



U.S. Department of the Interior  
Bureau of Land Management

March 2024

# Greater Sage-Grouse

Volume 2: Appendix 1. Maps

Draft Resource Management Plan Amendment and Environmental Impact Statement





The Bureau of Land Management's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

Cover Photo: Steve Ting

Lower Bar Photos (L to R):

US Fish and Wildlife, Rachel Woita, James Yule



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# Appendix I

## Maps



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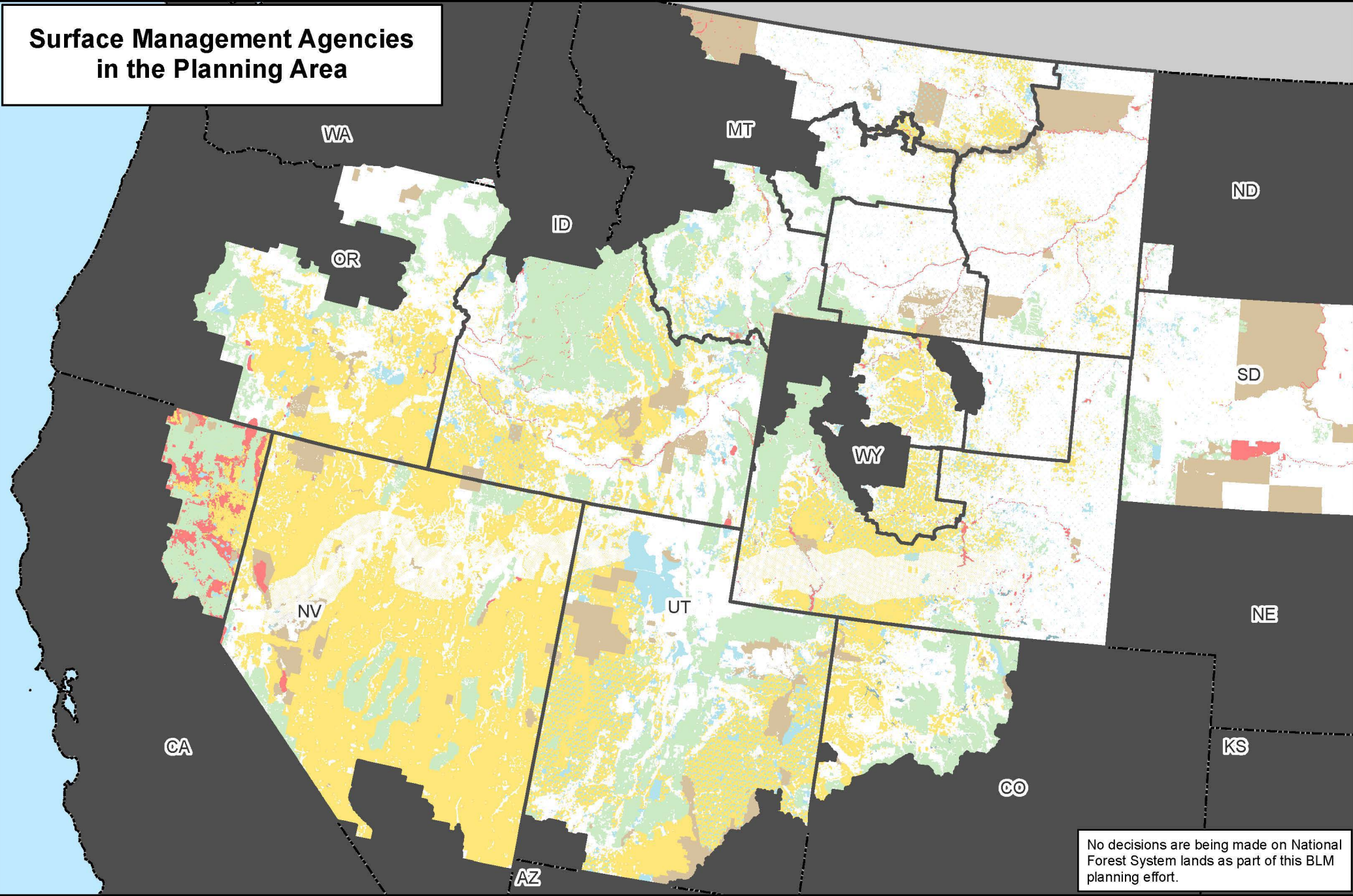
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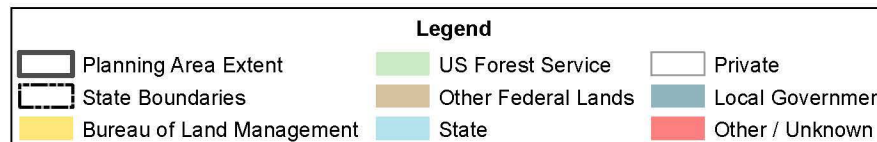
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# Surface Management Agencies in the Planning Area



No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 1.1a

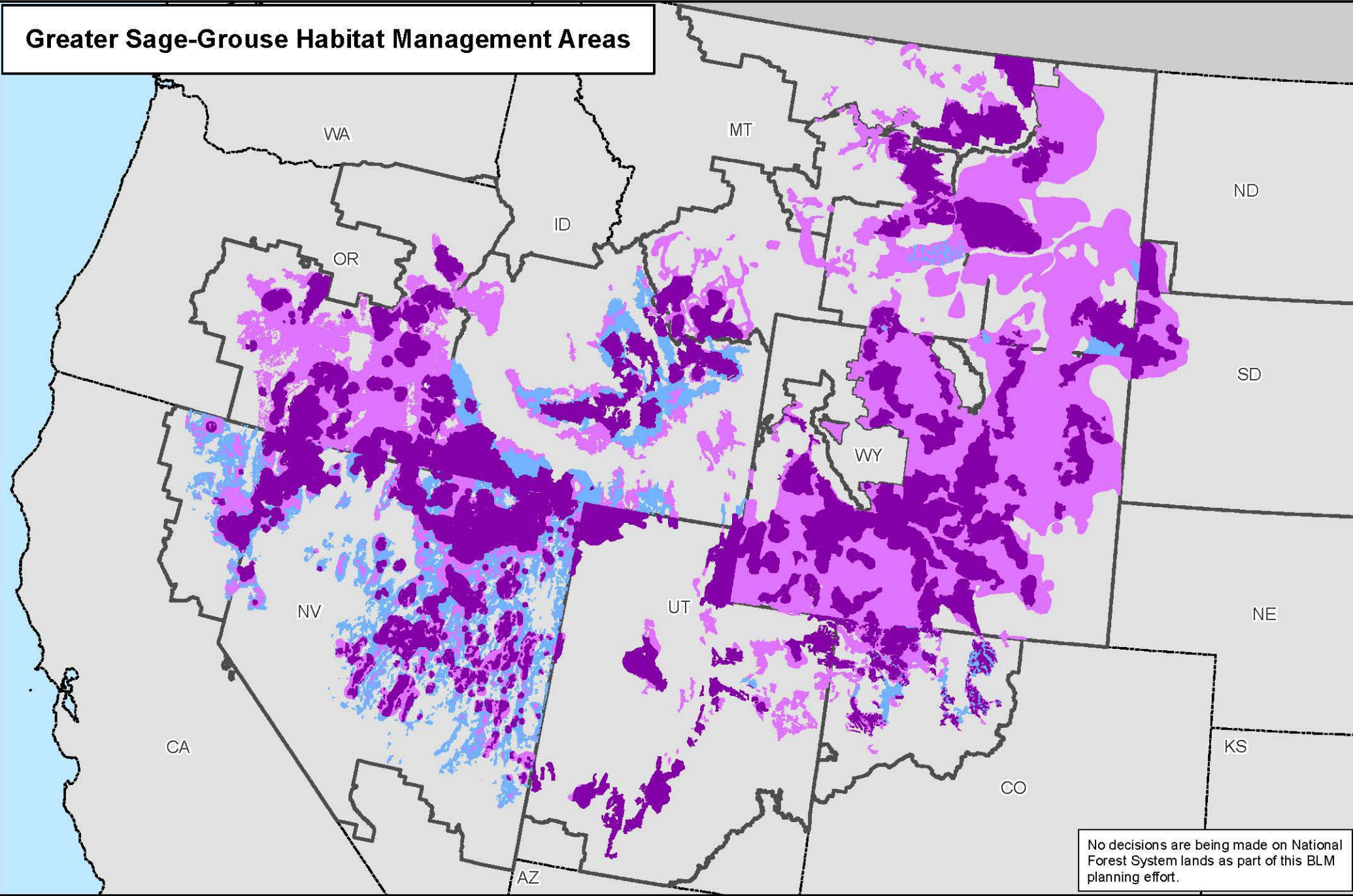


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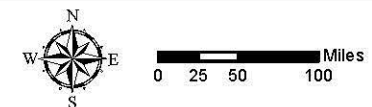


# Greater Sage-Grouse Habitat Management Areas



No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 1.1b

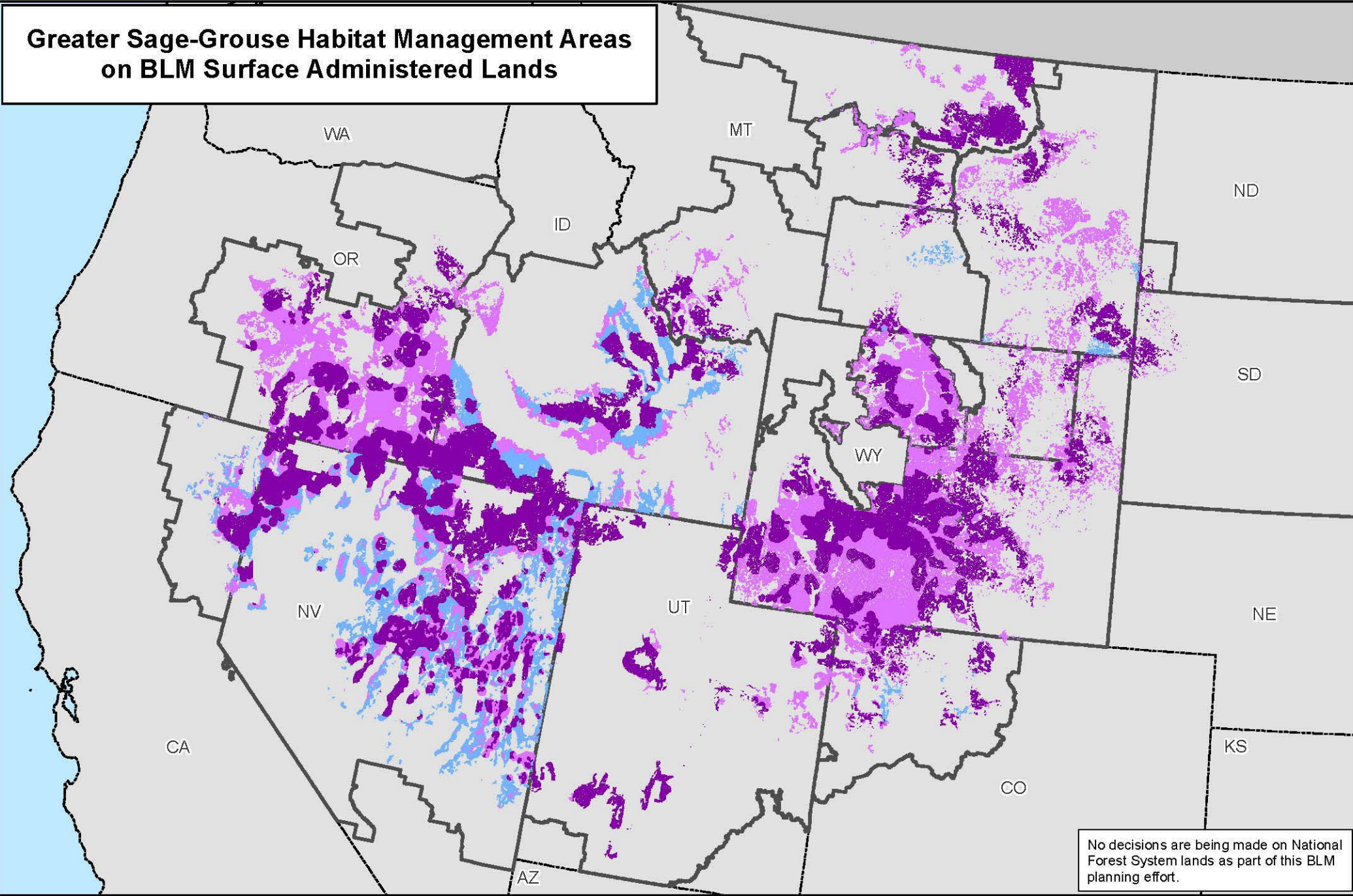


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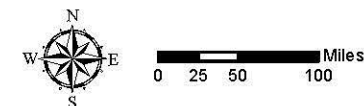




# Greater Sage-Grouse Habitat Management Areas on BLM Surface Administered Lands



Map 1.1c

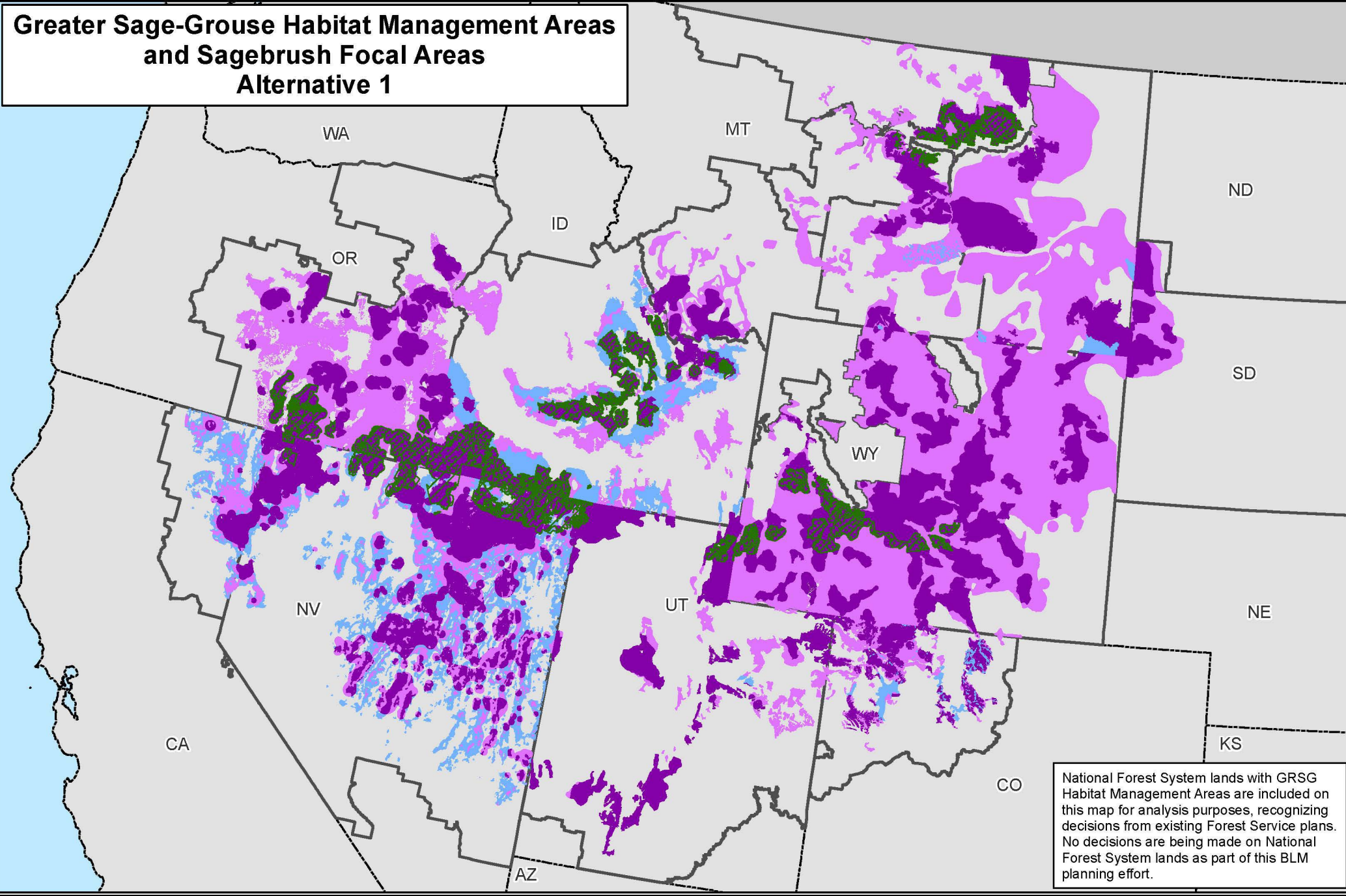


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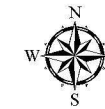




# Greater Sage-Grouse Habitat Management Areas and Sagebrush Focal Areas Alternative 1



Map 2.1



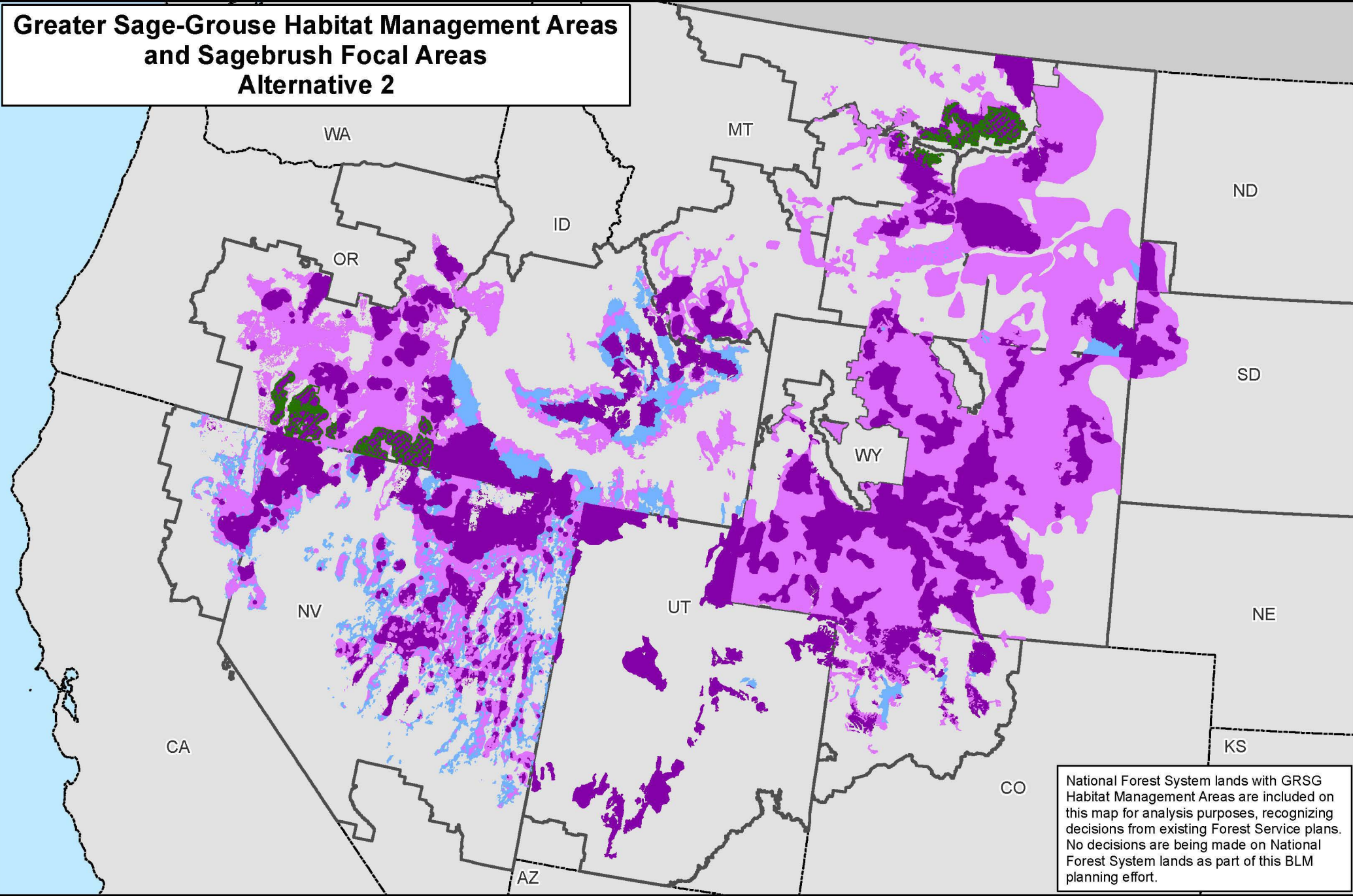
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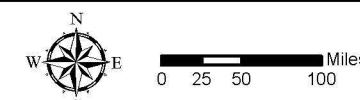




# Greater Sage-Grouse Habitat Management Areas and Sagebrush Focal Areas Alternative 2



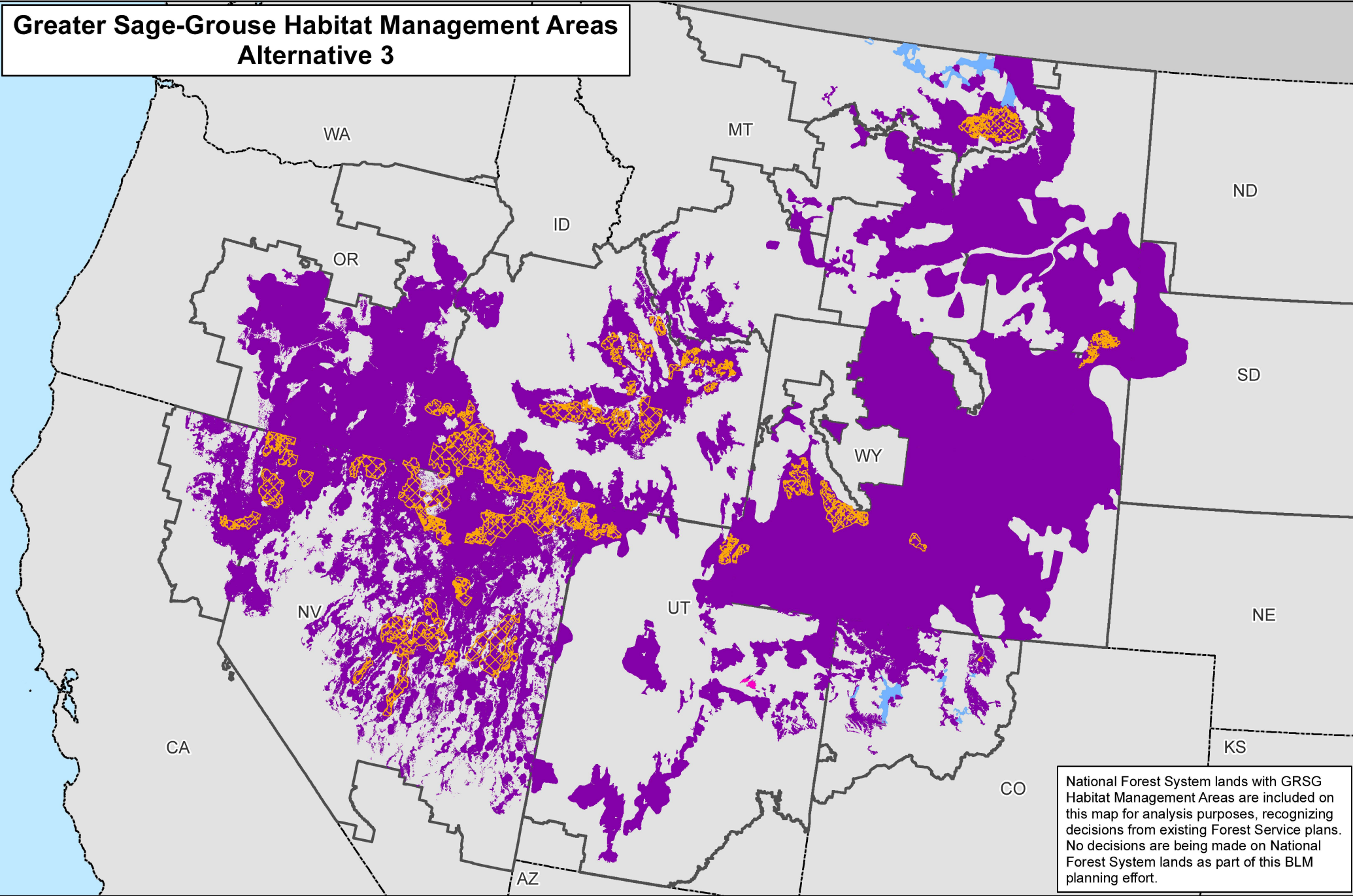
Map 2.2



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.3

Priority Habitat Management Areas

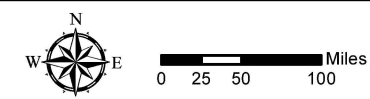
Anthro Mtn Habitat Management Areas

Connectivity Habitat Management Areas

Areas of Critical Environmental Concern

Planning Area Extent

State Boundaries

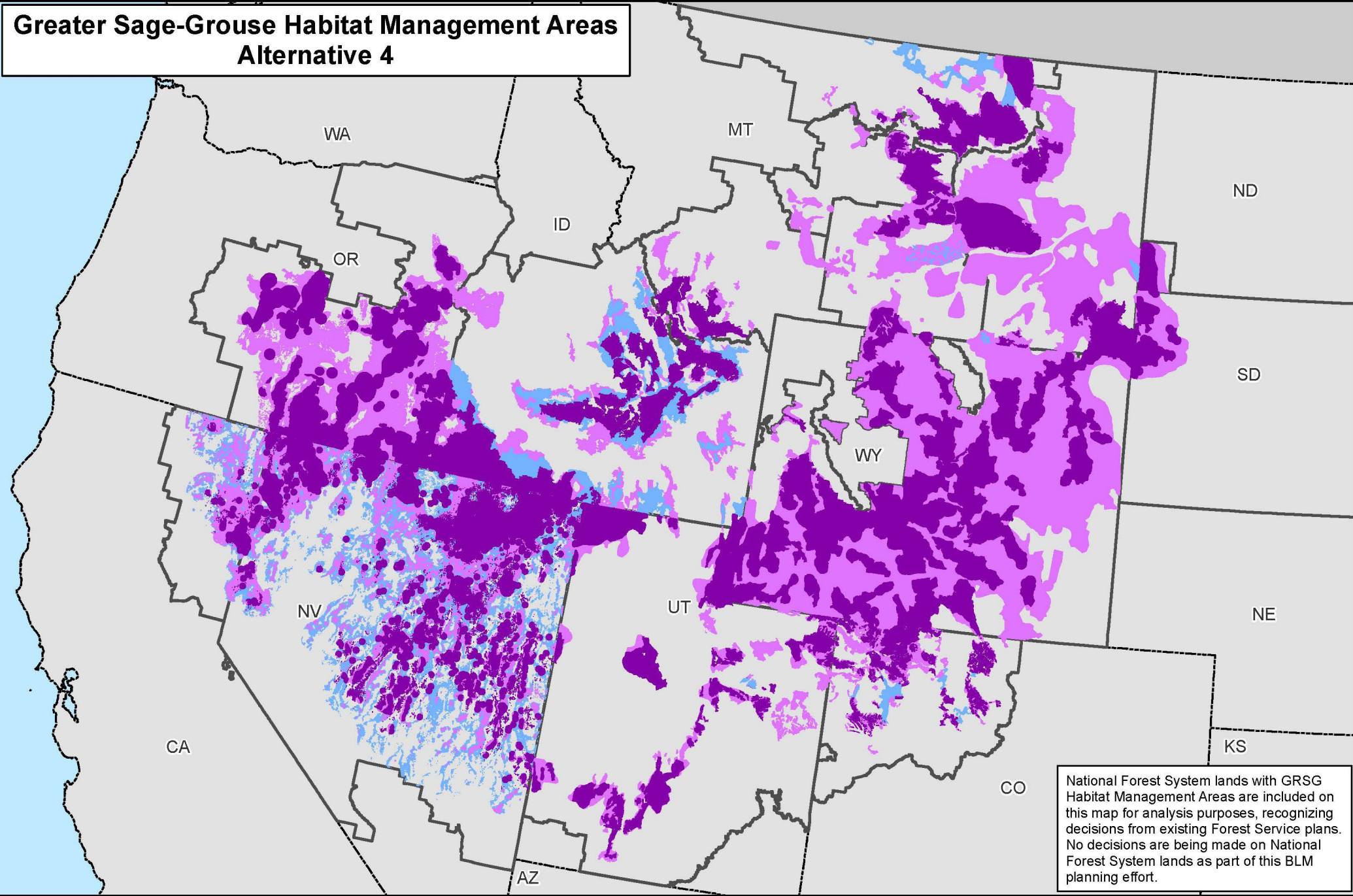


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# Greater Sage-Grouse Habitat Management Areas Alternative 4



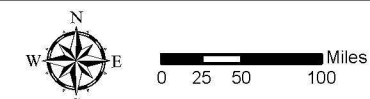
National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.4

**Legend**

- Priority Habitat Management Areas
- General Habitat Management Areas
- Other Habitat Management Areas

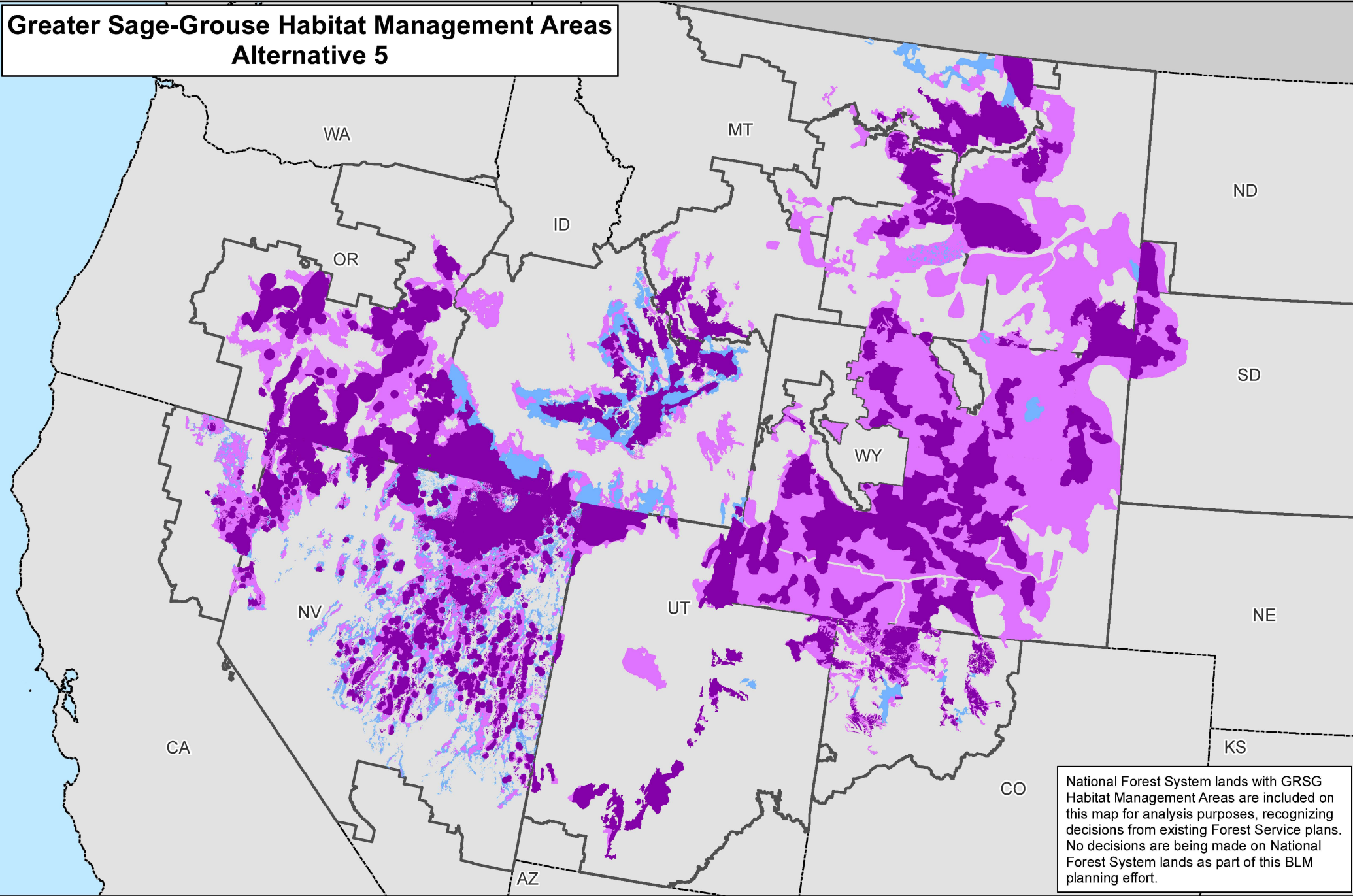
- Planning Area Extent
- State Boundaries



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# Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.5

Priority Habitat Management Areas

General Habitat Management Areas

Other Habitat Management Areas

Planning Area Extent

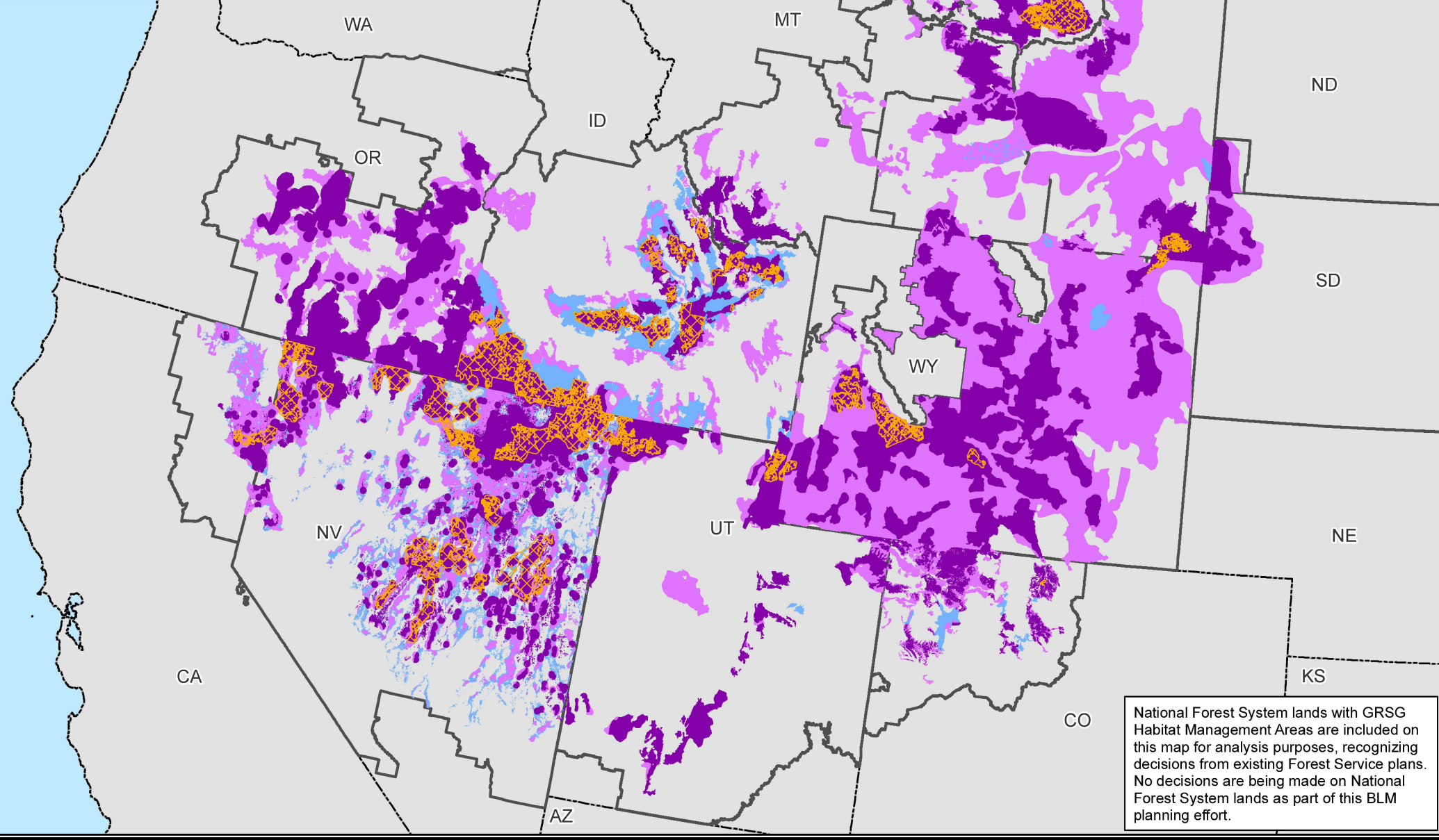
State Boundaries

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# **Greater Sage-Grouse Habitat Management Areas and Areas of Critical Environmental Concern (ACECs) Alternative 6**



**Map 2.6**

Priority Habitat Management Areas

General Habitat Management Areas

Other Habitat Management Areas

Areas of Critical Environmental Concern

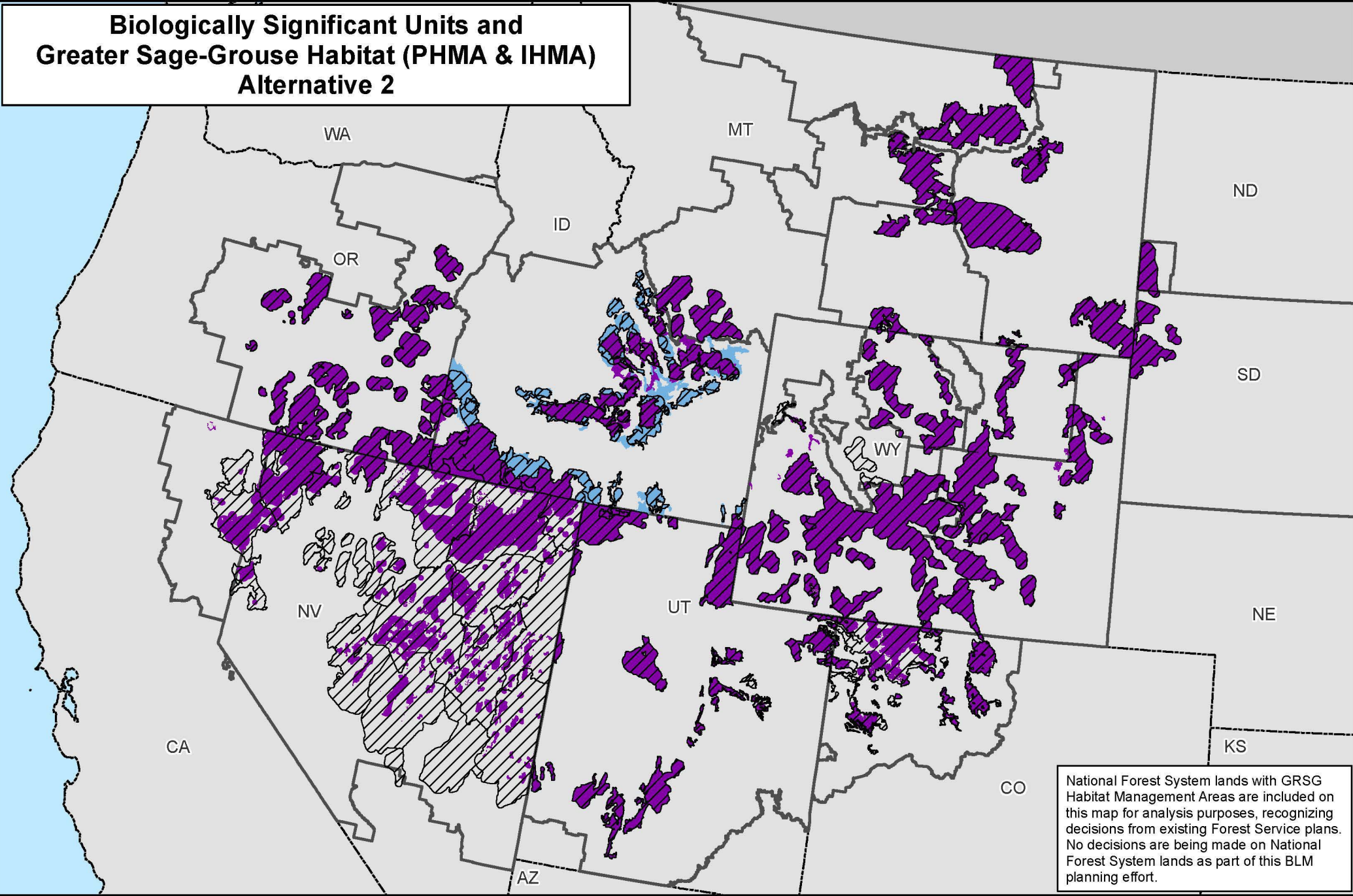
Planning Area Extent

State Boundaries

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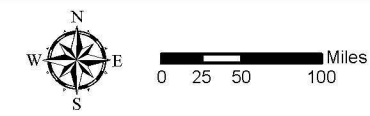
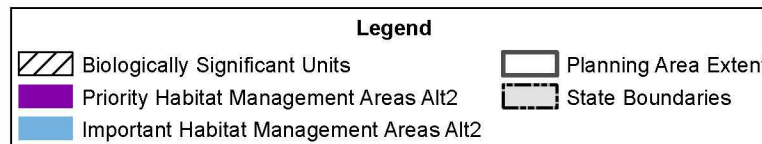


# Biologically Significant Units and Greater Sage-Grouse Habitat (PHMA & IHMA) Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.7

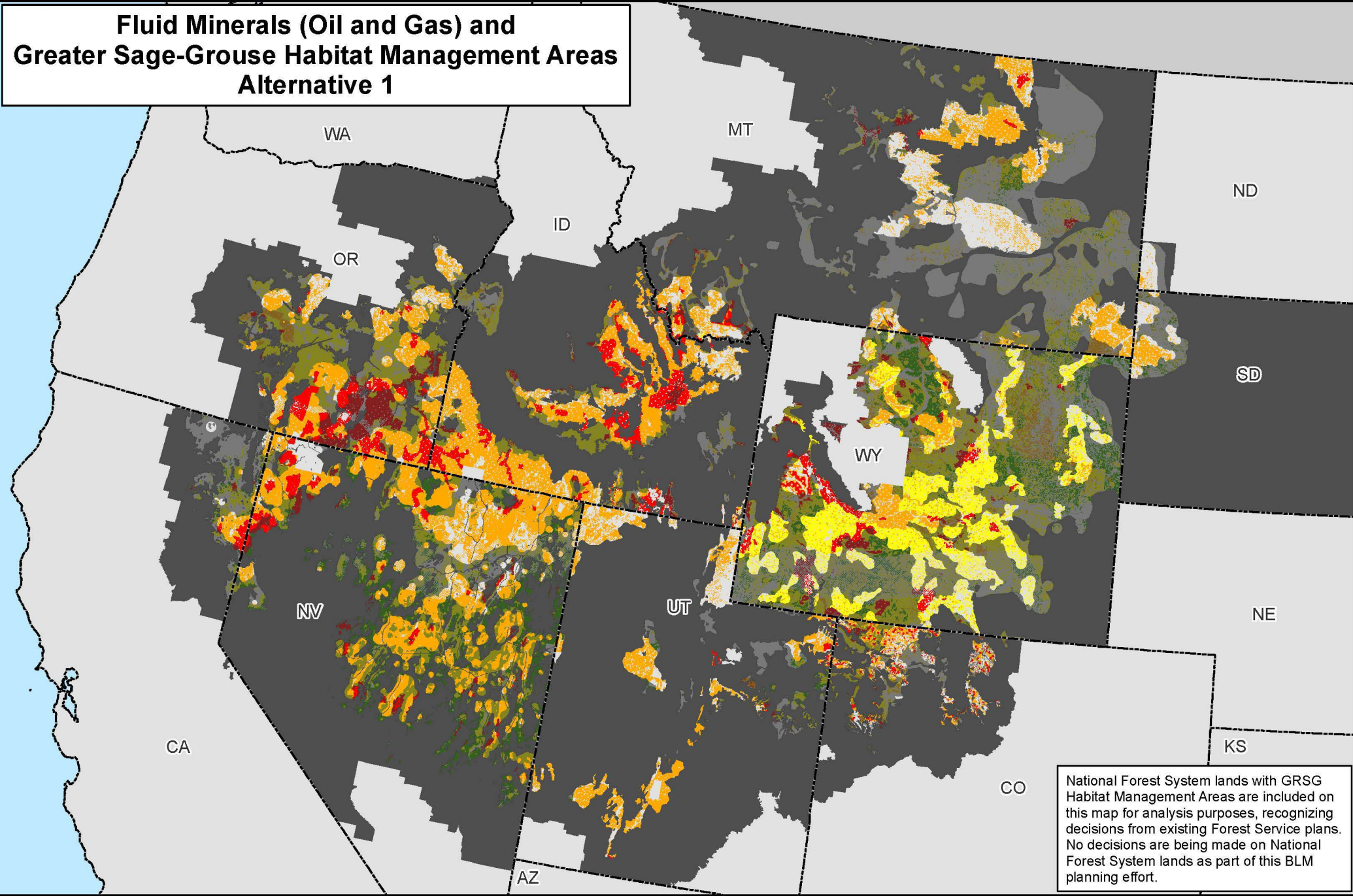


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# Fluid Minerals (Oil and Gas) and Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.8a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Oil and Gas - Closed

Oil and Gas - Open Major Stipulations (NSO)

Oil and Gas - Open Moderate Stipulations (CSU and/or TL)

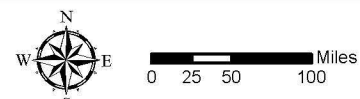
Oil and Gas - Open Standard Stipulations

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

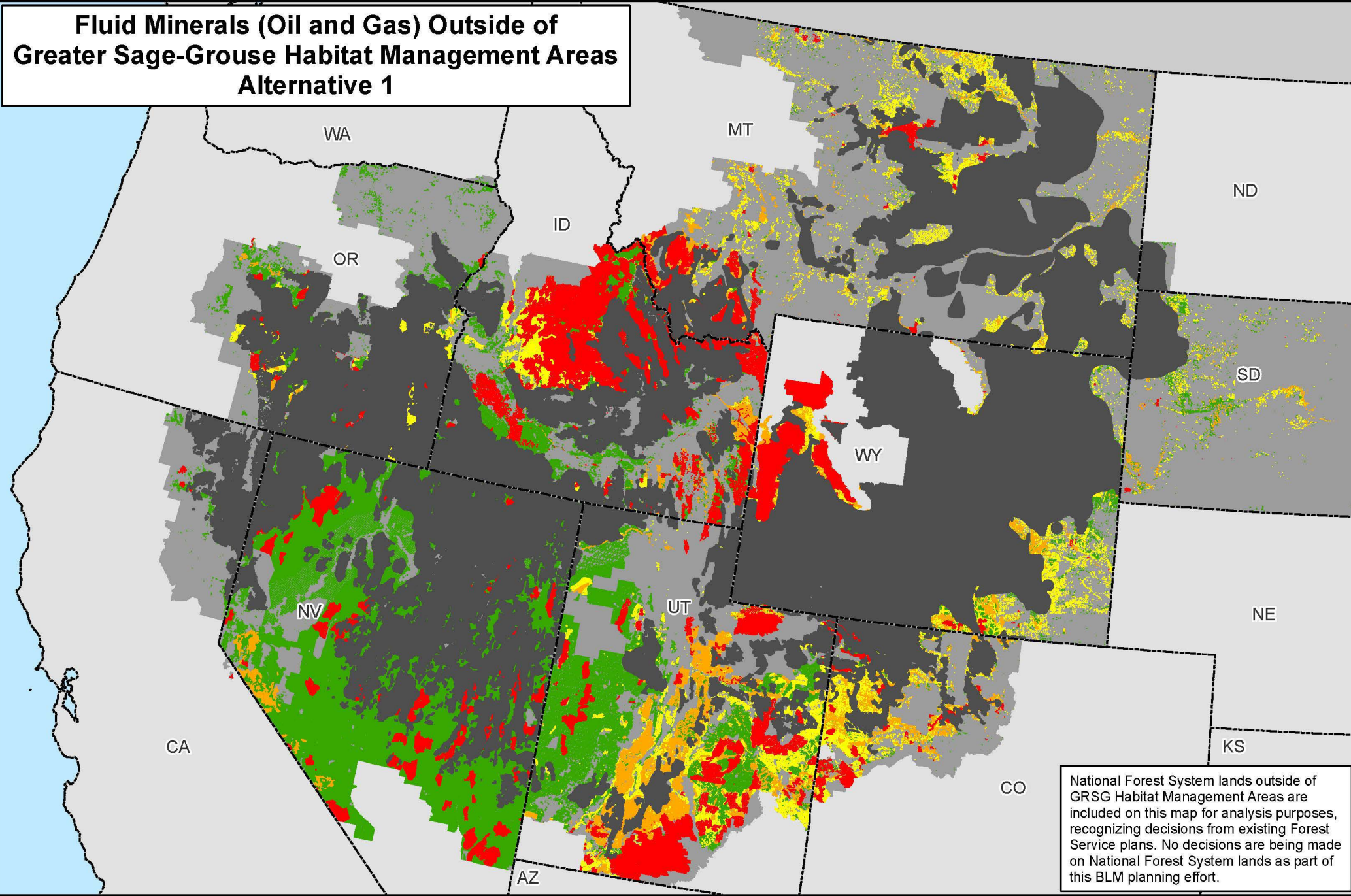


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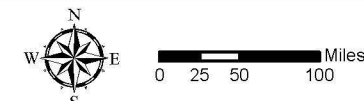
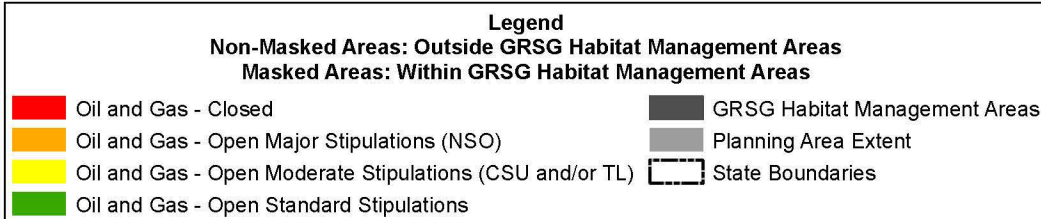




# Fluid Minerals (Oil and Gas) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



Map 2.8b

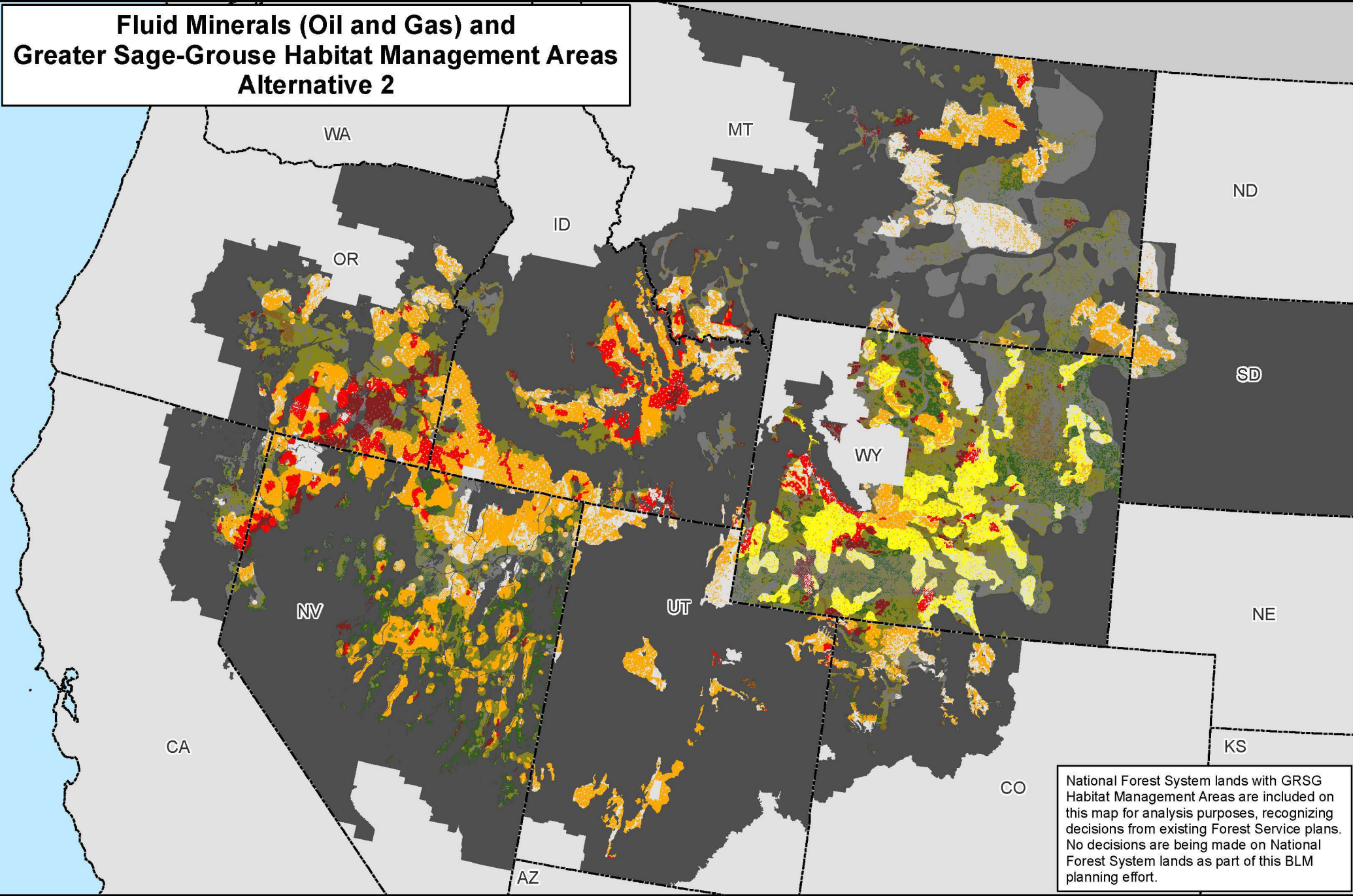


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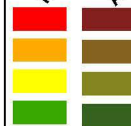
# Fluid Minerals (Oil and Gas) and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.9a

PHMAs / IHMAs  
GHMAs / Add'l HMAs



Oil and Gas - Closed  
Oil and Gas - Open Major Stipulations (NSO)  
Oil and Gas - Open Moderate Stipulations (CSU and/or TL)  
Oil and Gas - Open Standard Stipulations

## Legend

Non-Shaded Areas: PHMAs/IHMAs  
Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent  
State Boundaries



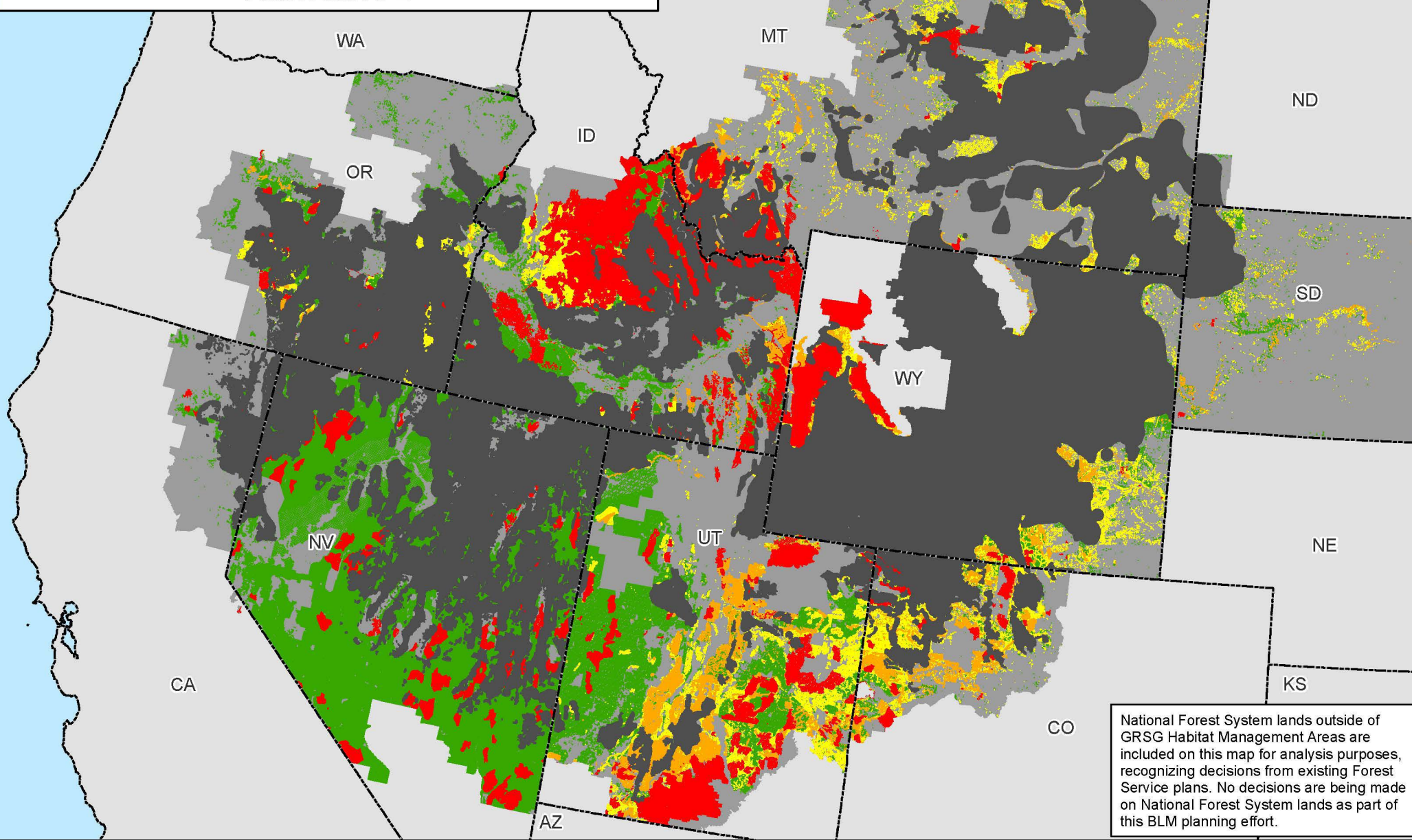
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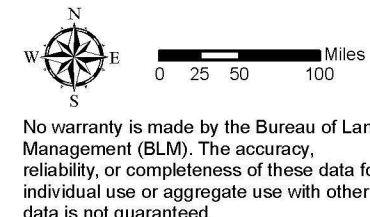
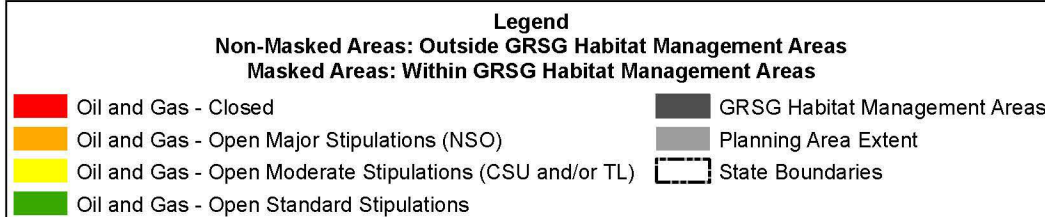




# Fluid Minerals (Oil and Gas) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2

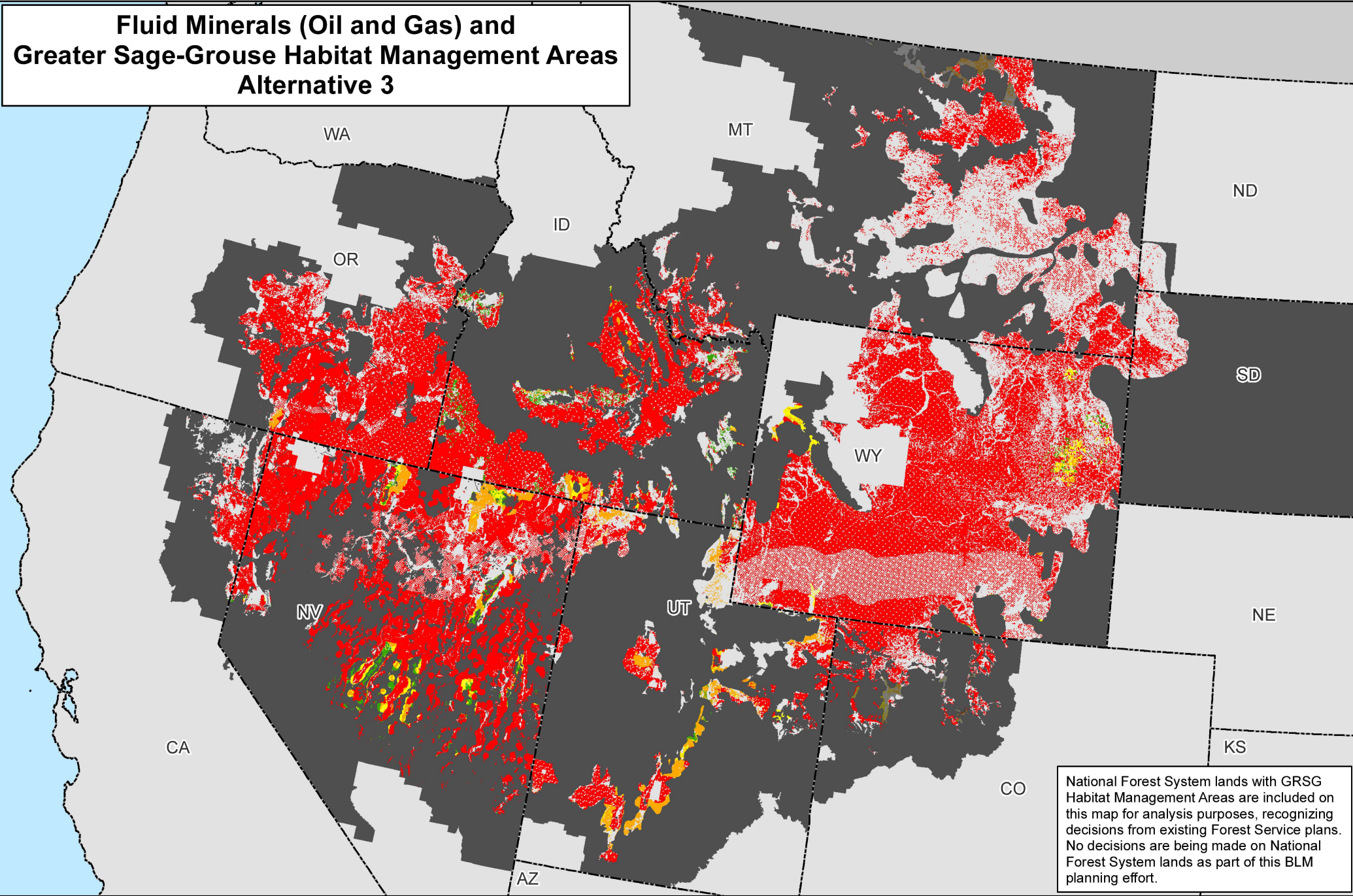


Map 2.9b

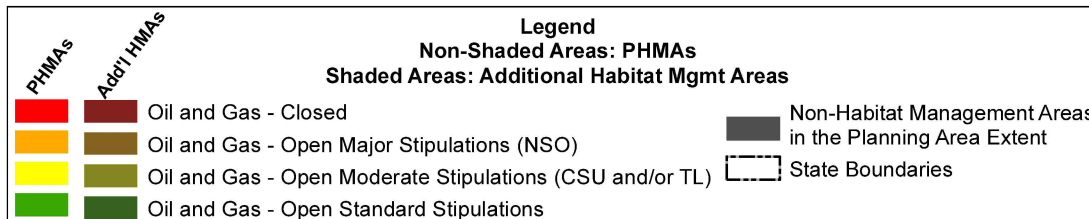




# Fluid Minerals (Oil and Gas) and Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.10a

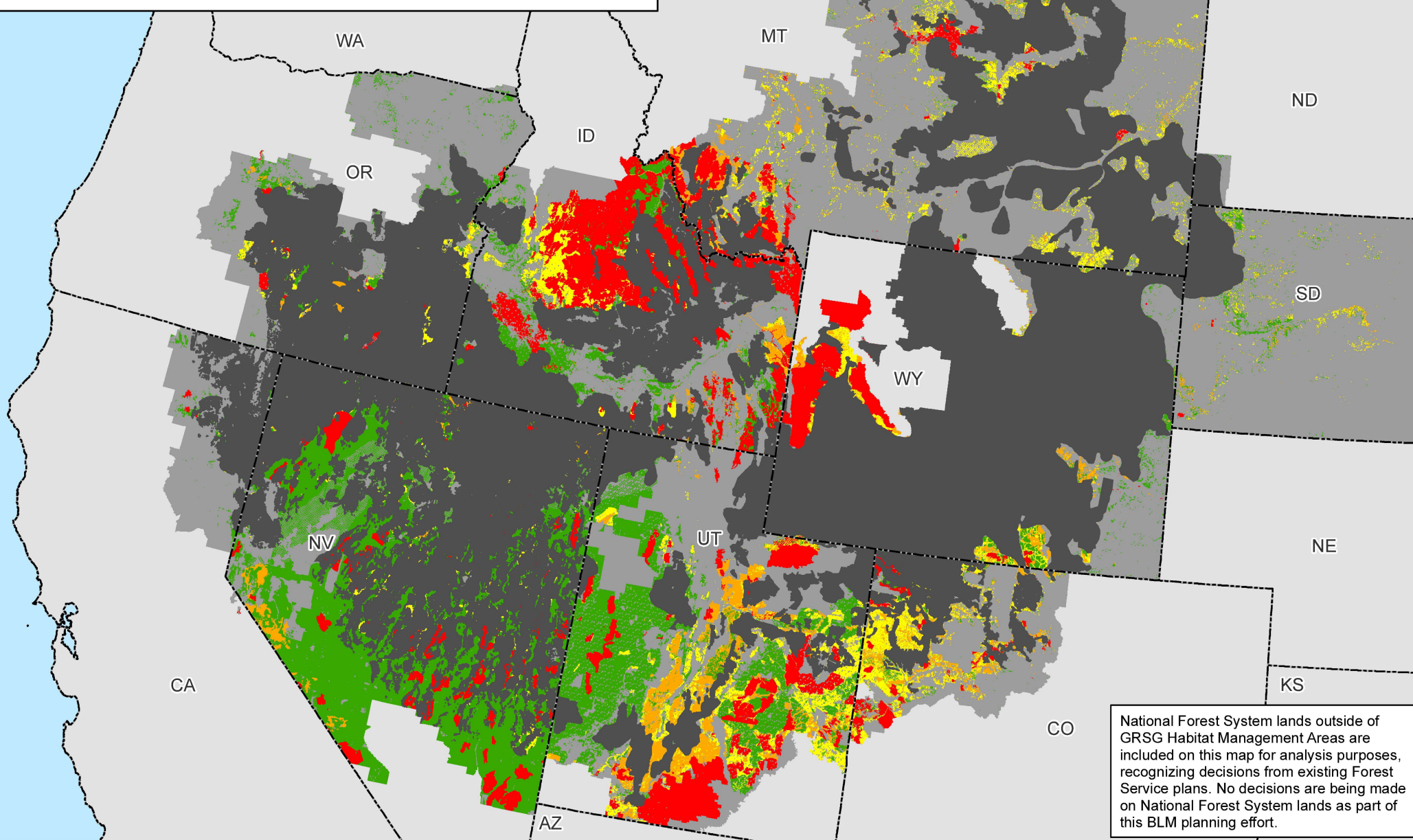


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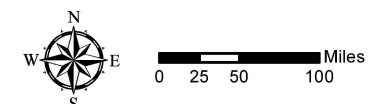
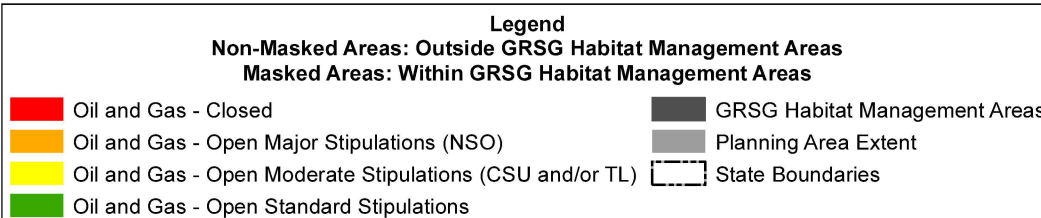




# Fluid Minerals (Oil and Gas) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.10b

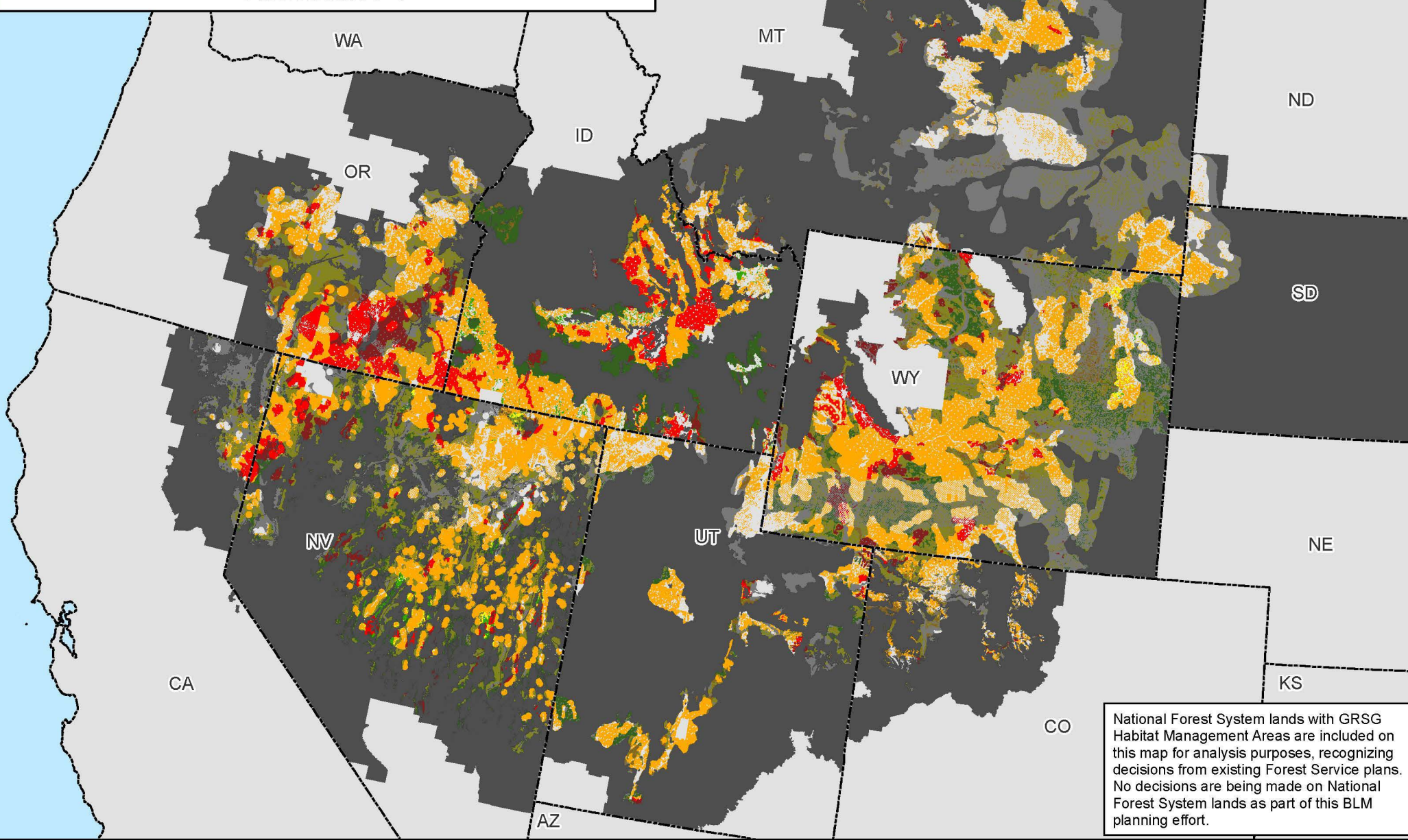


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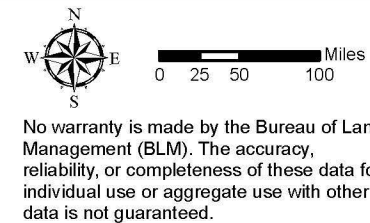
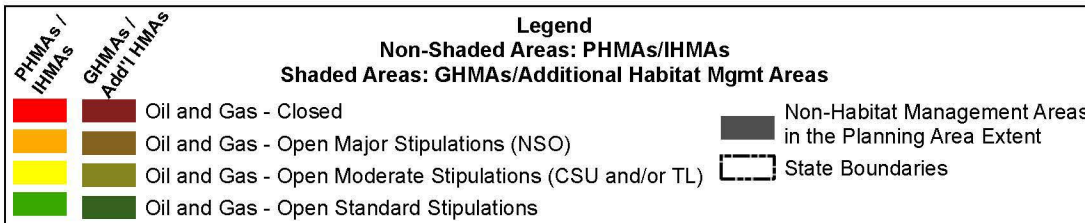




# Fluid Minerals (Oil and Gas) and Greater Sage-Grouse Habitat Management Areas Alternative 4

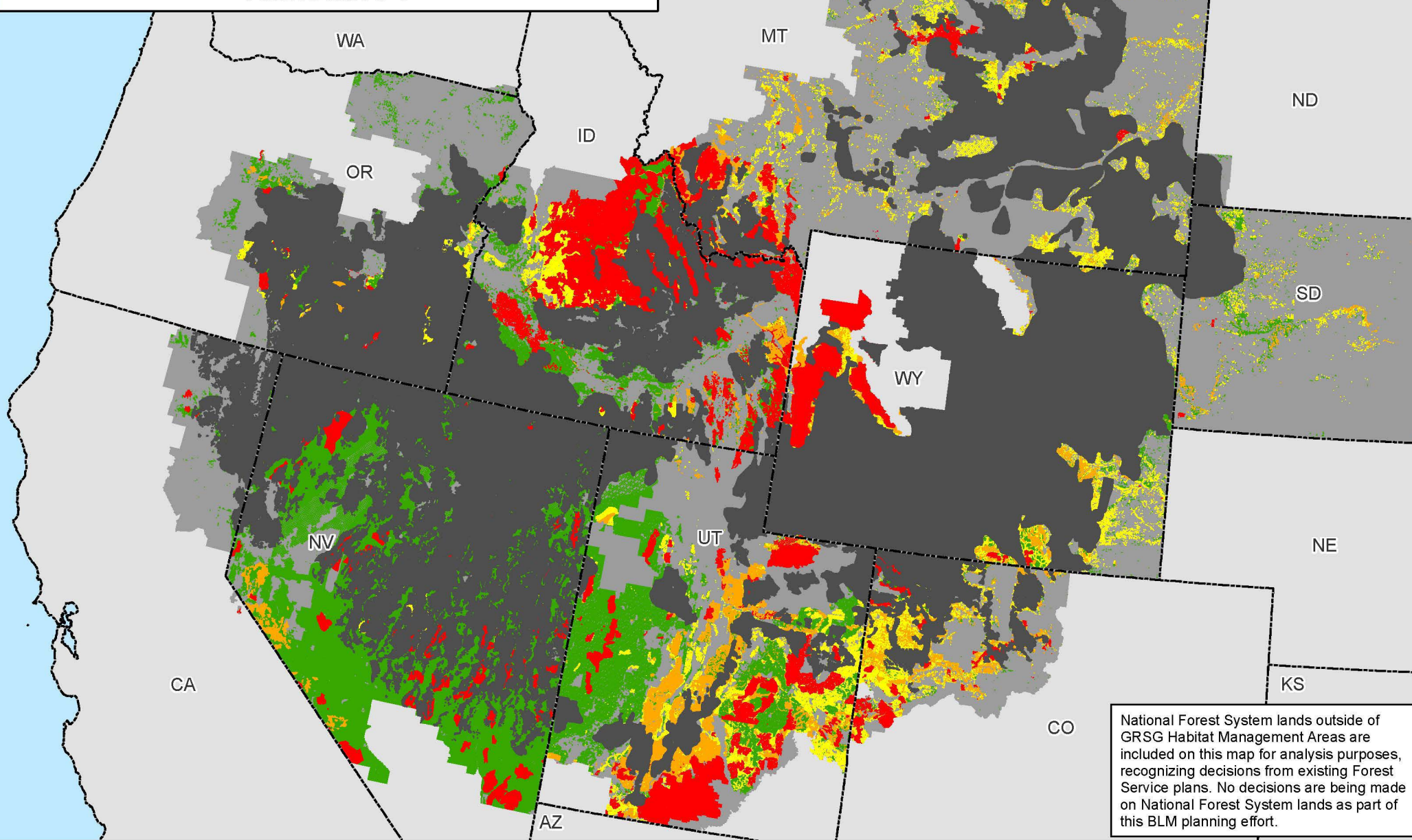


Map 2.11a

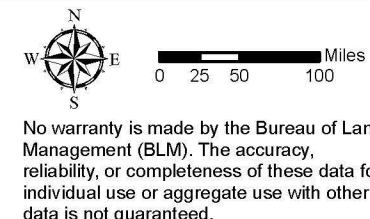
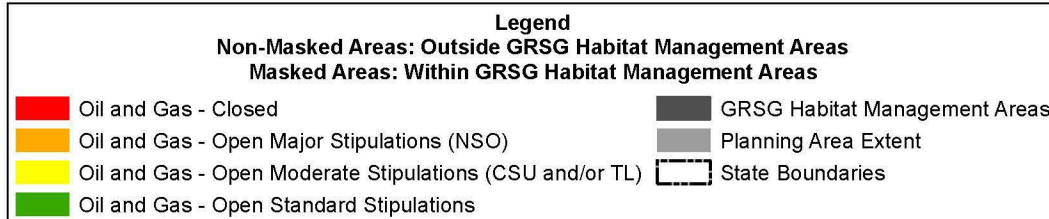




# Fluid Minerals (Oil and Gas) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4

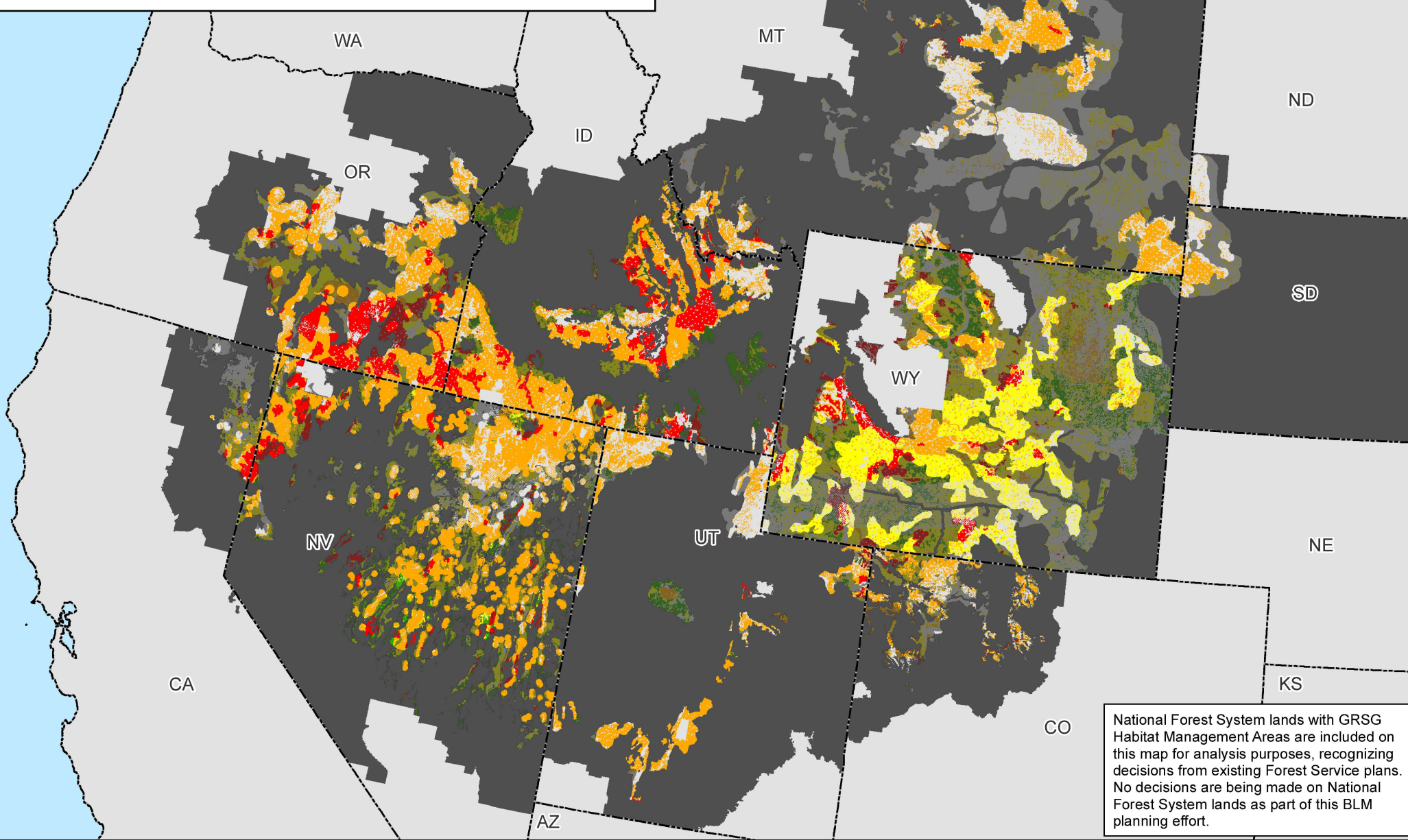


Map 2.11b



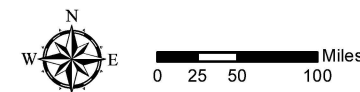


# Fluid Minerals (Oil and Gas) and Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.12a

PHMAs / IHMAs  
GHMAs / Add'l HMAs

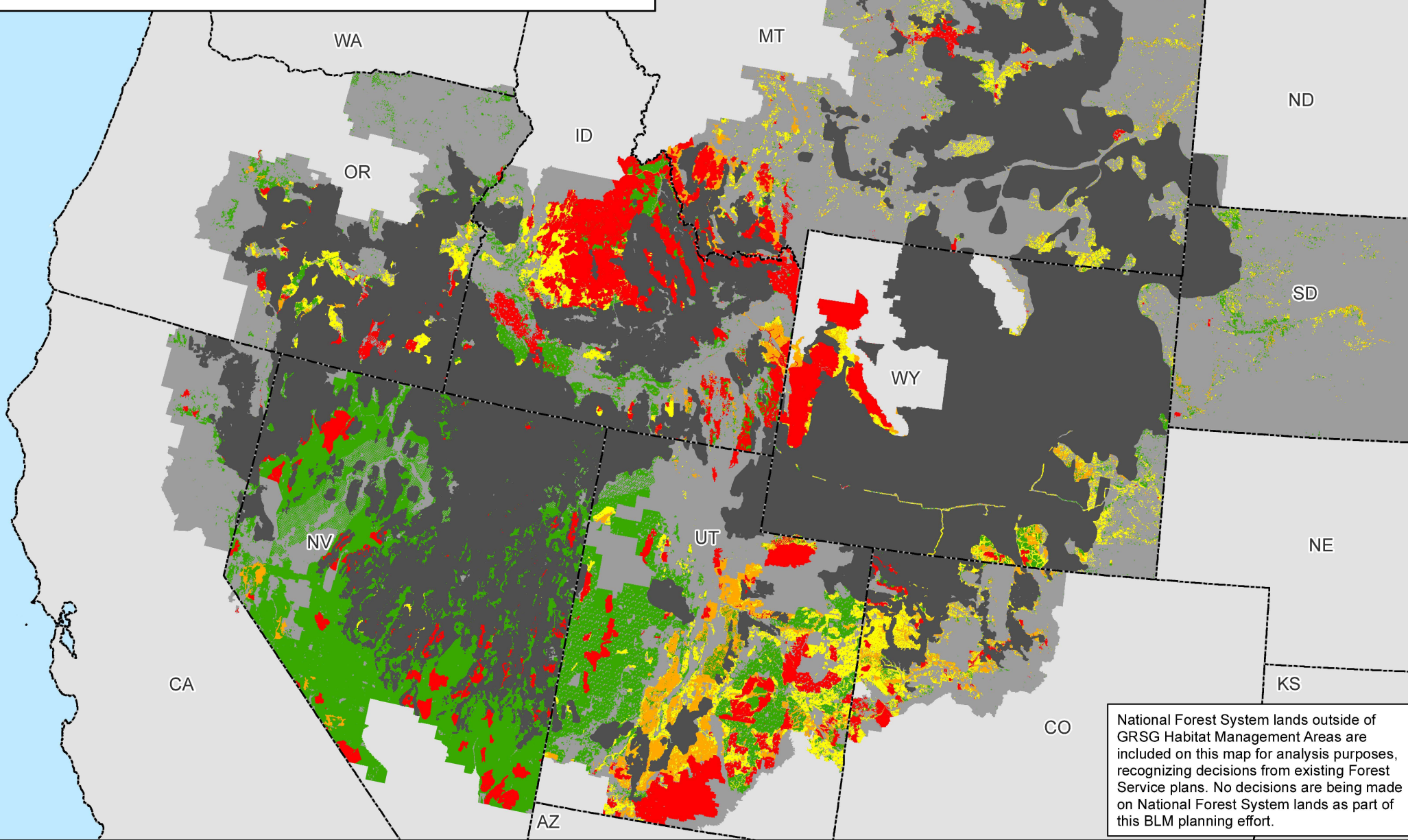


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# Fluid Minerals (Oil and Gas) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.12b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

- Oil and Gas - Closed
- Oil and Gas - Open Major Stipulations (NSO)
- Oil and Gas - Open Moderate Stipulations (CSU and/or TL)
- Oil and Gas - Open Standard Stipulations

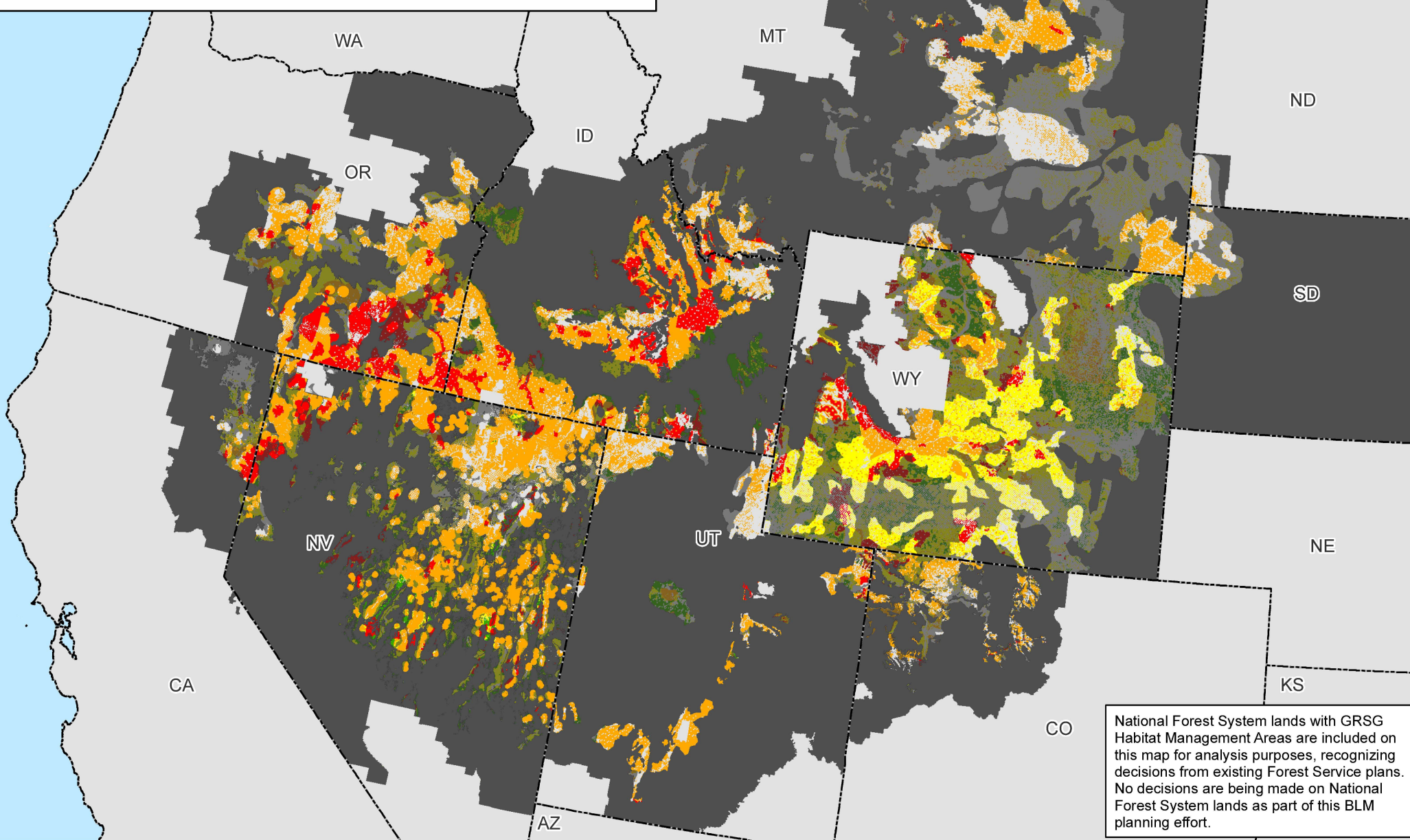
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

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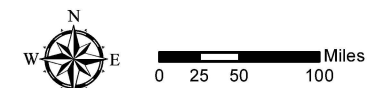
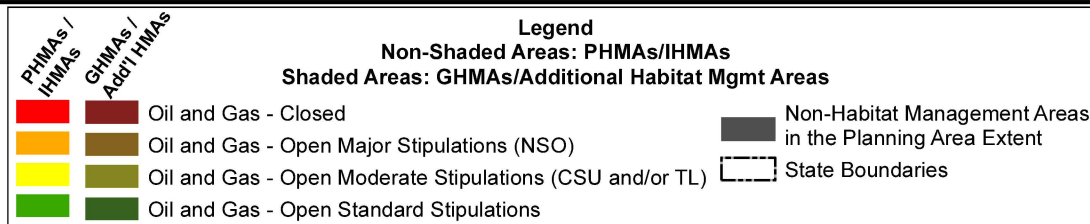


# Fluid Minerals (Oil and Gas) and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.13a

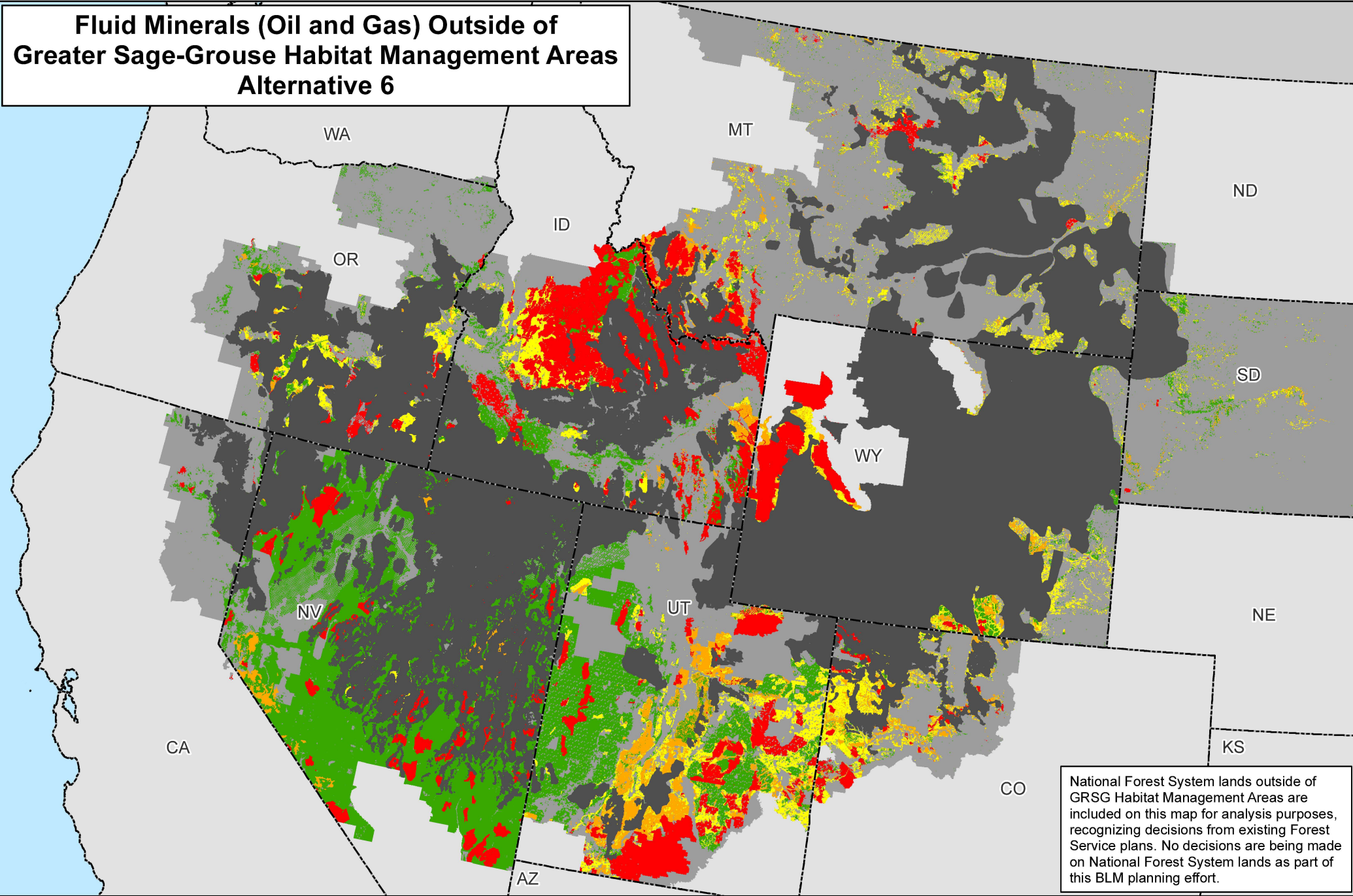


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# Fluid Minerals (Oil and Gas) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.13b



**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Oil and Gas - Closed

Oil and Gas - Open Major Stipulations (NSO)

Oil and Gas - Open Moderate Stipulations (CSU and/or TL)

Oil and Gas - Open Standard Stipulations

GRSG Habitat Management Areas

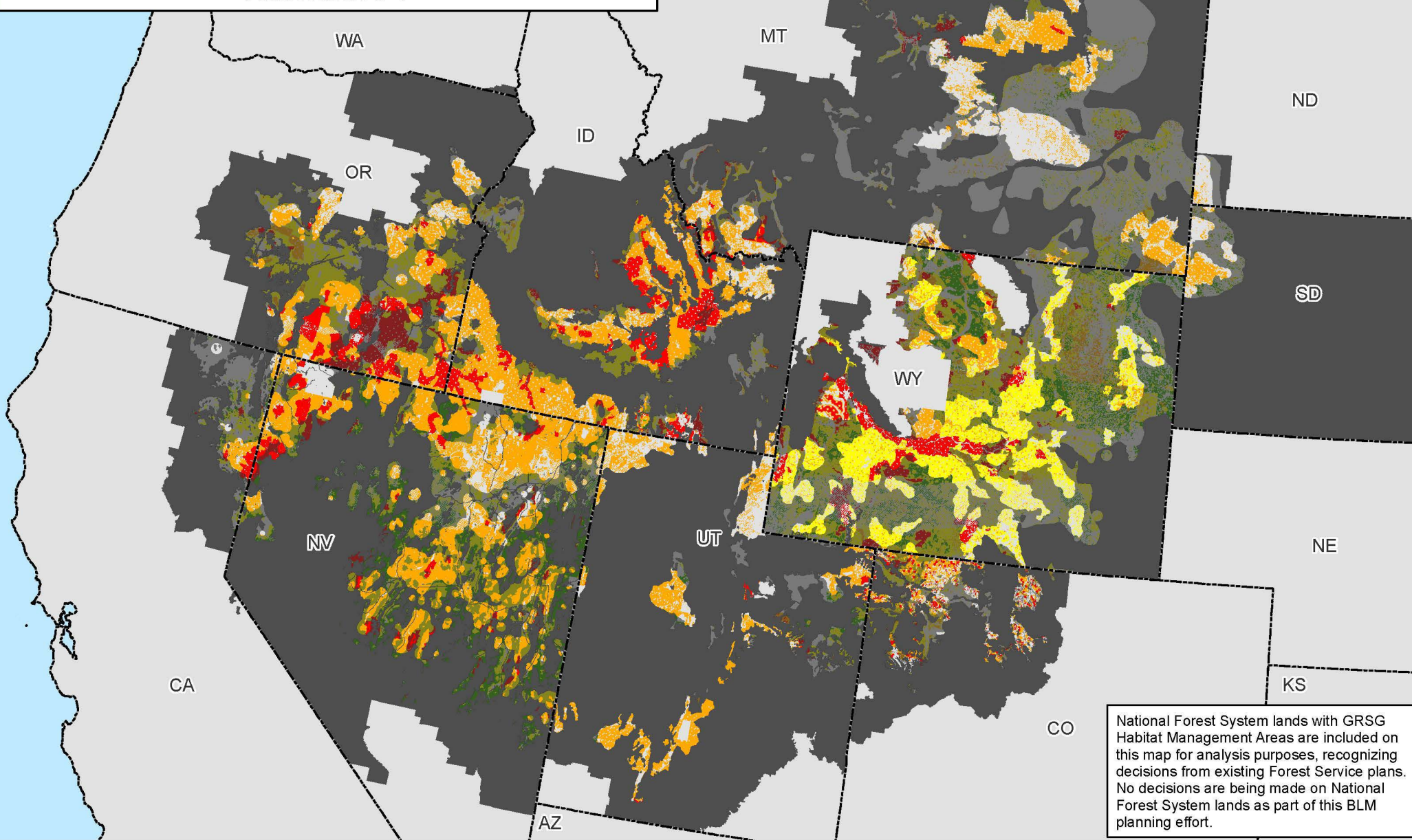
Planning Area Extent

State Boundaries

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# Geothermal and Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.14a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Geothermal - Closed

Geothermal - Open Major Stipulations (NSO)

Geothermal - Open Moderate Stipulations (CSU and/or TL)

Geothermal - Open Standard Stipulations

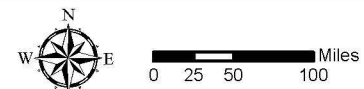
**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

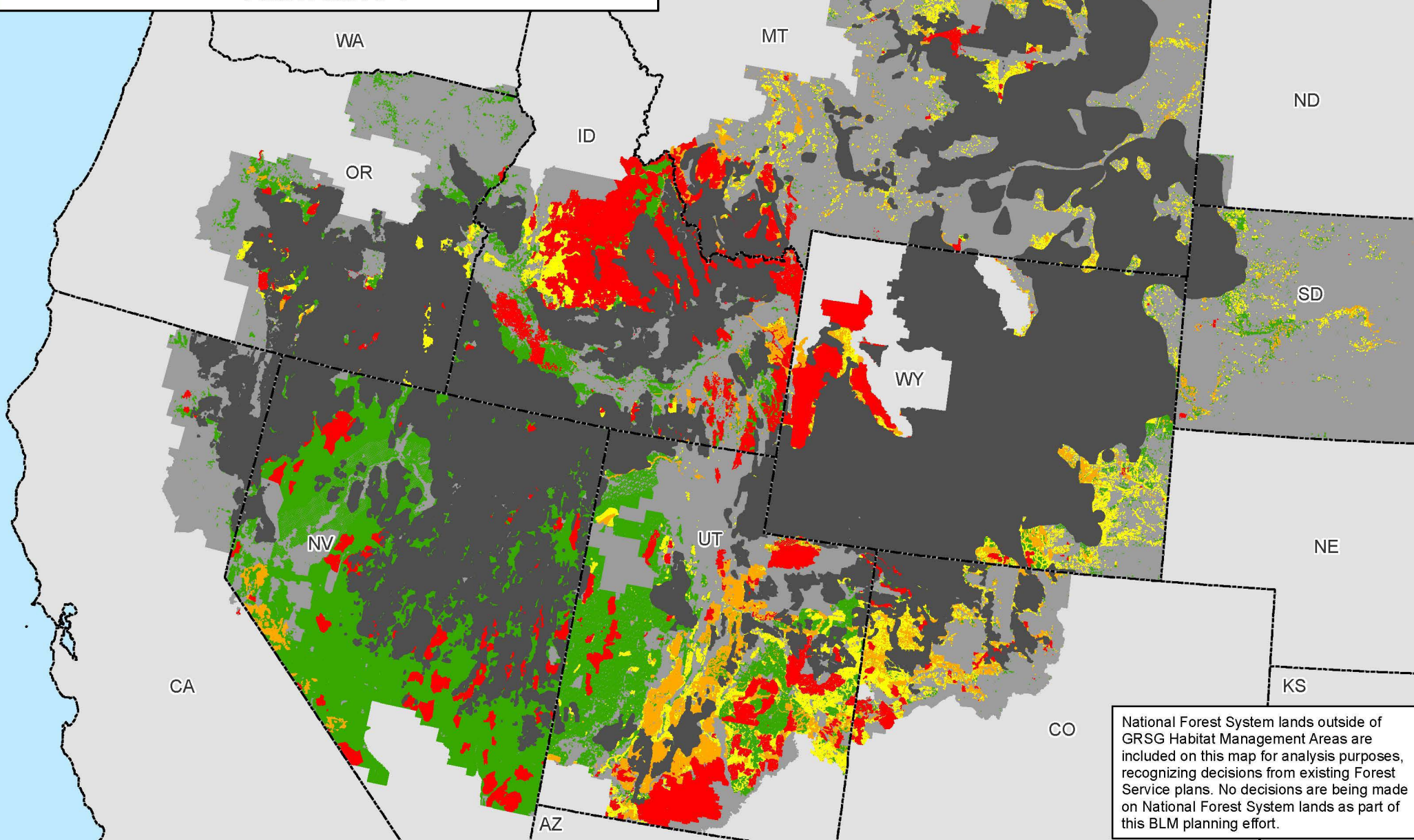


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

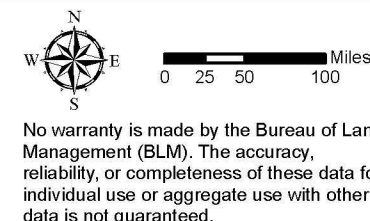
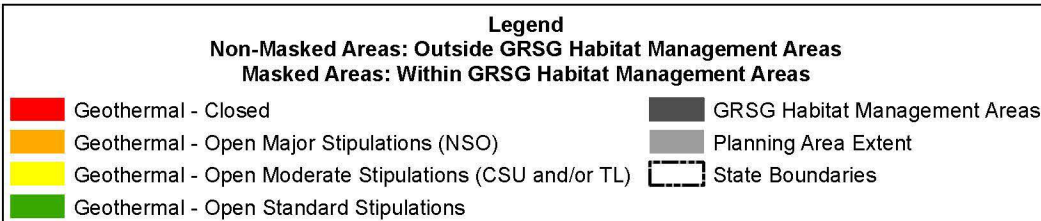




# Geothermal Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1

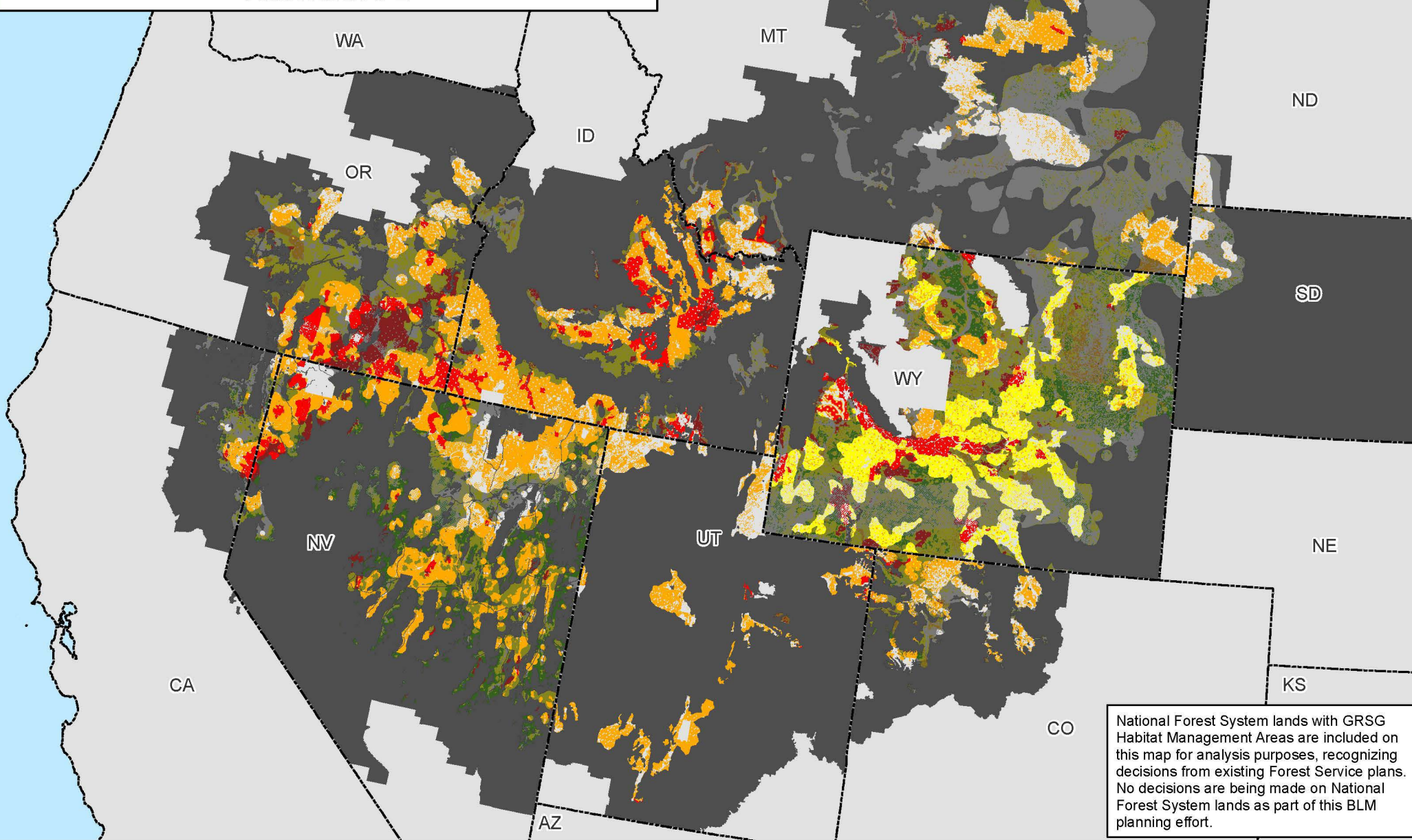


Map 2.14b





# Geothermal and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.15a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Geothermal - Closed

Geothermal - Open Major Stipulations (NSO)

Geothermal - Open Moderate Stipulations (CSU and/or TL)

Geothermal - Open Standard Stipulations

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Non-Habitat Management Areas in the Planning Area Extent

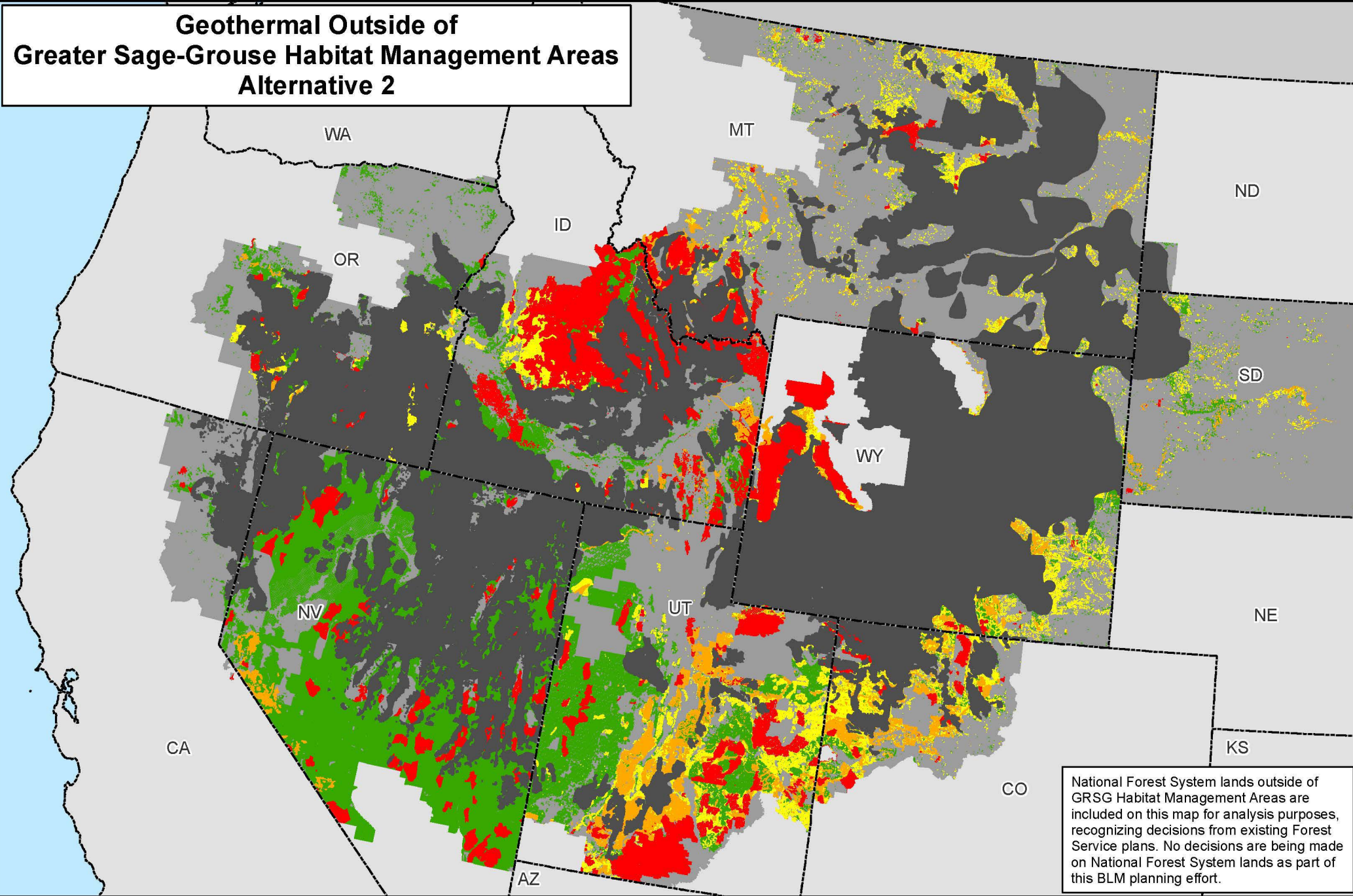
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Geothermal Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



Map 2.15b

**Legend**  
Non-Masked Areas: Outside GRSG Habitat Management Areas  
Masked Areas: Within GRSG Habitat Management Areas

- |   |  |
|---|--|
| <span style="color: red;">■</span> Geothermal - Closed  | <span style="background-color: darkgrey;">■</span> GRSG Habitat Management Areas |
| <span style="color: orange;">■</span> Geothermal - Open Major Stipulations (NSO)              | <span style="background-color: lightgrey;">■</span> Planning Area Extent         |
| <span style="color: yellow;">■</span> Geothermal - Open Moderate Stipulations (CSU and/or TL) | <span style="border: 1px solid black;"> </span> State Boundaries                 |
| <span style="color: green;">■</span> Geothermal - Open Standard Stipulations                  |  |



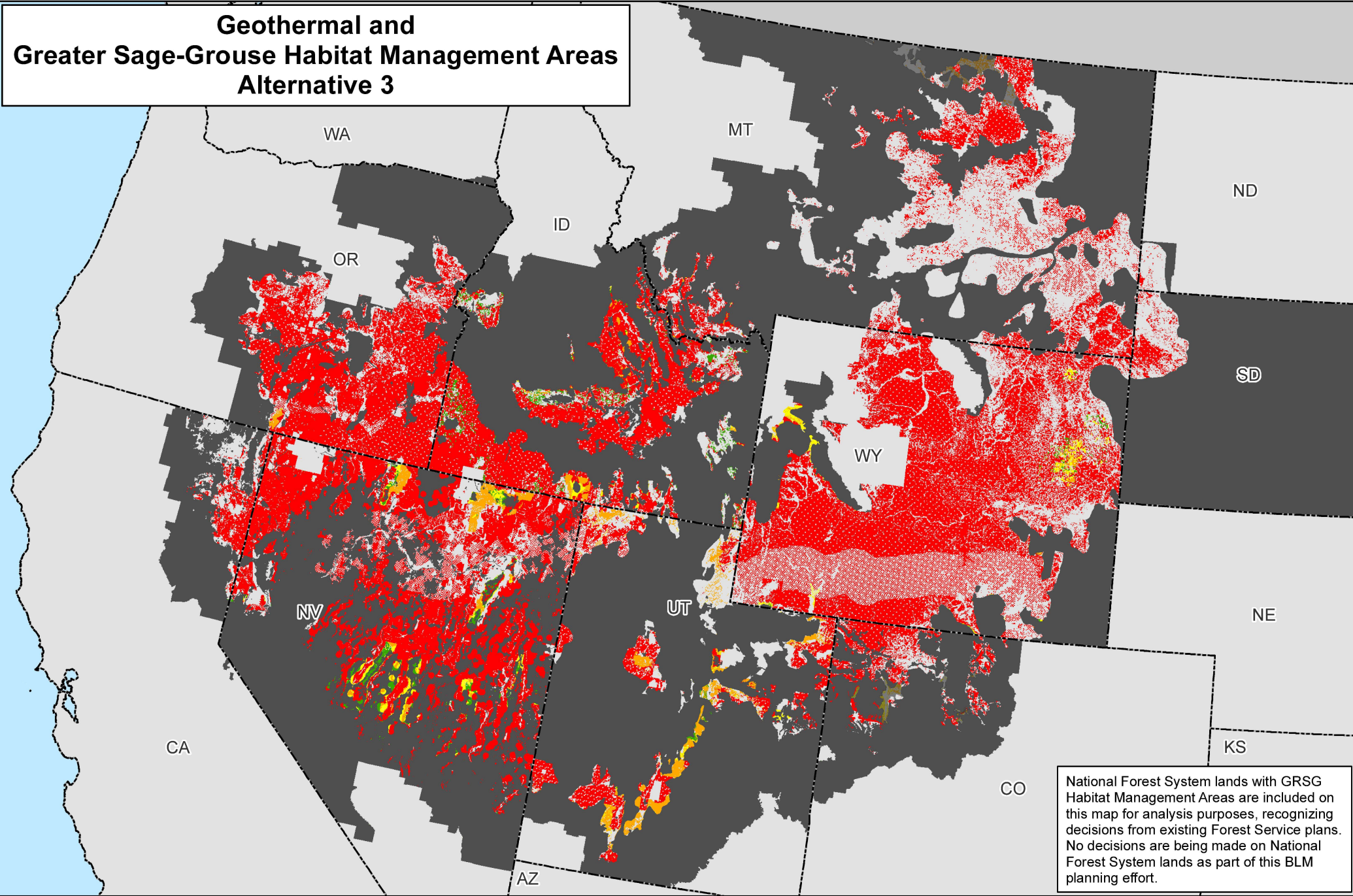
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Geothermal and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.16a

PHMAs

Non-Shaded Areas: PHMAs

Shaded Areas: Additional Habitat Mgmt Areas

Geothermal - Closed

Geothermal - Open Major Stipulations (NSO)

Geothermal - Open Moderate Stipulations (CSU and/or TL)

Geothermal - Open Standard Stipulations

Non-Habitat Management Areas in the Planning Area Extent

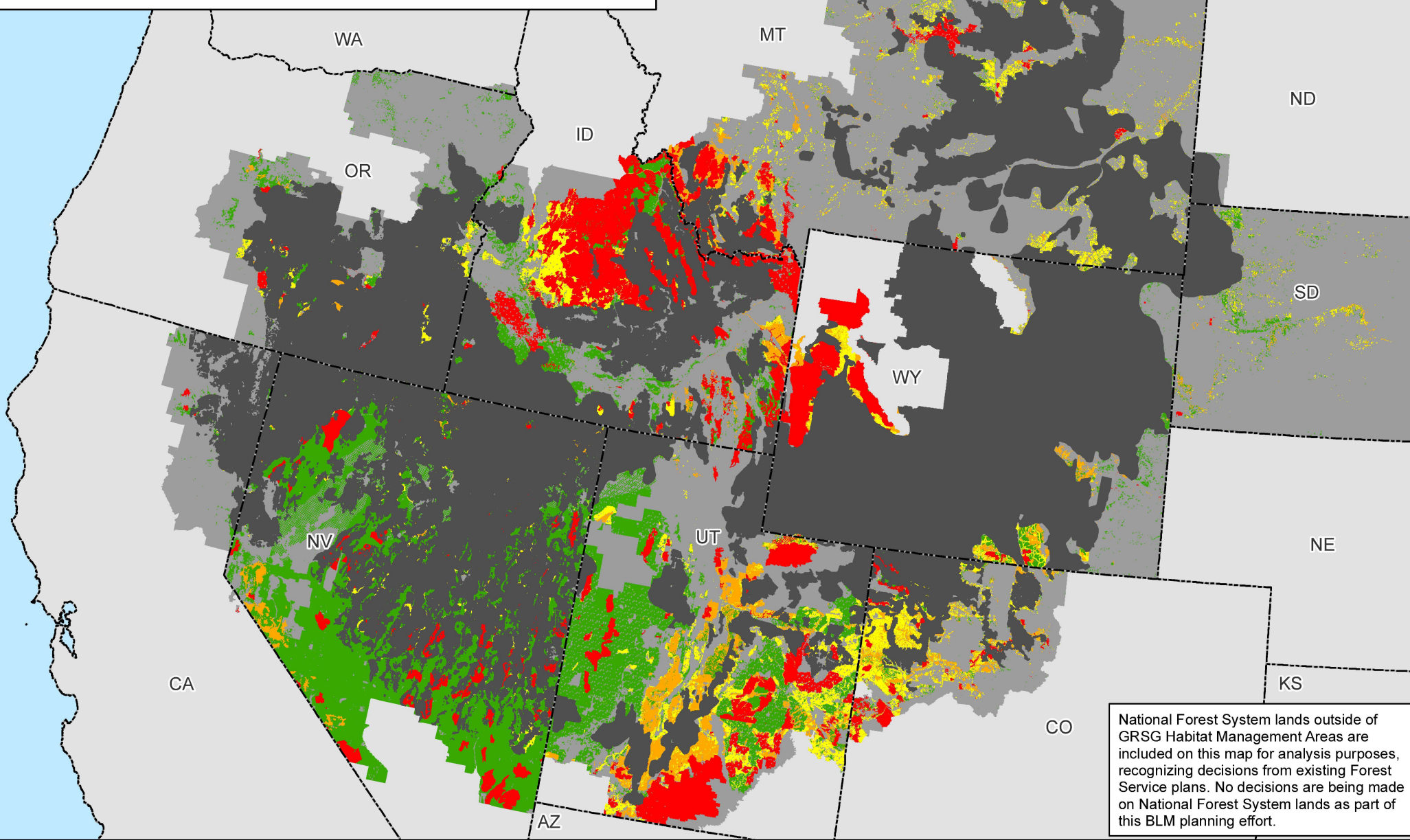
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Geothermal Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.16b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

- Geothermal - Closed
- Geothermal - Open Major Stipulations (NSO)
- Geothermal - Open Moderate Stipulations (CSU and/or TL)
- Geothermal - Open Standard Stipulations

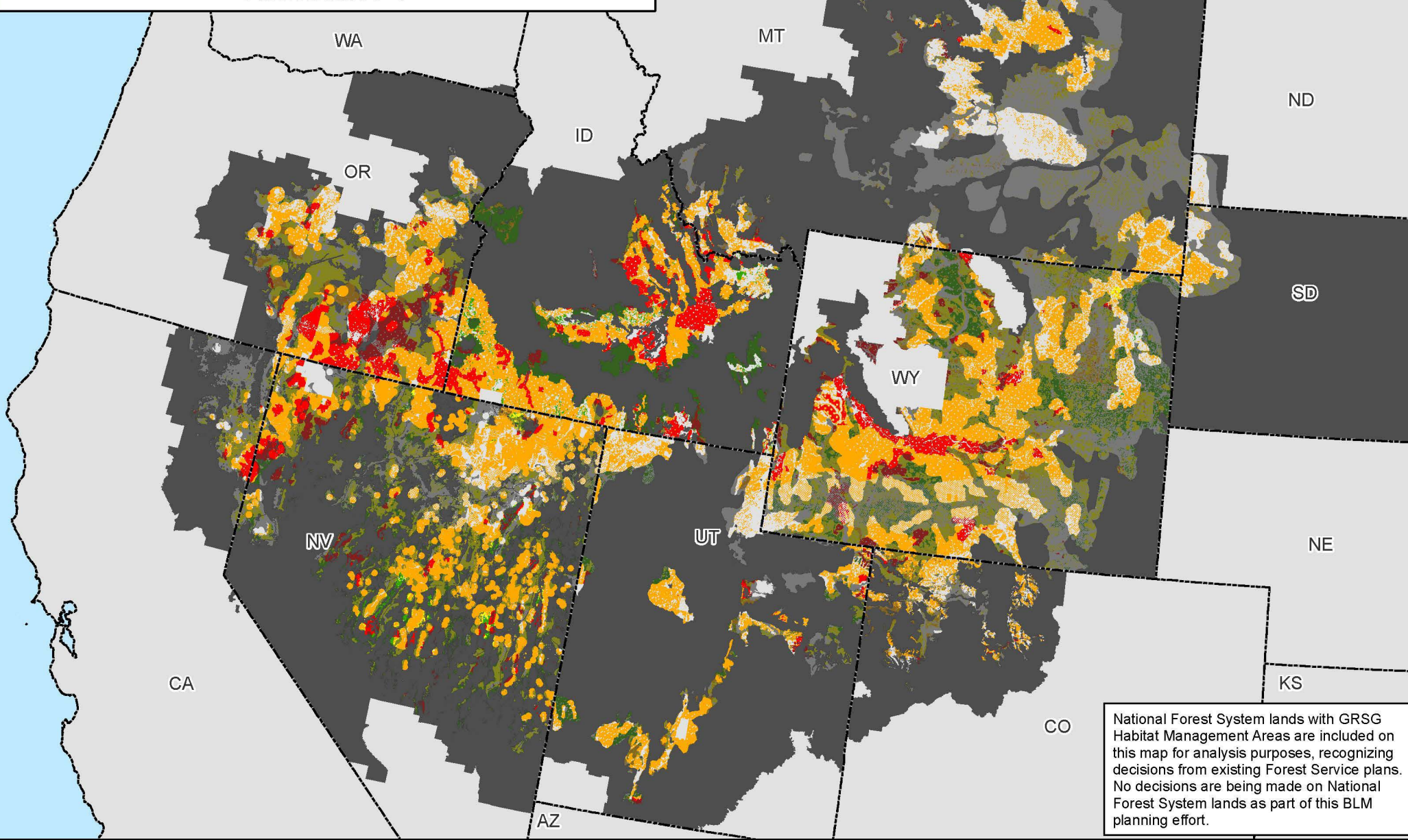
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Geothermal and Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.17a

PHMAs / IHMAs

GHMAs / Additional HMAs

Geothermal - Closed

Geothermal - Open Major Stipulations (NSO)

Geothermal - Open Moderate Stipulations (CSU and/or TL)

Geothermal - Open Standard Stipulations

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

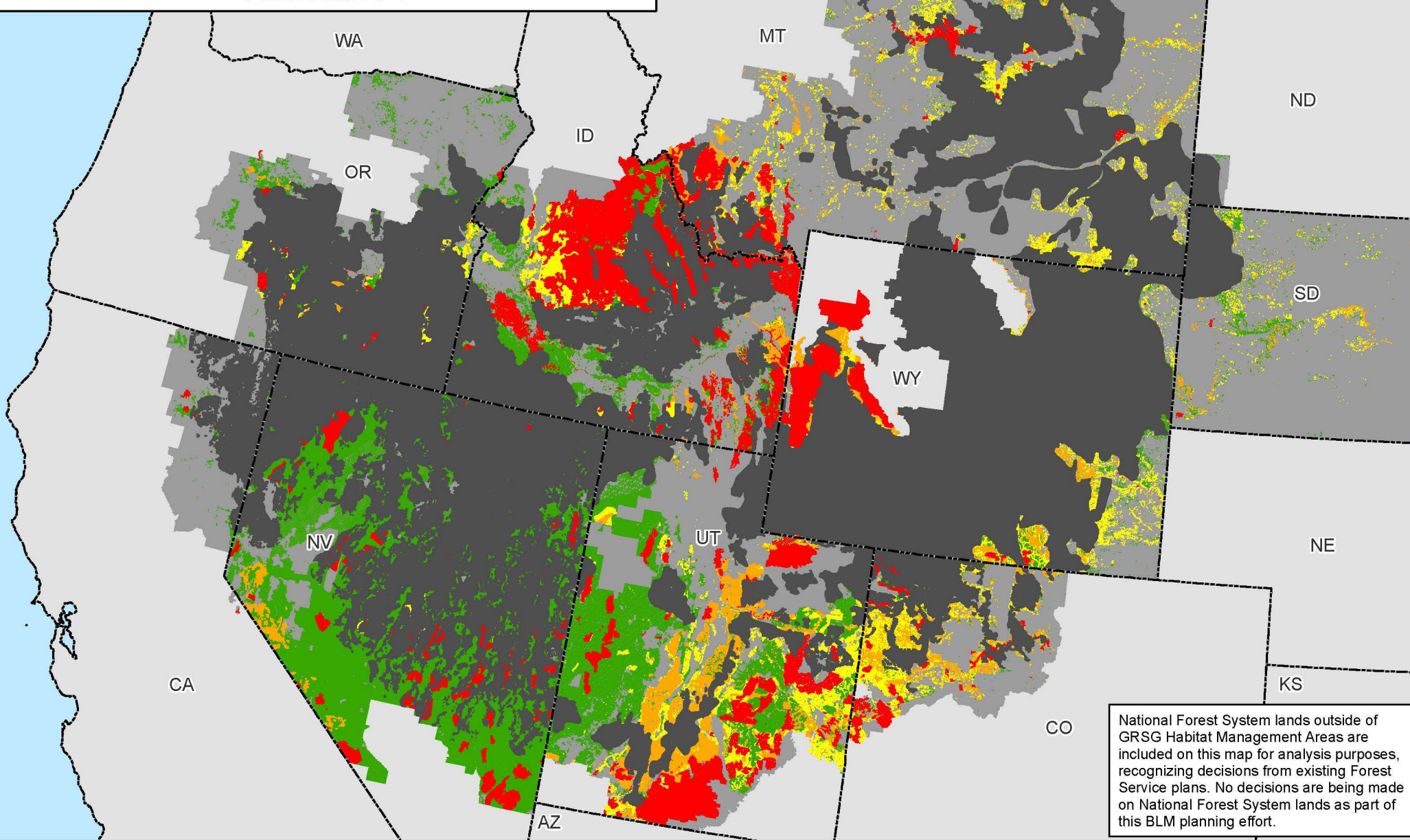
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

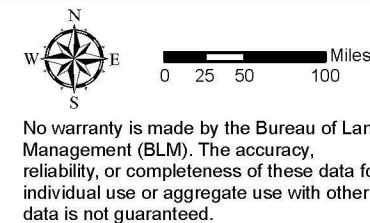
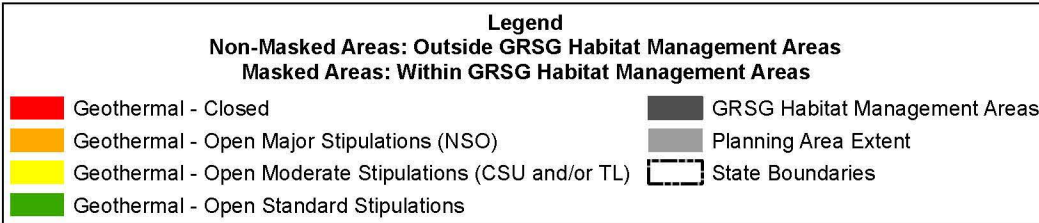
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Geothermal Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4

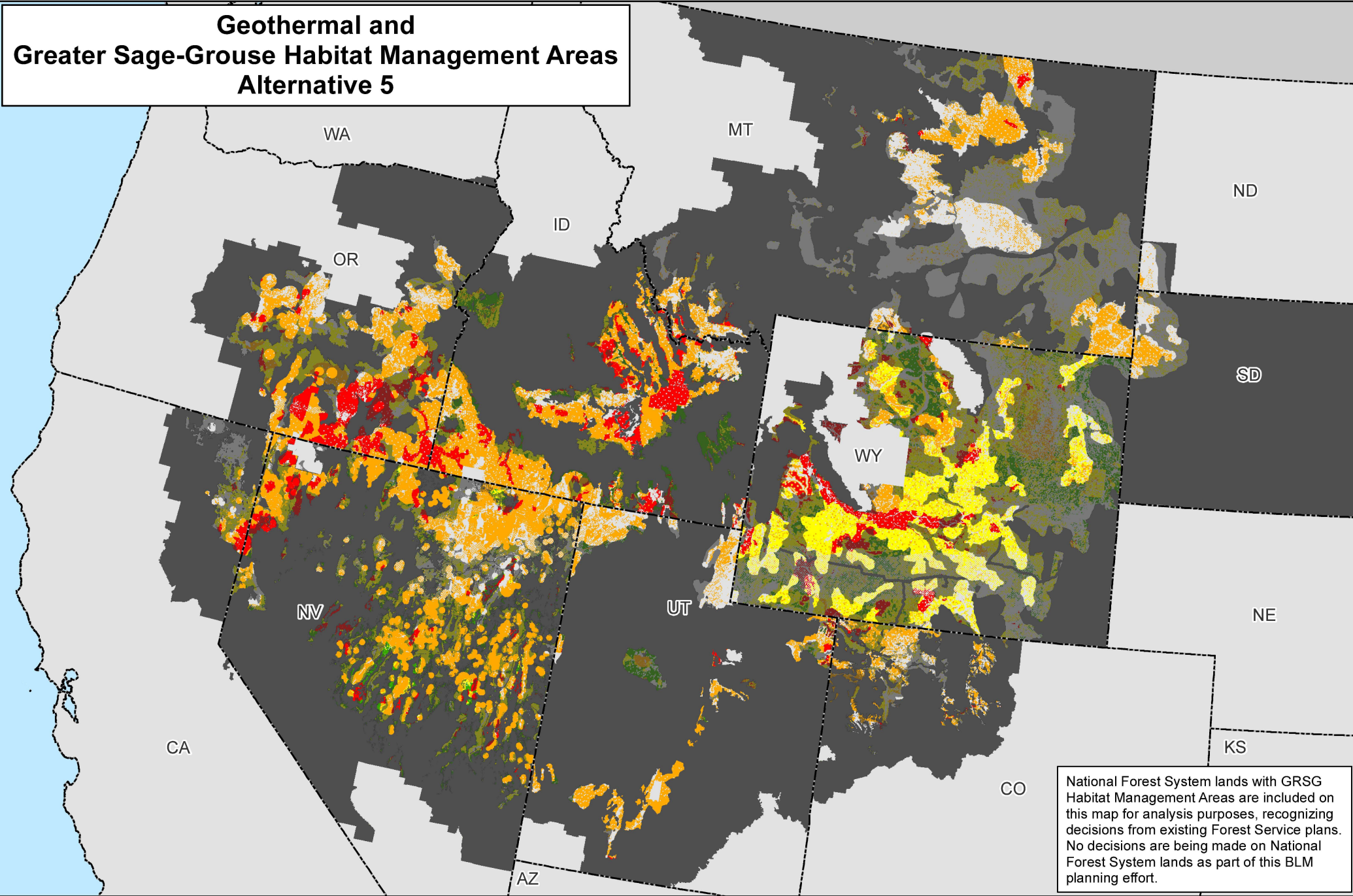


Map 2.17b





# Geothermal and Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.18a

PHMAs / IHMAs

GHMAs / Additional HMAs

Geothermal - Closed

Geothermal - Open Major Stipulations (NSO)

Geothermal - Open Moderate Stipulations (CSU and/or TL)

Geothermal - Open Standard Stipulations

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

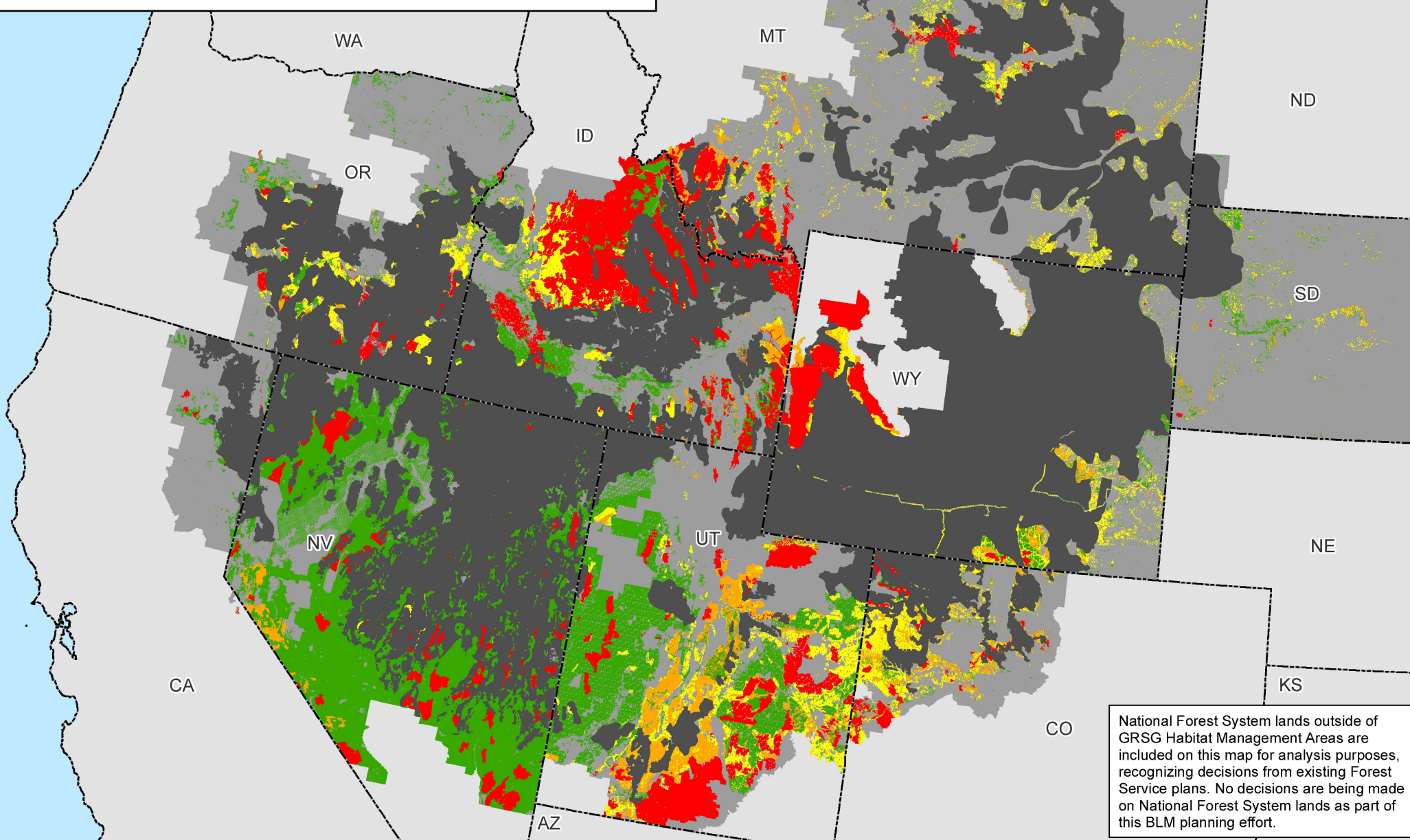
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

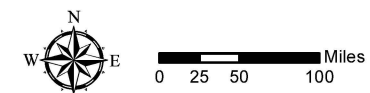
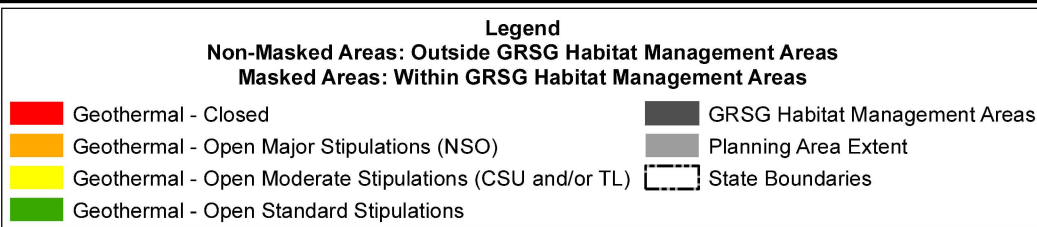
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Geothermal Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.18b

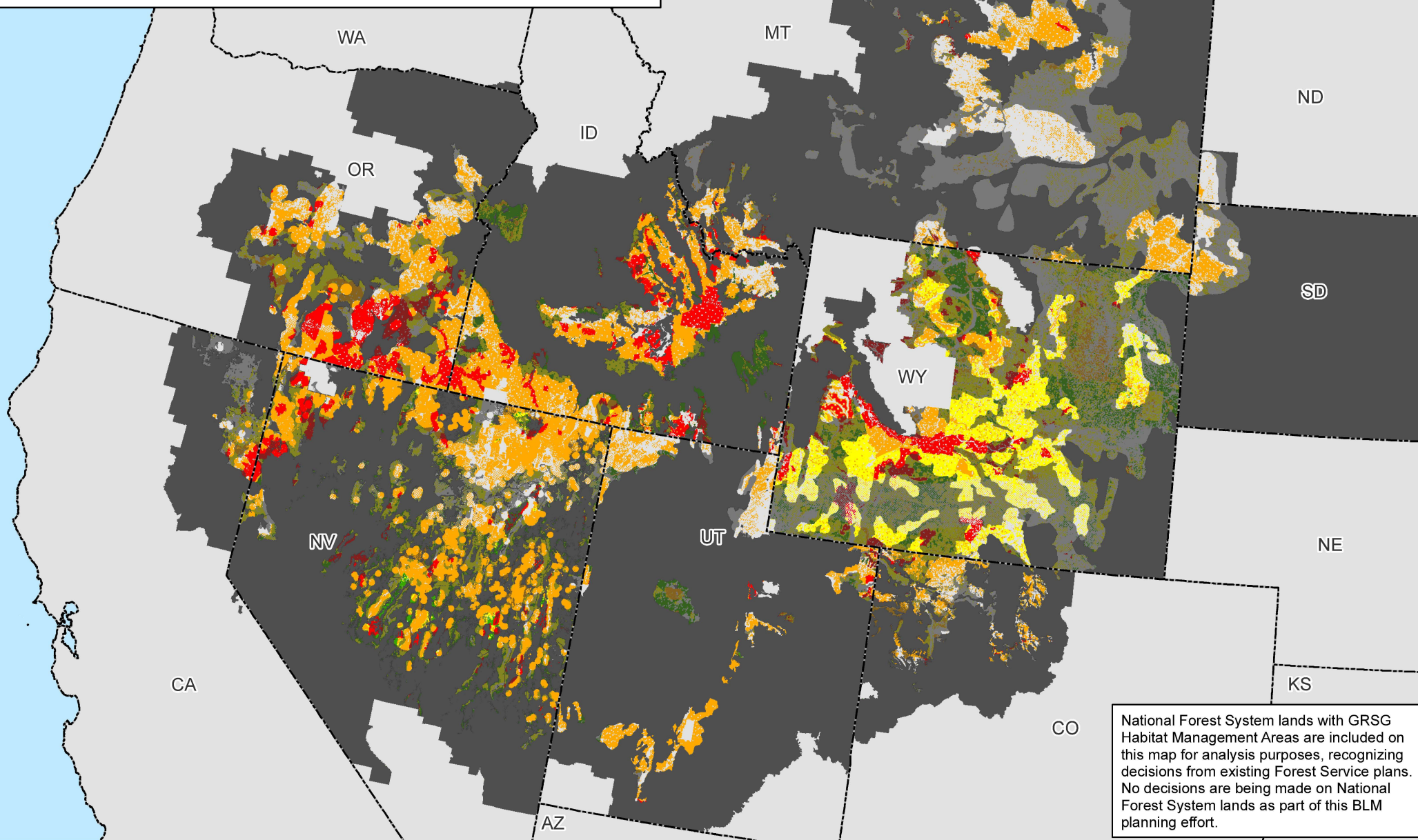


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



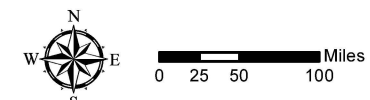
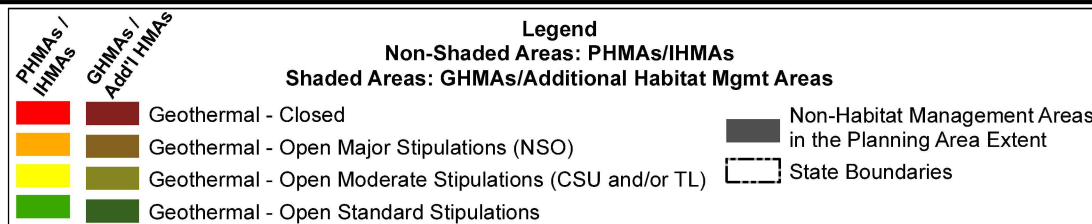


## Geothermal and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

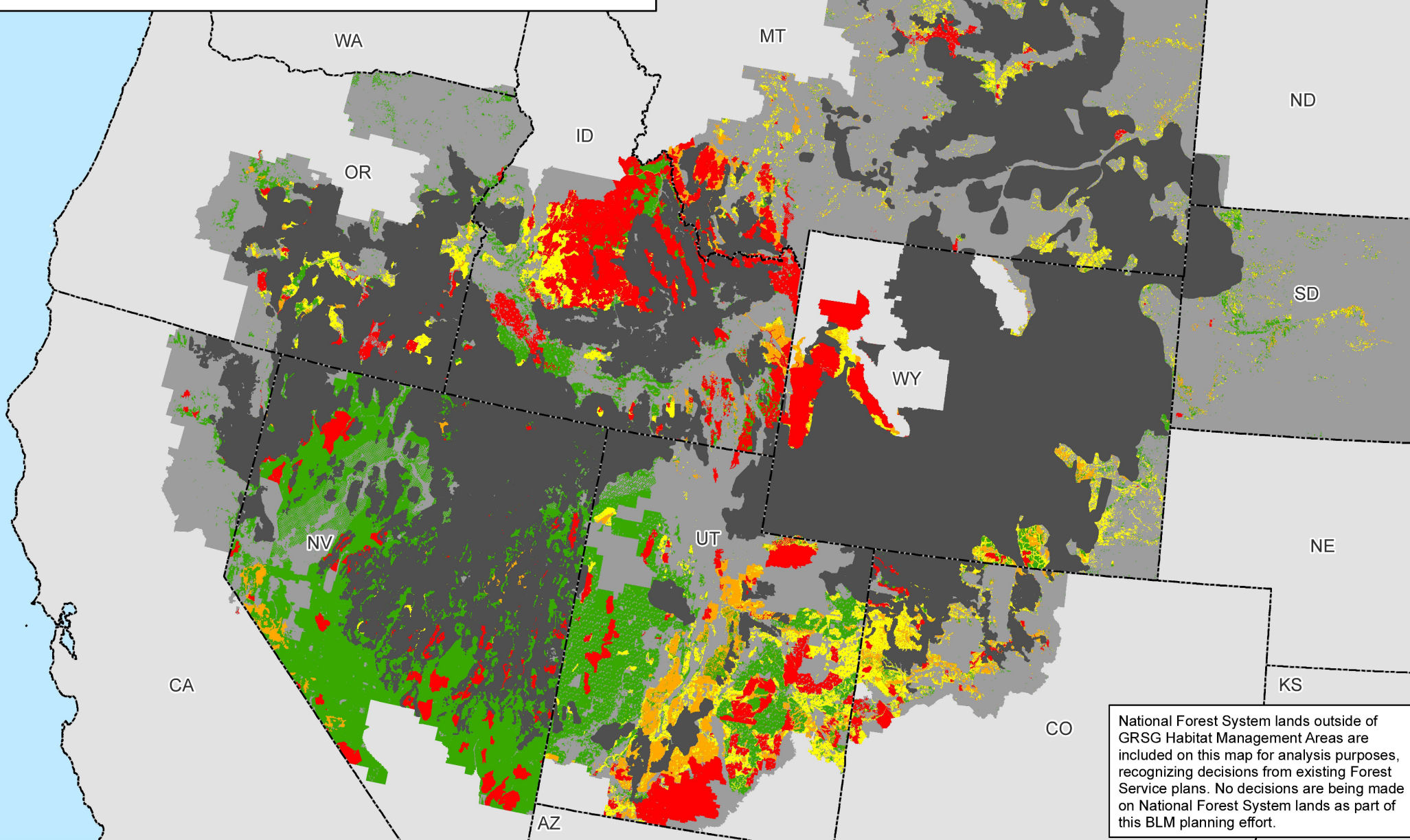
### Map 2.19a



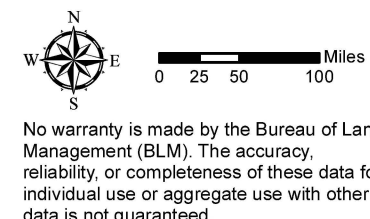
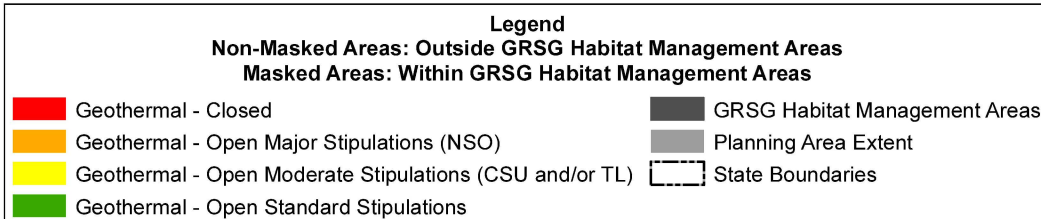
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Geothermal Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6

