

# The Fire and Invasive Annual Grass Assessment Tool (FIAT)



Doug Havlina, BLM Fire Ecologist

# Topics to Cover

- Background and Development of FIAT
- FIAT Step 1: The regional context
- FIAT Step 2: Strategies within priority landscapes
- Outcomes of FIAT



# Why another assessment?

- Regulatory certainty related to mgmt actions needed by USFWS
- FIAT assessments provide “quantified descriptions of future conservation actions to inform the sage-grouse listing decision” (Bureau of Land Mgmt. WO IM-2014-134)



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- Regulatory certainty related to mgmt actions needed by USFWS
- FIAT assessments provide “quantified descriptions of future conservation actions to inform the sage-grouse listing decision” (Bureau of Land Mgmt. WO IM-2014-134)





# Development of FIAT process



## Development Team

|                      |                 |
|----------------------|-----------------|
| Mike Pellant* (lead) | Dave Pyke*      |
| Jeanne Chambers*     | Jeremy Maestas* |
| Chad Boyd*           | Lou Ballard     |
| Doug Havlina         | Tim Metzger     |
| Todd Hopkins         | Tom Rinkes      |
| Clint McCarthy       | Joe Tague       |
| Steve Knick          | Mina Wuenschel  |
| Mike Gregg           |                 |

\* = member of WAFWA resistance and resilience team

## Review Team

|                |                      |
|----------------|----------------------|
| Laurie Kurth   | Chris Theisen        |
| Lauren Mermejo | Glen Stein           |
| Jesse Delia    | Mike Ielimi          |
| Tate Fischer   | Krista Gollnick Waid |
| Ken Collum     | Chuck Mark           |
| Dave Repass    | Peggy Olwell         |
| Don Major      | Don Kemner           |



# FIAT Step 1

Establishing the regional context for habitats, populations, and threat factors

(March 2013 - August 2014)

