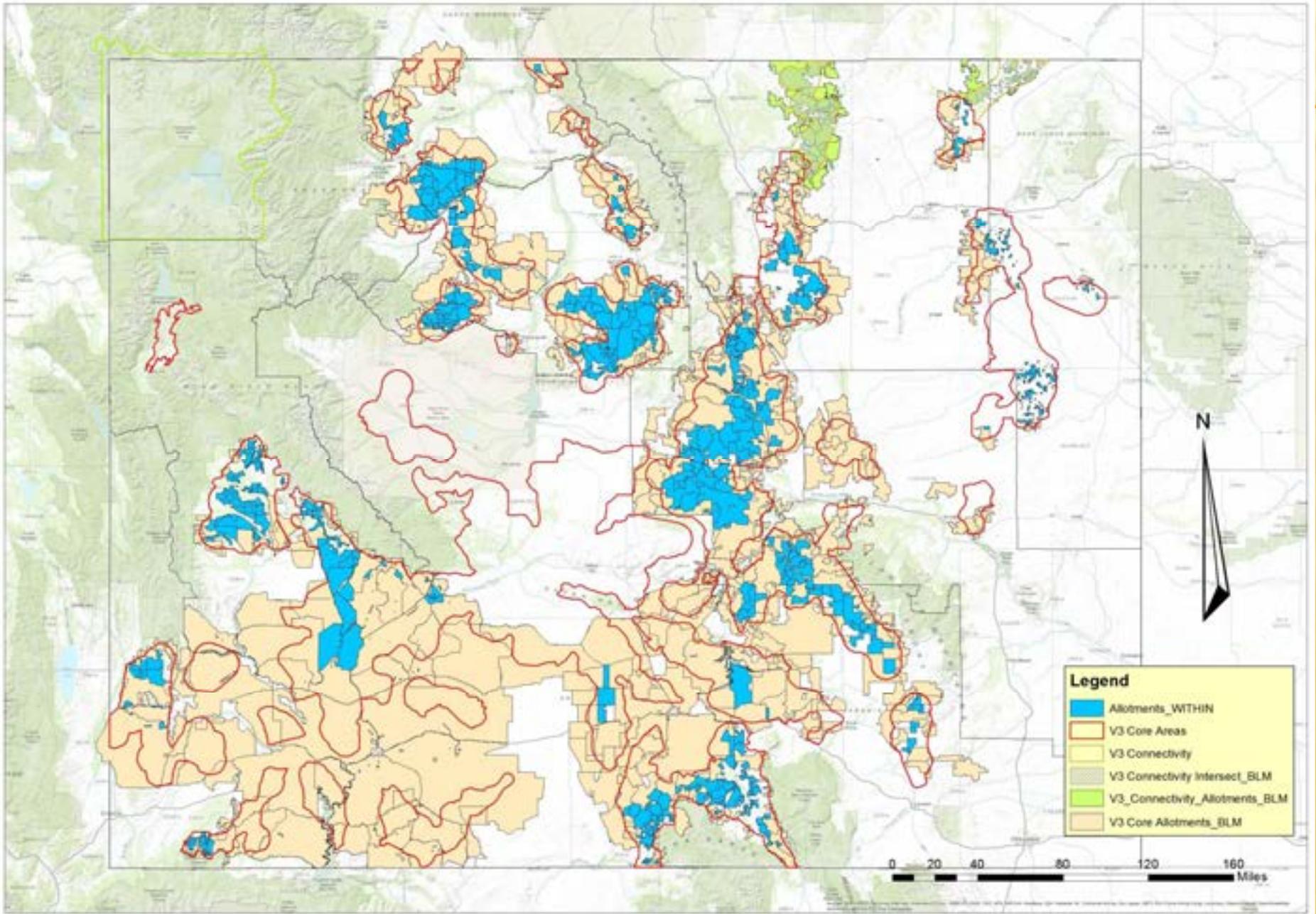
1. Are those responses consistent with local variability and ESDs? (MO 6, MO 8)

- f. Have measurable objectives (goals) been established? (MO 7, MO 11)
 - i. Is an effective grazing system in place? (MO 6)
 - ii. Is there available data and reliable ESDs? (MO 6, MO 16)
- g. Has the Habitat Assessment Framework tool been completed? (MO 9, MD GMD 15)
 - i. Have preferred species been identified?

2. Make adjustments/adaptive management

- a. Consult with permittees, and partners. (MD LG 2, MD SSS 13, MD GMD 3, MD GMD 5, MO 1, MO 9)
- b. Refer to Cagney et al. 2010 (MO 11)
- c. If a trigger is tripped
 - i. Causal Factor Det. (MD SSS 13)
 1. Refer to Cagney et al. 2010 (MO 11)
 2. Make adjustments based on prior defined responses and/or eval by Working Group (MD LG 4, MD SSS 13)





THE PROCESS – ALLOTMENT LEVEL (BLM)

- Prioritized allotments will be “reviewed”
 - Review could be many things – may be as simple as paper review or could be as intensive as on-the-ground.
 - Review centers around allotments not meeting Standards (MD LG 5)
 - Key issues during review
 - Reason for failure (Causal Factor) and what Standard(s) failure was realized on – some may not relate to grazing
 - Available data (ESDs, veg monitoring, historic use, etc.)
 - Existing flexibility or need for new documentation (NEPA)

THE PROCESS – ALLOTMENT LEVEL (BLM)

➤ Reviews of Reviews

➤ Initial Review – Which allotments need to be reviewed first? (Lists 1-4)

➤ Second Review – Of those, which did not fail due to livestock grazing?

➤ Third Review – Of the remaining, which allotments have up-to-date data available

➤ Fourth Review – What data is necessary?

➤ Fifth Review – Data collection, ground-truthing, ID preferred spp., Stiver et al. 4th Order selection

➤ Sixth Review – Determine appropriate step(s) forward (causal factor, NEPA, grazing adjustments, range improvements, etc.)

➤ Seventh Review – “Field Checks”

THE PROCESS – ALLOTMENT LEVEL

- Causal Factor Determination is tied to Adaptive Management
 - *“prioritize..the review of grazing permits/leases...to determine if modification is necessary prior to renewal...”* (9 Plan ROD, MD LG 5, pg. 47) and *“collaborate with appropriate federal agencies and the State of Wyoming...to determine if a causal relationship exists between improper grazing (by wildlife or wild horses or livestock) and [not achieving] GRSR conservation objectives...”* (9 Plan ROD, MD GMD 3, pg. 26)

THE PROCESS – ALLOTMENT LEVEL

- Before any changes occur many things have to be in place
 - Priority lists of allotments
 - ESDs or equivalent data
 - Guidelines (tables) adapted locally
 - Habitat/bird use within allotment(s) mapped (Stiver et al. 4th Order Selection)
 - Causal Factor Determination
 - NEPA w/ consideration to MD LG 4 (responses) and Cagney et al. 2010 (BLM)

1. Prioritize Allotments (MD LG 5)

- a. Is the allotment classified as I, M, or C?
- b. Is the allotment in SFA? PHMA? *(MD LG 5)*
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POSSIBLE CHANGE

- Rotation, season, timing, intensity, duration, numbers
 - For the BLM:
 - Management Objective 6: *“If an effective grazing system that meets sage-grouse habitat requirements is not already in place, analyze at least one...”* (9 Plan ROD, pg. 23)
 - Management Objective 11: *“In determining appropriate management actions that will be considered, refer to...Cagney et al. 2010 for guidance.”* (9 Plan ROD, pg. 24)
 - MD LG 10: *“Grazing between riparian and upland habitats will be balanced to promote the production and availability of beneficial forbs for GRSG...”* (9 Plan ROD, pg. 50)

POSSIBLE CHANGE

- For grazing, change does not always mean reduction
 - *“Grazing between riparian habitats and upland habitats would be balanced to promote the production and availability of beneficial forbs...”* (9 Plan ROD, MD LG 10, pg. 50).
 - This could require changes in duration, intensity, or timing. (Increase forbs by decreasing grasses)

