

Oil and gas field development may affect Wyoming pronghorn population

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The University of Wyoming and other organizations are studying factors that could contribute to declining pronghorn numbers in Wyoming. (Credit: Joe Riis Photo)

University of Wyoming scientists in the Department of Ecosystem Science and Management and Wyoming Cooperative Fish and Wildlife Research Unit are collaborating with a number of organizations in one of the largest studies of pronghorn and their declining population numbers.

Last November, 130 adult female [pronghorn](#) in three study areas in southwest Wyoming's Red Desert were captured and released after ultrasounds, blood and fecal samples, and weights were collected and GPS or VHF transmitter collars affixed to each animal.

Ecosystem science and management Associate Professor Jeff Beck says data collection will continue through November 2015 and will compare

anthropogenic and environmental factors potentially affecting pronghorn in the three study areas.

He says two of the areas are directly influenced by oil and gas field development, and the third acts as the control of the study.

"We will also be examining the effects of environmental conditions such as drought on these animals," Beck says.

"Wamsutter and Baggs are both places with energy development," he says, "But, to look at an area without energy development, we have another portion of the Red Desert, northwest of Wamsutter, where there is no energy development, or at least very little."

Beck says pronghorn numbers in the Red Desert have been declining and are about half from 20 years ago, despite the animals' prolific breeding habits. He explains Wyoming has had some heavy winters followed by dry summers but, historically, numbers have rebounded.

"So, we're modeling survival and reproduction, and we can couple it all with other things like timing and amount of precipitation and [energy development](#)," Beck says.

During initial capture, age, muscle and fat thickness, body mass and lactational status was recorded for each animal, Beck says. The animals will be monitored and offspring counts made for each the next two summers.

"We can use that data later to model resource selection, movements and if pronghorn survival and fawn production are being influenced by features in the landscape they inhabit such as fences, roads or well pads," Beck says. "Whatever kind of activity is going on, we'll be able to model how the animals respond to it."

Partners include the Wyoming Game and Fish Department, the Bureau of Land Management, Wyoming Reclamation and Restoration Center, Wyoming Governor's Big Game License Coalition and several energy companies.

Energy companies will benefit from this study, notes Beck, because, "Any time you provide more information, it helps them understand how to avoid or mitigate their impacts."

Beck compared pronghorn and sage grouse. Though not to the same level, declining populations have made pronghorn a species of concern. Just because Wyoming residents tend to see them all the time doesn't mean they aren't affected by changes in the habitats in which they live, he says.

"Animals might move more in the gas fields because they're avoiding trucks and things like that, which is an energy expenditure, where in other areas they don't, which could cost them—could be a deficit for survival and reproduction," Beck says. "Now, we have the ability with GPS technology to answer some of those questions."

Provided by University of Wyoming

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