FINDINGS AND IMPLICATIONS OF SAWYER MULE DEER 2006 REPORT

Further Confirmation of 46% decline in mule deer abundance because of Gas Field Activity:

- Mule deer numbers on the Mesa (northern half of Pinedale Anticline field) steadily declined by 46 percent over the first four years of gas development (2000-2004) and then appeared to stabilize during the fifth year (2005). December 2006

- These population figures are conservative because the study did not include deer that moved or died. "We did not include deer that emigrated or died early in the winter period because they had too few locations in the study area. This is important consideration because the deer that may have been affected the most by gas development (i.e. those that emigrated or died) were not included in the analysis." (page 4-19)

- While direct habitat loss of 1,300 acres to roads and pads is important, indirect habitat loss made the biggest difference. "The avoidance of areas near well pads created a functional loss of winter range that was substantially larger than the direct habitat losses incurred when native vegetation was removed during construction of a typical 3-4 well pad" (page 6-17). Sawyer notes that the disturbance activity caused deer to shift their use of the habitat dramatically. More than half (52 percent) of the pre-development "high use" areas were no longer highly used after five years of development.

- Emigration of deer to other areas played a very minor role in reduced abundance numbers and the study suggests that elevated mortality from deer displacement played the major role. "The average emigration rate of 2 percent per year for the treatment area (Mesa) contributed to the observed population decline, but combinations of reduced adult and fawn survival were likely the driving factors." (Page 6-18)

Documentation of Important and Intact Mule Deer Migration Route along Wind River Front:

- The report delineated a common spring and fall mule deer migration route along the base of the Wind River Range, termed the "Pinedale Front migration." Sawyer shows that this newly discovered migration corridor is more than 40 miles in length, quite narrow in width (less than a mile wide for most of its length), and faithfully used over time (i.e. "strong fidelity across seasons and years") by at least 3,500 deer.

- This migration route is of critical importance and should be protected in agency planning. "Given that this corridor provides the mechanism for thousands of deer to congregate on a common winter range and distribute themselves across multiple summer ranges (in the five different mountain ranges the report notes), the importance of protecting this migration corridor is evident and will be a key to long-term maintenance of the population." (page 3-8)

- The report emphasized the need to be proactive in making sure this migration continues, saying it could help minimize the impacts to the regional deer population caused from the loss of winter range on the Mesa. "In the case of the Sublette mule deer herd, over 1,300 acres of winter range has been lost on the Mesa and use of this winter range by deer has declined >40 percent since gas development began. Because deer from the Pinedale Front are part of the larger Sublette herd, the migration route identified along the Pinedale Front offers managers a clear, well-defined, and biologically relevant area that could be targeted for off-site mitigation projects." (page 3-9)

Mitigation Measures Can Make Some Difference, *But* More Are Also Needed:

- Even with seasonal drilling restrictions there is still winter-time disturbance to deer because of production-related activities. So additional measures are needed that reduce these winter-time disturbances. "Mitigation measures designed to minimize disturbance to wintering mule deer in natural gas fields should consider all human activity across the entire project area and not be restricted to developing new wells. Reducing disturbance to wintering mule deer may require approaches that limit the level of human activity during both production and development phases of wells." (page 4-20)

- With the caveat that based on only one year's preliminary data, the study suggests that installation of fluid collection systems for producing wells and road-management efforts (locked gates and some winter road closures) appear to minimize deer disturbance. "Our preliminary analysis suggests deer responded positively to both the fluids gathering system and roads with reduced traffic levels." (page 5-6). "The study found that on average deer were disturbed half as far out on pads with collection systems" but also noted, "Preliminary results also suggest deer responded negatively to roads with high traffic levels, which were often associated with winter-drilling sites." (page 5-6)

BLM's Upcoming Plans Need to Adopt New Measures Given Sawyer Study Findings:

This winter BLM will release two important draft plans for public comment and input from state and other agencies. These include: 1) the draft of the new "Resource Management Plan" which addresses where and how any new leasing should occur over the almost 1 million acres of public lands in the Upper Green River Valley; 2) the draft of the Pinedale Anticline Supplemental plan which will determine the pace and levels of infill drilling—and required mitigation measures—over the 200,000-acre Pinedale Anticline gas field. Findings in the Sawyer report support these two BLM plans implementing the following:

- Protection of the Pinedale Front migration route from new leasing. The original Pinedale Anticline plan put off limits to leasing 240,000 acres along the Wind River Front, but the new RMP will revisit this. To ensure the migration route documented here continues and helps offset Mesa impacts to the deer population, as noted by Sawyer, the BLM should continue the administrative withdrawal of this area in the new RMP.

- Directional drilling required to reduce industry's footprint. The BLM must require a limited number of new pads and have most new wells be directionally drilled, in order to minimize direct and indirect habitat impacts. These multi-well pads need to be kept to a minimal size and reclaimed to a smaller, production-only footprint quickly.

- Seasonal timing stipulations kept intact but other measures also required in order to reduce production-level disturbances. BLM must not wholesale remove seasonal timing restrictions on crucial winter ranges, as they are an important piece in the larger effort to reduce disturbances. Instead, upcoming BLM plans must require components such as a fluid collection system for <u>all</u> operators, comprehensive traffic management measures (carpooling, closing of some roads in winter, remote sensing of wellheads, etc), a transportation network plan with closure and reclamation of some roads, etc.

- Ensure coordination and staging of any infill development in the Anticline field so that blocks of historically high-use habitat areas remain available in any given year.

<u>FOR MORE INFORMATION:</u>

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