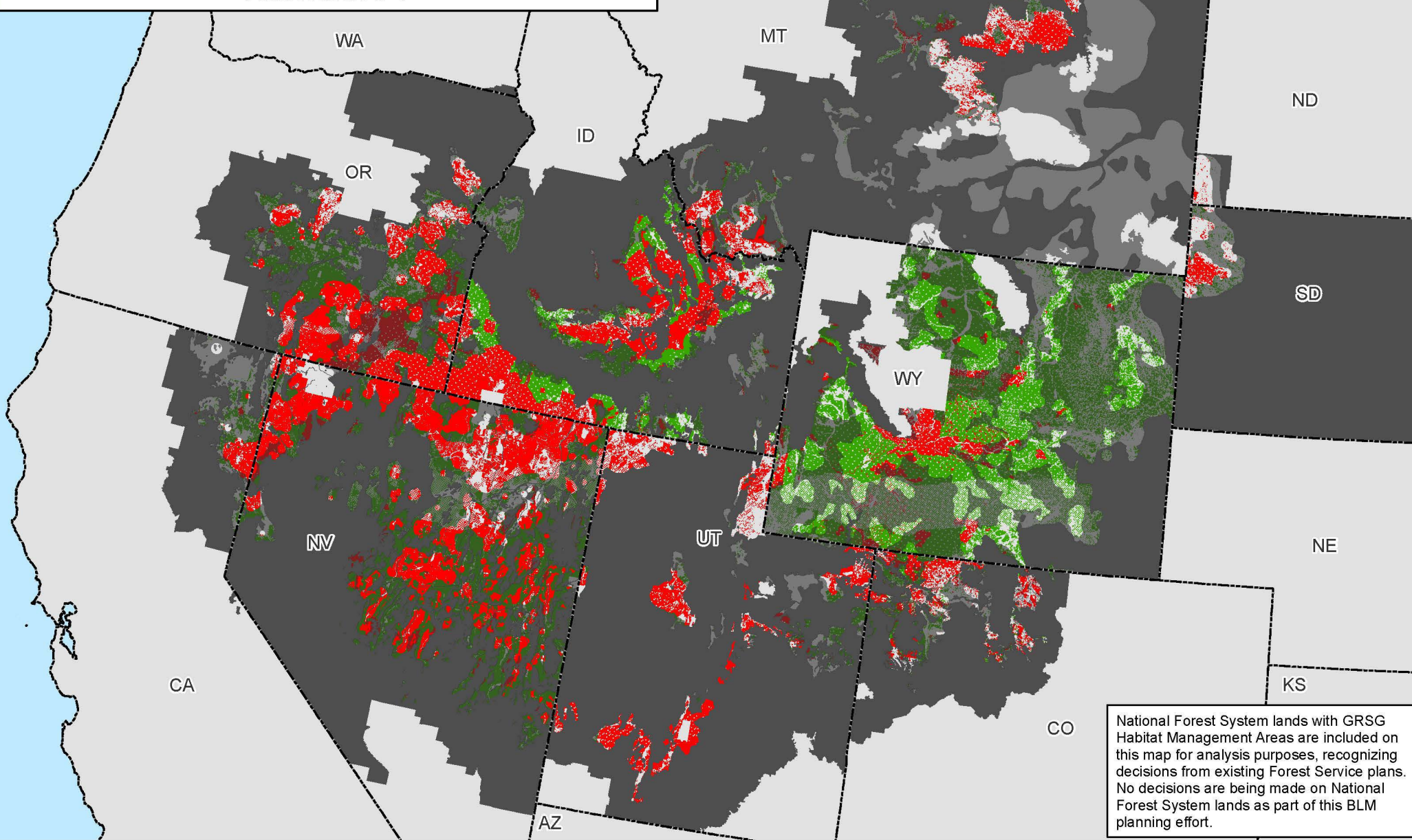


Map 2.19b





# Non-Energy Leasable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.20a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Energy Leasable Minerals - Closed

Non-Energy Leasable Minerals - Open

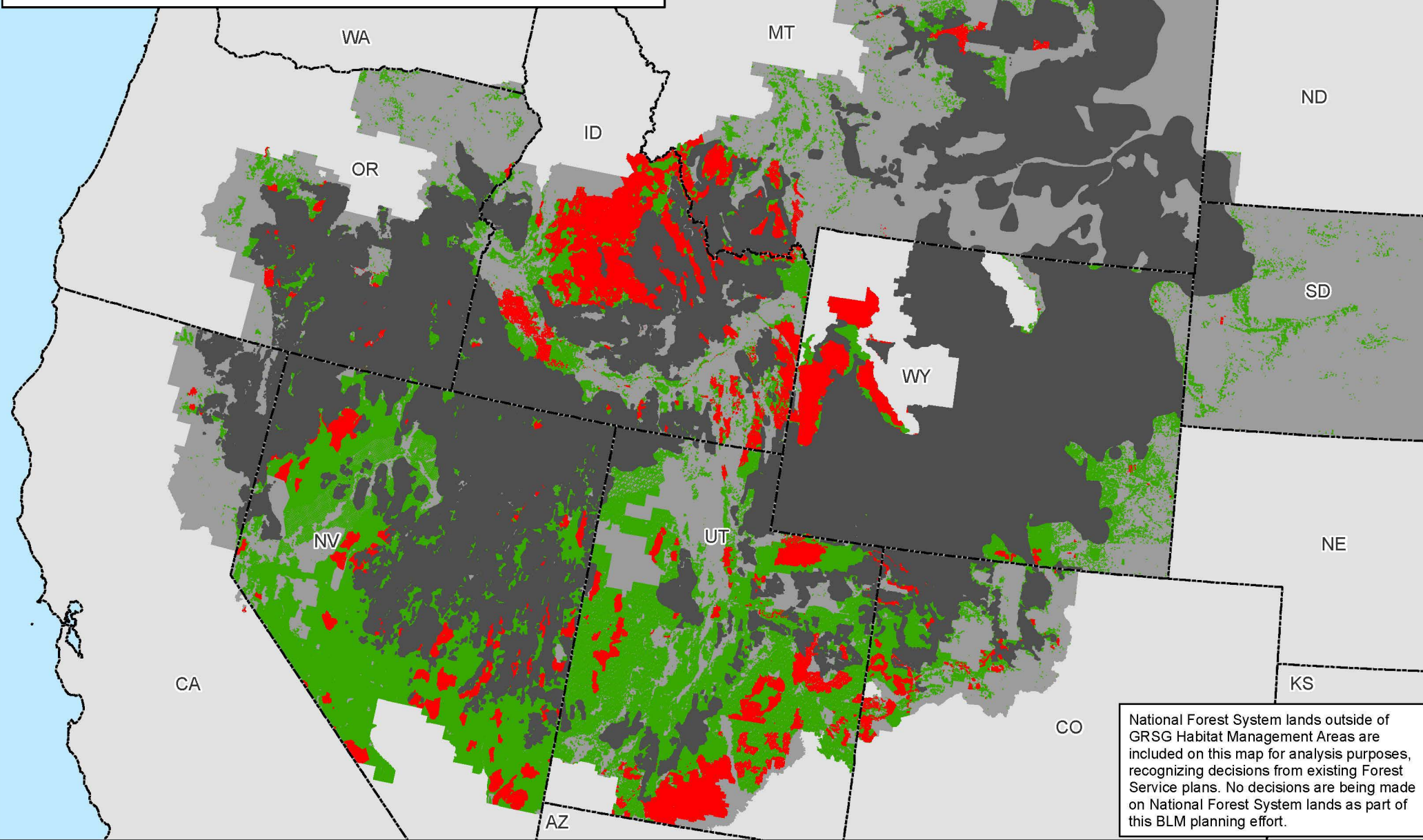
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

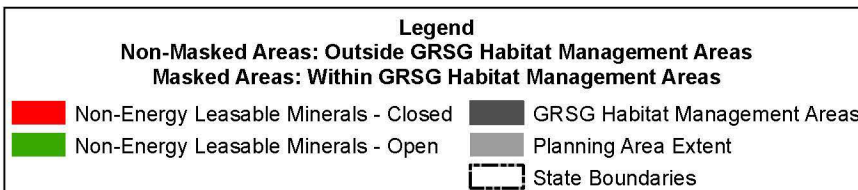
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Non-Energy Leasable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



Map 2.20b



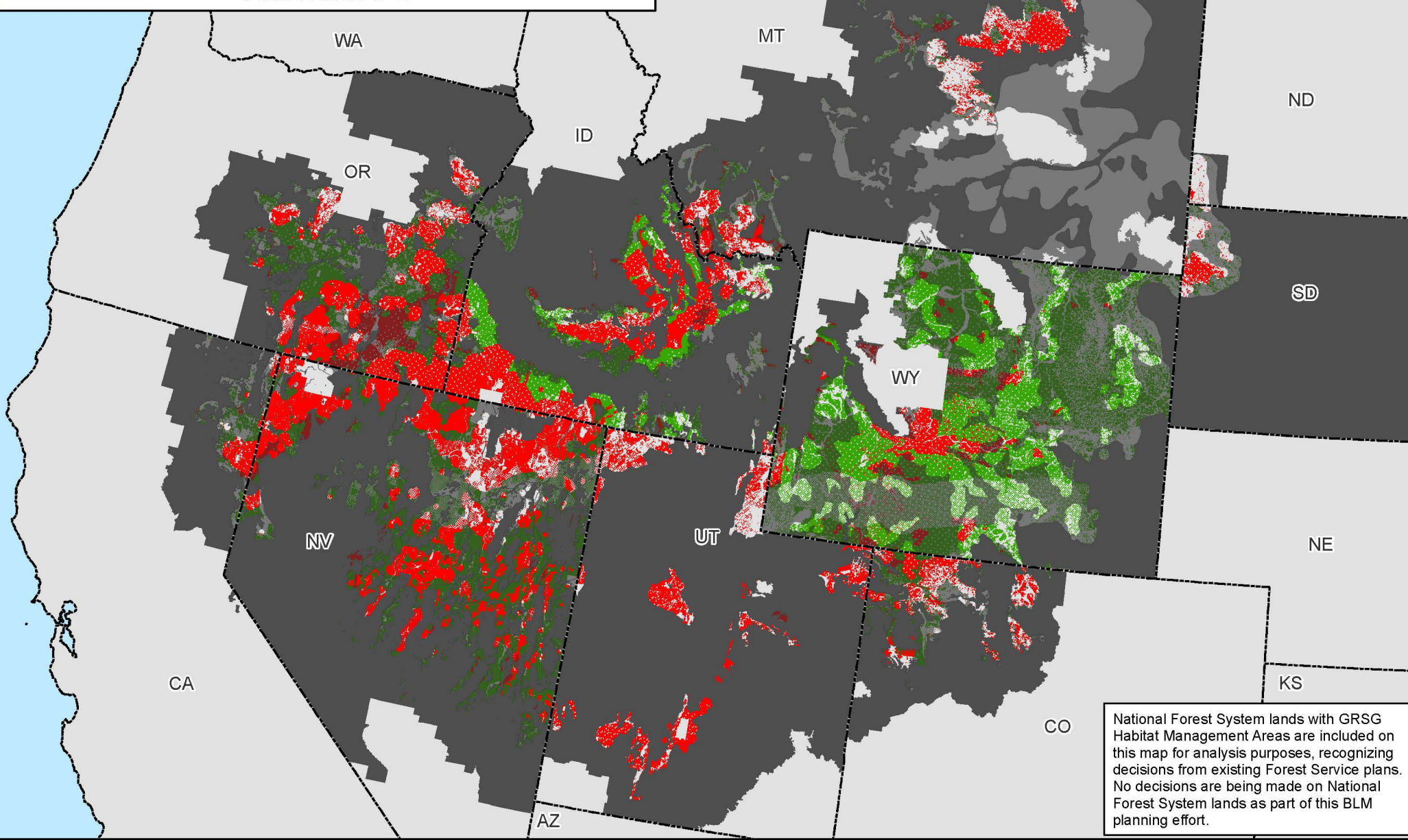
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Non-Energy Leasable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.21a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Non-Energy Leasable Minerals - Closed

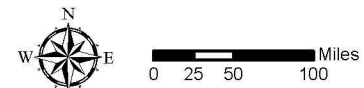
Non-Energy Leasable Minerals - Open

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

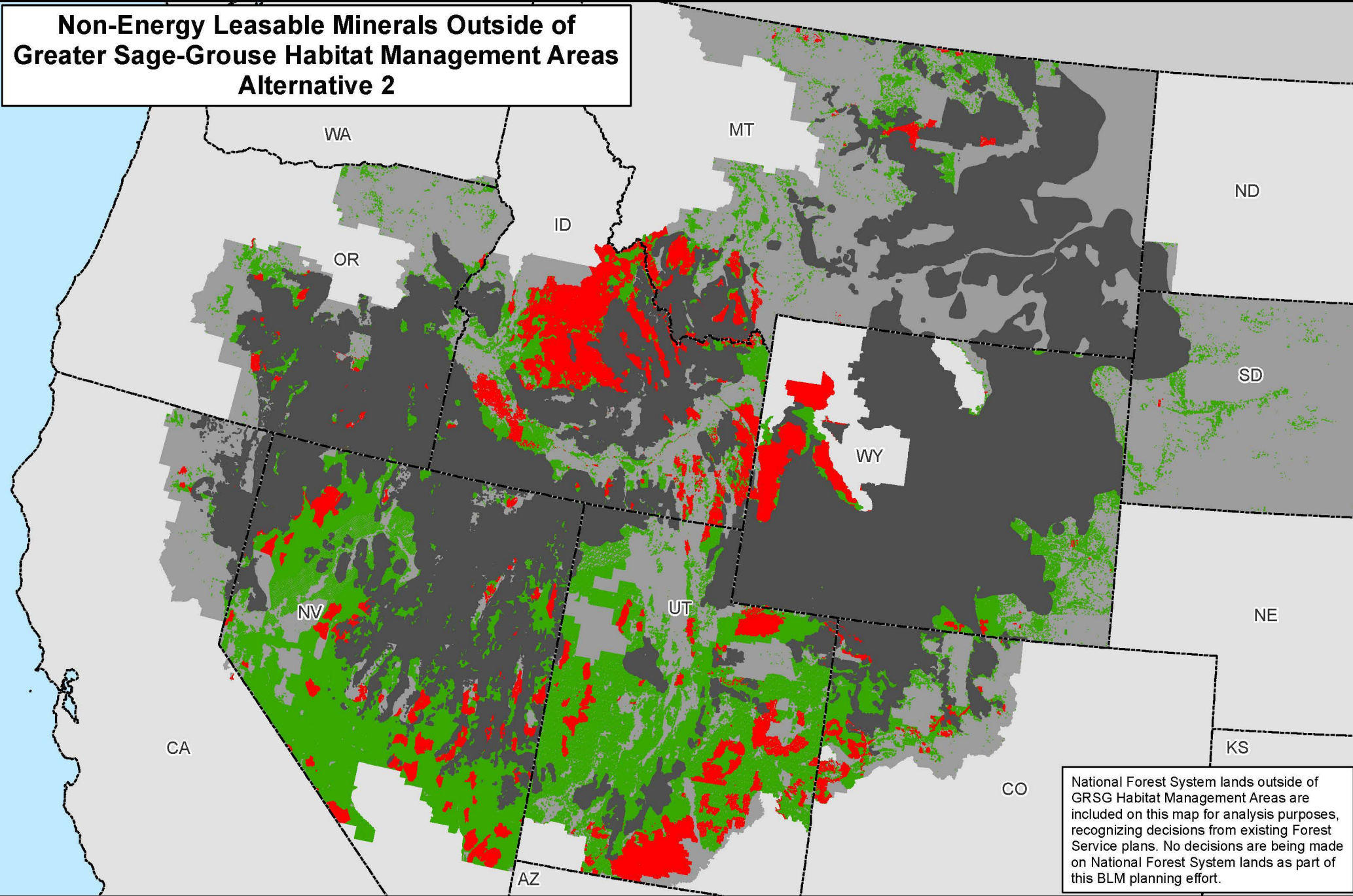


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



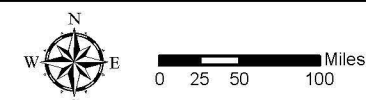
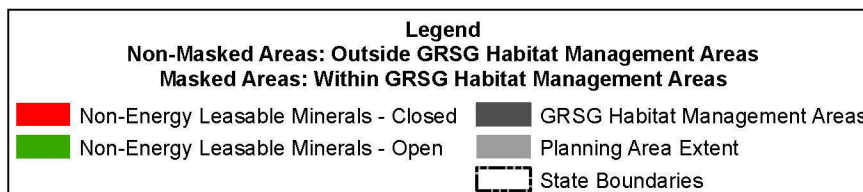


# Non-Energy Leasable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.21b

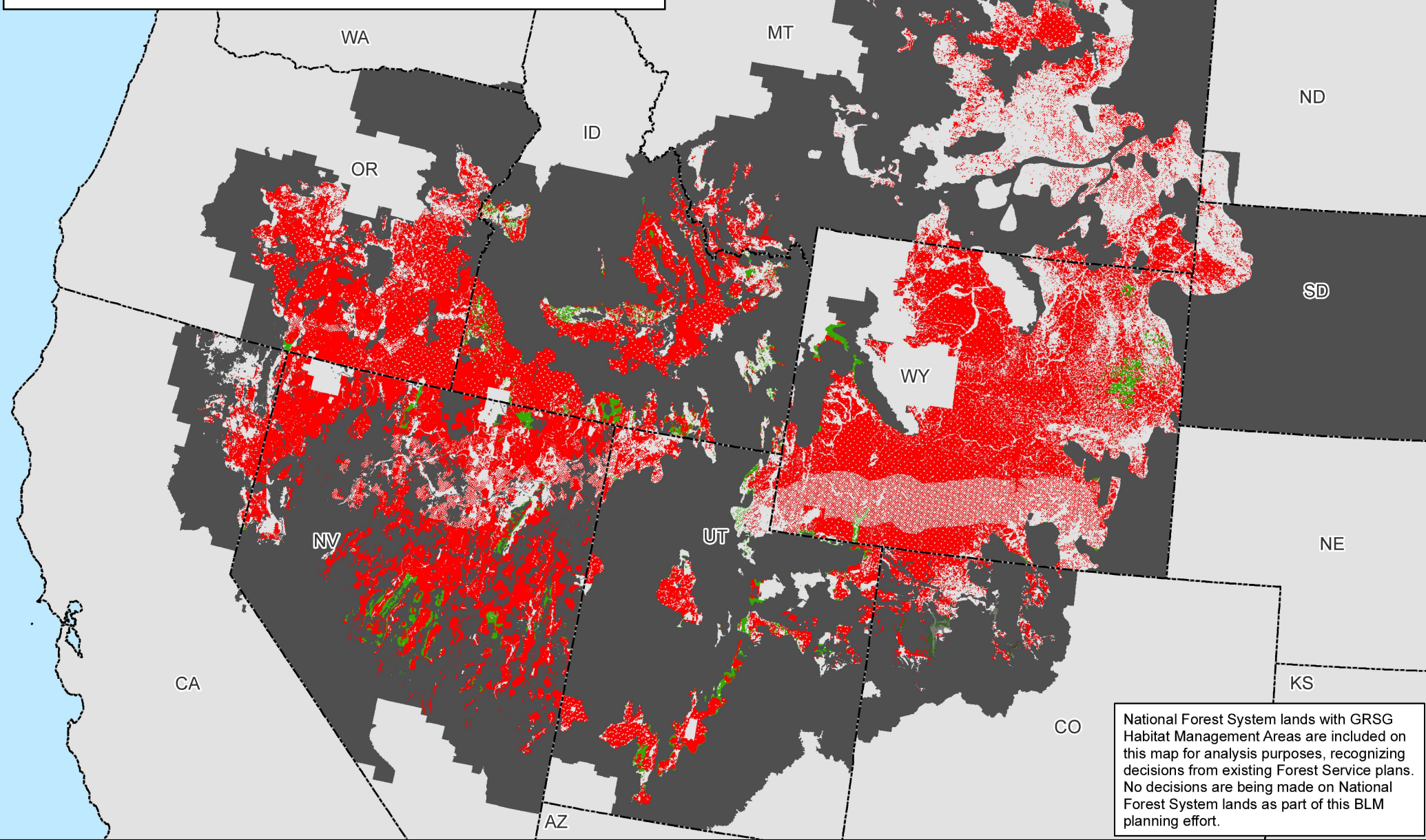


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Non-Energy Leasable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.22a

PHMAs

Adri HMAs

Non-Energy Leasable Minerals - Closed

Non-Energy Leasable Minerals - Open

Non-Shaded Areas: PHMAs

Shaded Areas: Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent

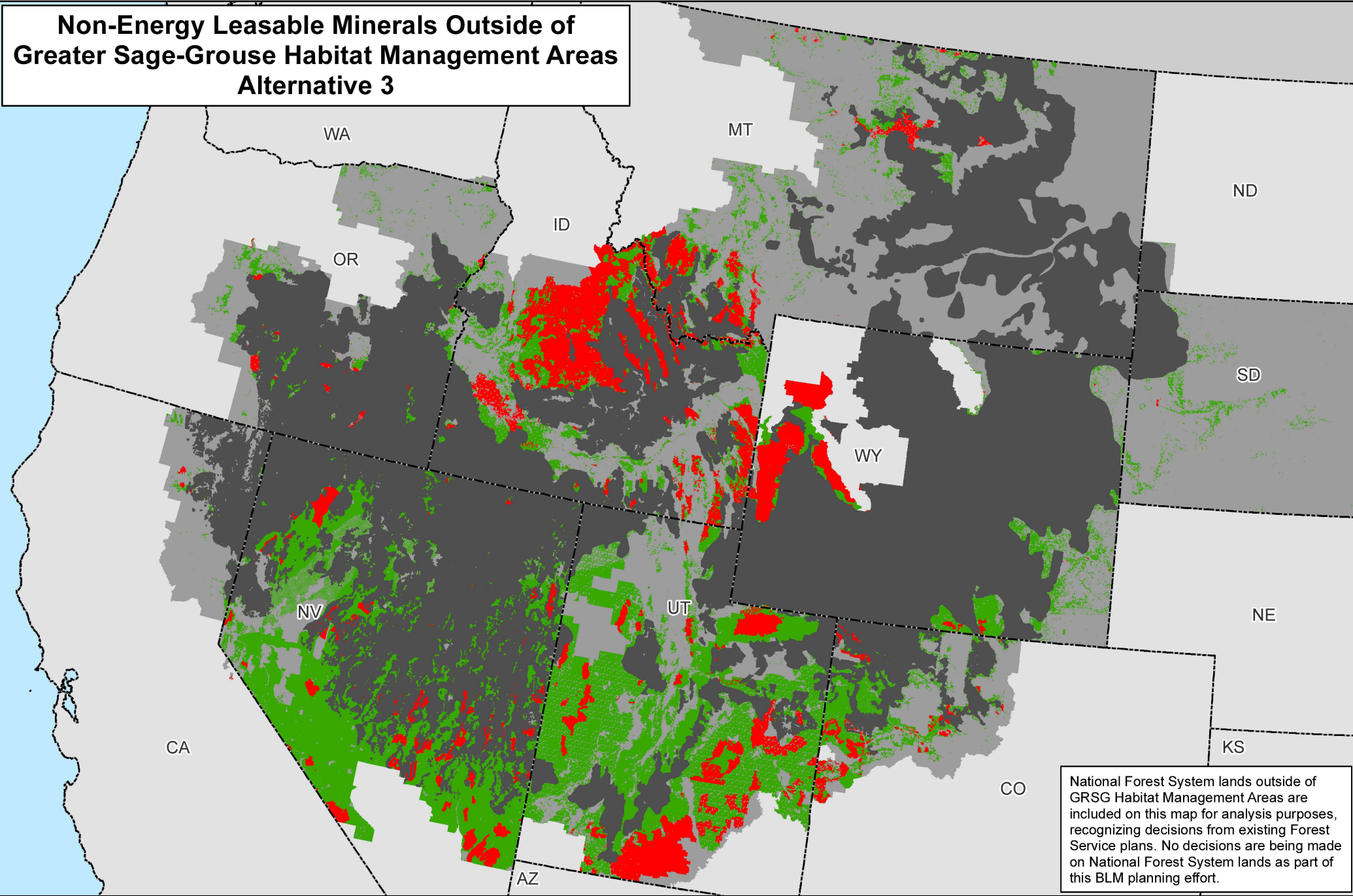
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Non-Energy Leasable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.22b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Non-Energy Leasable Minerals - Closed

Non-Energy Leasable Minerals - Open

GRSG Habitat Management Areas

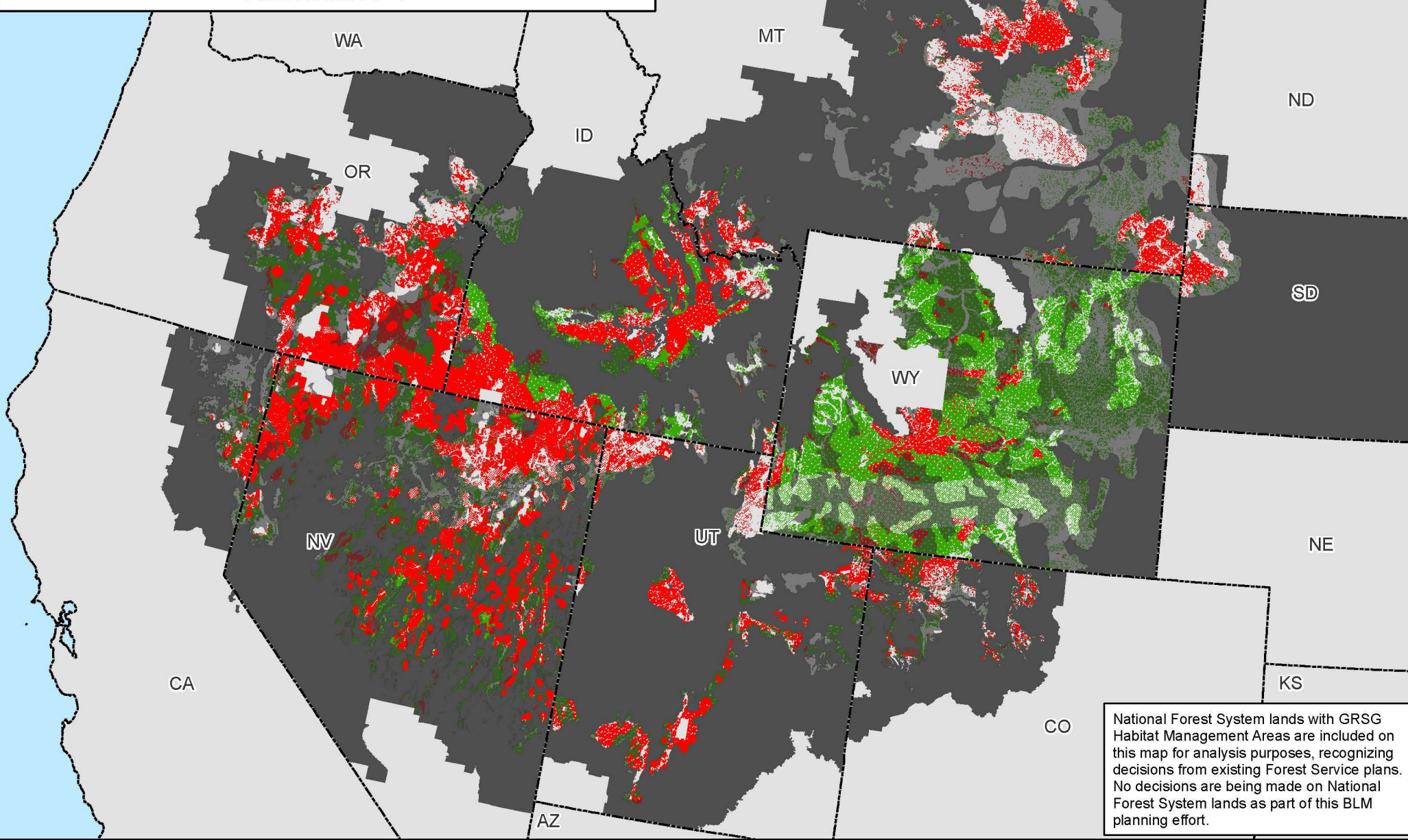
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

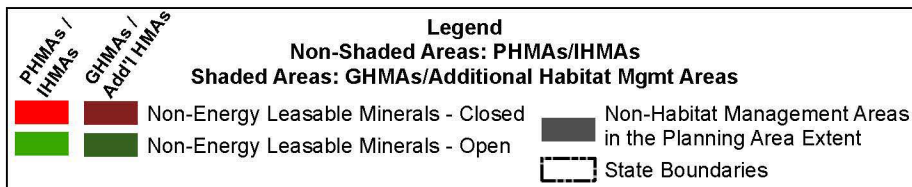


# Non-Energy Leasable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.23a

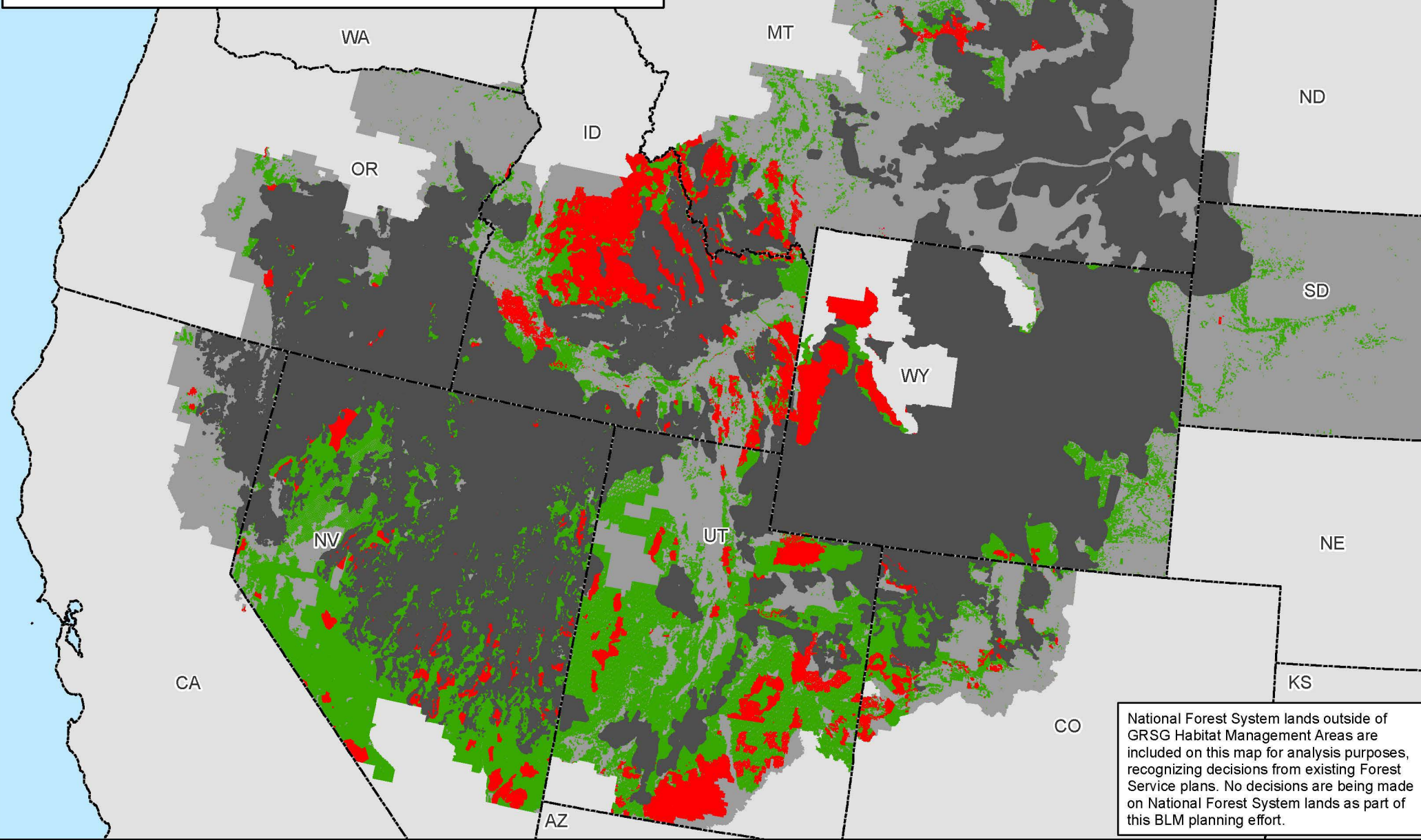


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



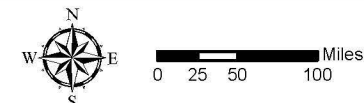
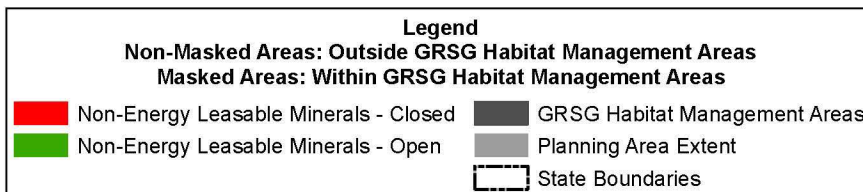


# Non-Energy Leasable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.23b

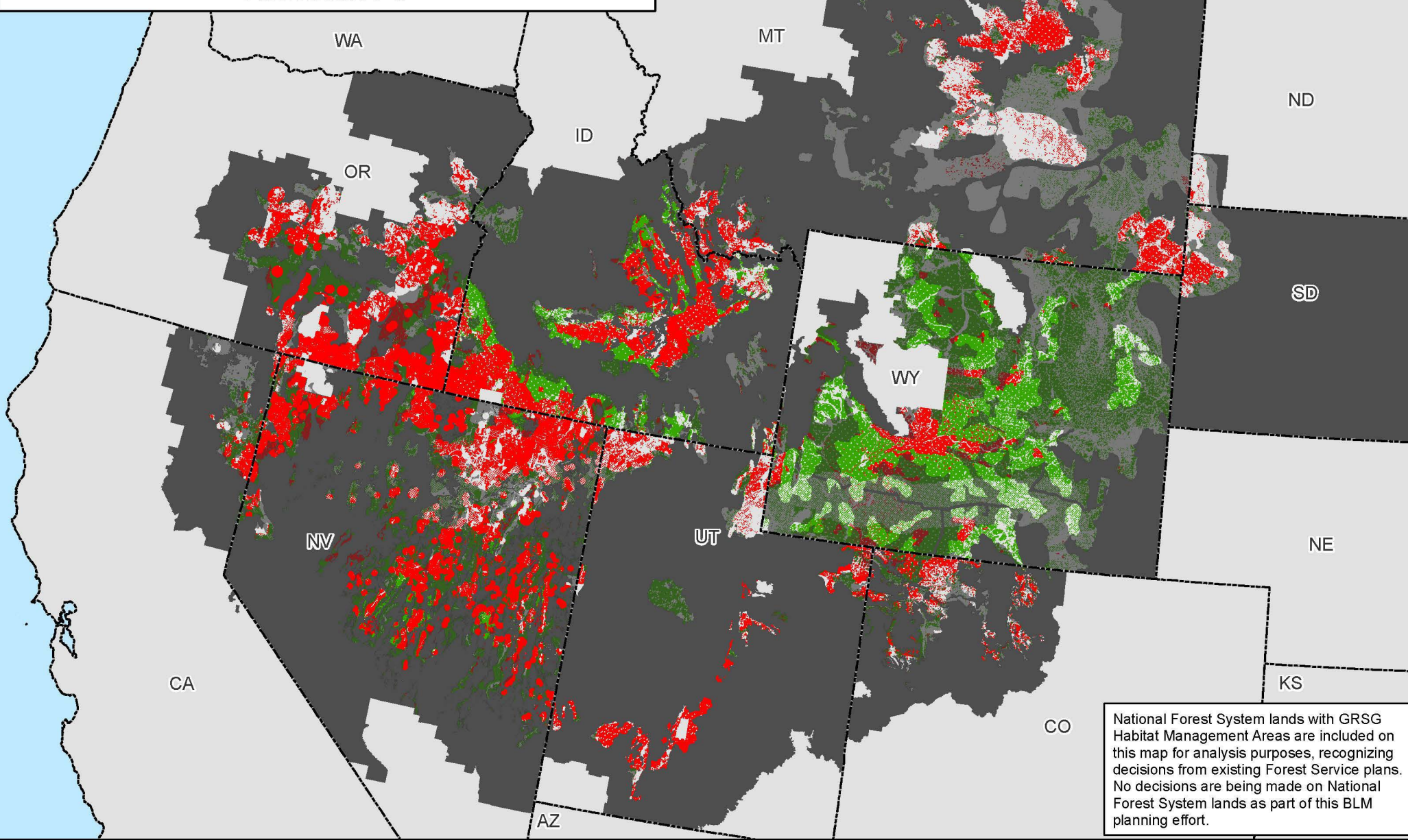


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



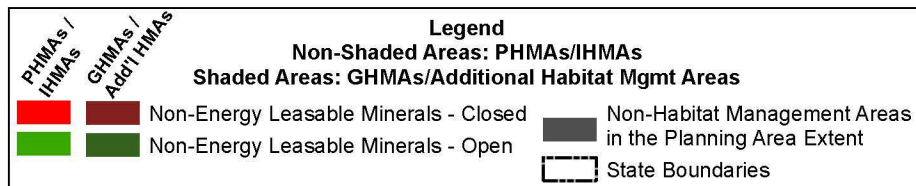


# Non-Energy Leasable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.24a

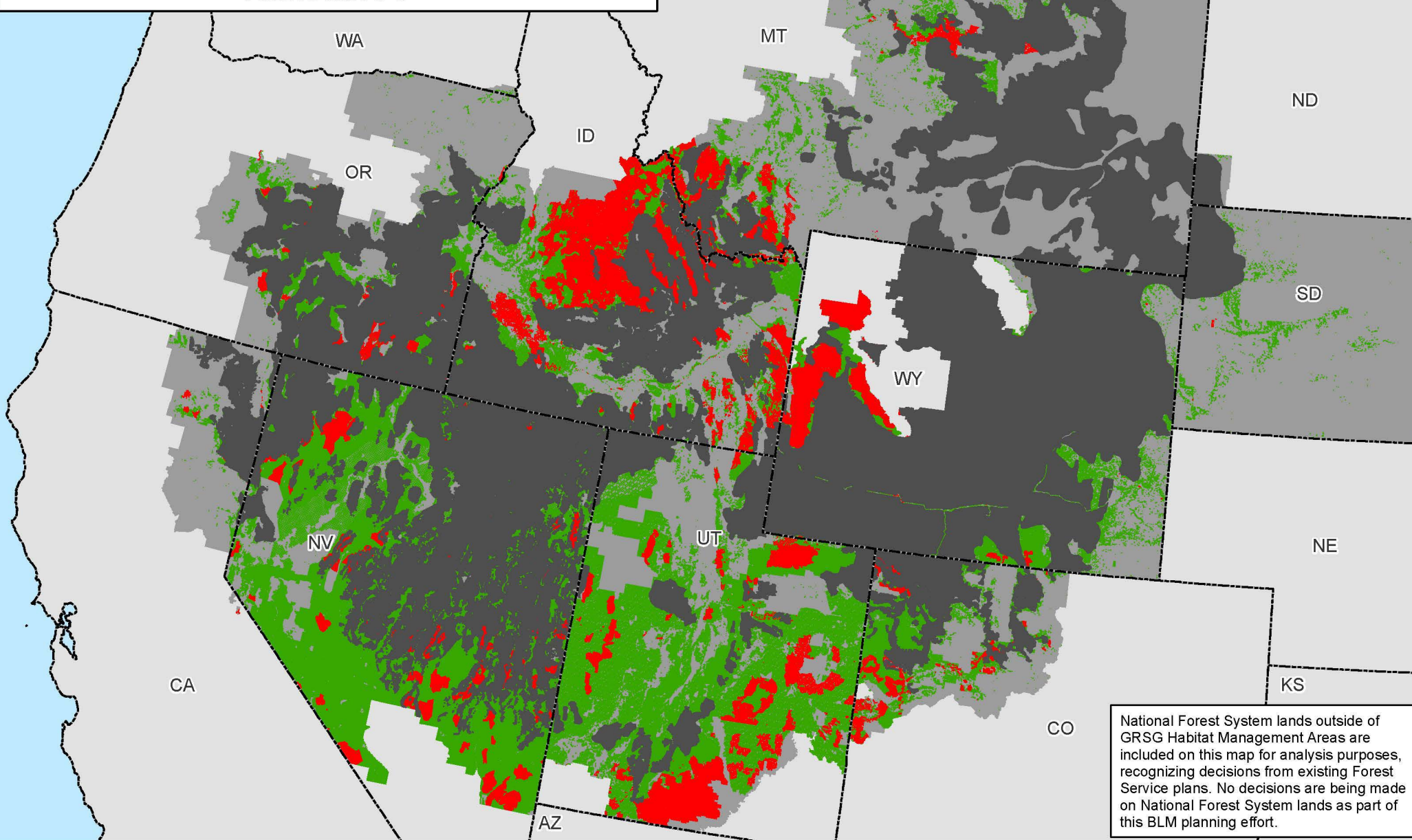


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Non-Energy Leasable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.24b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Non-Energy Leasable Minerals - Closed

Non-Energy Leasable Minerals - Open

GRSG Habitat Management Areas

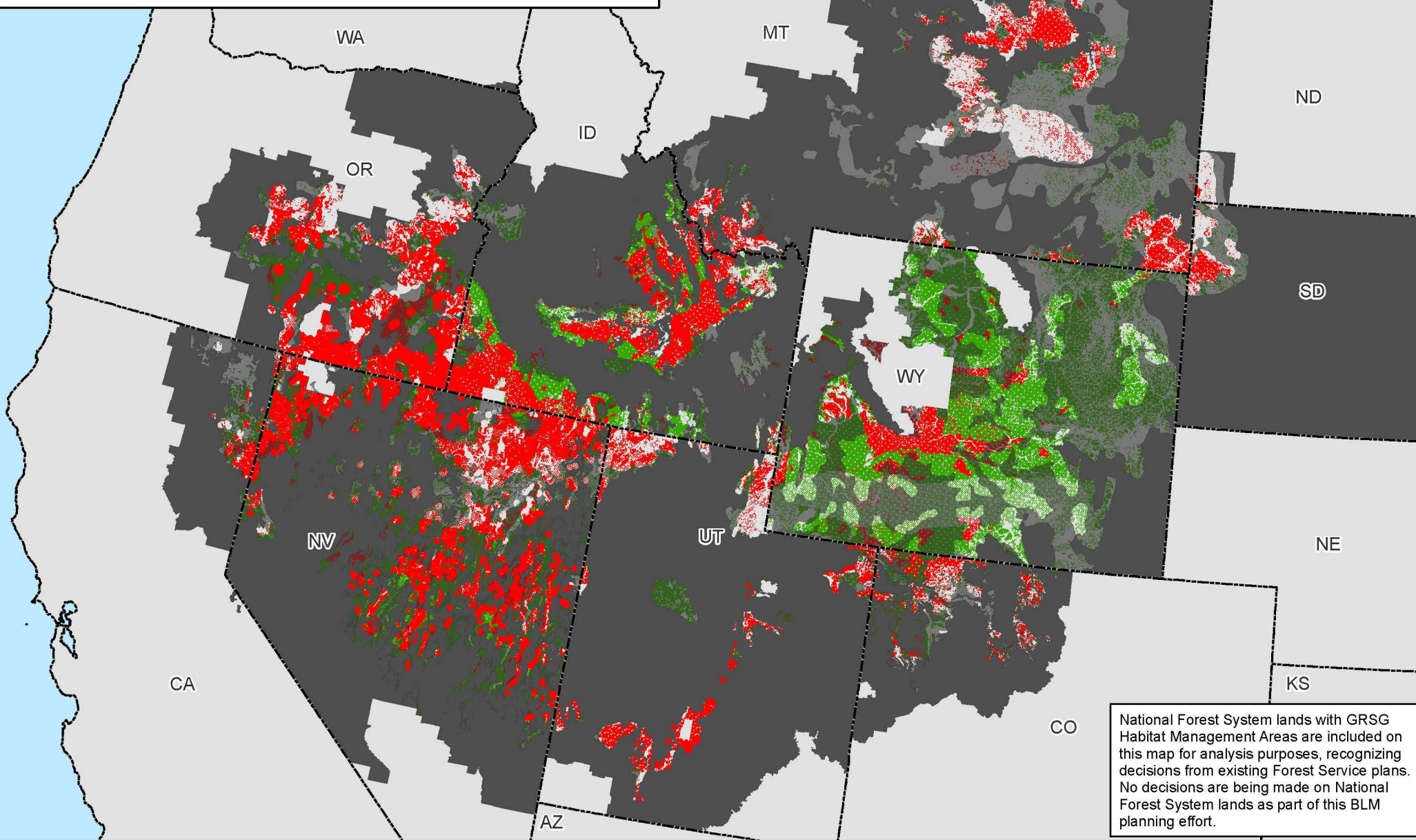
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

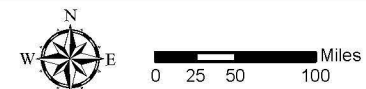
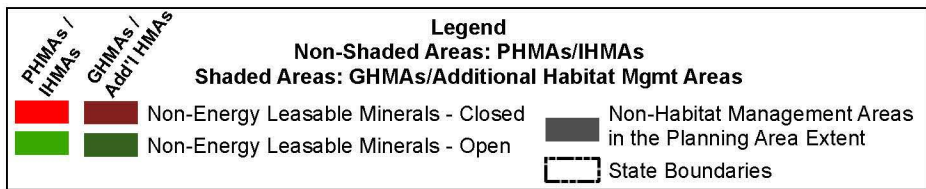


# Non-Energy Leasable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.25a

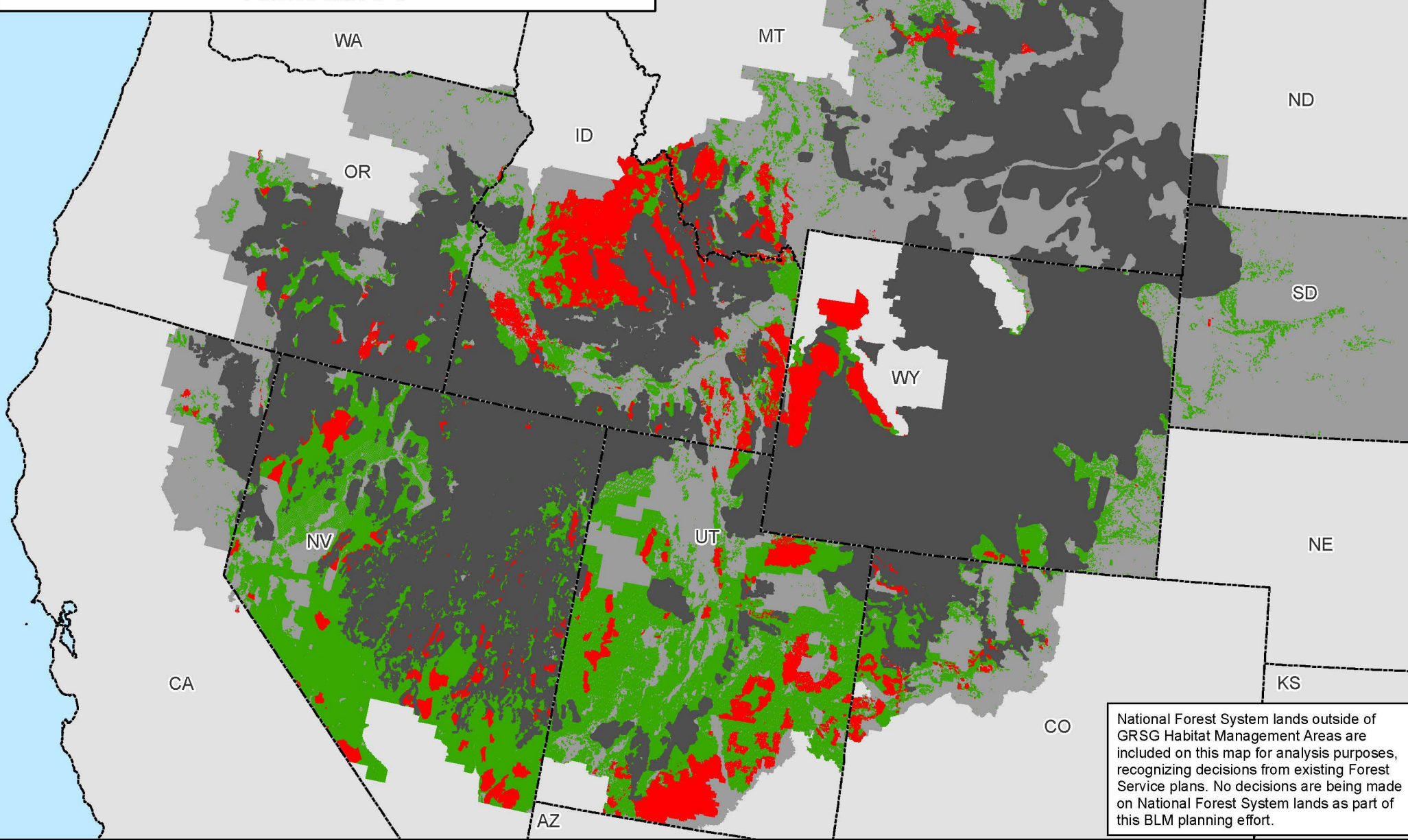


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Non-Energy Leasable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.25b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Non-Energy Leasable Minerals - Closed

Non-Energy Leasable Minerals - Open

GRSG Habitat Management Areas

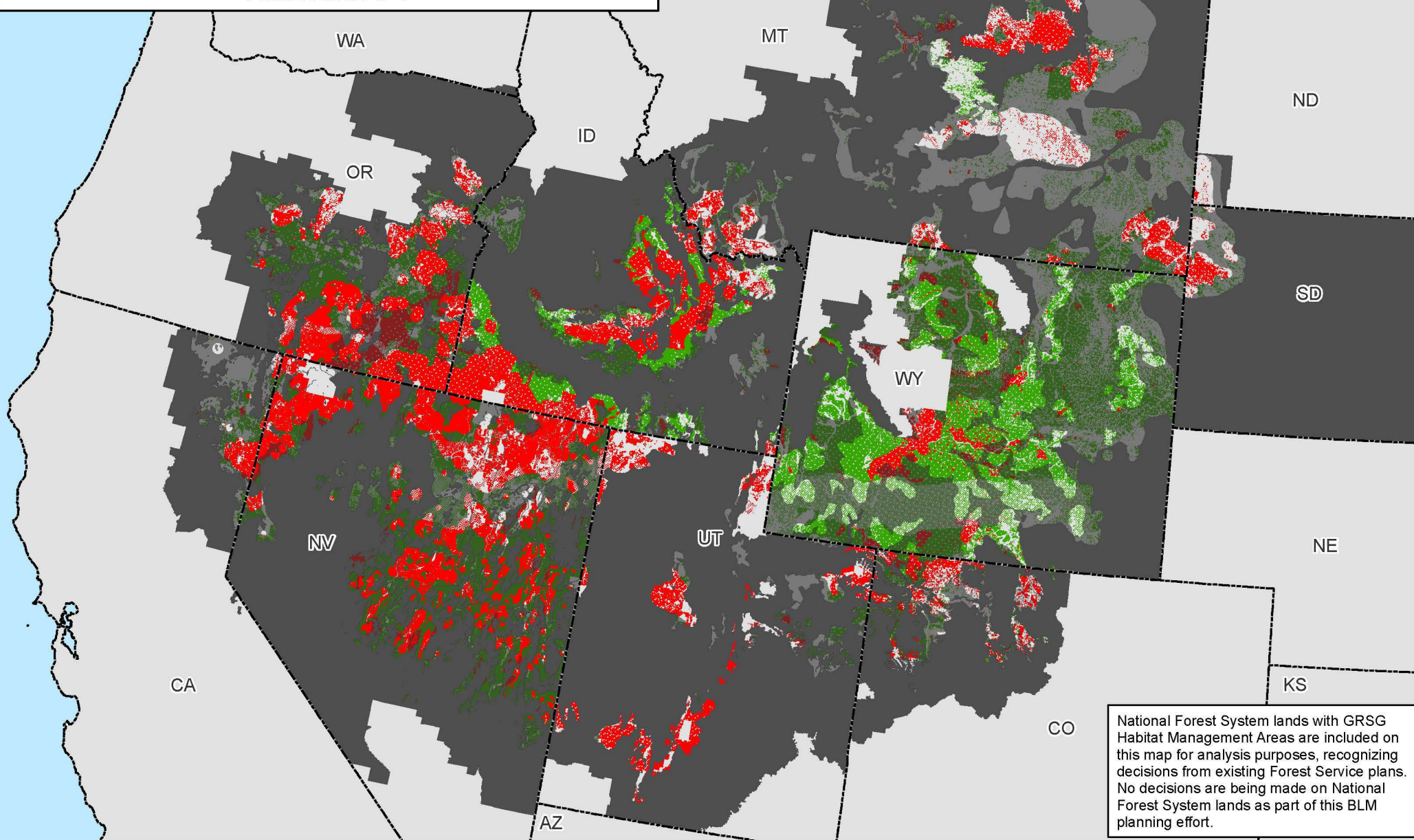
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Salable (Mineral Materials) and Greater Sage-Grouse Habitat Management Areas Alternative 1



Map 2.26a

PHMAs / IHMAs

GHMAs / Add'l HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Salable (Mineral Materials) - Closed

Salable (Mineral Materials) - Open

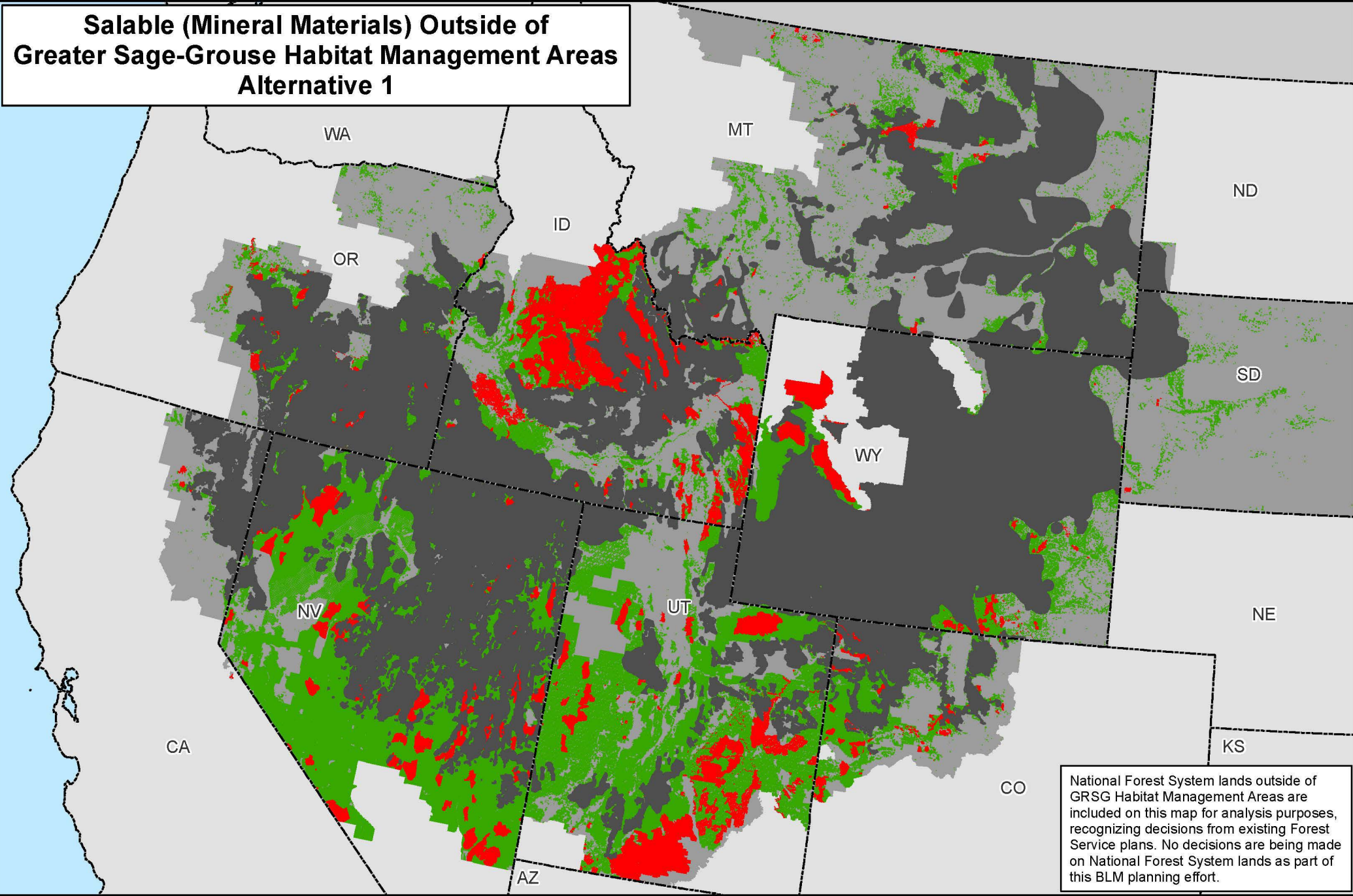
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Salable (Mineral Materials) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



Map 2.26b

**Legend**  
**Non-Masked Areas: Outside GRSG Habitat Management Areas**  
**Masked Areas: Within GRSG Habitat Management Areas**

- |   |   |
|---|---|
| <span style="color: red;">■</span> Salable (Mineral Materials) - Closed | <span style="background-color: darkgrey;">■</span> GRSG Habitat Management Areas                            |
| <span style="color: green;">■</span> Salable (Mineral Materials) - Open | <span style="background-color: lightgrey;">■</span> Planning Area Extent                                    |
|   | <span style="border-bottom: 1px dashed black; display: inline-block; width: 20px;"></span> State Boundaries |



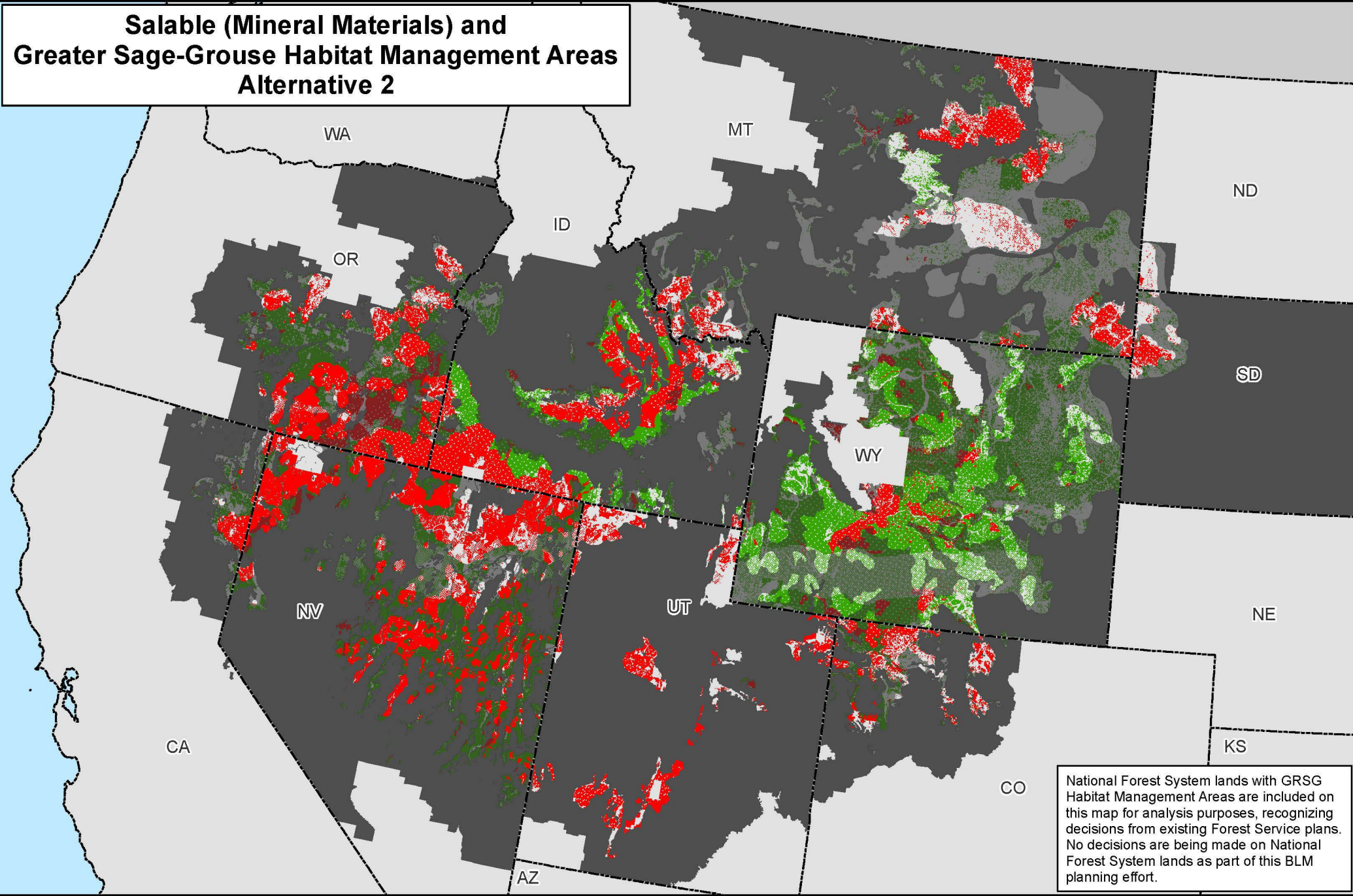
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.27a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Salable (Mineral Materials) - Closed

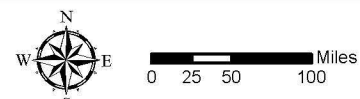
Salable (Mineral Materials) - Open

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

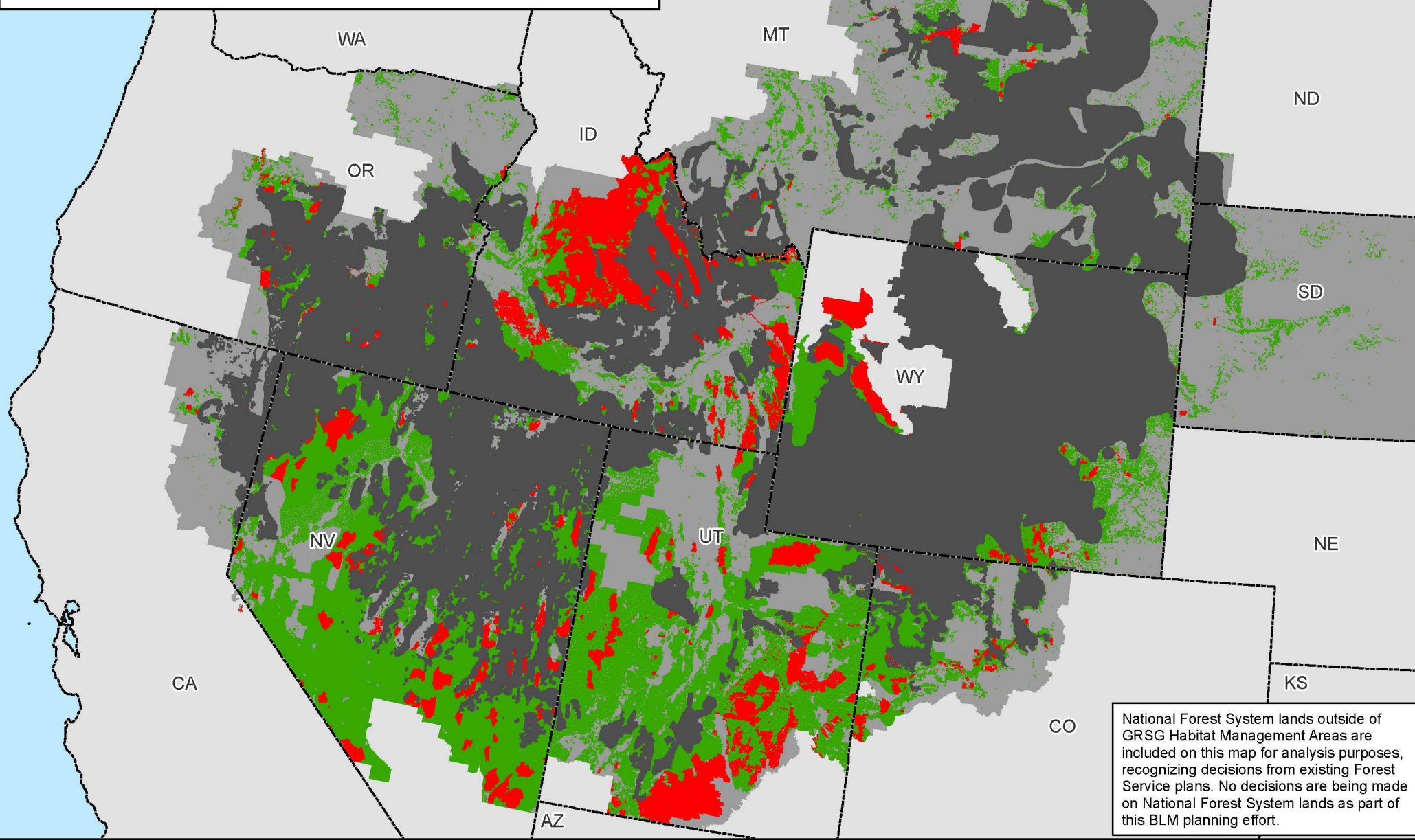


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



Map 2.27b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Salable (Mineral Materials) - Closed

Salable (Mineral Materials) - Open

GRSG Habitat Management Areas

Planning Area Extent

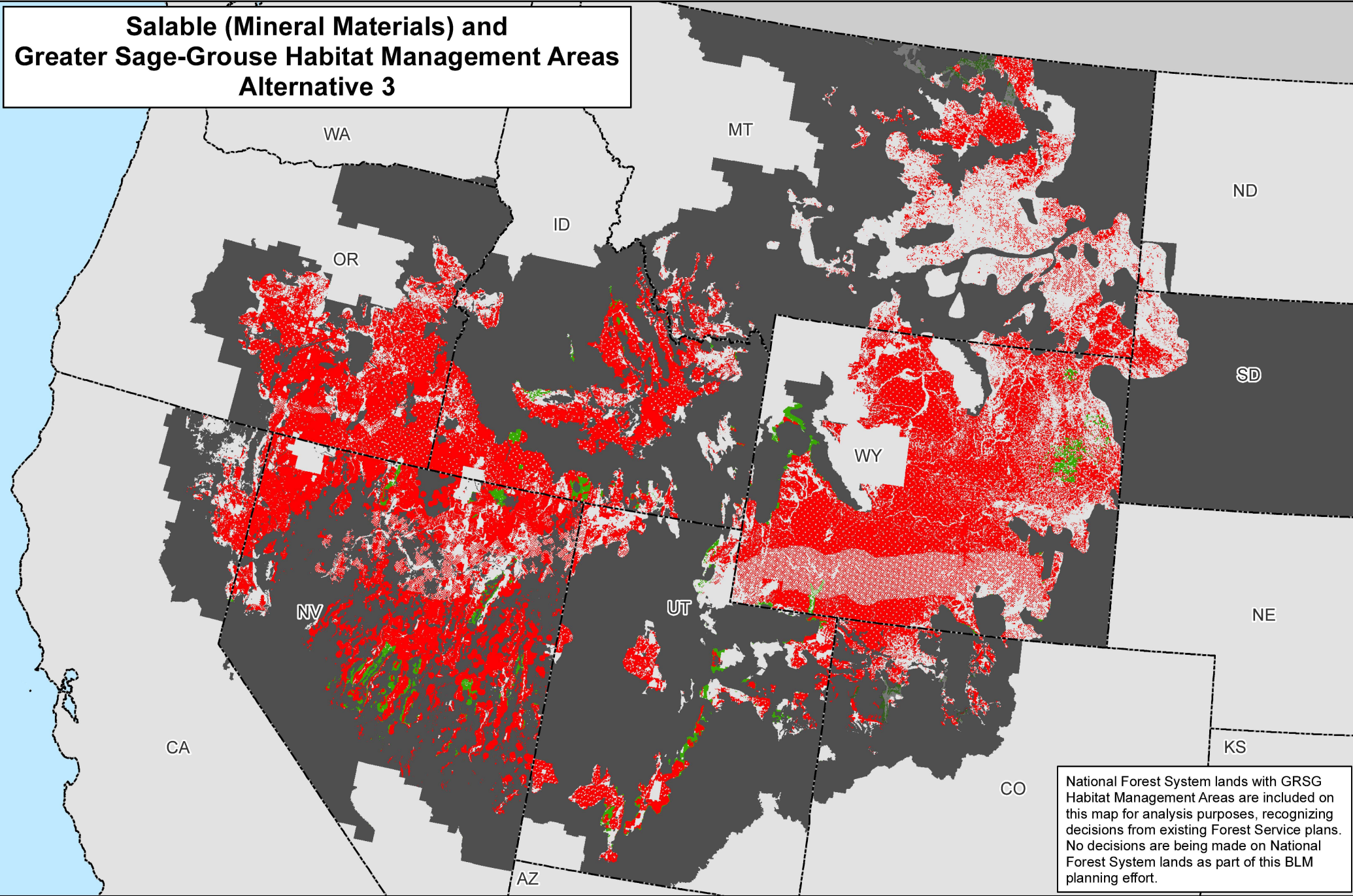
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.28a

PHMAs

Adtri HMAs

Salable (Mineral Materials) - Closed

Salable (Mineral Materials) - Open

**Legend**

**Non-Shaded Areas: PHMAs**

**Shaded Areas: Additional Habitat Mgmt Areas**

Non-Habitat Management Areas in the Planning Area Extent

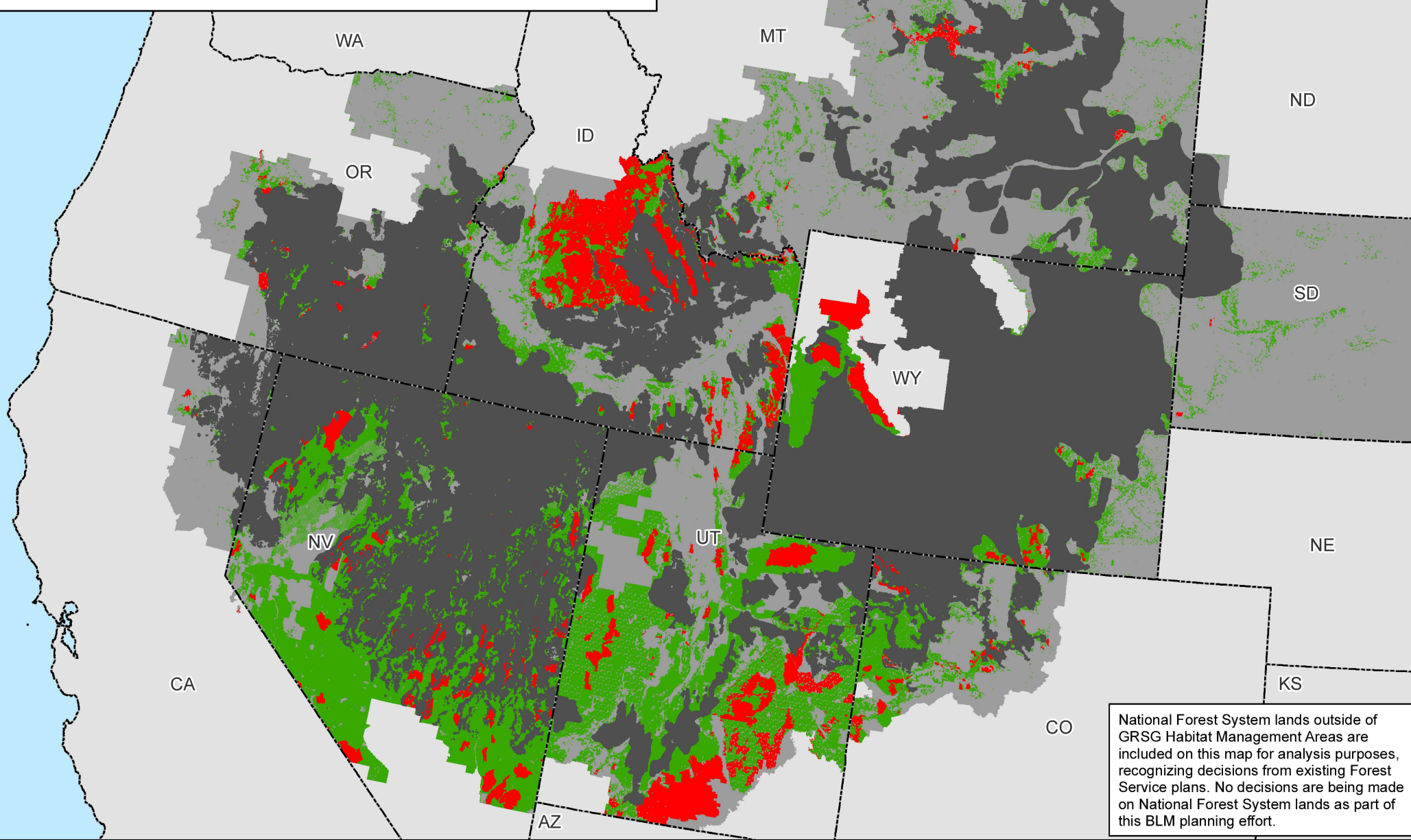
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.28b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Salable (Mineral Materials) - Closed

