10 Reasons Governor Brown Must Ban Fracking in California

The Science is in: A recent independent study by the California Council on Science and Technology (CCST) reveals the dangers of fracking and extreme oil extraction in the Golden State.

1. Fracking threatens our groundwater

About three quarters of fracking in California takes place in shallow wells less than 2000 ft. deep.[1] This increases the risk of water contamination because fracking can create direct conduits for pollutants to reach groundwater used for drinking and irrigation.[2] Toxic wastewater from fracking and production is also disposed of by illegally injecting it directly into our protected drinking water aquifers.[3] In addition, wastewater is commonly disposed of in unlined pits, a practice that has been banned in other states.[4] There is ample evidence that these unlined pits have contaminated groundwater.[5]

2. Wastewater from oil fields where fracking has occurred is used to irrigate crops.

Wastewater from oil production in Kern River and Mount Poso - where fracking has occurred - is being used for crop irrigation. It is likely that fracking fluids are in the water being used for irrigation.[6] Prior to use, wastewater undergoes treatment that is insufficient to remove dangerous chemicals, and it is not tested for fracking chemicals.[7]

3. Oil extraction in California has an ugly track record of leaks and spills

Between 2011 and 2014, oil companies reported 575 wastewater spills in California. 18% of those spills affected waterways.[8] Offshore oil production has not fared much better; from 2009 to 2014, there were 170 spill incidents offshore.[9]

4. In a time of record drought, fracking uses a lot of water

Fracking and fracking-enabled extreme oil extraction use over 4 billion gallons of water annually in California.[10]

5. Fracking is likely to cause earthquakes in California

The risk of fracking wastewater injection triggering significant earthquakes may be as great *or greater* than in other parts of the country.[11] California's wastewater disposal wells are closer to the surface and closer to active faults.[12] The study also found a likely link between injection well activity and a cluster of earthquakes in the Santa Maria basin.[13]

6. Fracking threatens endangered wildlife

These threats include: habitat loss, spread of invasive species, contamination of aquatic environments, noise and light pollution, and vehicle traffic.[14] The San Joaquin Valley - where the majority of fracking in California occurs - is home to 143 federally listed species, candidates and species of concern.[15] Fracking activity also overlaps with critical habitat for the California condor and steelhead salmon.[16]

7. Around half a million people in California live within one mile of a well that has been fracked or otherwise stimulated

The closer residents live to fracking wells, the more elevated their exposure risk to toxic air contaminants.[17] Studies show the most significant public health risks - including adverse birth outcomes and increased cancer risk - occur within half a mile from active oil and gas development.[18,19] In the Los Angeles basin alone, there are 20 schools, 39 daycare centers, 27 elderly homes, and 128,000 people within a half mile of a fracked or otherwise stimulated well.[20] In Los Angeles in particular, oil and gas development clearly occur in low-income communities and communities of color.[21]

8. Fracking uses a cocktail of highly toxic chemicals

14 chemicals used in hydraulic fracturing are among the most toxic compounds as ranked by the United Nations.[22] Little is know about many other chemicals used in fracking. In fact, two thirds of chemicals used in fracking and extreme extraction have incomplete or no information on their toxicity.[23]

9. The EPA allows offshore fracking wells to dump toxic wastewater directly into the Pacific Ocean

In federal waters, operators are allowed to discharge fracking wastewater directly into the ocean, despite the fact that there are no studies on the effects of fracking discharge on marine environments.[24,25] Lab tests suggest harm to marine life can result from exposure to wastewater discharge.[26] Lack of data on the toxicity of 31 of the 48 chemicals used in offshore fracking is also a significant problem.[27]

10. What we don't know about fracking in California is frightening

Oil companies are profiting off of a massive science experiment in which our health, air, water, and environment are the guinea pigs. The CCST report concludes that the sheer number and toxicity of chemicals used in fracking and extreme extraction fluids make it impossible to quantify the risks to the environment and human health.[28]

Created by the Center for Biological Diversity for Californians Against Fracking

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[1] California Council on Science and Technology. *An Independent Scientific Assessment of Well Stimulation in California*. Vol. II Potential Environmental Impacts of Hydraulic Fracturing of Hydraulic Fracturing and Acid Stimulations and Acid Stimulations. Sacramento, 2015 ("CCST Vol. II"). Pg. 406
[2] CCST Vol. II Pg. 106
[3] CCST Vol. II Pg. 113-114
[4] CCST Vol. II Pg. 107, 110
[5] CCST Vol. II Pg. 112
[6] CCST Vol. II Pg. 87,107
[7] CCST Vol. II Pg. 51, 115
[8] CCST Vol. II Pg. 127
[9] California Council on Science and Technology. *An Independent Scientific Assessment of Well Stimulation in California*. Vol. III Case Studies of Hydraulic Fracturing and Acid Stimulations in Select Regions: Offshore, Monterey Formation, Los Angeles Basin, and San Joaquin Basin. Sacramento, 2015 ("CCST Vol. II"). Pg. 76
[10] CCST Vol. II Pg. 49, 60
[11] CCST Vol. II Pg. 280
[12] CCST Vol. II Pg. 280
[13] CCST Vol. II Pg. 295
[14] CCST Vol. II Pg. 311
[15] CCST Vol. II Pg. 314
[16] CCST Vol. II Pg. 341
[17] CCST Vol. II Pg. 413
[18] CCST Vol. III Pg. 216, 230
[19] CCST Vol. II Pg. 414
[20] CCST Vol. III Pg. 244
[21] CCST Vol. III Pg. 245
[22] CCST Vol. II Pg. 79
[23] CCST Vol. II Pg. 79
[24] CCST Vol. III Pg. 29
[25] CCST Vol. III Pg. 64
[26] CCST Vol. III Pg. 92
[27] CCST Vol. III Pg. 95
[28] CCST Vol. II Pg. 437