## Greater Sage-Grouse Wildfire, Invasive Annual Grasses & Conifer Expansion Assessment

June 2014

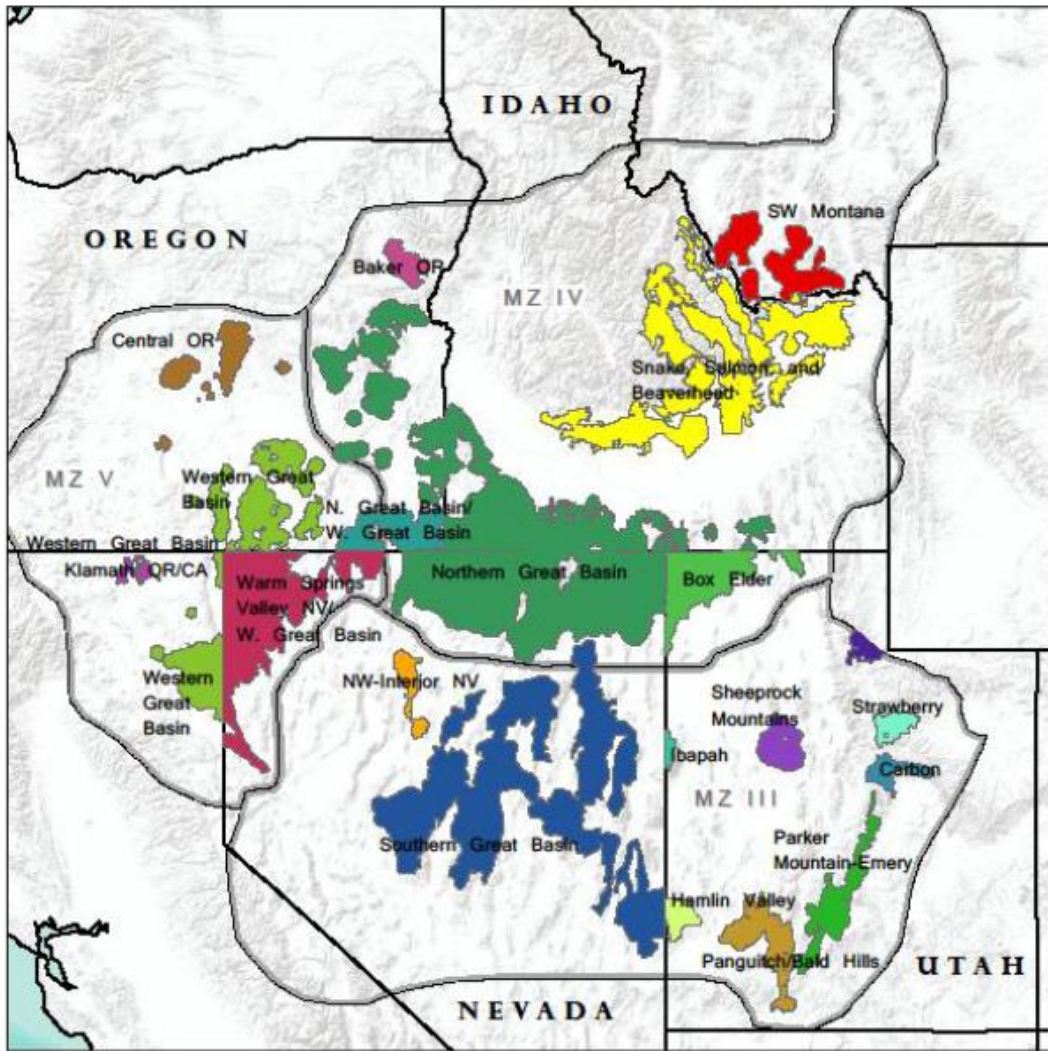


1





# Priority Areas for Conservation (PACs) from 2013 Conservation Objectives Team (COT) report



WAFWA Sage-grouse Management Zone

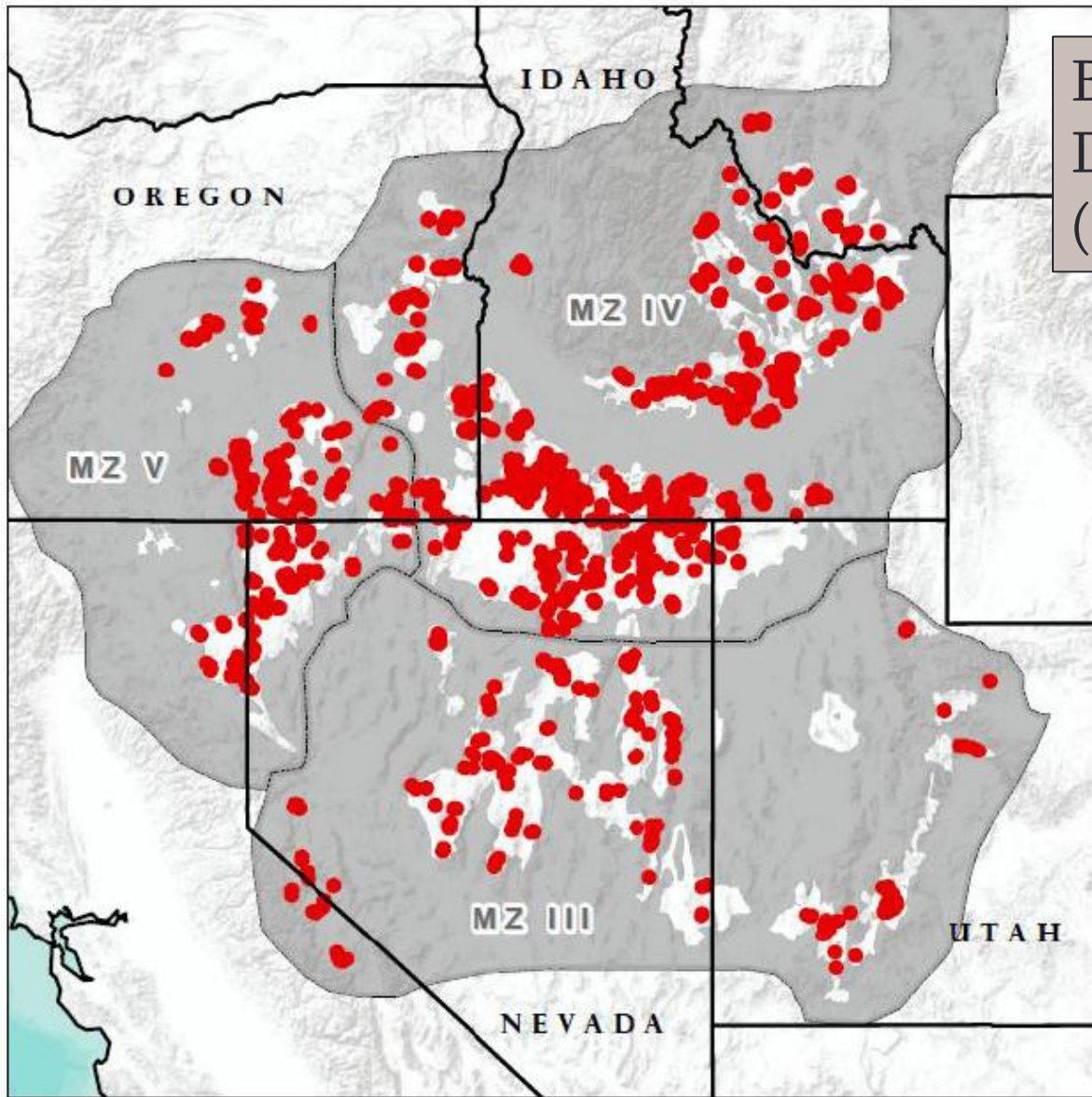
0 100 200 400 Kilometers




- Sage-grouse Priority Areas for Conservation (PAC)
- |   |  |  |
|---|--|--|
| <span style="display:inline-block; width:15px; height:15px; background-color: #e91e63; border:1px solid black;"></span> Baker OR      | <span style="display:inline-block; width:15px; height:15px; background-color: #ff9800; border:1px solid black;"></span> NW-Interior NV                           | <span style="display:inline-block; width:15px; height:15px; background-color: #9c27b0; border:1px solid black;"></span> Sheeprock Mountains                        |
| <span style="display:inline-block; width:15px; height:15px; background-color: #4caf50; border:1px solid black;"></span> Box Elder     | <span style="display:inline-block; width:15px; height:15px; background-color: #4caf50; border:1px solid black;"></span> Northern Great Basin                     | <span style="display:inline-block; width:15px; height:15px; background-color: #ffff00; border:1px solid black;"></span> Snake, Salmon, and Beaverhead              |
| <span style="display:inline-block; width:15px; height:15px; background-color: #00bcd4; border:1px solid black;"></span> Carbon        | <span style="display:inline-block; width:15px; height:15px; background-color: #00bcd4; border:1px solid black;"></span> Northern Great Basin/Western Great Basin | <span style="display:inline-block; width:15px; height:15px; background-color: #00008b; border:1px solid black;"></span> Southern Great Basin                       |
| <span style="display:inline-block; width:15px; height:15px; background-color: #8d6e14; border:1px solid black;"></span> Central OR    | <span style="display:inline-block; width:15px; height:15px; background-color: #8d6e14; border:1px solid black;"></span> Panguitch/Bald Hills                     | <span style="display:inline-block; width:15px; height:15px; background-color: #e0ffff; border:1px solid black;"></span> Strawberry                                 |
| <span style="display:inline-block; width:15px; height:15px; background-color: #c8e6c9; border:1px solid black;"></span> Hamlin Valley | <span style="display:inline-block; width:15px; height:15px; background-color: #4caf50; border:1px solid black;"></span> Parker Mountain-Emerly                   | <span style="display:inline-block; width:15px; height:15px; background-color: #e91e63; border:1px solid black;"></span> Warm Springs Valley NV/Western Great Basin |
| <span style="display:inline-block; width:15px; height:15px; background-color: #00bcd4; border:1px solid black;"></span> Ibapah        | <span style="display:inline-block; width:15px; height:15px; background-color: #4b0082; border:1px solid black;"></span> Rich-Morgan-Summit                       | <span style="display:inline-block; width:15px; height:15px; background-color: #4caf50; border:1px solid black;"></span> Western Great Basin                        |
| <span style="display:inline-block; width:15px; height:15px; background-color: #9c27b0; border:1px solid black;"></span> Klamath OR/CA | <span style="display:inline-block; width:15px; height:15px; background-color: #ff0000; border:1px solid black;"></span> SW Montana                               |  |





# Breeding Bird Density (Doherty 2010)



-  75% Breeding Bird Density
-  Sage-grouse Management Zone
-  PAC within Management Zones

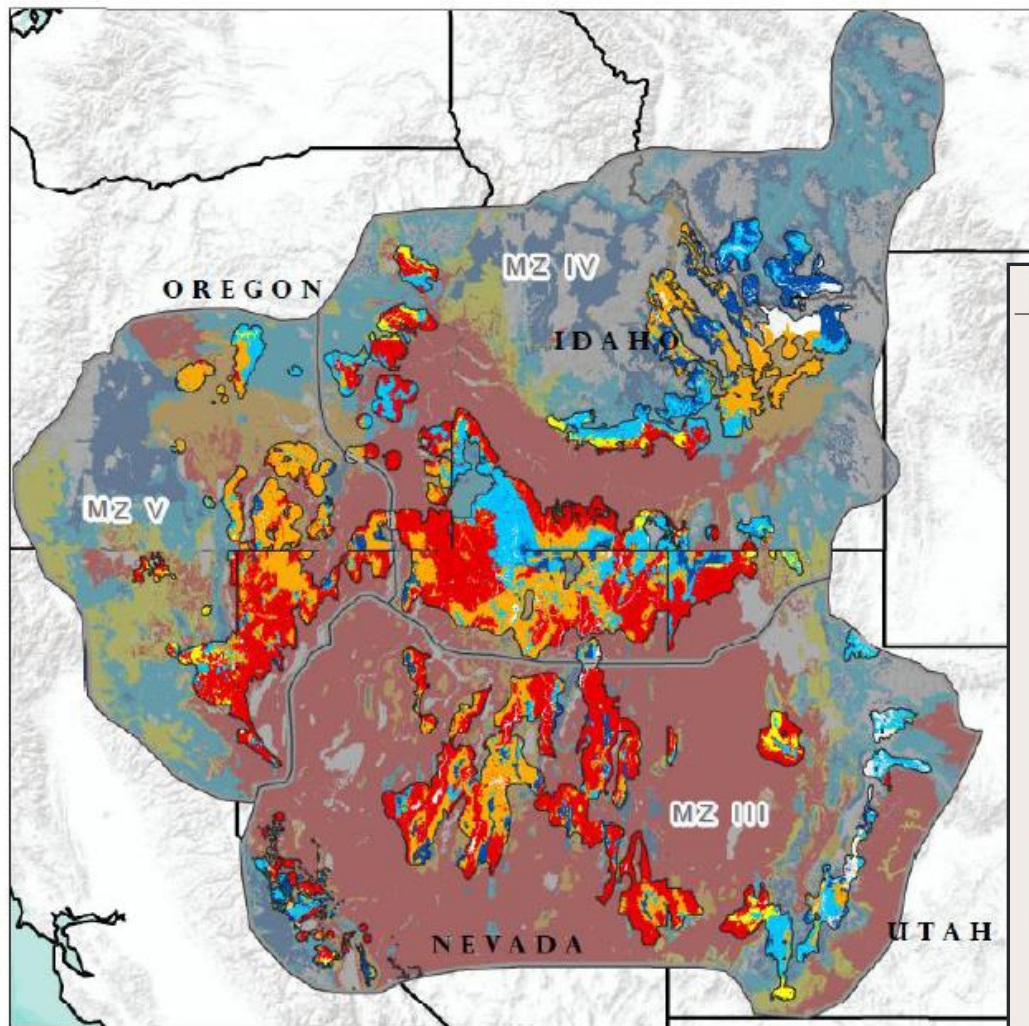
0 100 200 400 Kilometers







# Soil moisture/ temperature regimes



Sage-grouse Management Zone  
 Non Priority Area for Conservation

0 100 200 400 Kilometers

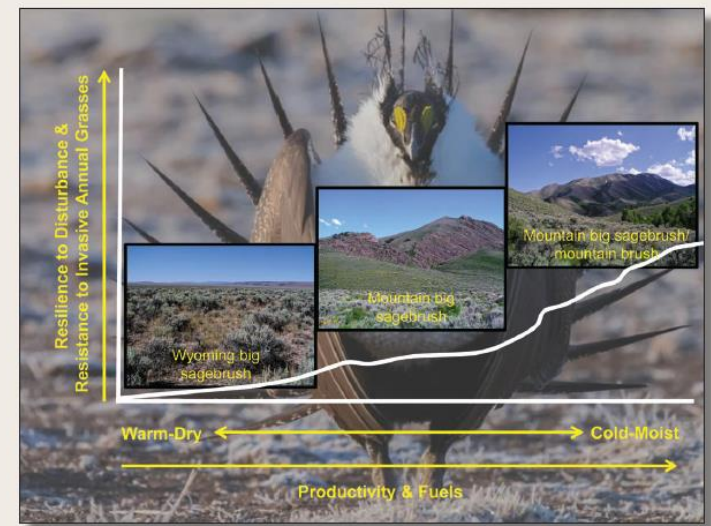
**Soil Moisture & Temperature Regime**

- Cold and Moist (Cryic)
- Cool and Moist (Frigid/ Xeric)
- Warm and Moist (Mesic/Xeric)
- Cool and Dry (Frigid/ Aridic)
- Warm and Dry (Mesic/ Aridic)
- Omitted or No Data

USDA United States Department of Agriculture

## Using Resistance and Resilience Concepts to Reduce Impacts of Invasive Annual Grasses and Altered Fire Regimes on the Sagebrush Ecosystem and Greater Sage-Grouse: A Strategic Multi-Scale Approach

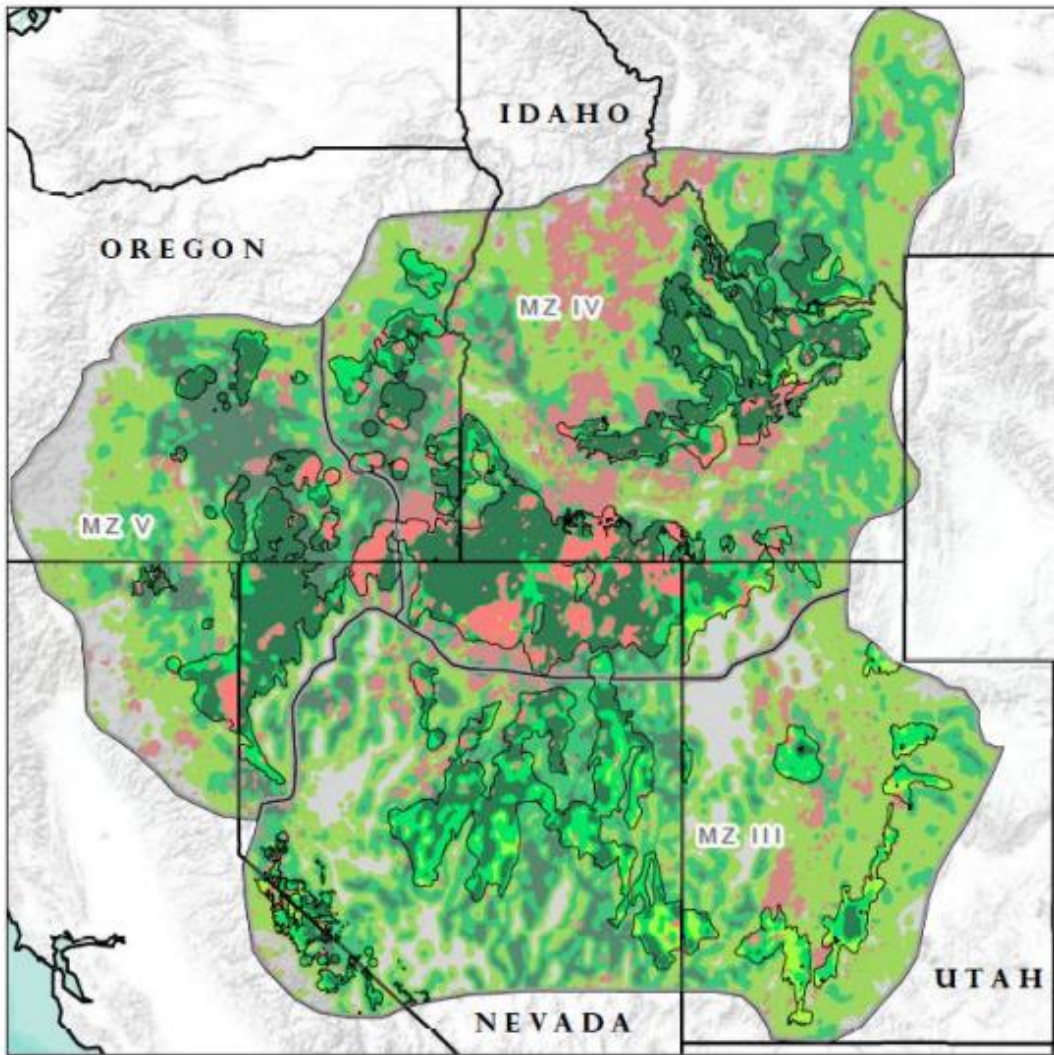
Jeanne C. Chambers, David A. Pyke, Jeremy D. Maestas, Mike Pellant, Chad S. Boyd, Steven B. Campbell, Shawn Espinosa, Douglas W. Havlina, Kenneth E. Mayer, and Amarina Wuenschel






Forest Service Rocky Mountain Research Station General Technical Report RMRS-GTR-326 September 2014









-  Sage-grouse Management Zone
-  Non Priority Area for Conservation
-  Fire Perimeter (post 2000)

Sagebrush % Area within a 5K Radius

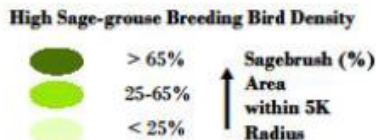
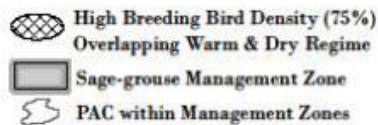
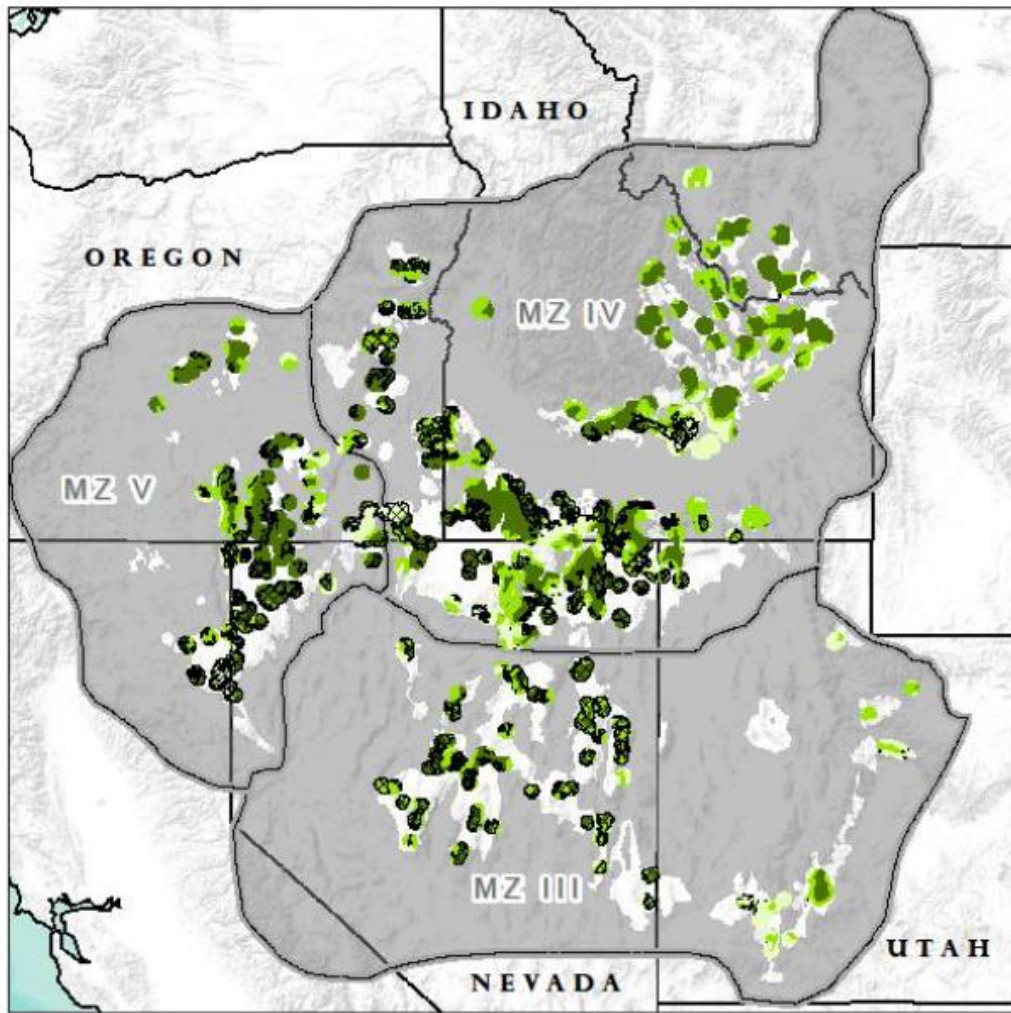
-  1 - 25
-  25 - 65
-  65 - 100

0 100 200 400 Kilometers

Sagebrush landscape cover (habitat indicator, correlation to persistence)



# Wildfire and Invasive Annual Grass Threat

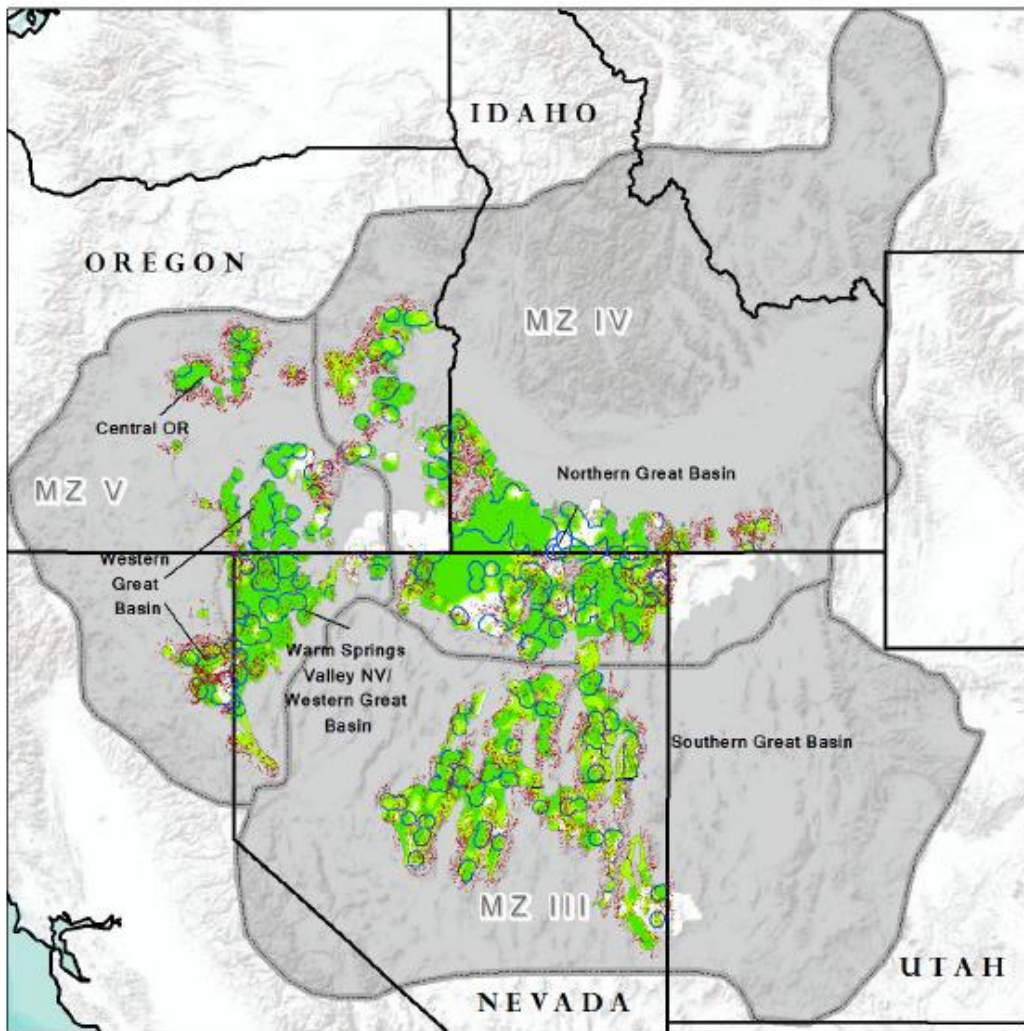


- Focal habitats:  
75% BBD areas in  
priority PACS with  
sagebrush
- Emphasis Areas:  
subsets of focal  
habitats in warm/dry  
moisture regimes with  
sagebrush landscape  
cover greater than  
25%



# Conifer Expansion Threat

- **Focal habitats:** Areas within or near conifer expansion in areas with > 25% sagebrush landscape cover
- **Emphasis Areas:** subsets of focal habitats in the 75% BBD areas