Salable (Mineral Materials) - Open

GRSG Habitat Management Areas

Planning Area Extent

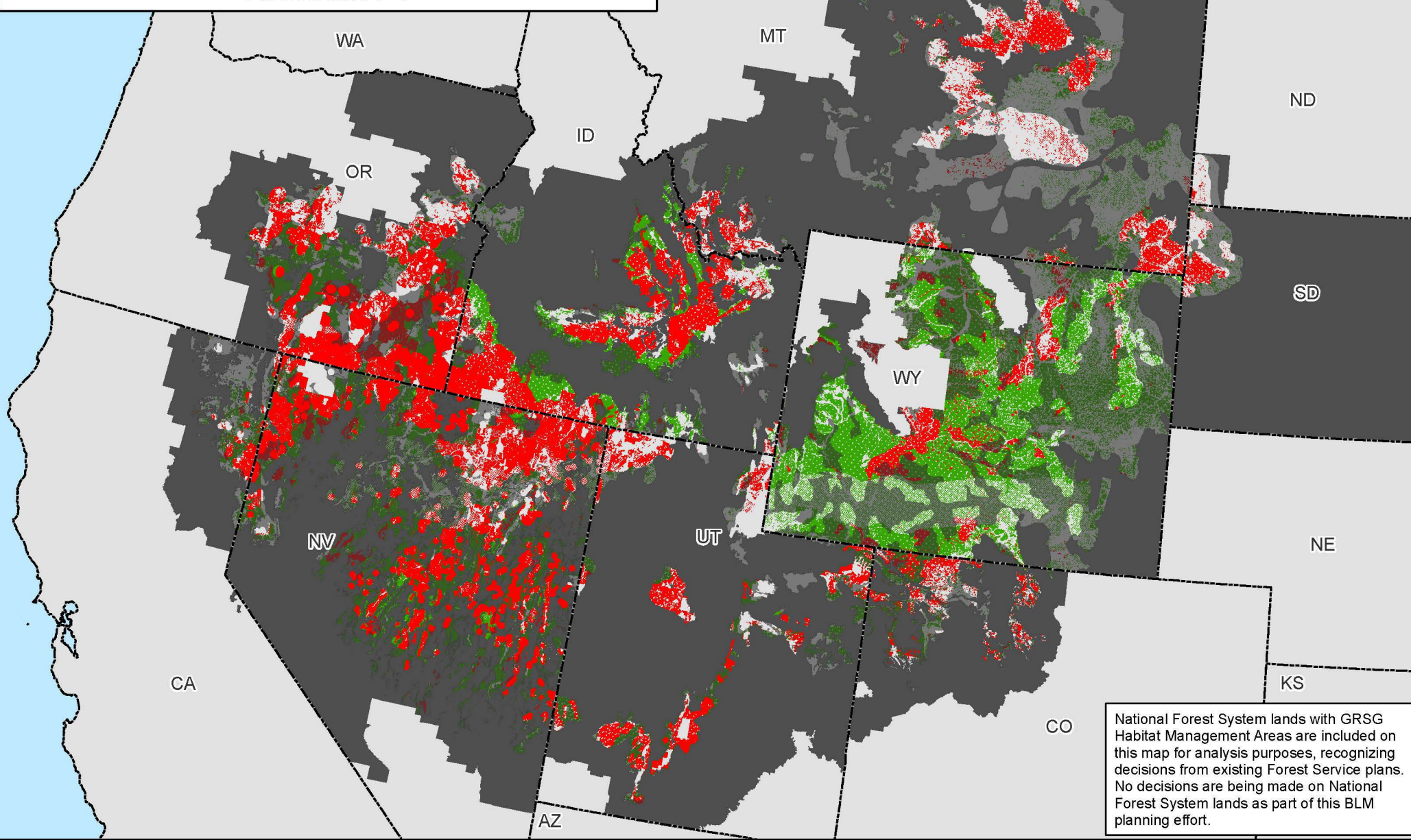
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) and Greater Sage-Grouse Habitat Management Areas Alternative 4



Map 2.29a

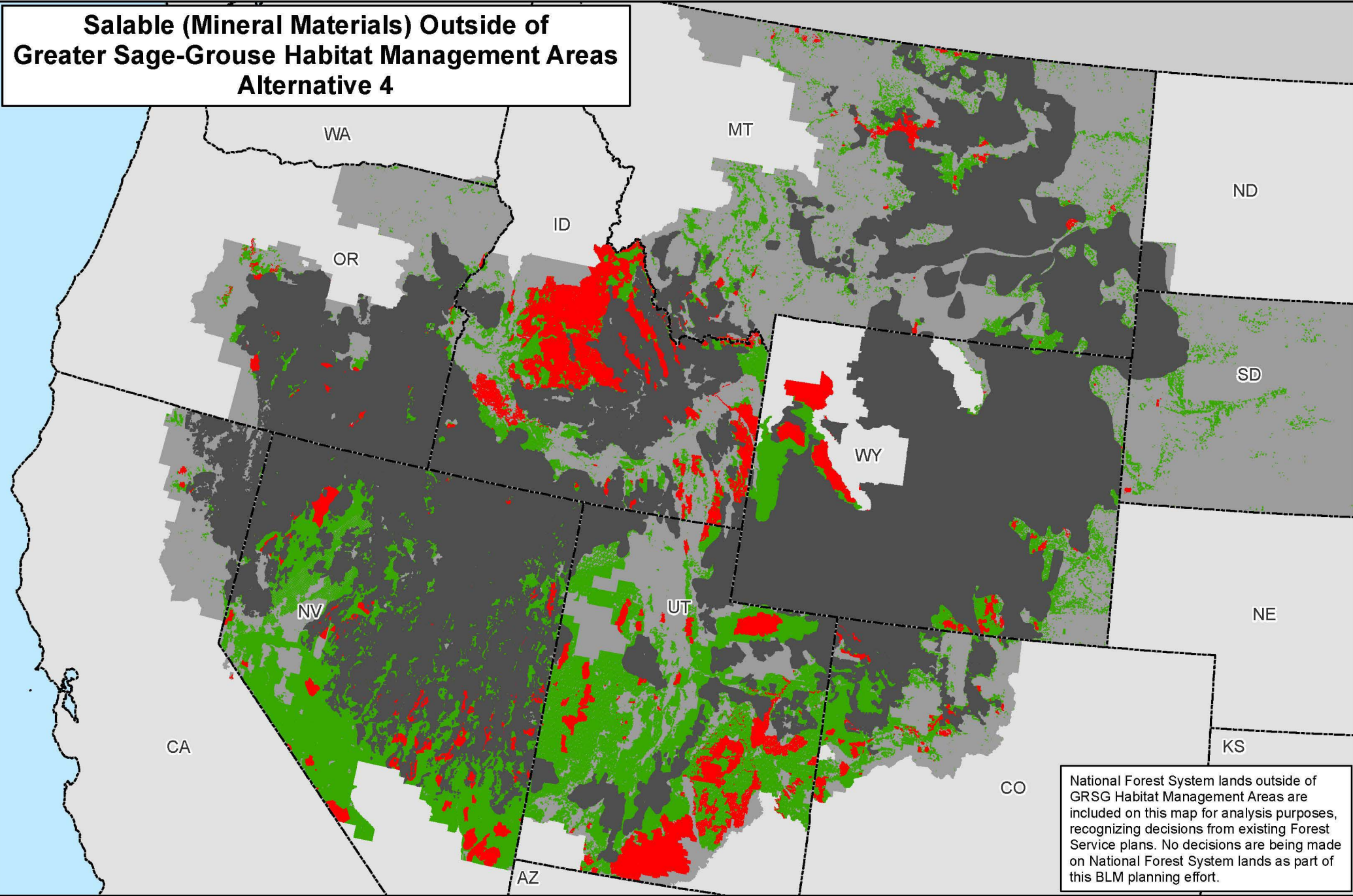


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Salable (Mineral Materials) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.29b

## Legend

Non-Masked Areas: Outside GRSG Habitat Management Areas  
Masked Areas: Within GRSG Habitat Management Areas

- Salable (Mineral Materials) - Closed
- Salable (Mineral Materials) - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries



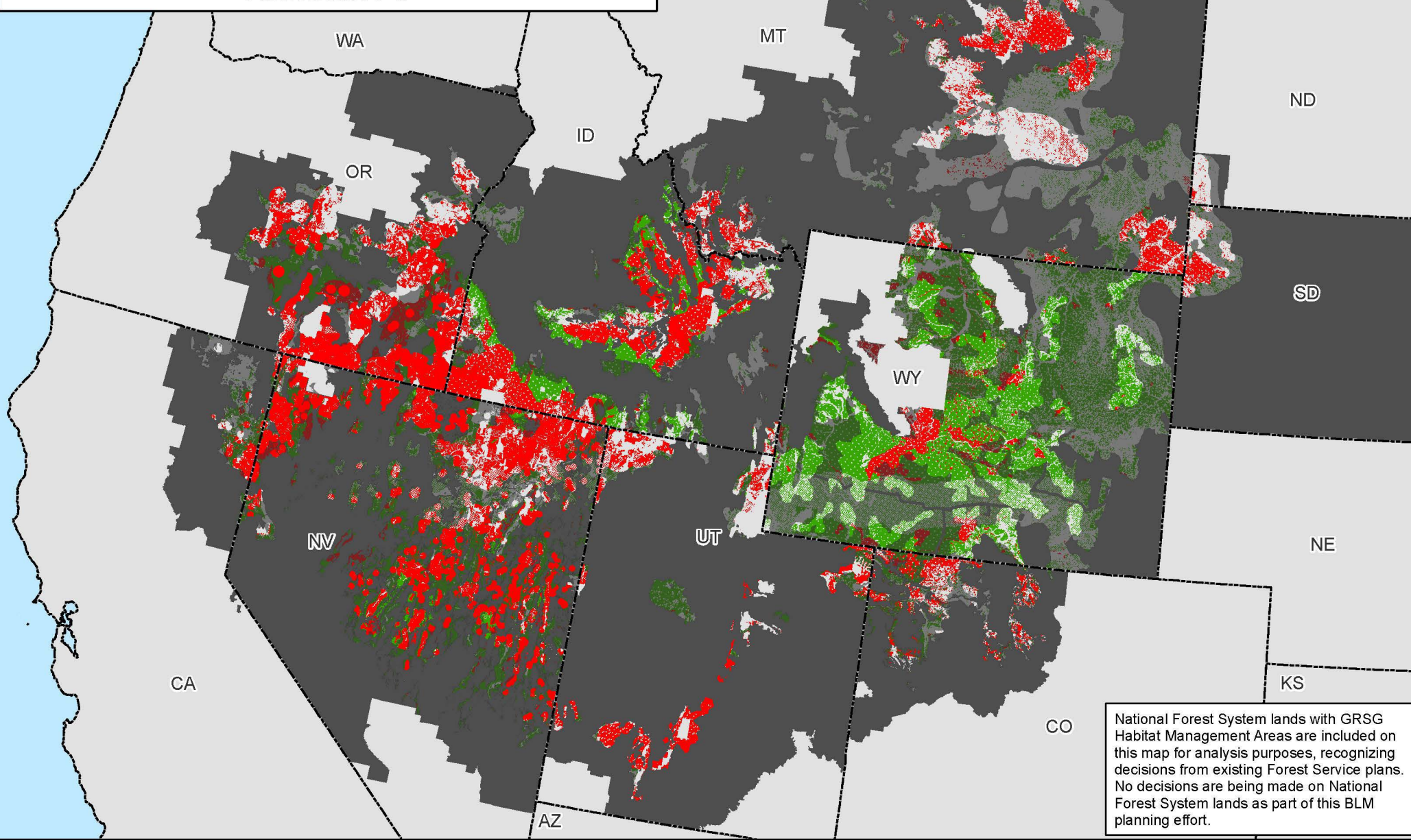
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) and Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.30a

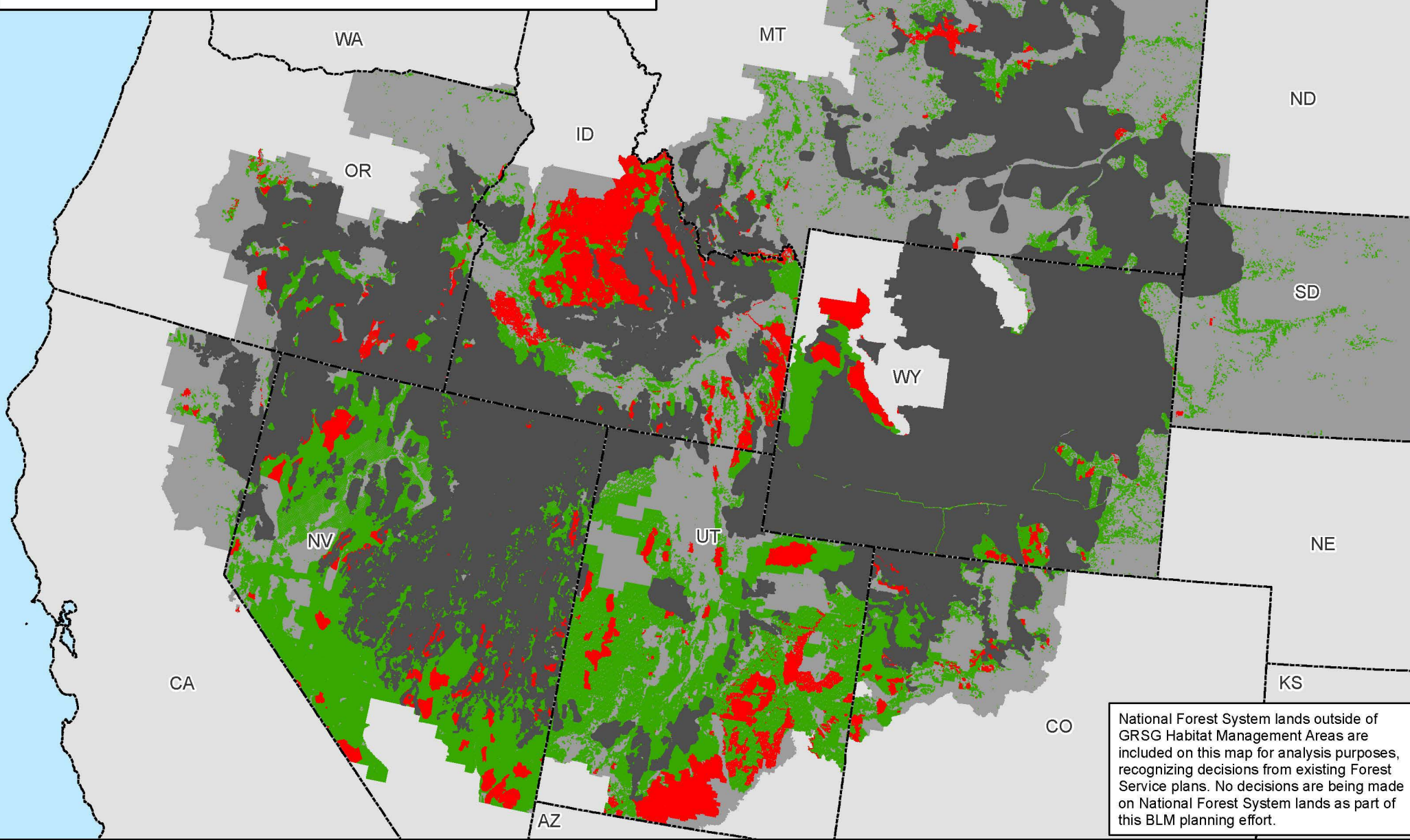


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Salable (Mineral Materials) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.30b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

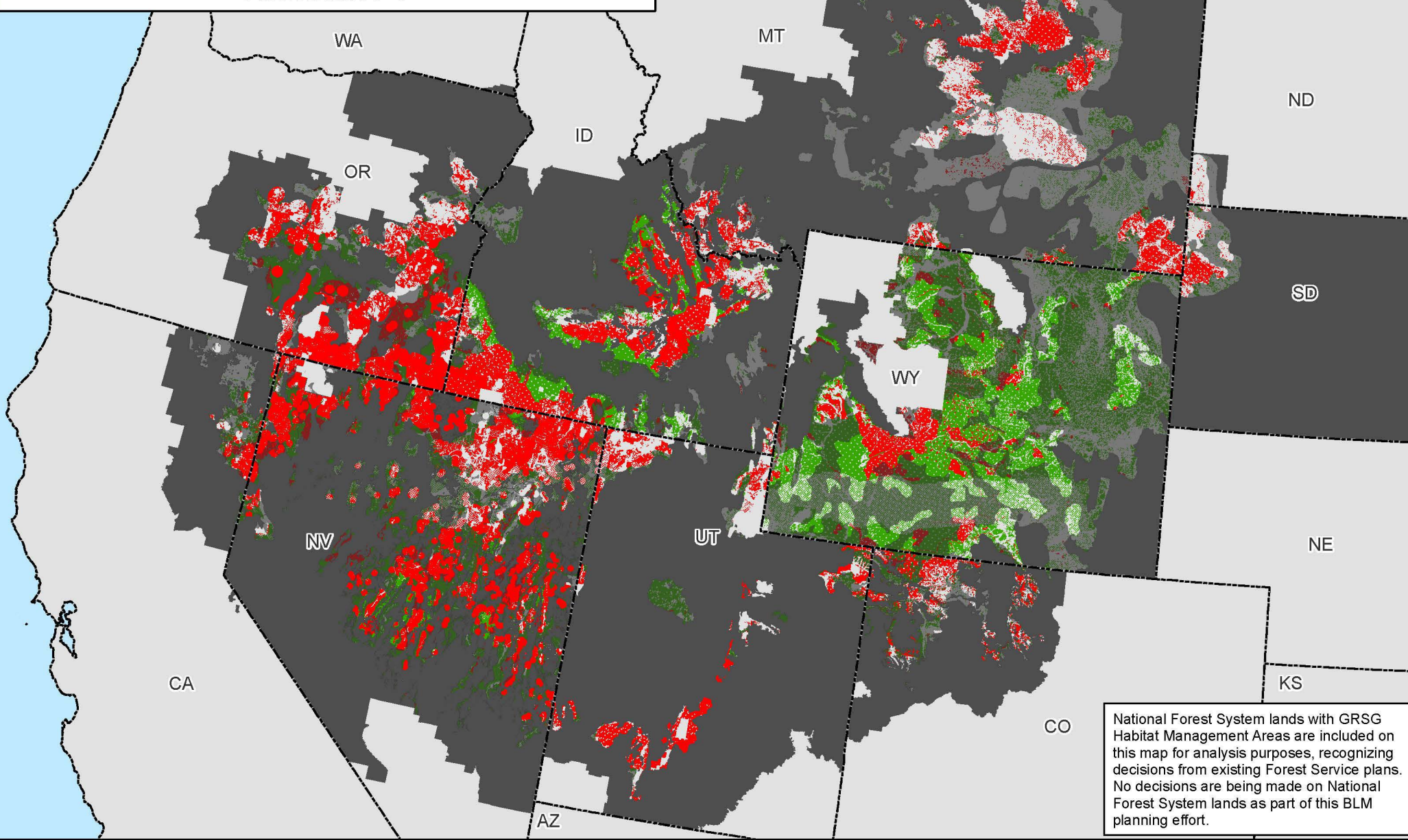
<span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Salable (Mineral Materials) - Closed	<span style="display:inline-block; width:15px; height:15px; background-color:darkgray; border:1px solid black;"></span> GRSG Habitat Management Areas
<span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span> Salable (Mineral Materials) - Open	<span style="display:inline-block; width:15px; height:15px; background-color:lightgray; border:1px solid black;"></span> Planning Area Extent
	<span style="display:inline-block; width:15px; height:15px; border-top:1px dashed black;"></span> State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Salable (Mineral Materials) and Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.31a

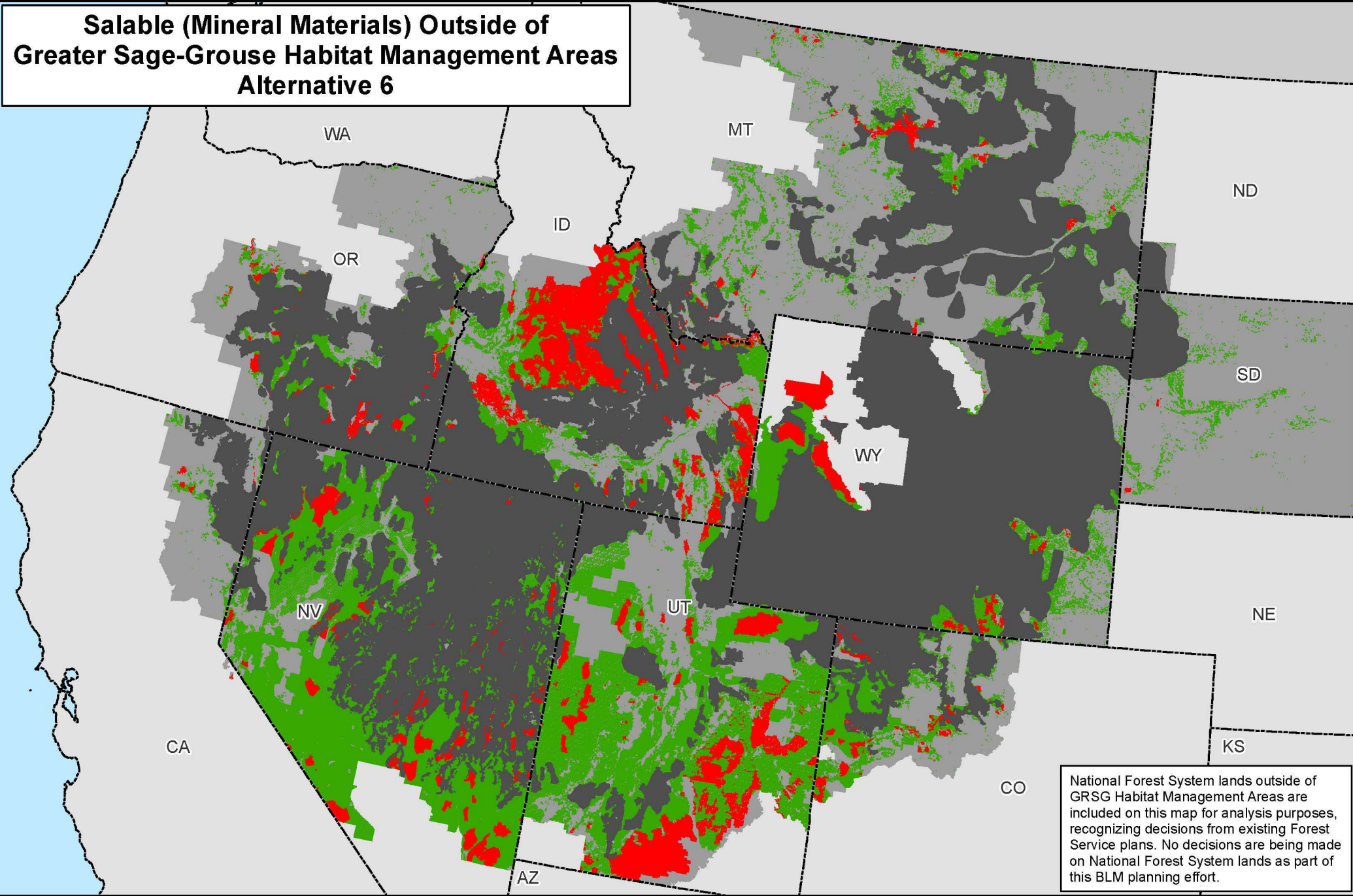


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Salable (Mineral Materials) Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.31b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Salable (Mineral Materials) - Closed

Salable (Mineral Materials) - Open

GRSG Habitat Management Areas

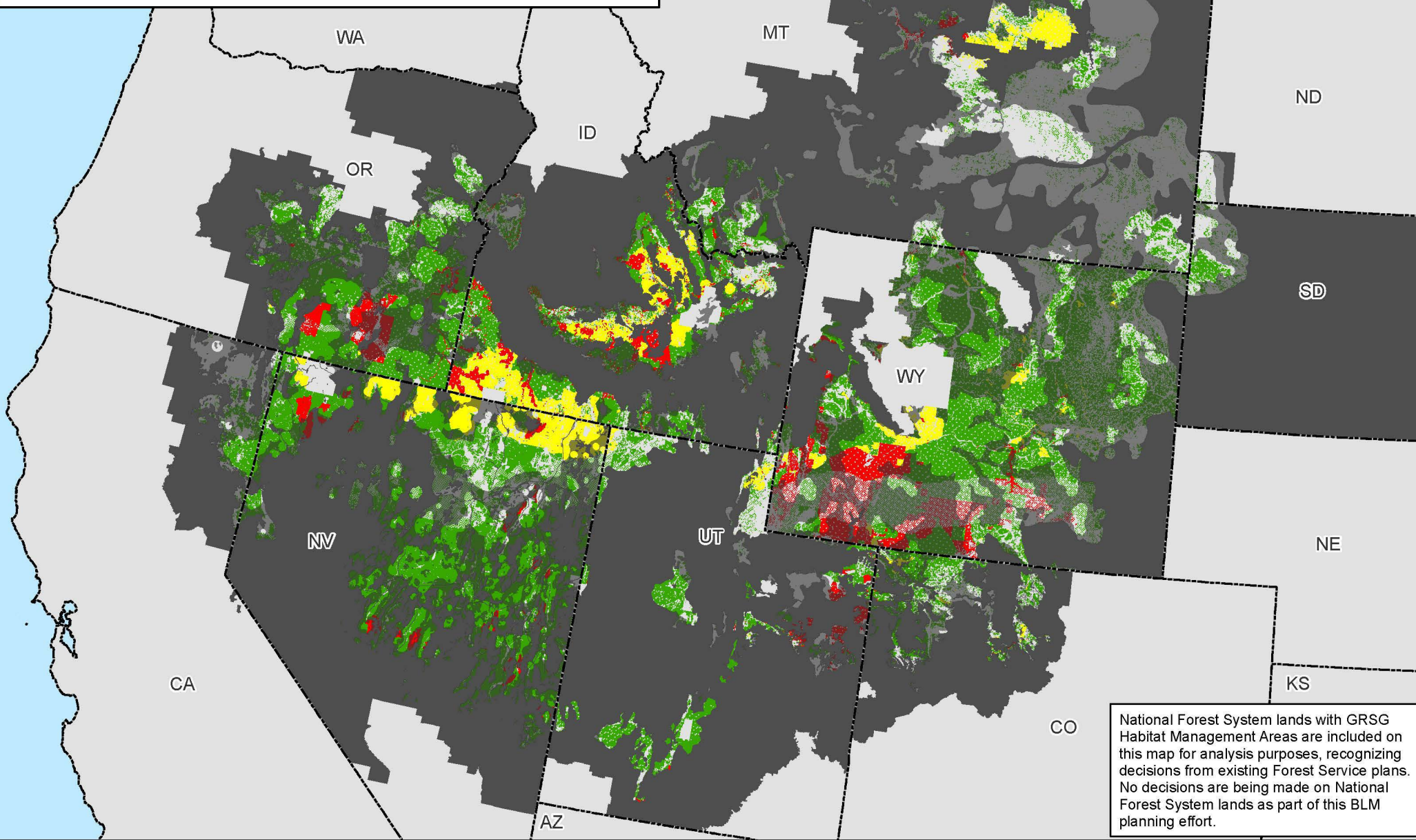
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

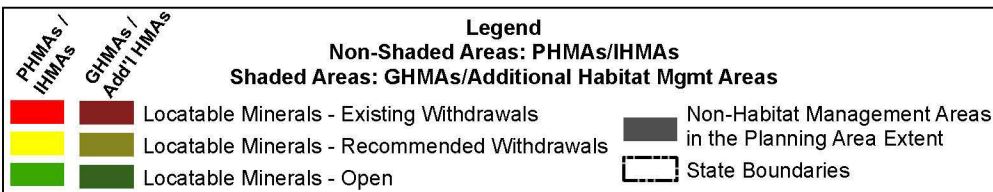


# Locatable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

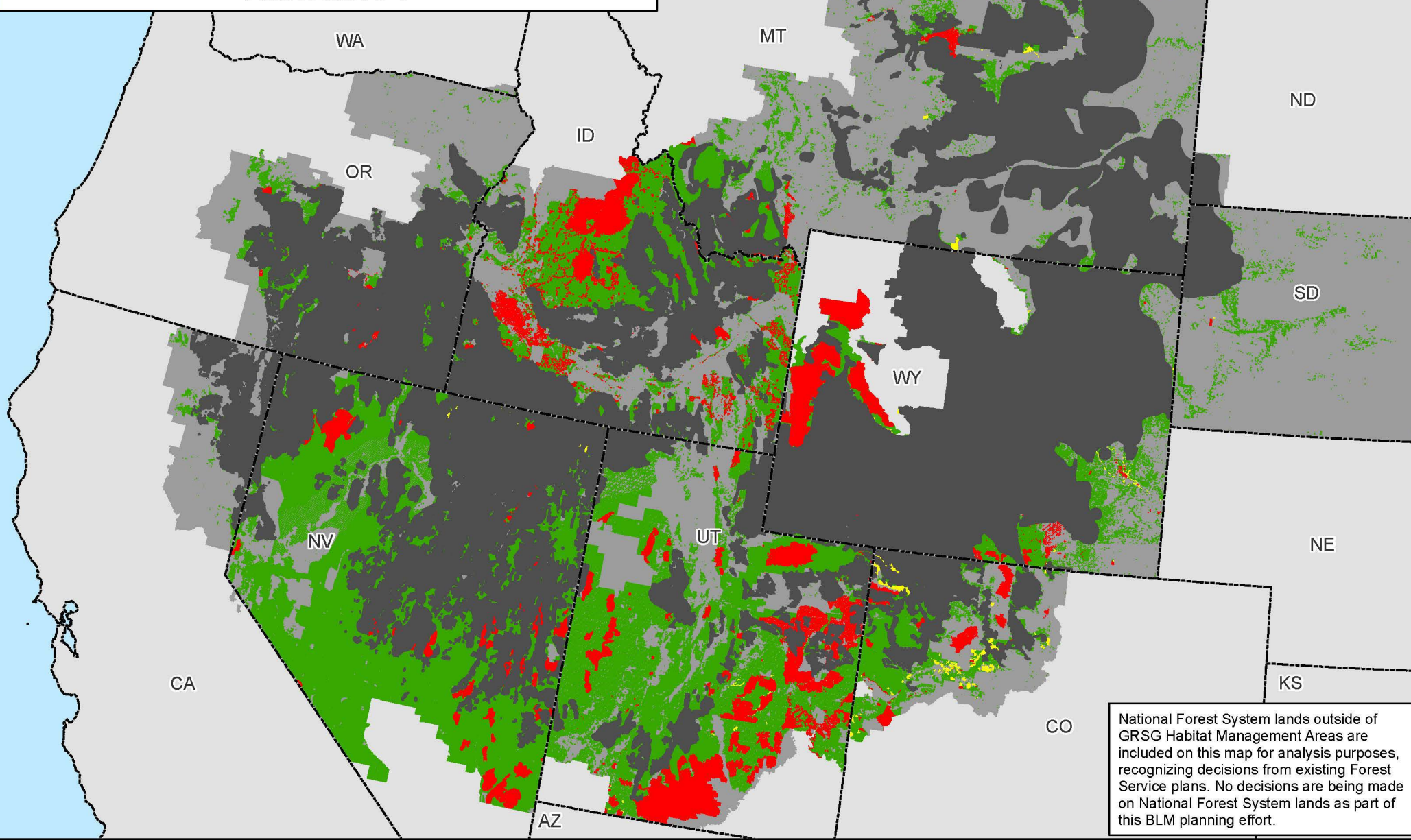
Map 2.32a



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.32b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

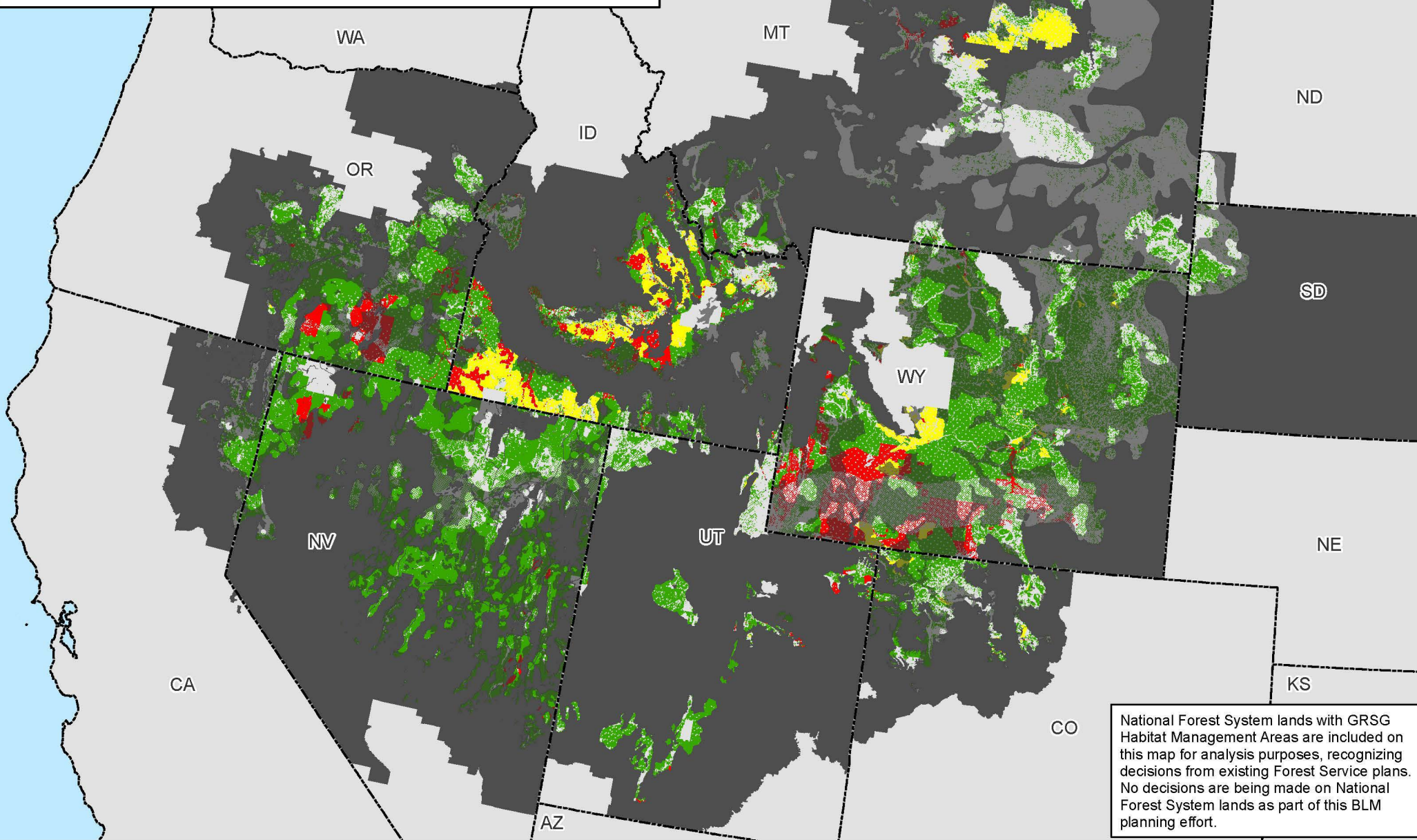
**Masked Areas: Within GRSG Habitat Management Areas**

- Locatable Minerals - Existing Withdrawals
- Locatable Minerals - Recommended Withdrawals
- Locatable Minerals - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

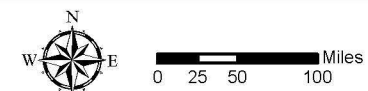
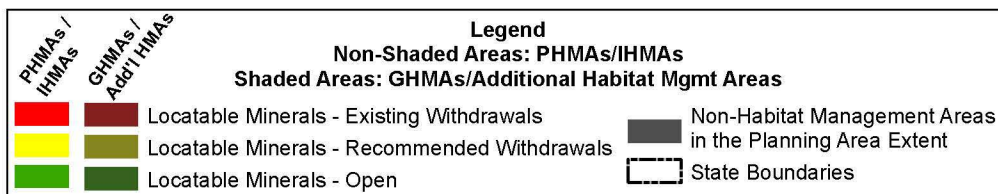
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 2



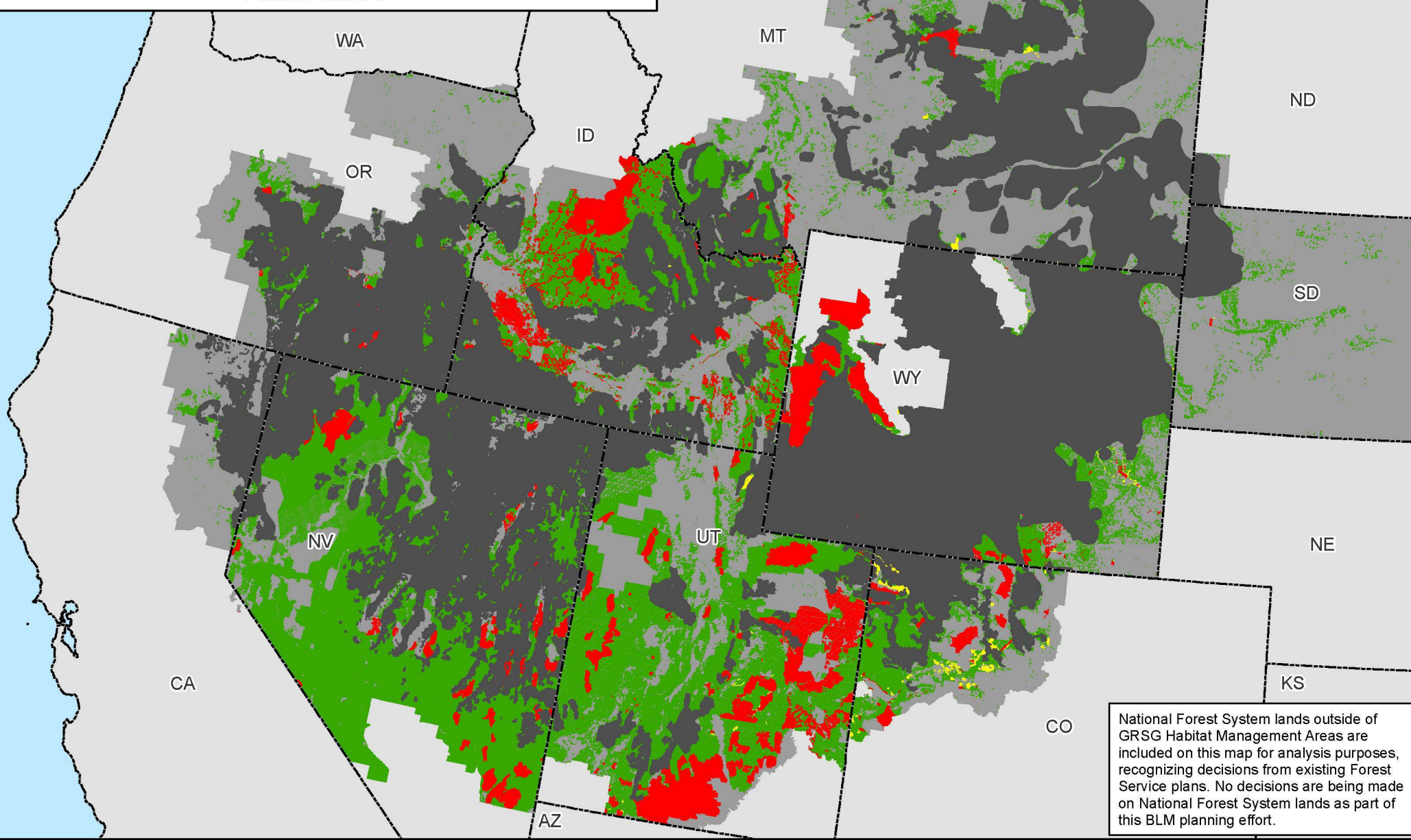
Map 2.33a



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



Map 2.33b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

- Locatable Minerals - Existing Withdrawals
- Locatable Minerals - Recommended Withdrawals
- Locatable Minerals - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

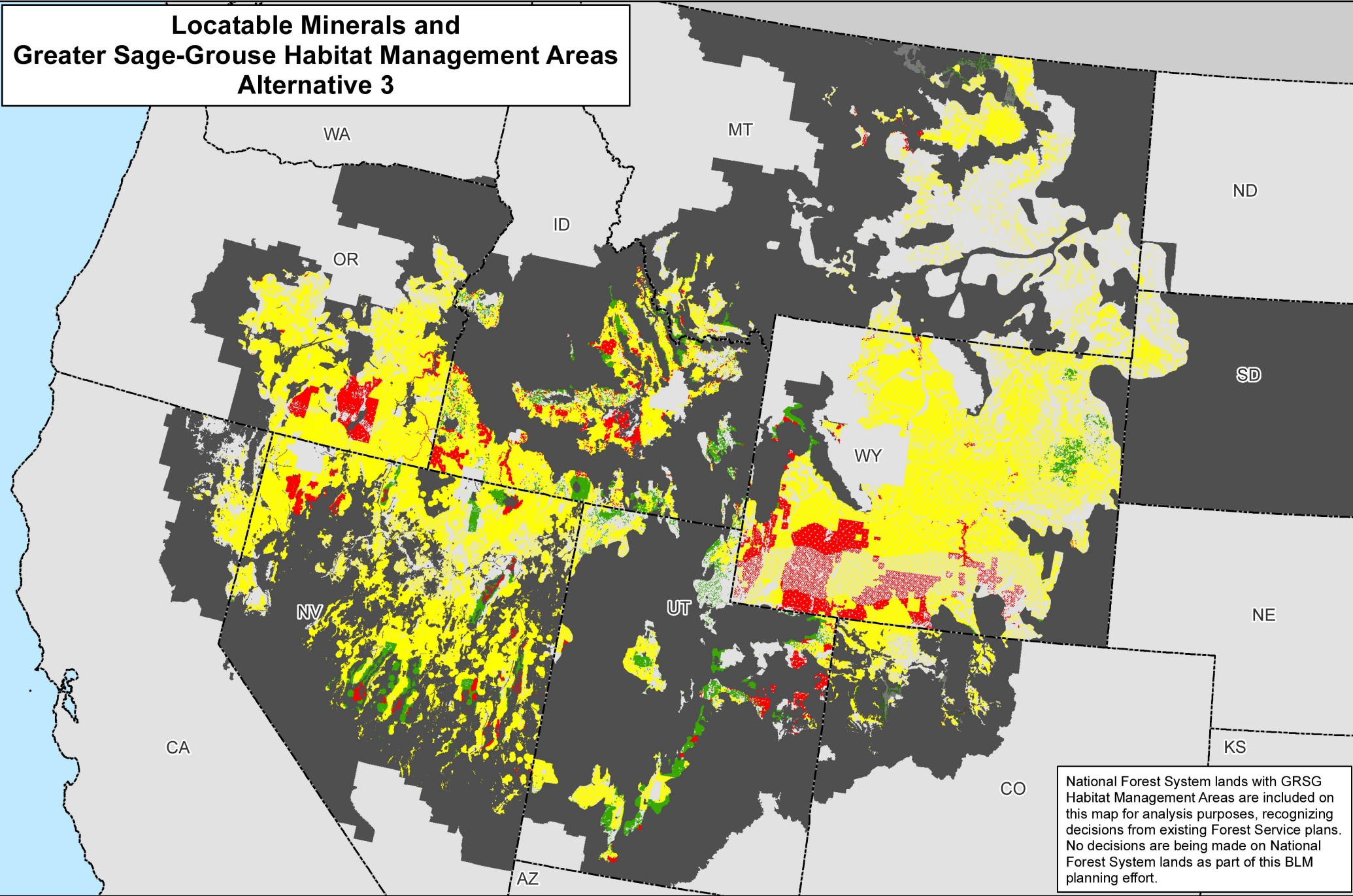


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Locatable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.34a

PHMAs

Add'l HMAs

Locatable Minerals - Existing Withdrawals

Locatable Minerals - Recommended Withdrawals

Locatable Minerals - Open

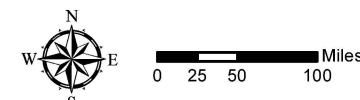
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

**Legend**

Non-Shaded Areas: PHMAs

Shaded Areas: Additional Habitat Mgmt Areas

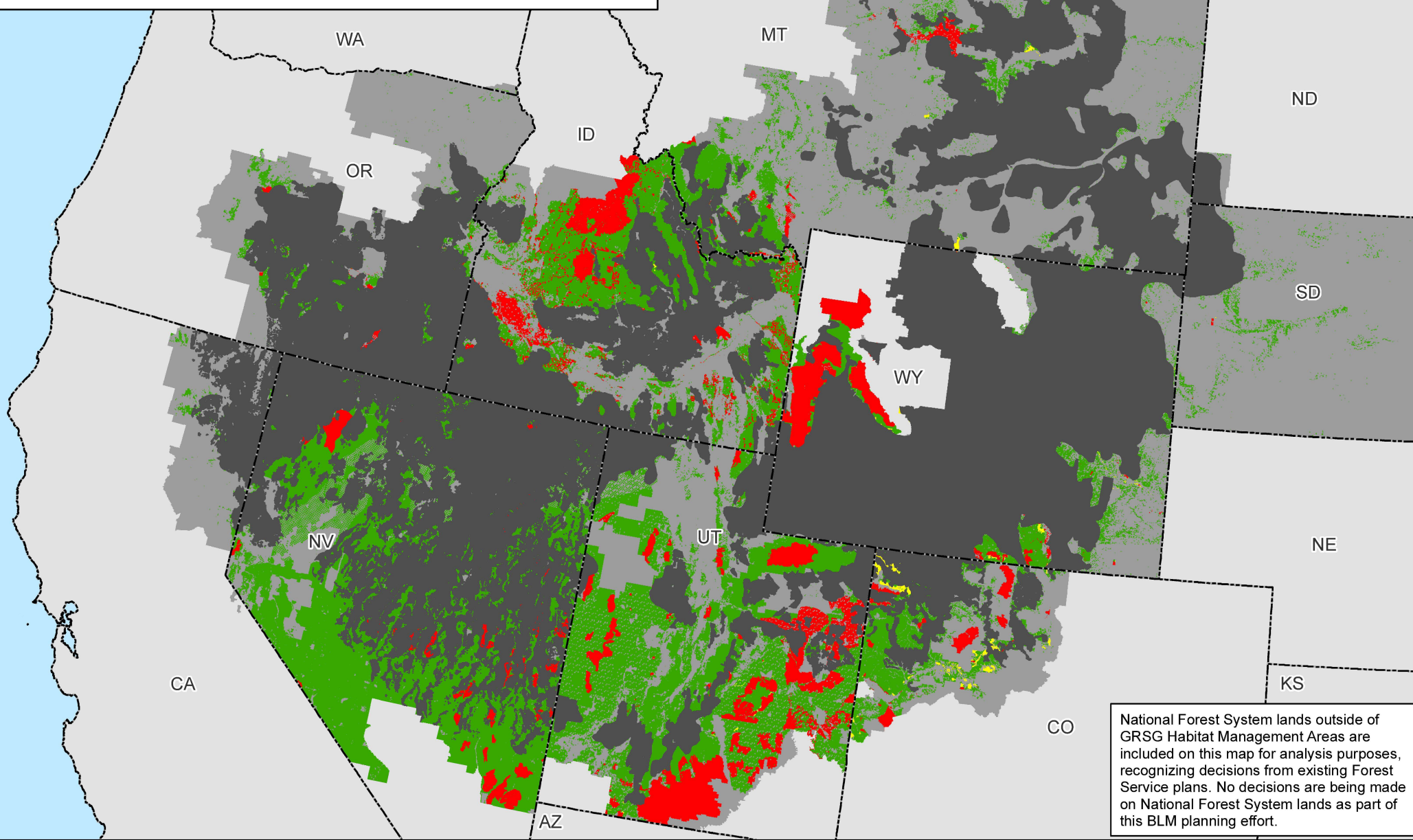


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Locatable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

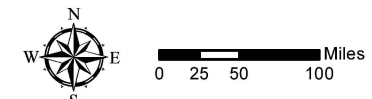
Map 2.34b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

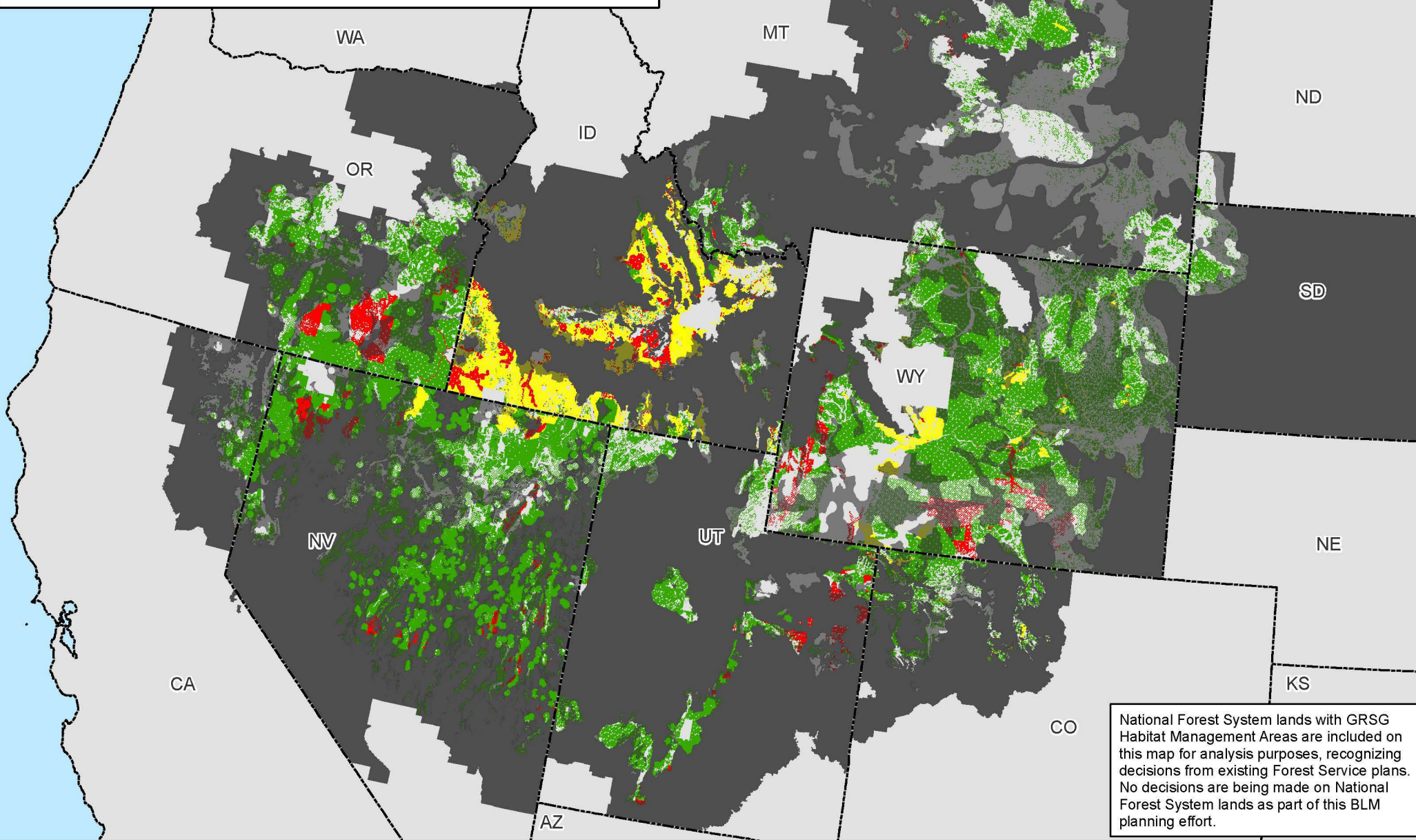
- Locatable Minerals - Existing Withdrawals
- Locatable Minerals - Recommended Withdrawals
- Locatable Minerals - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries



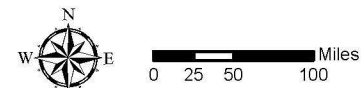
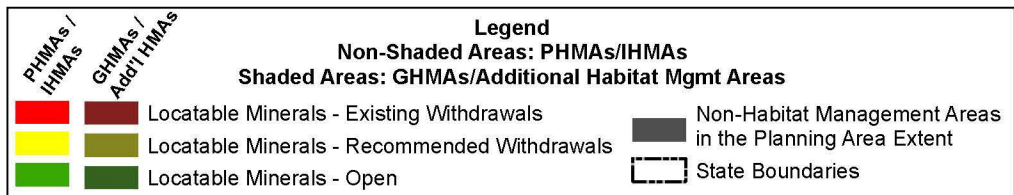
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 4



Map 2.35a

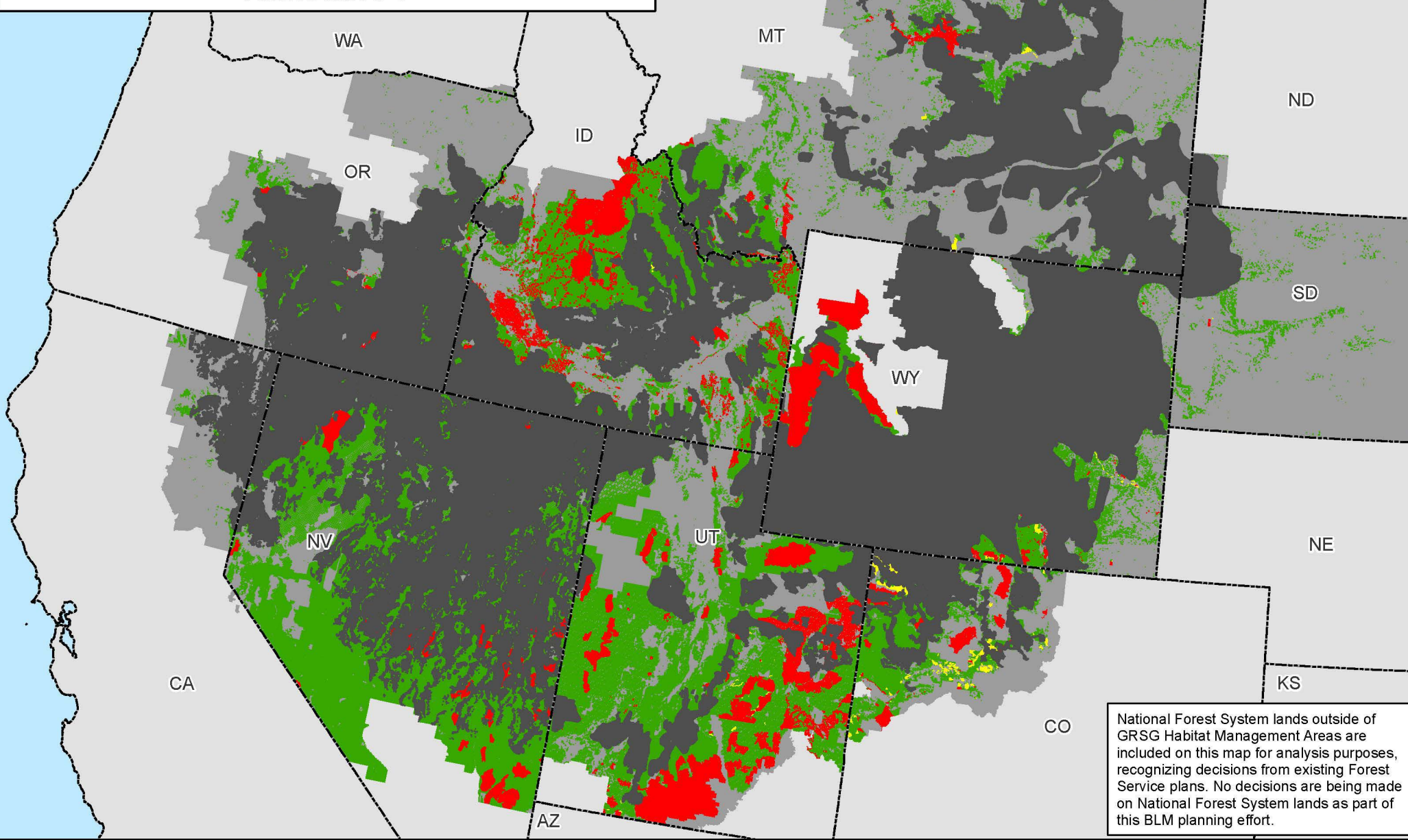


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Locatable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



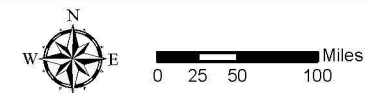
Map 2.35b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

- Locatable Minerals - Existing Withdrawals
- Locatable Minerals - Recommended Withdrawals
- Locatable Minerals - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

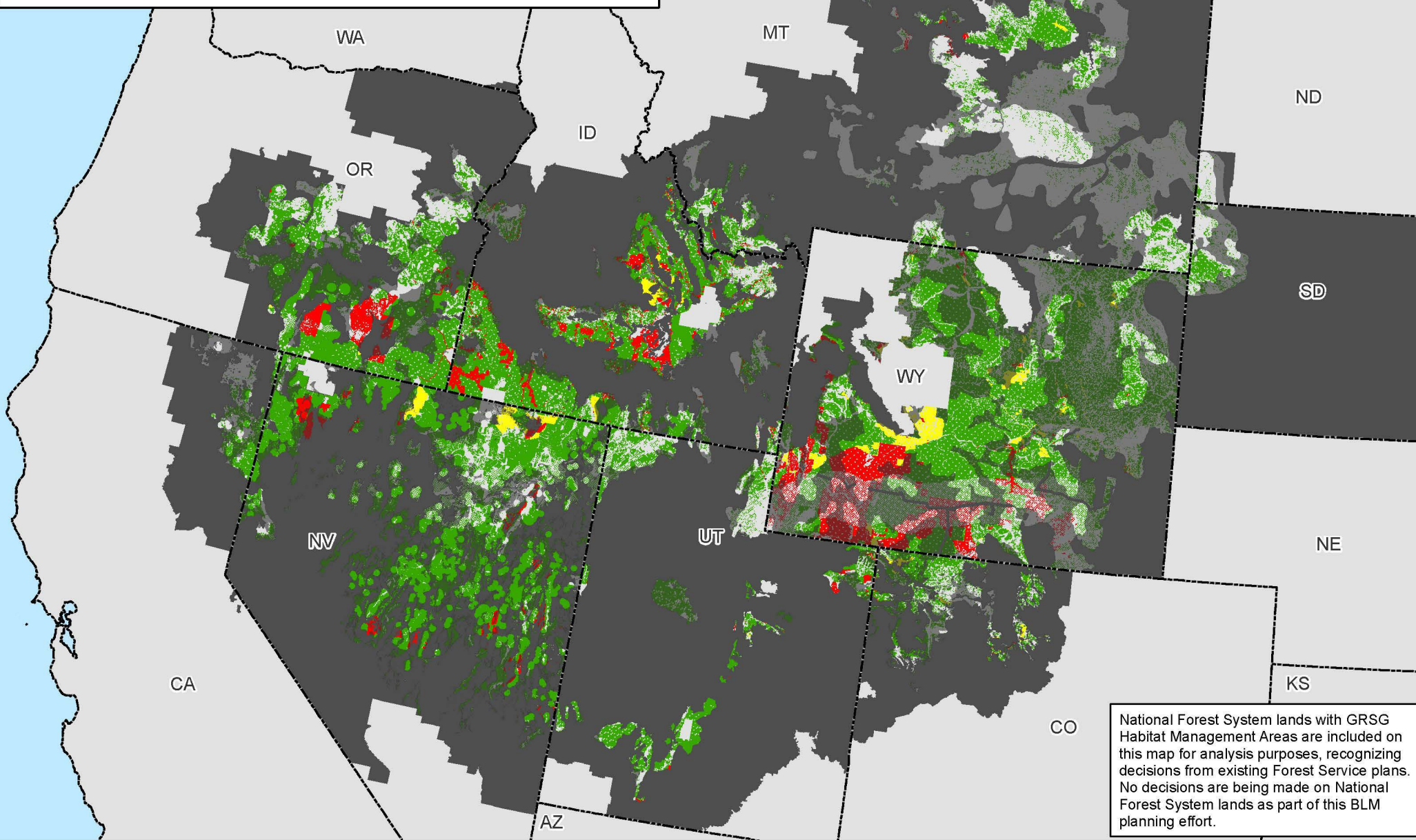


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

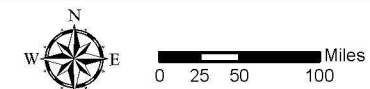
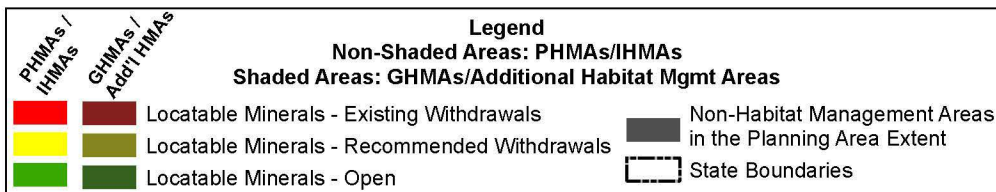




# Locatable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 5



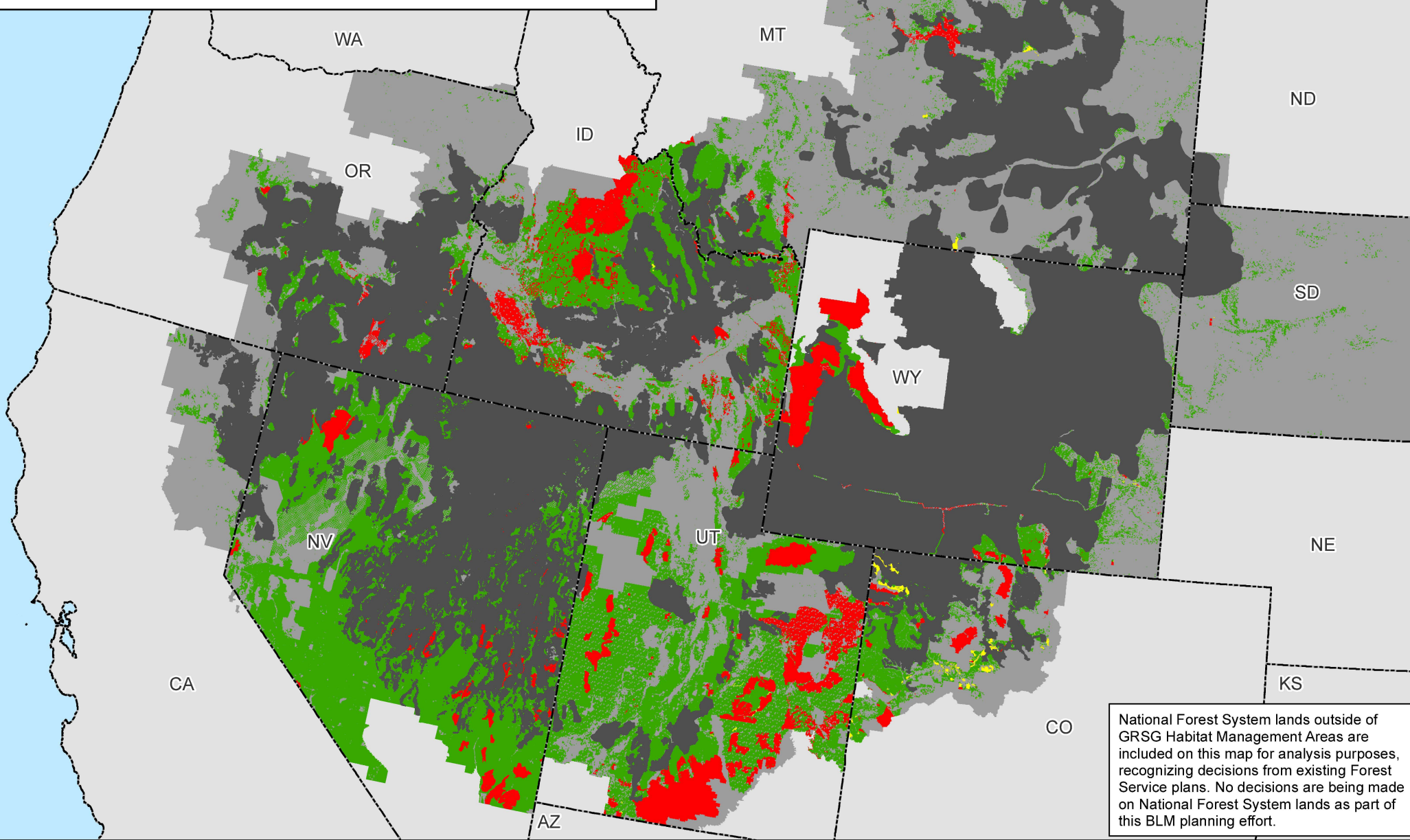
Map 2.36a



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.36b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

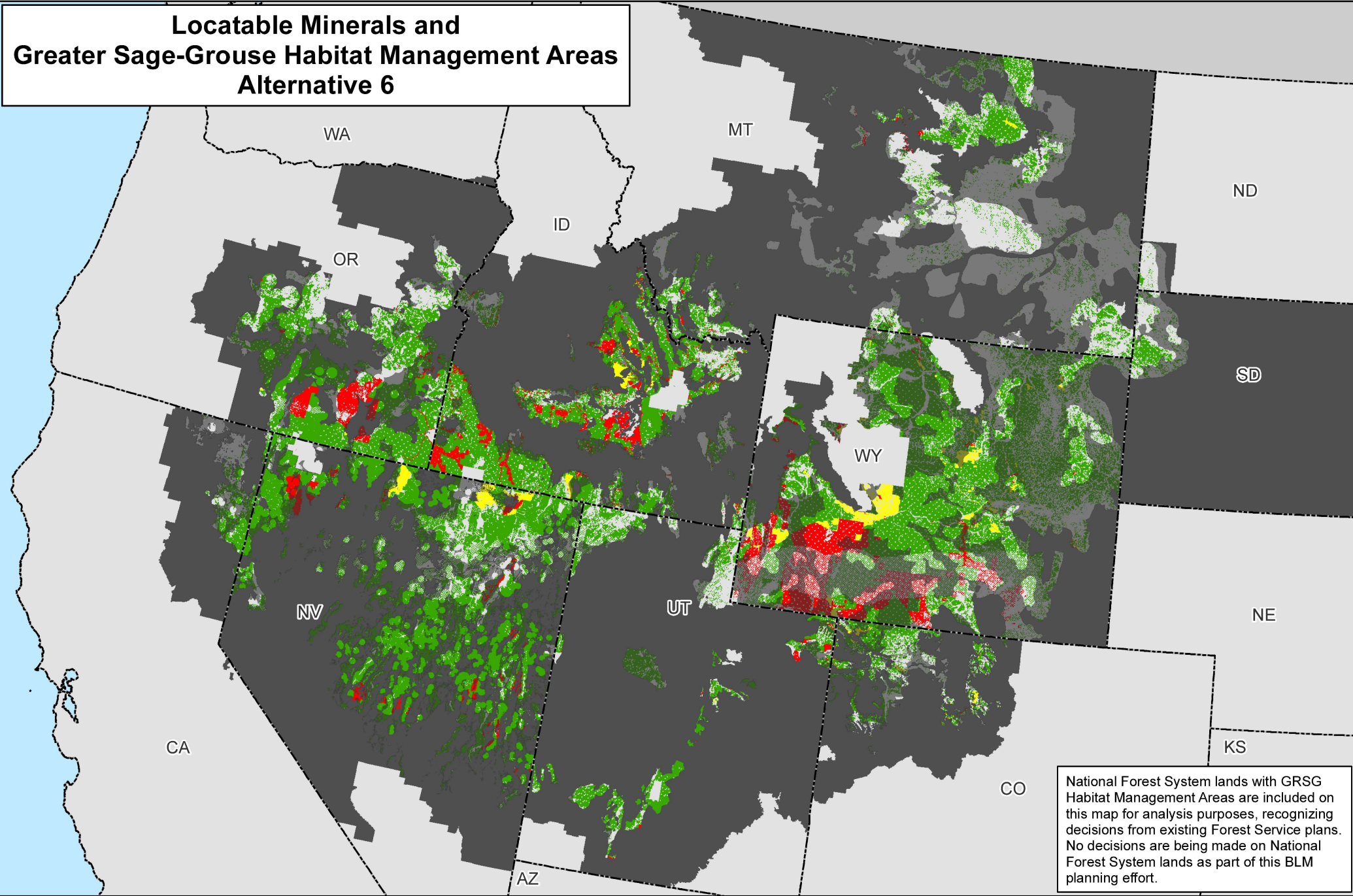
**Masked Areas: Within GRSG Habitat Management Areas**

- Locatable Minerals - Existing Withdrawals
- Locatable Minerals - Recommended Withdrawals
- Locatable Minerals - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.37a

PHMAs / IHMAs

GHMAs / Additional HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Locatable Minerals - Existing Withdrawals

Locatable Minerals - Recommended Withdrawals

Locatable Minerals - Open

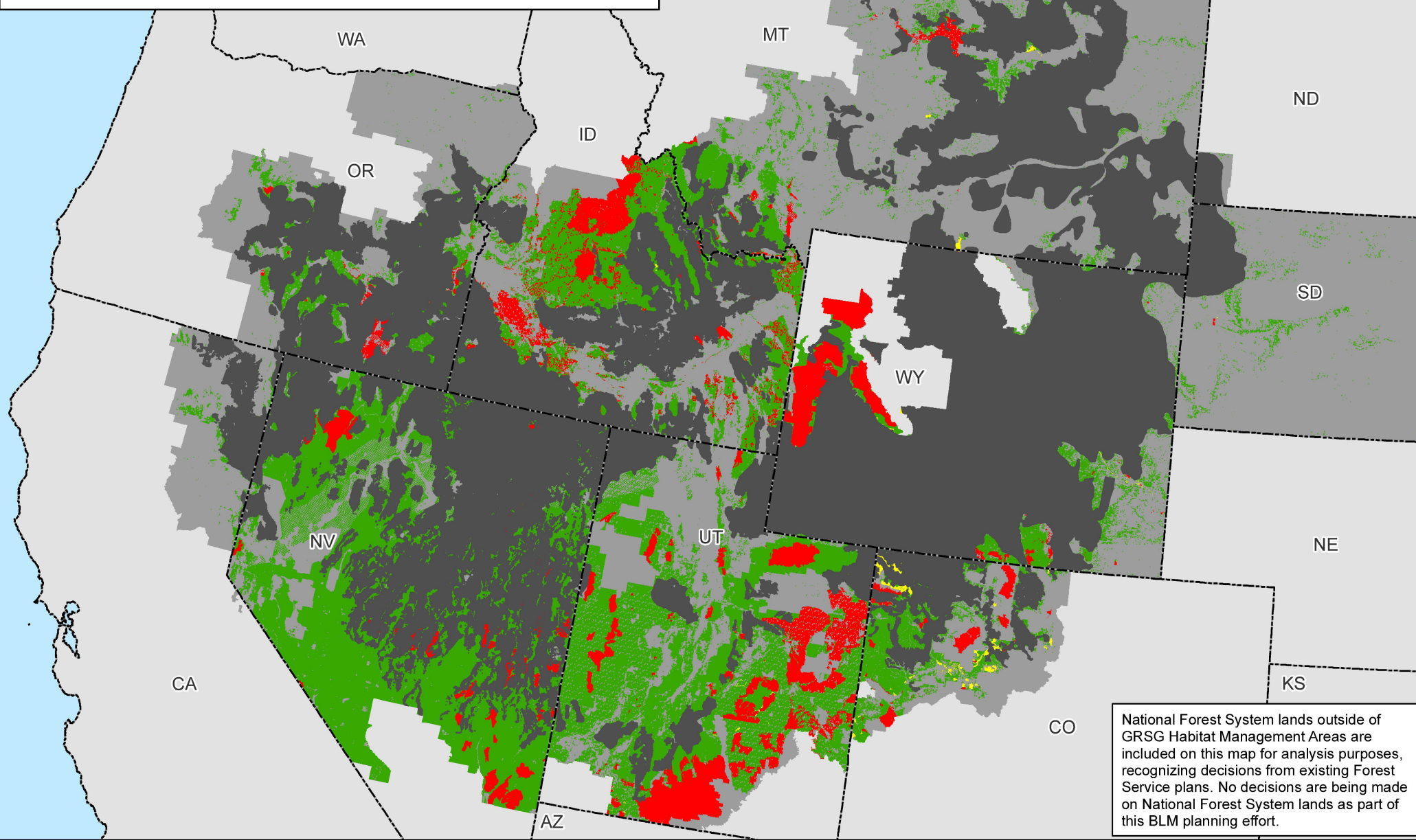
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Locatable Minerals Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6






Map 2.37b








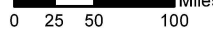
**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

 Locatable Minerals - Existing Withdrawals
  Locatable Minerals - Recommended Withdrawals
  Locatable Minerals - Open

 GRSG Habitat Management Areas
  Planning Area Extent
  State Boundaries

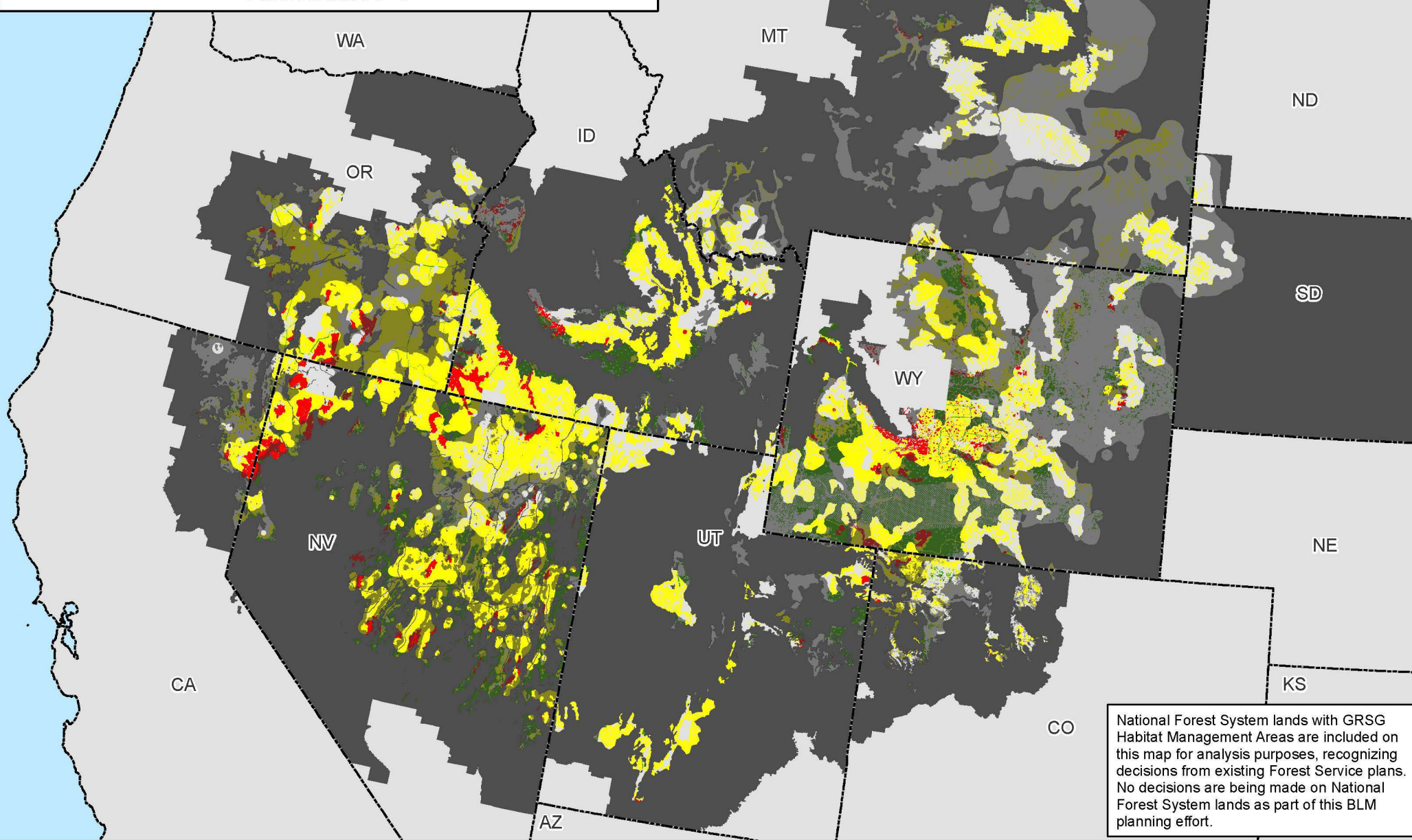



0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

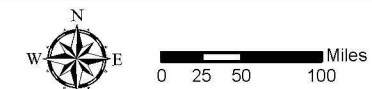
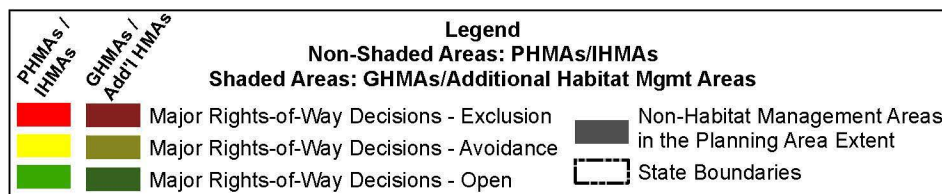


# Major Rights-of-Way Decisions and Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.38a

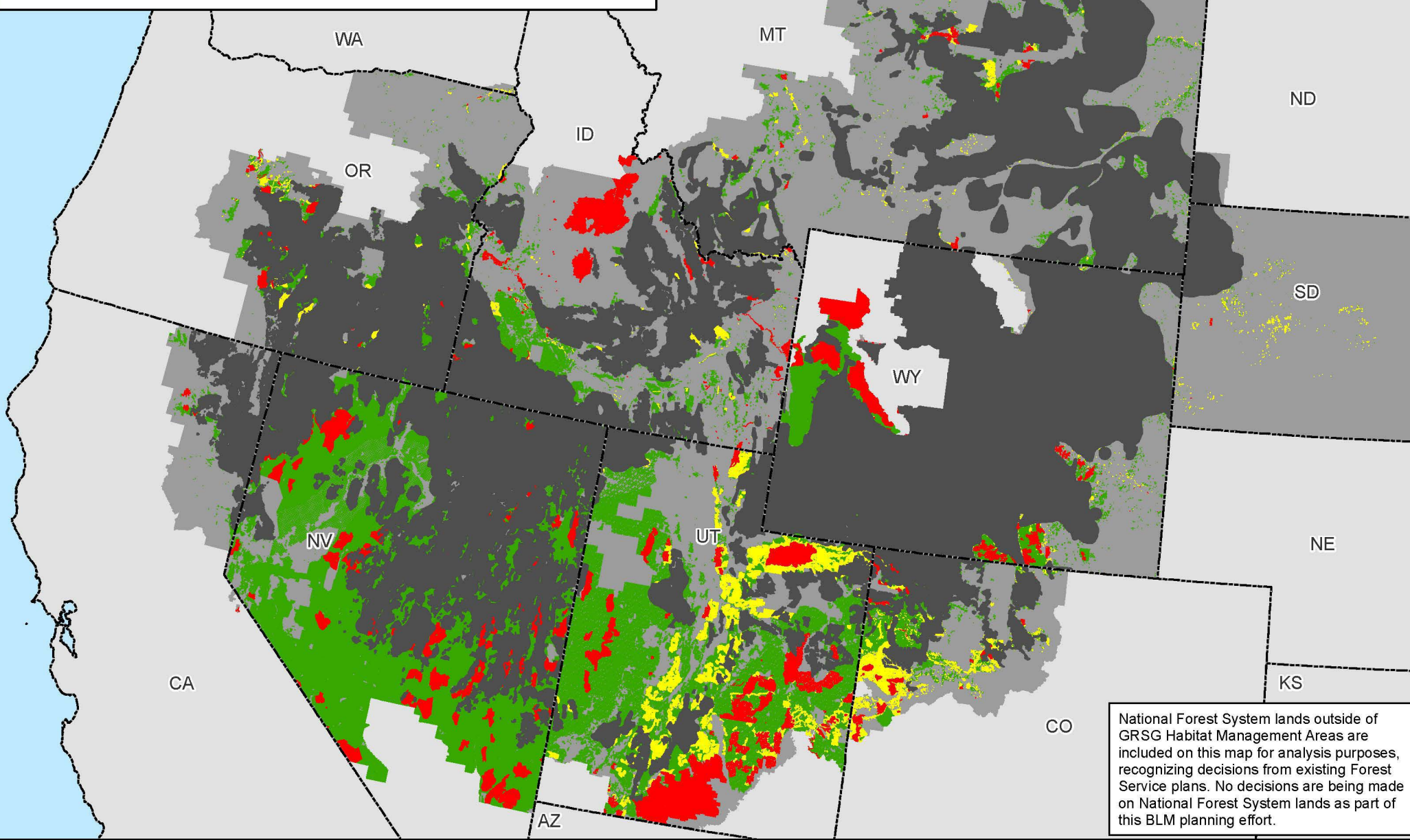


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Major Rights-of-Way Decisions Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



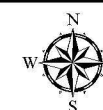
National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.38b

## Legend

Non-Masked Areas: Outside GRSG Habitat Management Areas  
Masked Areas: Within GRSG Habitat Management Areas

- |   |  |
|---|--|
| <span style="color: red;">■</span> Major Rights-of-Way Decisions - Exclusion    | <span style="background-color: gray;">■</span> GRSG Habitat Management Areas |
| <span style="color: yellow;">■</span> Major Rights-of-Way Decisions - Avoidance | <span style="background-color: lightgray;">■</span> Planning Area Extent     |
| <span style="color: green;">■</span> Major Rights-of-Way Decisions - Open       | <span style="border: 1px dashed black;">■</span> State Boundaries            |



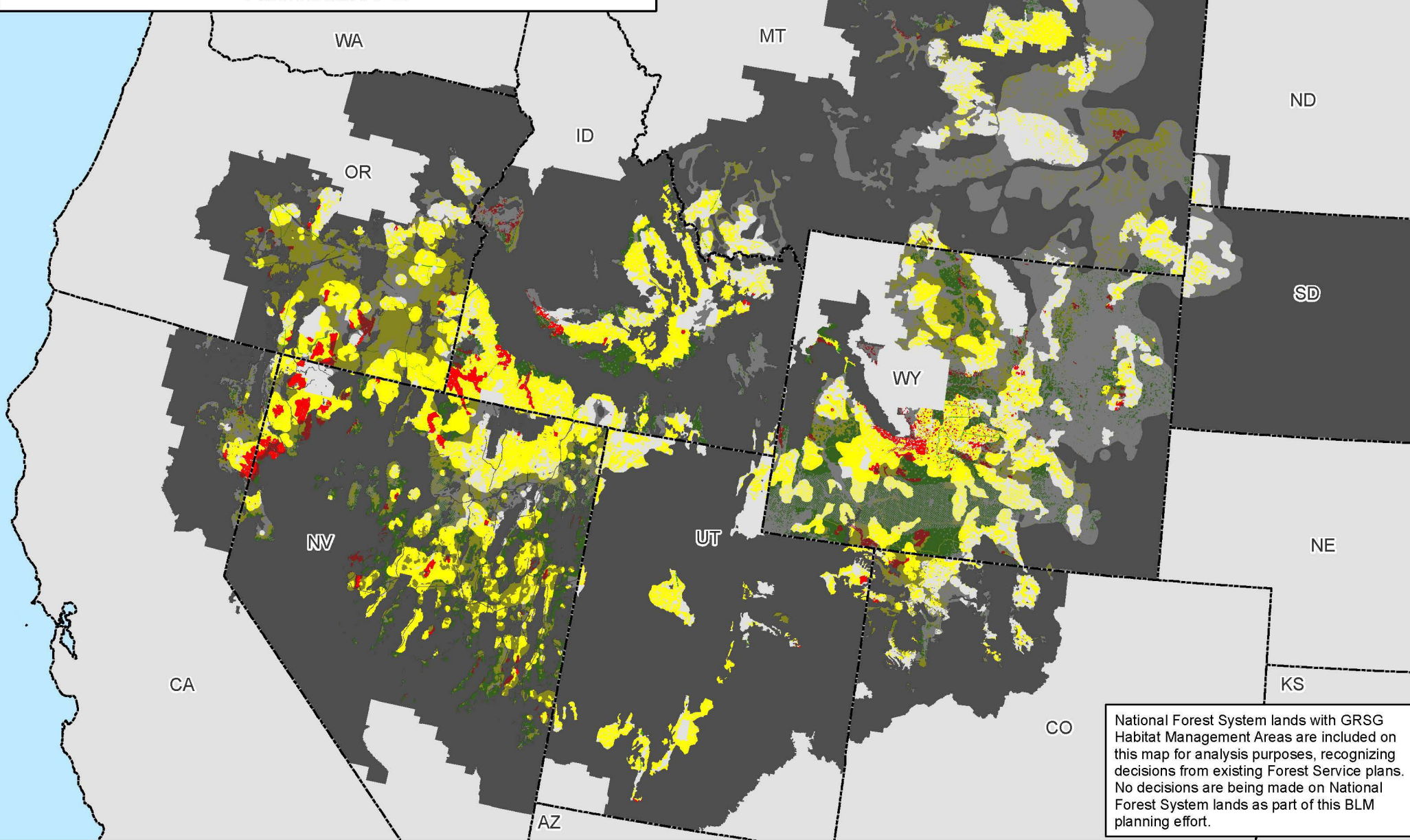
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



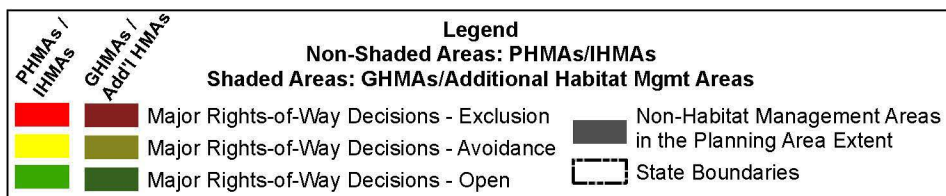


# Major Rights-of-Way Decisions and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.39a

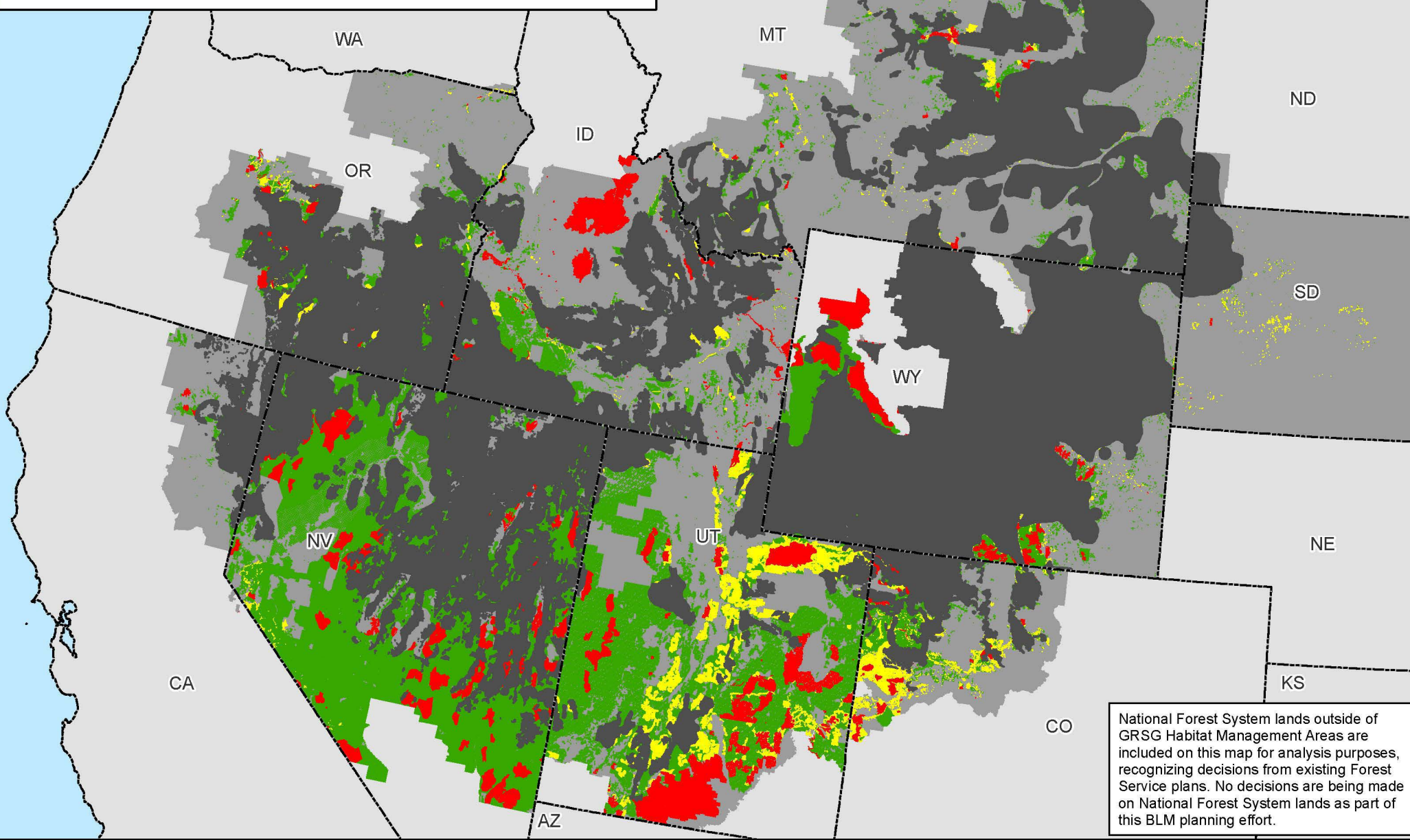


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Major Rights-of-Way Decisions Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.39b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

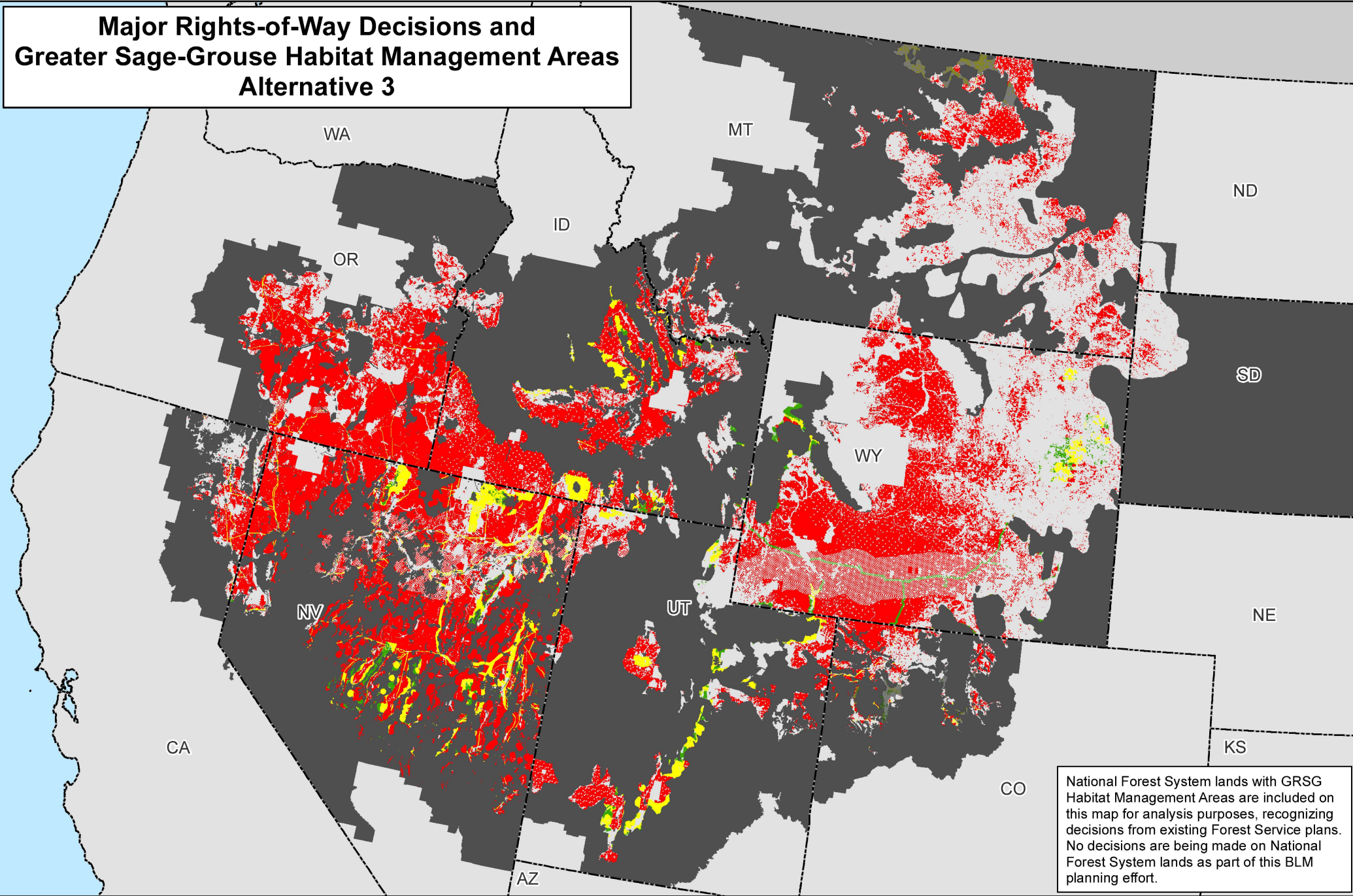
**Masked Areas: Within GRSG Habitat Management Areas**

- Major Rights-of-Way Decisions - Exclusion
- Major Rights-of-Way Decisions - Avoidance
- Major Rights-of-Way Decisions- Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Major Rights-of-Way Decisions and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.40a



PHMAs

Major Rights-of-Way Decisions - Exclusion

Major Rights-of-Way Decisions - Avoidance

Major Rights-of-Way Decisions - Open

Additional HMAs

Major Rights-of-Way Decisions - Exclusion

Major Rights-of-Way Decisions - Avoidance

Major Rights-of-Way Decisions - Open

Non-Shaded Areas: PHMAs

Shaded Areas: Additional Habitat Mgmt Areas

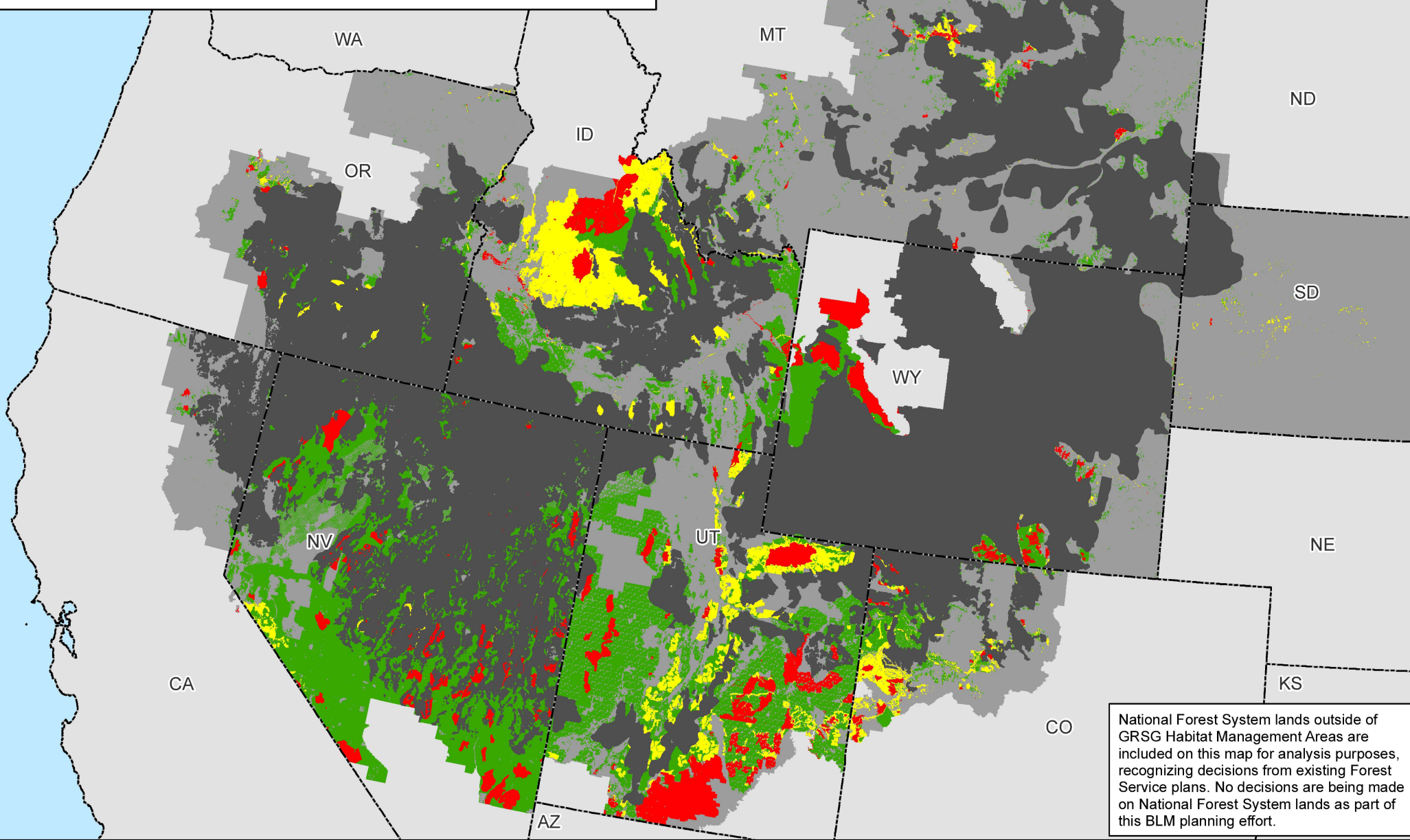
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Major Rights-of-Way Decisions Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.40b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Major Rights-of-Way Decisions - Exclusion

Major Rights-of-Way Decisions - Avoidance

Major Rights-of-Way Decisions - Open

GRSG Habitat Management Areas

Planning Area Extent

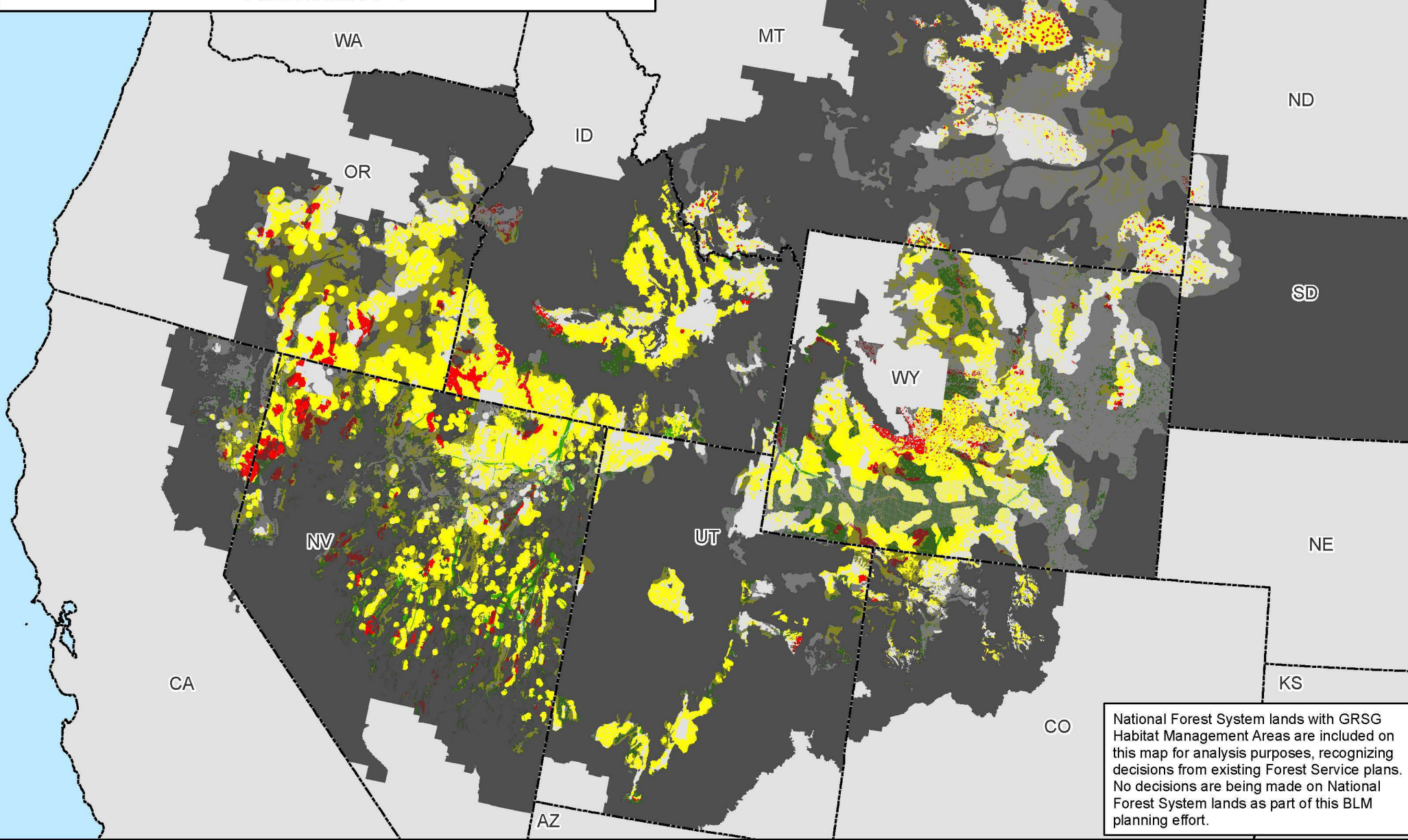
State Boundaries

0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Major Rights-of-Way Decisions and Greater Sage-Grouse Habitat Management Areas Alternative 4



Map 2.41a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Major Rights-of-Way Decisions - Exclusion

Major Rights-of-Way Decisions - Avoidance

Major Rights-of-Way Decisions - Open

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

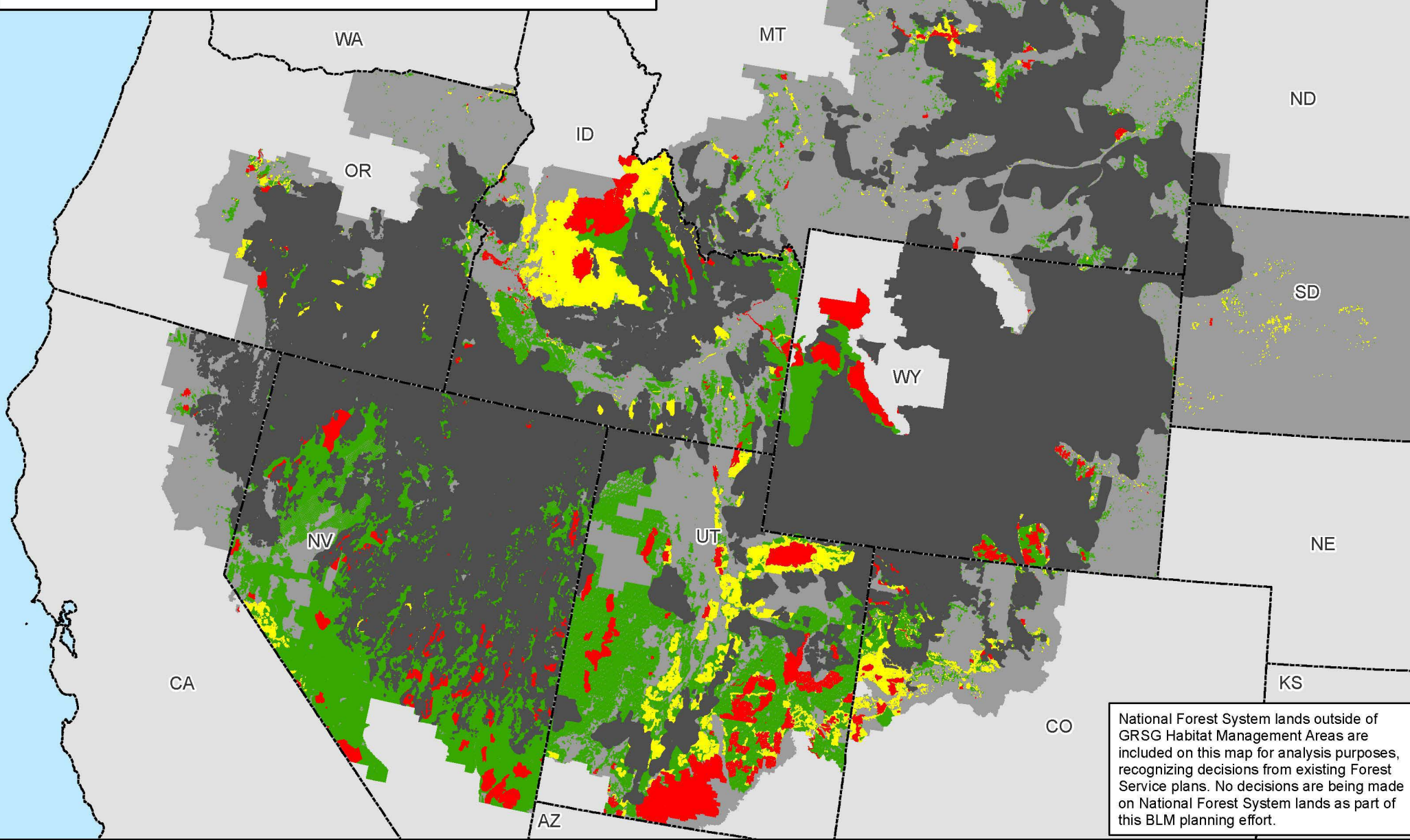
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Major Rights-of-Way Decisions Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

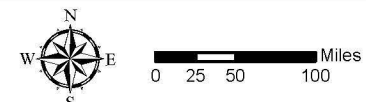
Map 2.41b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

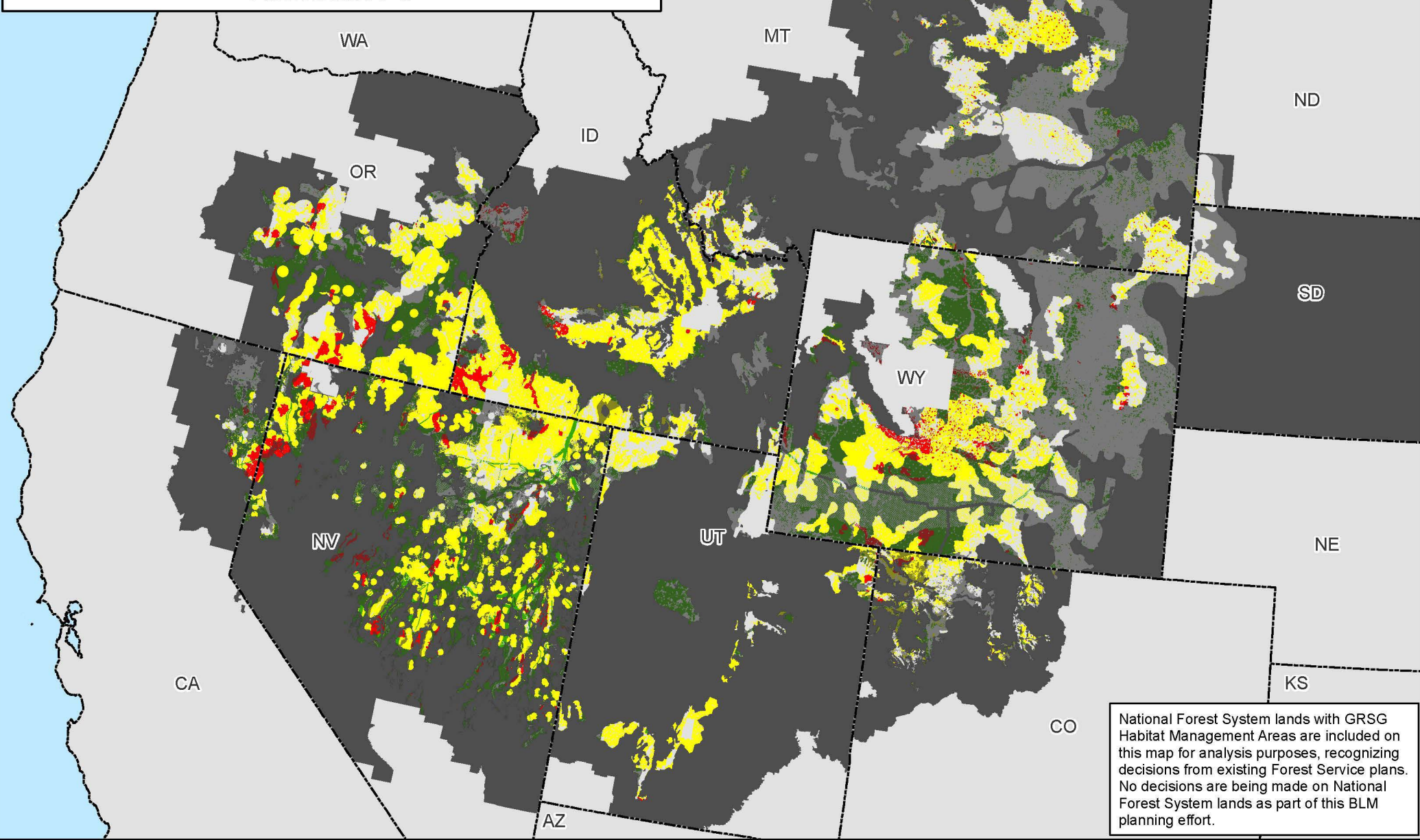
- Major Rights-of-Way Decisions - Exclusion
- Major Rights-of-Way Decisions - Avoidance
- Major Rights-of-Way Decisions - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Major Rights-of-Way Decisions and Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.42a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Major Rights-of-Way Decisions - Exclusion

Major Rights-of-Way Decisions - Avoidance

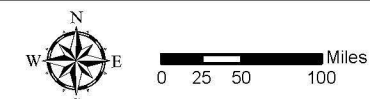
Major Rights-of-Way Decisions - Open

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

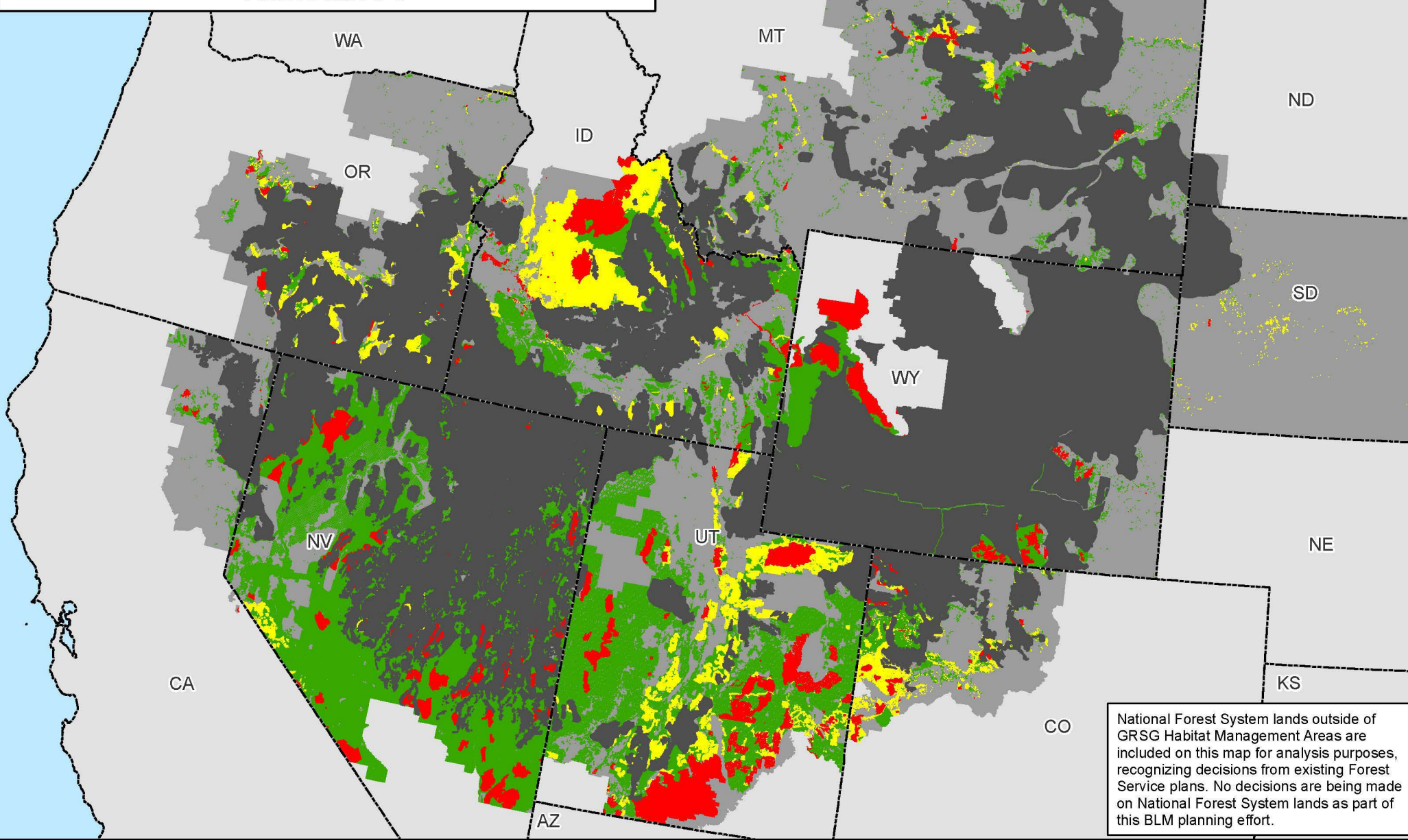


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Major Rights-of-Way Decisions Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.42b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Major Rights-of-Way Decisions - Exclusion

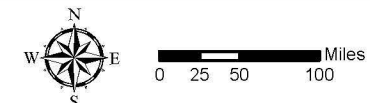
Major Rights-of-Way Decisions - Avoidance

Major Rights-of-Way Decisions - Open

GRSG Habitat Management Areas

Planning Area Extent

State Boundaries

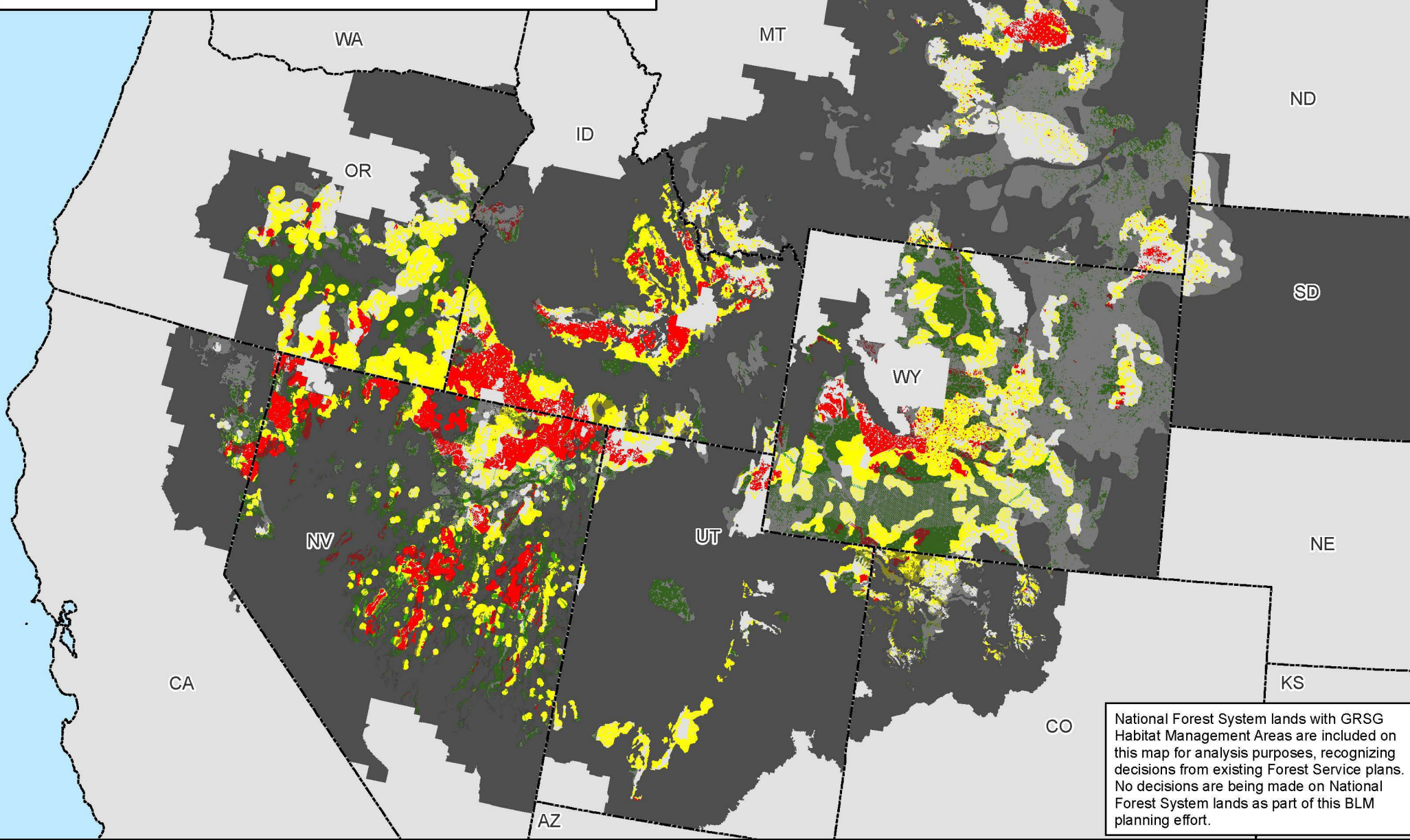


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Major Rights-of-Way Decisions and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.43a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Major Rights-of-Way Decisions - Exclusion

Major Rights-of-Way Decisions - Avoidance

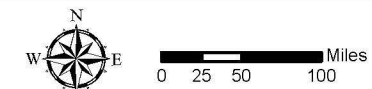
Major Rights-of-Way Decisions - Open

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

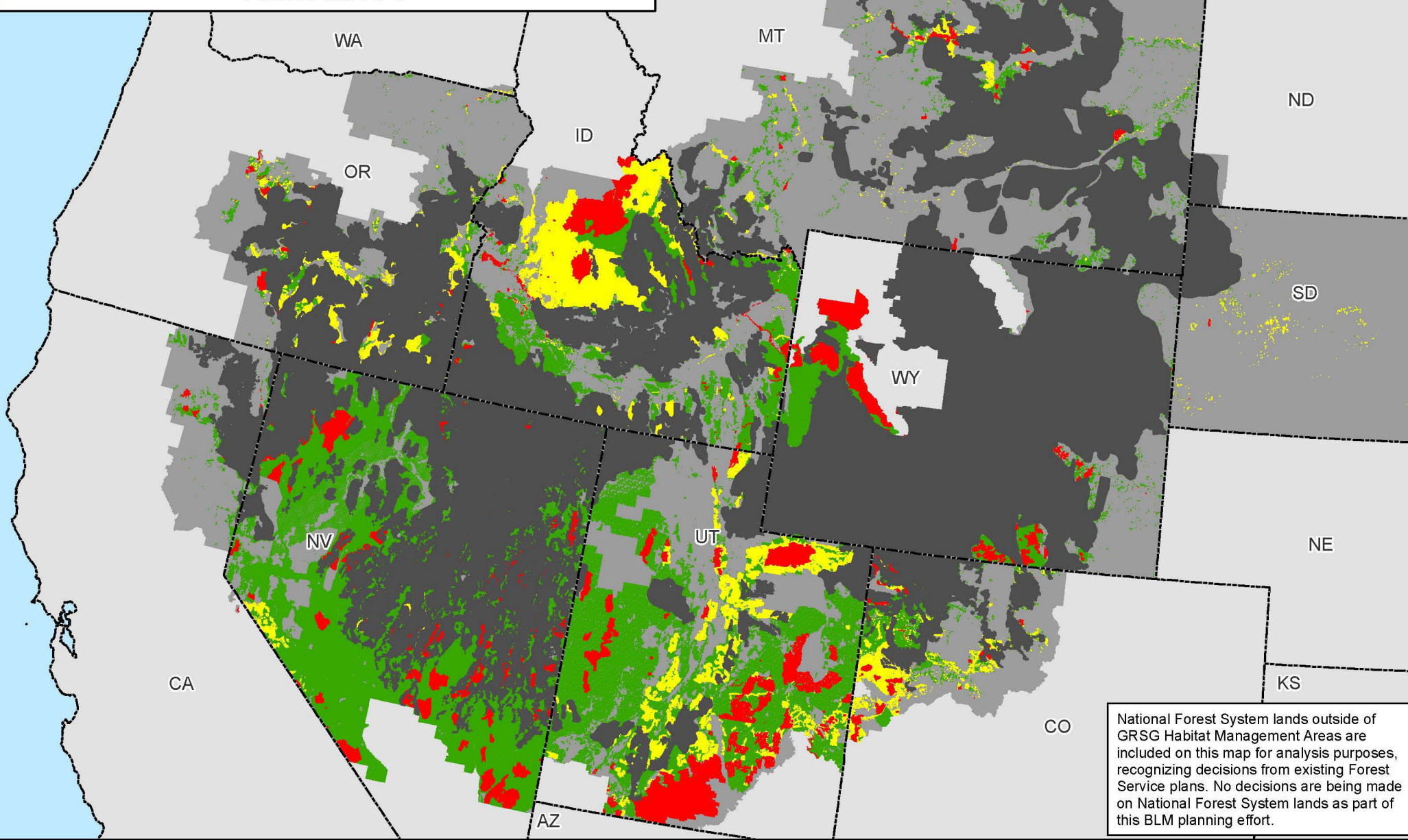


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Major Rights-of-Way Decisions Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6

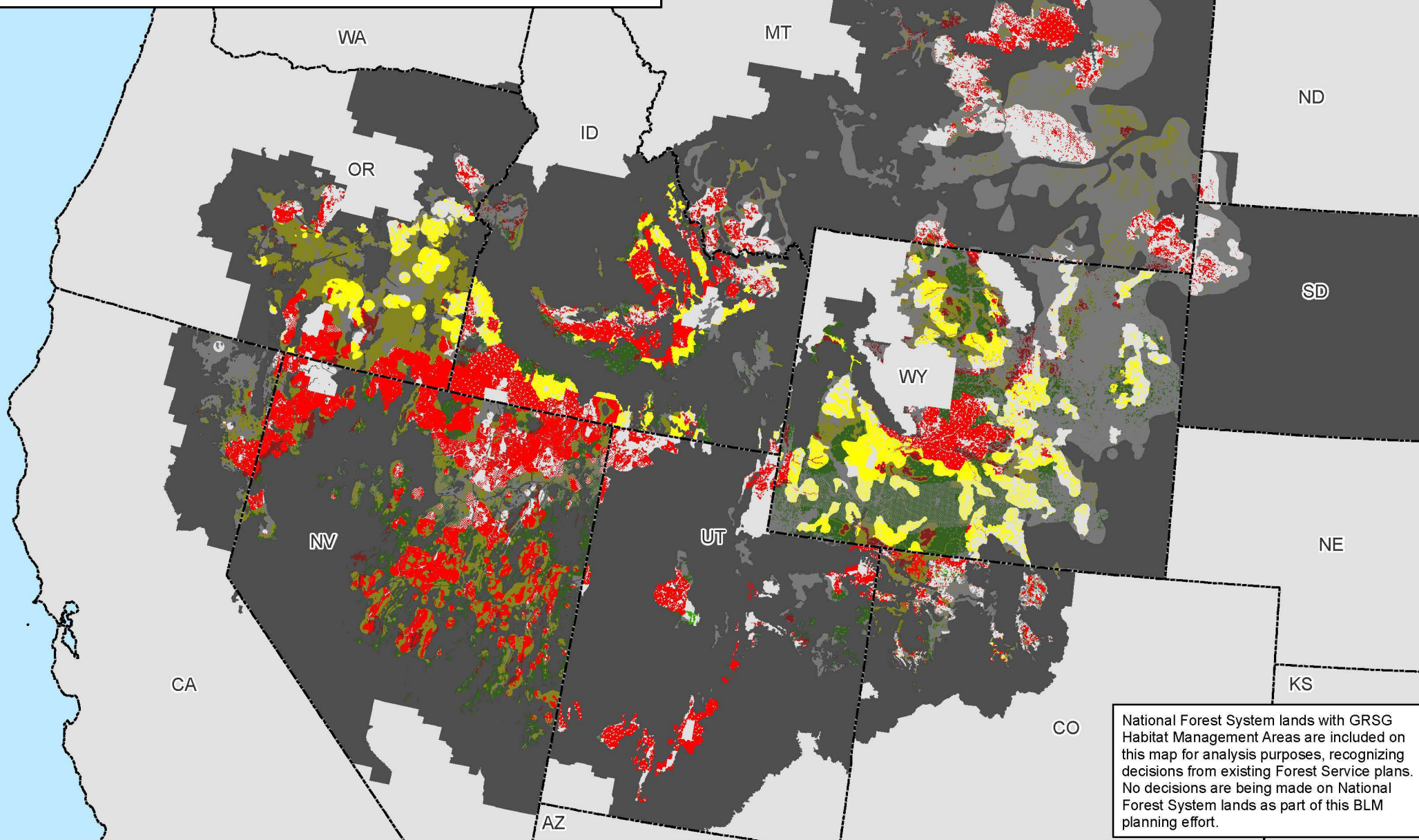


Map 2.43b



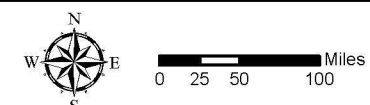
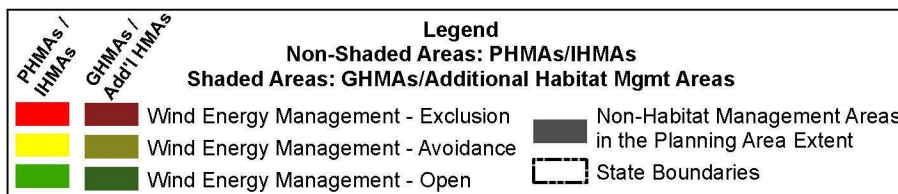


# Wind Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.44a

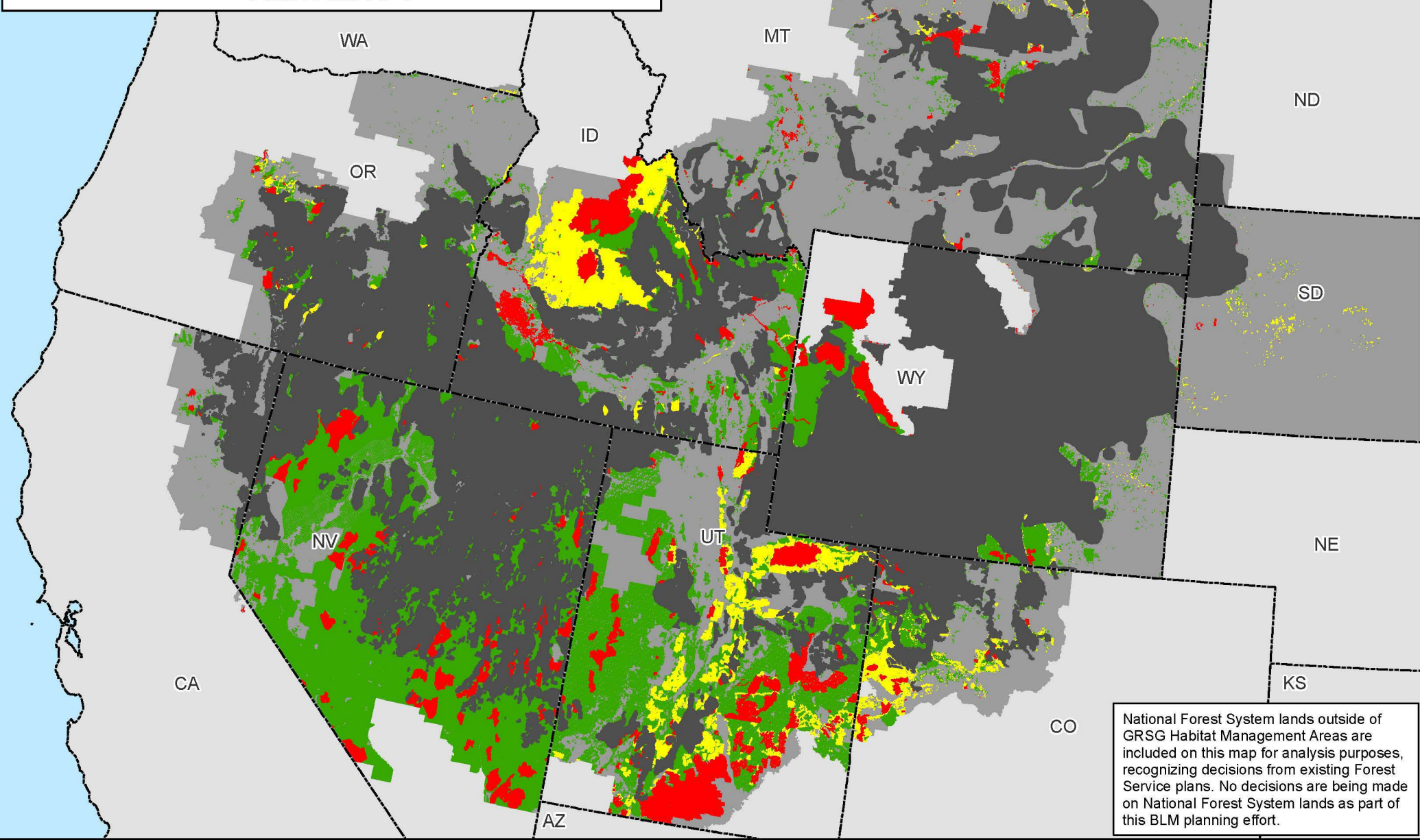


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Wind Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



Map 2.44b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

- Wind Energy Management - Exclusion
- Wind Energy Management - Avoidance
- Wind Energy Management - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

Wind Energy Management - Exclusion

Wind Energy Management - Avoidance

Wind Energy Management - Open

GRSG Habitat Management Areas

Planning Area Extent

State Boundaries

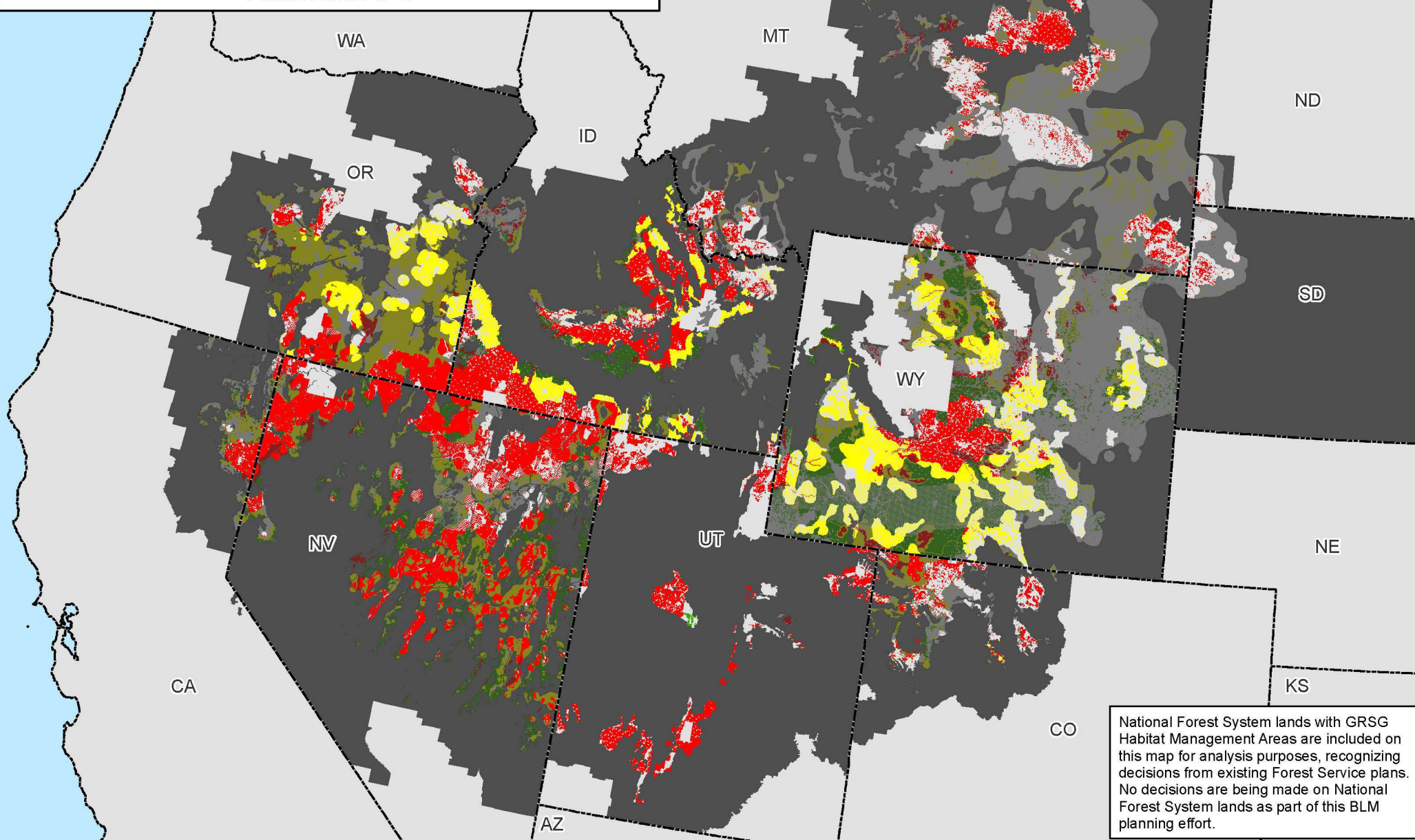


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Wind Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.45a

PHMAs / IHMAs

GHMAs / Add'l HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Wind Energy Management - Exclusion

Wind Energy Management - Avoidance

Wind Energy Management - Open

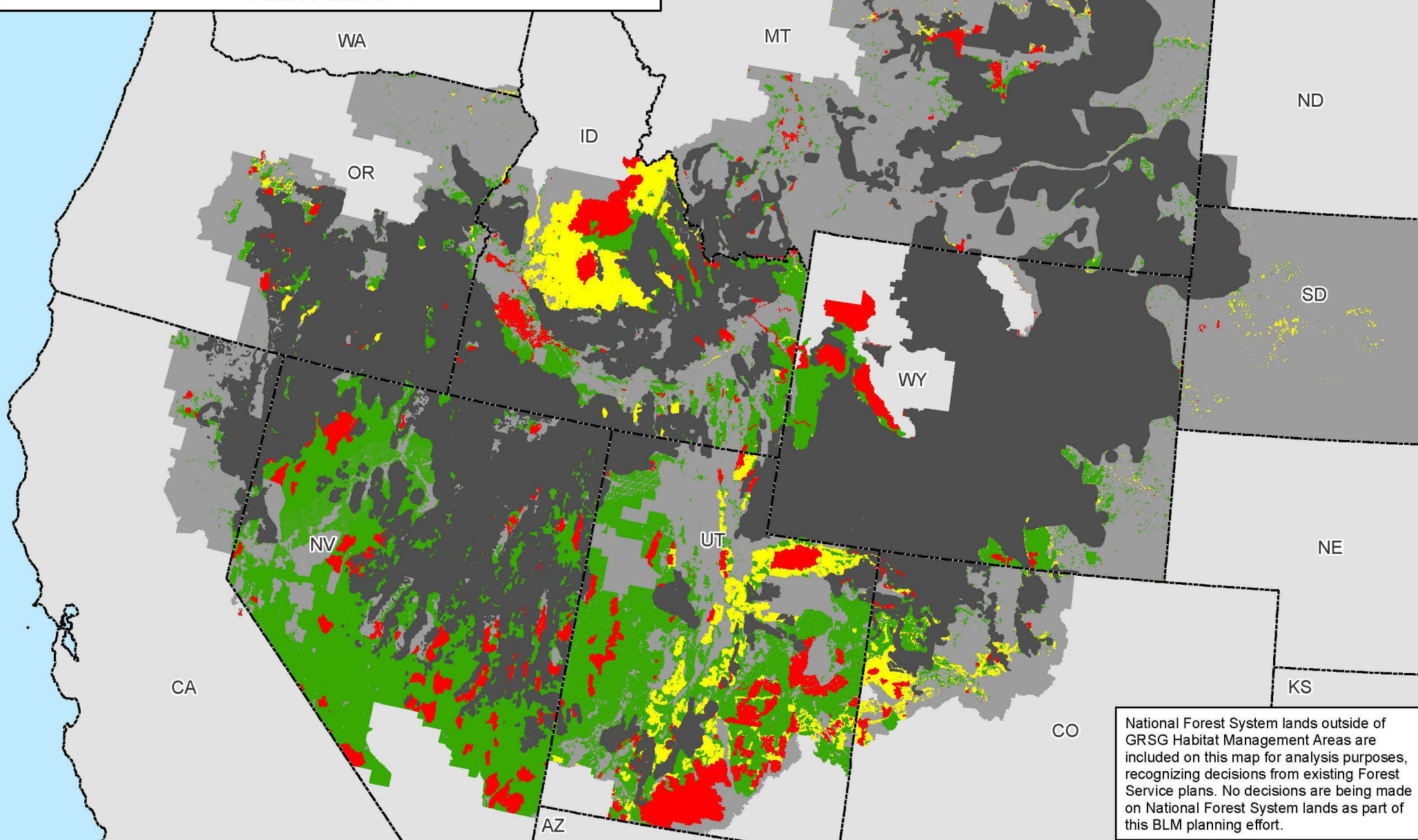
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Wind Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



Map 2.45b

**Legend**  
**Non-Masked Areas: Outside GRSG Habitat Management Areas**  
**Masked Areas: Within GRSG Habitat Management Areas**

- |  |  |
|--|--|
| <span style="color: red;">■</span> Wind Energy Management - Exclusion    | <span style="background-color: darkgray;">■</span> GRSG Habitat Management Areas |
| <span style="color: yellow;">■</span> Wind Energy Management - Avoidance | <span style="background-color: gray;">■</span> Planning Area Extent              |
| <span style="color: green;">■</span> Wind Energy Management - Open       | <span style="border: 1px dashed black;"> </span> State Boundaries                |

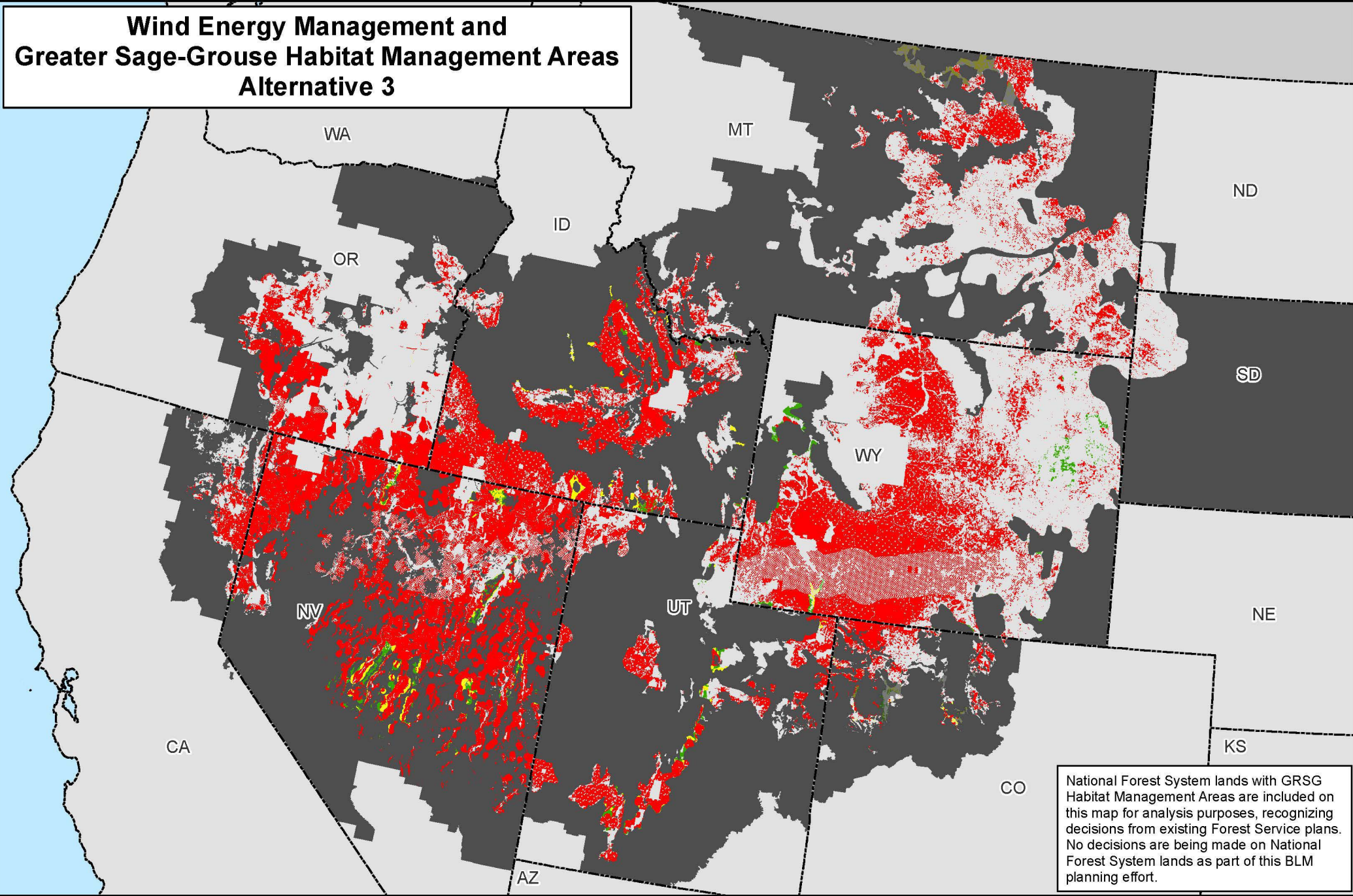


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Wind Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.46a

PHMAs

Add'l HMAs

Wind Energy Management - Exclusion

Wind Energy Management - Avoidance

Wind Energy Management - Open

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

Non-Shaded Areas: PHMAs

Shaded Areas: Additional Habitat Mgmt Areas

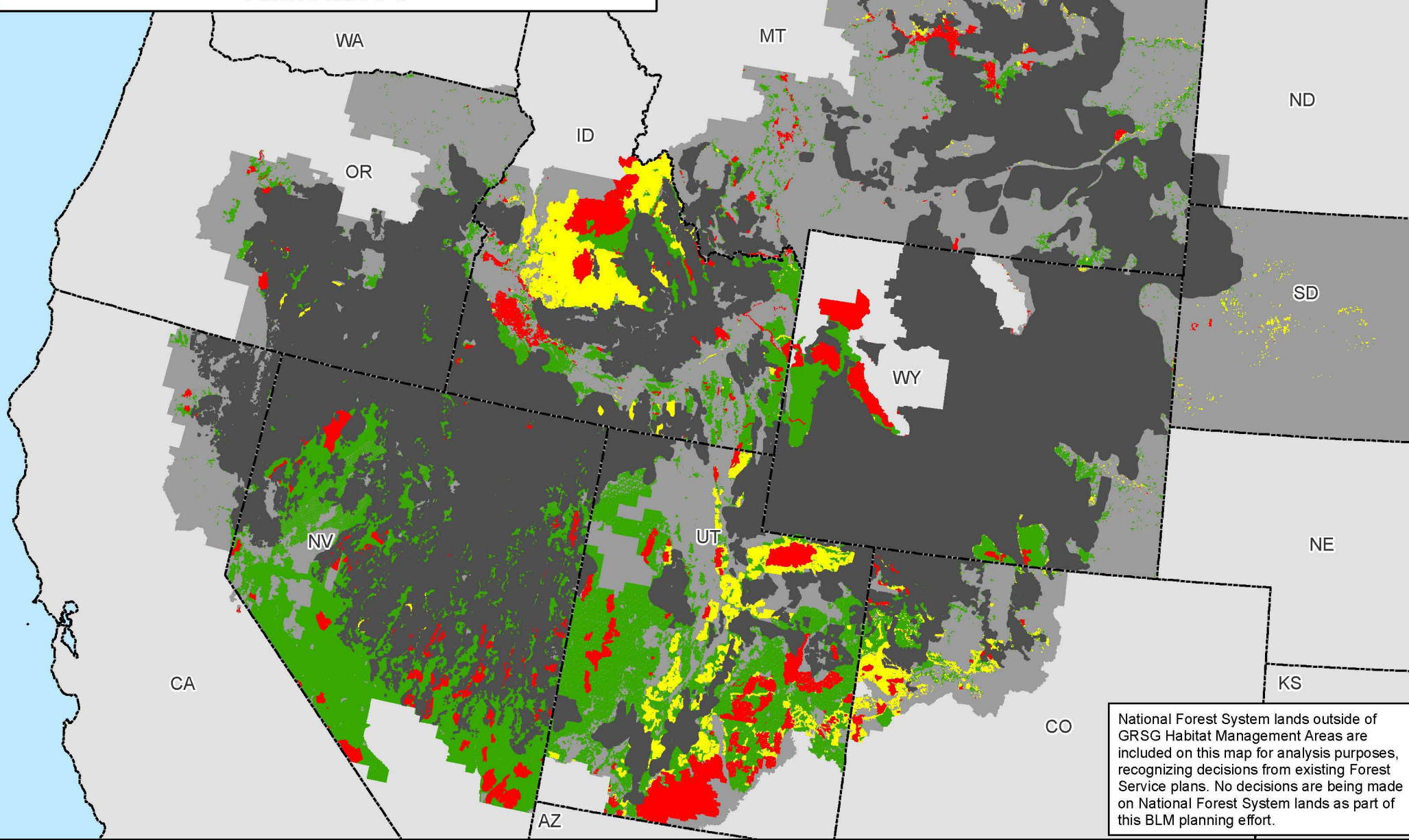


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Wind Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.46b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Wind Energy Management - Exclusion

Wind Energy Management - Avoidance

Wind Energy Management - Open

GRSG Habitat Management Areas

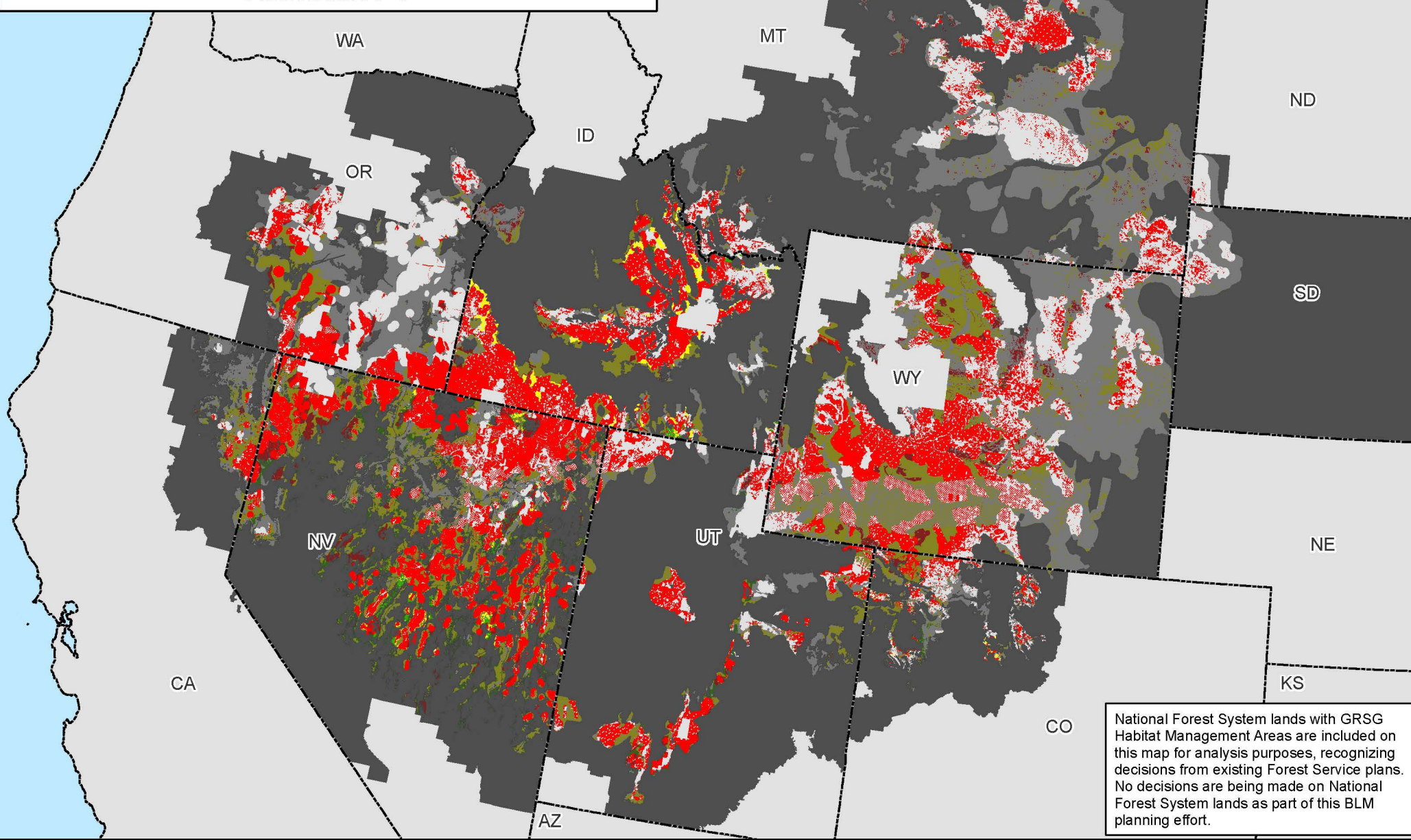
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Wind Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.47a

