



**CALIFORNIA  
CONSERVATION**

**Department of Conservation**

**Division of Oil, Gas, and Geothermal Resources**

# **California's Oil and Gas Production and Well Stimulation**

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**State Oil and Gas Supervisor**

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# The Division of Oil, Gas, and Geothermal Resources

Established in 1915



## Primary Mandates:

- 1) Supervise the drilling, operation, maintenance, and abandonment of wells so as to prevent, as far as possible, damage to life, health, property, and natural resources.



- 2) **To supervise the drilling, operation, maintenance, and abandonment of wells to permit operators to utilize all methods and practices known to the oil industry for the purpose of increasing the ultimate recovery of underground hydrocarbons.**



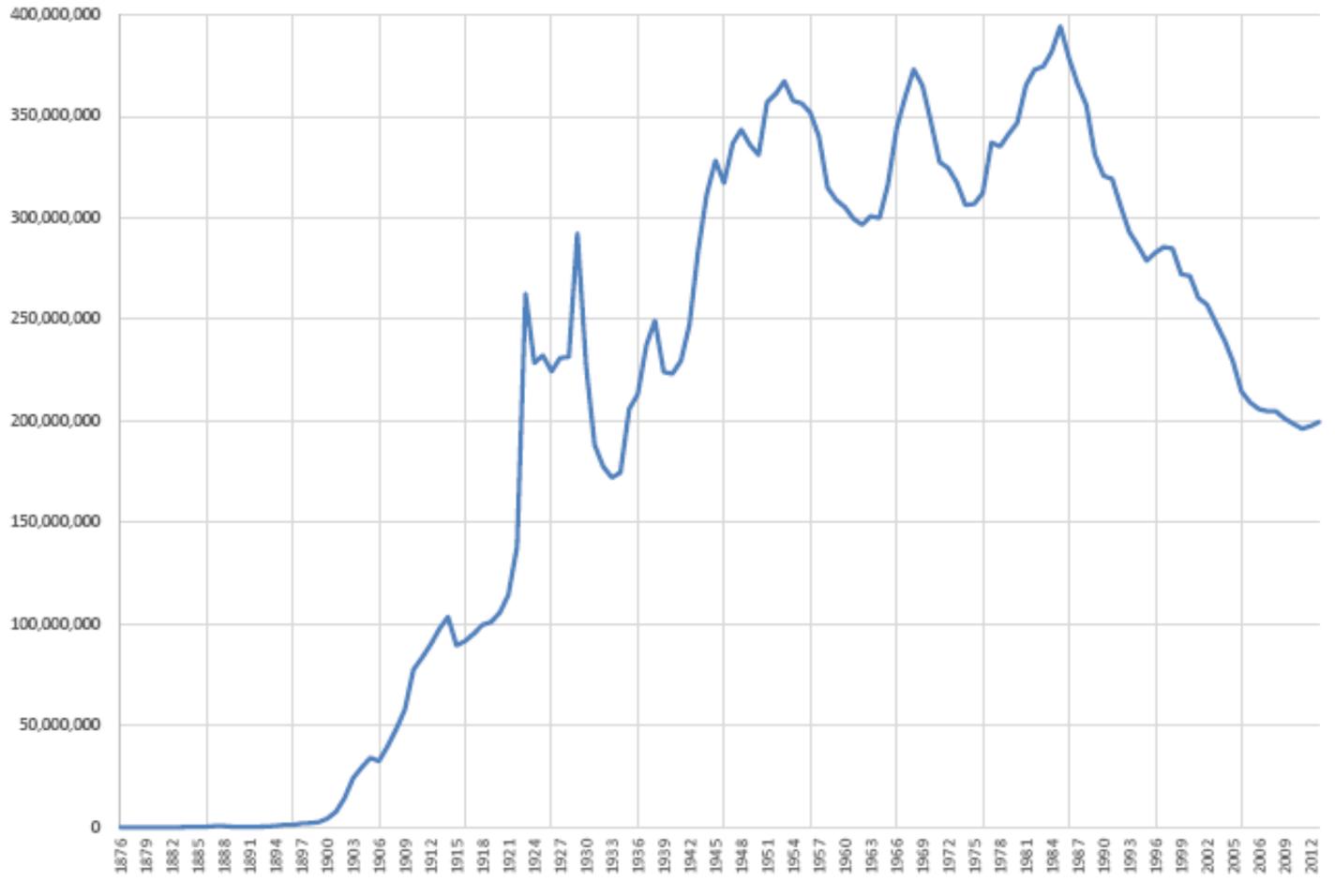
- 3) **To require an operator to implement a monitoring program to detect releases to soil and water, including both groundwater and surface water, for above ground oil production tanks and facilities.**



