MULE DEER HABITAT OBJECTIVES FOR THE PLAN

A FEW EXAMPLES TO GET US STARTED

Objective: **Use an integrated approach to balance the habitat needs of mule deer and other species when planning and implementing habitat management projects.**

Strategy: ***Habitat management plans designed primarily to benefit mule deer should include a detailed analysis of the effects treatments may have on other species such as sagebrush obligate species including sage grouse, pronghorn, and neo-tropical migratory birds.***

Strategy: ***When habitat treatments are planned in crucial mule deer habitats such as shrub-dominated winter ranges, but the treatments are intended primarily to benefit other species, proponents should evaluate short and long-term effects on mule deer before treatments are implemented.***

Objective: **Implement vegetation management practices and treatments to enhance and or protect mule deer habitat on a landscape scale, while considering both ecological and economic impacts.**

Strategy: ***Conduct monitoring to better understand shrub ecology, the role of fire (natural and prescribed), and how vegetation responds to treatments designed to enhance wildlife habitat, mitigate impacts, or restore degraded habitat types/communities in the Platte Valley such as sagebrush steppe, mixed mountain shrub, aspen, conifer and riparian habitats.***

Strategy: ***Work cooperatively with federal and state land management agencies and private landowners to implement monitoring programs that will detect and document potential decline or conversion of important habitats and take appropriate action to avoid, minimize, or mitigate the impact.***

Strategy: ***Ensure cover (hiding/security and thermal) requirements of mule deer are considered in all vegetation management plans.***

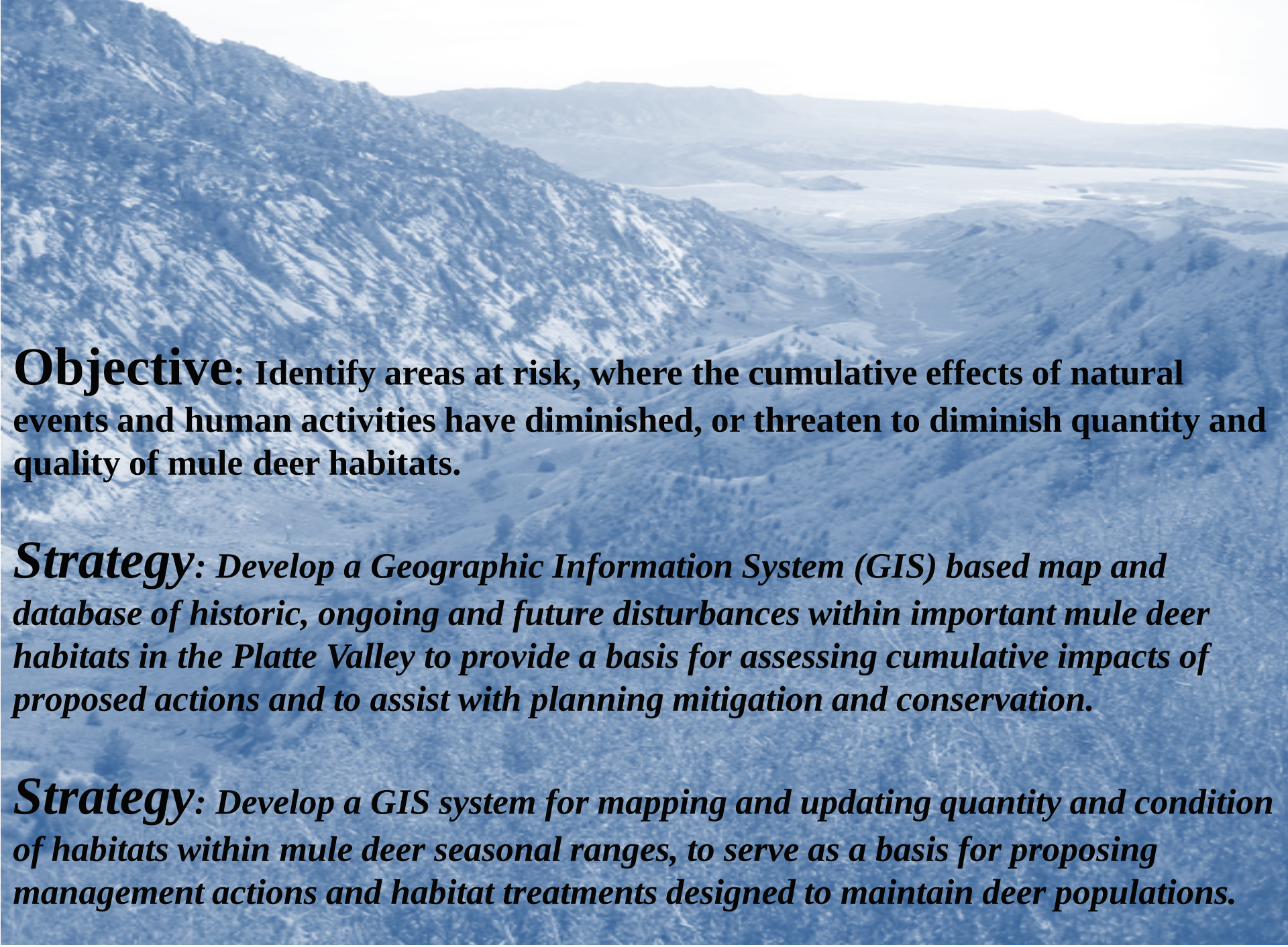
Objective (cont.): Implement vegetation management practices and treatments to enhance and or protect mule deer habitat on a landscape scale, while considering both ecological and economic impacts.

***Strategy**: Provide long-tem protection of important mule deer habitats on private lands through conservation easements or other long term land protection measures.*

***Strategy**: Work cooperatively with the federal land management agencies to develop fire management plans/policies that, under appropriate conditions, allow natural ignition fires to burn when they will benefit mule deer, particularly in the Medicine Bow National Forest.*

***Strategy**: Work cooperatively with private landowners (ranchers/farmers) to provide technical and financial assistance to enhance mule deer habitat.*

Strategy: Coordinate with wildlife agencies in neighboring states to cooperatively manage important habitats and to share habitat management techniques and strategies.



Objective: **Identify areas at risk, where the cumulative effects of natural events and human activities have diminished, or threaten to diminish quantity and quality of mule deer habitats.**

Strategy: ***Develop a Geographic Information System (GIS) based map and database of historic, ongoing and future disturbances within important mule deer habitats in the Platte Valley to provide a basis for assessing cumulative impacts of proposed actions and to assist with planning mitigation and conservation.***

Strategy: ***Develop a GIS system for mapping and updating quantity and condition of habitats within mule deer seasonal ranges, to serve as a basis for proposing management actions and habitat treatments designed to maintain deer populations.***

Objective: Maintain and improve programs and techniques to monitor the condition of deer habitats.

***Strategy**: Continue monitoring vegetation conditions in key deer habitats within all seasonal ranges, to include but not limited, to annual forage production, annual forage utilization by ungulates (wild and domestic), and sampling of nutritive values of key vegetative species on the landscape during their anticipated period / time of use.*

***Strategy**: Evaluate herd management objectives (i.e., population size) and, as appropriate, provide recommendations to the Wyoming Game and Fish Department so that populations can be adjusted to keep in balance with habitat condition and availability.*

***Strategy**: Re-evaluate all seasonal range delineations and, as appropriate, adjust them to reflect changes in deer distribution and habitat use that have occurred due to major alterations in habitat quality or quantity.*

***Strategy**: Develop a habitat monitoring plan that may be used / implemented by private landowners in the Platte Valley. Assist private landowners with set-up of monitoring points and evaluation of data as necessary or requested to help them make informed land management decisions.*

Objective: Prevent the introduction or expansion of invasive plants in mule deer habitat and promote control and reduction of current infestations, so that habitat enhancement efforts to support mule deer herds can proceed.

