The intersection of energy development and mule deer conservation represents a perpetual challenge in the West. World demand for energy increased by more than 50 percent in the last half-century, and the National Petroleum Council projects a similar increase between now and 2030. Fossil fuels will remain the largest source of energy worldwide, with oil, natural gas, and coal accounting for more than 80% of world demand. In many instances, the sagebrush landscapes that support world-class mule deer populations in the West are ground-zero in the struggle to maintain our wildlife legacy in the face of an ever-increasing demand for other natural resources.

Nowhere is the struggle for balancing our nation’s energy needs with the maintenance of important mule deer winter range more pronounced than in the Upper Green River Basin of Wyoming. With gas reserves estimated at up to 40 trillion cubic feet, the Pinedale Anticline is one of the newest and most productive oil and gas fields in the United States. It has been developed extensively in the last decade and could support oil and gas production for the next 75 years. Energy development on the Anticline has brought good paying jobs to Sublette County, bolstered the State of Wyoming’s fiscal reserves, and resulted in dramatic improvements to the Pinedale schools.

Yet, it also stands to dramatically compromise a rich sagebrush landscape that has been referred to as the “American Serengeti” due to its importance to mule deer, antelope, and a host of other wildlife. Mule deer that winter on an area known as the Mesa near Pinedale are part of the Sublette mule deer herd that has a post-season objective of 32,000 animals. These mule deer migrate seasonally 60 to 100 miles from their winter range to some of the most pristine summer range habitat in North America, in portions of the Salt River, Wind River, Wyoming, Gros Ventre, and Sinks River Ranges. Recent research shows a 40% decline of mule deer wintering on the Mesa since drilling began in 2000.
Sage Grouse & Energy Development

The driver of future decision-making relative to energy development and wildlife conservation may not be mule deer, pronghorn antelope, or even recognition of the West’s vast energy reserves. It may be an iconic native bird that makes its home in the sagebrush—the Greater Sage-Grouse—and a compelling new concept of science-based trade-offs designed to conserve the right amount of habitat in the right places to ensure healthy populations.

Greater Sage-Grouse, referred to herein as sage grouse, are at the center of a high stakes set of policy decisions. On March 5th, 2010, the U.S. Fish and Wildlife Service (USFWS) determined that an Endangered Species Act (ESA) listing for sage grouse was “warranted but precluded” by other higher priority listing decisions. The action sent a tremor through the energy and ranching industries, state and local governments, and federal agencies due to the potential for increased regulation of activities in sagebrush landscapes.

Gale Norton, former Secretary of Interior, summed up the significance of sage grouse to the commerce of the West back in 2004. “Some say the grouse could become the spotted owl of the intermountain West.” Norton stated at the 2004 Western Governors Association Annual Meeting. “But the sage grouse occupies nearly 12 times as much land as the northern spotted owl.”

Sage Grouse Core Areas

The sage grouse debate was set to play out as the classic tug-of-war between industry and environmental interests that has defined the ESA since it was signed into law in 1973. However, the State of Wyoming took a bold stance this summer to employ cutting-edge science and common sense in land use policy.

Research on sage grouse over the last few years has resulted in the definition and utilization of “core areas” for breeding sage grouse in Wyoming and Montana. Sage grouse core areas represent high abundance population centers for 25%, 50%, 75%, and 100% of the known breeding populations. Core area maps can be used to steer energy development and other impacts away from the areas that contain a high percentage of the breeding birds while loosening restrictions in other portions of the occupied range. Science-based tradeoffs constitute a relatively new and promising approach to natural resource conservation.

“It’s about doing enough of the right things in the right places to conserve sage grouse populations,” said Dave Naugle of the University of Montana, whose students conducted
much of the ground-breaking research. “Our paradigm has shifted in scale and practice from small and reactive to large and proactive approaches to implementing landscape-scale conservation.”

On August 25th, 2010, former Wyoming Governor Dave Freudenthal took the concept to a new level by issuing an Executive Order 2010-4. What this does is establish core areas for sage grouse in which new developments, to the extent they are subject to state authority, will be prohibited for the next five years. The mapping was conducted through a public process with strong engagement by Sage Grouse Local Working Groups (LWG) comprised of industry, conservation organization, and landowner interests. The LWGs made recommendations to the Governor’s Sage Grouse Implementation Team and the vast majority of those recommendations were adopted by the Team. The Executive Order clarifies that wind energy development will not be permitted within the core areas.