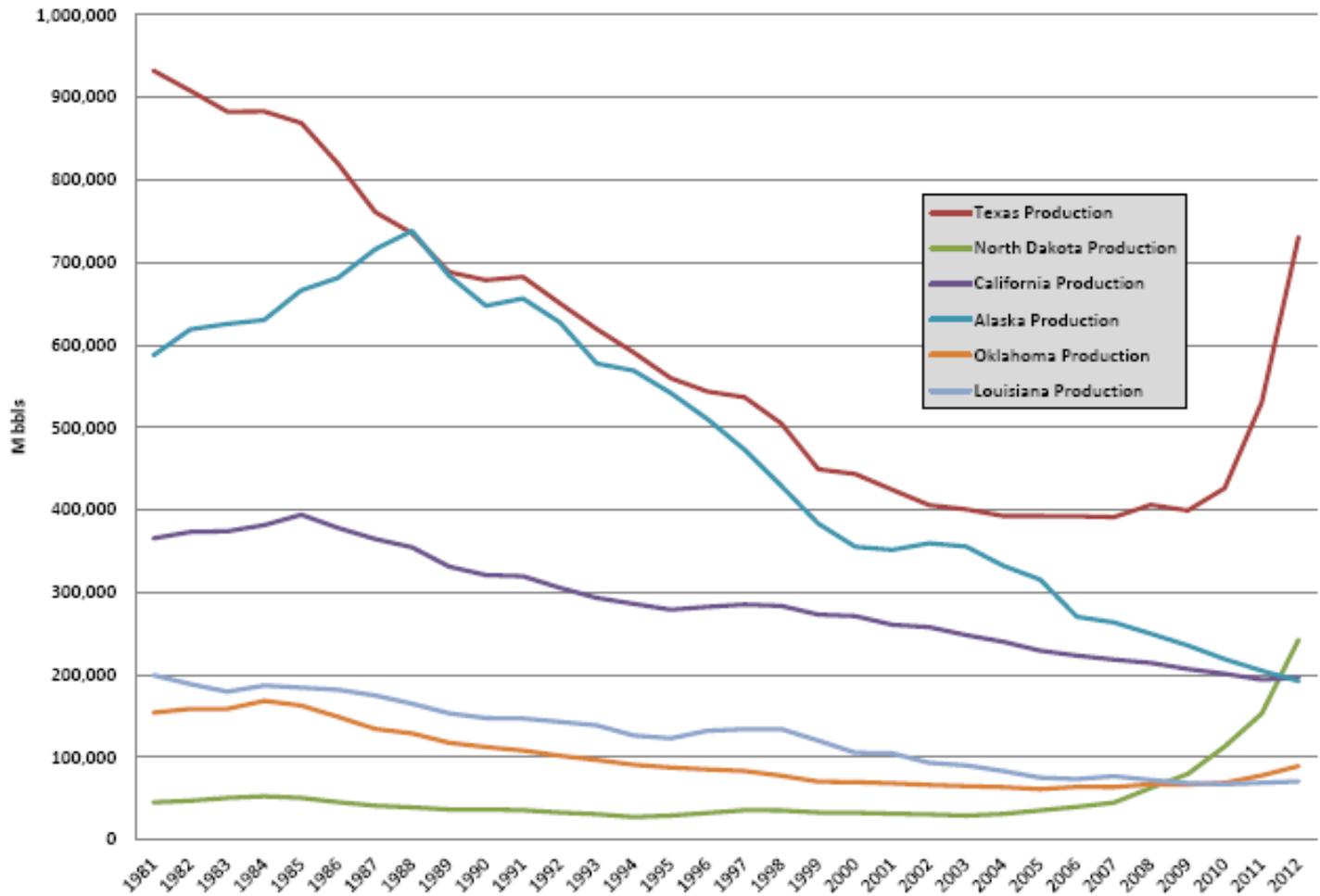
- 4) To best meet the needs of the state, and to encourage the wise development of oil and gas resources.