PHMAs / IHMAs

GHMAs / Add'l HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Wind Energy Management - Exclusion

Wind Energy Management - Avoidance

Wind Energy Management - Open

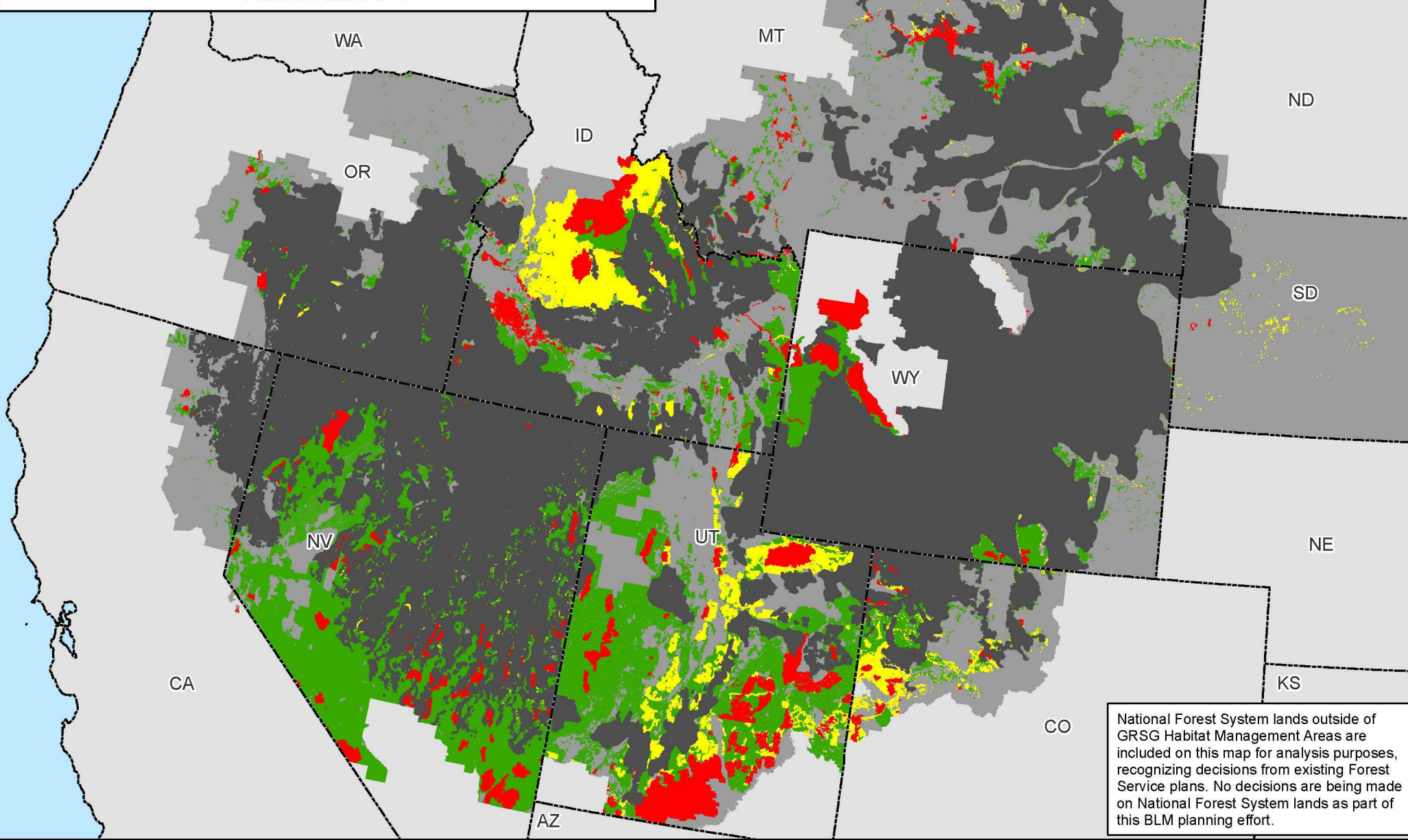
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

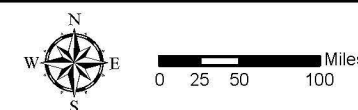
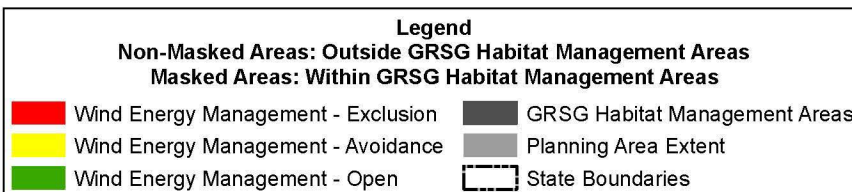
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Wind Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



Map 2.47b

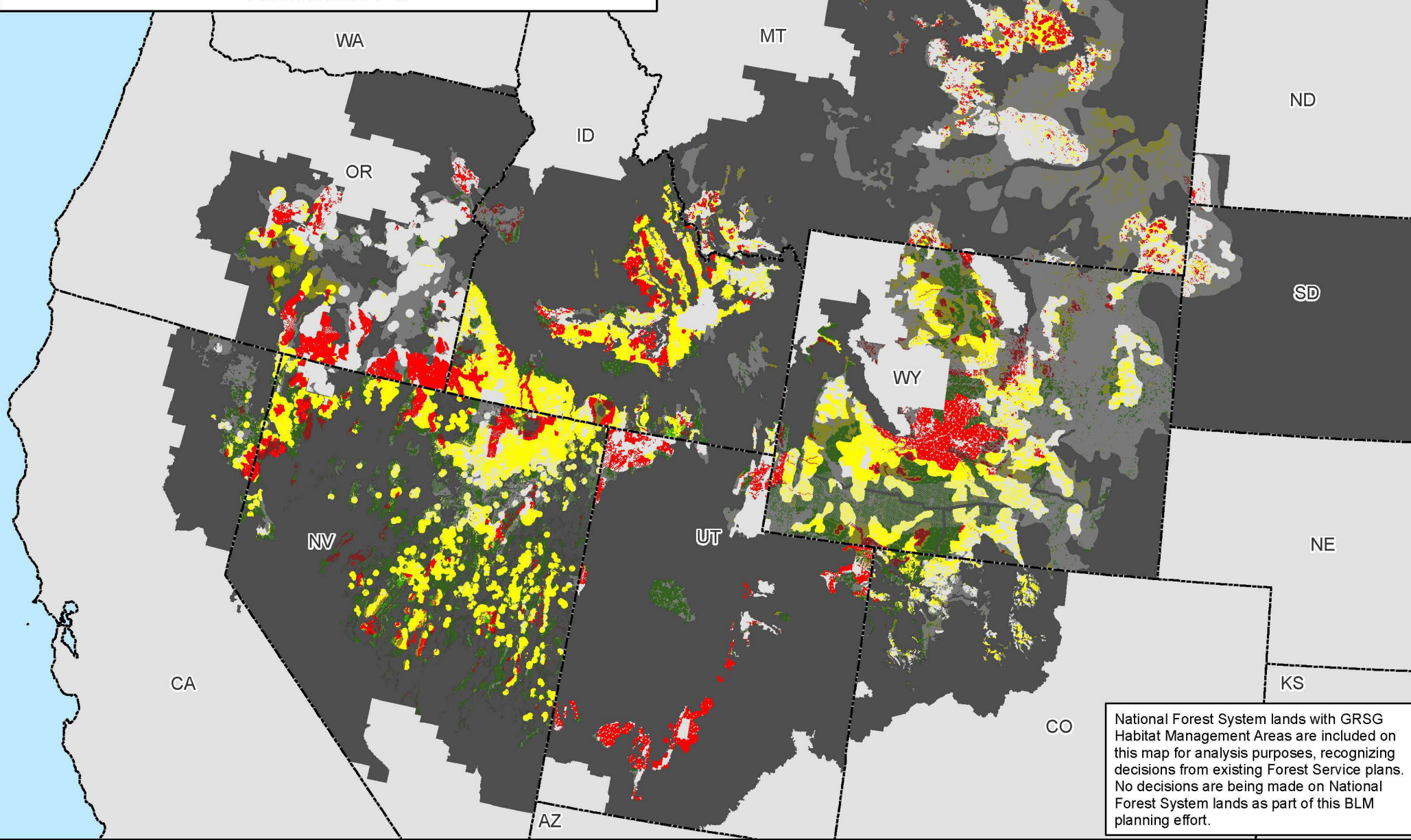


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Wind Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.48a

PHMAs / IHMAs

GHMAs / Add'l HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

<span style="color: red;">■</span>	Wind Energy Management - Exclusion	<span style="background-color: grey;">■</span>	Non-Habitat Management Areas in the Planning Area Extent
<span style="color: yellow;">■</span>	Wind Energy Management - Avoidance	<span style="border: 1px dashed black;"> </span>	State Boundaries
<span style="color: green;">■</span>	Wind Energy Management - Open		

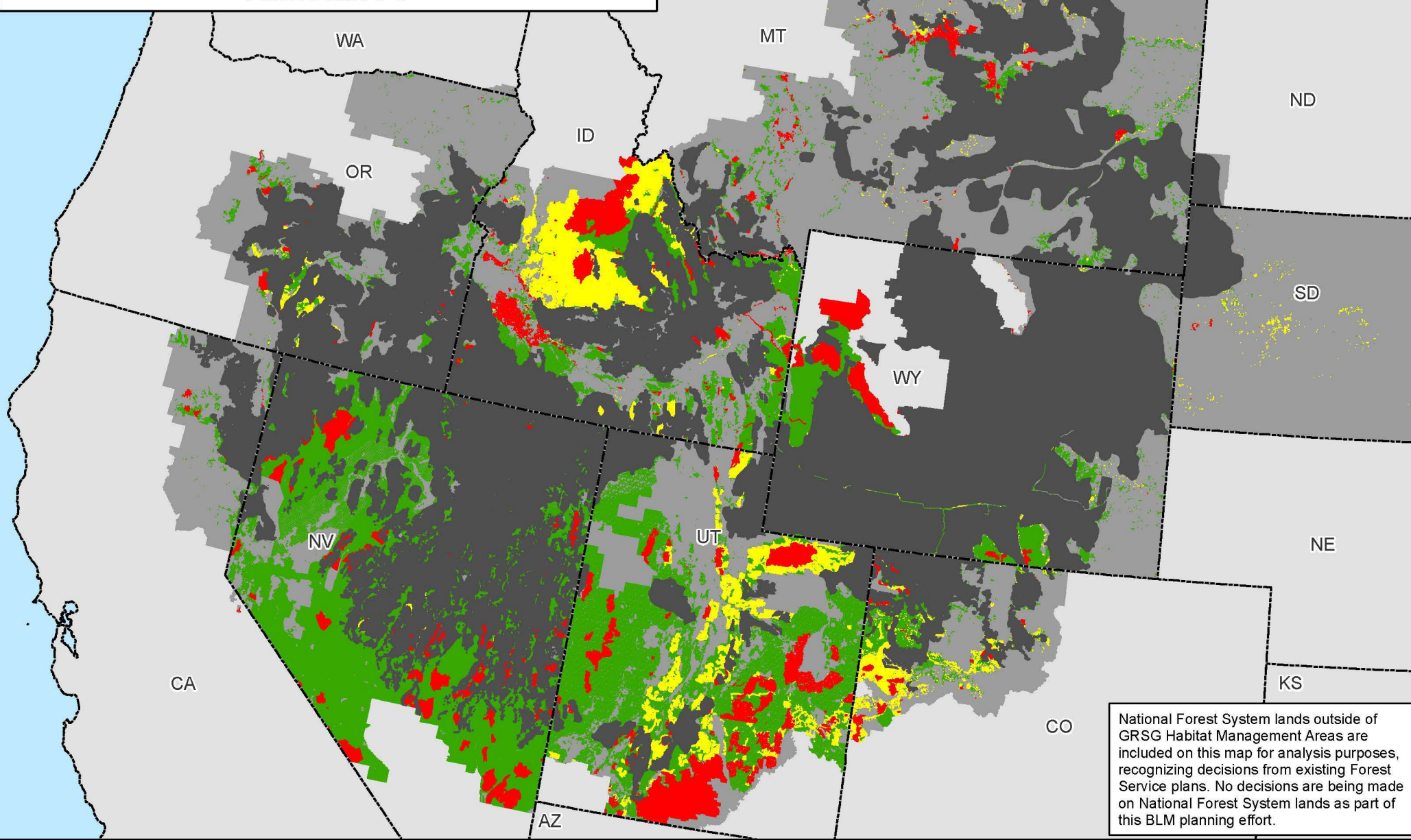
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Wind Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.48b

**Legend**  
**Non-Masked Areas: Outside GRSG Habitat Management Areas**  
**Masked Areas: Within GRSG Habitat Management Areas**

- |  |  |
|--|--|
| <span style="color: red;">■</span> Wind Energy Management - Exclusion    | <span style="background-color: darkgrey;">■</span> GRSG Habitat Management Areas |
| <span style="color: yellow;">■</span> Wind Energy Management - Avoidance | <span style="background-color: lightgrey;">■</span> Planning Area Extent         |
| <span style="color: green;">■</span> Wind Energy Management - Open       | <span style="border: 1px dashed black;"> </span> State Boundaries                |

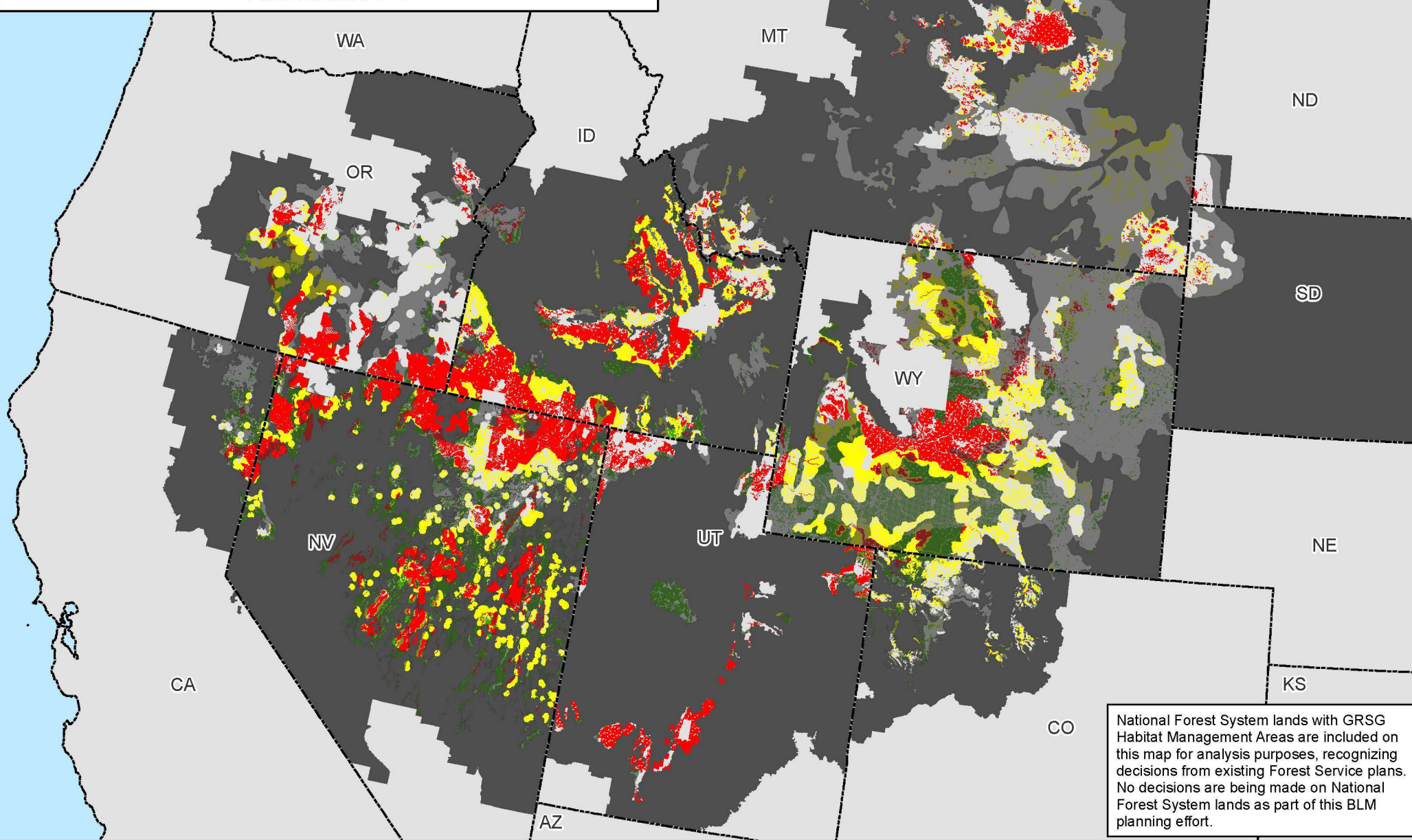


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



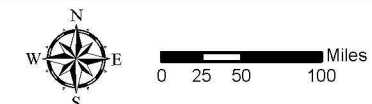
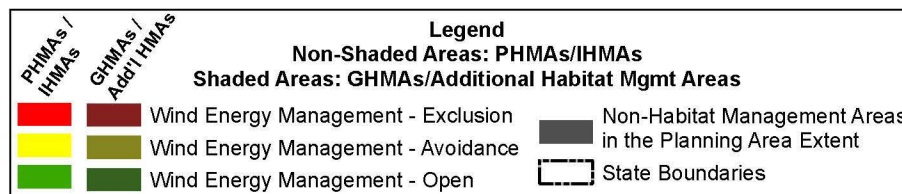


# Wind Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.49a

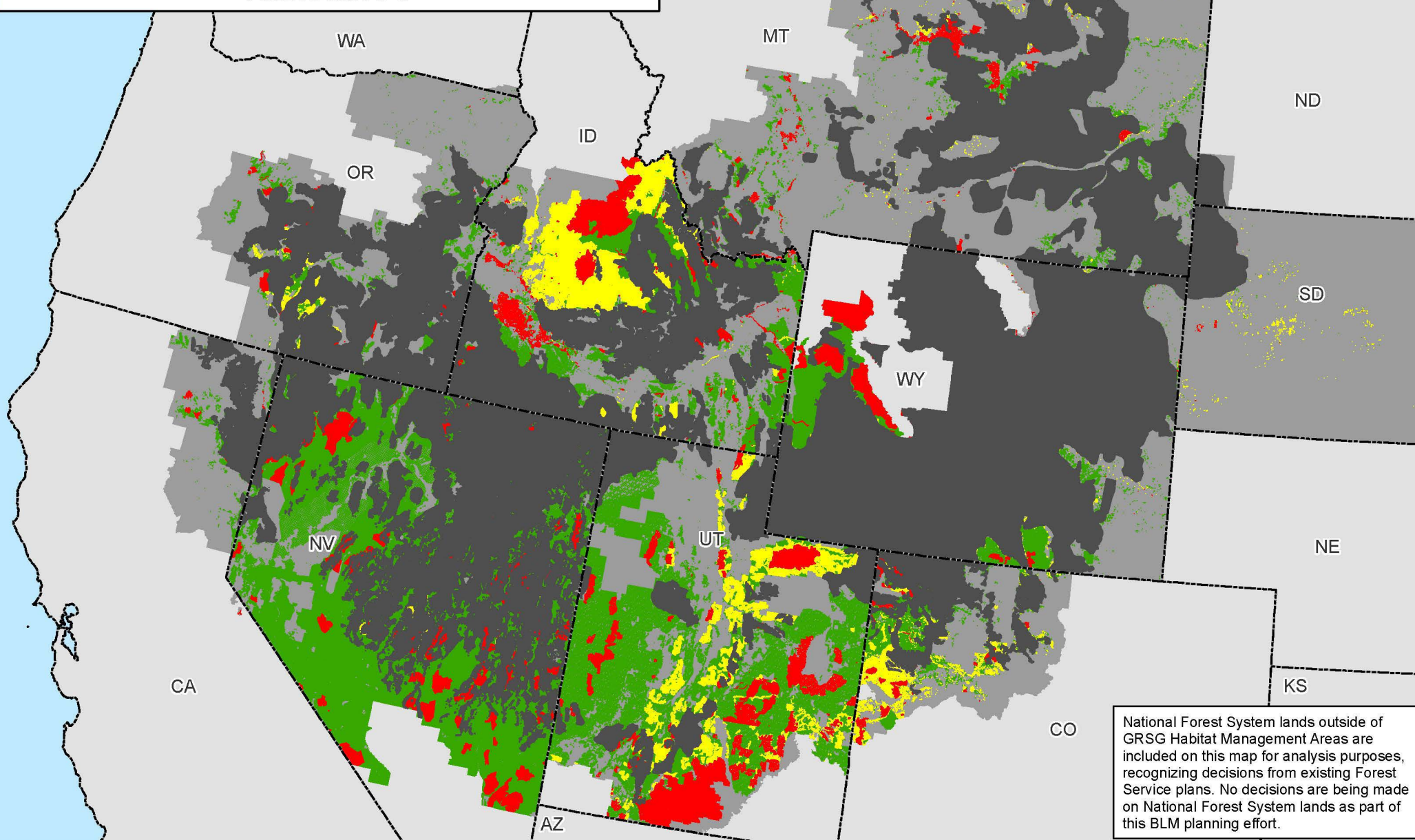


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

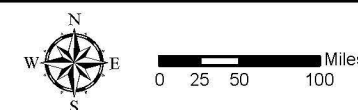




# Wind Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.49b

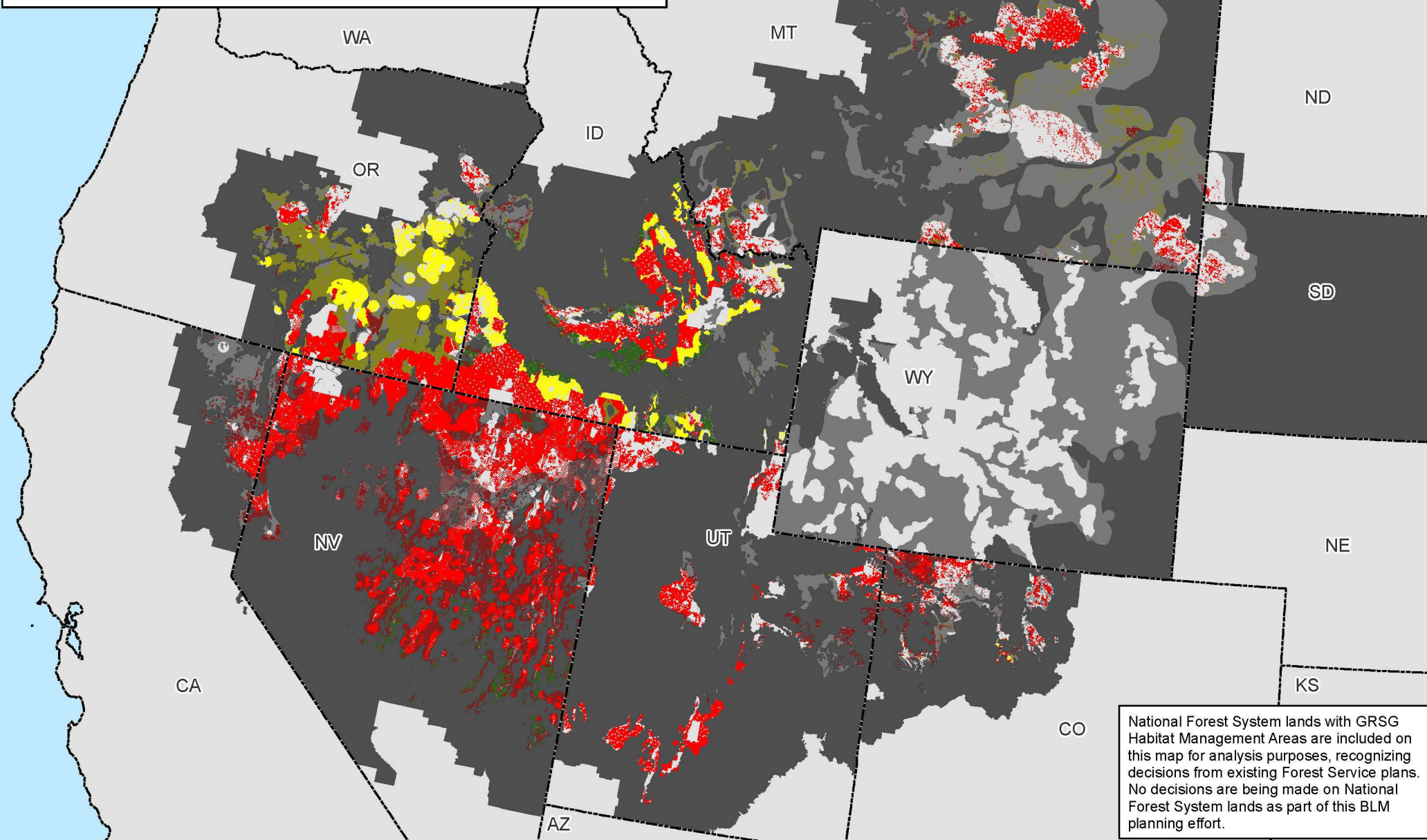


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





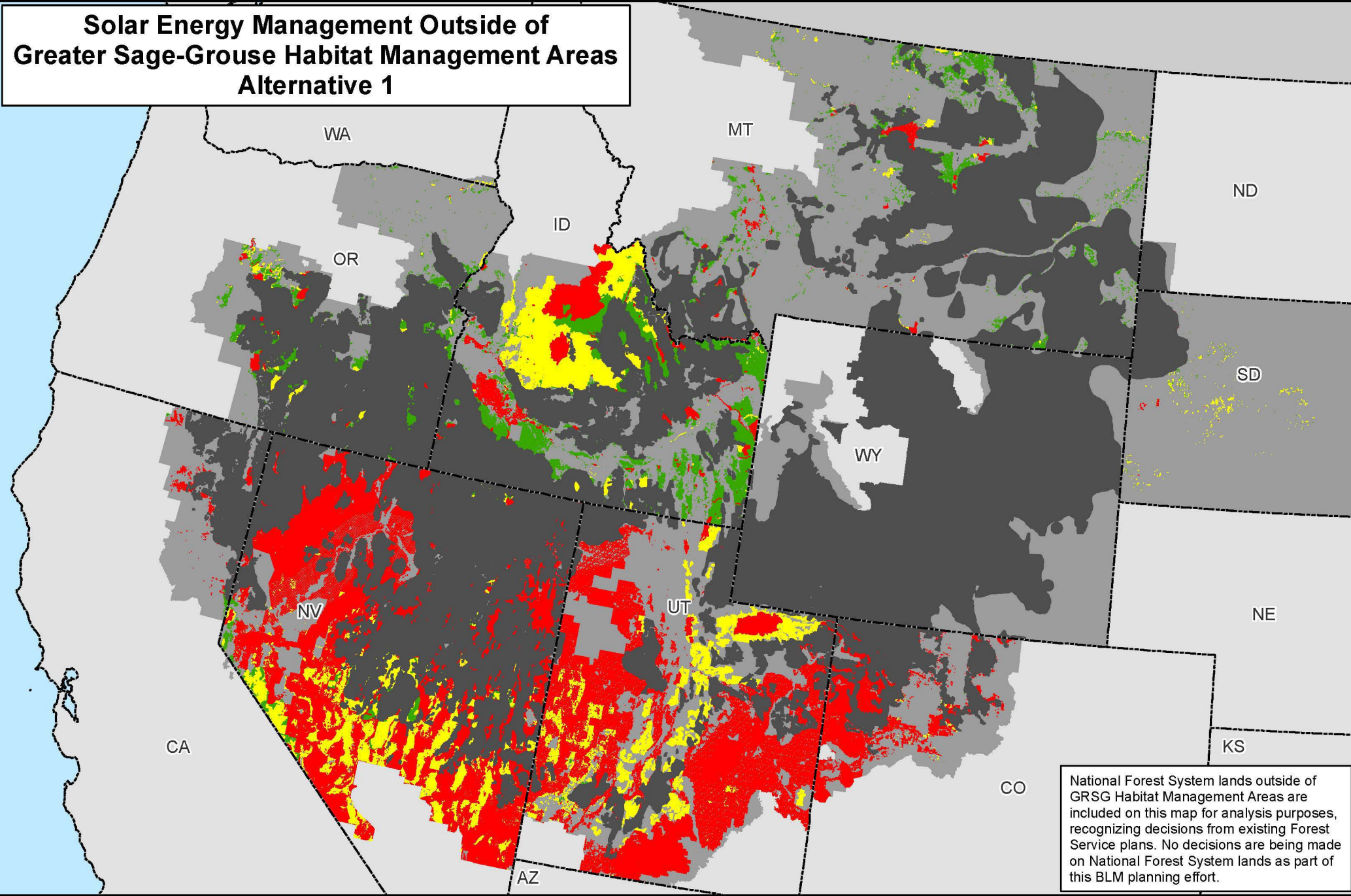
# Solar Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 1



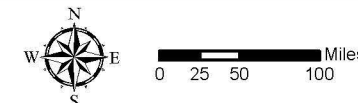
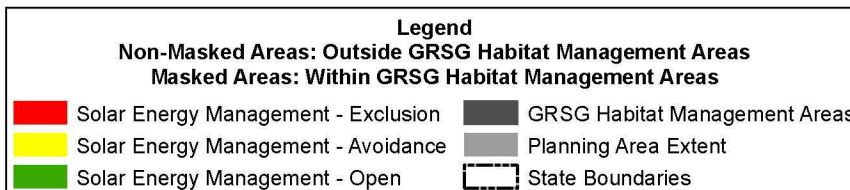
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Solar Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



Map 2.50b

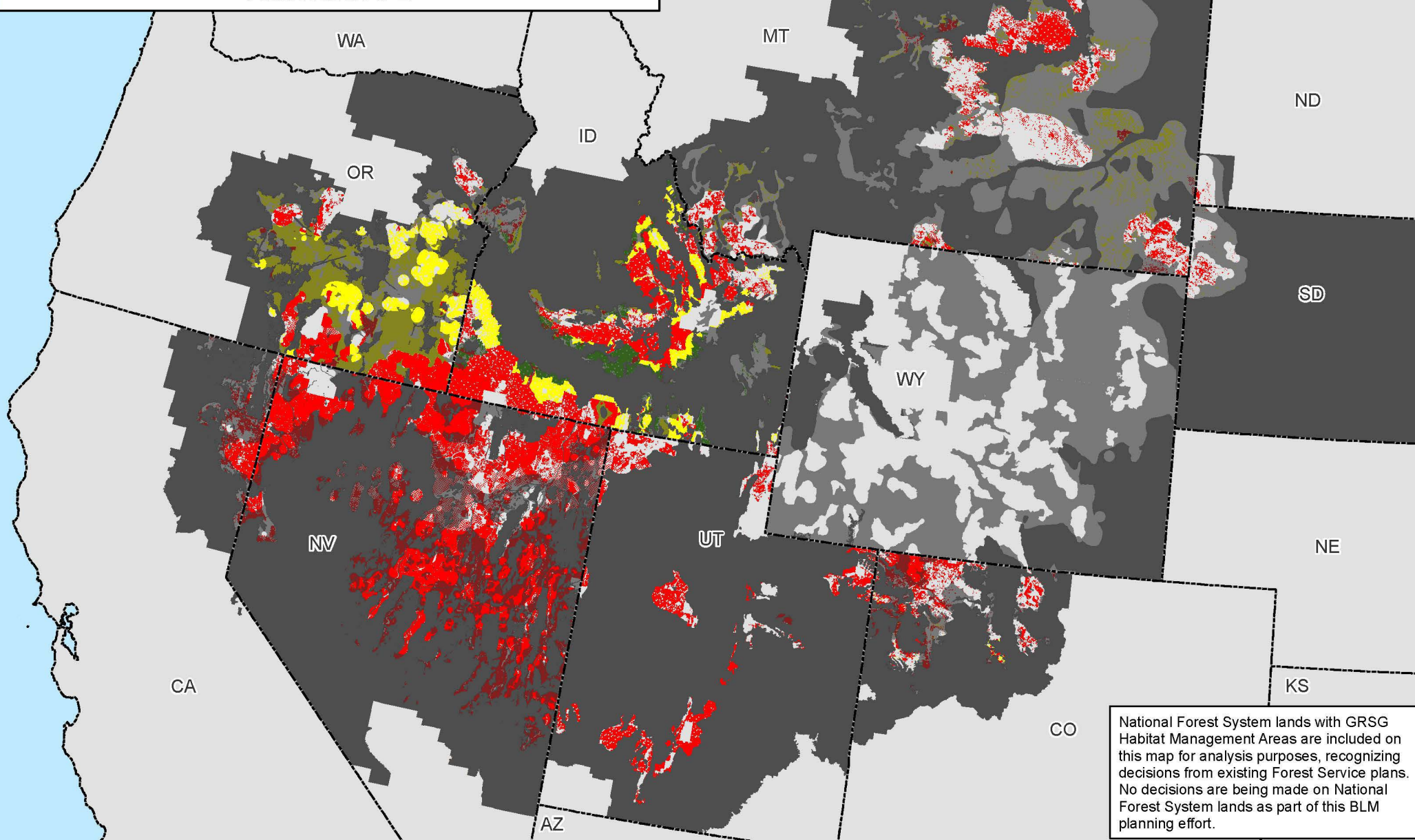


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Solar Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.51a

PHMAs / IHMAs

GHMAs / Add'l HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

Solar Energy Management - Exclusion

Solar Energy Management - Avoidance

Solar Energy Management - Open

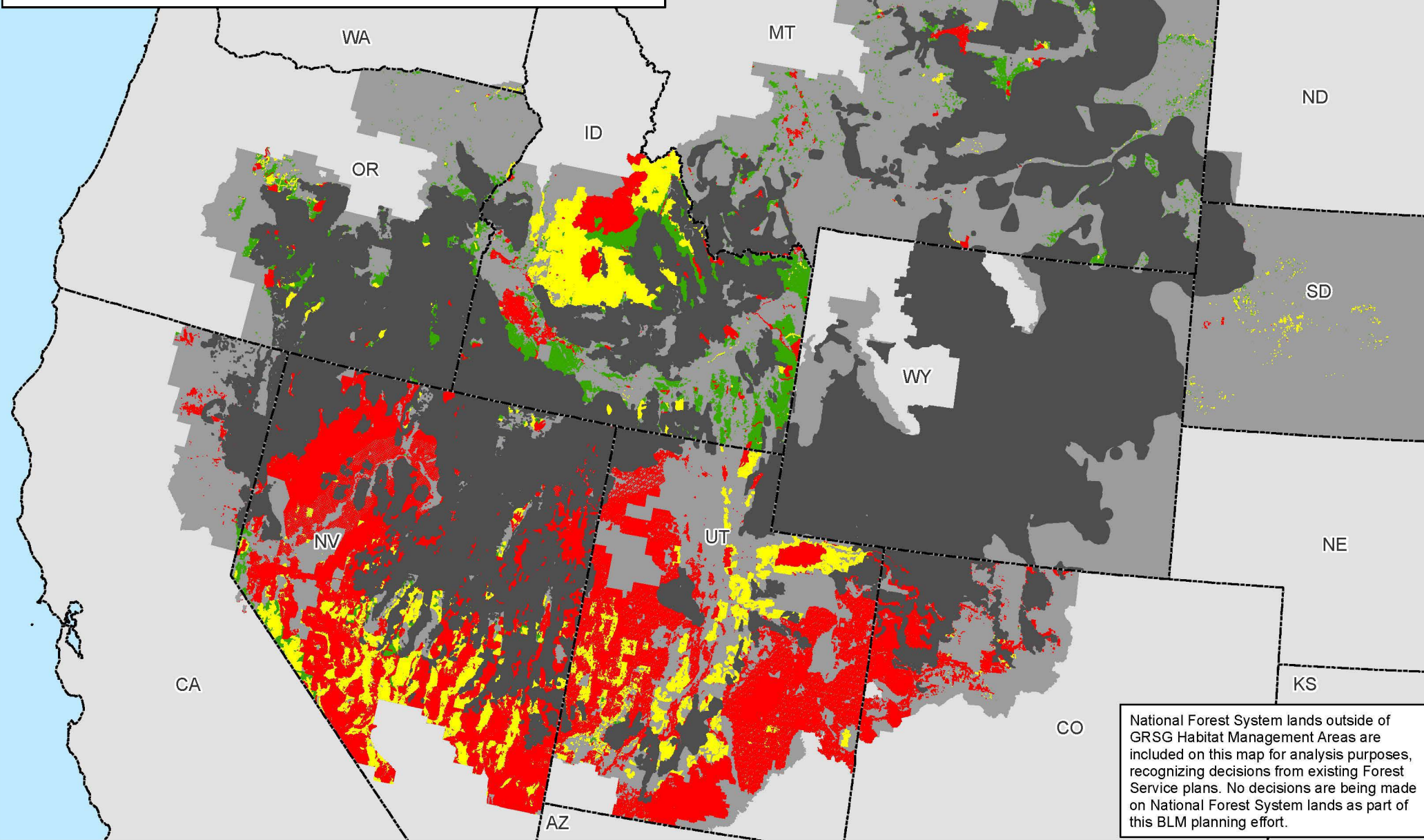
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

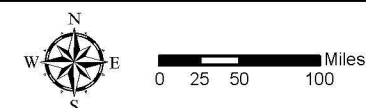
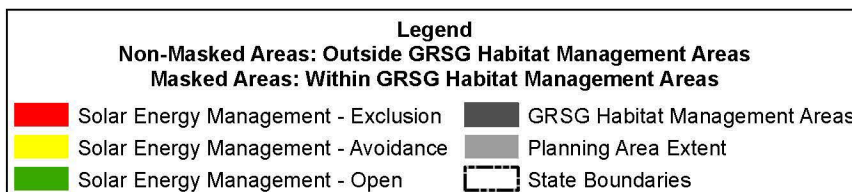
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Solar Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



Map 2.51b

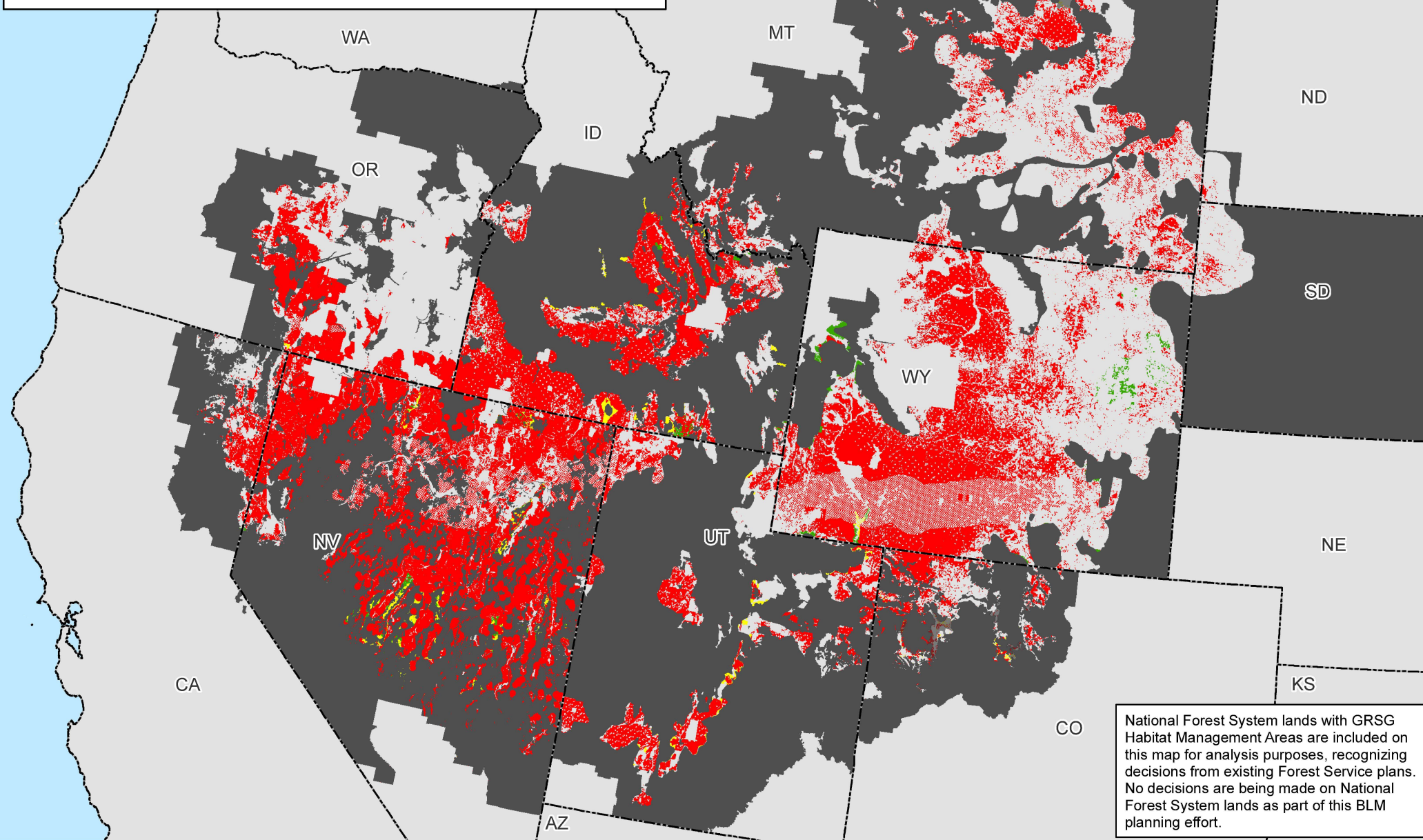


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



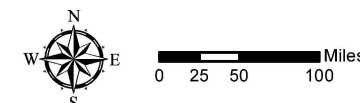
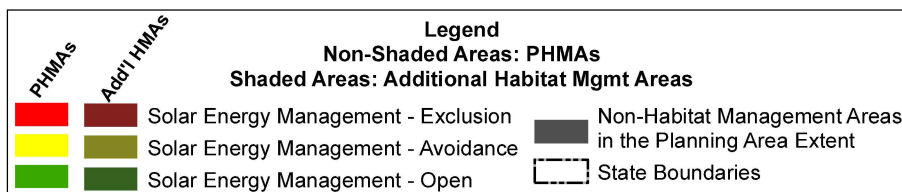


# Solar Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.52a

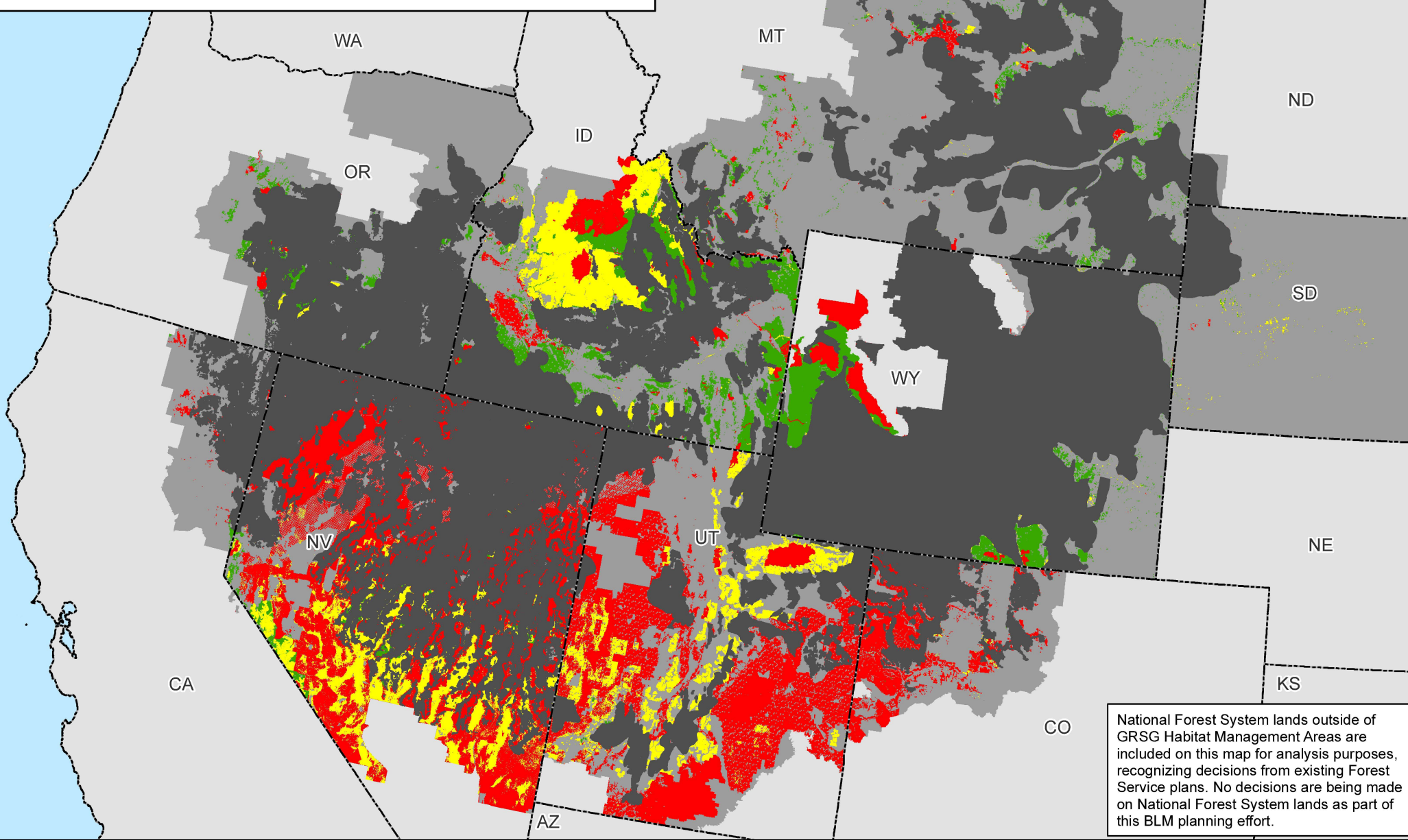


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Solar Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



Map 2.52b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Solar Energy Management - Exclusion

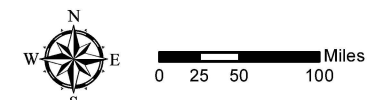
Solar Energy Management - Avoidance

Solar Energy Management - Open

GRSG Habitat Management Areas

Planning Area Extent

State Boundaries

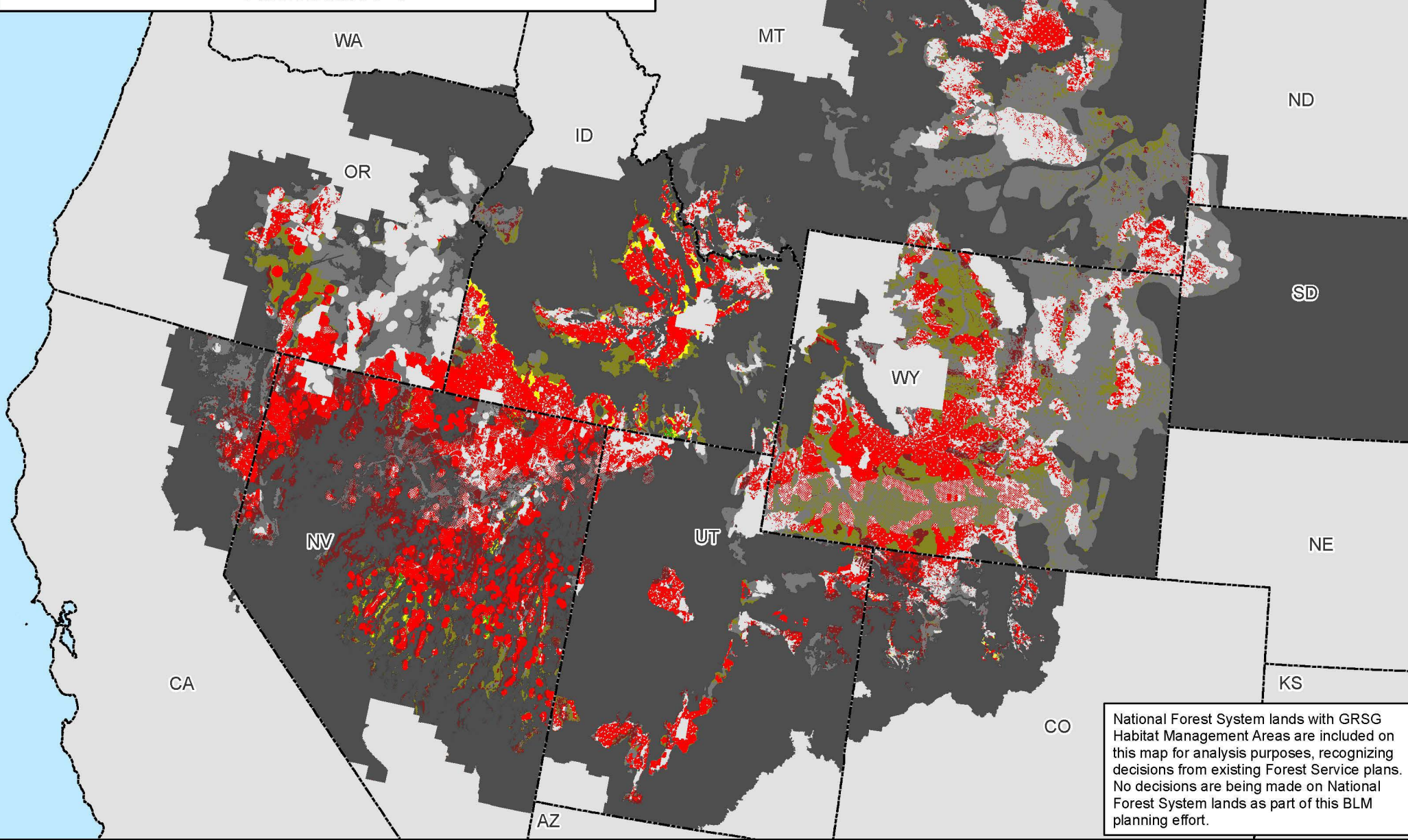


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Solar Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 4

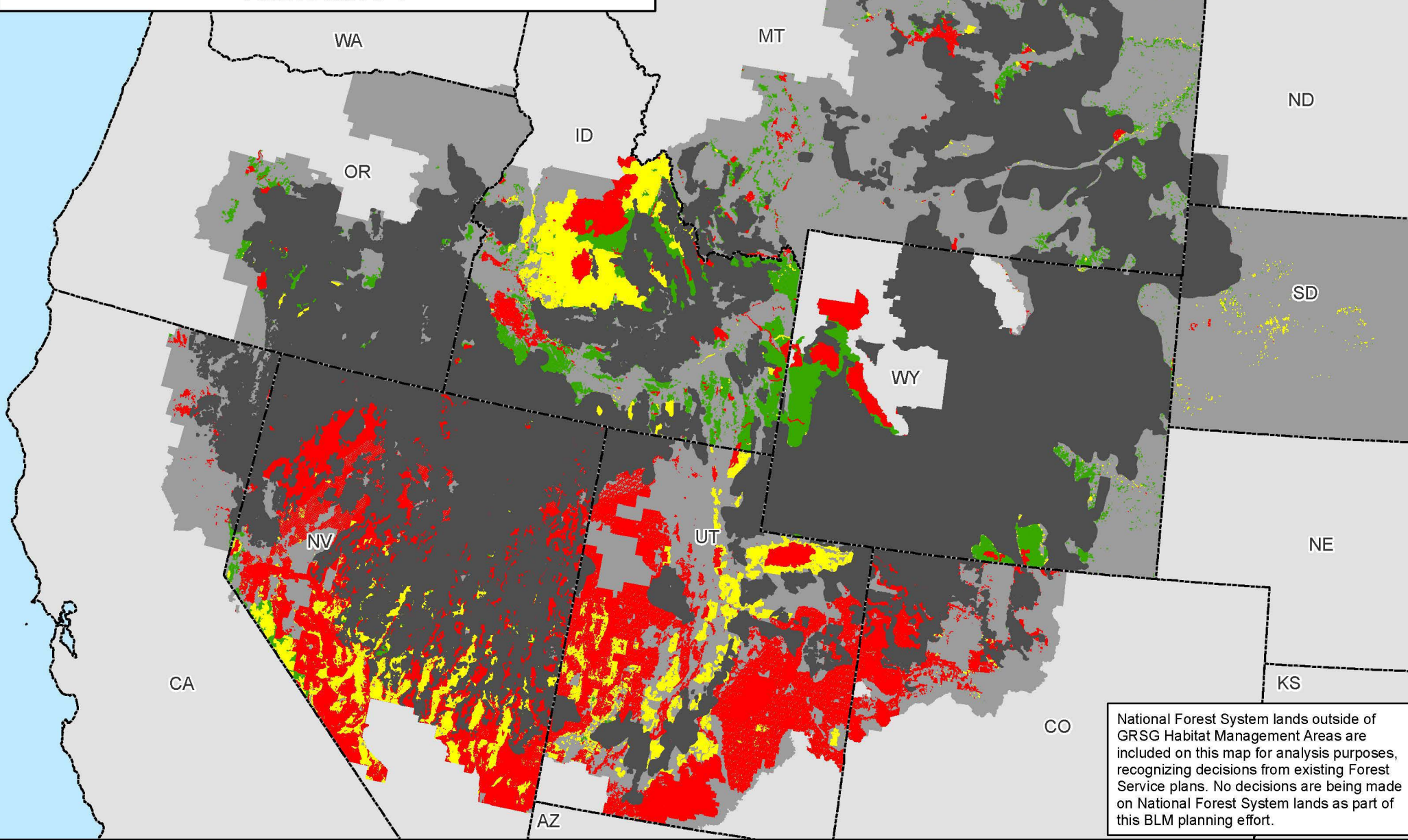


National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.





# Solar Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



Map 2.53b

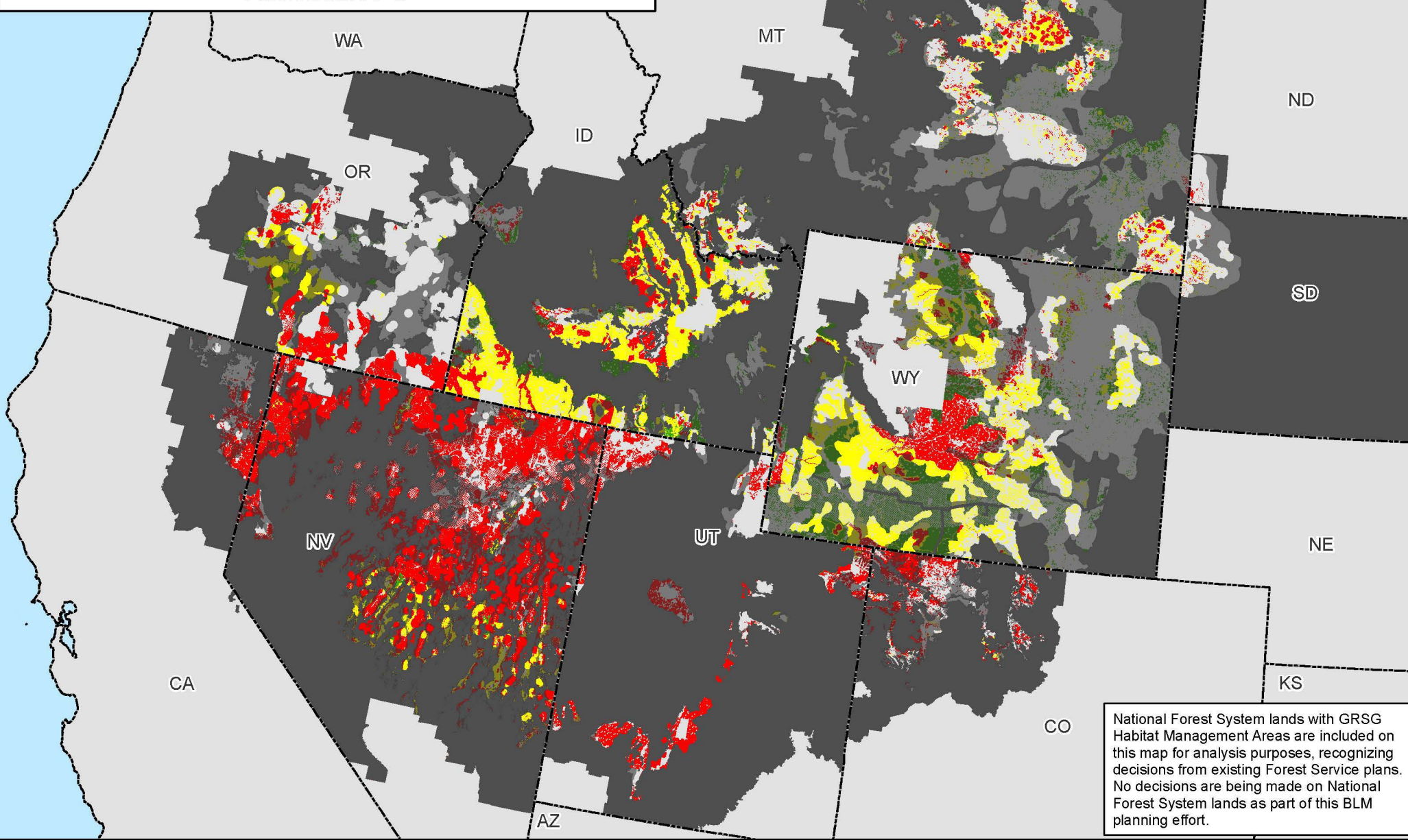


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Solar Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.54a

PHMAs / IHMAs

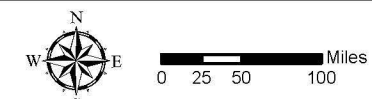
GHMAs / Add'l HMAs

**Legend**

**Non-Shaded Areas: PHMAs/IHMAs**

**Shaded Areas: GHMAs/Additional Habitat Mgmt Areas**

<span style="color: red;">■</span>	Solar Energy Management - Exclusion	<span style="background-color: gray;">■</span>	Non-Habitat Management Areas in the Planning Area Extent
<span style="color: yellow;">■</span>	Solar Energy Management - Avoidance	<span style="border: 1px dashed black;"> </span>	State Boundaries
<span style="color: green;">■</span>	Solar Energy Management - Open		

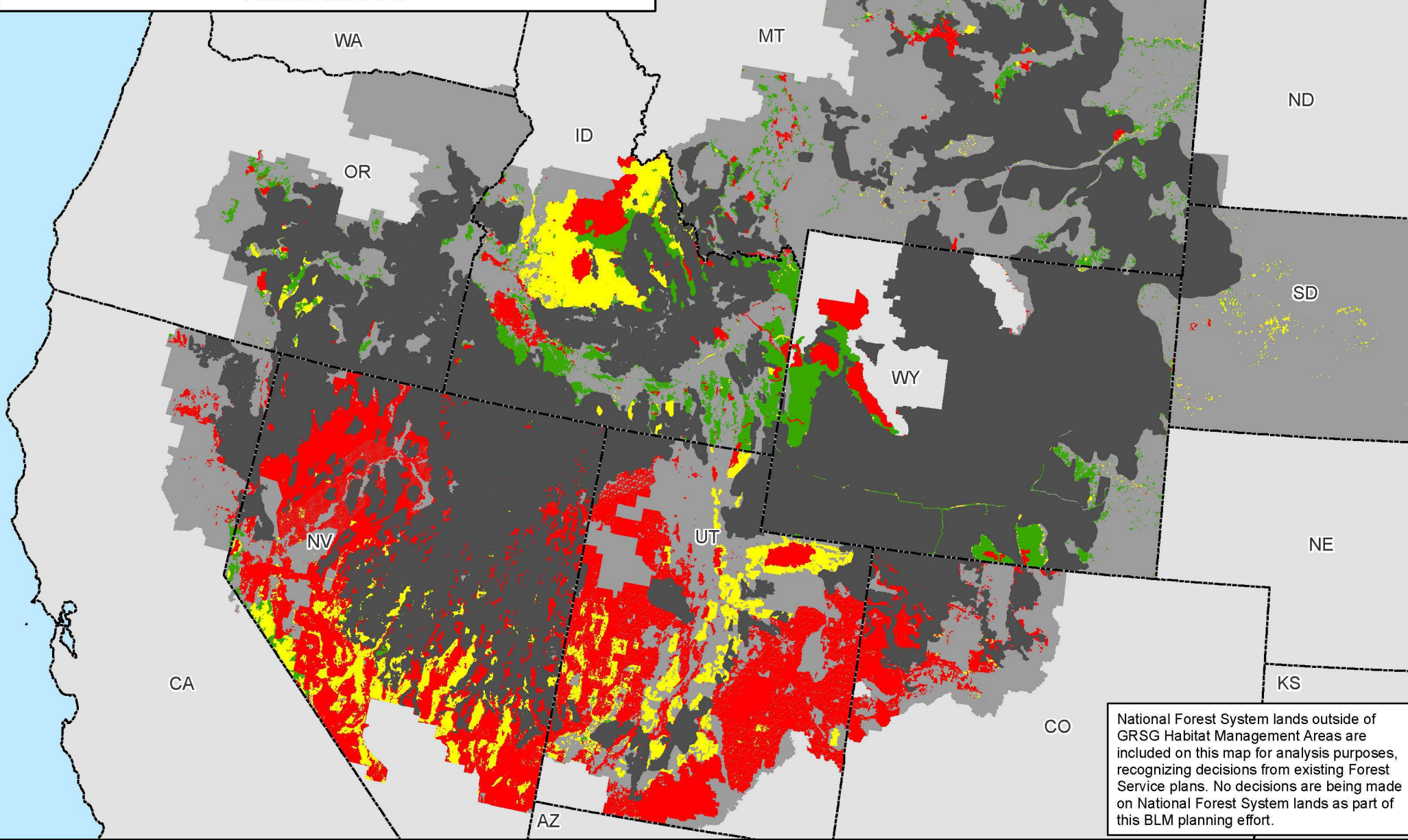


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Solar Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.54b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

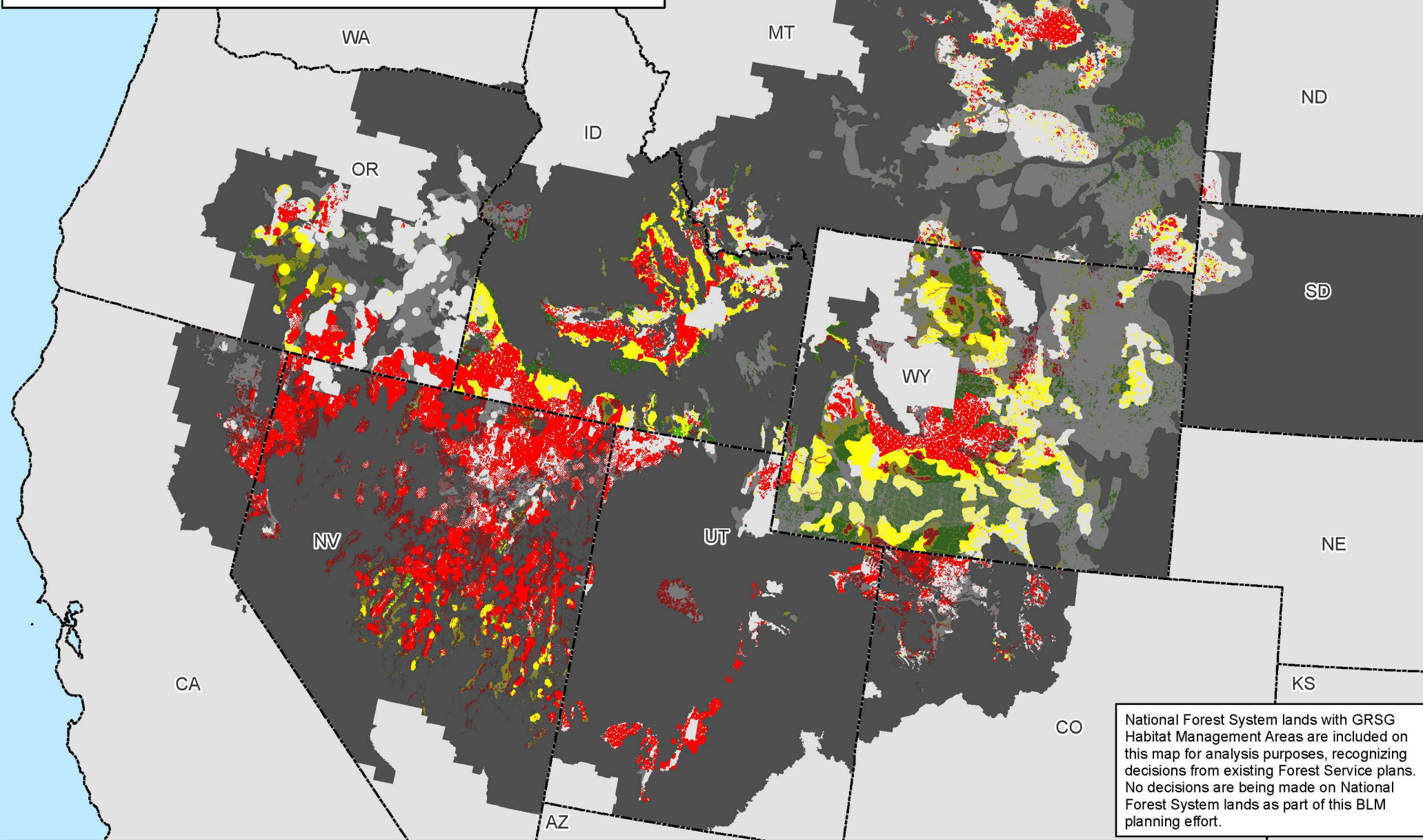
- Solar Energy Management - Exclusion
- Solar Energy Management - Avoidance
- Solar Energy Management - Open
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

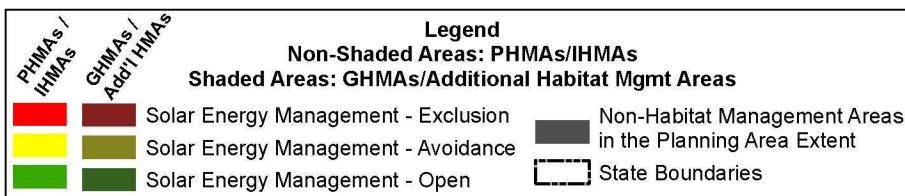




# Solar Energy Management and Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.55a

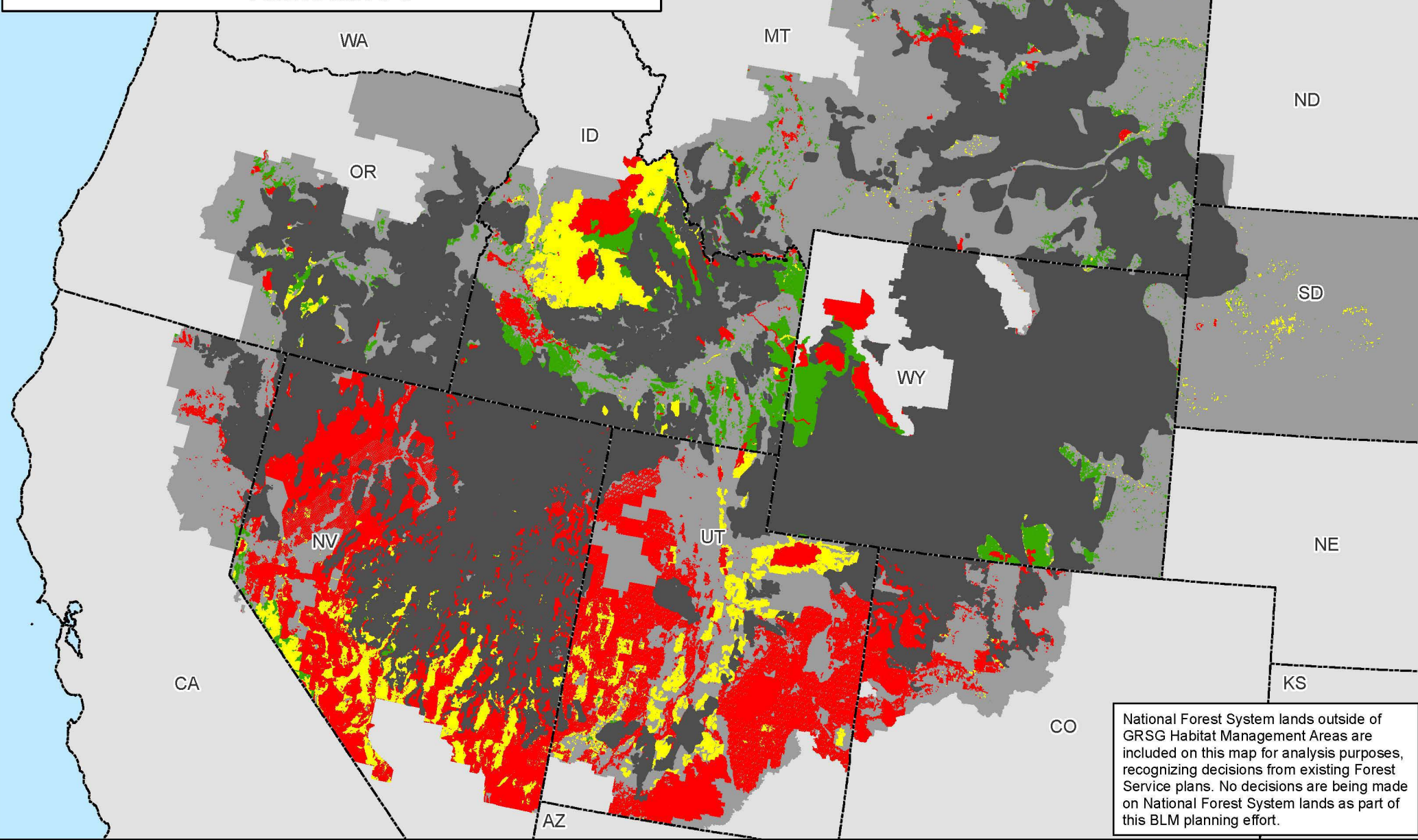


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

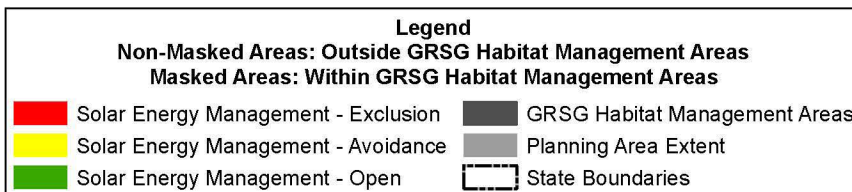




# Solar Energy Management Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.55b

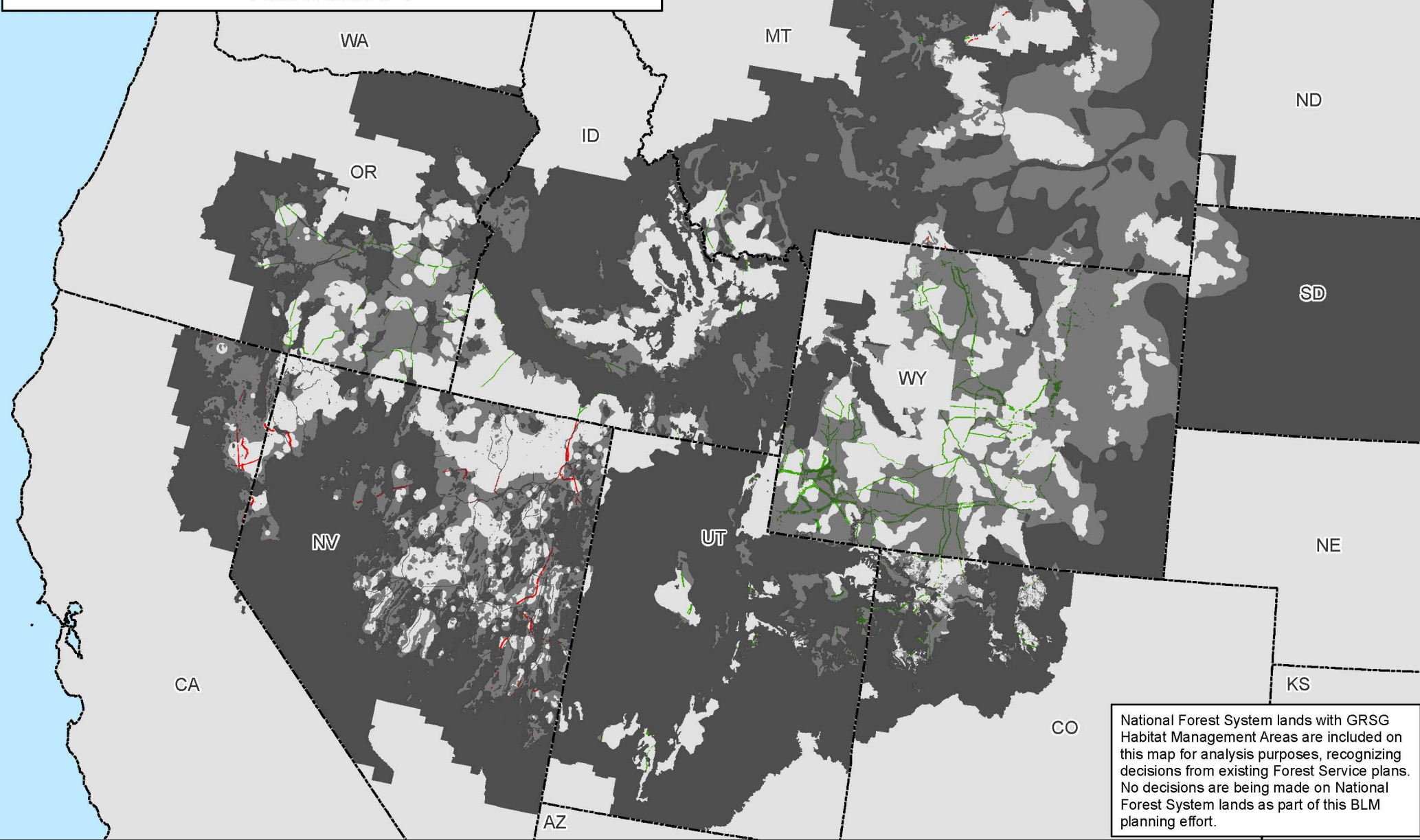


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

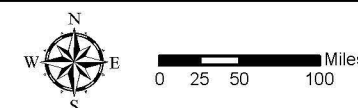
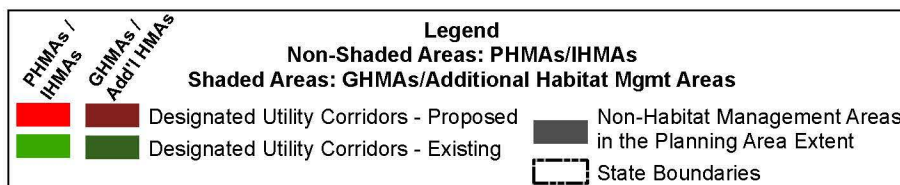




# Designated Utility Corridors and Greater Sage-Grouse Habitat Management Areas Alternative 1



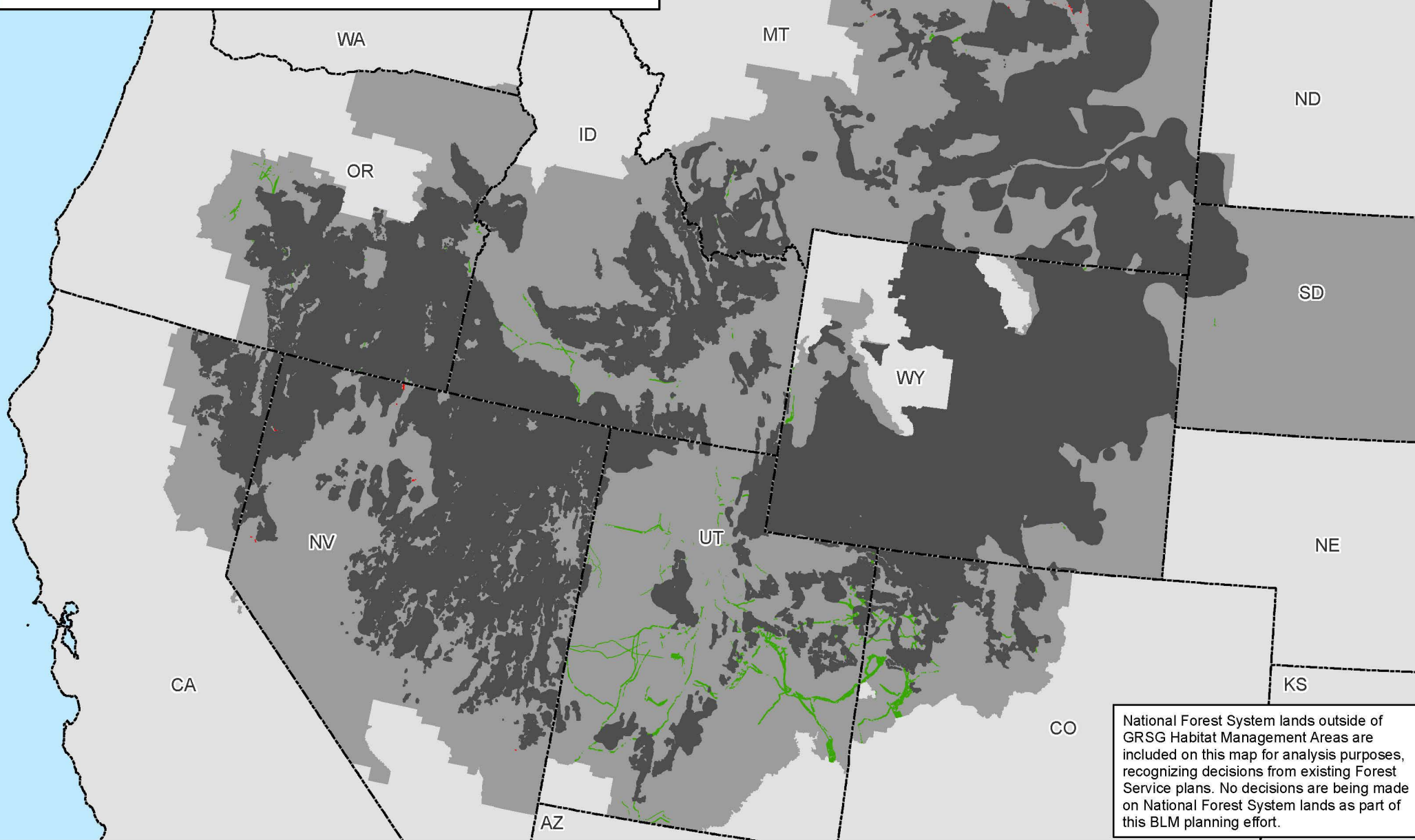
Map 2.56a



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Designated Utility Corridors Outside of Greater Sage-Grouse Habitat Management Areas Alternative 1



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.56b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Designated Utility Corridors - Proposed

Designated Utility Corridors - Existing

GRSG Habitat Management Areas

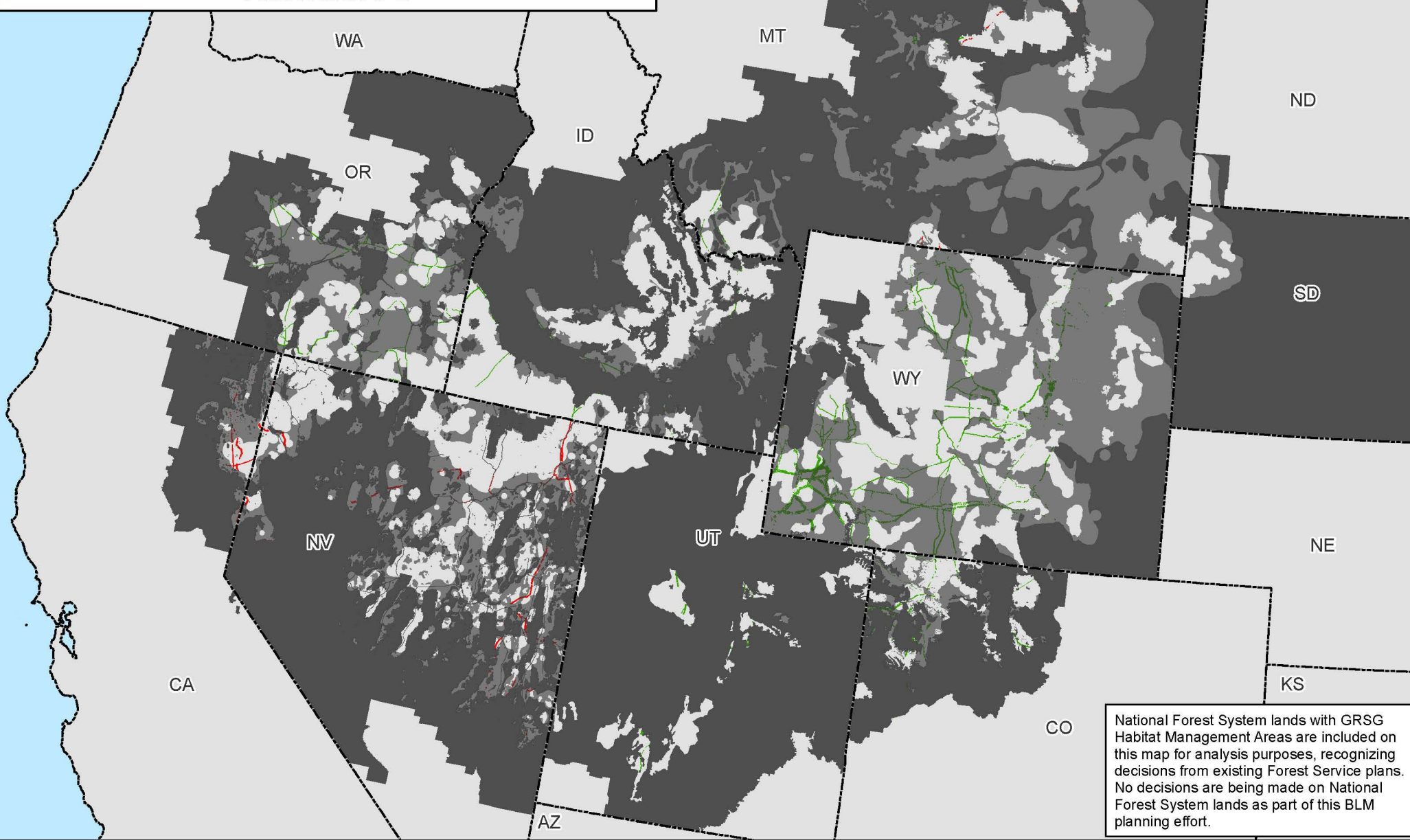
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Designated Utility Corridors and Greater Sage-Grouse Habitat Management Areas Alternative 2



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.57a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Red

Dark Green

Designated Utility Corridors - Proposed

Designated Utility Corridors - Existing

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Dark Gray

White

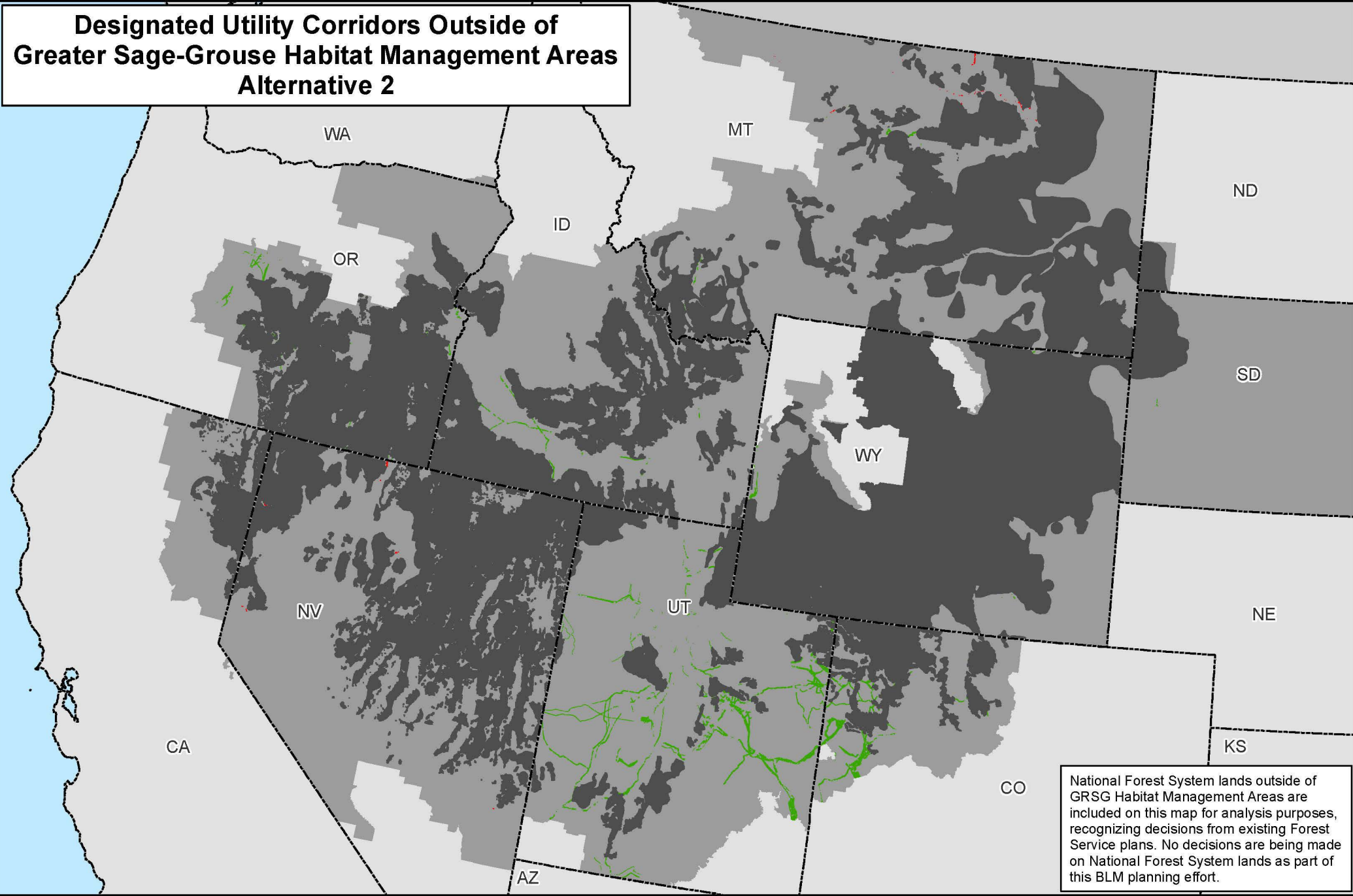
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Designated Utility Corridors Outside of Greater Sage-Grouse Habitat Management Areas Alternative 2



Map 2.57b



**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

Designated Utility Corridors - Proposed

Designated Utility Corridors - Existing

GRSG Habitat Management Areas

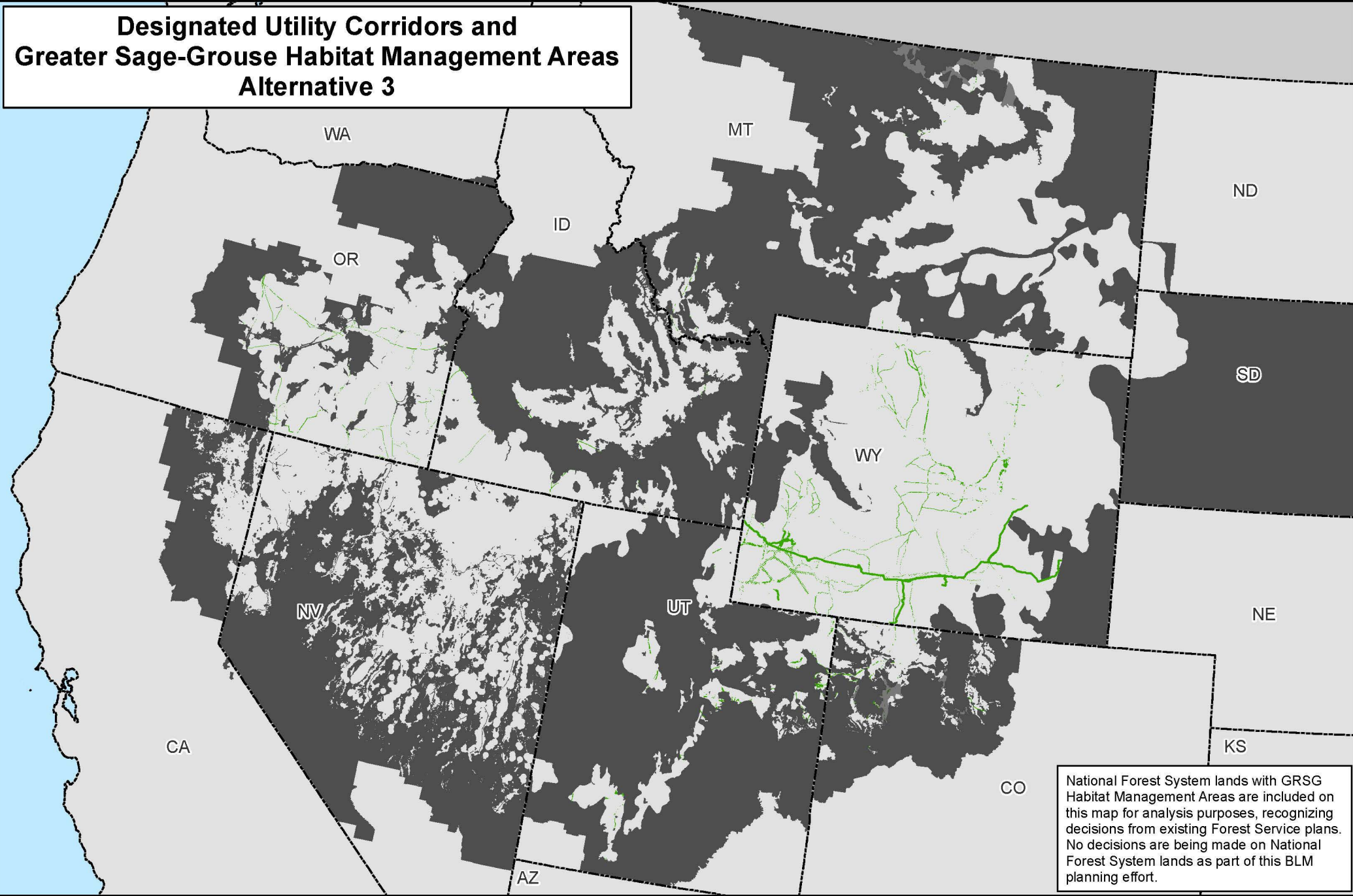
Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Designated Utility Corridors and Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.58a

PHMAs
 Add'l HMAs

**Legend**

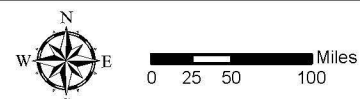
Non-Shaded Areas: PHMAs

Shaded Areas: Additional Habitat Mgmt Areas

Designated Utility Corridors - Existing

Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

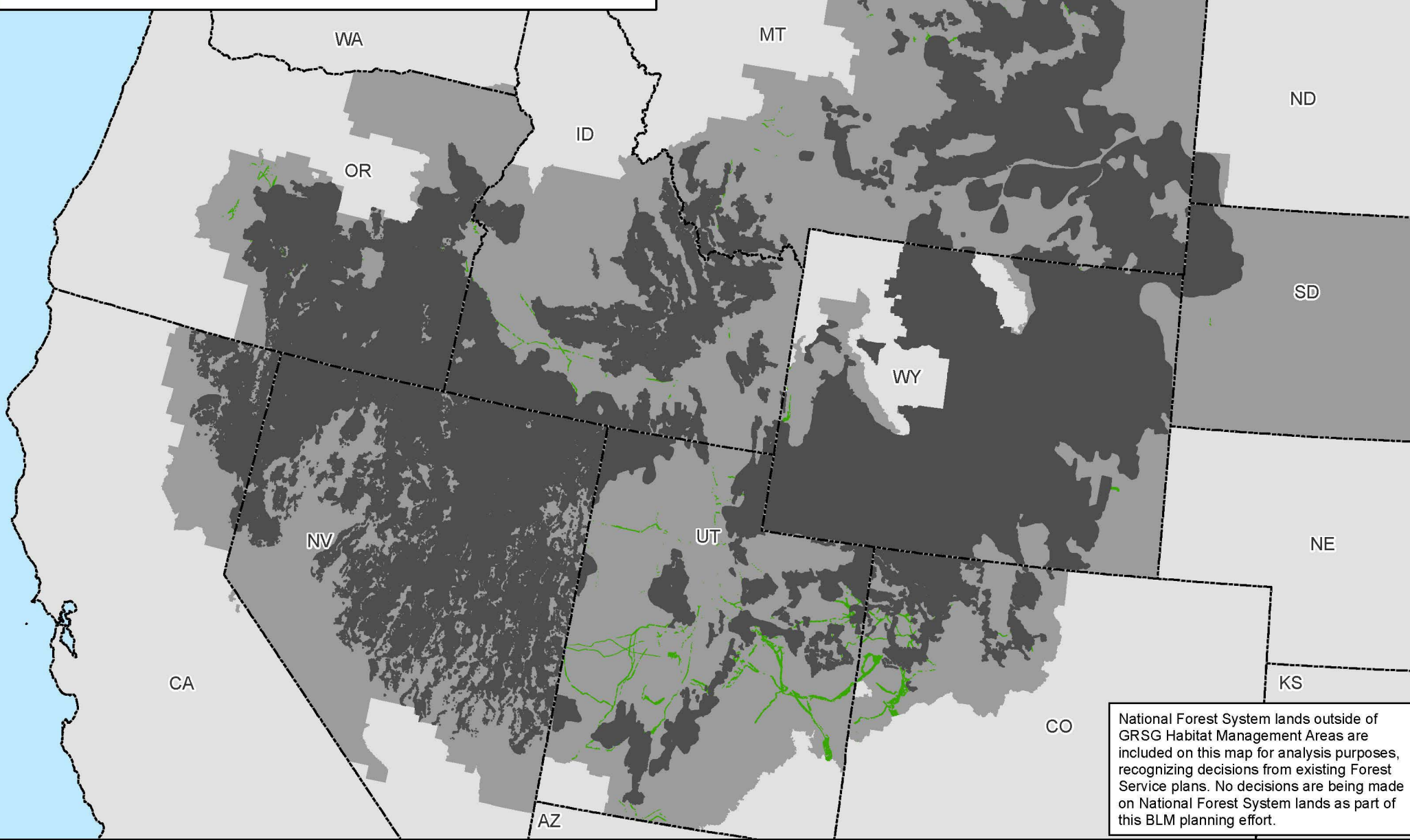


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Designated Utility Corridors Outside of Greater Sage-Grouse Habitat Management Areas Alternative 3



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.58b

**Legend**  
**Non-Masked Areas: Outside GRSG Habitat Management Areas**  
**Masked Areas: Within GRSG Habitat Management Areas**

- Designated Utility Corridors - Existing
- GRSG Habitat Management Areas
- Planning Area Extent
- State Boundaries



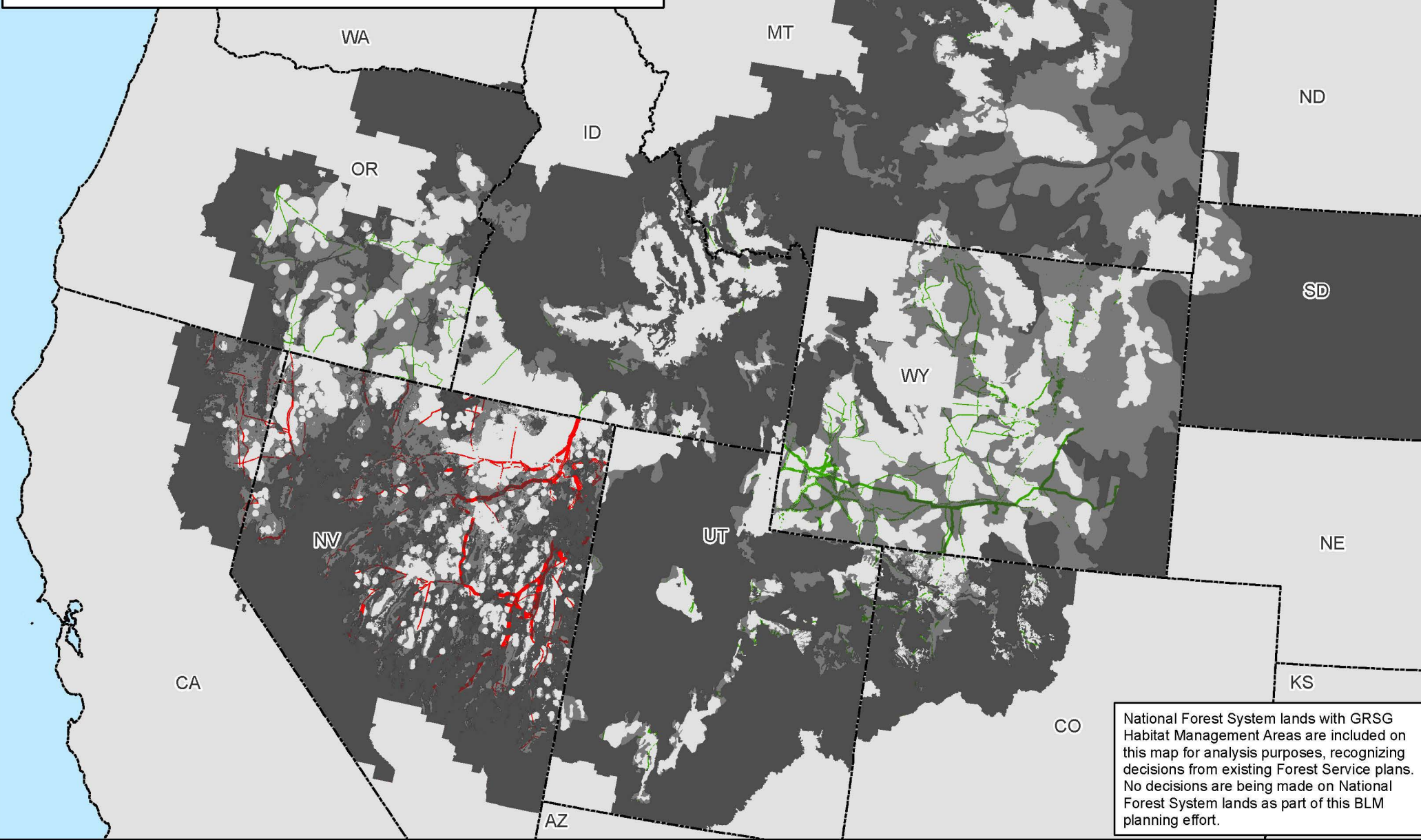
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



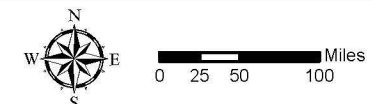
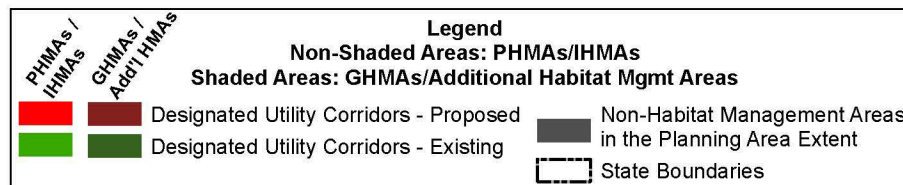


# Designated Utility Corridors and Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.59a

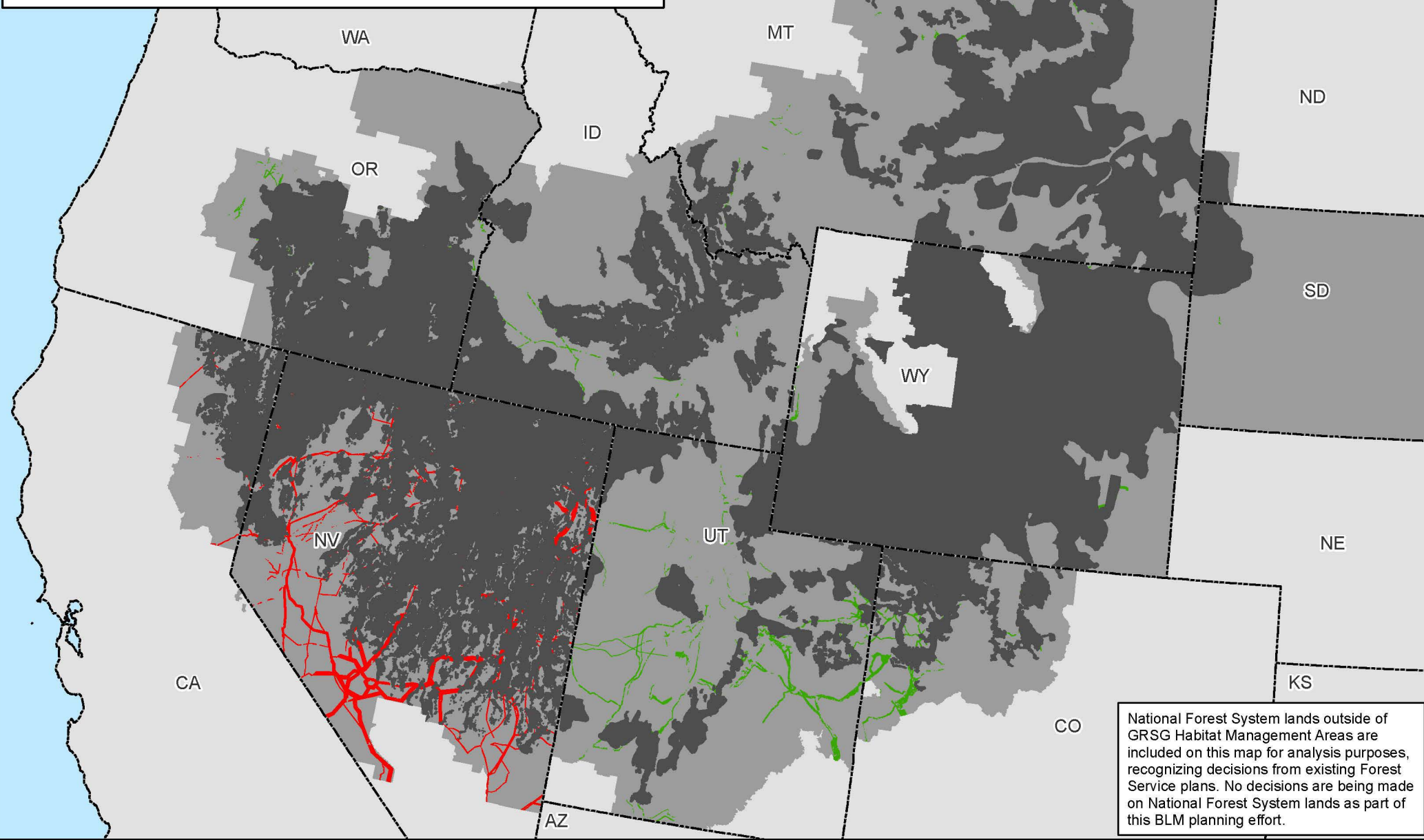


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



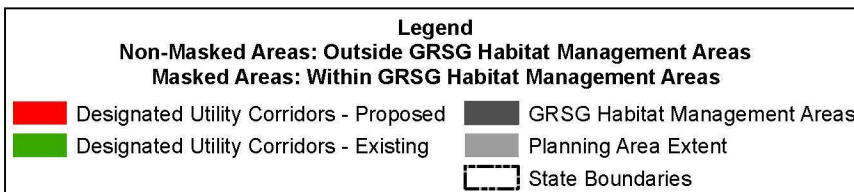


# Designated Utility Corridors Outside of Greater Sage-Grouse Habitat Management Areas Alternative 4



National Forest System lands outside of GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.59b

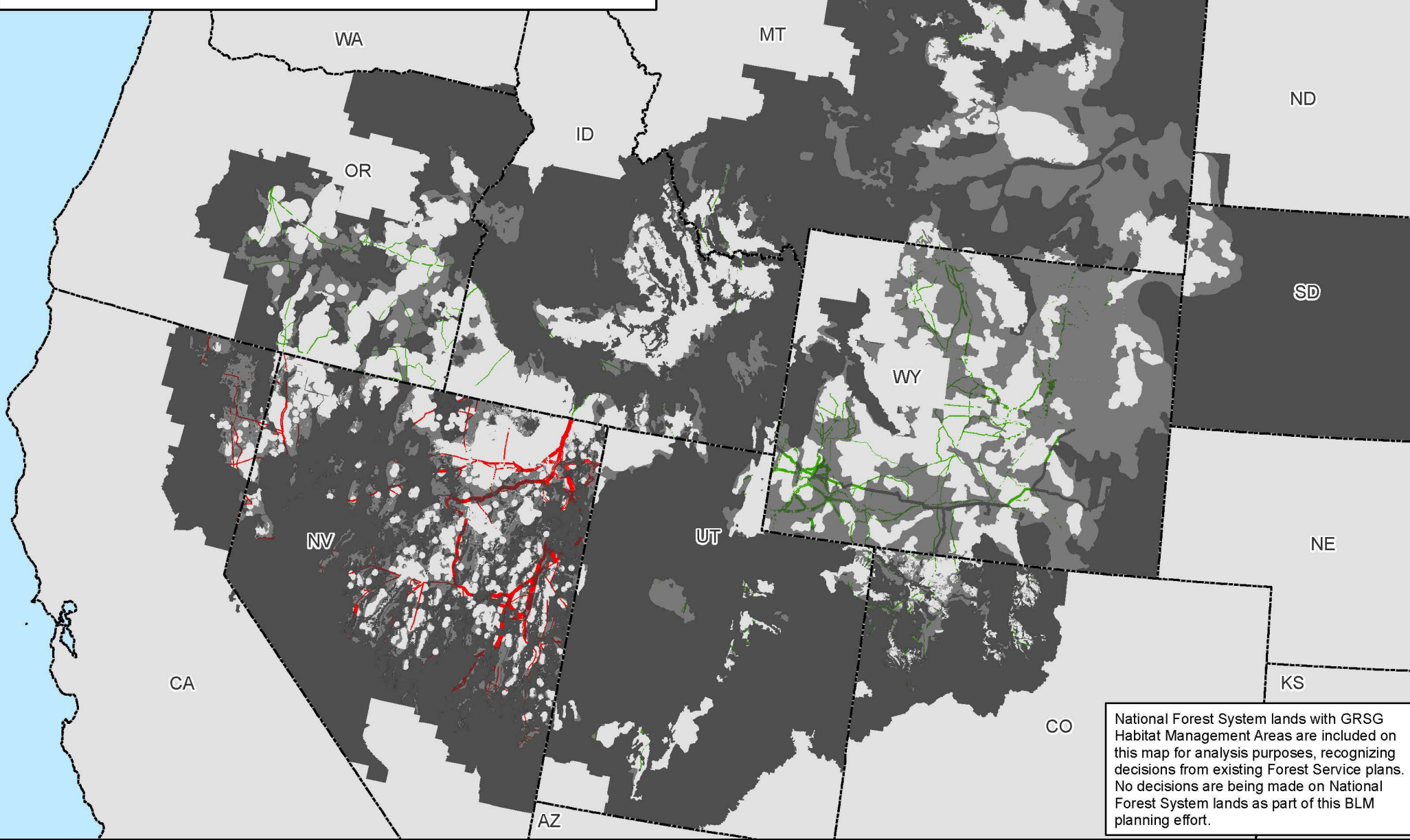


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Designated Utility Corridors and Greater Sage-Grouse Habitat Management Areas Alternative 5



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.60a

PHMAs / IHMAs

GHMAs / Add'l HMAs

Red line

Dark green line

Designated Utility Corridors - Proposed

Designated Utility Corridors - Existing

Non-Shaded Areas: PHMAs/IHMAs

Shaded Areas: GHMAs/Additional Habitat Mgmt Areas

Grey box

White box with dashed border

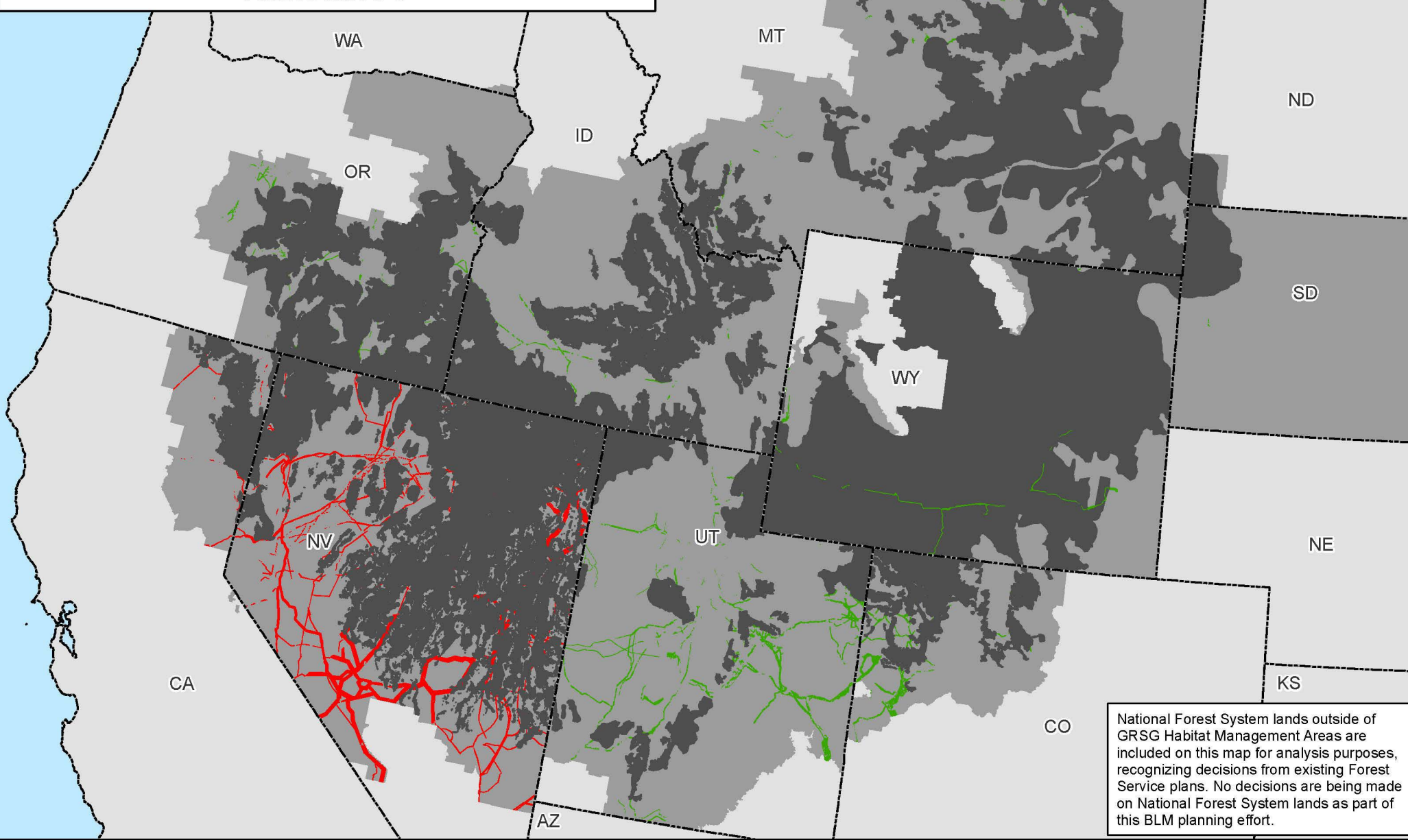
Non-Habitat Management Areas in the Planning Area Extent

State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Designated Utility Corridors Outside of Greater Sage-Grouse Habitat Management Areas Alternative 5



Map 2.60b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**  
**Masked Areas: Within GRSG Habitat Management Areas**

<span style="color: red;">—</span> Designated Utility Corridors - Proposed	<span style="background-color: darkgray; border: 1px solid black;"> </span> GRSG Habitat Management Areas
<span style="color: green;">—</span> Designated Utility Corridors - Existing	<span style="background-color: lightgray; border: 1px solid black;"> </span> Planning Area Extent
	<span style="border-bottom: 1px dashed black;"> </span> State Boundaries

N  
W E S

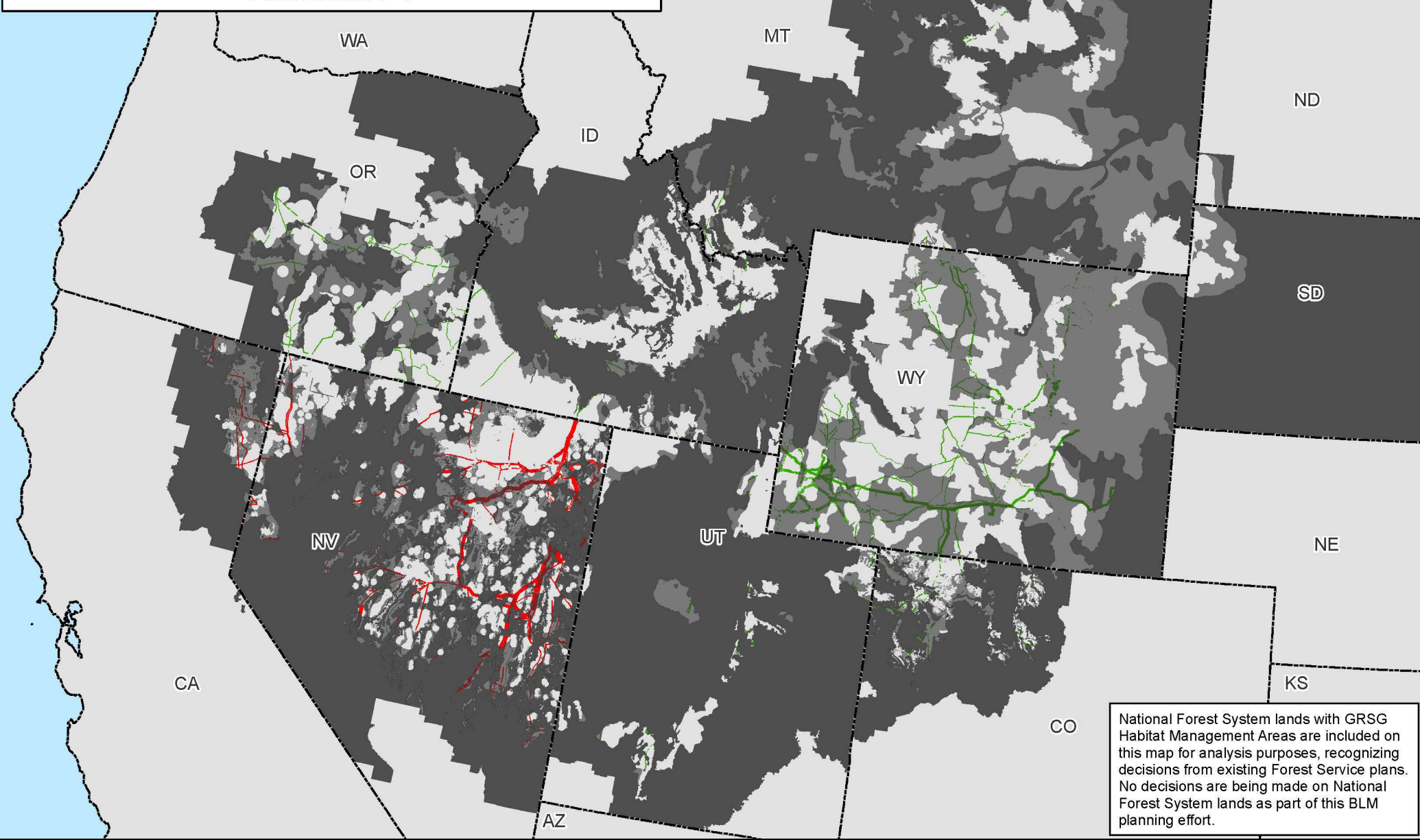
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



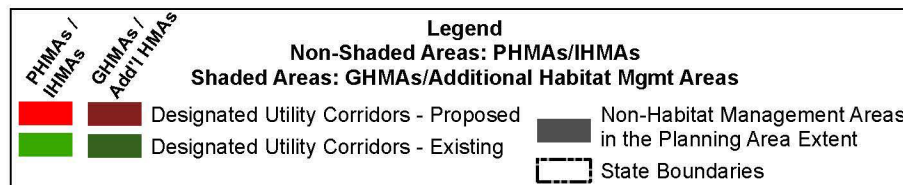


# Designated Utility Corridors and Greater Sage-Grouse Habitat Management Areas Alternative 6



National Forest System lands with GRSG Habitat Management Areas are included on this map for analysis purposes, recognizing decisions from existing Forest Service plans. No decisions are being made on National Forest System lands as part of this BLM planning effort.

Map 2.61a

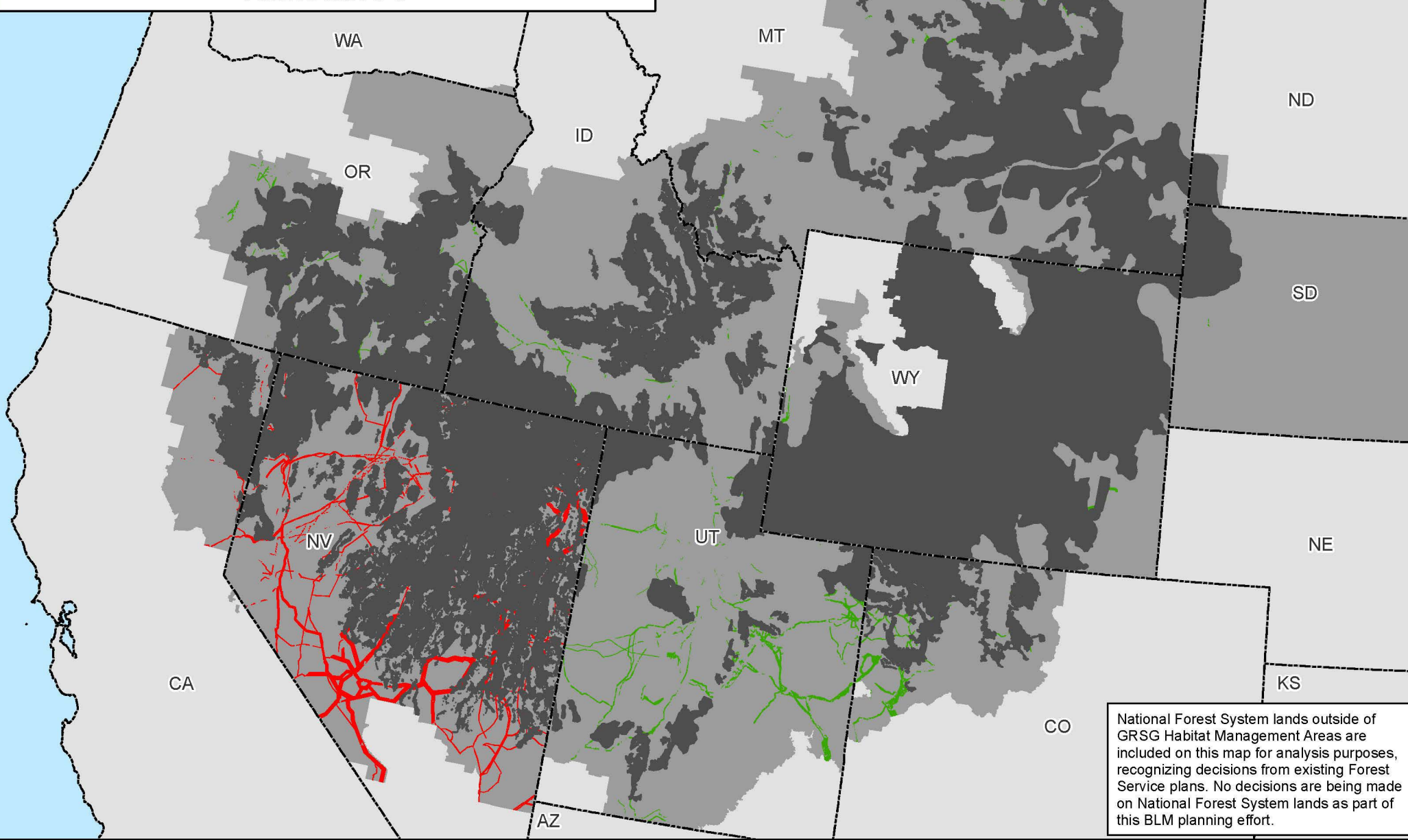


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Designated Utility Corridors Outside of Greater Sage-Grouse Habitat Management Areas Alternative 6



Map 2.61b

**Legend**

**Non-Masked Areas: Outside GRSG Habitat Management Areas**

**Masked Areas: Within GRSG Habitat Management Areas**

■ Designated Utility Corridors - Proposed

■ Designated Utility Corridors - Existing

GRSG Habitat Management Areas

  Planning Area Extent

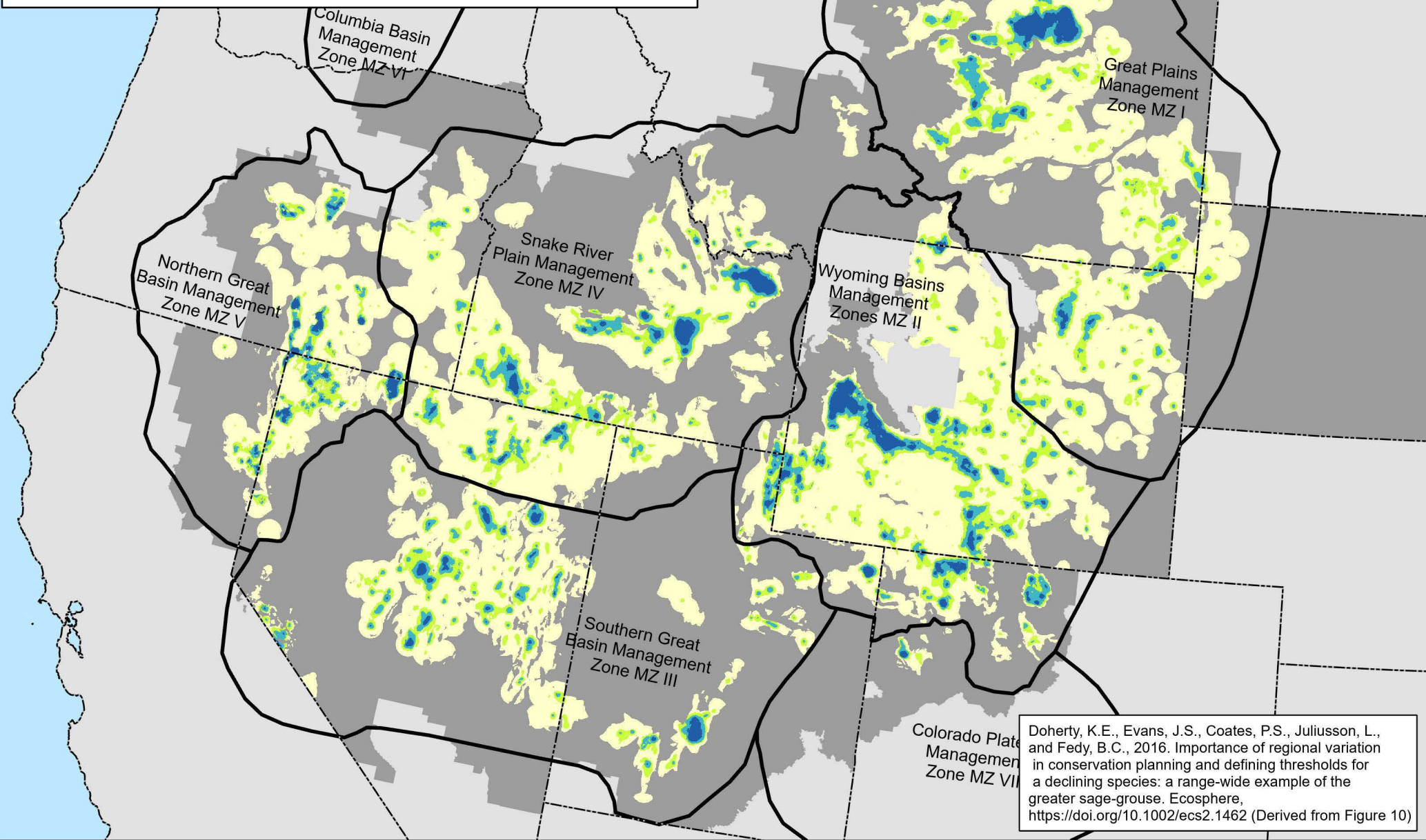
State Boundaries

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Greater Sage-Grouse Breeding Population Index Model within Greater Sage-Grouse Planning Areas



Map 3.1

## Legend

Relative Abundance - T25 Percent  
Relative Percent Population MZ VI

Relative Abundance

25% = "High"

50% = "Medium"

75% = "Low"

100% = "Very Low"

WAFWA Mgmt Zones

State Boundaries

Planning Area Extent



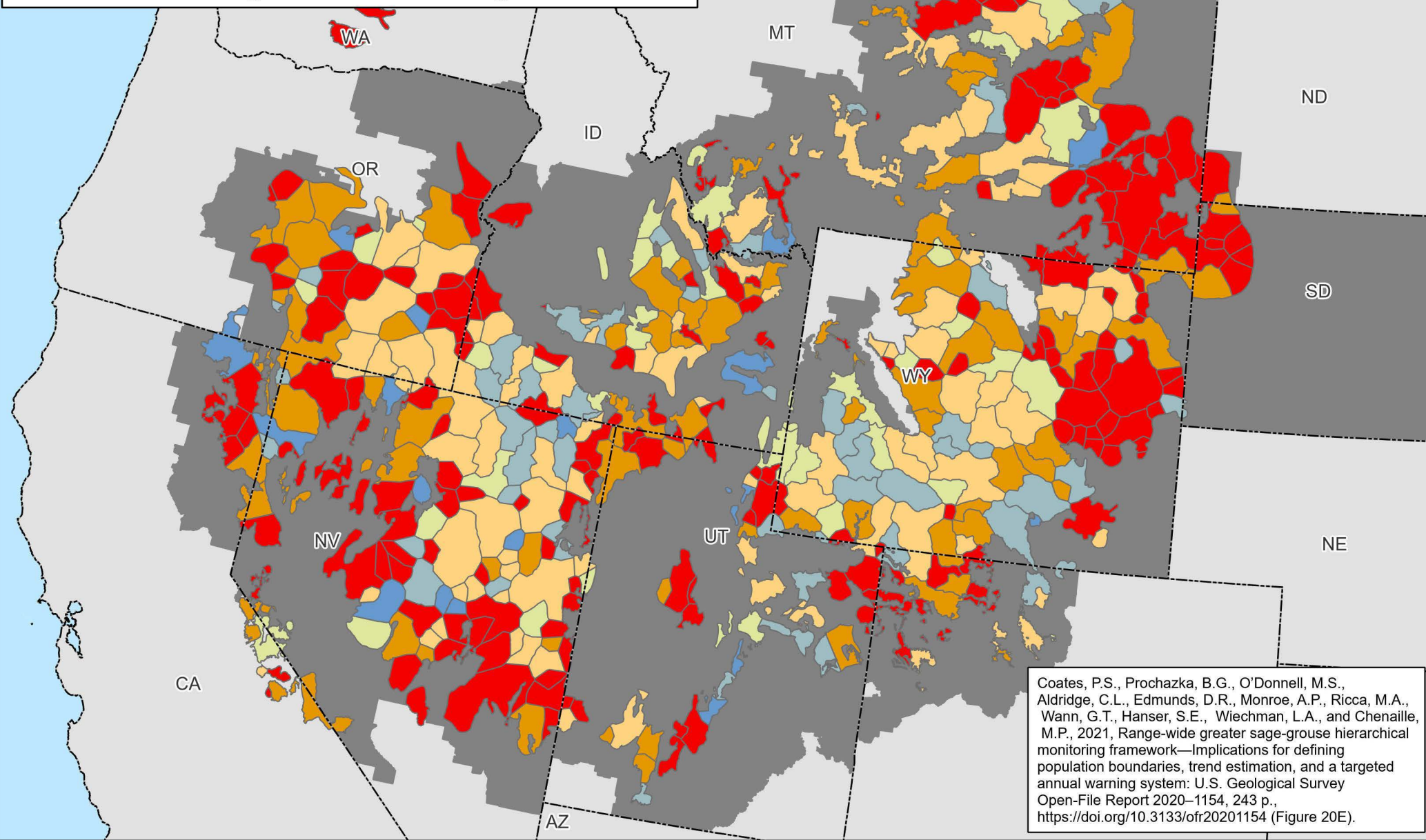
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Average Annual Rate of Change in Greater Sage-Grouse Abundance (Short term - 2002-2021) within Greater Sage-Grouse Planning Areas



Coates, P.S., Prochazka, B.G., O'Donnell, M.S., Aldridge, C.L., Edmunds, D.R., Monroe, A.P., Ricca, M.A., Wann, G.T., Hanser, S.E., Wiechman, L.A., and Chenaille, M.P., 2021, Range-wide greater sage-grouse hierarchical monitoring framework—Implications for defining population boundaries, trend estimation, and a targeted annual warning system: U.S. Geological Survey Open-File Report 2020–1154, 243 p., <https://doi.org/10.3133/ofr20201154> (Figure 20E).

Map 3.2

Average annual rate of change in GRSG abundance (2002-2021)

Short Term (2 oscillations)

Red ≤ 0.95

Orange > 0.95 - 0.97

Yellow > 0.97 - 0.99

Light Green > 0.99 - 1.00

Blue > 1.00 - 1.03

Dark Blue > 1.03

## Legend

Dashed line State Boundaries

Solid grey Planning Area Extent



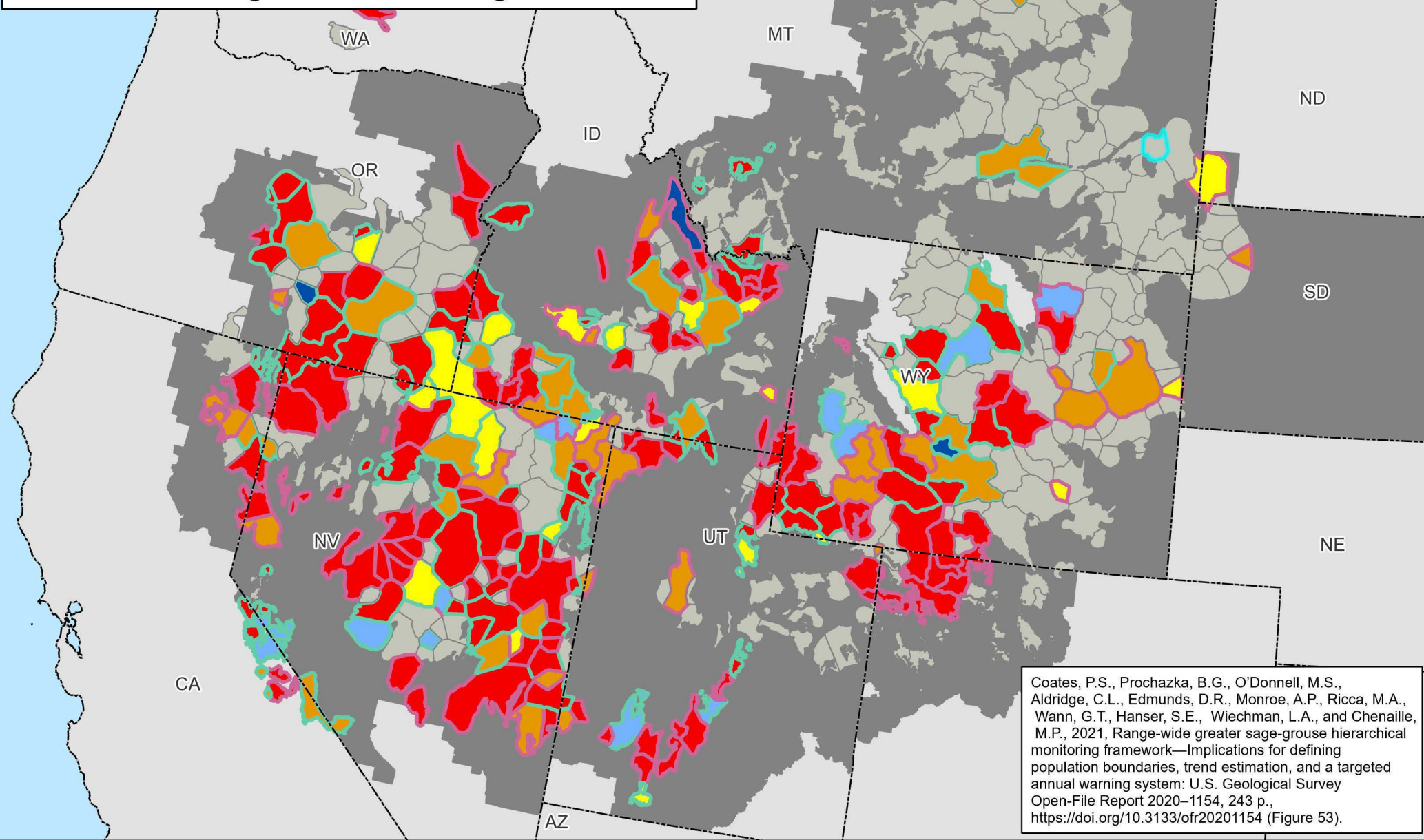
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Watch and Warning Signals for Greater Sage-Grouse Population Declines 1995-2021 within Greater Sage-Grouse Planning Areas



Map 3.3

Most recent watch or warning

1995 - 1999

2000 - 2004

2005 - 2009

2010 - 2014

2015 - 2021

## Legend

No warning or watch

Warning

Watch

State Boundaries

Planning Area Extent

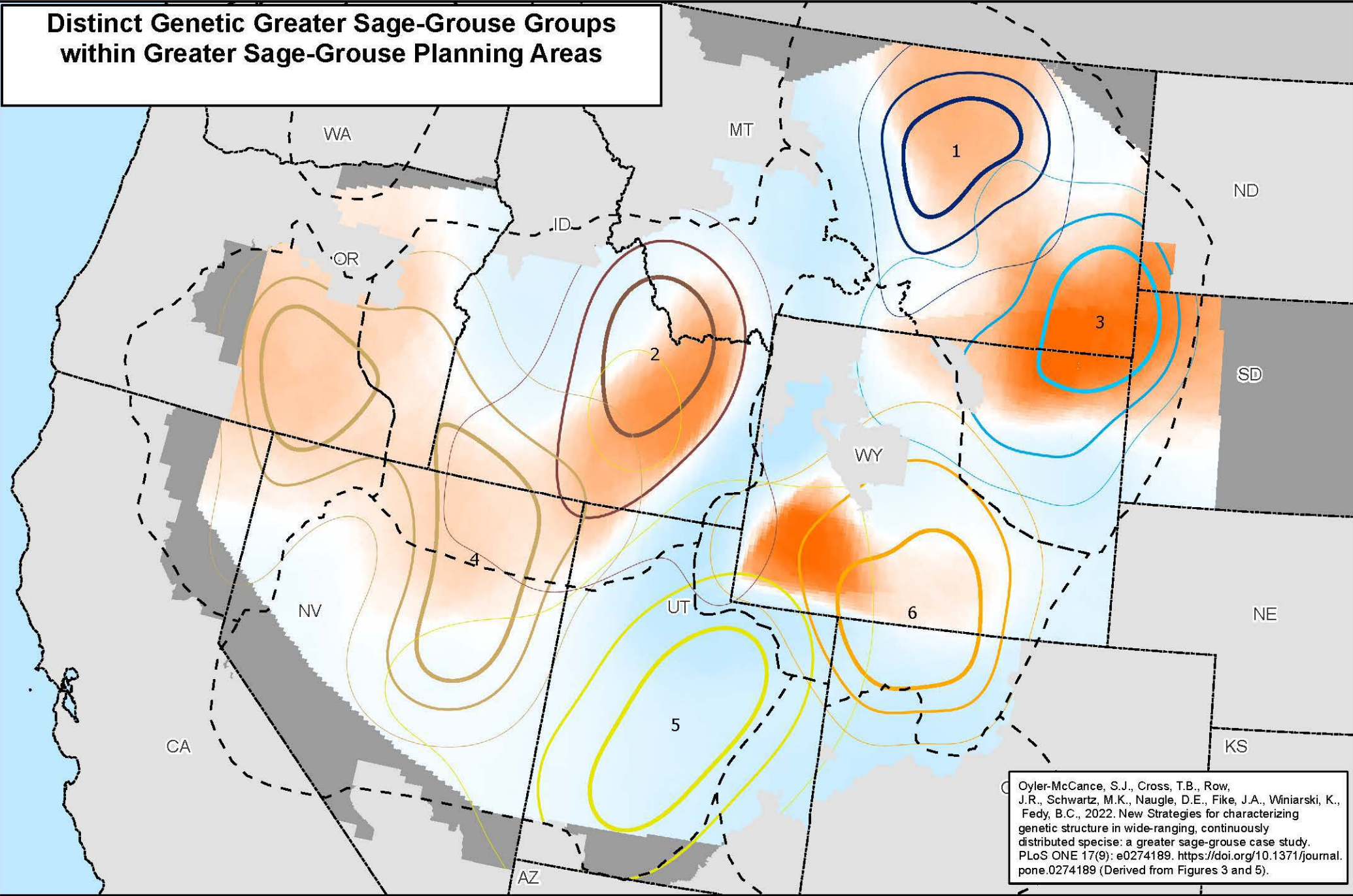


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



## Distinct Genetic Greater Sage-Grouse Groups within Greater Sage-Grouse Planning Areas



### Map 3.4




**Legend**

Subpopulation boundaries are 25% (darkest), 50% (medium), 75% (lightest) kernel density estimates to determine genetically distinct groups.

Subpopulation Boundaries

1  
2  
3

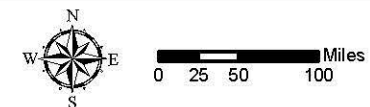
4  
5  
6

EffectiveMigrationRates

High : 0.8  
Low : -0.7

State Boundaries  
WAPWA Mgmt Zones  
Planning Area Extent

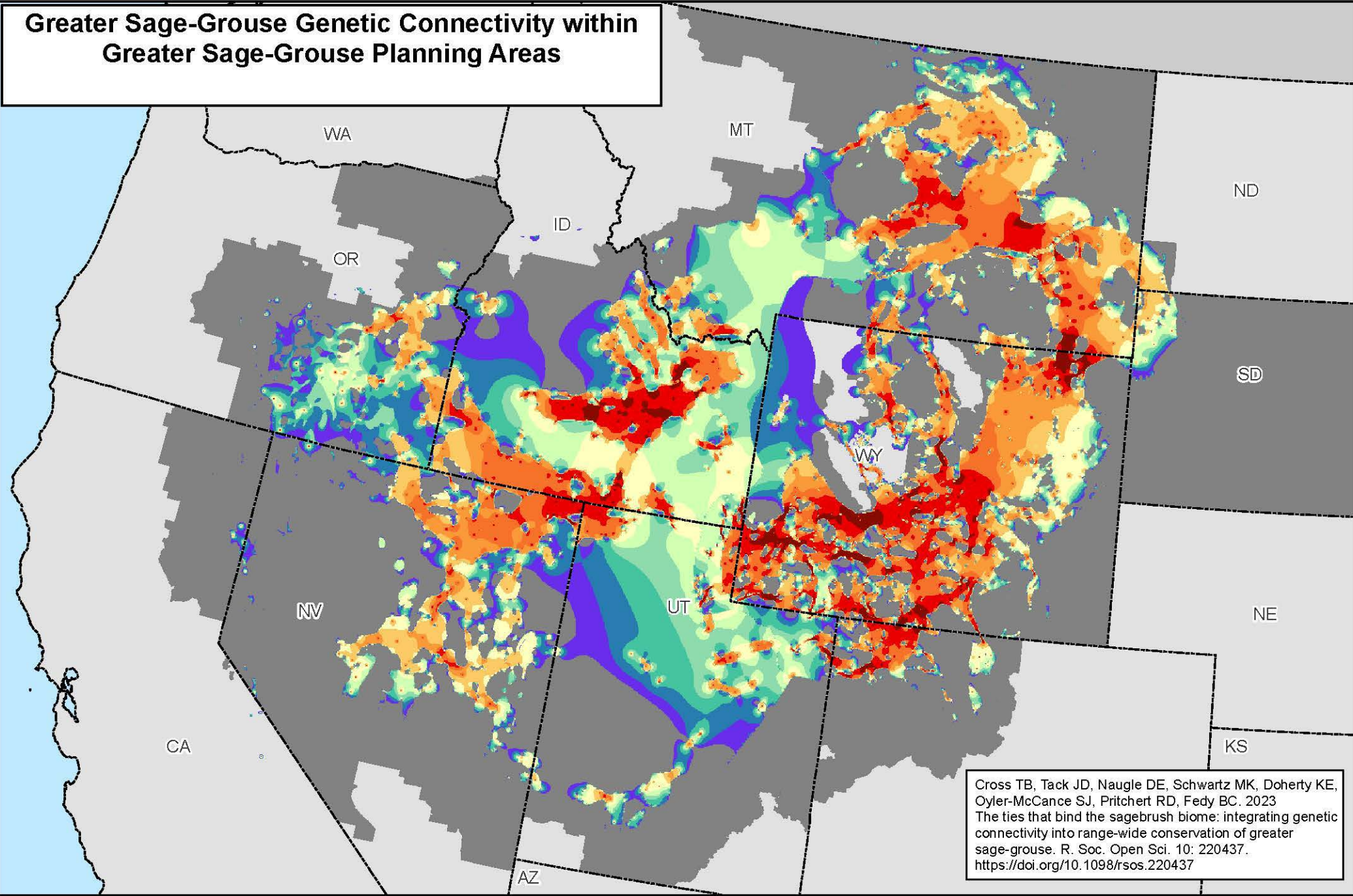
Oyler-McCance, S.J., Cross, T.B., Row, J.R., Schwartz, M.K., Naugle, D.E., Fike, J.A., Winiarski, K., Fedy, B.C., 2022. New Strategies for characterizing genetic structure in wide-ranging, continuously distributed species: a greater sage-grouse case study. *PLoS ONE* 17(9): e0274189. <https://doi.org/10.1371/journal.pone.0274189> (Derived from Figures 3 and 5).



