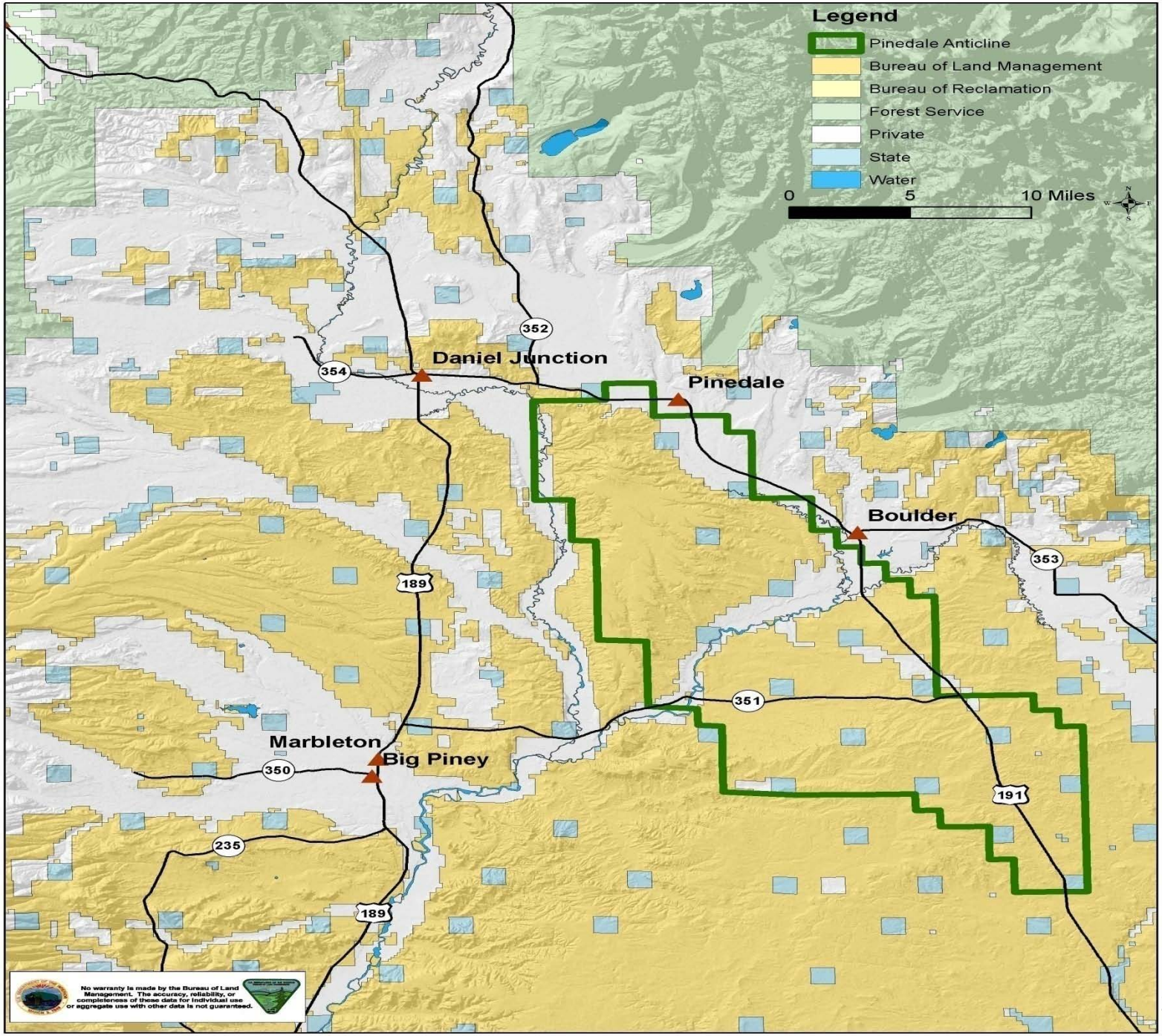
Pinedale Anticline Project Area Mule Deer Situational Report