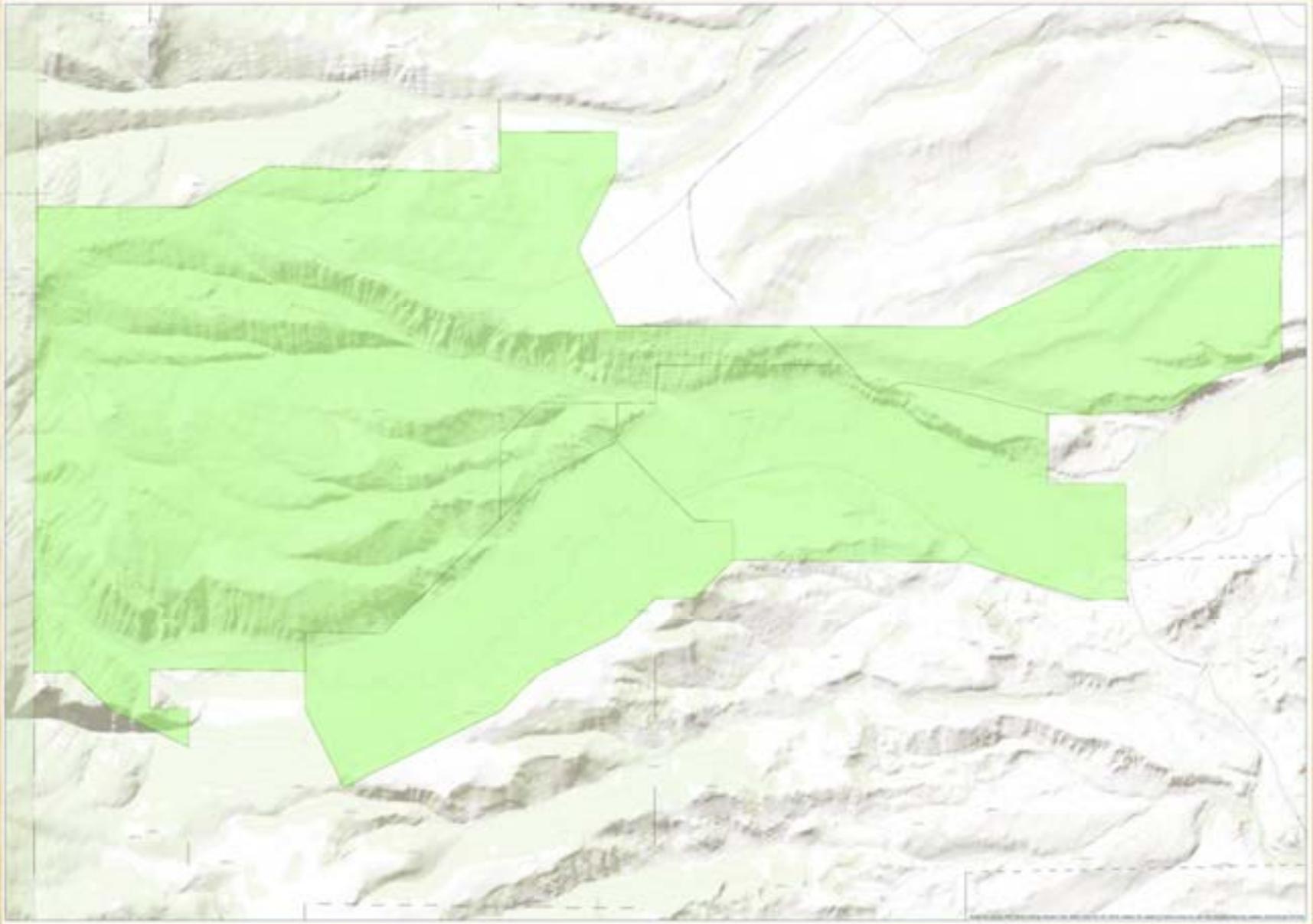
POSSIBLE CHANGE

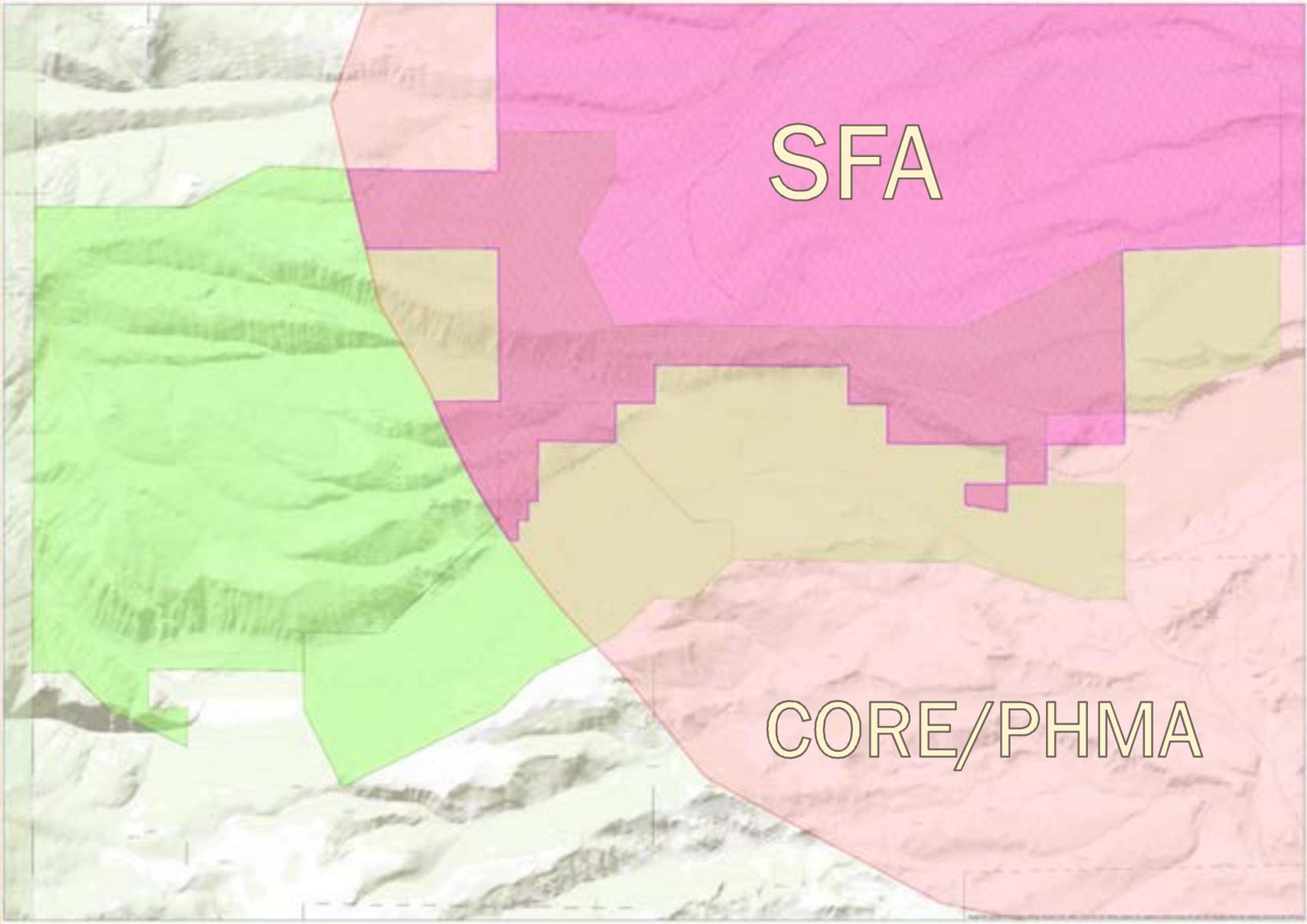
- Rotation, season, timing, intensity, duration, numbers
 - For the USFS:
 - Table 2: “...manage for upland perennial grass height [in breeding and nesting habitat] of 7 inches^{3,5,6}...Heights will be measured at the end of the nesting period [JULY 1]...post breeding and nesting...manage for 4 inches” (WY ROD, pg. 103)
 - LG-GL-037: “If values in table 2 cannot be achieved based upon a site-specific analysis using...[ESDs] adjust grazing management to move towards...table 1...” (WY ROD, pg. 103)