California Oil Production (bbls)



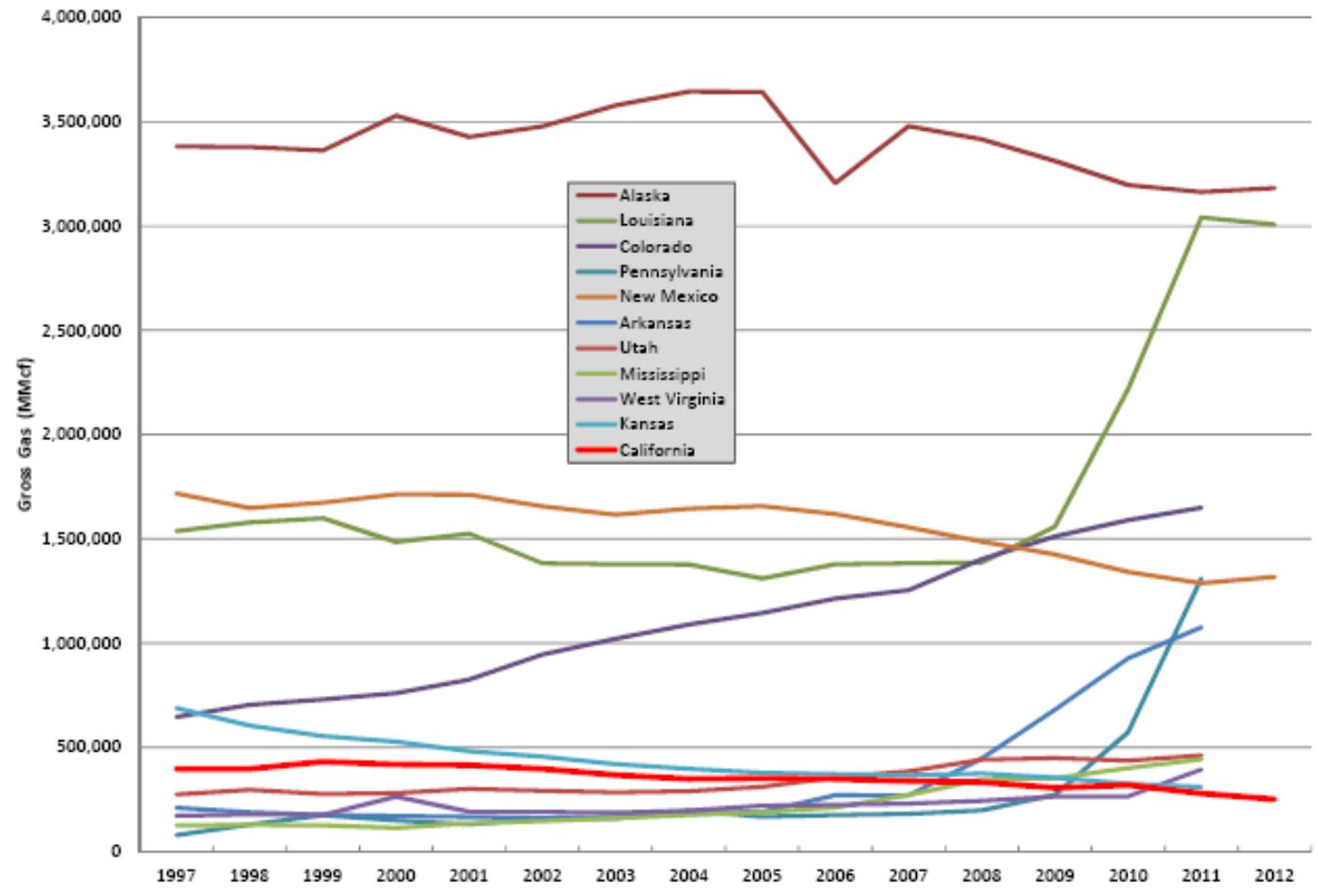
## Crude Oil Production



Production data from EIA



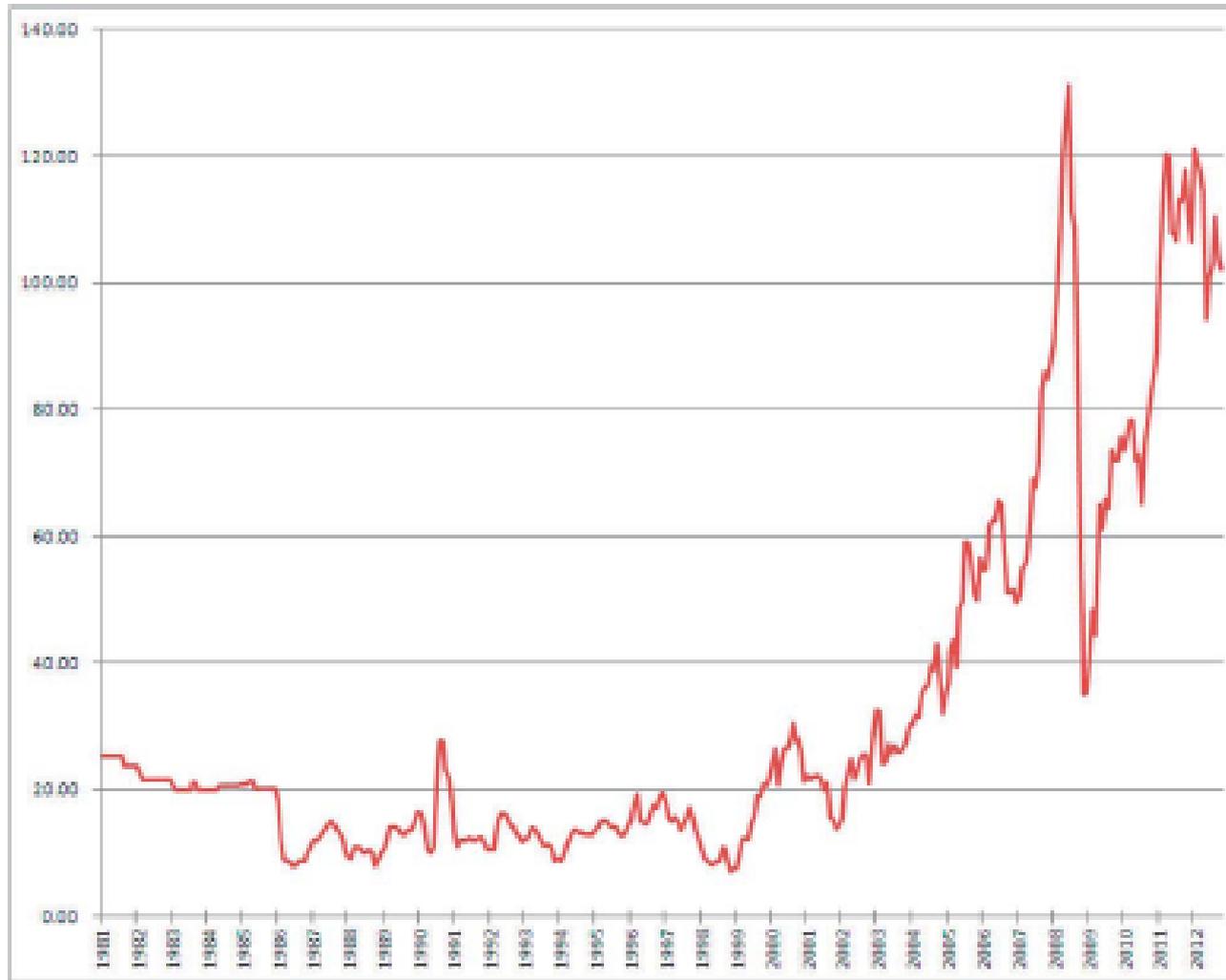
