

Wildlife Performance Goals

Initial focus on Atlantic Rim big game monitoring has been mule deer. We would like to develop pronghorn herd monitoring in coordination with Continental Divide / Creston monitoring and development. Elk crucial winter range is present within the Atlantic Rim area, but is outside of current development. Future development proposals, especially in the Sand Hills area could affect elk in the future. We have worked on an elk collaring program in conjunction with the State of Wyoming.

Item	Performance Goal
Migration Routes	maintain functional migration routes through or around development areas

Mule Deer

- Functional Migration Routes

Mule deer collaring studies have shown the functional migration routes include high use areas with relatively slow movement and low use areas with relatively fast movement. High-use areas provide key foraging and resting habitat, lower-use areas provide movement corridors and connectivity between high-use areas. Functional migration routes require that connectivity be maintained between high-use areas, such that deer have the ability to move between seasonal ranges. High-use areas within two miles of the Atlantic Rim Project Area (ARPA) were typically connected by medium-high and medium-low use areas (e.g., Brown Cow to Sand Hills, or Doty Mountain to Sand Hills). Low-use areas appear to function as simple movement corridors, rather than major foraging or resting areas.

Mule deer migration routes tend to become less distinct as distance from winter range increases. Data suggest that common and intensively-used migration routes splintered into multiple, less distinct routes, as mule deer moved east-northeast of the ARPA. An important consideration is that the distance of migration routes from winter range reduces intensity of use that the route receives. In general, the potential to disrupt mule deer migration is greater in areas that receive higher levels of use and are close to winter range. The potential to disrupt mule deer migration is lower in low-use areas or for routes further from winter range (i.e., close to summer range).

Vegetation components including cover and forage are an important element of high use areas. Whereas cover and forage availability in low use areas appear to be less important. The condition and health of migrating big game animals onto winter crucial range is dependent upon the availability of adequate high use areas and the connectivity supplied by lower use areas during migration. The timing of migration corridor movement by big game is driven by weather conditions being experienced by the animals.

Triggers for mule deer migration route adaptive management

- Detection of route alteration from on-going collaring studies
- Changes in population based on Game and Fish annual studies (JCRs) and/or best available science.
- Abandonment of existing migration routes
- New routes established (identified by long range monitoring)

- Change in use / rate of movement in migration routes (identified by long range monitoring)

The big game monitoring and mitigation Team will need to meet periodically to discuss future monitoring, current conditions and adaptive management opportunities / needs for mule deer migration routes. The big game group will assess the use of migration routes and determine adaptive management measures that can be used to mitigate adverse effects.

Item	Performance Goal
Big Game Crucial Winter Range	provide an adequate amount of suitable, undisturbed crucial winter range for big game animals

- “Adequate amount of crucial winter range”:

The total crucial winter range for each big game unit should be available and remain relatively intact. Crucial winter range should provide conditions suitable for a population to maintain itself at the Wyoming Game and Fish Department herd objective. Habitat conditions within crucial winter range should allow big game to survive winter in adequate body condition to maintain average reproductive rates eight out of ten years. (based on Game and Fish annual studies (JCRs) and/or best available science.)

Triggers

- Habitat evaluations

The BLM / WyG&F conducting transect surveys in crucial winter range to determine habitat conditions.

- Population trends

Game and Fish annual Job Completion Reports including herd number and fawn recruitment. Reproduction success is equal to or better than average reproduction 8 out of 10 years.

The big game monitoring and mitigation Team will need to meet periodically to discuss future monitoring, current conditions and adaptive management opportunities / needs for the Atlantic Rim area. The big game group will assess the condition of the herd and determine adaptive management measures that can be used to mitigate adverse effects.

Concern: the population dynamics of the Baggs Mule Deer herd unit will mask adverse population trends from Atlantic Rim development due to the size of the herd unit. Therefore adverse trends may not be detected in as timely manner as desired. Would like to pick up on trend changes within the first year. Also negative impacts to herd number from activities outside the Atlantic Rim area could result in false interpretation of Atlantic Rim development.