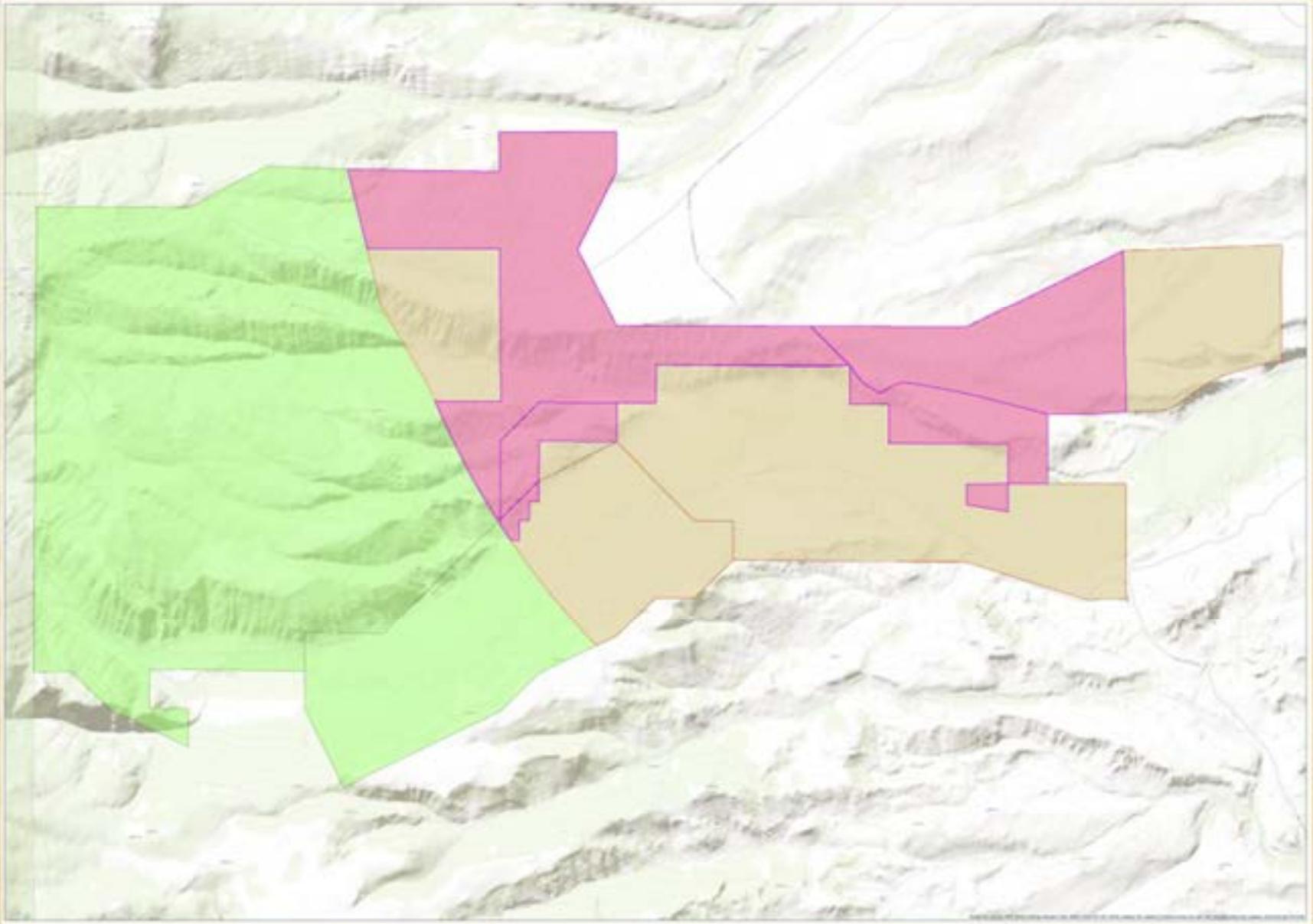
GETTING FROM “A” TO “Z”

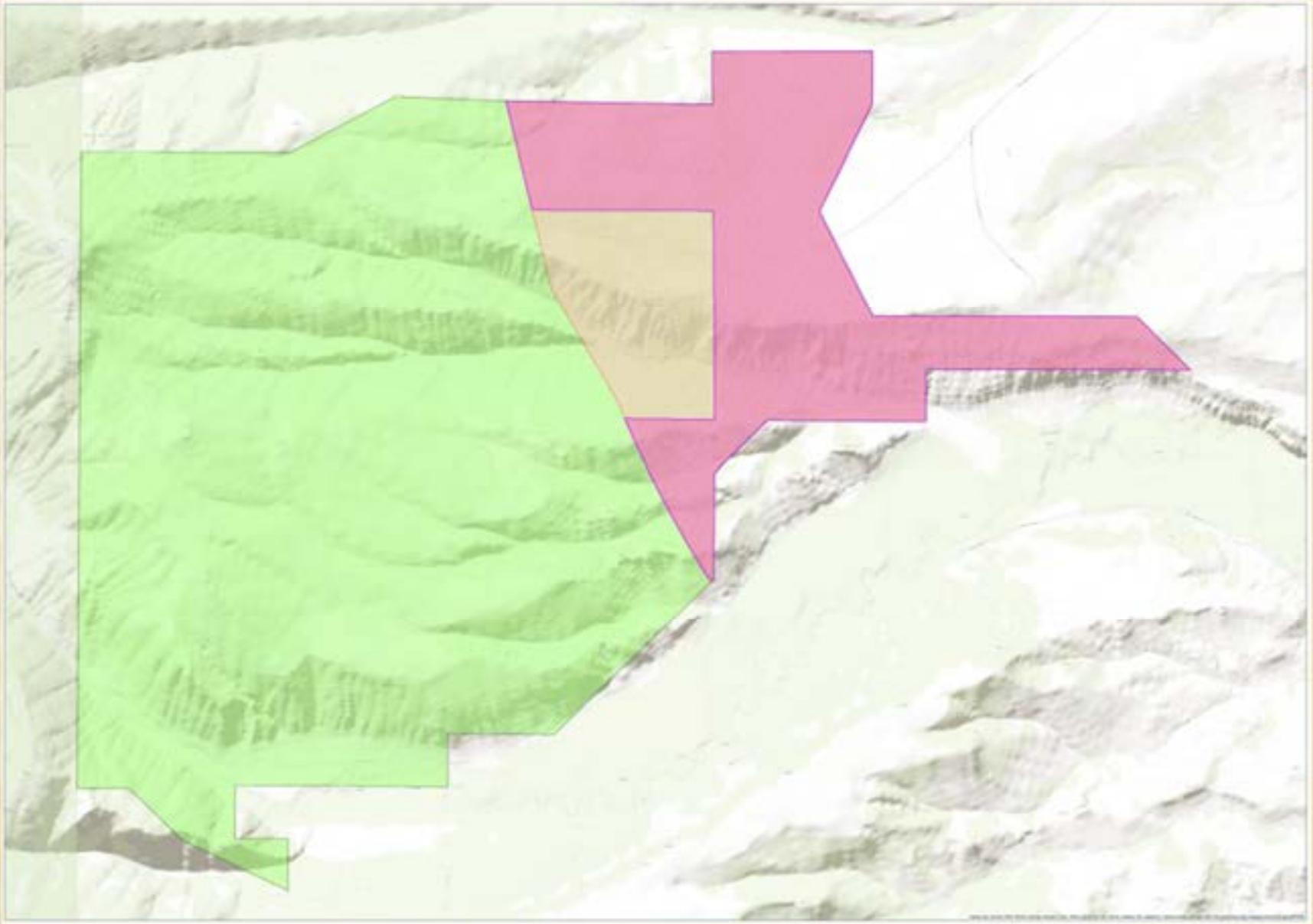
- Will not be fast...
- Cannot be rushed
- Will require adaptable plans/strategies
 - Greatest needs:
 - Data
 - Time/Patience
 - Flexibility
 - Staff/Man Hours (\$)

WHAT COULD POST-PRIORITIZATION LOOK LIKE?