## Top 11 Gross Gas Production States



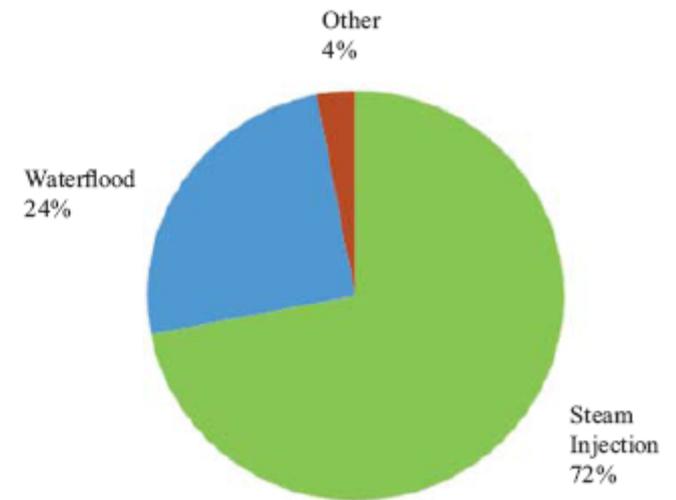
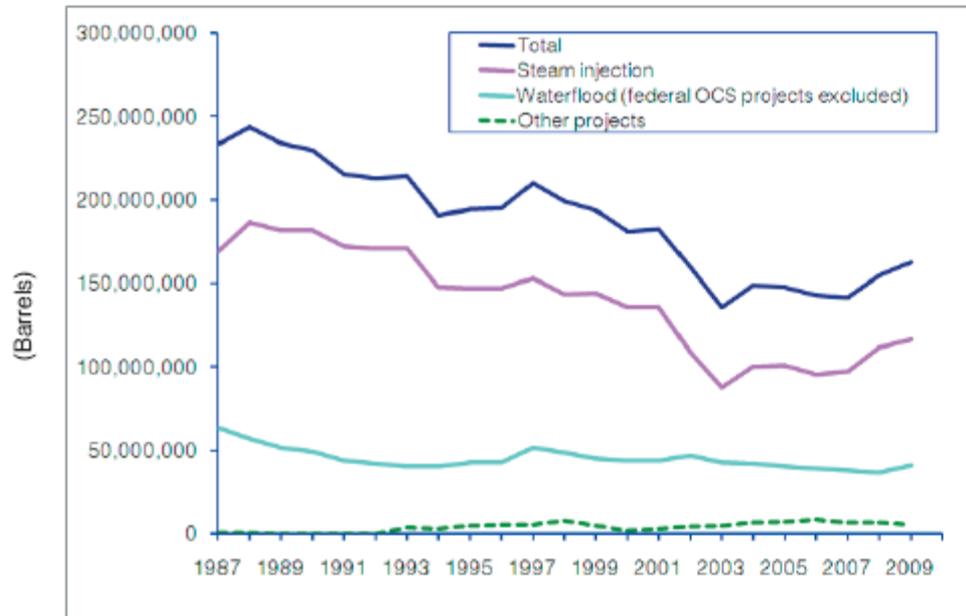
Production Data from EIA



