

Rocky Mountain not-so high: Oil, gas wells drive down Colorado home values

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Heather Stephens, assistant professor of resource economics and management at West Virginia University, found that shale development negatively impacts house prices, particularly for houses with private water and close proximity to the mountains. Credit: WVU

A cornucopia of contradiction is dotting the landscape of Colorado's Front Range, at the foot of the Rocky Mountains.

In the foreground of dramatic peaks and valleys, which are never out-of-season for a stunning snapshot, are—oil and gas wells.

And they're influencing [house prices](#).

Heather Stephens, assistant professor of resource economics and management at West Virginia University, found that [shale](#) development negatively impacts house prices, particularly for houses with private water and close proximity to the mountains.

Homes that rely on private water have lower valuations due to concerns about potential groundwater contamination from nearby wells. Likewise, a house with wells visible from the property sold for an average of \$3,000 less.

These findings come from Stephens' analysis of data on housing sales between 2006 and 2014 for the Front Range region of Colorado. Stephens co-authored the study with Amanda Weinstein, University of Akron, which is published in the peer-reviewed academic journal *Growth and Change*.

"We find that shale development activity lowers housing prices, providing some evidence that residents in Colorado negatively value this activity," said Stephens, of the Davis College of Agriculture, Natural Resources and Design.

Most existing research on shale development's impact on housing values has centered on Pennsylvania, Stephens said. Those studies suggest that only residents with private water negatively view drilling activity. For Coloradoans in Stephens' study, the negative view is more widely shared.

"The research finds that the value local residents place on shale development varies based on the attitudes of residents, as well as the presence of natural amenities," Stephens said. "We find that drilling negatively affects the value of proximity to the mountains and mountain views. We also find competition for housing as well and housing developments compete for land and are increasingly in close proximity to each other."

The researchers decided to focus on Colorado as it serves as a fitting contrast to Pennsylvania. Compared to the Keystone State, Colorado has witnessed a population and housing boom. Colorado residents also tend to value natural amenities and environmental protection more, Stephens said.

"We need to have a more nuanced look at local areas and not just assume what was found in Pennsylvania is going to apply everywhere," she said. "With this project, we thought, 'Why not research some place different?' So that if we got the same results, we could start generalizing that this is what you'll find across the whole U.S."

Colorado's natural amenities affect the capitalization of shale development into housing prices. A house with views of many mountain peaks sells for about 2.5 percent more, or an average of more than \$8,000.

The phrase "out of sight, out of mind" may capture the dichotomy between Pennsylvania and Colorado when it comes to well visibility.

"If you live in Pennsylvania or West Virginia, you may not be able to see wells from your house. If I live over a hill, I may not realize a well is nearby," Stephens said. "But on the Front Range in Colorado, it's very flat, and then there's the Rockies. You can see wells more clearly."

Stephens acknowledged that oil and gas development spurs positive impacts, such as lower energy prices across the U.S. However, most of the costs of development are borne by local residents and communities near the shale development, she said.

"An expansion of oil and gas production in an amenity-rich area will affect the natural capital of the area, thus there is a substitution effect between increased growth from shale oil and gas development and a reduction in the value of amenities," Stephens said.

"As shale development increases, policymakers may need to consider policies to address this substitution effect and to maintain or even improve upon the natural capital of these areas. Investing the immediate gains, through severance taxes or other fees, from oil and gas extraction into the natural capital of these areas may help ensure these amenity-rich areas maintain their quality of life and continue to experience growth in the long term."

Stephens is also conducting research on shale development's impact on West Virginia with a current Ph.D. student in [natural resource economics](#) and hopes those results will be available in the near future.

More information: Heather M. Stephens et al. Household valuation of energy development in amenity-rich regions, *Growth and Change* (2019). DOI: [10.1111/grow.12335](https://doi.org/10.1111/grow.12335)

Provided by West Virginia University

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