

The **SCIENCE** on Fracking in **CALIFORNIA**



CALIFORNIA COUNCIL ON SCIENCE AND TECHNOLOGY **JULY 2015**:

“The study found no releases of hazardous hydraulic fracturing chemicals to surface waters in California and no direct impacts to fish or wildlife... We found no documented instances of hydraulic fracturing or acid stimulations directly causing groundwater contamination in California... In the South Coast air district (including all of Orange County, the non-desert regions of Los Angeles and Los Angeles County, San Bernardino County, and Riverside County), upstream oil and gas sources represent small proportions (<1%) of criteria air pollutant and toxic air contaminant emissions due to large quantities of emissions from other sources in a highly urbanized area.”



STANFORD UNIVERSITY **JULY 2015**: “Several recent reports examining hydraulic fracturing have concluded that surface activities, particularly spills, and near-surface activities via well integrity provide the greatest potential risks for groundwater, but their risks could be managed with proper safeguards.”



INGLEWOOD OIL FIELD – CARDNO ENTRIX **OCTOBER 2012**: “Public health trends in the area surrounding the field were consistent with public health trends throughout the L.A. Basin. It is reasonable to conclude that the conduct of hydraulic fracturing during the analyzed period did not contribute or create abnormal health risks.”



CALIFORNIA STATE WATER RESOURCES CONTROL BOARD **SEPTEMBER 2014**: “Thus far, the test results indicate that the injection wells have not degraded groundwater quality in the tested water supply wells.”



CALIFORNIA STATE UNIVERSITY, FRESNO **AUGUST 2013**: “The petroleum industry along with the industries linked to it supports 52,271 jobs in the [San Joaquin Valley] SJV (3.1% of total employment in the region), paying a total of \$4.08 billion in annual labor income.”



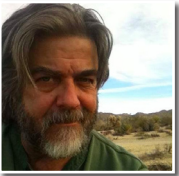
CALIFORNIA DEPARTMENT OF CONSERVATION **2015**: “In California, hydraulic fracturing has been used as a production stimulation method for more than 30 years with no reported damage to the environment.”

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WHAT THEY ARE SAYING



MARK ZOBACK, GEOPHYSICIST, STANFORD UNIVERSITY **JUNE 2012**: “These microseismic events [from hydraulically fracturing a well] affect a very small volume of rock and release, on average, about the same amount of energy as a gallon of milk falling off a kitchen counter...Needless to say, these events pose no danger to the public.”



CHRIS CLARKE, ENVIRONMENTAL REPORTER **APRIL 2015**: “The water used for fracking in 2014 is just .00069 percent of California’s total water consumption. Or put another way: If all the water used by California society in 2014 was represented by a bank account totaling \$10,000, the amount we spent on fracking last year was just under seven cents. Puts those 214 acre-feet in perspective, no?”



TIM KUSTIC, FORMER CALIFORNIA OIL AND GAS SUPERVISOR **DECEMBER 2012**: “There is no evidence of harm from fracking in groundwater in California at this point in time. And it has been going on for many years.”



CALIFORNIA GOV. JERRY BROWN **MARCH 2015**: “[F]racking in California has been going on for more than 50 years and uses a fraction of the water of fracking on the east coast for gas particularly... California imports 70 percent of our petroleum products; our cars drive over 330 billion miles mostly on petroleum. If we reduce our oil drilling on California, which a ban on fracking would do, we’ll import more oil by train or by boat, that doesn’t make a lot of sense.”



DR. RICHARD MULLER, UNIVERSITY OF CALIFORNIA- BERKELEY **DECEMBER 2013**: “Environmentalists who oppose the development of shale gas and fracking are making a tragic mistake.”



21 SCIENTISTS’ LETTER TO CALIFORNIA GOV. JERRY BROWN **DECEMBER 2013**: “In our research, we have found nothing to suggest that shale development poses risks that are unknown or cannot be managed and mitigated with available technologies, best practices and smart regulation.”