

A DECADE OF SHALE

Huge Benefits, Manageable Risks



2009
Annual U.S. oil production increases for first time in 18 years.¹

2011
Then-EPA Administrator Lisa Jackson states, "I'm not aware of any proven case where the fracking process itself has affected water."³

2014
NOAA study credits natural gas for dramatic declines in sulfur dioxide and nitrogen oxide emissions.⁵

2015
A Harvard analysis estimates shale development has created roughly 2.7 million jobs.⁷

2017
A Colorado health assessment based on 10,000 air samples concludes, "the risk of harmful health effects is low for residents living [near] oil and gas operations."⁹

2017
United States breaks its monthly crude oil production record.¹¹

2011
FracFocus.org, a nationwide database featuring information on additives used in fracking, debuts.²

2012
United States overtakes Russia as world's top natural gas producer.⁴

2014
An Intergovernmental Panel on Climate Change report states fracking is an "important reason for a reduction of GHG emissions in the United States."⁶

2016
EPA study concludes, "[H]ydraulic fracturing operations are unlikely to generate sufficient pressure to drive fluids into shallow drinking water zones."⁸

2017
International Energy Agency examines multiple methane leakage scenarios and finds clear climate benefits for natural gas.¹⁰

2018
Three consecutive peer-reviewed studies find no evidence of major groundwater impacts from fracking, supporting conclusions of more than two-dozen previous reports.^{12 13 14 15}

1 Energy Information Administration "U.S. Field Production of Crude Oil," July 2018. <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPUS2&f=A>

2 "New website provides info on fracking chemical mix," The Denver Post, April 7, 2011. <https://www.denverpost.com/2011/04/07/new-website-provides-info-on-fracking-chemical-mix/>

3 "EPA Lisa Jackson Not Aware of Any Proven Case of Water Contamination From Hydraulic Fracturing," YouTube, May 24, 2011. <https://www.youtube.com/watch?v=im-yJhCHhCo>

4 "U.S. Is Overtaking Russia as Largest Oil-and-Gas Producer," The Wall Street Journal, Oct. 2, 2013. <https://www.wsj.com/articles/us-is-poised-to-overtake-russia-as-largest-oilandgas-producer-1380742525?tesla=y>

5 "New findings show U.S. power plant emissions are down," NOAA Earth System Research Laboratory, Jan. 9, 2014. https://www.esrl.noaa.gov/csd/news/2014/148_0109.html

6 Intergovernmental Panel on Climate Change Fifth Assessment Report, April 2014. <https://www.ipcc.ch/report/ar5/>

7 "America's Unconventional Energy Opportunity," Harvard Business School/Boston Consulting Group, June 2015. <https://www.hbs.edu/competitiveness/Documents/america-unconventional-energy-opportunity.pdf>

8 "EPA's Study of Hydraulic Fracturing for Oil and Gas and Its Potential Impact on Drinking Water Resources," Environmental Protection Agency, December 2016. <https://www.epa.gov/hfstudy>

9 "Oil and gas health assessment," CDPHE, 2017. <https://www.colorado.gov/pacific/cdphe/oil-and-gas-health-assessment>

10 "Commentary: The environmental case for natural gas," International Energy Agency, Oct. 23, 2017. <https://www.iea.org/newsroom/news/2017/october/commentary-the-environmental-case-for-natural-gas.html>

11 "U.S. Sets New Monthly Oil Production Record," Oilprice.com, March 6, 2018. <https://oilprice.com/Energy/Crude-Oil/US-Sets-New-Monthly-Oil-Production-Record.html>

12 "Methane in groundwater before, during, and after hydraulic fracturing of the Marcellus Shale," Proceedings of the National Academies of Sciences of America, June 18, 2018. <http://www.pnas.org/content/early/2018/06/12/1720898115>

13 "Big Groundwater Data Sets Reveal Possible Rare Contamination Amid Otherwise Improved Water Quality for Some Analytes in a Region of Marcellus Shale Development," Environmental Science & Technology, May 22, 2018. <https://pubs.acs.org/doi/10.1021/acs.est.8b01123>

14 "Monitoring concentration and isotopic composition of methane in groundwater in the Utica Shale hydraulic fracturing region of Ohio," Environmental Monitoring and Assessment, June 2018. <https://link.springer.com/article/10.1007/s10661-018-6696-1>

15 Independent Petroleum Association of America website, hydraulic fracturing issues page. <https://www.ipaa.org/fracking/>