
CALIFORNIA STATE OIL & FRACKING LAWS



***SIERRA CLUB/LOYOLA ELS ENVIRONMENTAL LAW SERIES
WORKSHOP VIII: OIL PRODUCTION, DISTRIBUTION, AND FRACKING
MARCH 21, 2015***

Overview

I. California Oil Background

1. Historical Oil Use
2. California Oil Development

II. Direct State Regulation

1. Early CA Oil Law
2. Division of Oil, Gas, and Geothermal Resources (DOGGR)
3. Direct Regulation
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5. Prop 65

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3. Bad Features

IV. CEQA

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2. Flawed SB 4 EIR

I. Background **Early Uses of Oil**

- Humans have known about and used oil for centuries if not millennia
- Smaller quantities were readily available without modern drilling technology
 - Not all oil must be drilled, there are natural seeps like the La Brea tar pits
- Spanish explorers in the 1500s used thick asphaltum oil to seal cracks in their ships
- Native Americans also used it to seal their canoes and as a lubricant and adhesive for decorating or even to affix arrowheads to shafts.

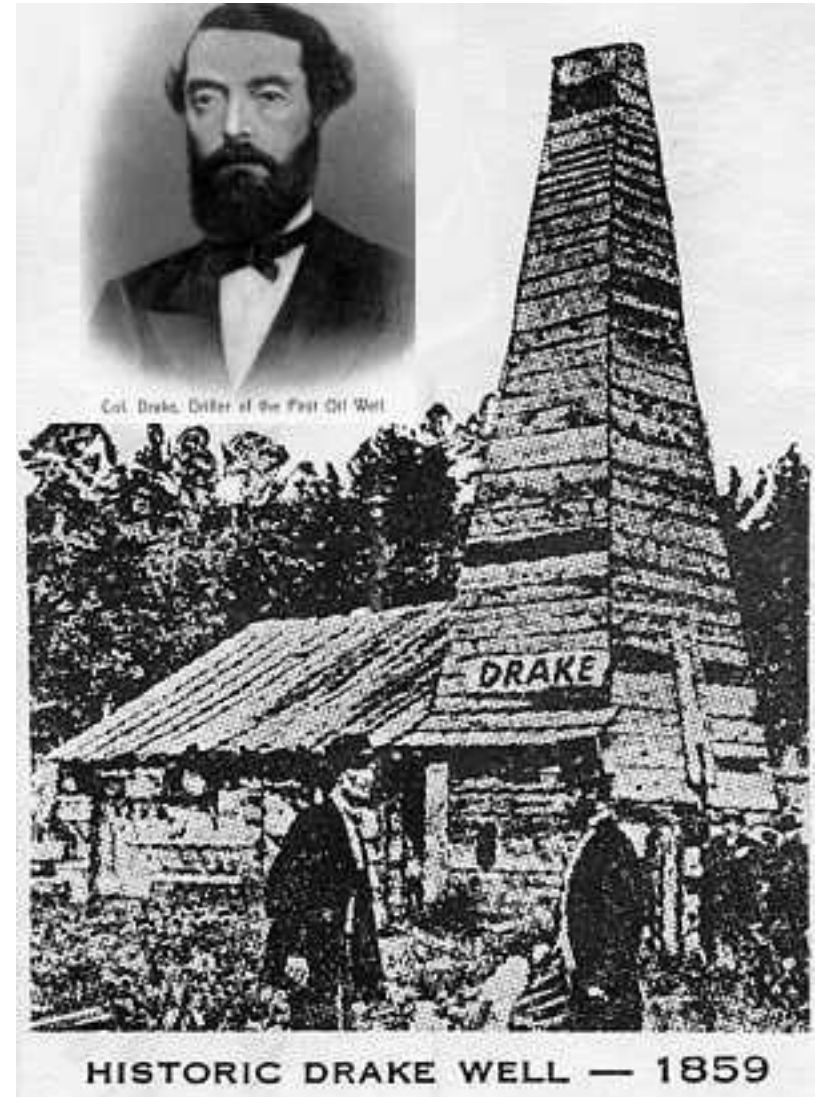


I. Background Commercial Oil in California

- 1857: Californians were distilling that thick oil from seeps into lamp oil on a commercial basis
 - Also began mining thick oil from tunnels
- 1858: Edwin Drake drills world's first commercial well
- 1861: 1st CA oil production well drilled, Humboldt Cnty
- Brief lull in drilling expansion due to PA boom
- 1865: 65 companies trying to drill for oil in CA