October 27, 2010


Legend
Pinedale Anticline
Bureau of Land Management
Bureau of Reclamation
Forest Service
Private
State
Water
0
5
10 Miles
Daniel Junction
Pinedale
Boulder
Marbleton
Big Piney
352
354
189
353
351
350
191
235
189
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

Documents which Guide and Inform Decisions and Actions

- Supplemental Environmental Impact Statement of the Pinedale Anticline Oil and Gas Exploration and Development Project
- Final Record of Decision Signed September 12, 2008
  - Appendix B Wildlife Monitoring and Mitigation Matrix
  - Appendix E Adaptive Management in the PAPA
- Mule Deer Monitoring in the Pinedale Anticline Project Area: 2010 Annual Report ; September 14, 2010

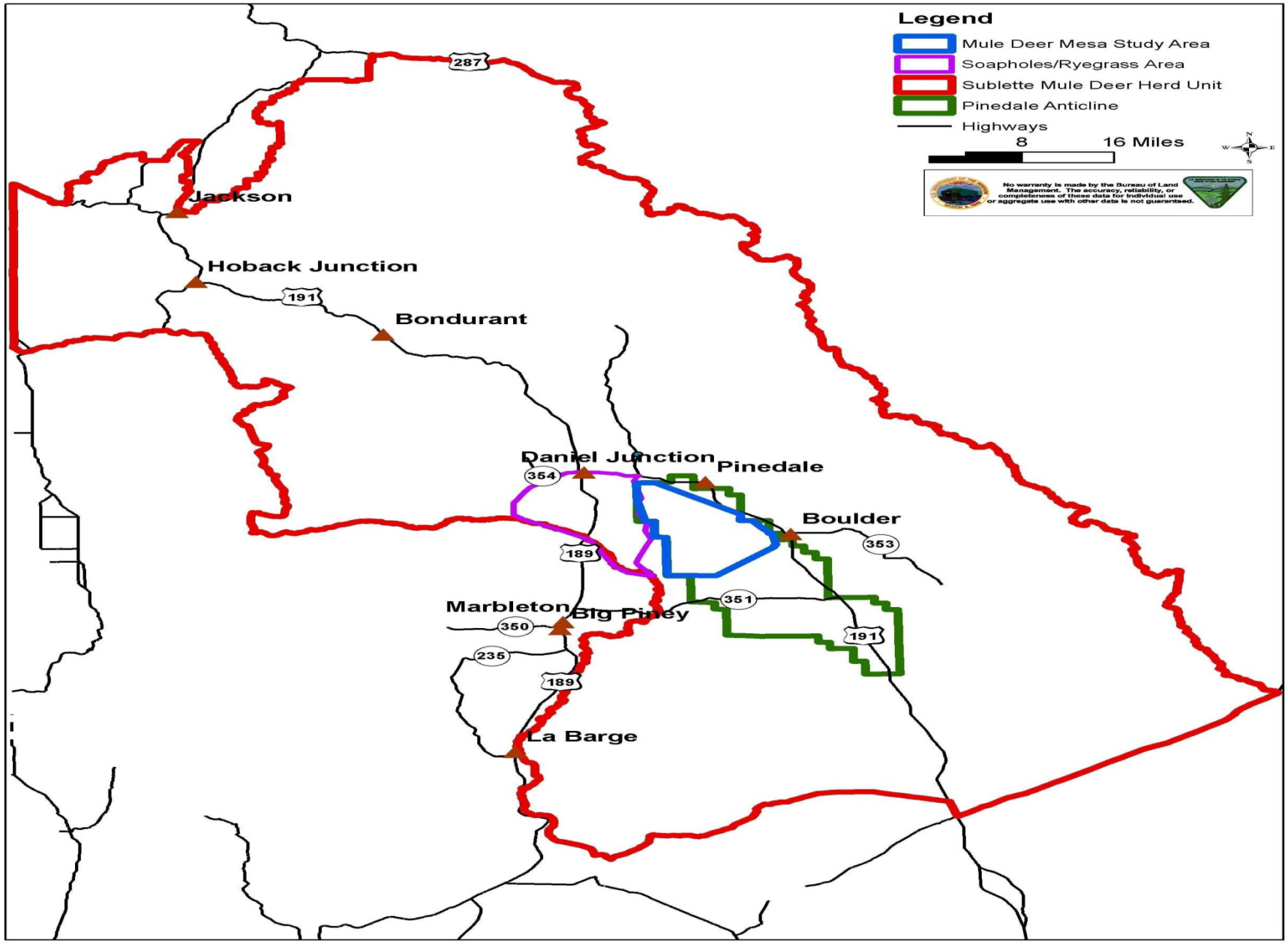
DATA SUMMARY: Mule Deer Monitoring in the Pinedale Anticline Project Area