## CRUDE OIL POSTED PRICES MIDWAY-SUNSET OIL FIELD



# Incremental Oil Production from Enhanced Oil Recovery Projects



# What is the Future with California Oil and Gas Production?



# Monterey Shale

**Energy Information Administration Original  
Estimate: 15.2 Billion Barrels**

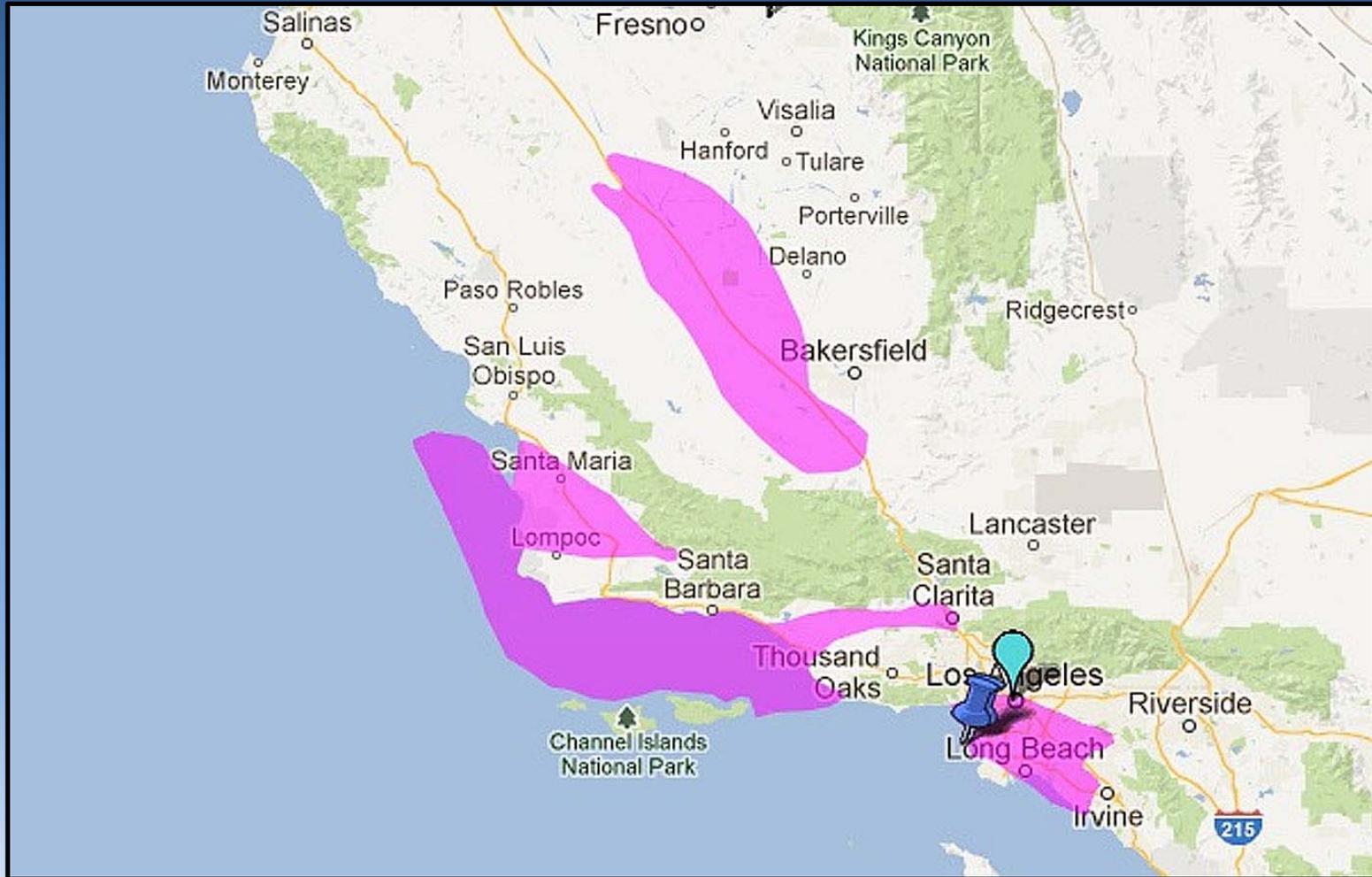
**Recent Estimate: 600 Million Barrels, a  
reduction of 96%**



