

Groundwater Monitoring Related to Oil and Gas Activities



State Water Resources Control Board

Presentation Overview

- Background Information
- Senate Bill 4 – Water Board Requirements
- Developing Model Criteria for Groundwater Monitoring
- Project Timeline

Water Use:

- Vast majority on vertical oil wells
- Vertical well stimulation uses far less water than directionally drilled
- Other types of enhanced oil recovery (Steam/Water Flood); most water used is from production zone

Senate Bill 4

➤ 2013 Well Stimulation Legislation

- Public concern initiated several different bills in the state legislature
- SB 4 (Pavley) ultimately passed and signed into law in late 2013
- Well Stimulation includes hydraulic fracturing and acid fracturing treatments

SB 4 Requirements

- **DOGGR to adopt regulations specific to well stimulation**
 - Final regulations by July 2015
 - Interim regulations (Jan 2014) include groundwater monitoring requirements

SB 4 Requirements

- State Water Board to implement regulatory program for groundwater monitoring of oil and gas-related activities
 - Develop “model criteria” for groundwater monitoring
 - Implement regional groundwater monitoring program by 2016
 - Funded by oil and gas operation fees

SB 4

Development of Model Criteria

- Model criteria is being developed in consultation with:
 - DOGGR
 - Technical Experts
 - Public Stakeholders
- Lawrence Livermore National Laboratory (LLNL) to consult with experts and provide written recommendations to State Water Board staff
- U.S. Geological Survey collecting and analyzing data and information to help develop model criteria

SB 4

Development of Model Criteria (cont.)

➤ Model criteria covers:

- Operator-required groundwater monitoring near wells subject to well stimulation
- Regional-scale monitoring to be implemented by State Water Board

➤ Model Criteria to include:

- Methods for monitoring
- Chemical analyses
- Frequency and duration of monitoring
- Areas to monitor

Timeline

- **August 2014** - Public stakeholder kickoff meeting(s)
- **Late 2014** - Public stakeholder meeting with technical experts to allow input to model criteria design issues (led by LLNL)
- **Early 2015** - LLNL to submit recommendation report to State Water Board staff to consider

Timeline (cont.)

- **Early 2015** – State Water Board staff to release draft model criteria for public review
- **By July, 1 2015** - Water Board adoption of final model criteria
- **January 1, 2016** – State Water Board begin regional groundwater monitoring

Thank You

State Water Board - Oil and Gas Monitoring Unit

http://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4.shtml



OIL DEVELOPMENT ALONG OCEAN BOULEVARD
HUNTINGTON BEACH, CALIF.
FRASHERS PHOTO - POMONA

B-2037