



The Frack Fact List

Water needed to frack a typical well on the Monterey Shale, per frack job: **1 to 3 million gallons**¹

Number of times an average oil well is fracked: **10**²

Percentage of water that must be transported and treated after fracking operations: **About 50%**³

Average farm water use per acre in California, before considering recapture due to groundwater percolation and runoff to surface water: **1 million gallons**⁴

Amount of oil in the Monterey Shale: **15.4 billion barrels**⁵

Greenhouse gases emitted from extracting all the Monterey Shale oil: **7.7 billion metric tons**⁶

Greenhouse gases emitted from the U.S. as a whole in an average year: **7.7 billion metric tons**⁷

Greenhouse gases emitted from California for 17 years at the 2010 level: **7.7 billion metric tons**⁸

Greenhouse gases emitted from extracting all the Monterey Shale Oil is equivalent to adding: **1.6 billion cars to the road**⁹

Amount of greenhouse gases California must reduce to meet AB 32's targets: **80 million metric tons**¹⁰

Number of chemicals currently used in existing fracking wells: **750**¹¹

Fracking the Monterey Shale would include acidization of wells, a process that uses hydrofluoric acid which is a volatile, dangerous, and highly toxic chemical. Average concentration of hydrofluoric acid per frack: **9%**¹²

Increased groundwater contamination is occurring near fracking sites. Number of drinking water wells with methane located near fracking sites in Pennsylvania: **115 of 141 wells**¹³

Concentration of methane in wells close to fracking sites as opposed to wells farther away: **6 times**¹⁴

Number of times more radium, a radioactive metal, than normal was found in mud near a fracking wastewater treatment plant: **200**¹⁵

¹ Donna L. Drogos, Ean Warren, *Call For Papers: Hydraulic Fracturing in California: Environmental Issues with the Largest Shale Oil Formation in the U.S.*, 44th American Chemical Society, Western Regional Meeting (last accessed Oct. 10, 2013) http://www.wrm2013.org/files/CallForPapers_ACSFrackingSymp_2013_10.pdf.

² Shaleshock.org, *Drilling 101*, <http://shaleshock.org/drilling-101/>.

³ *Ibid.*

⁴ Pete Canessa, Sarge Green, David Zoldoske, *Agricultural Water Use in California: A 2011 Update*, Center for Irrigation Technology, 3, 30 (Nov., 2011) available at http://www.californiawater.org/cwi/docs/CIT_AWU_REPORT_v2.pdf.

⁵ Robert Collier, *A New California Oil Boom? Drilling the Monterey Shale, Part 4: Monterey Shale: Twice as Polluting as the Keystone XL?*, (Sept. 19, 2013) <http://thenextgeneration.org/blog/post/monterey-shale-series-part-4>.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ *Ibid.*

⁹ EPA, *Greenhouse Gas Equivalencies Calculator*, (Sept. 2013) <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>.

¹⁰ Collier, *supra* note 5.

¹¹ Drogos and Warren, *supra* note 1.

¹² Robert Collier, *A New California Oil Boom? Drilling the Monterey Shale, Part 1: Distracted by Fracking?*, (Aug. 8, 2013) <http://thenextgeneration.org/blog/post/monterey-shale-series-distracted-by-fracking>.

¹³ Mark Fischetti, *Groundwater Contamination May End the Gas-Fracking Boom*, Scientific American (Sept. 12, 2013) <http://www.scientificamerican.com/article.cfm?id=groundwater-contamination-may-end-the-gas-fracking-boom>.

¹⁴ *Ibid.*

¹⁵ Douglas Main, *Fracking Wastewater Contaminated – And Likely Radioactive*, LiveScience (Oct. 2, 2013) <http://www.nbcnews.com/science/fracking-wastewater-contaminated-likely-radioactive-8C11323012>.