◆ Conifer Expansion (risk model) surrounding PAC

○ 75% Breeding Bird Density Area

○ Sage-grouse High Priority PAC within Management Zones

■ Sage-grouse Management Zone

Sagebrush (%) Area within a 5K Radius

■ > 65%

■ 25-65%

□ < 25%



# Wildfire and Invasive Annual Grass PACs

| Sage-grouse Management Zone | Sage-grouse Priority Area for Conservation (PAC) Name | Total PAC Acres | Breeding Bird Density (75%) Acres | Percent of Breeding Bird Density (75%) Area within PAC | Warm and Dry Soil Moisture & Temperature Regime within Breeding Bird Density (75%) Acres* |                                   |                                |
|-----------------------------|---|-----------------|-----------------------------------|--|---|-----------------------------------|--------------------------------|
|                             |   |                 |                                   |  | 0-25% Sagebrush Landscape Cover   | 25%-65% Sagebrush Landscape Cover | 65%+ Sagebrush Landscape Cover |
| 4                           | Northern Great Basin                                  | 13045515        | 7383442                           | 57%  | 179551 (2%)   | 674554 (9%)                       | 1745163 (24%)                  |
| 3                           | Southern Great Basin                                  | 9461355         | 3146056                           | 33%  | 42596 (1%)  | 792780 (25%)                      | 1062091 (34%)                  |
| 4                           | Snake, Salmon, and Beaverhead                         | 5477014         | 2823205                           | 52%  | 68107 (2%)  | 89146 (3%)                        | 95970 (3%)                     |
| 5                           | Western Great Basin                                   | 3177253         | 2084626                           | 66%  | 149399 (7%)   | 140141 (7%)                       | 202767 (10%)                   |
| 5                           | Warm Springs Valley NV/Western Great Basin            | 3520937         | 1558166                           | 44%  | 31458 (2%)  | 207365 (13%)                      | 741353 (48%)                   |
| 4                           | SW Montana  | 1369076         | 659475                            | 48%  | 0 (0%)  | 0 (0%)                            | 0 (0%)                         |
| 4                           | Northern Great Basin/Western Great Basin              | 1065124         | 624581                            | 59%  | 114222 (18%)  | 85258 (14%)                       | 116513 (19%)                   |
| 5                           | Central OR  | 813699          | 451755                            | 56%  | 0 (0%)  | 6211 (1%)                         | 16463 (4%)                     |
| 3                           | Panguitch/Bald Hills                                  | 1135785         | 352258                            | 31%  | 6883 (2%)   | 5821 (2%)                         | 0 (0%)                         |
| 3                           | Parker Mountain-Emerly                                | 1122491         | 308845                            | 28%  | 0 (0%)  | 127 (0%)                          | 0 (0%)                         |
| 4                           | Box Elder   | 1519454         | 292658                            | 19%  | 22 (0%)   | 43325 (15%)                       | 23913 (8%)                     |
| 4                           | Baker OR  | 336540          | 184813                            | 55%  | 0 (0%)  | 46459 (25%)                       | 36214 (20%)                    |
| 3                           | NW-Interior NV  | 371557          | 108256                            | 29%  | 576 (1%)  | 17117 (16%)                       | 25173 (23%)                    |
| 3                           | Carbon  | 355723          | 97734                             | 27%  | 255 (0%)  | 180 (0%)                          | 0 (0%)                         |
| 3                           | Strawberry  | 323219          | 52635                             | 16%  | 0 (0%)  | 0 (0%)                            | 0 (0%)                         |
| 3                           | Rich-Morgan-Summit                                    | 217033          | 37005                             | 17%  | 0 (0%)  | 0 (0%)                            | 0 (0%)                         |
| 3                           | Hamlin Valley   | 341270          | 3244                              | 1%   | 0 (0%)  | 139 (4%)                          | 3105 (96%)                     |
| 3                           | Ibapah  | 98574           | 0                                 | 0%   | 0 (NA)  | 0 (NA)                            | 0 (NA)                         |
| 3                           | Sheeprock Mountains                                   | 611374          | 0                                 | 0%   | 0 (NA)  | 0 (NA)                            | 0 (NA)                         |
| 5                           | Klamath OR/CA   | 162667          | 0                                 | 0%   | 0 (NA)  | 0 (NA)                            | 0 (NA)                         |



\* Numbers in parenthesis indicate the percent of acres relative to total acres of breeding bird density (75%)



# Conifer Expansion PACs

| Sage-grouse Management Zone | Sage-grouse Priority Area for Conservation (PAC) Name | Total PAC Acres | Breeding Bird Density (75%) Acres | Percent Breeding Bird Density (75%) Acres | Conifer Expansion (Modeled) Acres within Breeding Bird Density (75%) Areas* |                                   |                                |
|-----------------------------|---|-----------------|-----------------------------------|---|---|-----------------------------------|--------------------------------|
|                             |   |                 |                                   |   | 0-25% Sagebrush Landscape Cover   | 25%-65% Sagebrush Landscape Cover | 65%+ Sagebrush Landscape Cover |
| 4                           | Northern Great Basin                                  | 13045515        | 7383442                           | 57%                                       | 95714 (1%)  | 247250 (3%)                       | 272079 (4%)                    |
| 3                           | Southern Great Basin                                  | 9461355         | 3146056                           | 33%                                       | 23982 (1%)  | 229389 (7%)                       | 92756 (3%)                     |
| 4                           | <del>Snake, Salmon, and Beaverhead</del>              | 5477014         | 2823205                           | 52%                                       | 970 (0%)  | 18367 (1%)                        | 92251 (3%)                     |
| 5                           | Western Great Basin                                   | 3177253         | 2084626                           | 66%                                       | 57918 (3%)  | 106130 (5%)                       | 67858 (3%)                     |
| 5                           | Warm Springs Valley NV/Western Great Basin            | 3520937         | 1558166                           | 44%                                       | 9984 (1%)   | 46846 (3%)                        | 104168 (7%)                    |
| 4                           | SW Montana  | 1369076         | 659475                            | 48%                                       | 90 (0%)   | 8182 (1%)                         | 21224 (3%)                     |
| 4                           | Northern Great Basin/Western Great Basin              | 1065124         | 624581                            | 59%                                       | 9436 (2%)   | 1869 (0%)                         | 3587 (1%)                      |
| 5                           | Central OR  | 813699          | 451755                            | 56%                                       | 339 (0%)  | 27260 (6%)                        | 31765 (7%)                     |
| 3                           | Panguitch/Bald Hills                                  | 1135785         | 352258                            | 31%                                       | 28515 (8%)  | 22118 (6%)                        | 0 (0%)                         |
| 3                           | Parker Mountain-Emery                                 | 1122491         | 308845                            | 28%                                       | 6967 (2%)   | 15052 (5%)                        | 5980 (2%)                      |
| 4                           | Box Elder   | 1519454         | 292658                            | 19%                                       | 2415 (1%)   | 22184 (8%)                        | 20316 (7%)                     |
| 4                           | Baker OR  | 336540          | 184813                            | 55%                                       | 1 (0%)  | 7484 (4%)                         | 195 (0%)                       |
| 3                           | NW-Interior NV  | 371557          | 108256                            | 29%                                       | 4320 (4%)   | 5718 (5%)                         | 653 (1%)                       |
| 3                           | Carbon  | 355723          | 97734                             | 27%                                       | 3364 (3%)   | 15832 (16%)                       | 0 (0%)                         |
| 3                           | Strawberry  | 323219          | 52635                             | 16%                                       | 236 (0%)  | 1007 (2%)                         | 0 (0%)                         |
| 3                           | Rich-Morgan-Summit                                    | 217033          | 37005                             | 17%                                       | 3913 (11%)  | 2628 (7%)                         | 0 (0%)                         |
| 3                           | Hamlin Valley   | 341270          | 3244                              | 1%  | 0 (0%)  | 16 (0%)                           | 520 (16%)                      |
| 3                           | Ibapah  | 98574           | 0                                 | 0%  | 0 (NA)  | 0 (NA)                            | 0 (NA)                         |
| 5                           | Klamath OR/CA   | 162667          | 0                                 | 0%  | 0 (NA)  | 0 (NA)                            | 0 (NA)                         |
| 3                           | Sheeprock Mountains                                   | 611374          | 0                                 | 0%  | 0 (NA)  | 0 (NA)                            | 0 (NA)                         |



\* Numbers in parenthesis indicate the percent of acres relative to total acres of breeding bird density (75%)

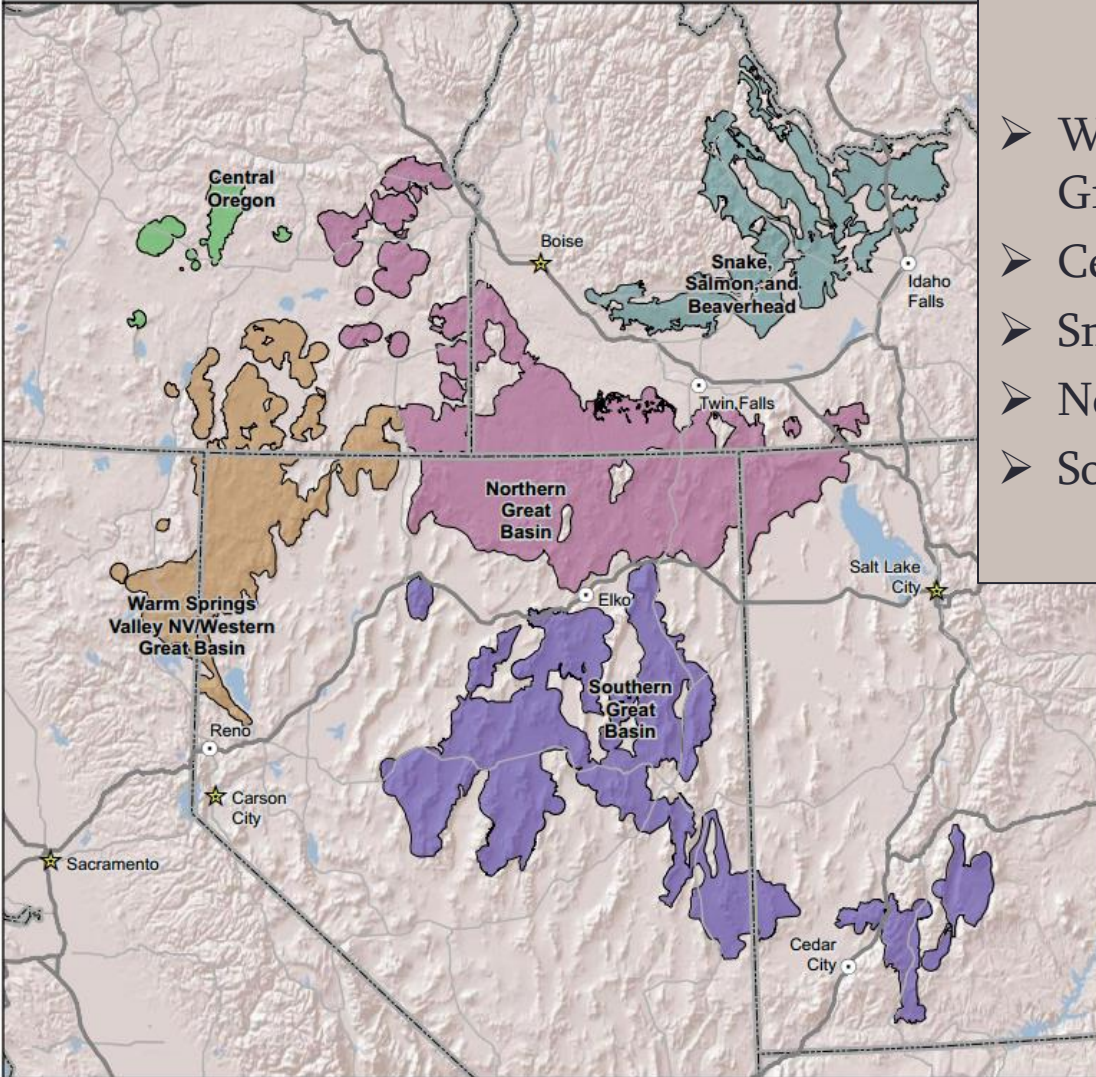


# FIAT Assessment Areas

National Operations Center  
Bureau of Land Management  
U.S. Department of the Interior

## FIAT Assessment Areas:

- WGB/Warm Springs Valley, Western Great Basin (7.3 M acres)
- Central Oregon (814,000 acres)
- Snake/Salmon/Beaverhead (5.5 M acres)
- Northern Great Basin (16 M acres)
- Southern Great Basin (13.5 M acres)