In a recent letter to former Governor Freudenthal’s Chief of Staff, the FWS reaffirmed their support for the core area strategy as a means of providing adequate protection for sagebrush and their habitats in Wyoming. Further, in an article in the Land Letter online publication, the new Wyoming Governor, Matt Mead, said he doesn’t want sage grouse to be listed and believes that the state was right to develop the core area strategy, though it is still a work in progress.

What Does it Mean To Mule Deer?

Political anomalies aside, the core area concept and, specifically, the Wyoming Executive Order, begs a critical question for MDF members: What does it all mean to mule deer?

Daryl Lutz, Wildlife Management Coordinator for the Wyoming Game & Fish Department in Casper, has provided MDF readers with a very concise and hot-off-the-press answer relative to crucial mule deer winter range. Lutz asked the Department’s GIS staff to conduct an analysis of the overlap between sage grouse core areas and mule deer crucial winter range, specifically for this article (see map below).

Lutz also explained that protection of

Mule Deer Crucial Range Compared to Sage-Grouse Core Areas V.3

Daryl Lutz, Wildlife Management Coordinator for the Wyoming Game & Fish Department reports that in Wyoming, 33% of mule deer crucial winter range overlaps with sage grouse core areas.
sagebrush habitat from energy development can play into mule deer conservation in a variety of ways.

"Sagebrush habitat in some parts of the state is very important to mule deer on migration," said Lutz. "In addition, sagebrush plant communities in xeric low elevation ranges can be important to mule deer in terms of building energy reserves for the winter. We obviously emphasize habitat conditions on their winter range but it is also important to make sure the deer get there in good condition. Finally, there are some important sagebrush habitats in eastern Wyoming that we just don't have the data to define as crucial winter range. It is critical that we maintain healthy sagebrush grasslands in these areas and other 'winter year-long range' habitats. The protection of sage grouse core areas from energy development will be helpful to mule deer beyond the overlap with crucial winter range."

Southeastern Wyoming mule deer habitat could come under siege in the future with the recent unveiling of the promising Niobrara Shale Formation oil play. The Niobrara play is being
touted in investment circles as the next Bakken, in reference to the productive shale formation in western North Dakota.

Lutz credits MDF for playing an important role in assisting the Wyoming Game & Fish Department with implementation of mule deer habitat conservation.

"The Mule Deer Foundation is very strong in Wyoming," said Lutz. "We work closely with the chapters, and they have donated hundreds of thousands of dollars to mule deer habitat projects. We really emphasize in the Mule Deer Initiative the importance of public participation and getting the public engaged in the management of their mule deer, and MDF is a greater partner in that endeavor."

The principal drawback to the sage grouse core area concept to mule deer is that habitat managers must now be more cautious when implementing large-scale habitat projects such as controlled burns in sage grouse habitat.

"It requires that we conduct more thorough assessments of the need for and efficacy of mule deer habitat projects in sagebrush habitats within core areas," said Lutz.

**Long-term Sage Grouse & Mule Deer Conservation**

The Sage Grouse Initiative (SGI), being implemented by the Natural Resources Conservation Service (NRCS) in cooperation with the state fish and wildlife agencies, is focusing its voluntary habitat conservation funding to sage grouse core areas as defined by the states. In the first year of the initiative, NRCS allocated $18.5 million in SGI funds to grazing management, juniper control, sagebrush seeding, and other practices beneficial to mule deer (see Part 1 of this series in the last issue of MDF). The SGI provides a great nexus for the proactive habitat work of MDF chapters.

"We focused 71% of all SGI contracts in sage-grouse core areas," said Tim Griffiths, NRCS Sage Grouse Initiative Coordinator. "That’s different than some other efforts to restore species in which funds are spent on the periphery of the range or in subpar habitats. Our approach is to conserve the most important habitat and do it in a way that supports the long-term viability of ranching in the West."

The chief criticism of the sage grouse core area strategy is that it does not, alone, eliminate the risk of energy development or other activities that would compromise wildlife habitat in the future.

However, the stakes are so high with the potential sage grouse ESA listing that it may be in the best interests of all involved to continue in the direction set forth by the Wyoming Sage Grouse Local Working Groups and Implementation Team by making sage grouse core areas a fundamental way of doing business. The avoidance of energy development combined with the SGI’s voluntary habitat improvements and the use of conservation easements to address surface fragmentation threats in core areas represents a potent three-pronged approach to conserving the best sagebrush habitat in the West.

"The Wyoming example points to the value of core areas," said Naugle. "Eighty-three percent of the known breeding birds occur in 25% of the occupied range within the entire state. Without the cores, you risk losing the ability for efficient energy development in sage grouse habitat statewide."

For that reason alone, the value of sage grouse core areas to mule deer may persist for a long time.