## THE SCIENCE ON SHALE GAS DEVELOPMENT

## A Survey of the Environmental Public Health Literature

The scientific community is only beginning to understand the impacts of shale and tight gas development on human health and the environment. Many data gaps remain, but numerous hazards and risks have been identified.

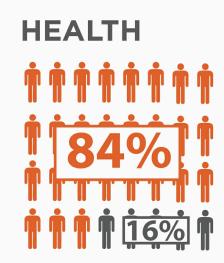
Current total of peer-reviewed publications on the impacts of shale or tight gas development

**80**%<sup>+</sup>

More than 80% of all the peer-reviewed literature has been published since January 2013.



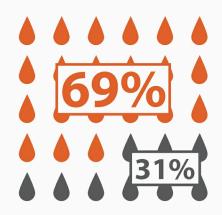
Number of peer-reviewed articles published per year



26 studies contain findings that indicate public health hazards, elevated risks, or adverse health outcomes

5 studies contain findings that indicate no significant public health hazards, elevated risks, or adverse health outcomes

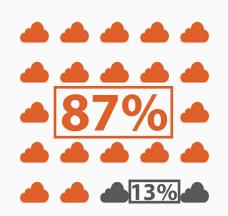
## WATER QUALITY



**40** studies contain findings that indicate potential, positive association, or actual evidence of water contamination

18 studies contain findings that indicate minimal potential, no association or rare incidence of water contamination

## AIR QUALITY



**40** studies contain findings that indicate elevated air pollutant emissions and/or atmospheric concentration.

6 studies contain findings that indicate no significantly elevated air pollutant emissions and/or atmospheric concentration

SOURCE:

"Toward an Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas Development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 2009-2015", PLOS ONE. 2016.:





