



DEPARTMENT OF CONSERVATION

PUBLIC AFFAIRS OFFICE

801 K STREET • MS 24-07 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 323-1886 • FAX 916 / 323-1887 • TDD 916 / 324-2555 • WEB SITE conservation.ca.gov

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Contact:

Teresa Schilling/Don Drysdale
(916) 323-1886

DEPARTMENT OF CONSERVATION UPDATES OIL AND GAS INDUSTRY WATER USE INFORMATION

SACRAMENTO—The Department of Conservation (DOC) today provided additional information about the oil and gas industry’s handling of water, data that builds upon an ongoing monthly reporting process to include further details about where water is obtained and its treatment and disposal.

“These reports provide further details about the oil and gas industry’s use of water in California, including how the water is treated before disposal,” said State Oil and Gas Supervisor Steve Bohlen, head of DOC’s Division of Oil, Gas, and Geothermal Resources. “This is just the [first report](#), and the information will continue to get more useful and comprehensive as producers improve their reporting process and compliance for future reports. We’re collecting this data, in part, to determine whether more treated water from oil production can be put to further productive use in oil and gas activities, as well as for beneficial uses.”

Until now, DOC only received monthly reports of the total amount of water used and a single source and disposal method -- even if this did not adequately capture all the actual industry practices. The new quarterly reporting process, required under [Senate Bill 1281](#) (Pavley, 2014), included about 250 new data points both for individual wells and fields.

The data include sources and volumes of water used, water treatment methods, and disposal methods. The industry-supplied data showed that approximately 65,000 acre-feet of water – mainly unsuitable for other uses – was produced and typically re-injected to produce more oil. By comparison, about 80 million acre-feet used in an average year by Californians for all purposes. The data in today’s report represents reports filed by roughly 60 percent of the state’s oil and gas operators, and accounts for approximately half of the overall expected reported water volumes for the first quarter of 2015.

“By the end of the month, operators who have failed to provide the required data will face a \$4,500 civil penalty that could double for a second violation,” Bohlen said. “In a time of extended drought, it is vital that we collect this water data required under the law. There will be little tolerance for oil and gas operators who are not doing their part to achieve 100 percent industry-wide compliance.”

Over 99 percent of the 65,535 acre-feet of water produced during oil and gas extraction (65,279 acre-feet) was treated in some manner. About 60 percent of the time, this water was injected back underground. Some of this “produced water” was transferred to other oil fields or put to domestic use.

The report also helped distinguish how much of the water brought to the surface during oil or gas exploration and production might have been potable or useful for agriculture, versus that which had no other beneficial uses because of naturally-occurring salts, hydrocarbons or mineral content. The data generally showed that most water associated with oil and gas production was never suitable for drinking or agriculture because of high, naturally-occurring hydrocarbons or salinity.

Here are some other key elements of the water data reported by the oil and gas industry this quarter (an acre-foot is about 325,900 gallons or the typical usage of two households for a year):

- ◆ Most of the water produced from January through March, about 97 percent, was naturally briny. About 3 percent, or 1,688 acre-feet, could have been suitable for beneficial uses.

- ◆ 63 percent, or 41,402 acre-feet, of the produced water -- nearly all of it unfit for domestic use -- was injected for enhanced oil recovery or permanent storage. About 292 acre-feet of this had the potential for drinking or agricultural water.

- ◆ 35 percent or, 23,171 acre-feet were transferred to be recycled for oil field or domestic uses.

- ◆ 4,783 acre-feet, or 7 percent, of produced water were in storage or used for non-underground injection purposes, such as dust control. About 670 acre-feet of that total were fit for domestic use.

- ◆ 32 acre-feet of water were allocated for well stimulation and 211 acre-feet for well work such as drilling, well repairs and upgrades.

All 433 operators in California were required to report under the new law but only 329 complied. The data released today includes reports from 242 operators. About a quarter of operators filed data that was either incomplete or in an incompatible format. The Division is working with those operators to correct and evaluate their reports. The remaining operators have been issued notices of violations, the first step in the process that can lead to fines and additional penalties.

“Compiling the data for this first report was challenging because producers took water from many different sources, treated it in different ways, and used many different methods of disposal,” Bohlen said. “Capturing all the diverse sources and methods with a consistent tracking system is complicated, but needs to be done.”

California in 2014 produced more than 205 million barrels of oil -- the state’s highest total since 2009 -- and 3.3 billion barrels of water. Most California oil and gas production takes place in Kern County.

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