### Legend

#### FIAT Assessment Areas

- Central Oregon
- Northern Great Basin
- Snake, Salmon, and Beaverhead
- Southern Great Basin
- Warm Springs Valley NV/Western Great Basin
- State Boundary

- Freeway or Other Major Road
- Other Major Road
- Cities
- ★ Capital City



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

1:5,000,000

February 2015

Date Saved: 2/10/2015

Data Sources: Bureau of Land Management, ESRI Basedata





# FIAT Step 2

(Sept. 2014 – March 2015)

- Completing the 5 individual assessments
- Incorporate local data with step 1 findings
- Design mgmt. strategies, establish spatial priorities, and identify potential treatments for:
  - Fuels Management
  - Habitat Recovery/Restoration
  - Fire Operations
  - Post-fire Rehabilitation

# FIAT Team Leads

- Craig Goodell:** Central Oregon  
(OR/WA Fire Ecologist)
- Joe Adamski:** (1) N. Great Basin  
(ID Forestry Lead) (2) Snake/Salmon/Beaverhead
- Sandy Gregory:** S. Great Basin  
(NV Fuels Lead)
- Ken Collum:** W. Great Basin/Warm Springs Valley  
(Eagle Lake Field Office Manager)



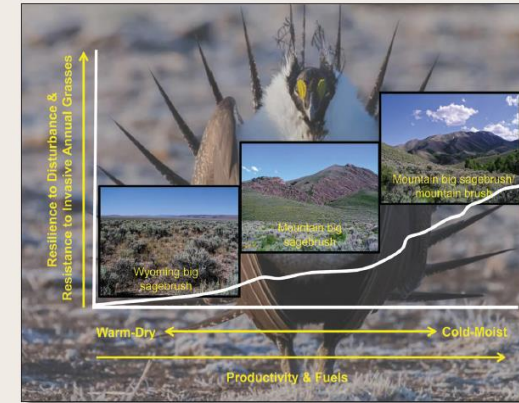


# Sideboards of FIAT Step 2

- Ameliorate threats to SG and habitats from wildfire, invasive annual grasses, and conifer expansion
- Spatially identify management strategies, potential treatments, and priority areas (fuels mgmt., habitat restoration, fire operations, post-fire rehabilitation)
- Use focal habitats and emphasis areas to define where management should be applied
- Apply guidance from SG habitat matrix, the R/R General Technical Report, and FIAT Report

## Using Resistance and Resilience Concepts to Reduce Impacts of Invasive Annual Grasses and Altered Fire Regimes on the Sagebrush Ecosystem and Greater Sage-Grouse: A Strategic Multi-Scale Approach

Jeanne C. Chambers, David A. Pyke, Jeremy D. Maestas, Mike Pellant, Chad S. Boyd, Steven B. Campbell, Shawn Espinosa, Douglas W. Havlina, Kenneth E. Mayer, and Amarina Wuenschel



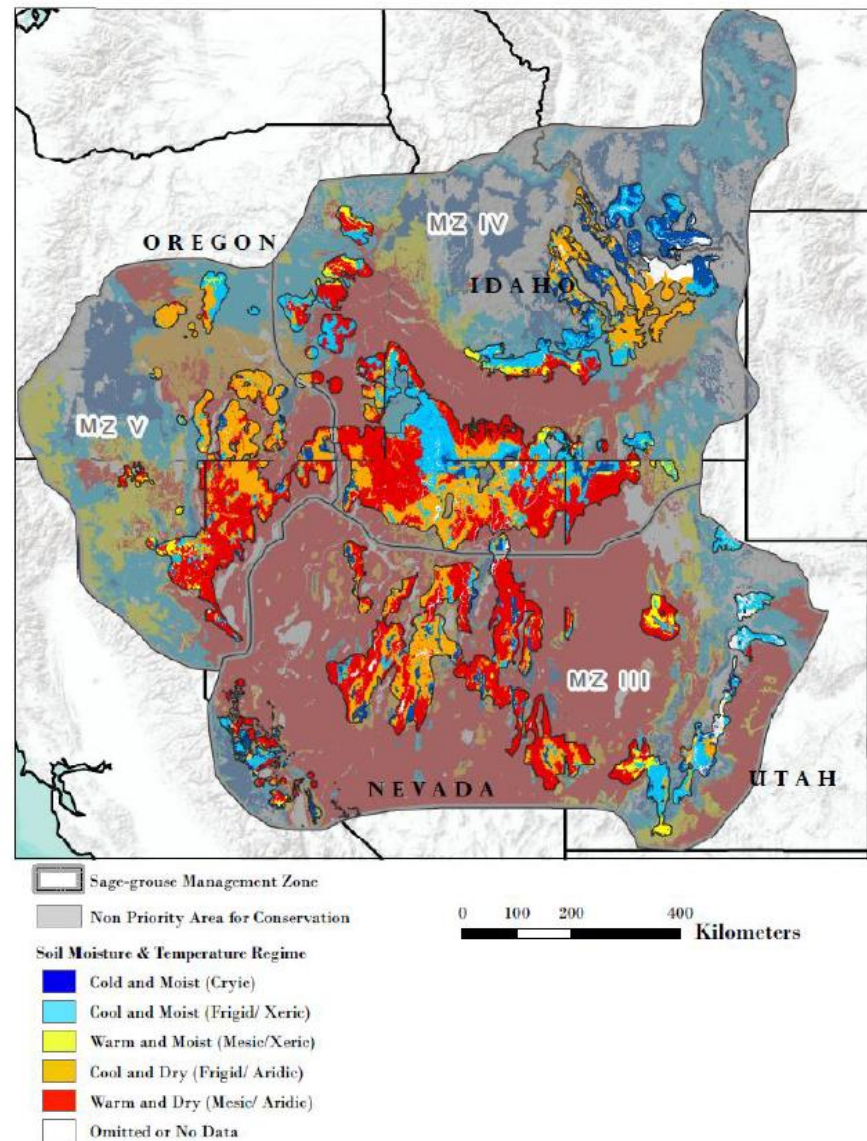
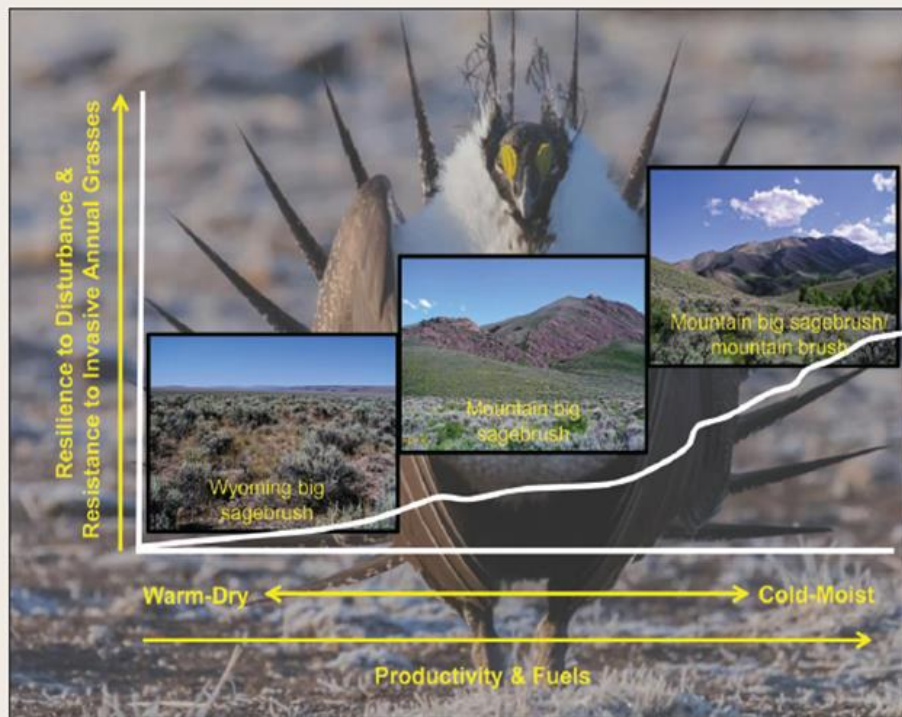
### Greater Sage-Grouse Wildfire, Invasive Annual Grasses & Conifer Expansion Assessment

June 2014



# Using Resistance and Resilience Concepts to Reduce Impacts of Invasive Annual Grasses and Altered Fire Regimes on the Sagebrush Ecosystem and Greater Sage-Grouse: A Strategic Multi-Scale Approach

Jeanne C. Chambers, David A. Pyke, Jeremy D. Maestas, Mike Pellant, Chad S. Boyd, Steven B. Campbell, Shawn Espinosa, Douglas W. Havlina, Kenneth E. Mayer, and Amarina Wuenschel