# Monterey Shale?



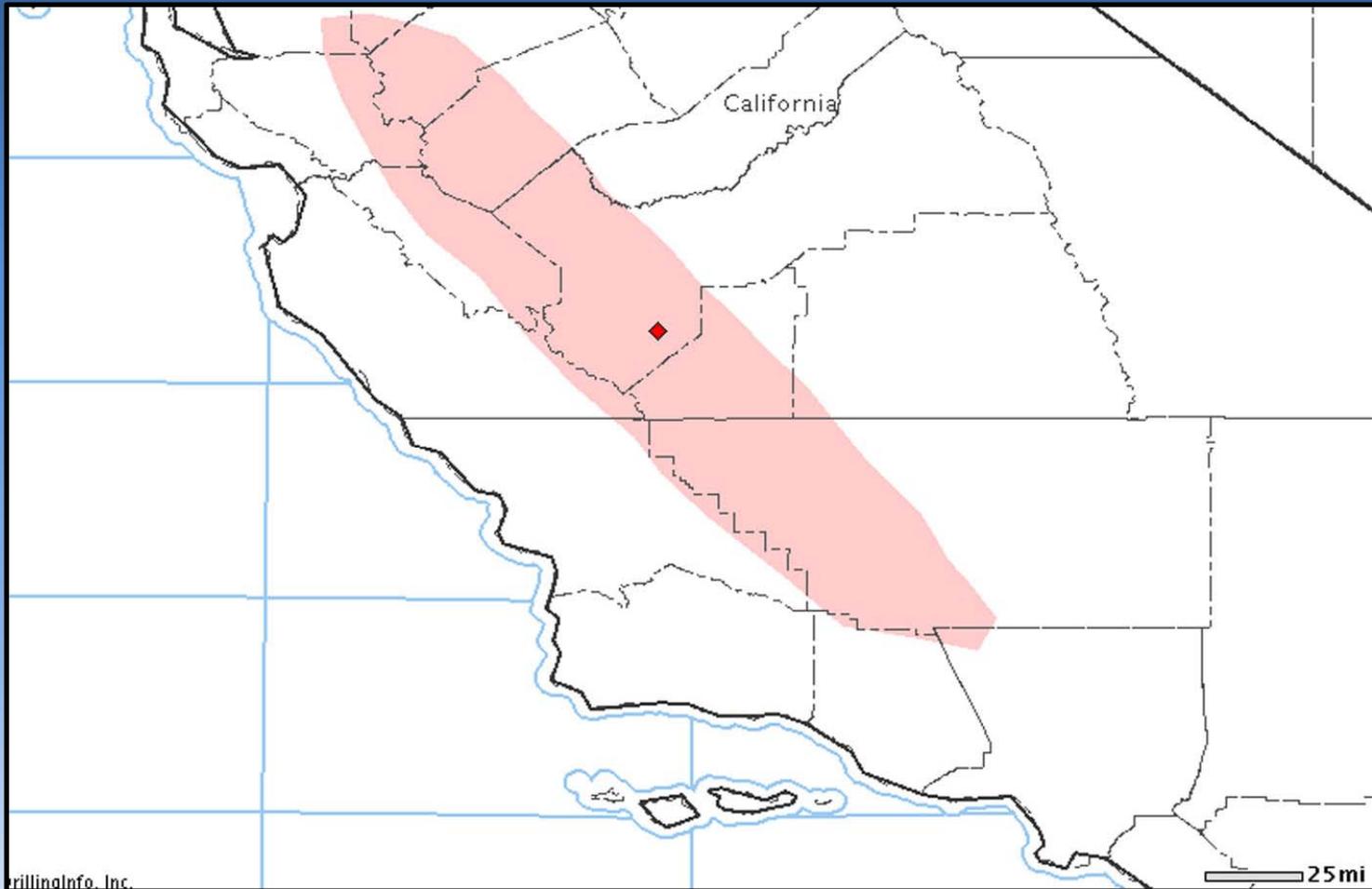
# Monterey Shale?