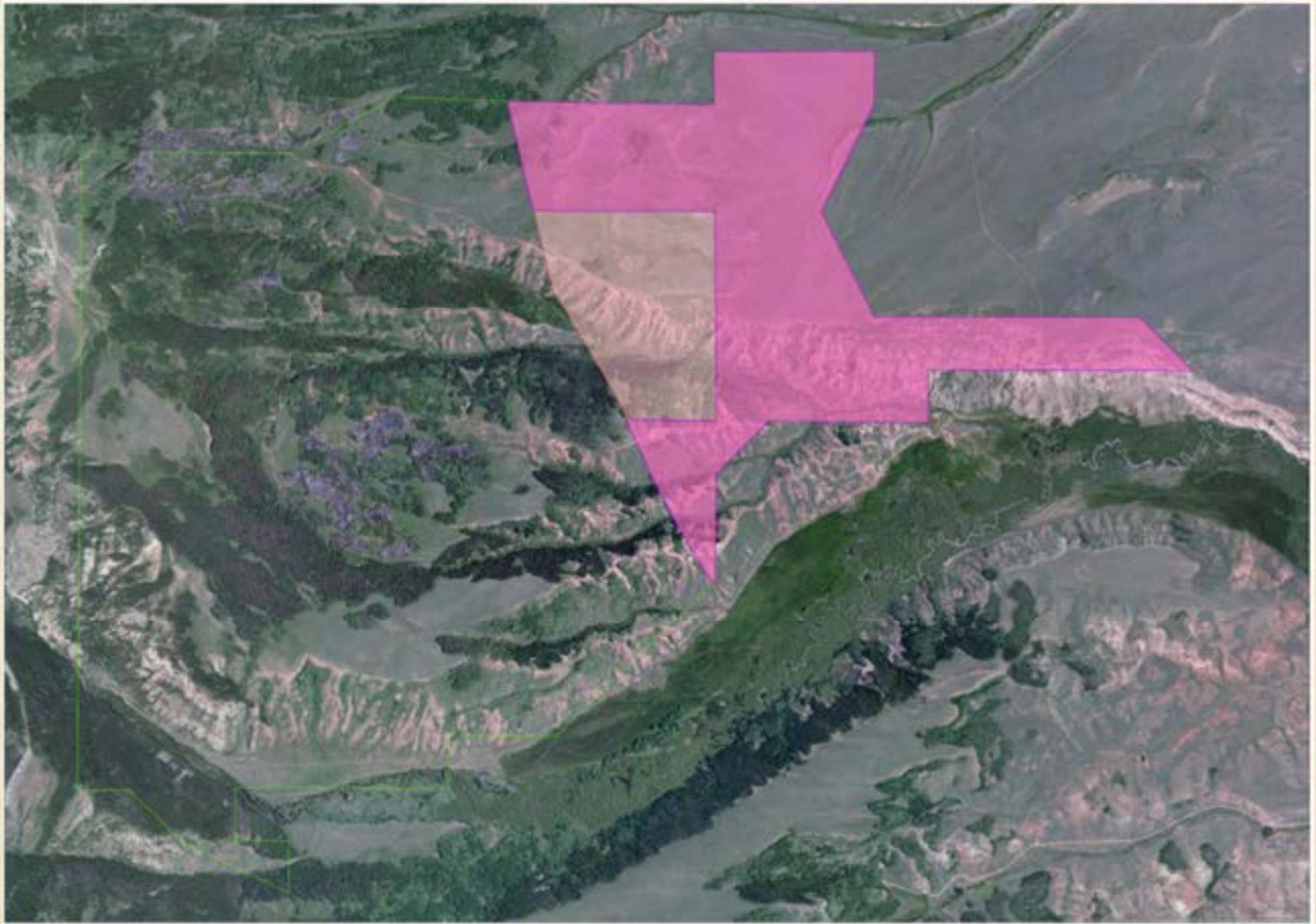
















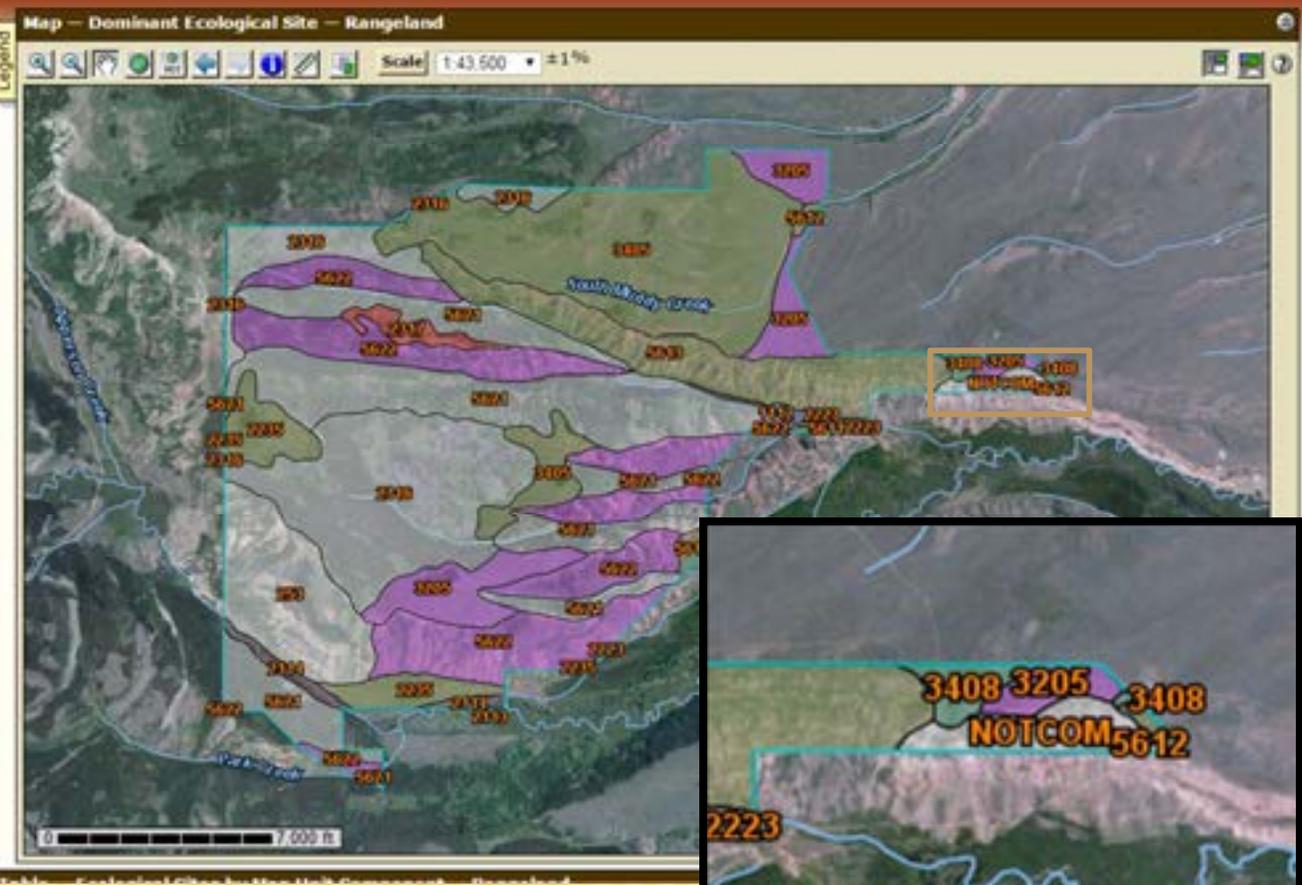






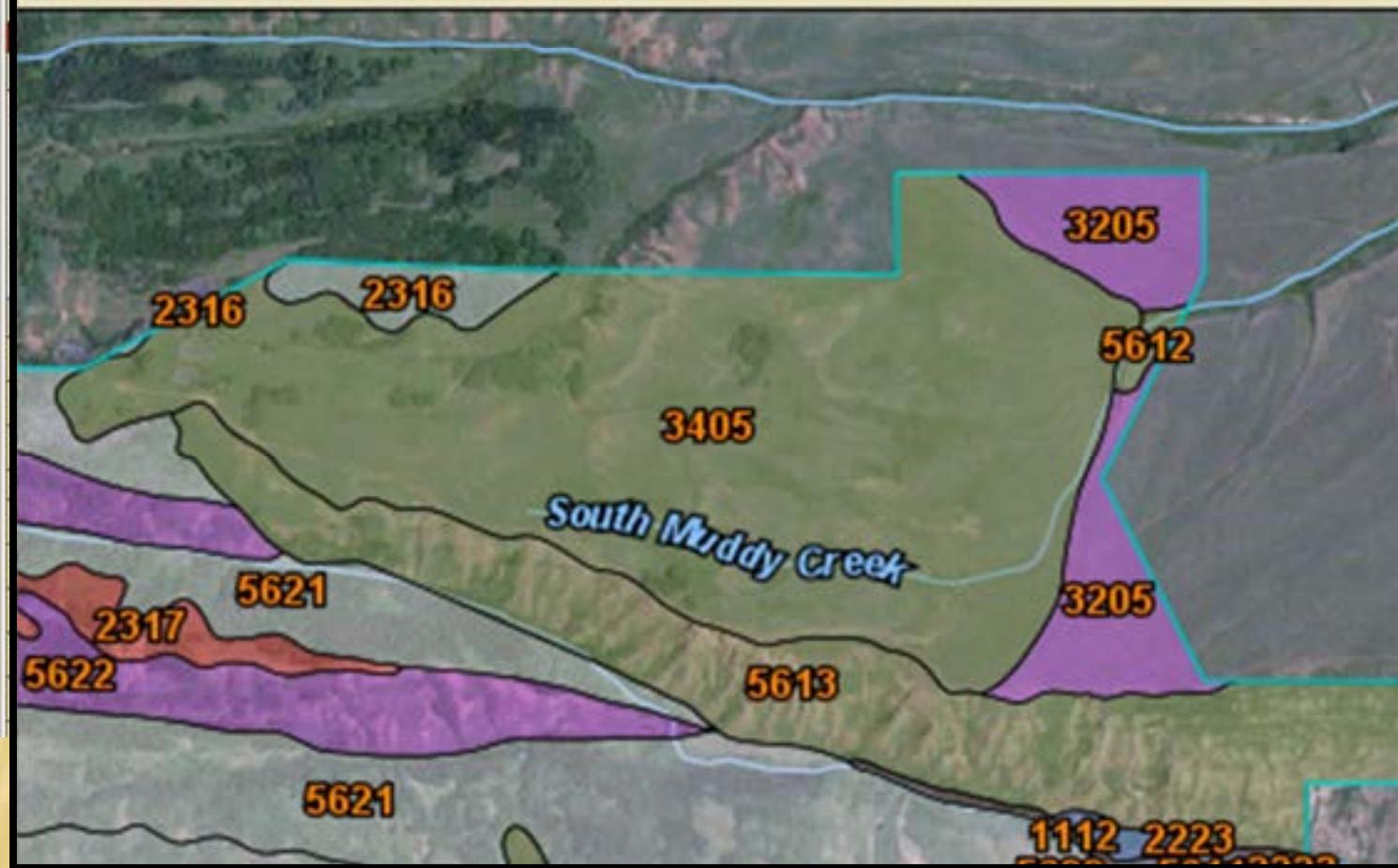


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- Ecological Sites**
- Open All | Close All
- All Ecological Sites**
- [View All Ecological Sites Info](#)
- View Options**
- Dominant Ecological Site Map
- Ecological Sites by Map Unit Component Table
- Basic Options**
- Ecological Site Type: Rangeland
- [View All Ecological Sites Info](#)
- R034AY244WY — Saline Upland (Foothills And Basins West)
 - R034AY258WY — Shallow Clayey (Foothills And Basins West)
 - R034AY274WY — Subirrigated (Foothills And Basins West)
 - R043BY162WY — Shallow Loamy (High Mountains)
 - R043BY204WY — Clayey (Foothills And Mountains West)
 - R043BY210WY — Dense Clay (Foothills And Mountains West)
 - R043BY212WY — Gravelly (Foothills And Mountains West)
 - R043BY222WY — Loamy (Foothills And Mountains West)
 - R043BY258WY — Shallow Clayey (Foothills And Mountains West)
 - R043BY347WY — Shallow Loamy (Foothills And Mountains West)