- PAPA AREA
- Sublette Mule Deer Herd
- Mesa Area
- Soapholes/Ryegrass Area

Population Status and Trends

Herd Unit	05/06 Starting population	09/10 population estimates	Percent change (number)
Wyoming State-wide	500256	441214	-12%
Sublette	*27254	26060	-7%
Mesa Unit	*2856	2088 +/-553	-28%
Rye Grass/Soapholes Unit	** 986+/-391	2223 +/- 330	+125%

*SEIS ROD
** Data first collected during 06/07 winter


Legend
Mule Deer Mesa Study Area
Soapholes/Ryegrass Area
Sublette Mule Deer Herd Unit
Pinedale Anticline
Highways
8
16 Miles
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
287
Jackson
Hoback Junction
191
Bondurant
Daniel Junction
354
Pinedale
Boulder
353
189
351
Marbleton
Big Piney
350
191
235
189
La Barge

Percent Change Comparisons

HERD UNIT	PERCENT CHANGE 05/06 to today
Statewide	-12
Sublette	-7
Mesa	-28
Soapholes/Ryegrass	+125

% change Mesa - % Change in Sublette = Monitor Point Matrix Benchmark

7 – 28 = 21

OBSERVATIONS: Why The Changes ?

- Activities On The Anticline
- Displacement Or Relocation To Different Areas
- Mild Winters
- Other Human Disturbance/Activities(ex. Fire Suppression In Summer Ranges)
- Normal Population Fluctuations Due To Other Environmental, Behavioral, Reproductive Factors'
- Improvements In The Rye Grass/Soapholes Area
- Others

Whatever The Reason, In Spite Of The Unknown Contribution Of Other Possible Influences, The Magnitude of Changes Indicates

The Matrix Threshold Has Been Reached

Further Discussion AND Action Must Be Considered

WHAT THE MATRIX SAYS

Change In Mesa Deer Numbers

Avoidance Distances

Mitigation Response

Change In Mesa Deer Numbers

- Change in deer numbers in any year, or a cumulative change over all years, initially compared to average of 05/06 numbers (2856 deer)
  - 15% decline in any year, or cumulatively over all years compared to reference area (Sublette mule deer herd unit [average 05/06 herd unit population is 27,254], <u>or other mutually agreeable area</u>.

Avoidance Distances

- Average of any 2-year avoidance distance from well pads and roads, and a concurrent change in deer numbers compared to average of 05/06 numbers (2856 deer)
  - Average of 0.5 Km change per year over 2 years, and a concurrent 10% decline in deer numbers in any year, compared to reference area (Sublette mule deer herd unit [average 05/06 herd unit population is 27,254], or other mutually agreeable area

MITIGATION RESPONSE

- Select mitigation response sequentially as established in the ROD,
- implement most useful and feasible Response
- monitor results over sufficiently adequate time for the level of impact described by current monitoring.

Sequential Mitigation Response As Defined In The 2008 ROD

- On-Site
  - 1. Protection of flank areas from disturbance to assure continued habitat function of flank areas, and to provide areas for enhancement of habitat function
  - 2. Habitat enhancements of SEIS area (both core/crest and flanks) at an appropriate (initially 3:1) enhancement to disturbance acreage ratio.
- On-site/Off-site
  - 3. Conservation Easements or property rights acquisition to assure their continued habitat function, or provide an area for enhanced habitat function (e.g., maintenance of corridor and bottleneck passages, protection from development, establishment of forage reserves, habitat enhancements at an appropriate (initially 3:1) enhancement-to-disturbance ration).
- Modification of Operations
  - 4. Recommend, for consideration by Operators and BLM, adjustments of spatial arrangement and/or pace of ongoing development.

