

New study provides insight on energy development and sage-grouse habitat in the intermountain West

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A study released October 14th in the current issue of the peer-reviewed journal *PLoS ONE* will shed new light on oil and gas development potential in the Intermountain West. Maps accompanying the study show the impacts to greater sage-grouse populations in relation to potential energy development. If business as usual continues and more forward-thinking development strategies are not considered, sage-grouse populations will decline an additional 7 to 19 percent.

Prepared by scientists from The Nature Conservancy, the National Audubon Society, and the University of Montana, the study created a tool to understand the cumulative impacts of [energy development](#) on species in the West. Agencies can use the study's findings to determine how best to pursue energy independence while maintaining quality habitat that is critical to imperiled sage-grouse populations as well as a host of other species, including iconic big game of the West.

"This study illustrates how impacts to sensitive species, in this example sage-grouse, can be used to forecast biological trade-offs of newly proposed or ongoing development plans" said study co-author Dr. Kevin Doherty, Senior Ecologist at the National Audubon Society. "A 7-19% impact to sage-grouse in their eastern range from just one of the host of issues causing their declines, highlights the need for scientifically credible conservation planning tools to balance natural resource development with wildlife conservation"

Sage-grouse populations are considered indicators of ecosystem health and have been closely monitored by state game and fish agencies over the past decade. The greater sage-grouse is currently a candidate for Endangered Species listing - a result that would have far reaching implications for a wide range of industries in the region.

"Sage-grouse are useful in prioritizing conservation because their abundance is indicative of large and intact shrub-dominated grasslands, the most endangered ecosystem in North America," said study co-author, Dr. David Naugle, Associate Professor, University of Montana.

"Challenges with sage-grouse are a harsh reminder that the value of small-scale conservation actions may be negated if large-scale cumulative impacts are ignored"

The new study and its detailed maps of the Intermountain West indicates that future oil and gas drilling could impact up to 9.1 million acres of sagebrush shrub lands and 2.7 million acres of grasslands - key sage-grouse habitat.

Global demand for energy has increased by more than 50 percent in the last half century, and a similar increase is projected between 2007 and 2030. Much of our domestic demand will be served by new exploration in the western US - making the health of wildlife in the West, such as sage-grouse, an issue of national importance.

"The Conservancy and the Audubon Society have been jointly working with state and federal agencies to proactively identify areas of high biological value that may impact oil and gas operations," said study lead author Holly Copeland, spatial [ecologist](#), with the Nature Conservancy in Wyoming. "Linking wildlife impacts with predictive oil and gas models will provide tools to decision makers charged with meeting the challenge of maintain healthy wildlife populations while responsibly developing domestic energy resources."

More information: Copeland HE, Doherty KE, Naugle DE, Pocewicz A, Kiesecker JM (2009) Mapping Oil and Gas Development Potential in the US Intermountain West and Estimating Impacts to Species. [PLoS ONE](#) 4(10): e7400. [doi:10.1371/journal.pone.0007400](https://doi.org/10.1371/journal.pone.0007400)

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