***Strategy**: Map areas where non-native invasive plants threaten mule deer habitat.*

***Strategy**: Promote the aggressive treatment (using chemical, mechanical, biological, and grazing techniques) to eradicate non-native invasive plants.*

***Strategy**: Conduct a "risk assessment" for invasion by non-native species in crucial mule deer habitats.*

***Strategy**: Use multi- agency partnerships to develop coordinated approaches to identify and prioritize cheatgrass infestations and implement control programs.*

Objective: Improve methods used to estimate winter mortality of deer and implement management practices to moderate the adverse effects of severe winter weather.

Strategy: Study the relationships among seasonal precipitation, availability and quality of forage, and trends of mule deer populations.

Strategy: Reduce the potential for severe weather to impact mule deer populations by maintaining deer herds within the habitat's carrying capacity and maintaining (or improving) habitats in optimal condition.

Objective: Integrate other species' habitat needs with those of mule deer when developing and implementing habitat management plans within mule deer habitats.

Strategy: Coordinate species management programs when developing habitat management plans that will be implemented in important mule deer habitats.

Strategy: Minimize the impacts other species' management plans may have on mule deer populations and habitat.

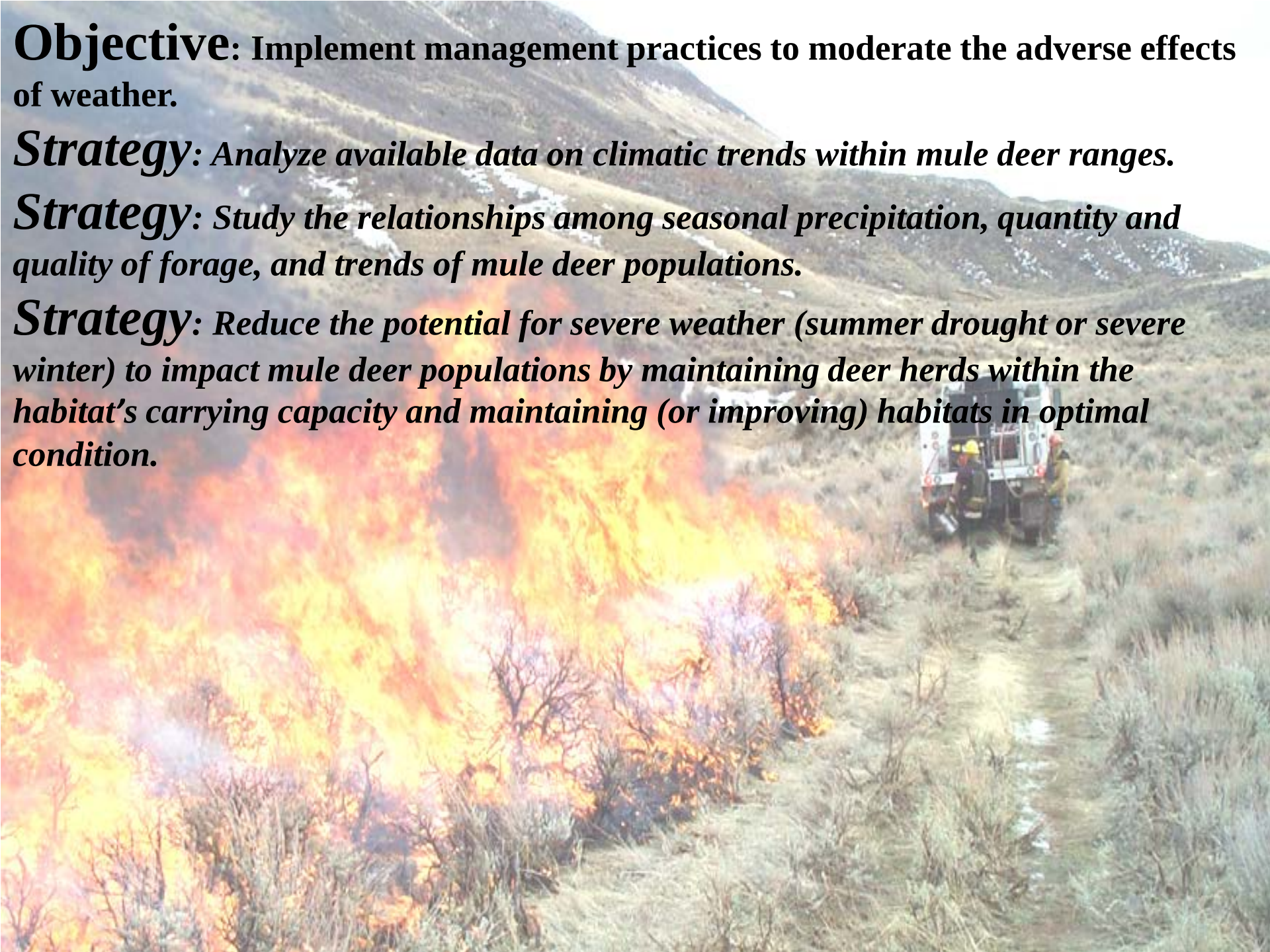
Objective: **Minimize impacts from competing wildlife on mule deer populations.**