Considerable Experience and Expertise Has Been Brought To The Table

In an effort to reduce impacts, the BLM and its Partners and the Operators were already working on mitigation before the SEIS ROD was signed and have continued to constantly develop new actions to proactively address the known AND possible impacts to mule deer and other species

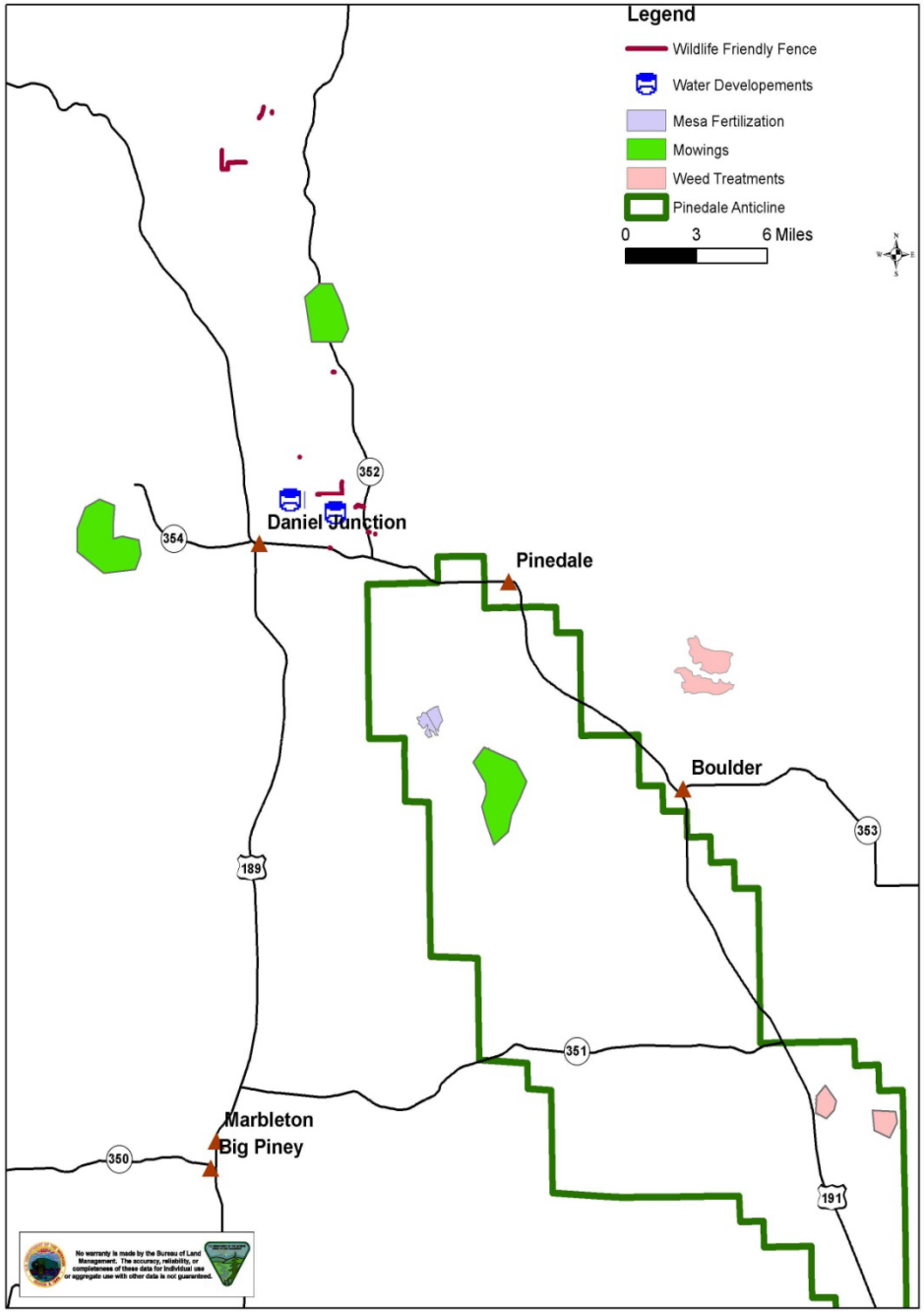
Actions Taken Prior To and Upon Issuance of the Final ROD