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Scale 1:43,500 ±1%



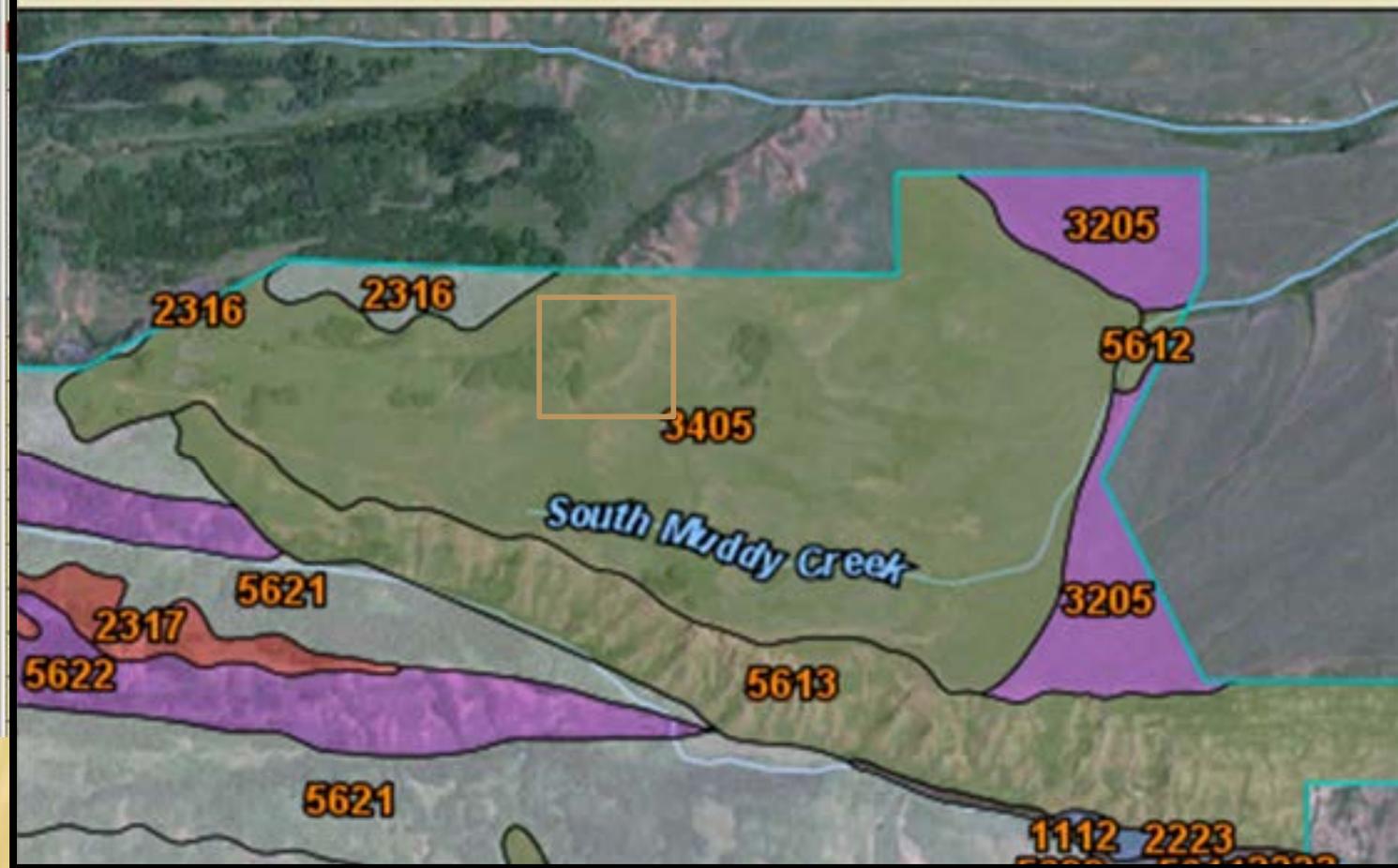
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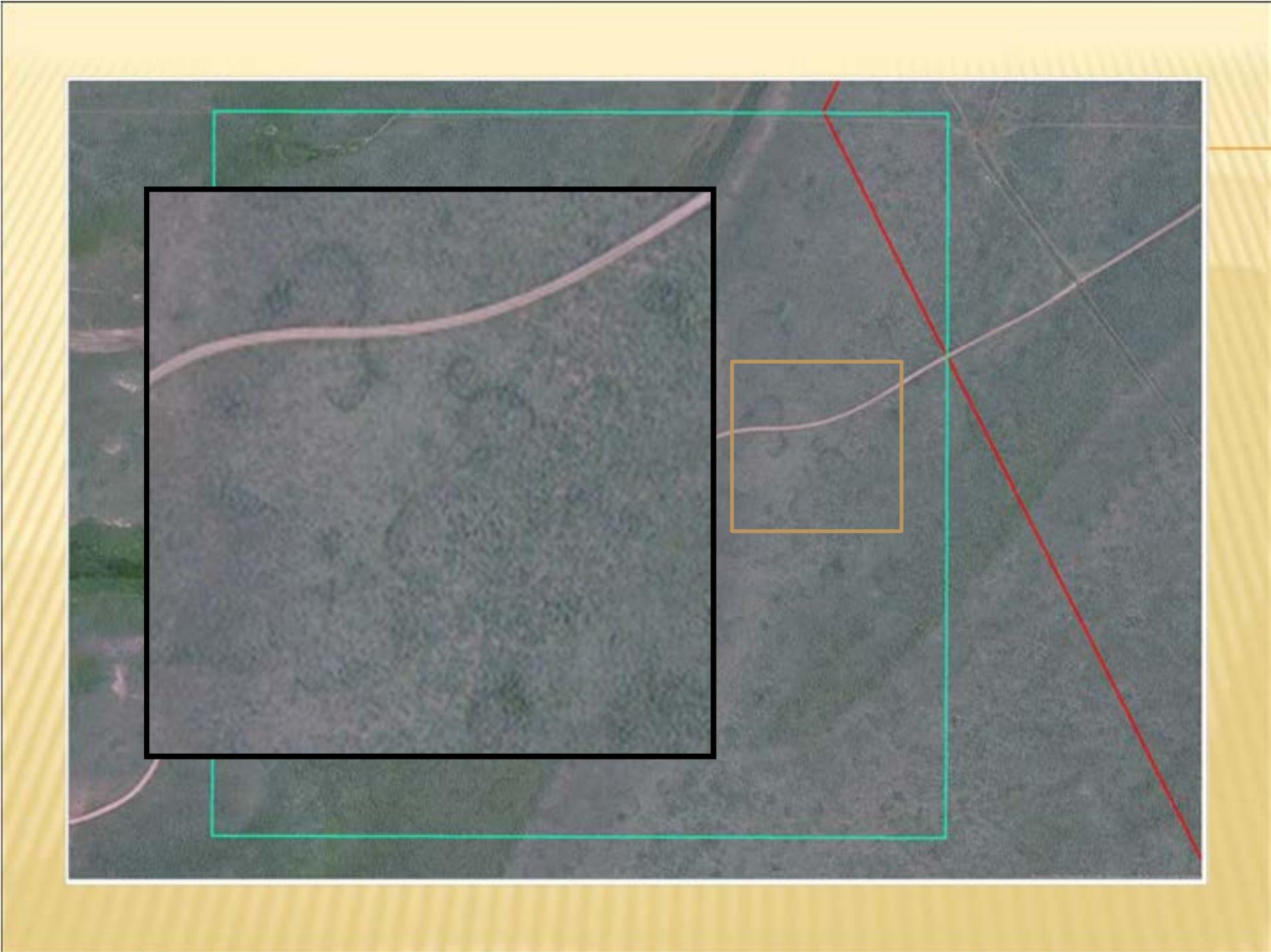
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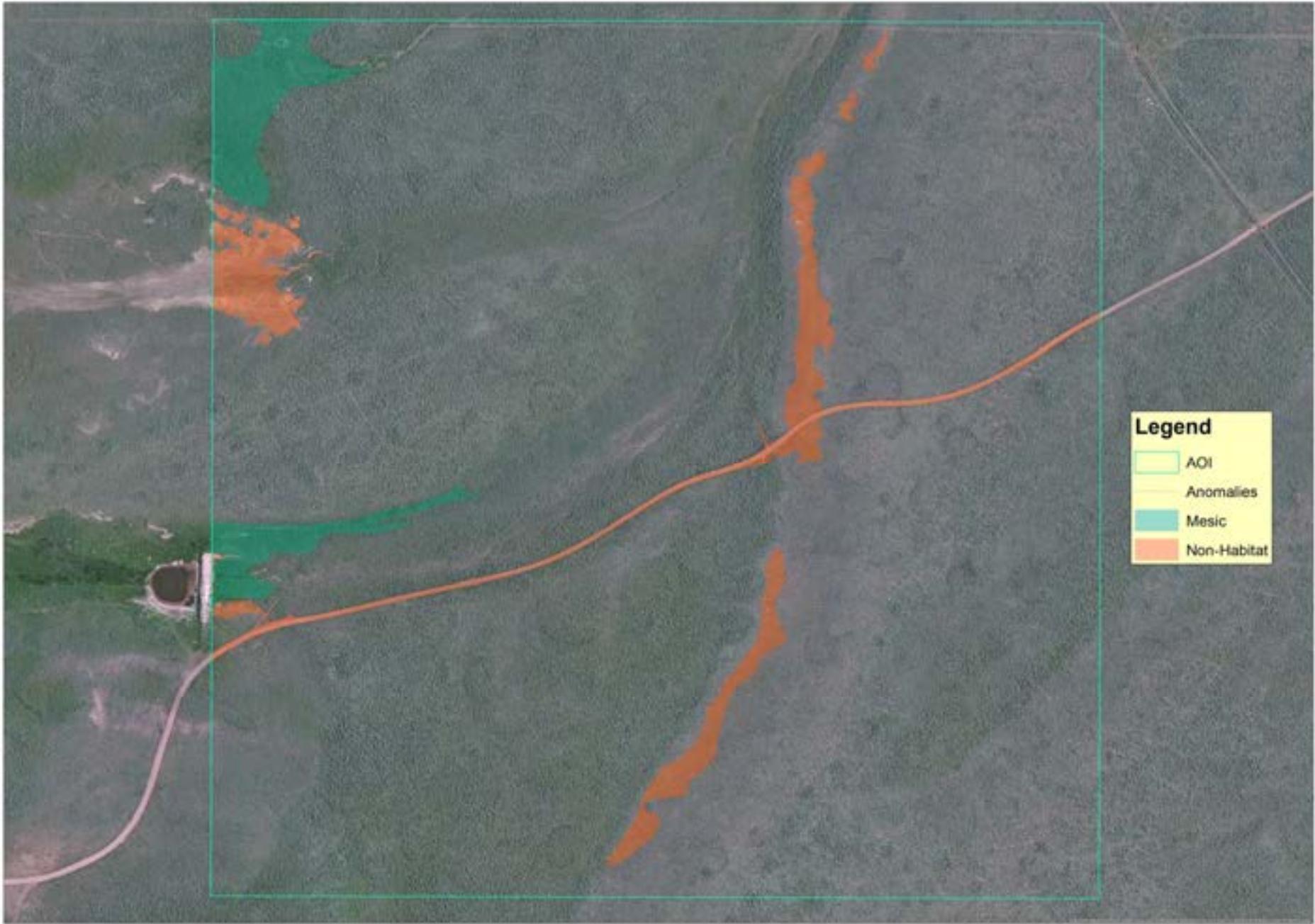