# SAGE-GROUSE HABITAT MATRIX

## Proportion of Landscape Dominated by Sagebrush

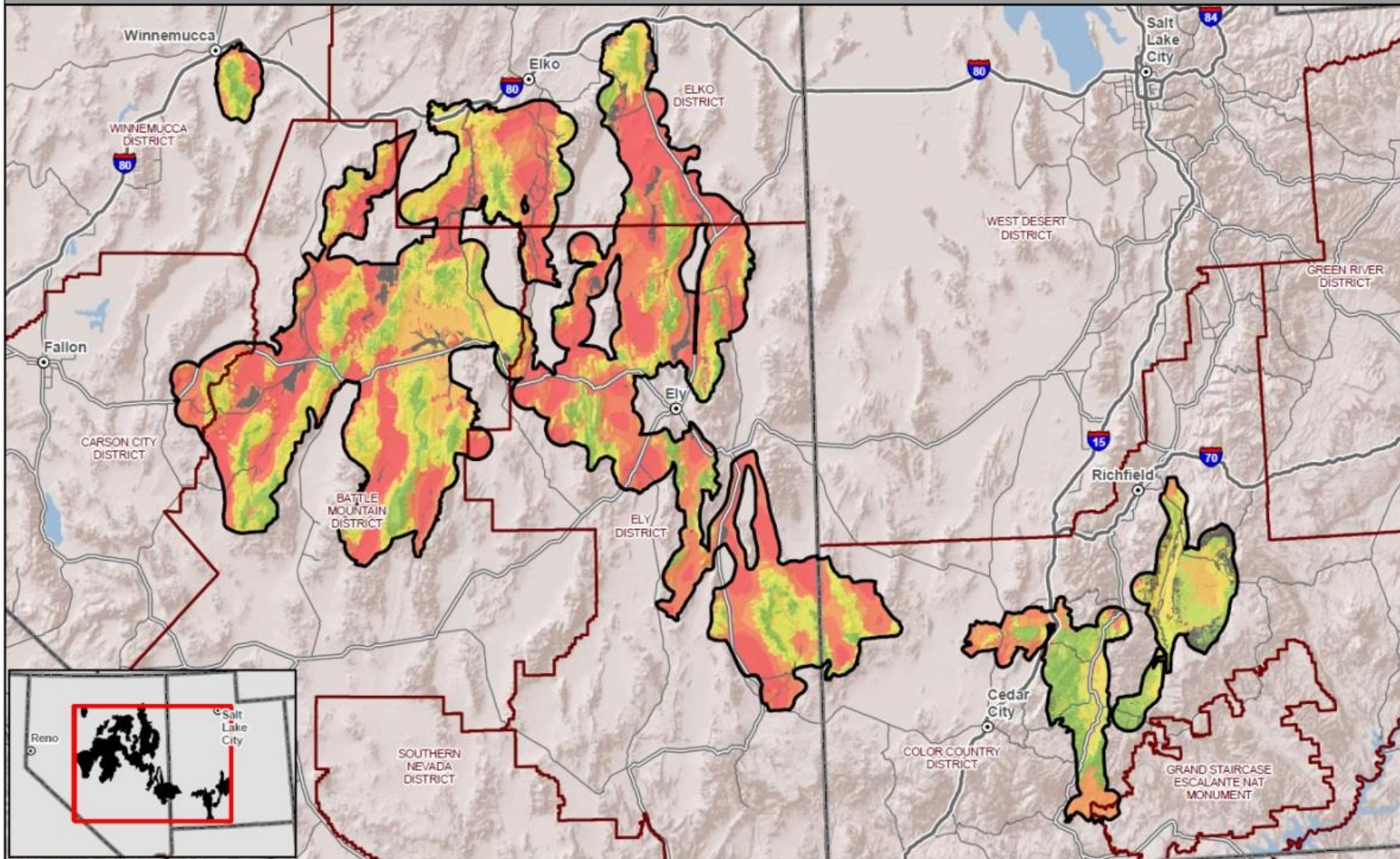
Resilience to Disturbance & Resistance to Invasive Annual Grasses

|                 | <i>Low</i><br>< 25% Sagebrush-Dominated Landscape   | <i>Medium</i><br>25-65% Sagebrush-Dominated Landscape   | <i>High</i><br>> 65% Sagebrush-Dominated Landscape  |
|-----------------|---|---|---|
| <i>High</i>     | <p><b>1A</b> Natural sagebrush recovery possible. Sagebrush restoration potential is high</p>   | <p><b>1B</b> Natural sagebrush recovery is likely to occur, but certain areas may lack connectivity</p> | <p><b>1C</b> Natural sagebrush recovery is likely to occur.</p>                                   |
|                 | <p>Perennial grasses and forbs sufficient to recover<br/>Annual invasive risk is low<br/>Restoration potential high<br/>Recovery from inappropriate grazing high</p>  |   |   |
| <i>Moderate</i> | <p><b>2A</b> Natural sagebrush recovery is possible, but time required for may be too great</p>   | <p><b>2B</b> Natural sagebrush recovery is likely to occur, but certain areas may lack connectivity</p> | <p><b>2C</b> Natural sagebrush recovery is likely to occur</p>                                    |
|                 | <p>Perennial grasses and forbs usually adequate for recovery<br/>Risk of annual invasives is moderately high on warmer and drier sites<br/>Seeding-transplanting success depends on site characteristics<br/>Recovery following inappropriate livestock use depends on site characteristics</p> |   |   |
| <i>Low</i>      | <p><b>3A</b> Natural sagebrush recovery or restoration not likely</p>   | <p><b>3B</b> Natural sagebrush recovery may occur, but time required will likely be too great</p>       | <p><b>3C</b> Natural sagebrush recovery may occur, but time required will likely be too great</p> |
|                 | <p>Perennial grasses and forbs inadequate to recover<br/>Annual invasive risk is high<br/>Restoration potential low; needs multiple interventions<br/>Recovery from inappropriate grazing is low</p>  |   |   |

# Soil Moisture / Temperature Regimes - NEW

Greater Sage-Grouse, Wildfire, Invasive Annual Grasses, and Conifer Expansion Assessments

Southern Great Basin  
Bureau of Land Management  
U.S. Department of the Interior



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



Assessment Area  
State Boundary  
BLM District Boundary

Interstate Hwy  
US Route  
State Route

January 2015  
Date Saved: 2/11/2015  
Data Sources: Bureau of Land Management, ESRI Basedata  
1:2,782,791



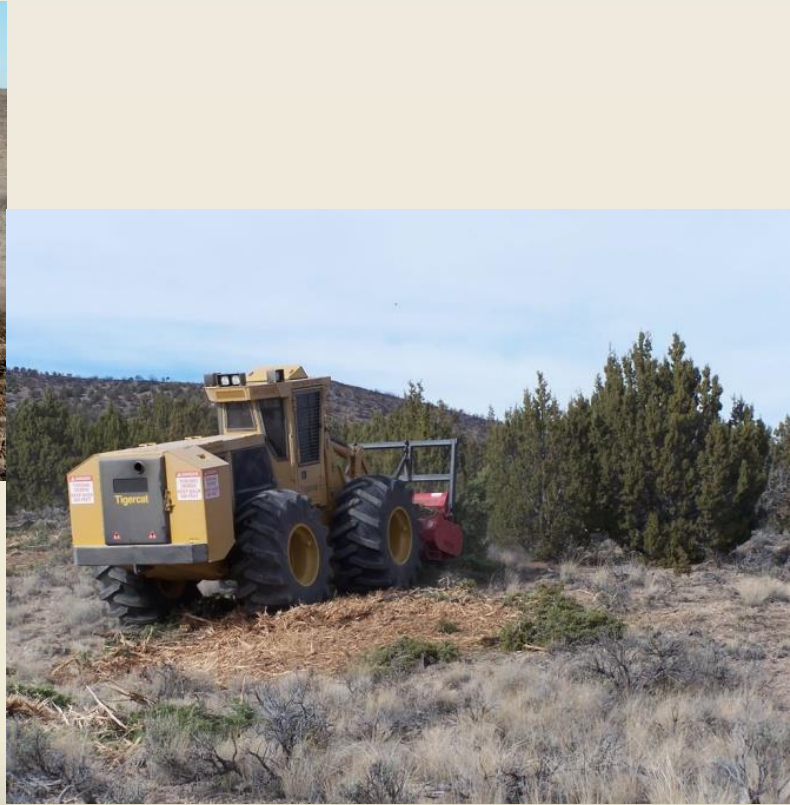
# Fuels Management

(proactive strategies)



# Habitat Recovery/Restoration

(proactive strategies)





# Fire Operations

(both proactive and reactive strategies)



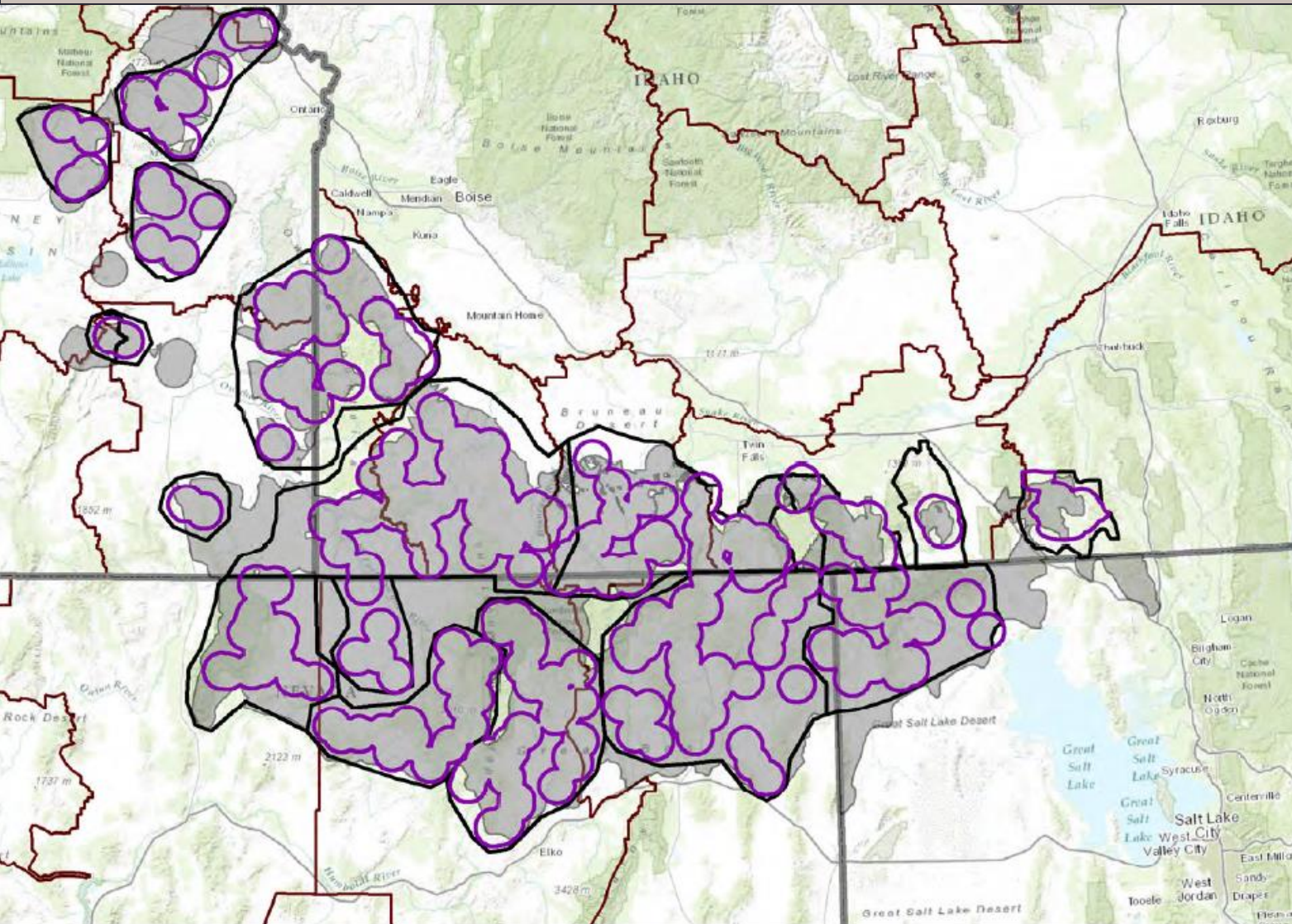
# Post-fire rehabilitation

(reactive strategies)








# Northern Great Basin FIAT: 18 Project Planning Areas



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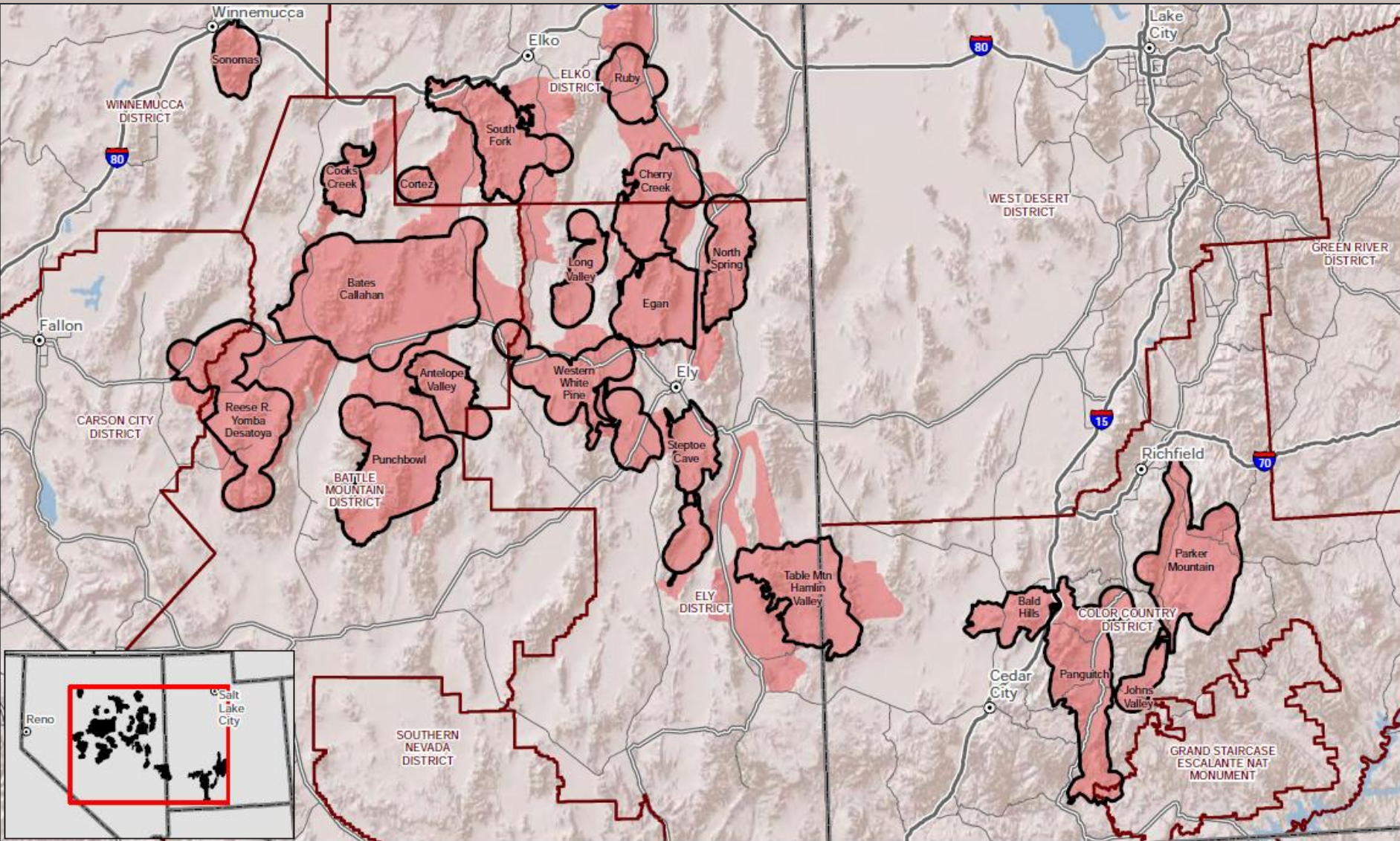


-  Northern Great Basin Focal Habitat
-  Northern Great Basin Project Planning Areas
-  Northern Great Basin Assessment Area

January 2015  
Date Saved: 1/7/2015  
Data Sources: Bureau of Land Management, ESRI Basedata  
1:2,801,613



# Southern Great Basin FIAT: 20 Project Planning Areas



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



- Project Planning Area
- Assessment Area
- BLM District Boundary
- Interstate Hwy
- US Route
- State Route
- State Boundary

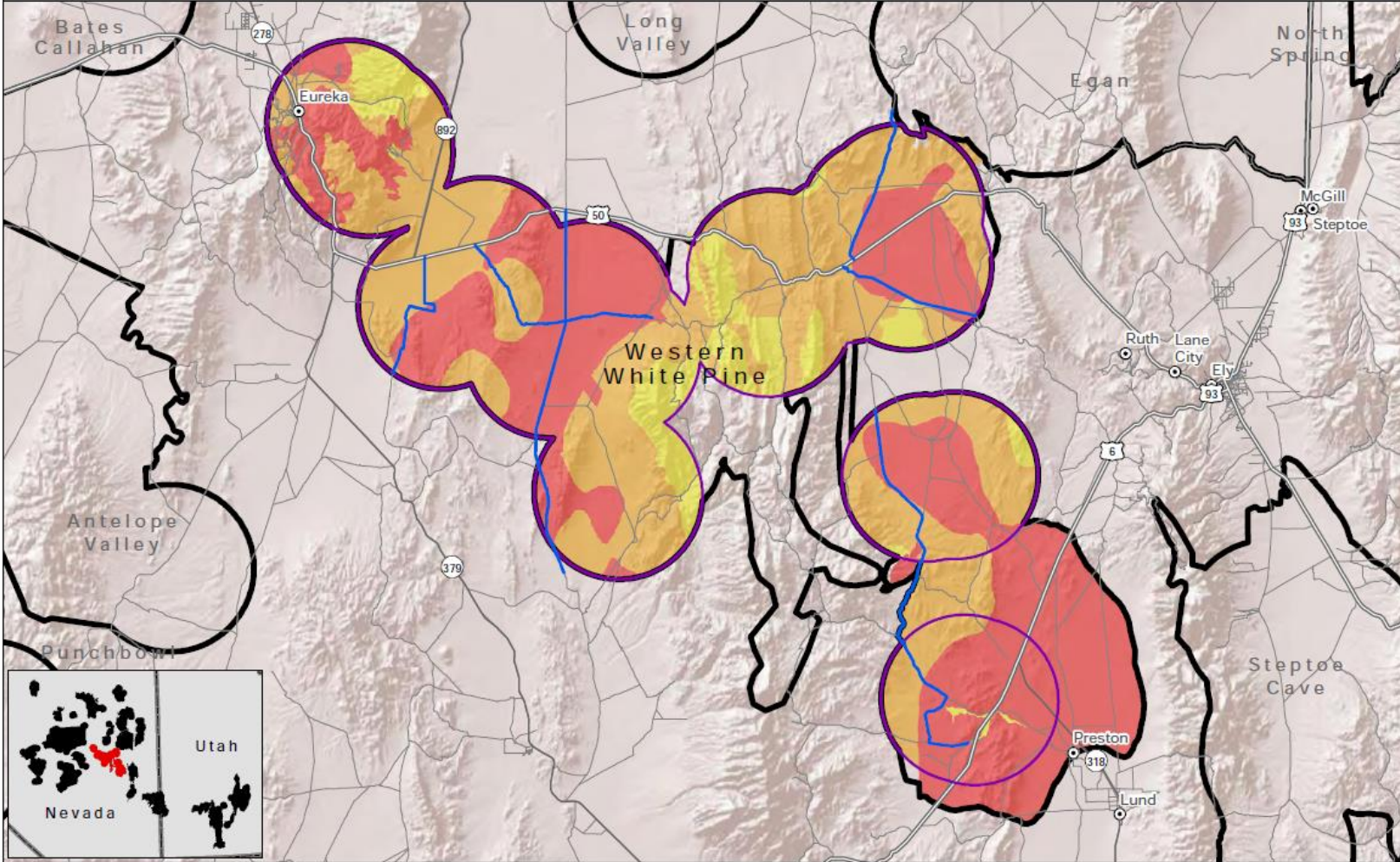
January 2015  
 Date Saved: 1/15/2015  
 Data Sources: Bureau of Land Management, ESRI Basedata  
 1:2,782,791



# Fire Operations/ESR Priority & Fuels Management

## Greater Sage-Grouse, Wildfire, Invasive Annual Grasses, and Conifer Expansion Assessments

Southern Great Basin  
Bureau of Land Management  
U.S. Department of the Interior



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



- Priority 1
- Priority 2
- Priority 3
- Fuel Break
- Project Planning Area
- Interstate Hwy
- US Route
- State Route
- Local Roads
- State Boundary