- 5-Year Deferment Of Development Along The Flanks (voluntary lease suspensions)
- Phased Development To Concentrate Activity In Localized Areas
- Winter Closures Of Key Winter Habitat Areas
- Installation Of Liquids Gathering Systems And Central Gathering Facilities (Not Completed Until After 09/10 Winter)
- Directional Drilling
- Interim Reclamation On Drill Pads
- Computer Assisted Operations Monitoring

Actions Taken Since Signing Of the Final Record Of Decision

- Habitat Enhancements including:
  - Weed Treatments
  - Sagebrush And Other Browse Plantings
  - Understory release Treatments (Mowing)
  - Fertilization Study
  - Seeding Trials
  - Fence Modifications

Note: above are JIO funded projects except for fertilization study however USQ has applied several of these on a trial basis within the PAPA


Legend
Wildlife Friendly Fence
Water Developements
Mesa Fertilization
Mowings
Weed Treatments
Pinedale Anticline
0
3
6 Miles
352
354
Daniel Junction
Pinedale
Boulder
353
189
351
Marbleton
Big Piney
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191
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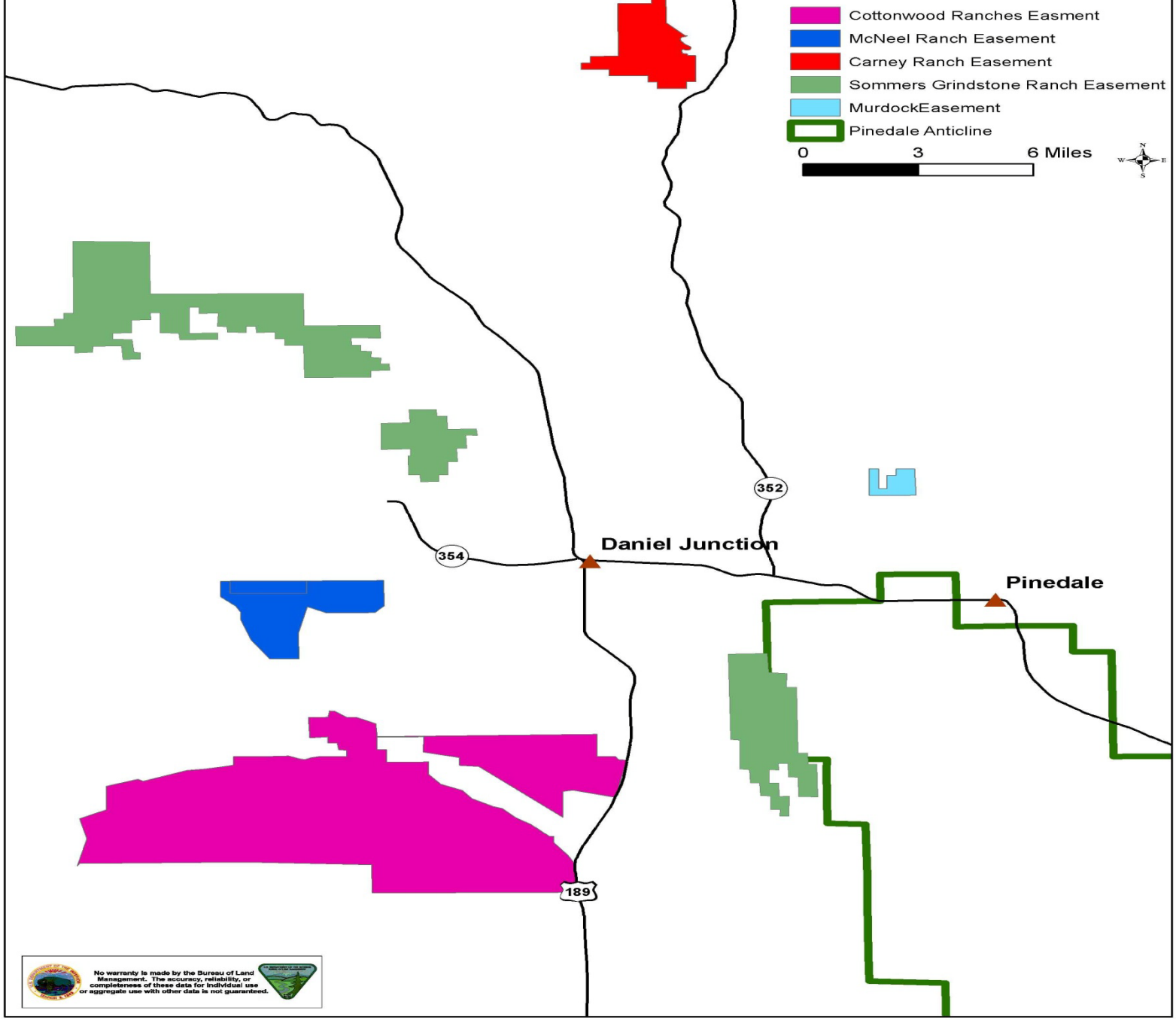
Actions Taken Since Signing Of the Final Record Of Decision