Early oil mining tunnel at Sulphur Mountain, Ojai CA



I. Background Commercial Oil in Southern California

- 1892: Edward Doheny and Charles Canfield discover subsurface oil in SoCal
 - By then, oil drilling technology fairly widespread
 - Demand was also going up, so renewed interest
- 1894: 80 wells in the LA area
- 1897: Over 500 wells in LA area
- Today: ~210,000 oil, gas, and geothermal wells have been drilled statewide
 - ~88,500 are still in use
 - ~570 companies are operating those wells



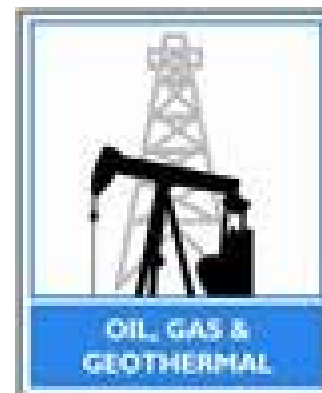
Early oil development in Baldwin Hills

California Oil and Gas Wells



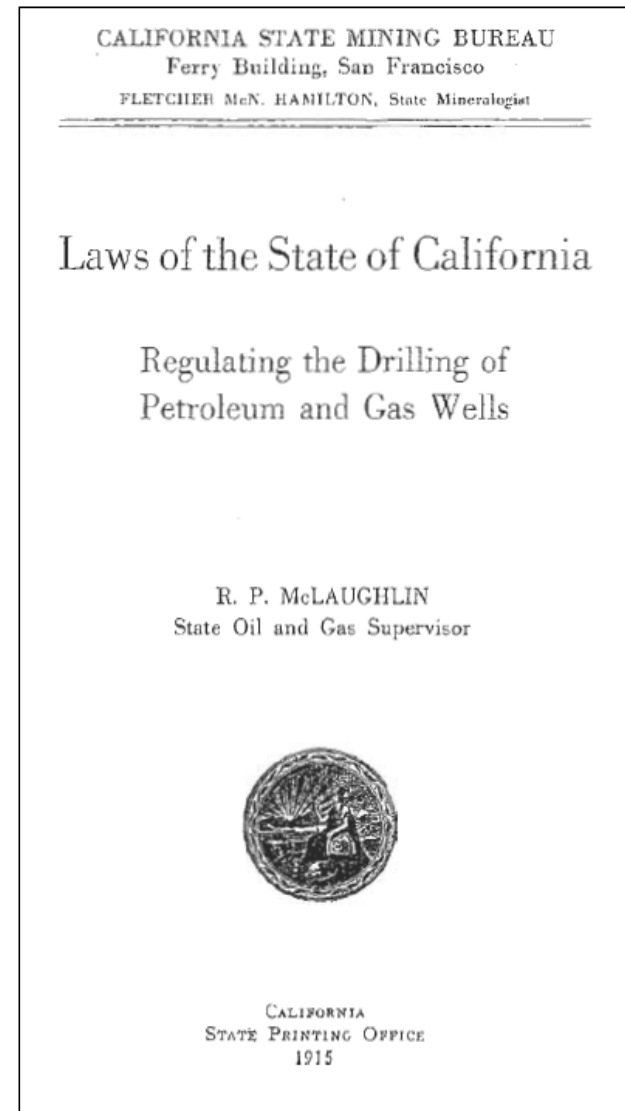
II. Direct State Regulation Act of 1915

- Oil extraction was regulated like mineral mining at first
- Minor laws in 1909 (water intrusion) and 1913 (created State Mining Bureau)
- Need for regulation became apparent as drilling boomed
- First real oil law: Act of 1915
 - Enacted at industry request
 - Introduction: "The law of 1915, which is herewith presented, was drawn in response to a *widespread demand among oil operators* for some means of regulating the drilling of wells so that the operations of one concern would not damage the property of a neighbor...."
- Effectively created the Division of Oil, Gas and Geothermal Resources (DOGGR)