Strategy: ***Identify and prioritize areas within the Platte Valley where elk or pronghorn populations may have a negative impact on mule deer numbers and distribution, and may negatively impact planned habitat treatments.***

Strategy: ***Where significant competition by elk or other wildlife is documented or believed to impact mule deer or their habitats, develop harvest management strategies to reduce competition for space or forage resources.***

Objective: **Improve the Platte Valley Habitat Partnership team members' knowledge of how various vegetation management techniques affect mule deer and their habitat.**

Strategy: ***Evaluate vegetation and mule deer response to various applications of prescribed fire, chemical, mechanical, or other biological treatment methods in sagebrush steppe, mountain shrub, aspen, conifer and riparian habitats.***



Objective: Implement management practices to moderate the adverse effects of weather.

Strategy*: *Analyze available data on climatic trends within mule deer ranges.

Strategy*: *Study the relationships among seasonal precipitation, quantity and quality of forage, and trends of mule deer populations.

Strategy*: *Reduce the potential for severe weather (summer drought or severe winter) to impact mule deer populations by maintaining deer herds within the habitat's carrying capacity and maintaining (or improving) habitats in optimal condition.

Platte Valley Mule Deer Initiative Habitat Related Goals.....

- *Increase partnerships to manage and enhance mule deer habitat in the Platte Valley.*
- *Increase number and extent of habitat improvement projects.*
- *Control invasive and noxious plants on mule deer range.*
- *Increase monitoring of important mule deer habitat.*
- *Minimize impacts to Platte Valley mule deer herd from energy development.*
- *Use WGFD lands to test new habitat improvement techniques.*
- *Respond to changing forest structure and condition as a result of pine beetles.*
- *Improve mule deer habitats on private lands.*
- *Use promotion and advertising to increase interest in habitat projects.*

WAFWA Mule Deer Conservation Plan - July 2004

- Restore or improve mule deer habitat function on seasonal ranges by managing shrub communities thru rx or natural fire, mechanical, or other….to maintain mosaics of uneven aged stands to enhance conditions for mule deer.
- Ensure security cover requirements are incorporated into habitat enhancement projects.
- Habitat protection thru conservation easements or other long term protection measures in key habitats / seasonal ranges.
- Manage to control major habitat type conversions (mountain shrub to juniper).
- Allow normal fire regimes / natural fire plans where threats from invasive vegetative species or risks to human development are minimal.
- Reduce impacts of cheatgrass and other invasive species thru development of treatment protocols.

WAFWA Mule Deer Conservation Plan - July 2004 (cont.)