- Purchase of Conservation Easements
  - Sommers/Grindstone Conservation Project
  - Murdock Conservation Project
  - Others conducted by JIO


Cottonwood Ranches Easment
McNeel Ranch Easement
Carney Ranch Easement
Sommers Grindstone Ranch Easement
MurdockEasement
Pinedale Anticline
0
3
6 Miles
352
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Daniel Junction
Pinedale
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Actions Taken Since Signing Of the Final Record Of Decision

- Reduced Impacts During Drilling and Completion Operations
  - Transition To Closed Loop Drilling
  - Reduced Fencing and use of Wildlife Friendly Fencing Designs
  - Enforcement of Speed Control
  - Busing Of Rig Crews

Actions Taken Since Signing Of the Final Record Of Decision

- Monitoring
  - Mule Deer
  - Other Species Including Pronghorn, Pygmy Rabbit, Raptor, Sage Grouse, Snow Depth, Traffic, White-Tailed Prairie Dog

SO WHY HASN’T MITIGATION PREVENTED DECLINES?

We Have Only Begun To Implement Mitigation Treatments For The PAPA, Monitor The Results Of Ongoing Mitigation Treatments, And Adjust Our Efforts

The SEIS acknowledged that "habitat impacts will be substantial due to full field development."

The ROD in Appendix B disclosed

The Mitigation Process Utilizes Performance Based Measures To Proactively React To Emergent Undesired Changes

Response is Early Enough To Assure Both Effective Mitigation Responses And A Fluid Pace Of Development

Response is Designed To Provide Certainty To The Affected Agencies And The Public That Impacts To Wildlife Will Be Addressed Before Consequences Become Severe Or Irreversible

Monitor Changes

CONTINUE IMPLEMENTING THE FINAL RECORD OF DECISION:

Some Categories Of Mitigation Envisioned In the Final ROD Which We Haven't Tried Yet on the PAPA

Voluntary Lease Suspensions (outside of the Flank areas), lease buyouts, voluntary limits on area of delineation/development drilling Establishment of Forage Reserves

Other Habitat Enhancements Core/Flank Areas

Some Categories Of Mitigation Envisioned In the Final ROD Which We Have Only Made Initial Efforts on the PAPA

Conservation Easements or property rights acquisitions such as:

maintenance of corridor and bottleneck passages

protection from development

habitat enhancements

ADAPTIVE MANAGEMENT

We Are Committed To Continuing To Work To Mitigate The Impacts Of Development On the Anticline

We Want To Hear Your Ideas