II. Direct State Regulation Focus on Extraction

- DOGGR formed with a single mission: efficient/effective resource extraction
- Self-characterization in Act of 1915: new department will protect oil and gas “from waste and destruction through improper operations...”
 - No mention of public health or environment
- Included regulation for casing, but for the opposite reason we worry about it now:
 - “It shall be the duty of the owner . . . to properly case such well or wells, with metal casing . . . to effectually shut off all water overlying or underlying the oil or gas-bearing strata . . . *to effectually prevent any water from penetrating such oil or gas-bearing strata.*” (Section 15)



II. Direct State Regulation Evolution of DOGGR

- Reorganized in 1961, DOGGR moved to present location in Dept. of Conservation under the Resources Agency
- Today, "Division requirements encourage wise development of California's oil, gas, and geothermal resources while protecting the environment."
- Current mission: "preventing damage to:
 - (1) life, health, property, and natural resources;
 - (2) underground and surface waters suitable for irrigation or domestic use; and
 - (3) oil, gas, and geothermal reservoirs. AKA: Prevent, as far as possible, damage to life, health, property, and natural resources; prevent damage and waste of underground oil, gas, and geothermal deposits; prevent loss of oil, gas, or geothermal resources."
- AKA dual mission: protect people/property + develop resources
 - Obvious tension between the two

II. Direct State Regulation DOGGR Today

- Despite dual mission, DOGGR has still historically been oriented towards industry
 - "There has been a serious imbalance between the role regulating the oil and gas industry and the role of protecting the public." -State Sen. Hannah-Beth Jackson
- New Oil and Gas Supervisor, Dr. Steve Bohlen
 - Since June, 2014
 - Ph.D in geology
 - Stanford professor
 - Most recently a Program Director at the Lawrence Livermore National Lab
- Trying to take DOGGR in a new direction



II. Direct State Regulation **Current Oversight**

- Oil regulations are scattered throughout California law:
 - Public Resources Code
 - California Coastal Act of 1976
 - Civil Code
 - Code of Civil Procedure
 - Government Code
 - Health and Safety Code
- Wide range of regulated activities
 - Ex) casing, testing, bonding, safety devices/practices, plugging/abandonment, record-keeping
- Field Rules specific to a given oil or gas field supplement broad statutory/regulatory requirements
 - Variations in casing requirements, blowout prevention equipment etc. based on geology and other characteristics
- Mainly DOGGR, but also:
 - State air, water, waste agencies within Cal EPA
 - Regional water quality boards
 - Air pollution control districts
 - Coastal and bay development regulators
 - Counties and municipalities

II. Direct State Regulation DOGGR Program Areas

- Well Permitting and Testing/Witnessing
 - Drilling, redrilling, deepening, permanently altering casing (reworking) plugging and abandonment
 - Now fracking, per SB 4 (discussed below)
- Environmental Field Inspections
 - Well inspections, tank inspections/testing, spill contingency plans/response, site restoration after abandonment, enclosure requirements in urban areas
- Underground Injection Control (UIC)
 - Subsurface wastewater disposal (more below)
- AB 1960 Facility Inspections, Plan Reviews
 - 2008 law authorizing DOGGR to regulate oil production facility maintenance standards
- Construction Site Well Review
- Idle Wells
- Orphan Wells and Deserted Facilities

II. Direct State Regulation UIC

- Federal Safe Drinking Water Act has varying regulations for 6 classes of injection wells
 - **Class I—Industrial Waste and Municipal Disposal:** store hazardous (potentially radioactive) waste beneath lowermost formation containing underground drinking water
 - **Class II—Oil and Gas Related:** inject fluids either for EOR or liquid hydrocarbon storage
 - **Class III—Mining Wells:** injection related to mineral extraction
 - **Class IV—Shallow Hazardous and Radioactive Injection:** ~phased out since 1980
 - **Class V—Shallow Non-Hazardous Injection Wells:** 20+ subtypes ranging from shallow disposal systems to aquifer storage and recovery wells to experimental geologic sequestration wells
 - **Class VI—Geologic Sequestration:** used for carbon sequestration, newest type
- Under federal law, state regulating agencies may apply for “primacy” for any of the classes
 - US EPA delegates authority to enforce the federal law to a state agency
 - DOGGR has primacy over Class II wells only (encompasses >60% of instate oil/gas prod.)
- DOGGR has dropped the ball
 - So has EPA for not overseeing them or stepping in