- Evaluate livestock grazing in mule deer habitats by location, season of use, and dietary overlap based upon season of use.
- Restoration efforts in forested habitats impacted by beetle epidemics should provide habitat needs for mule deer on summer and transitional ranges.
- Monitor mule deer body condition as it correlates to weather, habitat availability and condition, and overall ungulate populations.
- Track annual / seasonal precipitation, availability of and nutritional quality of forages as it relates to mule deer population trends.
- Use long term weather data to develop maps of critical areas for special management under extreme weather conditions / events.

Mule Deer Conservation: Issues and Management Strategies (2003)

- Use rx fire where appropriate to create disturbance and foster early successional stages with nutritious forbs, grasses and shrubs. Support the role of natural fire in forest systems.
- Work to provide a mosaic of seral stages on a given deer range.
- Riparian management
- Aspen – rx fire, controlled cutting, mechanical treatments with reduction of grazing to encourage aspen regeneration (young, vigorous stands).
- Management adaptability during drought, more moderate use of plants by wildlife / livestock.
- Manage for early successional stages to provide additional forage.
- Manage for a diversity of key plants, including forbs.
- Monitor habitat modifications to determine if an effect has occurred in the population.

Habitat Extension Biologist's Input to Objectives

Habitat Quantifiable: primary goal, forage analysis

Mule Deer Quantifiable: secondary goal, fawn wean weights, doe:fawn ratios, body fat indices, mule deer performance

Monitoring of Projects – how much, where, repetition of sampling

Work within capacity / capability of land

ID land uses and those in control of

Projects undertaken by the PVHP may vary greatly in size / scale. Small sized treatments may be completed to test treatment methodologies, and may be followed by larger scale treatments when success can be reasonably assured.

Reduce prevalence of cheatgrass through a combination of biological, chemical, and mechanical treatments. Map areas within the Platte Valley that are at risk for invasion post-disturbance and plan treatments accordingly.

Manage for a diversity of age classes of vegetation in all mule deer seasonal ranges.

Manage for healthy and vigorous herbaceous and woody plants through proper management of domestic and wild ungulates (timing, duration, and intensity of utilization).

Manage for a diversity of vegetation within each seasonal range (age class and structure)

Manage ungulates within the identified carrying capacities of habitats.

Ensure areas slated for habitat treatments receive proper rest from herbivory to promote re-establishment of native vegetation and reduce opportunity for invasion by non-native vegetation.

Establish an adequate number of permanent vegetative transects (photo points, production / utilization, forage quality) within different seasonal ranges to track success/failure of treatments. Assemble data in a format that can be utilized by the scientific community as well as local sportsmen and other general public.

Manage the landscape in the Platte Valley for a number of land uses (livestock grazing, wildlife, logging, and others)
Maintain or return habitats to "normal" fire regimes / fire intervals through re-introduction of prescribed fire or implementation of natural fire plans where possible.
Monitor spread or risk of invasion of invasive species such as cheatgrass that may hamper the PVHP's ability to complete on the ground enhancements.
Work with private landowners in the Platte Valley to develop infrastructure (fence, livestock water systems, other) to improve management flexibility and options, so that they may participate in larger scale habitat treatments
Reduce impacts to non-targeted wildlife species (i.e. sage grouse) in planned treatments.
Identify treatments (cost:benefit analysis), risk for invasive species colonization, pressures from other ungulates that will hamper the success of the treatment
Identify possible locations for a "grass bank" in the Platte Valley, where AUM's would be available to private landowners or permittees during periods of grazing rest required pre- or post-treatment
Track correlate annual / seasonal precipitation and its effect on response of treatments completed.
Summer – fawning cover, thermal, hiding, nutritional demands of producing milk, forage quality / quantity, high veg. species overlap / diet overlap
Transition – Fall / Spring – prepare for rut, higher weaning weights, chase "green" in spring, mix of hiding cover during hunt seasons to reduce vulnerability
Winter – weight loss expected, forage quality issues
Track precip / weather & response to treatments

WYOMING GAME & FISH DEPARTMENT