Mule Deer Habitat Studies to date

Mule Deer Collaring Study

2006 2007 Phase I (baseline data, Final Report available)
 2008 2010 Phase II (monitoring herd movement for changes, waiting for final report)
 2010 Phase III (funding in 2009, implementation spring 2010:
 (vegetation monitoring in migration corridors)
 2010 Prioritizing fence conversion study
 2010 Defined terms from performance goals
 2010 Developed triggers for adaptive management for performance goals

Item	Performance Goal
Sage and Sharp-Tailed Grouse	provide well-dispersed sage-grouse breeding, nesting, brood rearing, and winter habitat

The current State of Wyoming designated sage-grouse core areas do not include the Atlantic Rim area. No modifications or changes to the on-going sage-grouse monitoring and adaptive management activities at Atlantic Rim are expected from this policy. No development or development proposals have been received within sharp tailed grouse habitat.

- “Well dispersed”

Maintaining grouse and grouse habitat distribution though out the project area both functionally and spatially. Identify sink and source habitats / areas and ensure source habitat functionality is maintained.

Triggers

- Population Monitoring*

Lek counts and surveys

annually coordinated between industry and agencies with the WyG&F. Monitoring group wants to implement a program that uses the US Geological Survey (USGS) sage grouse population trend model for the entire state to help assess and compare population trends within the Atlantic Rim area for sage grouse. Currently no funding to implement this. A change in bird numbers that is inconsistent with the USGS model will trigger a review of existing conditions and the application of adaptive and additional best management practices.

- Habitat monitoring

Current population modeling includes a company funded study of sage-grouse habitat usage including source and sink habitats. The BLM assesses development proposals for impacts on sage-grouse. Identifying source habitats with current studies.

The sage-grouse monitoring and mitigation Team will need to meet periodically to discuss future monitoring, current conditions and adaptive management opportunities / needs for the Atlantic Rim area. The big game group will assess the condition of the herd and determine adaptive management measures that can be used to mitigate adverse effects.

Sage Grouse Studies to date

Sage Grouse Collaring Study

- 2007 Collaring Study – track and monitor sage grouse locations – aerial
- 2008 Collaring Study – identify important nesting and brood rearing habitat – air and ground
- 2009 Collaring Study – identify important nesting and brood rearing habitat – air and ground
- 2008 Predation Study (ongoing study with University of Utah)
- 2010 Trend monitoring proposal with USGS (pending funding)

Item	Performance Goal
Shrub-Dependent Song Birds	assure occupied habitat for shrub-dependent song birds is well distributed throughout the project area

Initiated a change in the survey method in 2010. Developed a survey protocol using the GRID method in conjunction with the Rocky Mountain Bird Observatory and WyG&F. Conducted third annual breeding bird survey (BBS) using established routes and monitoring stops. 2010 BBS report received in July, 2010. Evaluating the need for both surveys and the comparative benefits they provide. Ideally would like to have one survey we maintain overtime.

Definitions

- Sufficient habitat:

The area has all the characteristics that an individual species needs to maintain viable populations of that species.

- Well-distributed:

Consistent with the current natural arrangement in the area as reflected by the base line data.

- Occupied habitat:

presence of native successfully reproducing song birds during the breeding season (courtship through pre-migration staging).

Triggers

- Trend from habitat specialists to habitat generalists.

Conduct annual surveys. When a shift in bird species is detected review activities and development approved within the affected area and implement adaptive management and new / or additional best management practices as appropriate.

- Change in location of species detected.

When a change in species location is detected review activities within the affected area and implement adaptive management and new /or additional BMPs as appropriate.

- Overall song bird population trends from surveys.

Watch for declining trends in song bird populations being mindful of the overall population trends within the region. When a change is detected within the project area that is not reflected in the regional trends, review activities within the project area and implement adaptive management and new / or additional BMPs as appropriate.

Song Birds

2008 Shrub dependent song bird survey & report (breeding bird survey)
2009 Shrub dependent song bird survey & report (breeding bird survey)
2010 Shrub dependent song bird survey & report (breeding bird survey)
2010 Shrub dependent song bird survey & report (GRID monitoring) and report
2010 Review and compare results from BBS and GRID monitoring