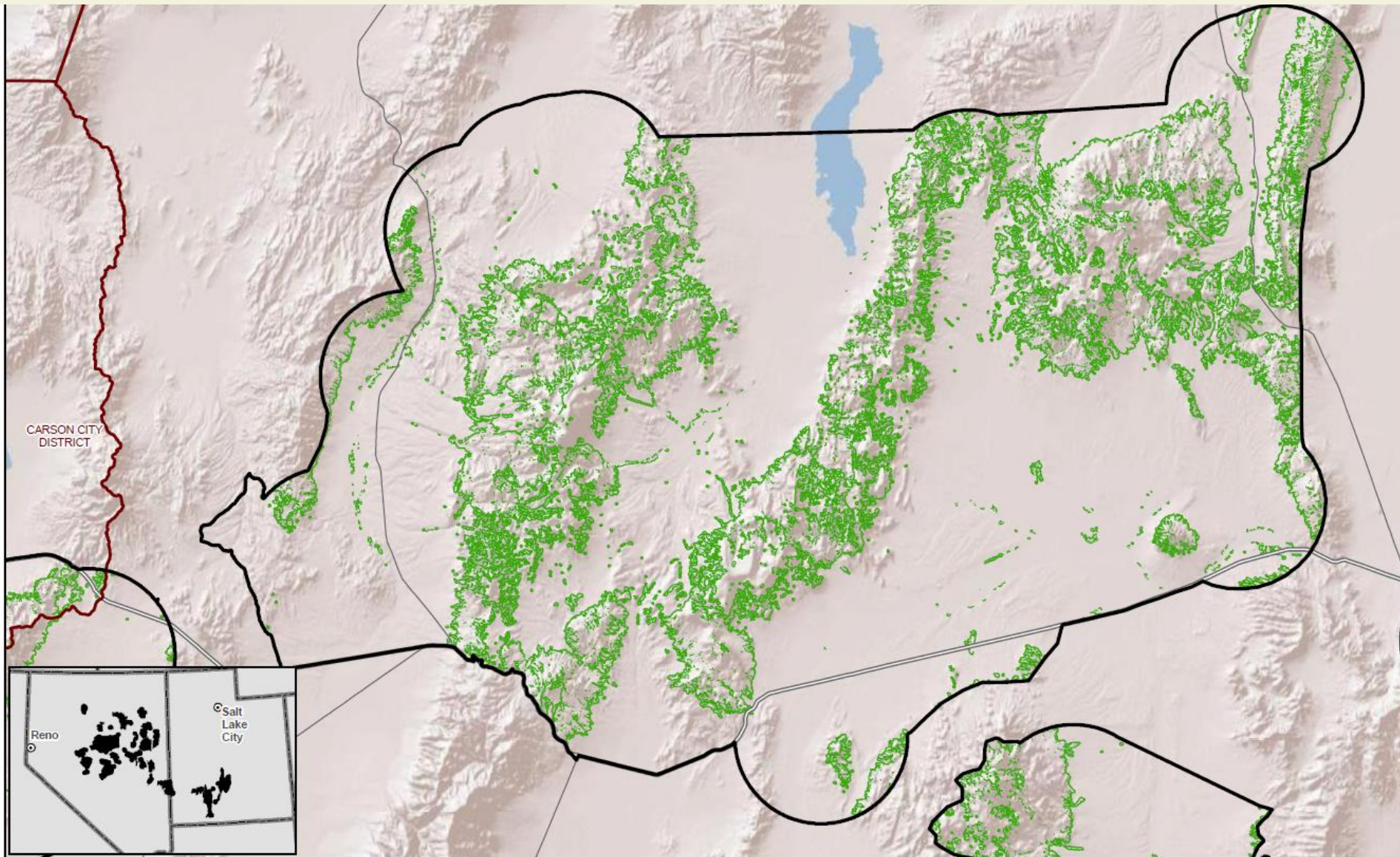
January 2015  
Date Saved: 1/13/2015  
Data Sources: Bureau of Land Management, ESRI Basedata  
1:535,870



## FIAT Step 2: Identifying treatment opportunities in or adjacent to focal habitats



# Habitat restoration potential treatments identified using conifer expansion data and intersection with habitats and sagebrush cover



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

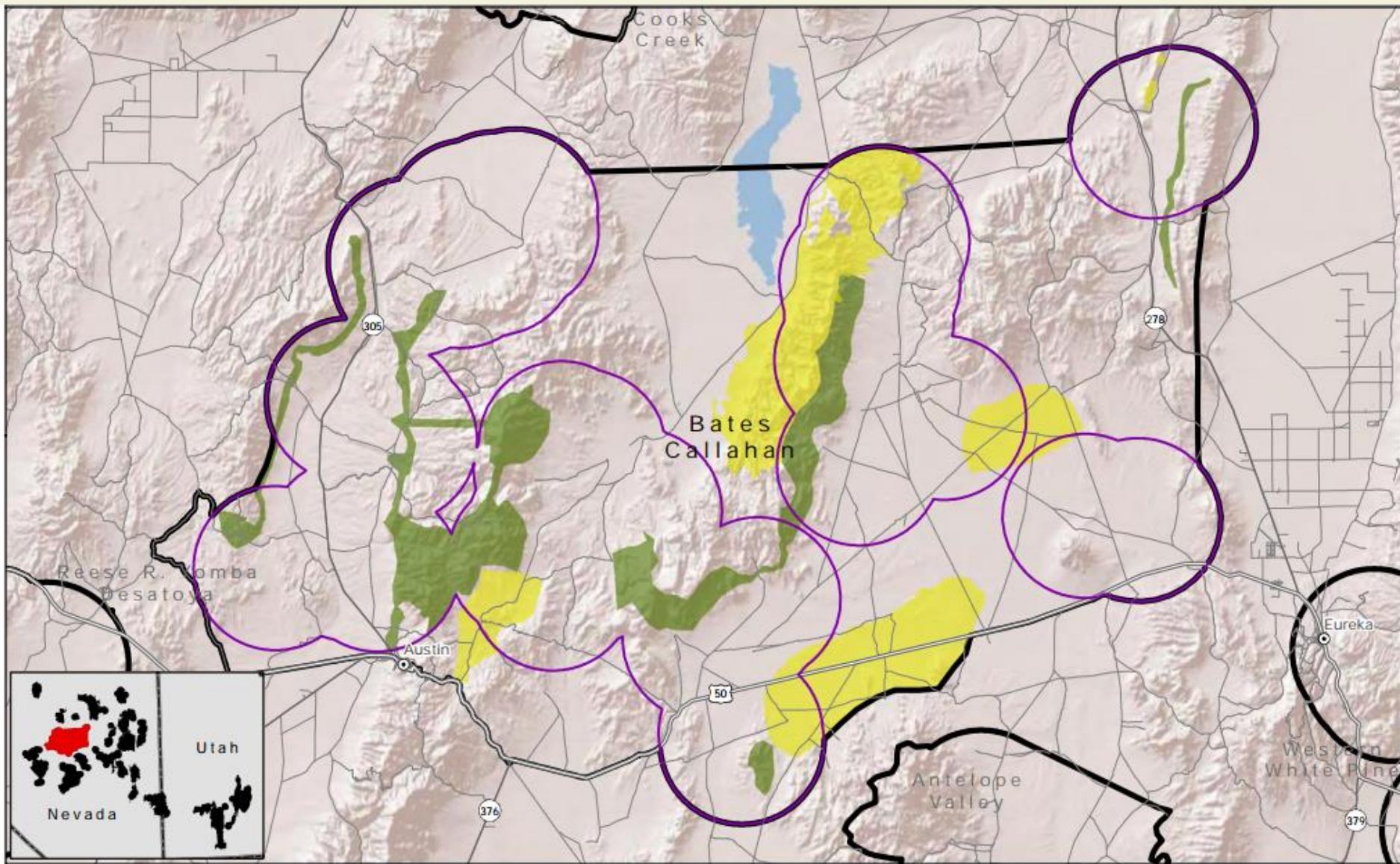


- Conifer Expansion
- Project Planning Area
- State Boundary
- BLM District Boundary
- Interstate Hwy
- US Route
- State Route

January 2015  
Date Saved: 1/9/2015  
Data Sources: Bureau of Land Management, ESRI Basedata  
1:516,191



# Identifying potential treatments for (1) conifer expansion and (2) invasive annual grasses



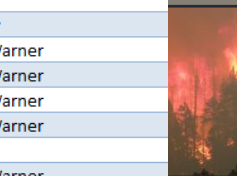
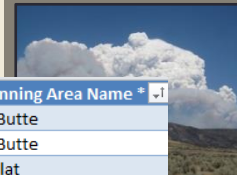
No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



- Invasive Annuals
- Conifer Expansion
- Project Planning Area
- Breeding Bird Density
- Interstate Hwy
- State Route
- US Route
- Local Roads
- State Boundary

January 2015  
 Date Saved: 1/14/2015  
 Data Sources: Bureau of Land Management, ESRI Basedata  
 1:542,720

# FIAT treatment areas input into Geodatabase



## Fuels Treatments

| A          | B       | C  | D                         |
|------------|---------|--|---------------------------|
| OBJECTID * | SHAPE * | Potential Treatment Area Name                | FIAT Planning Area Name * |
| 6          | Polygon | Beaty's Butte Conifer Treatment 1            | Beaty's Butte             |
| 7          | Polygon | Beaty's Butte Overstory Treatment 1          | Beaty's Butte             |
| 8          | Polygon | Beaty's Butte Overstory Treatment 2          | Beaty's Butte             |
| 9          | Polygon | Beaty's Butte Overstory Treatment 3          | Beaty's Butte             |
| 18         | Polygon | Beaty's Butte East Fuel Breaks               | Beaty's Butte             |
| 19         | Polygon | Beaty's Butte Southwest Fuel Breaks          | Beaty's Butte             |
| 1          | Polygon | Clover Flat Conifer Reduction 1              | Clover Flat               |
| 11         | Polygon | Clover Flat Fuel Breaks                      | Clover Flat               |
| 2          | Polygon | Gravelly Conifer Treatment 1                 | Gravelly                  |
| 12         | Polygon | Gravelly East Fuel Break                     | Gravelly                  |
| 4          | Polygon | North Warner Juniper Reduction               | North Warner              |
| 5          | Polygon | North Warner Invasive Species Restoration    | North Warner              |
| 15         | Polygon | North Warner Powerline Rd. Fuel Break        | North Warner              |
| 16         | Polygon | North Warner West Fuel Breaks                | North Warner              |
| 17         | Polygon | North Warner Northern Fuel Breaks            | North Warner              |
| 10         | Polygon | Orejana Water Development                    | Orejana                   |
| 14         | Polygon | Orejana Mowings                              | Orejana                   |
| 20         | Polygon | Orejana Overstory Treatment 1                | Orejana                   |
| 3          | Polygon | South Warner Conifer/Maintenance Treatment 1 | South Warner              |
| 13         | Polygon | South Warner Powerline Rd. Fuel Break        | South Warner              |

## Post-Fire Rehabilitation Treatments

| OBJECTID * | SHAPE * | Priority ESR Area Name                                 | FIAT Planning Area Name * |
|------------|---------|--|---------------------------|
| 8          | Polygon | Beaty's Butte East ESR                                 | Beaty's Butte             |
| 11         | Polygon | Beaty's Butte < 6,000 ft ESR                           | Beaty's Butte             |
| 1          | Polygon | Clover Flat Lek ESR                                    | Clover Flat               |
| 2          | Polygon | Gravelly North: Wyoming/Cheatgrass ESR                 | Gravelly                  |
| 3          | Polygon | Gravelly South RSR                                     | Gravelly                  |
| 5          | Polygon | North Warner Low Sage 1 ESR                            | North Warner              |
| 6          | Polygon | North Warner Big Sage Greater than 6000 and Low RR ESR | North Warner              |
| 12         | Polygon | North Warner >6,000 ft ESR                             | North Warner              |
| 13         | Polygon | North Warner Low Sage < 6,000 ft ESR                   | North Warner              |
| 7          | Polygon | Orejana ESR  | Orejana                   |
| 4          | Polygon | South Warner ESR                                       | South Warner              |



# FIAT in summary

- ❑ Collaborative
- ❑ Application of management strategies based in science
- ❑ Represents an integrated framework for analysis and planning
- ❑ Answers “why here, why now?”