Source: <http://www.indybay.org>



# Monterey Shale?

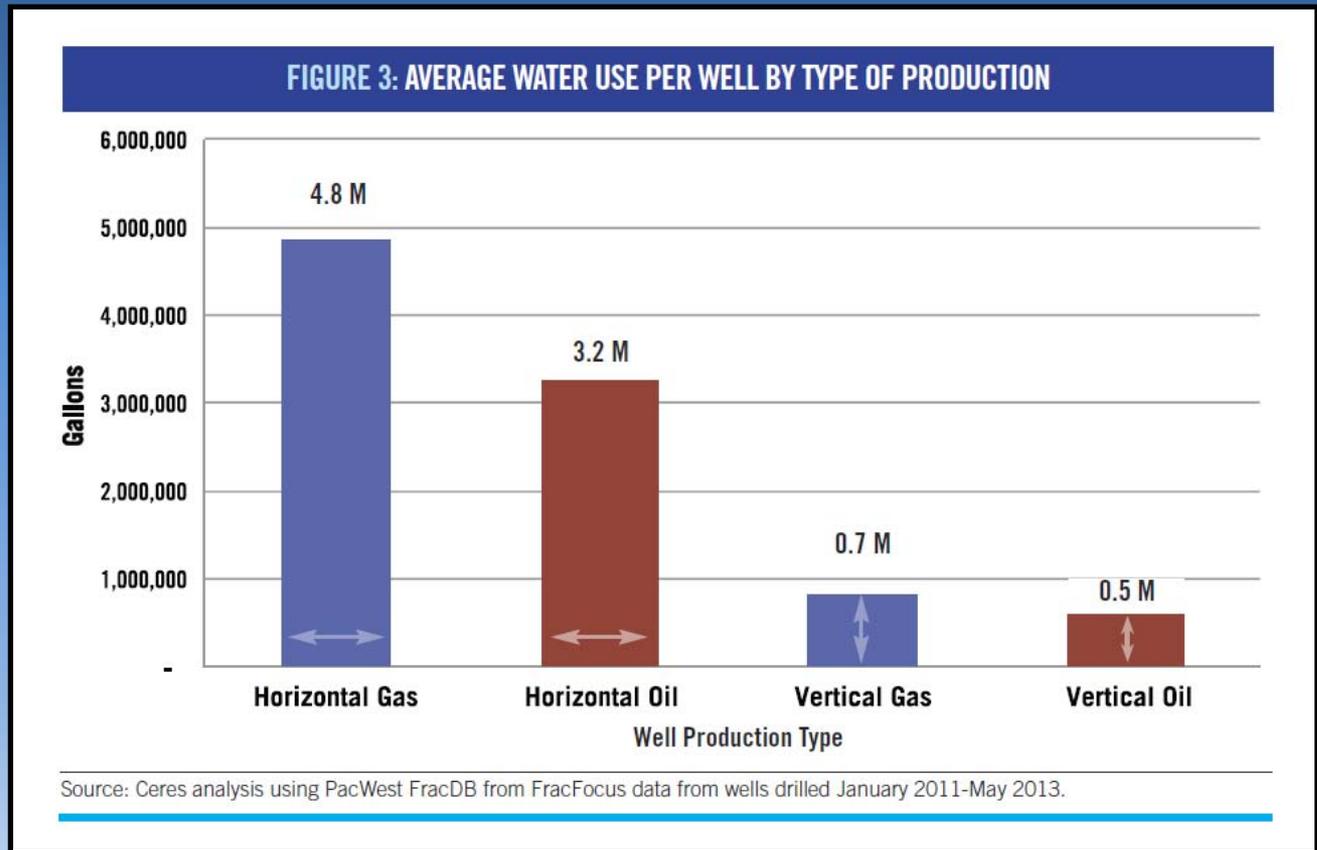


Source: <http://info.drillinginfo.com>

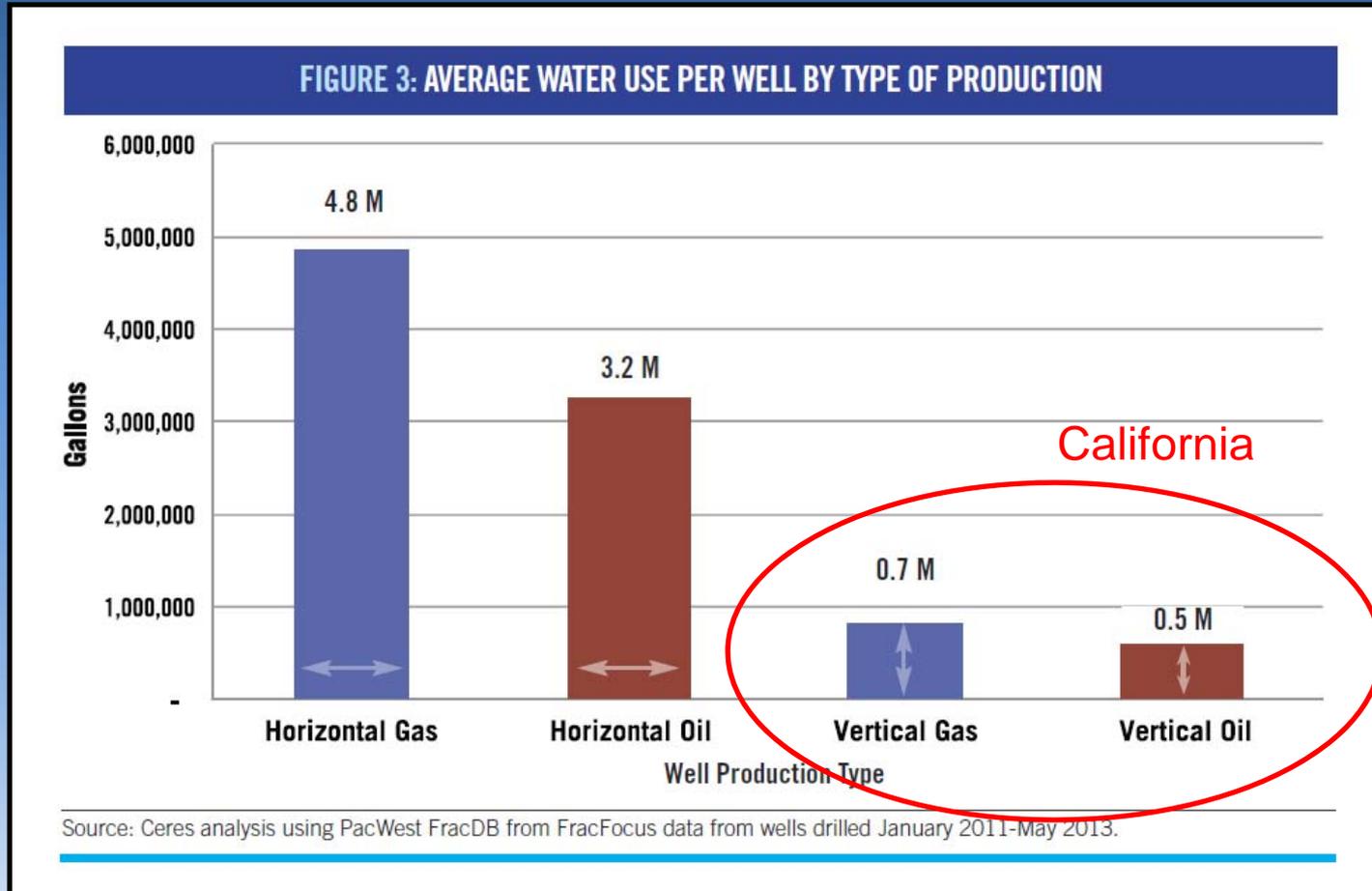
**Does oil and gas activity have an impact on California water supply?**

# Water Use in Hydraulic Fracturing

- Nat'l water use for HF in 2014
- CA avg. water use per HF  $\approx$  160,000 gallons
- Total CA water use all HF in 2013  $\approx$  300 acre feet



# Water Use in Hydraulic Fracturing



# Historical Regulations

## Facilities regulations:

- Covers pipelines, collection/separation vessels/tanks
- Includes Spill Prevention and Contingency Planning

## Well Construction Standards:

- Focus on competent well bores
- Ensure “zonal isolation”



# Senate Bill 4

## Permanent Regulations

**Will require:**

- Permit from DOGGR
- Neighbor notification
- Pre-WST evaluation of formation and well
- Monitoring during and after WST
- Water quality monitoring plans and water management plans
- Public disclosure of job and chemicals used



# Conclusions

**California's oil fields are mature.**

**California's production will continue to decline without new discoveries.**

**New technologies may slow the decline.**

**The Division will continue to prevent damage to life, health, property, and natural resources.**



# Questions?





[www.conservation.ca.gov](http://www.conservation.ca.gov)