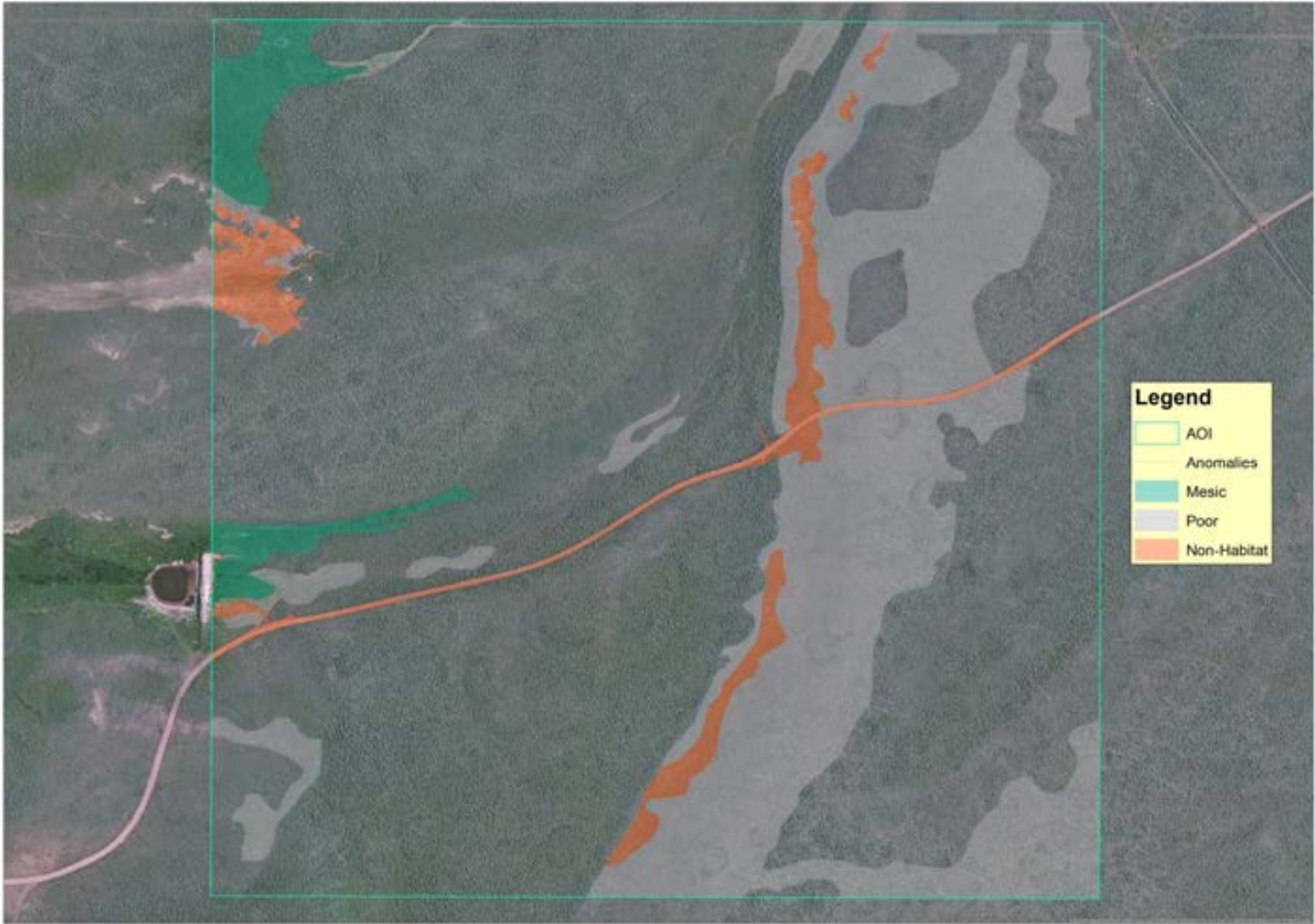






Legend

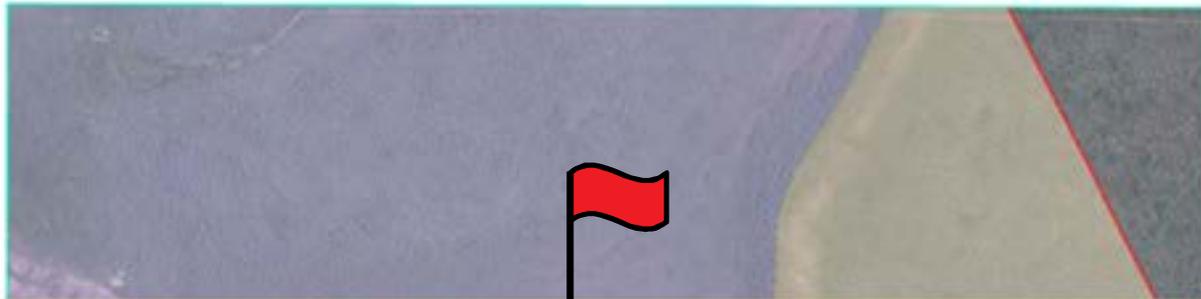
- AOI
- Anomalies
- Mesic
- Non-Habitat











Sublette County Area, Wyoming



Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
3205	Muddybench-Wilhelm complex, 1 to 6 percent slopes	Muddybench (50%)	R043BY258WY — Shallow Clayey (Foothills And Mountains West)	415.4	6.2%
		Wilhelm (35%)	R043BY222WY — Loamy (Foothills And Mountains West)		
		Billiesdraw (10%)			
		Heath (5%)			
3405	Jerry-Conwaycreek complex, 4 to 20 percent slopes	Jerry (70%)	R043BY222WY — Loamy (Foothills And Mountains West)	1,213.6	18.0%
		Conwaycreek (20%)	R043BY258WY — Shallow Clayey (Foothills And Mountains West)		
		lo-sk ustic argicryolls (5%)			
		Millerlake (5%)			