II. Direct State Regulation **Recent Scandals**

- DOGGR's UIC mess
 - CA has ~12,000 wastewater injection wells, ~2500 in areas with drinking-quality aquifers
 - DOGGR has allowed wastewater injection into at least 12 drinking-quality aquifers
 - "We all fell down on the job," and DOGGR engineers monitoring wastewater injection were "not fully qualified." -Director of the Dept. of Conservation
- Illegal unlined wastewater pits in Kern County
 - At least 300, often adjacent to agriculture
- Takeaway: DOGGR still has problems
 - Bright side: these were discovered by water board investigation
 - Product of new authority and inter-agency communication from SB 4



II. Direct State Regulation **Proposition 65**

- You may know this law as the reason for all the chemical warning signs
- Most known for requiring businesses to post warnings for exposure to listed chemical
 - Listed if an authoritative body (US EPA, FDA etc.) says they cause cancer or birth defects
- A lesser-known (and used) provision prevents knowing injection of a listed chemical into drinking water

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**PROP 65
WARNING**

THIS FACILITY CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR REPRODUCTIVE HARM.

CALIFORNIA HEALTH AND SAFETY CODE SEC. 25249.6

8" X 12" Decal



III. SB 4 Background/Genesis

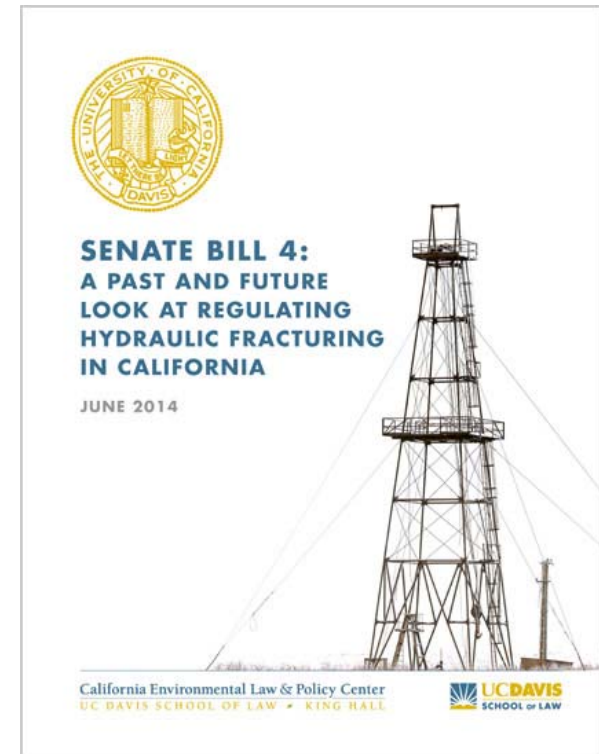
- Fracking was previously unregulated
- In 2010, State Sen. Fran Pavley asked DOGGR whether fracking was occurring in CA, where, and to what extent
 - DOGGR did not know (and also that based on CA geology, not a big deal)
- Legislature gave DOGGR funding/authority to gather data/investigate, but said “may” not “shall”
 - DOGGR still did not act, so Gov. Brown removed DOGGR supervisor in late 2011
 - Lawsuits began, including by Sierra Club, and the state legislature began to move
- Contentious drafting/amendment process, even within environmental community
 - Moratorium was a major focus
 - Early versions had it, dropped later
 - NRDC still advocates for a moratorium, but supported SB 4 as a needed first step
 - Late changes forced NRDC and every other previously supportive environmental group to drop their support
- Signed in September 2013
 - A compromise removed the CEQA issue, but caused a scheduling situation

III. SB 4 Structure

Structure:

- Temporary, interim regulations (took effect Jan. 1, 2014)
- Permanent regulations (adopted Dec. 30, 2014, take effect **July 1, 2015**)
 - Set up a permitting regime for fracking
- Independent Scientific Assessment (released by **July 1, 2015**)
- EIR (finalized by **July 1, 2015**)

Scheduling largely negates value of EIR/assessment



III. SB 4 The Good

- Nation's first comprehensive fracking law
- No more secret fracking
 - Notification (10-days before) → Permitting
 - Information from notice/permits:
 - Location
 - Timeframe
 - List of anticipated chemicals/concentrations
 - Water management plan
 - Modeling taking into account nearby faults/wells
 - Neighbor notification (at least 30 days before)
 - Every owner/tenant within 1500 ft of wellhead or 500 ft of any horizontal projection
- Opportunity for water testing
 - Surface or subsurface
 - Before + after
 - Paid for by operator (unless tenant)