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

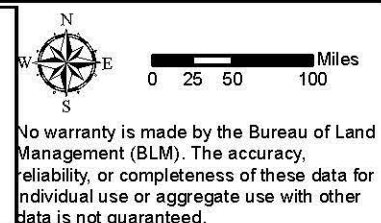
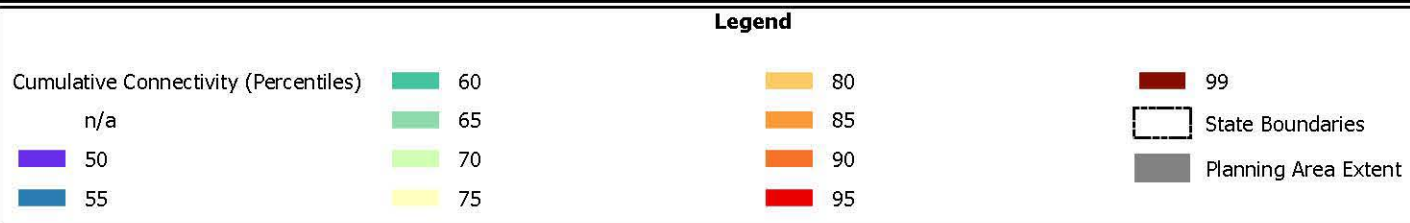


# Greater Sage-Grouse Genetic Connectivity within Greater Sage-Grouse Planning Areas



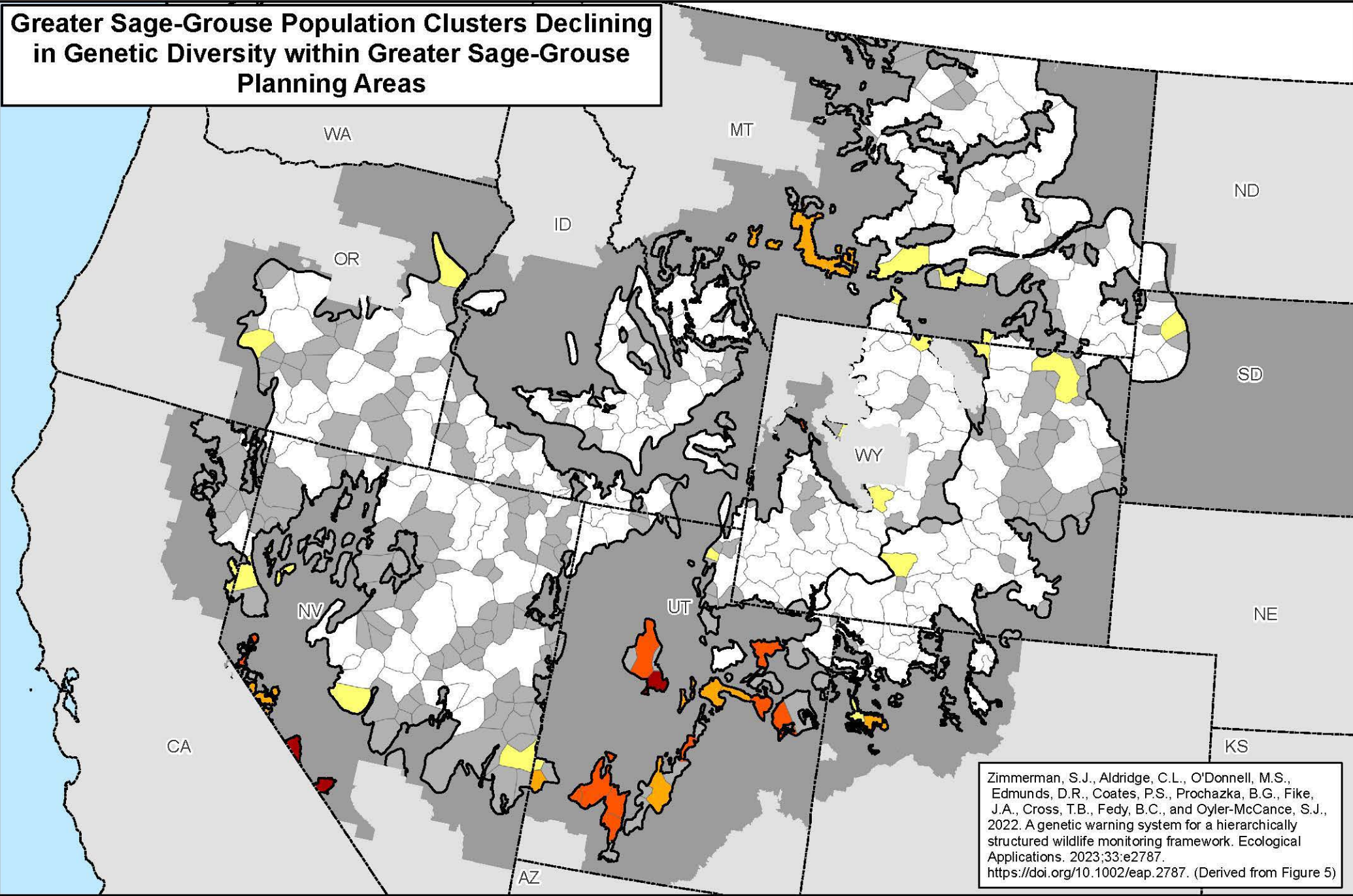
Cross TB, Tack JD, Naugle DE, Schwartz MK, Doherty KE, Oylar-McCance SJ, Pritchert RD, Fedy BC. 2023  
The ties that bind the sagebrush biome: integrating genetic connectivity into range-wide conservation of greater sage-grouse. R. Soc. Open Sci. 10: 220437.  
<https://doi.org/10.1098/rsos.220437>

Map 3.5





# Greater Sage-Grouse Population Clusters Declining in Genetic Diversity within Greater Sage-Grouse Planning Areas



Zimmerman, S.J., Aldridge, C.L., O'Donnell, M.S., Edmunds, D.R., Coates, P.S., Prochazka, B.G., Fike, J.A., Cross, T.B., Fedy, B.C., and Oyler-McCance, S.J., 2022. A genetic warning system for a hierarchically structured wildlife monitoring framework. *Ecological Applications*. 2023;33:e2787. <https://doi.org/10.1002/eap.2787>. (Derived from Figure 5)

Map 3.6



Neighborhood Cluster - Genetic Watches & Warnings

- Watch 1
- Watch 2

- Warning 1
- Warning 2
- None
- No Data

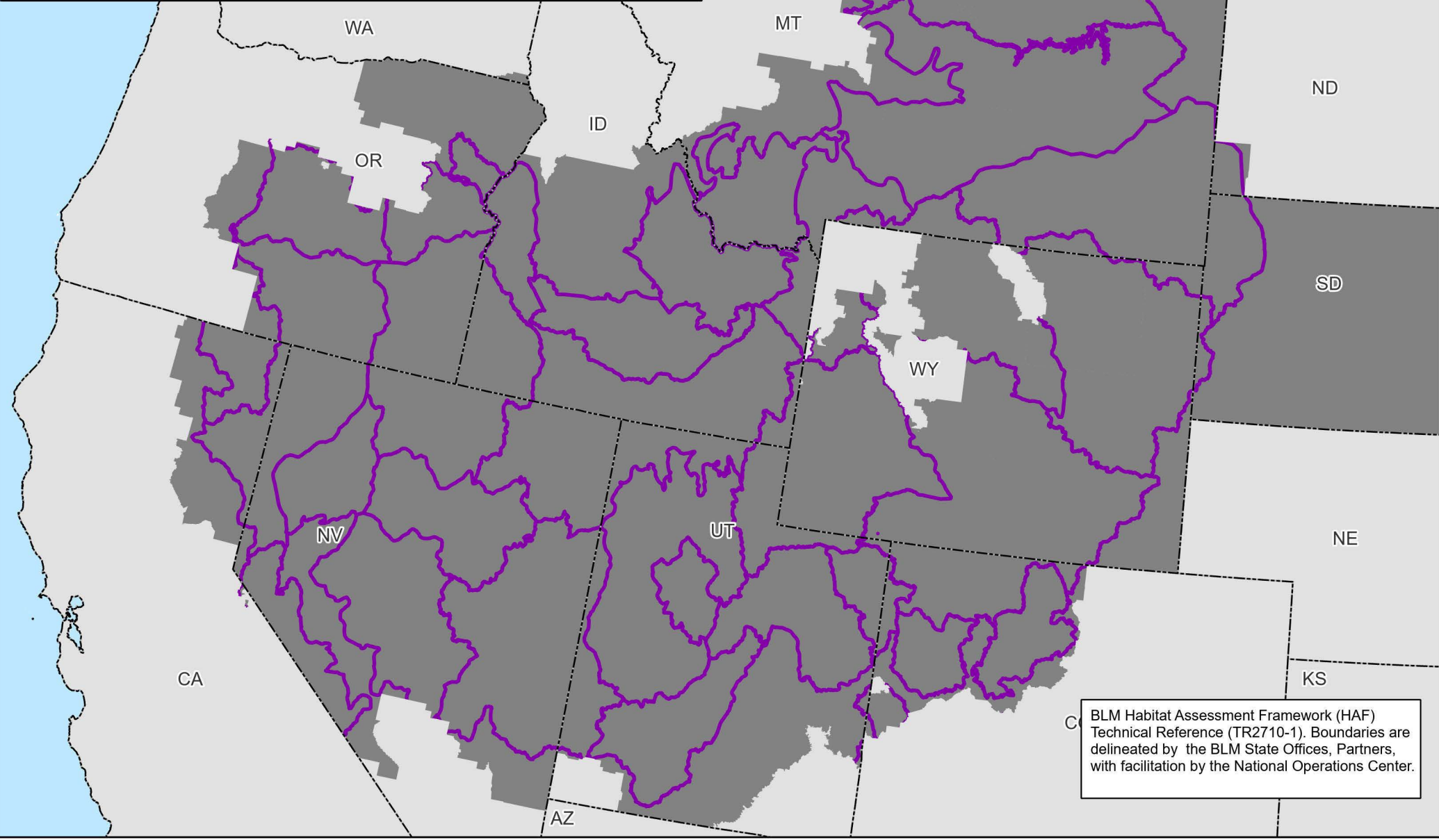
- Climate Clusters
- State Boundaries
- GRSG Planning Area 2022

0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Greater Sage-Grouse Habitat Assessment Framework, Mid-Scale Areas (Level 2) and Greater Sage-Grouse Planning Areas



Map 3.7



Legend

HAF Mid-Scale Areas (Level 2)

State Boundaries

Planning Area Extent

N

S

E

W

0

25

50

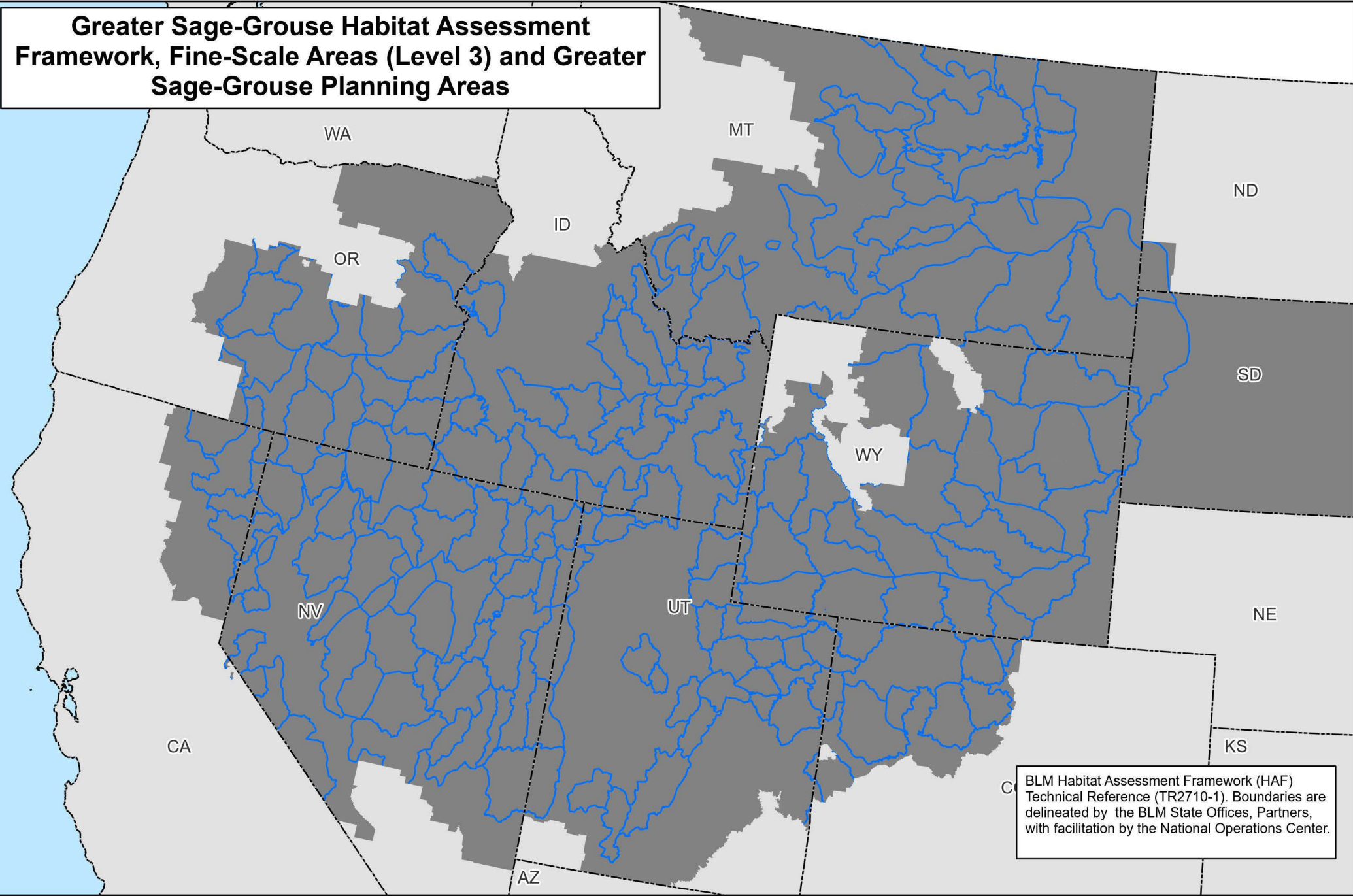
100

Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



**Greater Sage-Grouse Habitat Assessment Framework, Fine-Scale Areas (Level 3) and Greater Sage-Grouse Planning Areas**


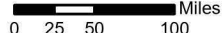


BLM Habitat Assessment Framework (HAF) Technical Reference (TR2710-1). Boundaries are delineated by the BLM State Offices, Partners, with facilitation by the National Operations Center.

**Map 3.8**

**Legend**

-  HAF Fine-Scale Areas (Level 3)
-  State Boundaries
-  Planning Area Extent

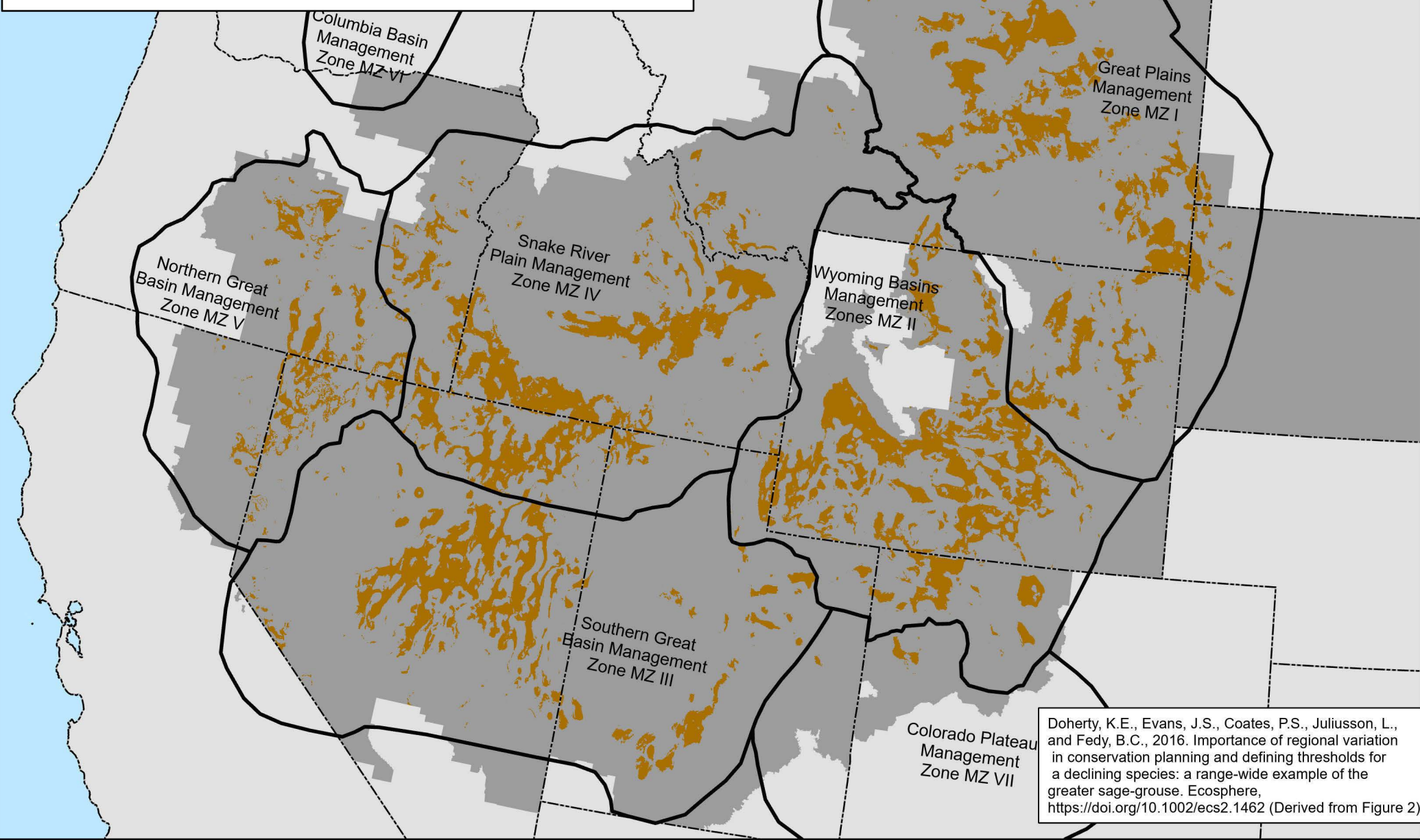
 

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Greater Sage-Grouse Breeding Habitat Model within Greater Sage-Grouse Planning Areas

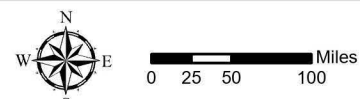


Doherty, K.E., Evans, J.S., Coates, P.S., Juliusson, L., and Fedy, B.C., 2016. Importance of regional variation in conservation planning and defining thresholds for a declining species: a range-wide example of the greater sage-grouse. *Ecosphere*, <https://doi.org/10.1002/ecs2.1462> (Derived from Figure 2)

Map 3.9

## Legend

- Probability of Breeding Habitat > 0.65
- State Boundaries
- WAFWA Mgmt Zones
- Planning Area Extent

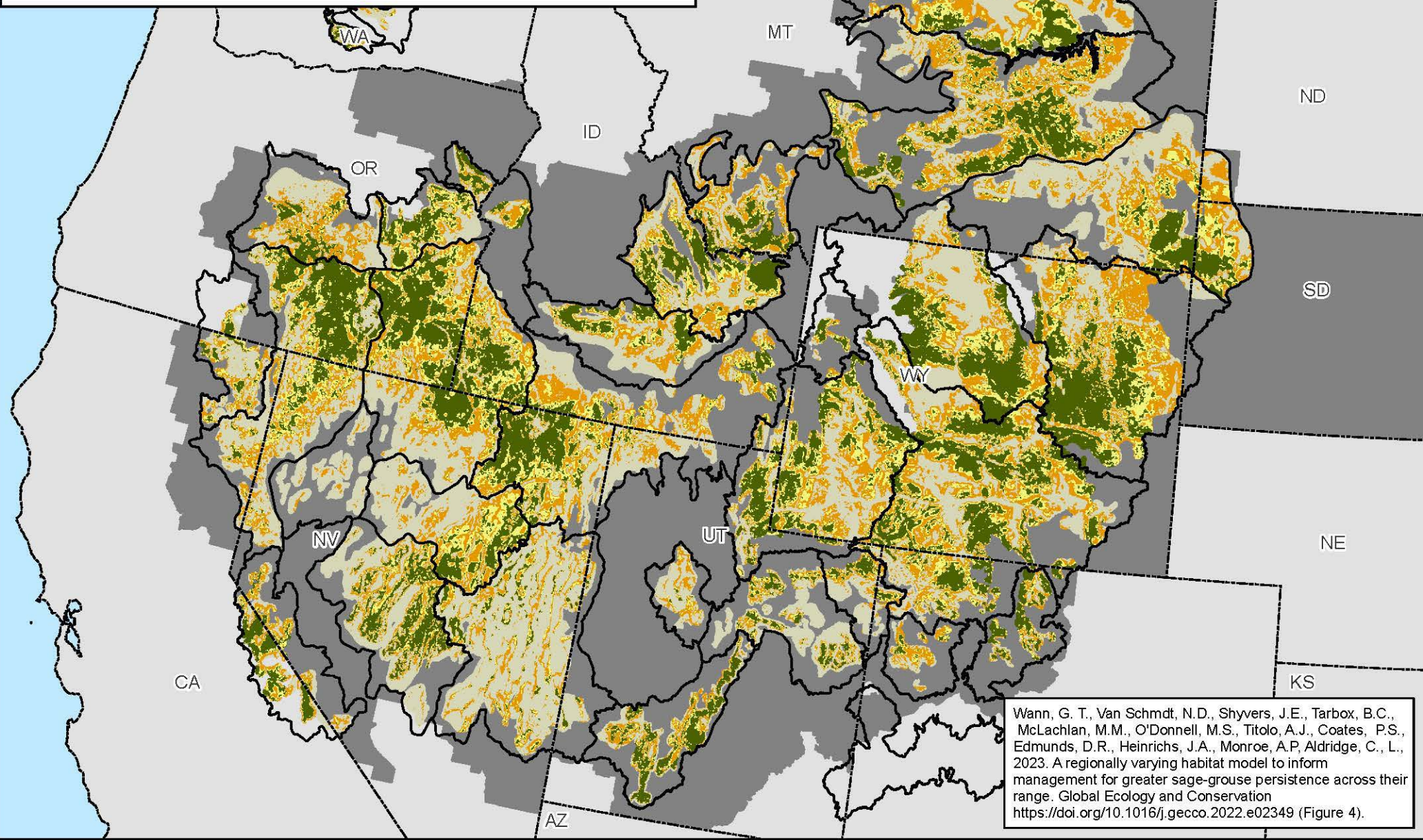


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Probability of Greater Sage-Grouse Lek Persistence within Greater Sage-Grouse Planning Areas



Map 3.10

Lek Persistence Probability

High

Medium

Low

## Legend

Marginal

State Boundaries

HAF Mid-Scale Areas (Level 2)

Planning Area Extent



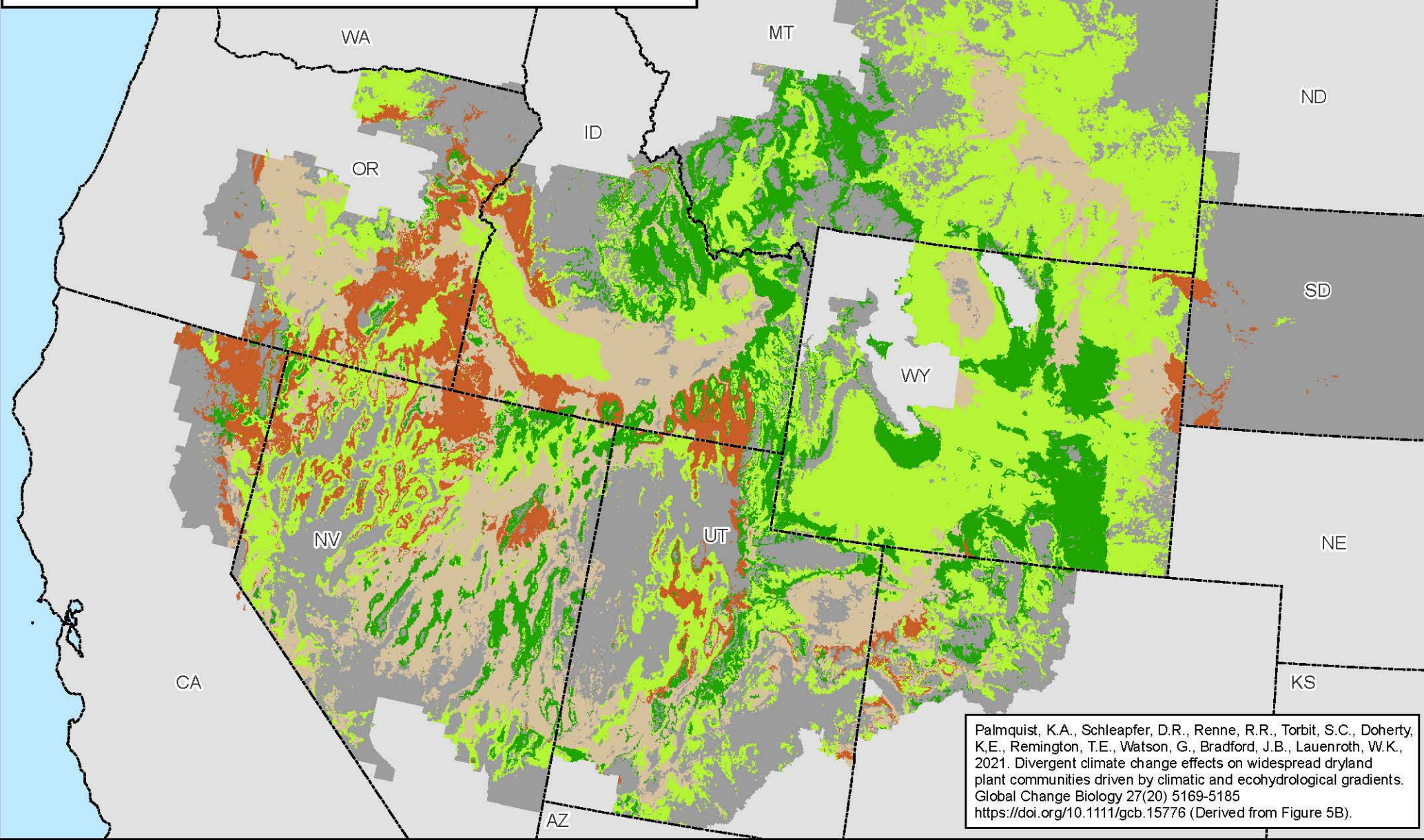
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Modeled Potential Change in Sagebrush Biomass (2030-2060) within Greater Sage-Grouse Planning Areas



Map 3.11

Change in Sagebrush Biomass (g/m<sup>2</sup>)  
2030 to 2060

Highest Decrease

Low to Moderate Decrease

Low to Moderate Increase

Highest Increase

State Boundaries

Planning Area Extent



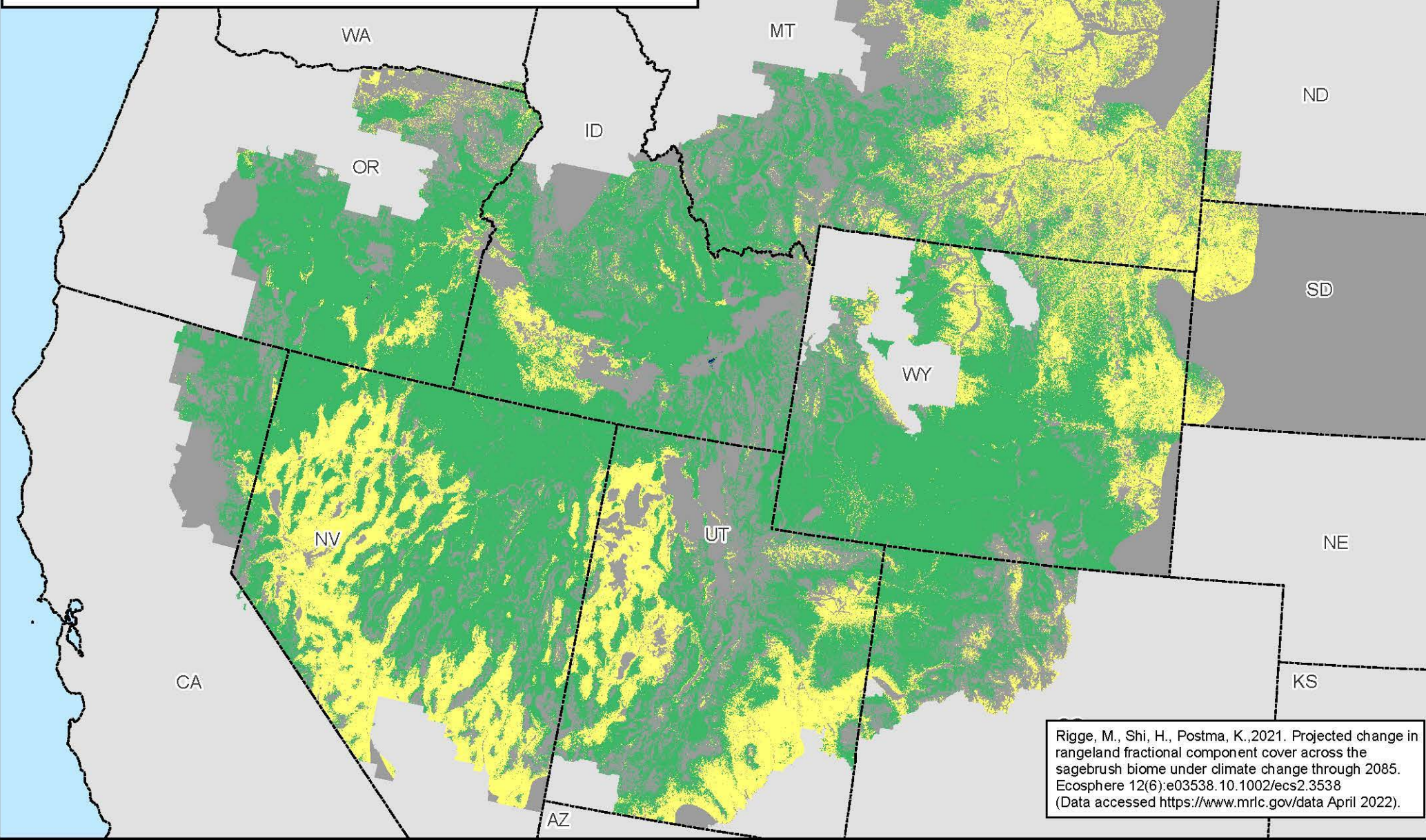
Miles  
0 25 50 100

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Modeled Potential Sagebrush Cover (2011-2040) within Greater Sage-Grouse Planning Areas



Map 3.12

% Cover

0 - 4

4 - 25

25 - 58

## Legend

State Boundaries

Planning Area Extent



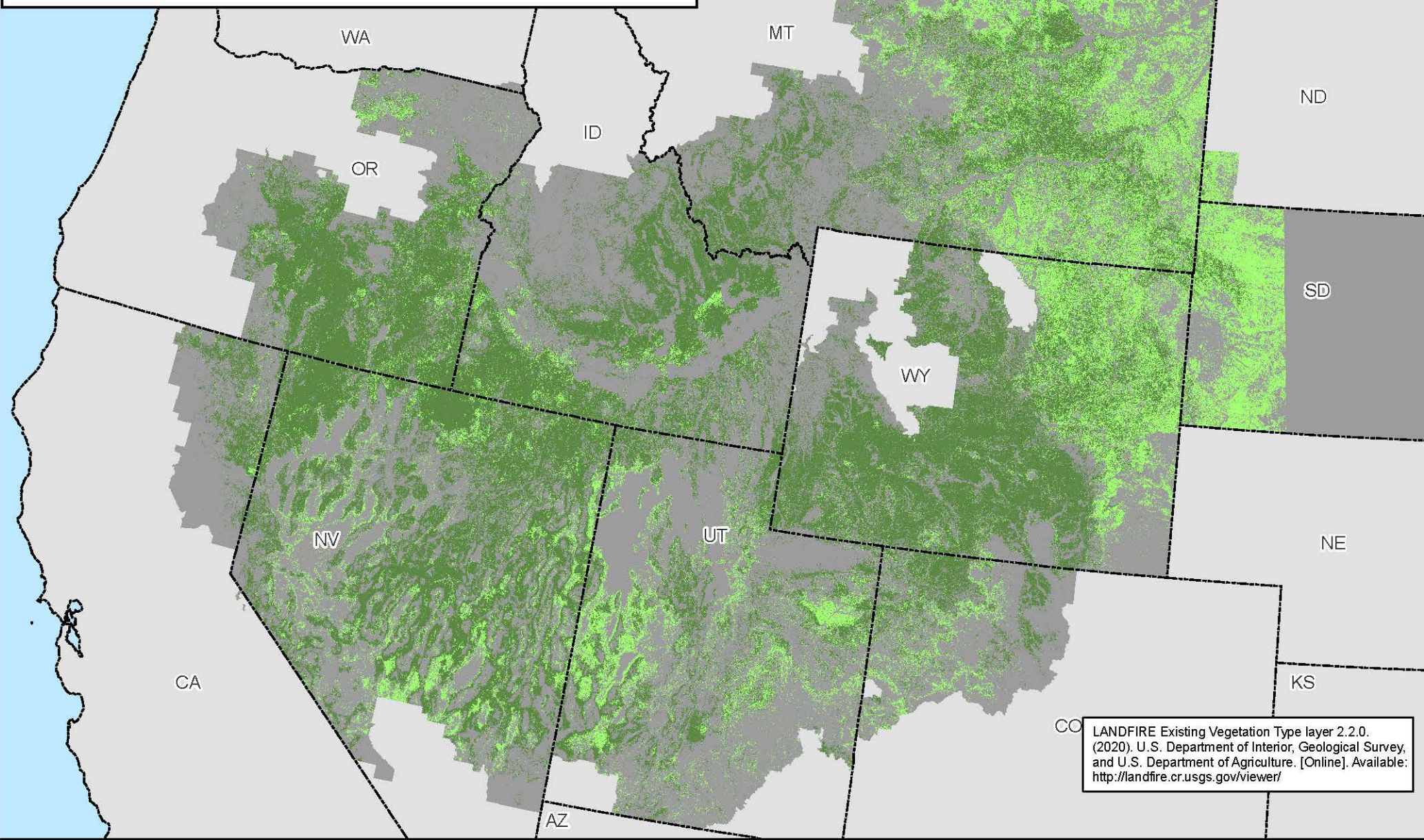
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Vegetation Communities within Greater Sage-Grouse Planning Areas



LANDFIRE Existing Vegetation Type layer 2.2.0. (2020). U.S. Department of Interior, Geological Survey, and U.S. Department of Agriculture. [Online]. Available: <http://landfire.cr.usgs.gov/viewer/>

Map 3.13

## Legend

Reclassified Landfire EVT220

Existing Sagebrush

Existing Sagebrush Associated

Non-Sagebrush in Planning Area

State Boundaries



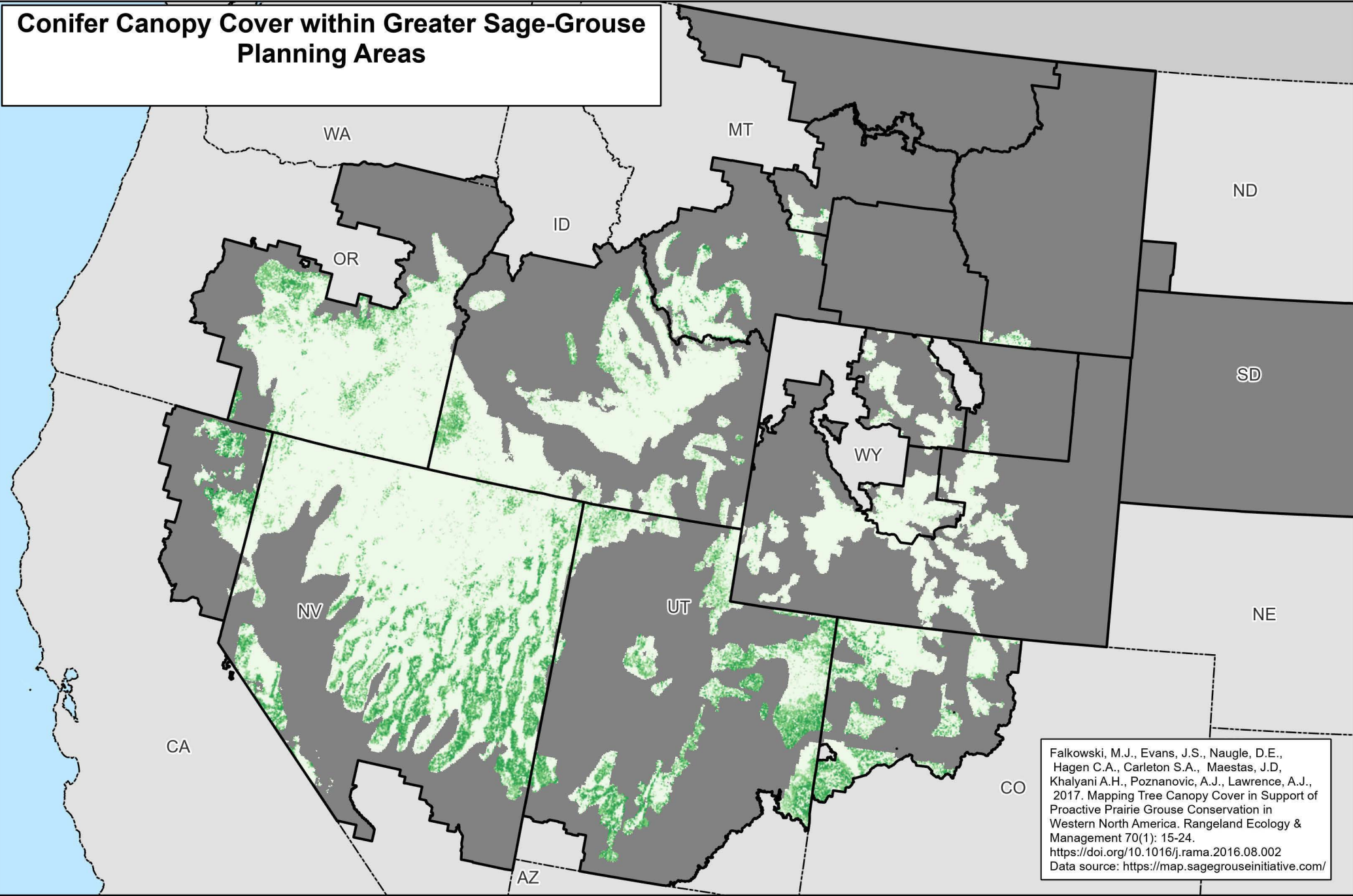
0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Conifer Canopy Cover within Greater Sage-Grouse Planning Areas



Falkowski, M.J., Evans, J.S., Naugle, D.E., Hagen C.A., Carleton S.A., Maestas, J.D., Khalyani A.H., Poznanovic, A.J., Lawrence, A.J., 2017. Mapping Tree Canopy Cover in Support of Proactive Prairie Grouse Conservation in Western North America. *Rangeland Ecology & Management* 70(1): 15-24.  
<https://doi.org/10.1016/j.rama.2016.08.002>  
 Data source: <https://map.sagegrouseinitiative.com/>

Map 3.14

Tree canopy cover (%)

- < 1
- 1 - 4
- 4 - 10
- 10 - 20
- 20 - 50
- > 50

Legend

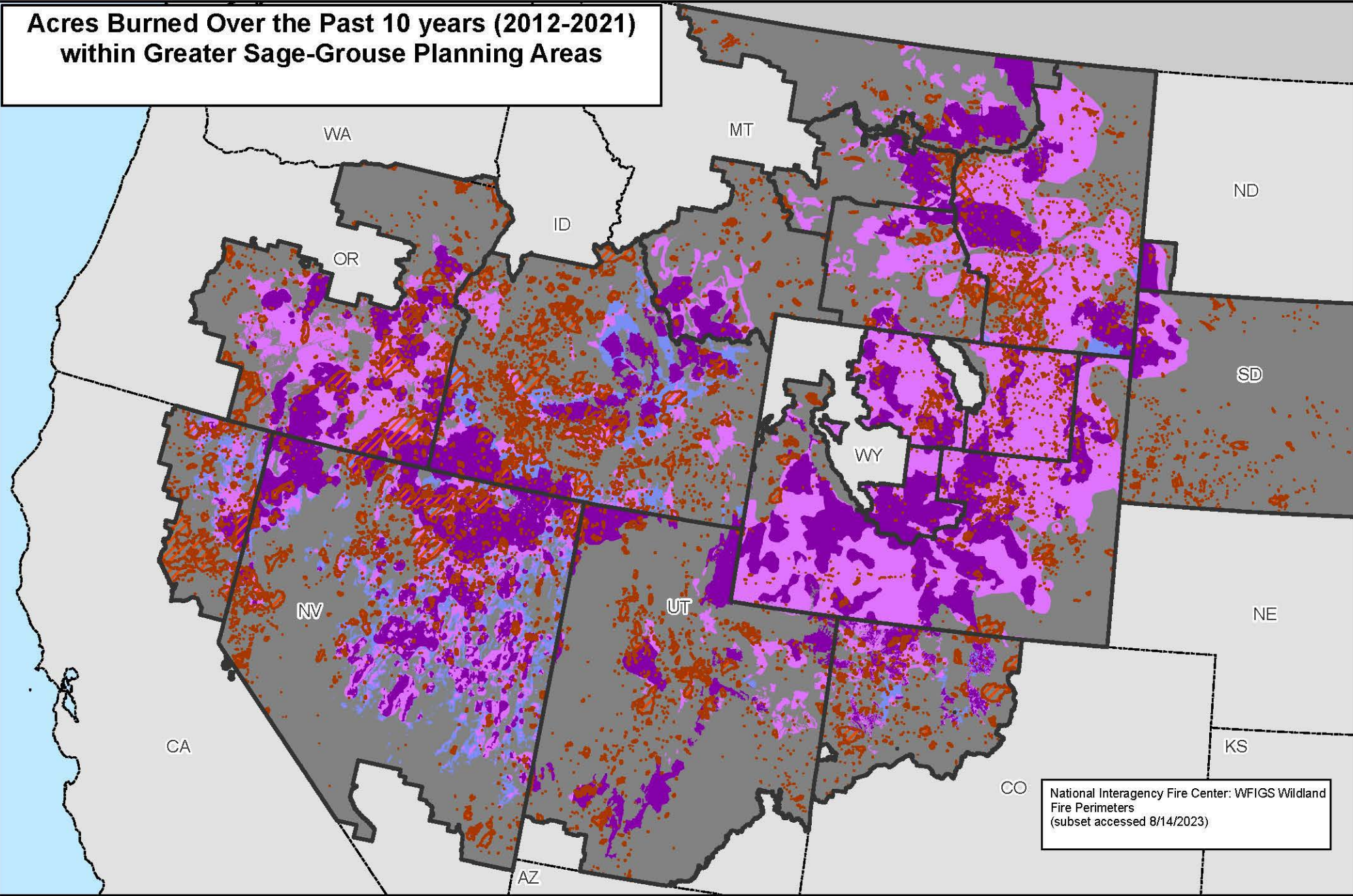
- Planning Areas not Mapped for Canopy Cover
- State Boundaries


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.







# Acres Burned Over the Past 10 years (2012-2021) within Greater Sage-Grouse Planning Areas






 Fires 2012-2021


Habitat\_Type

 PHMA
  GHMA



Anthro Mtn



 IHMA
  LCHMA
  OHMA

RHMA

 UDH

State Boundaries

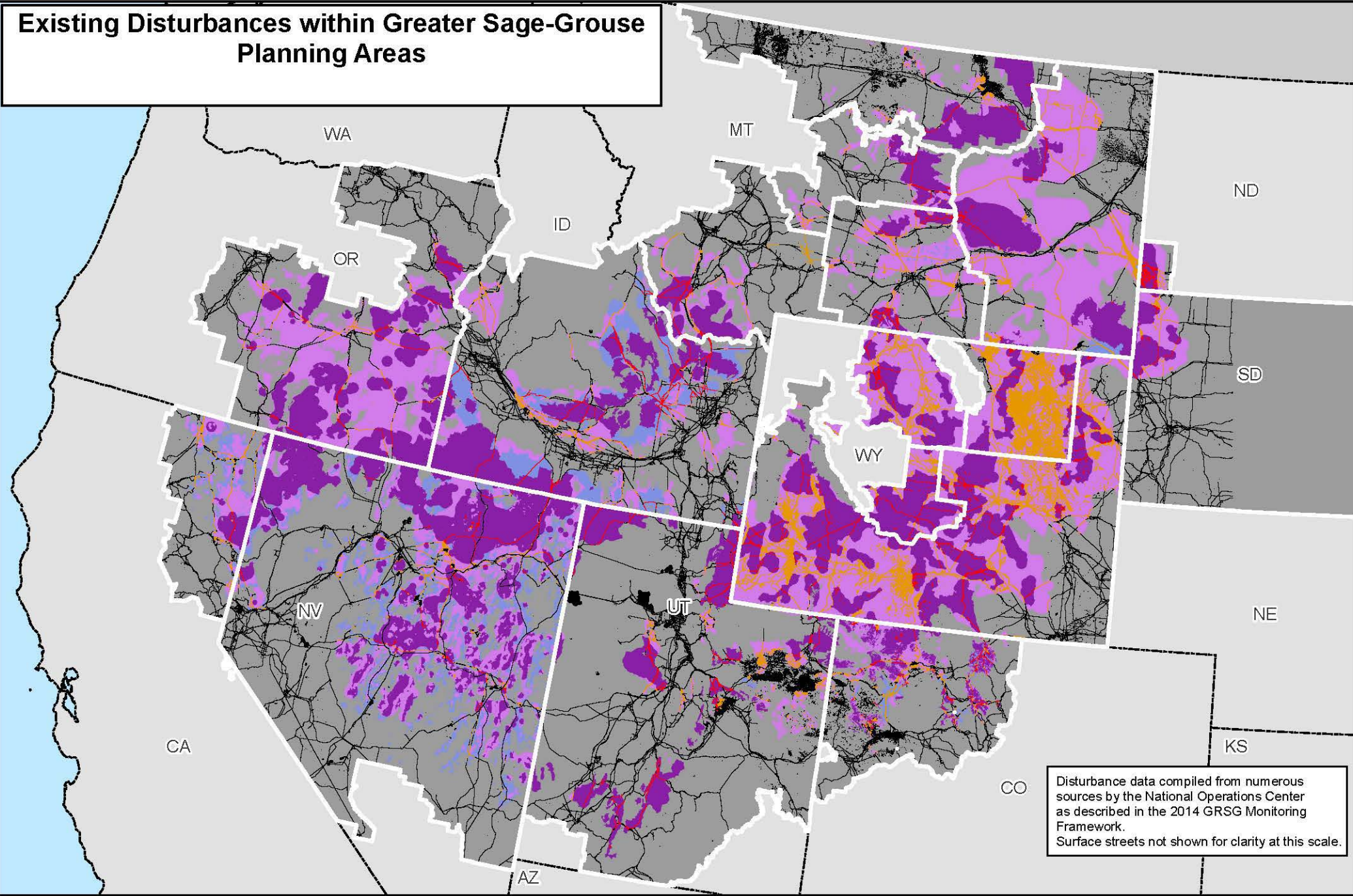
 Planning Area Boundaries
  Planning Area Extent

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Existing Disturbances within Greater Sage-Grouse Planning Areas



Map 3.16

Disturbance in Habitat Type - no Surface Streets

IHMA; PHMA

Anthro Mtn; GHMA; LCHMA; OHMA; RHMA; UDH

NA

Habitat\_Type

PHMA

GHMA

## Legend

Anthro Mtn

IHMA

LCHMA

OHMA

RHMA

UDH

State Boundaries

Planning Area

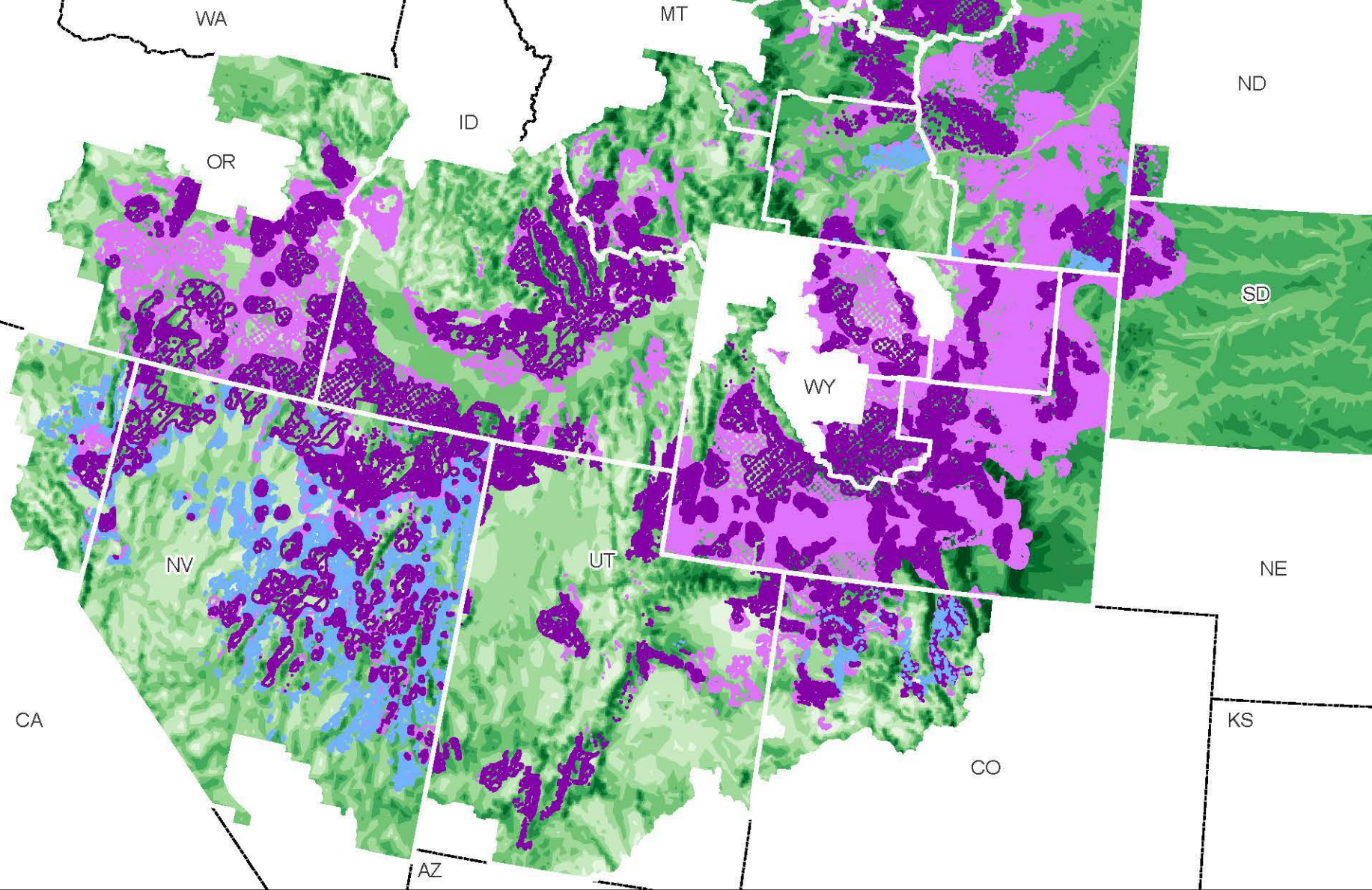


0 25 50 100 Miles

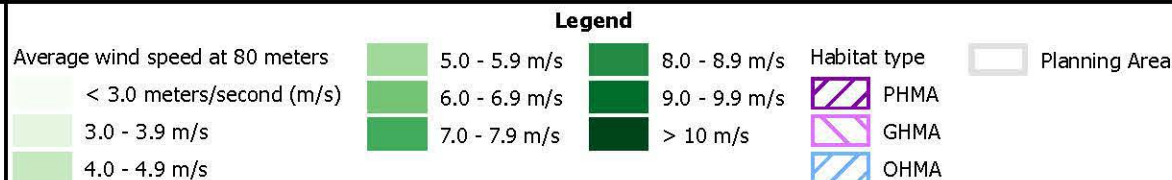
No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Wind Potential



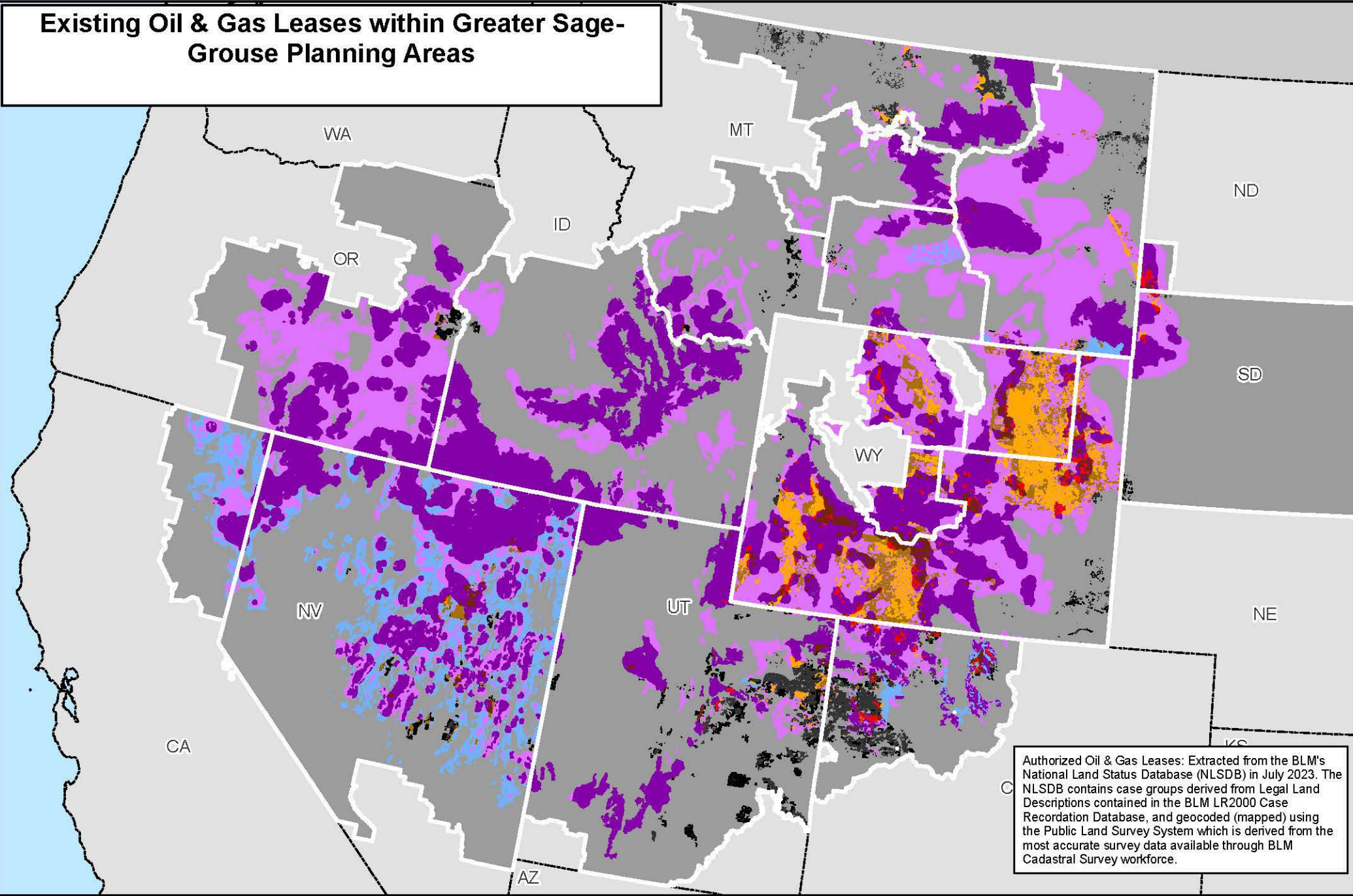
Map 3.17



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Existing Oil & Gas Leases within Greater Sage-Grouse Planning Areas



Authorized Oil & Gas Leases: Extracted from the BLM's National Land Status Database (NLSDB) in July 2023. The NLSDB contains case groups derived from Legal Land Descriptions contained in the BLM LR2000 Case Recordation Database, and geocoded (mapped) using the Public Land Survey System which is derived from the most accurate survey data available through BLM Cadastral Survey workforce.

Map 3.18

**Authorized Oil and Gas Leases - Producing**

Habitat Type

- PHMA
- Anthro Mtn; GHMA; LCHMA; OHMA; RHMA; UDH
- Non-HMA

**Authorized Oil and Gas Leases - Non-Producing / Unknown Production**

Habitat Type

- PHMA
- Anthro Mtn; GHMA; LCHMA; OHMA; RHMA; UDH
- Non-HMA

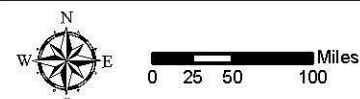
## Legend

**Habitat Type**

- IHMA; PHMA
- GHMA
- Anthro Mtn; LCHMA; OHMA; RHMA; UDH

State Boundaries

Planning Area

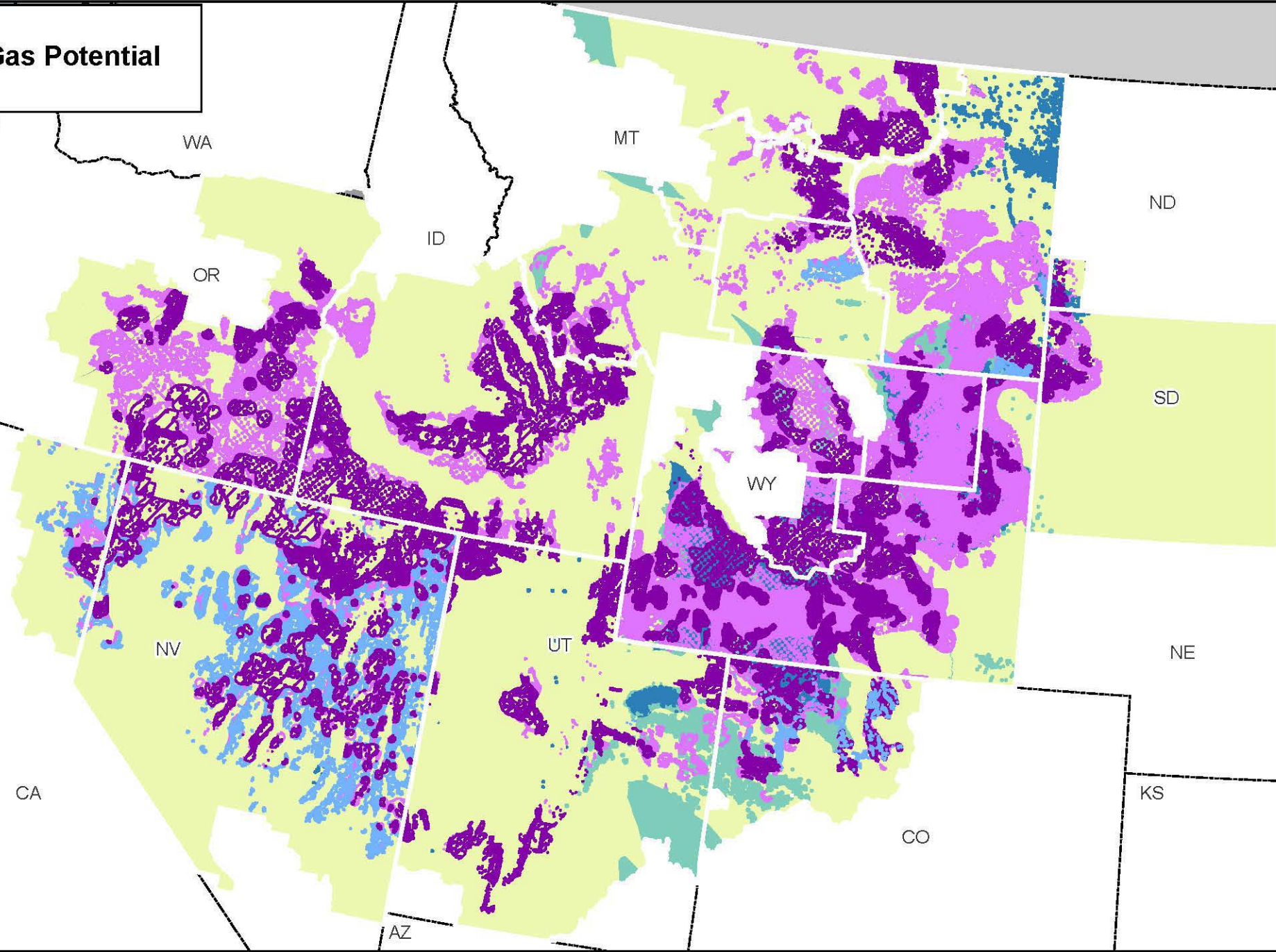


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

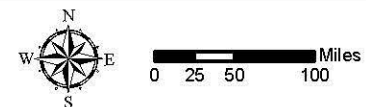
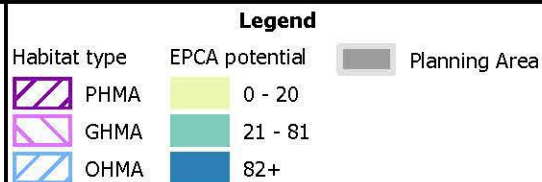




# Oil and Gas Potential



Map 3.19

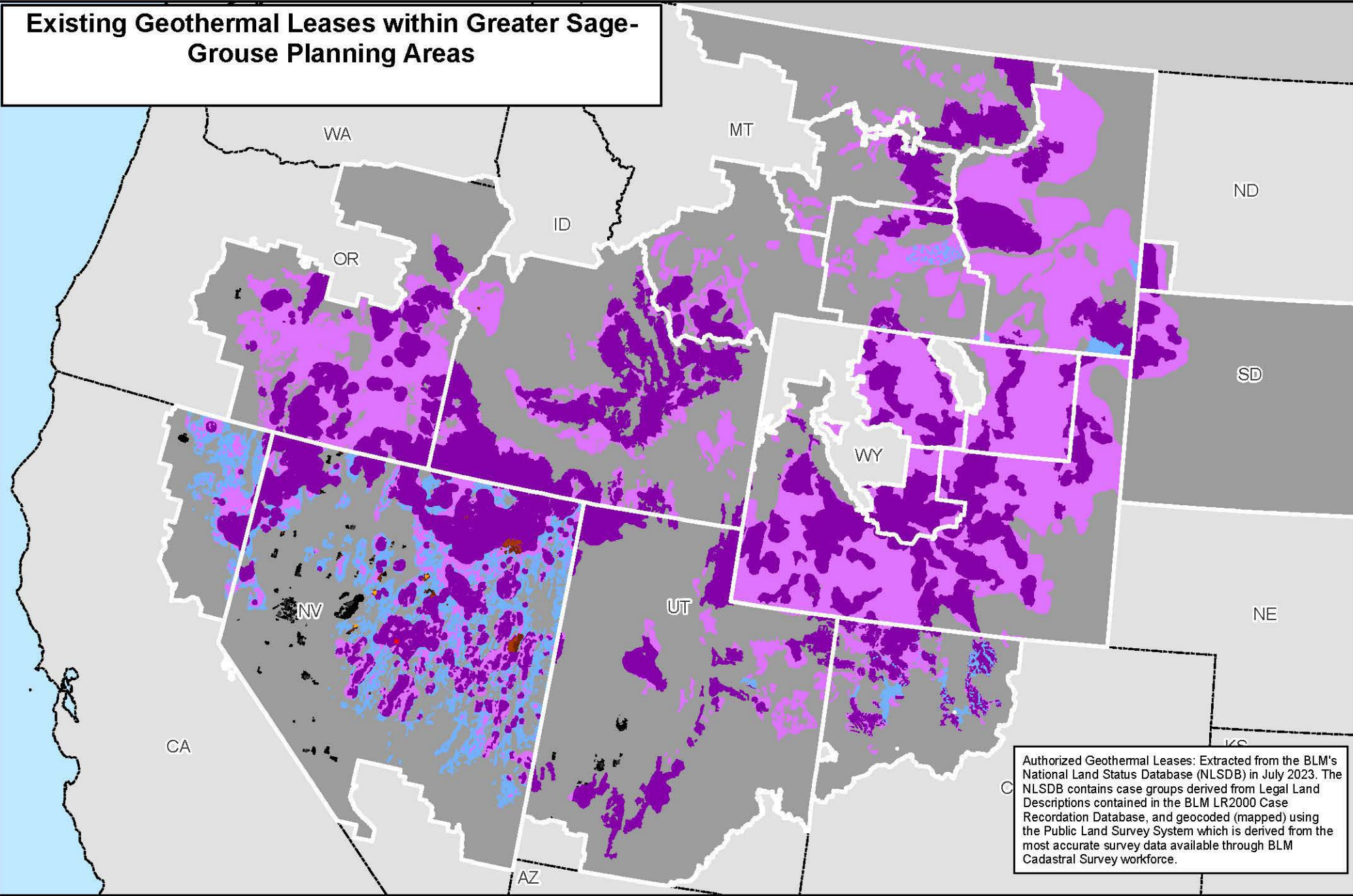


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# Existing Geothermal Leases within Greater Sage-Grouse Planning Areas



Authorized Geothermal Leases: Extracted from the BLM's National Land Status Database (NLSDB) in July 2023. The NLSDB contains case groups derived from Legal Land Descriptions contained in the BLM LR2000 Case Recordation Database, and geocoded (mapped) using the Public Land Survey System which is derived from the most accurate survey data available through BLM Cadastral Survey workforce.

Map 3.20

Approved / Authorized Geothermal Leases - Producing

Habitat Type

- PHMA
- GHMA; OHMA
- Non-HMA

Approved / Authorized Geothermal Leases - Non-Producing

Habitat Type

- PHMA
- GHMA; OHMA
- Non-HMA

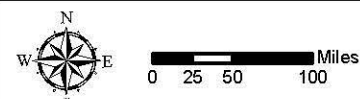
Legend

Habitat Type

- IHMA; PHMA
- GHMA
- Anthro Mtn; LCHMA; OHMA; RHMA; UDH

State Boundaries

Planning Area

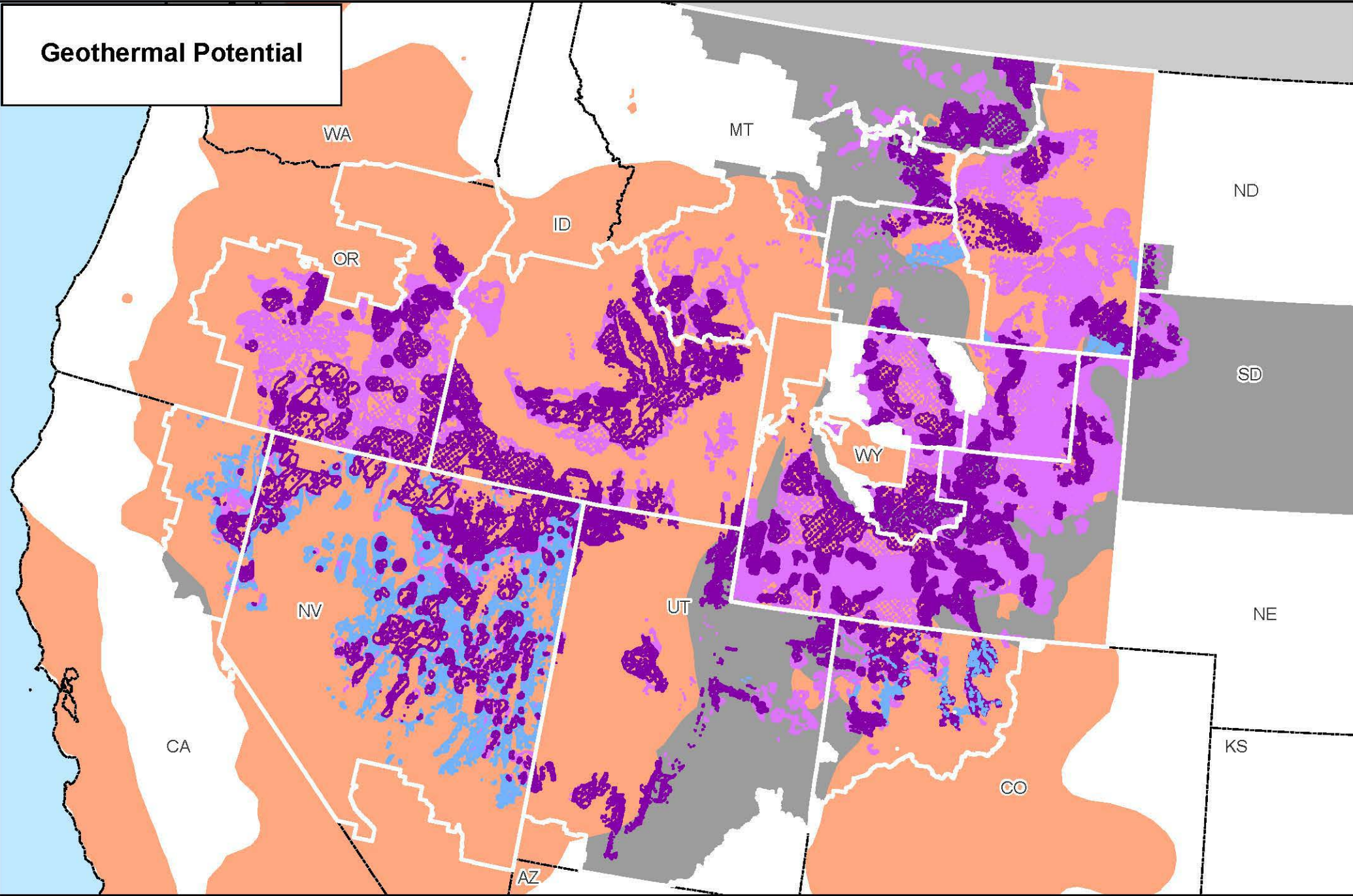


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



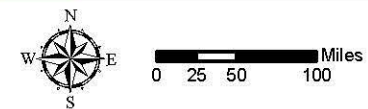


# Geothermal Potential



Map 3.21

- Legend**
- |              |                           |
|--------------|---------------------------|
| Habitat type | Geothermal potential area |
| PHMA         | Geothermal potential area |
| GHMA         | Planning Area             |
| OHMA         |                           |

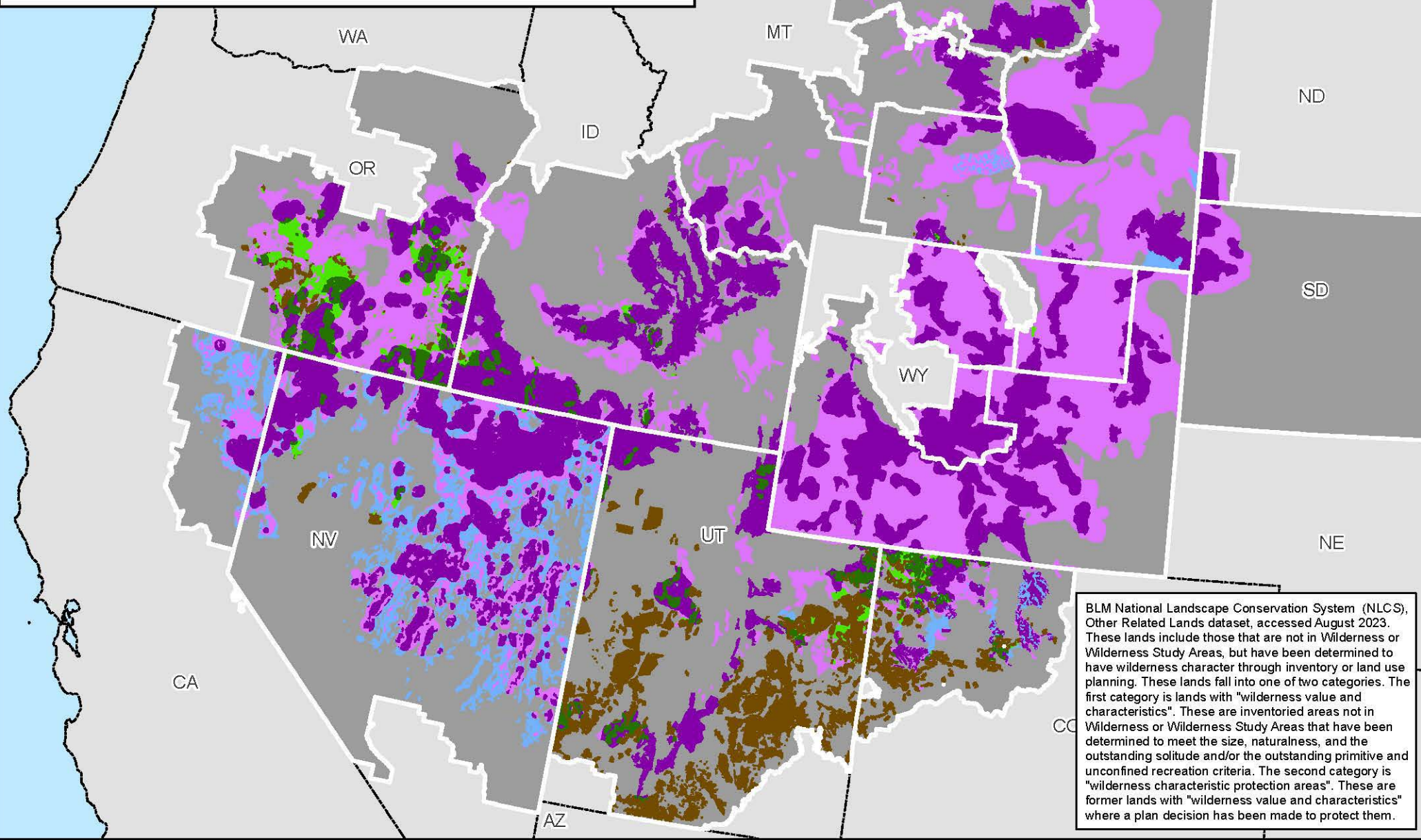


No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.





# BLM National Landscape Conservation System (NLCS), Other Related Lands within Greater Sage-Grouse Planning Areas



BLM National Landscape Conservation System (NLCS), Other Related Lands dataset, accessed August 2023. These lands include those that are not in Wilderness or Wilderness Study Areas, but have been determined to have wilderness character through inventory or land use planning. These lands fall into one of two categories. The first category is lands with "wilderness value and characteristics". These are inventoried areas not in Wilderness or Wilderness Study Areas that have been determined to meet the size, naturalness, and the outstanding solitude and/or the outstanding primitive and unconfined recreation criteria. The second category is "wilderness characteristic protection areas". These are former lands with "wilderness value and characteristics" where a plan decision has been made to protect them.

Map 3.22

Other Related NLCS Lands

Habitat Type

- PHMA; IHMA
- Anthro Mtn; LCHMA; GHMA; OHMA
- Non-HMA

Habitat Type

- PHMA; IHMA
- GHMA
- Anthro Mtn; LCHMA; OHMA; RHMA; UDH

## Legend

- State Boundaries
- Planning Area

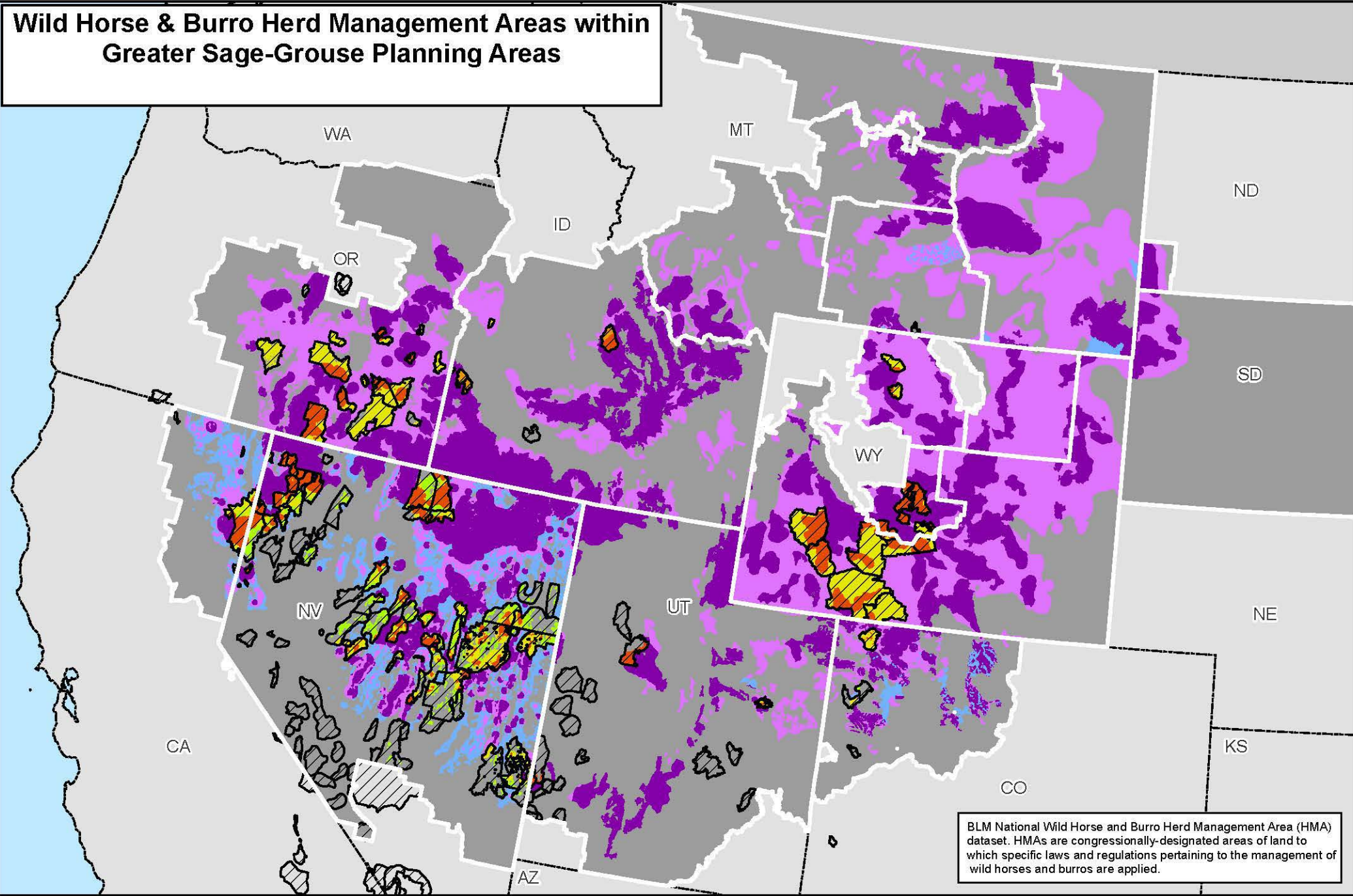


0 25 50 100 Miles

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



# Wild Horse & Burro Herd Management Areas within Greater Sage-Grouse Planning Areas



Map 3.23

