



DEPARTMENT OF CONSERVATION

Managing California's Working Lands

Public Affairs Office

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Hydraulic Fracturing

Overview - The practice of hydraulic fracturing or “fracking” is commonly associated with the recovery of non-associated natural gas (that is, gas not produced along with oil) from gas shale, primarily in the eastern United States. In California, fracking is occasionally used for a brief period to stimulate production of oil and gas wells. A relatively small percentage of California’s oil and gas production is from shale formations.

The California Division of Oil, Gas, and Geothermal Resources (DOGGR) has statutory authority to regulate hydraulic fracturing under Section 3106 of the Public Resources Code, but does not have regulations requiring reporting or requirements to permit or track the different methods of hydraulic fracturing or fluids injected. The practice is largely exempted from the U.S. Safe Drinking Water Act, except when diesel fuel is used as the fracking agent. (42 U.S.C.S § 300h(d)). The United States Environmental Protection Agency (U.S. EPA) is undertaking a multi-year study of hydraulic fracturing and its potential impacts. More information can be found at the U.S. EPA web link: http://www.epa.gov/hfstudy/HF_Study_Plan_110211_FINAL_508.pdf

What is hydraulic fracturing? Hydraulic fracturing is a process that involves injecting fluids into a well bore at pressures that exceed the strength of the formation (rock), thereby resulting in the formation breaking down or fracturing. Typically, a propping agent, such as sand, is also injected into the well to ensure the fractures in the formation remain open. This process increases the permeability of the formation and, therefore, increases the production of the resource.

Is fracking used in California? DOGGR only has anecdotal information about the use of the practice. That said, the Division does not believe that fracking is widely used in California. Fracking, as portrayed in the documentary “Gasland,” is used to retrieve non-associated natural gas. More than 90 percent of California’s non-associated gas production occurs north of Stockton and is produced from sands rather than shale. Sands do not respond well to hydraulic fracturing. California’s non-associated gas production has been on the decline since 2006. While DOGGR is aware of industry interest in the potential to increase non-associated natural gas production in the state through hydraulic fracturing, the associated costs of production may remain too high to be beneficial at present natural gas prices.

What specific statutory and regulatory authority does DOGGR have? Per Public Resources Code Section 3106, the State Oil and Gas Supervisor permits the owners or operators of wells to, “utilize all methods and practices known to the oil industry for the purpose of increasing the ultimate recovery of underground hydrocarbons . . . [and to] do what a prudent operator using reasonable diligence would do . . . including, but not limited to, the injection of air, gas, water, or other fluids into the productive strata, the

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application of pressure heat or other means for the reduction of viscosity of the hydrocarbons, the supplying of additional motive force, or the creating of enlarged or new channels for the underground movement of hydrocarbons into production wells.”

DOGGR has an Underground Injection Control (UIC) Program in place to address enhanced oil recovery, water disposal, and gas storage. Additionally, the division has State and federal authority to permit Class II injection wells, which allow for injection of California non-hazardous fluids produced in the course of oil and natural gas production operations. The division has a primacy agreement with the U.S. EPA to permit and regulate Class II injection wells under the federal Safe Drinking Water Act (Act). Hydraulic fracturing operations are excluded from regulation under the Act, except when diesel fuel is used as the fracking agent. DOGGR has no authority to permit the injection of diesel fuel because it is a refined product.

Before a permit is issued, the proposed injection project is studied by DOGGR engineers and reviewed by the appropriate Regional Water Quality Control Board. Injection project permits often include conditions, such as approved injection zones, allowable injection pressures, and testing requirements. State regulations were designed to ensure that injected fluids are confined to the project area and zone, and that formation pressures are not exceeded to the extent that damage occurs.

Are more fracking regulations forthcoming? Due to the ongoing natural gas drilling boom in the eastern U.S., some members of Congress are calling for more regulation of hydraulic fracturing. During the summer of 2010, the U.S. EPA conducted a “listening tour” to receive public comments about how to structure a forthcoming \$1.9 million study of fracking. The “Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources” can be found at the link provided above to the U.S. EPA website.

LINKS

- [U.S. EPA](#)
- [Groundwater Protection Council](#)
- [STRONGER](#)
- [California Office of Environmental Health Hazard Assessment](#)

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