“Establishing achievable long-term goals based on state and transition models is a critical first step in synchronizing sagebrush plant community objectives with grazing management strategies”

(Cagney et al. 2010, pg. 4)

ESDs vs. REALITIES

- ESDs will not always align with “desired conditions” or reality which should emphasize need for local adaptation
- Case and point: State and Transition Models
 - Ex: 1 - R043BY222WY – Loamy (Foothills and Mountains West)

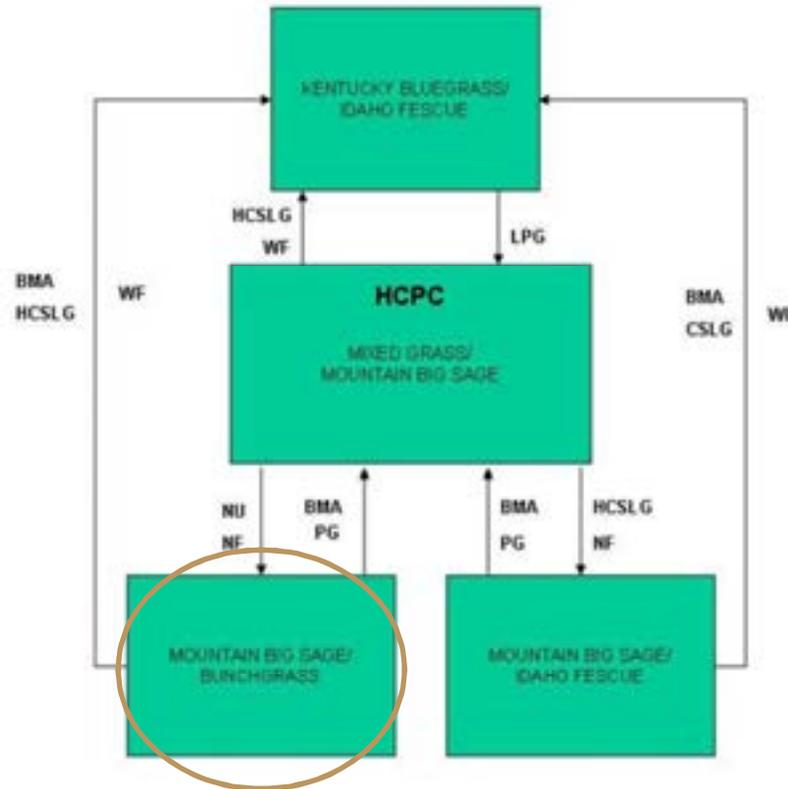
ESDs

- ESDs
- con
- local
- Cas
- Ex
- M

State-and-Transition Diagram

Site Type: Rangeland
MLRA: 43B-Central Rocky Mountains

Leamy (Ly) 15-19W
R043BY222WY



BMA – Brush Management (all methods)
BMC – Brush Management (chemical)
BMF – Brush Management (fire)
BMM – Brush Management (mechanical)
CSP – Chemical Seedbed Preparation
CSLG – Continuous Season-long Grazing
DR – Drainage
CSO – Continuous Spring Grazing
HB – Heavy Browse
HCSLG – Heavy Continuous Season-long Grazing
HI – Heavy Irrigation
LPG – Long-term Prescribed Grazing
MT – Mechanical Treatment (chiving, ripping, piling)

NF – No Fire
NS – Natural Succession
MVC – Noxious Weed Control
MVI – Noxious Weed Invasion
NU – Noxious
PG – Plow & Crop (including hay)
PG – Prescribed Grazing
RPT – Re-plant Trees
RS – Re-seed
SGD – Severe Ground Disturbance
SHC – Severe Hoof Compaction
VLD – Vulture Damage (Beaver)
VF – Vulture

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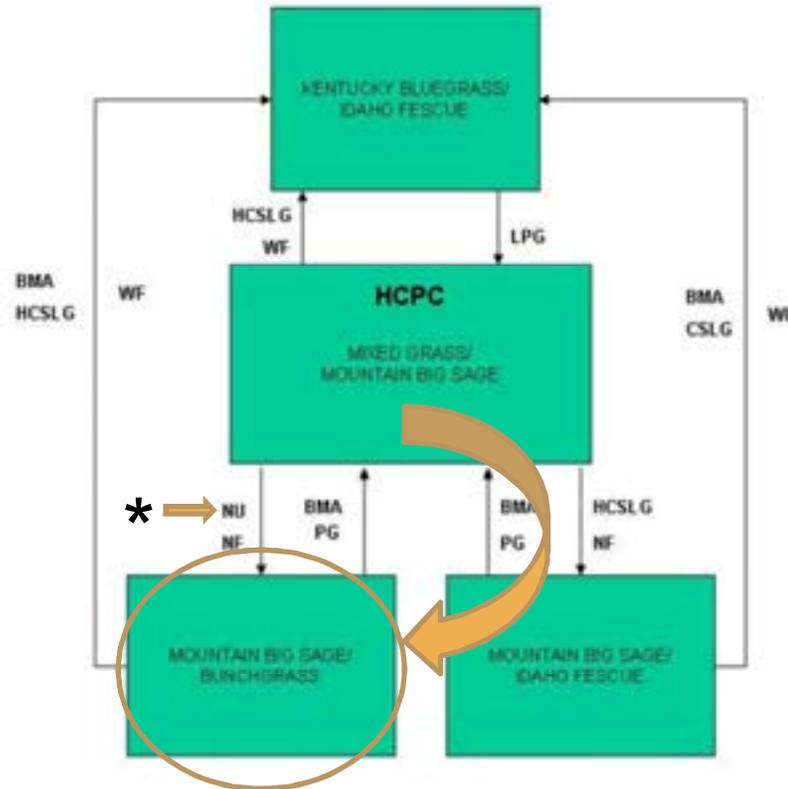
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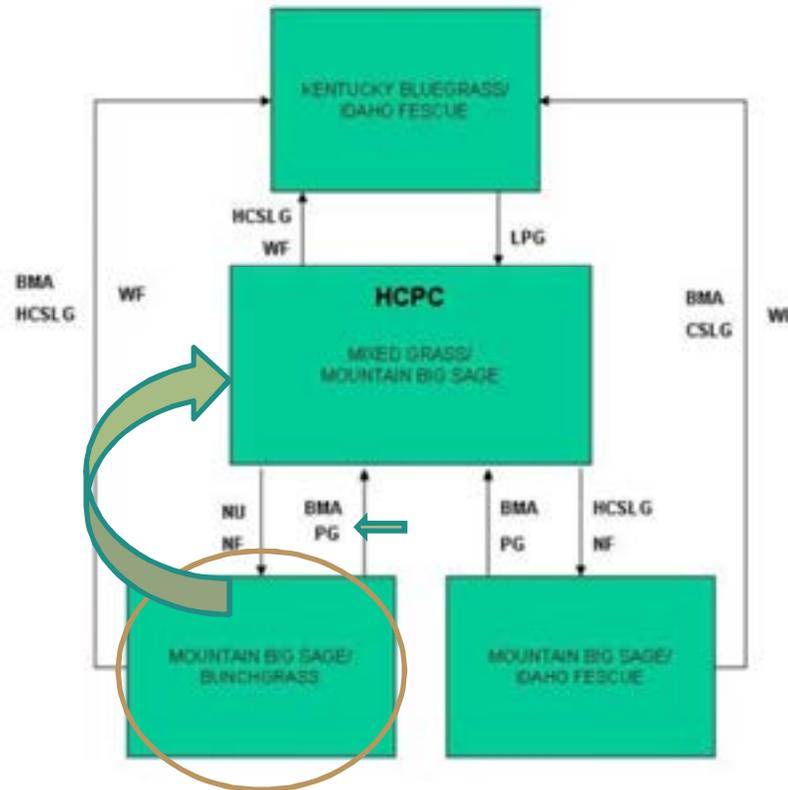
ESDs

