

**The California Oil and Gas Report**

# Berkeley Releases Study on Fracking in California

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#### By Dennis R. Luna, P.E., J.D.

The potential impact of hydraulic fracturing of oil and gas wells is the focus of a 59-page report released April 12 by the Wheeler Institute for Water Law & Policy of UC Berkeley School of Law’s Center for Law, Energy and the Environment.

The [report](http://www.law.berkeley.edu/files/ccelp/Wheeler_HydraulicFracturing_April2013.pdf), which examines possible adverse effects on water quality and the environment, was prepared by Jayni Foley Heinis, J.D., Executive Director of the Center, and Michael Kiparsky, Ph.D., Associate Director of the Wheeler Institute.

Despite the report’s academic style, it leaves little doubt about the authors’ skepticism about fracking.

“The general practice of fracking is not new – oil and gas producers have employed fracking in California for many decades,” they acknowledge, without noting that there have been no incidents of contamination of water supplies in the state during the half-century of fracking activity.

“What is new, and potentially alarming, are projections of dramatically increased fracking activity in California brought on by the availability of new techniques,” they state. “Such developments have outstripped the ability of responsible agencies to effectively oversee fracking activity,” they add, without identifying ways that state, regional and local regulatory agencies have been unable to monitor fracking activity.

“Hydraulic fracturing, along with the other aspects of unconventional oil and gas production, presents risks to environmental quality and public health,” the report declares. “The hydraulic fracturing process also yields byproducts, including wastewater, which must be properly managed in order to reduce any risk to human health and the environment.”

Those risks, in the view of the authors, center on flowback of fracturing fluid as well as produced water. These liquids “contain potentially harmful chemicals, some of which are known carcinogens,” while produced water is “also highly saline and potentially harmful to humans, aquatic life and ecosystems.”

The primary risks highlighted in the report are not exclusively linked to fracking, but are potential impacts related to all oil and gas drilling.

“Risks to water quality stem primarily from: improper storage and handling of fluids at the well site, including spills and improper lining of pits; injection of wastewater into disposal wells, which can trigger earthquakes; and potential for groundwater contamination due to failure of well integrity,” the authors state.

“However, uncertainty is high,” they acknowledge, because there are “few peer-reviewed scientific studies on the potential risks to water quality from fracking activities, and fewer still focused on California.”

Rather than wait for such studies to be performed, the authors call for new regulations.

These would include formal notification to “citizens and stakeholders” 30 days in advance of any fracking activity, disclosure of all ingredients to be used in fracking fluids, baseline testing of water quality before fracking occurs, and adding “unique tracers” to the fluids so any contamination could be tracked to a specific well and operator.

“Scientific uncertainty drives the need for more research,” the authors say, into such topics as whether injection of waste water into disposal wells could cause seismic activity, the possible implications of newer techniques such as directional drilling and acid matrix fracturing, “and the risk of ground or surface water contamination.”

Until such research is completed, the authors believe, the state should consider putting the brakes on all use of fracking.

“The legislature and DOGGR (the California Division of Oil, Gas and Geothermal Resources) should not shy away from finding that there is not enough scientific knowledge or institutional capacity to effectively manage a sharp increase in the expansion of hydraulic fracturing in California. If it makes this determination, it may choose to slow its growth until more knowledge and capacity can be developed,” they write.

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