In California, the fluid extracted by oil wells typically contains much more water than oil. The water portion of this fluid is called “produced water,” which is either disposed of or treated and reused. Disposal of produced water occurs predominantly in injection wells and percolation ponds. This fact sheet summarizes information on the oil and gas production (Class II) related underground injection control (UIC) program in California.

**WHAT IS UNDERGROUND INJECTION CONTROL?**

The federal UIC program was created under the Safe Drinking Water Act to protect underground sources of drinking water. UIC projects involve the injection of oil and gas production fluids through wells into underground geologic formations for enhanced oil recovery or produced water disposal. Injection may only be permitted in an aquifer that does not qualify as an underground sources of drinking water, as defined by federal regulations.

**WHO REGULATES UNDERGROUND INJECTION CONTROL IN CALIFORNIA?**

Since 1983, the Division of Oil, Gas and Geothermal Resources (DOGGR) has the authority from the US Environmental Protection Agency (US EPA) to implement the Class II UIC program in California.

**ELEMENTS OF THE UNDERGROUND INJECTION CONTROL PROGRAM**

**Class II UIC Projects:** Operators of UIC wells must have a permit from DOGGR prior to injecting fluids for enhanced oil recovery or disposal of produced water.

**Aquifer Exemptions:** An aquifer may become exempt only after a proposal from the State is forwarded to the USEPA for approval. Stringent requirements in both federal and state regulations must be met since underground sources of drinking water and other beneficial uses of water must be protected. More information on the exemption process is explained on page 2.

(Continued on Page 2)
The Water Boards’ role is two-part:

- DOGGR consults with the Water Boards in the review of UIC projects to ensure protection of groundwater.
- The Water Boards are required to review any aquifer exemption proposal prepared by DOGGR. The Water Boards review addresses water quality and beneficial uses of groundwater. State Water Board concurrence is required prior to DOGGR submitting the aquifer exemption proposal to the US EPA for review and possible approval.

How are UIC projects approved?
There is a three-step process to review a proposed UIC project. First, an operator must submit to DOGGR a UIC project proposal for review. Second, after DOGGR’s review, the application is submitted to Water Boards staff to evaluate whether the proposed project is a threat to water quality. If Water Boards staff have no objection to the proposed project, DOGGR submits a Draft Project Approval Letter (draft permit) to the Water Boards for final review. Lastly, DOGGR then issues a final Project Approval Letter.

What is the process in California to exempt an aquifer?
There are three entities involved in the decision to exempt an aquifer. An application to exempt an aquifer is first reviewed by DOGGR and then forwarded to the Water Boards. The Water Boards’ evaluation of exemption applications addresses the following questions: are there any current or potential future beneficial uses of the groundwater at issue; will injection affect the quality of water that is, or may reasonably be, used for any beneficial use; and will the produced water injected back be contained in the exempted area. If State Water Board staff concur with the aquifer exemption proposal, the application is subject to public comment and final approval by US EPA.

Where is underground injection occurring?
Approximately 55,000 injection wells exist in the state and are predominantly used for enhanced oil recovery. Eighty percent of UIC wells are in Kern County, and the remainder are in the Central Coast and Los Angeles areas.

Additional Information:
http://www.conservation.ca.gov/dog/general_information/Pages/UndergroundInjectionControl(UIC).aspx

Contact:
Janice Zinky
State Water Board
916.341.5897
Janice.Zinky@waterboards.ca.gov