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State-and-Transition Diagram

Site Type: Rangeland
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Leamy (Ly) 15-19W
R043BY222WY



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 CSLO – Continuous Season-long Grazing
 DR – Drainage
 CSO – Continuous Spring Grazing
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 HCSLG – Heavy Continuous Season-long Grazing
 HI – Heavy Irrigation
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 MT – Mechanical Treatment (chiving, ripping, piling)

NF – No Fire
 NS – Natural Succession
 NWC – Noxious Weed Control
 NWI – Noxious Weed Invasion
 NU – Noxious
 PG – Plow & Crop (including hay) ←
 PGT – Prescribed Grazing
 RPT – Re-plant Trees
 RS – Re-seed
 SGD – Severe Ground Disturbance
 SHC – Severe Hoof Compaction
 VLD – Vulture Damage (Beaver)
 WF – Wildlife

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ESDs

State-and-Transition Diagram

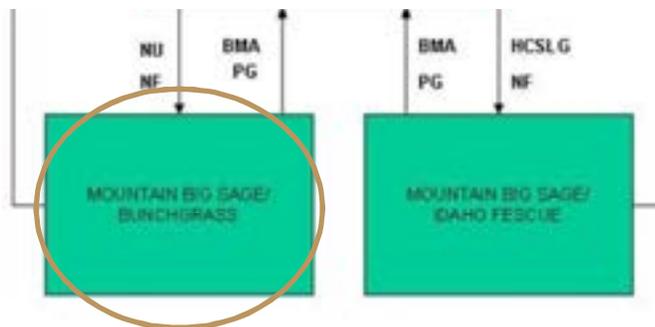
Site Type: Rangeland
MLRA: 43B-Central Rocky Mountains

Leamy (Ly) 15-19W
R043BY222WY

Table 2-2
Seasonal Habitat Objectives for GRSG Wyoming Basin Ecoregion

Attribute	Indicators	Desired Condition ⁶	Reference
	Predominant grassbrush HCSLG	Predominantly encroaching HCFE MIXED GRASS/	Stiver S I E T Rinkes D

⁶All Desired Conditions will be dependent upon site capability and local variation (e.g., weather patterns, localized drought, ESD state, etc.).



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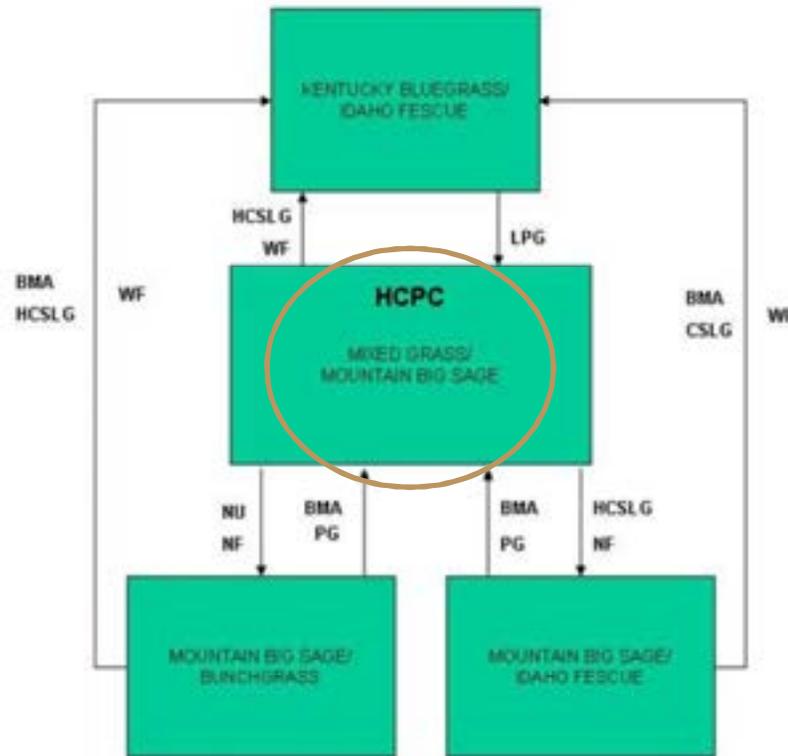
ESDs

- ESDs are developed for each site
- ESDs are developed for each location
- Case studies
- Examples
- M

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BMC – Brush Management (chemical)
BMF – Brush Management (fire)
BMM – Brush Management (mechanical)
CSP – Chemical Seedbed Preparation
CSLO – Continuous Season-long Grazing
DR – Drainage
CSO – Continuous Spring Grazing
HB – Heavy Browse
HCSLG – Heavy Continuous Season-long Grazing
HI – Heavy Irrigation
LPG – Long-term Prescribed Grazing
MT – Mechanical Treatment (chiving, ripping, piling)

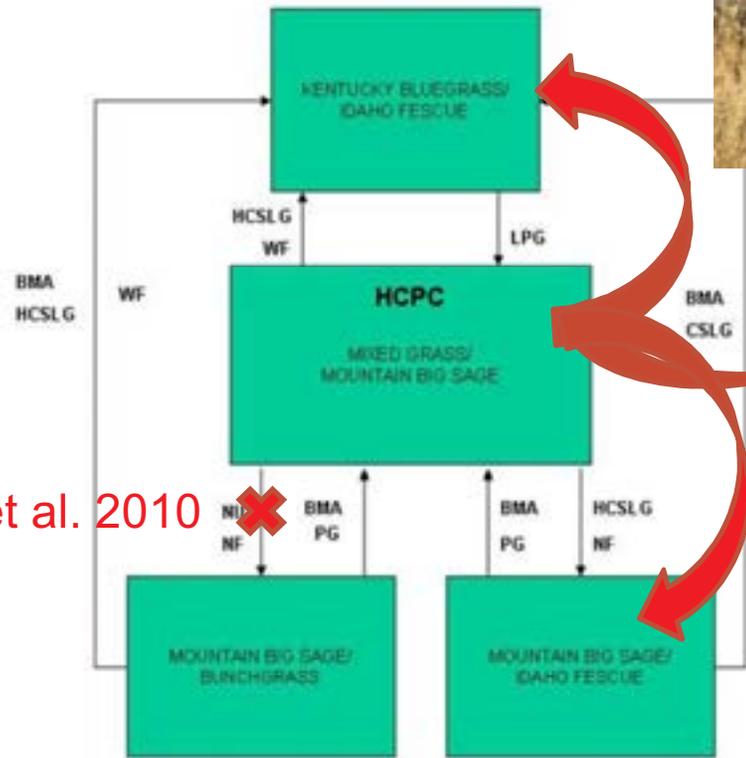
NF – No Fire
NS – Natural Succession
NWC – Noxious Weed Control
NWI – Noxious Weed Invasion
NU – Nonuse
PG – Plow & Crop (including hay)
PG – Prescribed Grazing
RPT – Re-plant Trees
RS – Re-seed
SGD – Severe Ground Disturbance
SHC – Severe Hoof Compaction
VLD – Vulture Damage (Beaver)
VF – Vulture

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ESDs

- ESDs are developed for a specific location
- Case studies
- Examples

State-and-Transition Diagram
 Site Type: Rangeland
 MLRA: 43B-Central Rocky Mountains



Cagney et al. 2010

BMA – Brush Management (all methods)
 BMC – Brush Management (chemical)
 BMF – Brush Management (fire)
 BMM – Brush Management (mechanical)
 CSP – Chemical Seedbed Preparation
 CSLO – Continuous Season-long Grazing
 DR – Drainage
 CSO – Continuous Spring Grazing
 HB – Heavy Browse
 HCSLG – Heavy Continuous Season-long Grazing
 HI – Heavy Irrigation
 LPG – Long-Term Prescribed Grazing
 MT – Mechanical Treatment (chipping, ripping, piling)

NF – No Fire
 NS – Natural Succession
 NWC – Noxious Weed Control
 NWI – Noxious Weed Invasion
 NU – Noxious
 P/C – Plow & Crop (including hay)
 PG – Prescribed Grazing
 RPT – Re-plant Trees
 RS – Re-seed
 SOD – Severe Ground Disturbance
 SHC – Severe Hoof Compaction
 V/D – Vulture Damage (Beaver)
 V – Vulture

Cheatgrass/Sagebrush



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IMPLEMENTATION - NEXT STEPS

- Assessments to complete the Habitat Assessment Framework Tool as described by Stiver et al. 2015
- Adjustments for local variability in habitat, weather, inputs, plant species, etc. that inform possible adjustments in management
- Possible adjustments in management strategy*

MAJOR POINTS

- Logical, achievable goals have to be set
- The correct data at the correct scale must be available and used
- Managers have the latitude to deviate
- Local variability has to underlie decisions and objectives
- This cannot, and should not, happen quickly
- Implementation has to be adaptive, pragmatic and applicable
- Changes in management have to be capable of change themselves

QUESTIONS/DISCUSSION