

HEALTH PROFESSIONAL SIGN ON LETTER

Dear Governor Brown,

We, the undersigned physicians, nurses, researchers and public health professionals, write to you out of concern for the health of Californians who are threatened with pollution associated with hydraulic fracturing, or fracking, and similar techniques. With our concerns informed by the rapidly expanding evidence of harm, and by the uncertainties about health impacts that remain, we urge you to adopt an immediate moratorium on fracking and other unconventional fossil fuel extraction methods.

Evidence linking water contamination to fracking-related activities is now indisputable. An investigation by the Associated Press has confirmed cases of water contamination in Pennsylvania, Ohio, West Virginia, and Texas (Begos, 2014). Fracking-related contaminants detected in water sources in recent years include methane (Jackson et al., 2013), radium (Vengosh, Jackson, Warner, Darrah, & Kondash, 2014), arsenic (Fontenot et al., 2013), and hormone-disrupting substances (Kassotis, Tillitt, Davis, Hormann, & Nagel, 2014). According to industry data, five percent of wells leak immediately, and more than half leak after 30 years (Brufatto et al., 2003). A recent study of fracking wells in Pennsylvania found that casing and cement impairment in fracking wells can lead to methane migration into underground sources of drinking water, and that unconventional wells are far more likely to leak than conventional ones (Ingraffea, 2014). We know that drilling and fracking contribute to loss of well integrity, increasing the risk that toxic chemicals enter groundwater.

Transporting fracking wastewater to treatment plants has resulted in contamination of rivers and streams with unfilterable radioactive radium (Nelson et al., 2014; Warner, Christie, Jackson, & Vengosh, 2013). In California, the transport of chemical mixtures that include hydrofluoric acid, widely used in well stimulation operations, is particularly dangerous. According to the Centers for Disease Control and Prevention, hydrofluoric acid is one of the most hazardous industrial chemicals in use and can cause severe burns, lung damage and even death (CDC, 2013).

Air quality impacts from fracking-related activities are clearer than ever. Fracking-related air pollutants include carcinogenic silica dust (Moore, Zielinska, Pétron, & Jackson, 2014), carcinogenic benzene (McKenzie, Witter, Newman, & Adgate, 2012), and volatile organic compounds (VOCs) that create ozone (Gilman, Lerner, Kuster, & de Gouw, 2013). Exposure to ozone—smog—contributes to costly, disabling health problems, including premature death, asthma, stroke, heart attack, and low birth weight (Jerrett et al., 2009).

Residents of Kern County and the Los Angeles basin have reported headaches and other ailments associated with air pollution caused by fracking. Kern endures more fracking than any other county in California, on top of some of the worst air quality in the nation. According to the American Lung Association, Kern's air poses a threat to residents' health due to high levels of pollutants such as ozone (American Lung Association, 2014), which are likely increased by fracking operations. In Los Angeles and Orange Counties, also burdened by high levels of air pollution, oil companies used over 45 million pounds of air toxics between June 2013 and June 2014 alone (PSR-LA et al., 2014). Air toxics are chemicals that have been proven to cause significant illness, such as cancers, neurological and respiratory diseases and death (EPA, n.d.).

Finally, expanding fossil fuel extraction by allowing fracking and similar techniques fuels climate change, exacerbating health problems throughout California. Rising temperatures could lead to higher

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concentrations of ozone (NCA, 2014), which, as noted above, contributes to respiratory and heart conditions (Jerrett et al., 2009). Twelve percent of Californians have already been diagnosed with asthma, a figure higher than the national average (CARB, 2013). Extreme heat events will also become more frequent and prolonged as the climate warms, increasing deaths from heat stroke, cardiovascular disease, and respiratory illness (NCA, 2014).

These are just some of the health concerns that have led us to call on you to enact an immediate moratorium on fracking and other unconventional fossil fuel extraction techniques in California. As Governor, you have the responsibility to protect all Californians – and in particular already overburdened communities – from threats to our health and welfare.

Sincerely,

Full Name _____

Title _____

Position _____

Institution/Organization _____

I am signing-on on behalf of (mark one)

_____ My Institution/Organization

_____ Myself

Email _____

*(for our purposes only to confirm signatories)

Phone _____

*(for our purposes only if we need to reach out)

Once completed, please mail completed form to:

David Braun
Californians Against Fracking
1814 Franklin Street, Suite 1100
Oakland, CA 94612

If you have questions, please email organizers@californiansagainstfracking.org

Alternatively, you can sign onto this letter by going to www.californiansagainstfracking.org and clicking on the Take Action tab.

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