III. SB 4 More Good

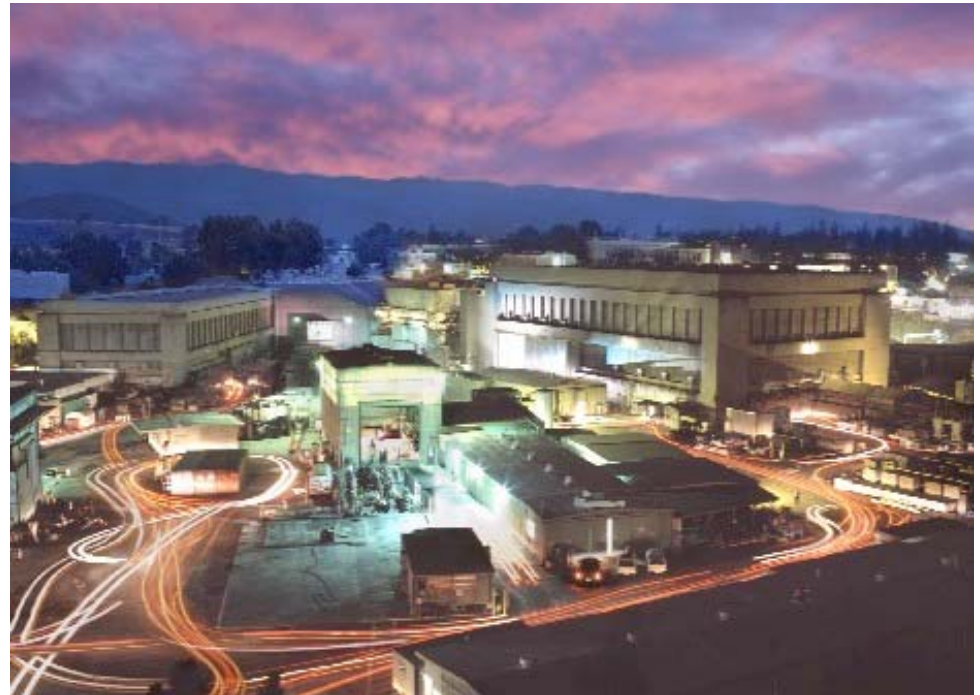
- Pre-Stimulation Pressure Testing
- Concurrent Monitoring Requirements
- Seismic Monitoring
 - Exactly what you'd think
 - More evaluation required if a 2.7M quake occurs nearby
- Disclosure within 60 days
 - Chemicals, volumes, disposition
 - Info posted to FracFocus until DOGGR can set up its own website (by Jan. 1, 2016)
 - Trade Secrets
 - Traditional presumption reversed, *all* info must be reported to DOGGR regardless
 - DOGGR does have some discretion to withhold info from public
 - But public can still trigger substantiation requirement
 - Even if upheld, accurate info must always be given to certain gov't offices/employees, medical personnel in emergencies, and public health experts with statement of need

III. SB 4 The Bad

- No moratorium
 - Fracking has been allowed to continue before EIR and Scientific Assessment
- Making tenants pay for water testing
- Definition of “well stimulation treatment” is technical and allows for loopholes
 - Acid Volume Threshold distinguishes regulated fracking from exempted “maintenance”
 - Do not count certain types of fluids (“pre-flush” or “post-flush”) toward threshold
 - Similar concerns for Acid Concentration Threshold (ex. 7% regulated, 6.9% not)
 - But all stimulation uses at very least large quantities of water and push fluid deeper
- Requires chemical disclosure, but does not limit what chemicals can be use
- Current regs require operator to say from whom water is supplied, but not from *where*
- NRDC wants clarification that SB 4 does not preempt local fracking regulation in communities that desire it
- DOGGR will have some discretion here, so their enforcement matters

III. SB 4 Independent Scientific Assessment

- Commissioned by California Natural Resources Agency and conducted by the California Council on Science and Technology along with the Lawrence Berkeley National Laboratory
- Peer-reviewed (although question of how rigorous it can be if review completed on time)
- Volume I (of 3) released on January 14, 2015, II/III due July 2015
 - Vol. I: describes fracking in detail and analyzes where/how it is used
 - Vol. II: potential impacts to water, air quality, GHG emissions, induced seismicity, biological resources, traffic, and noise
 - Vol. III: case studies to assess specific geographic regions



Lawrence Berkeley National Lab

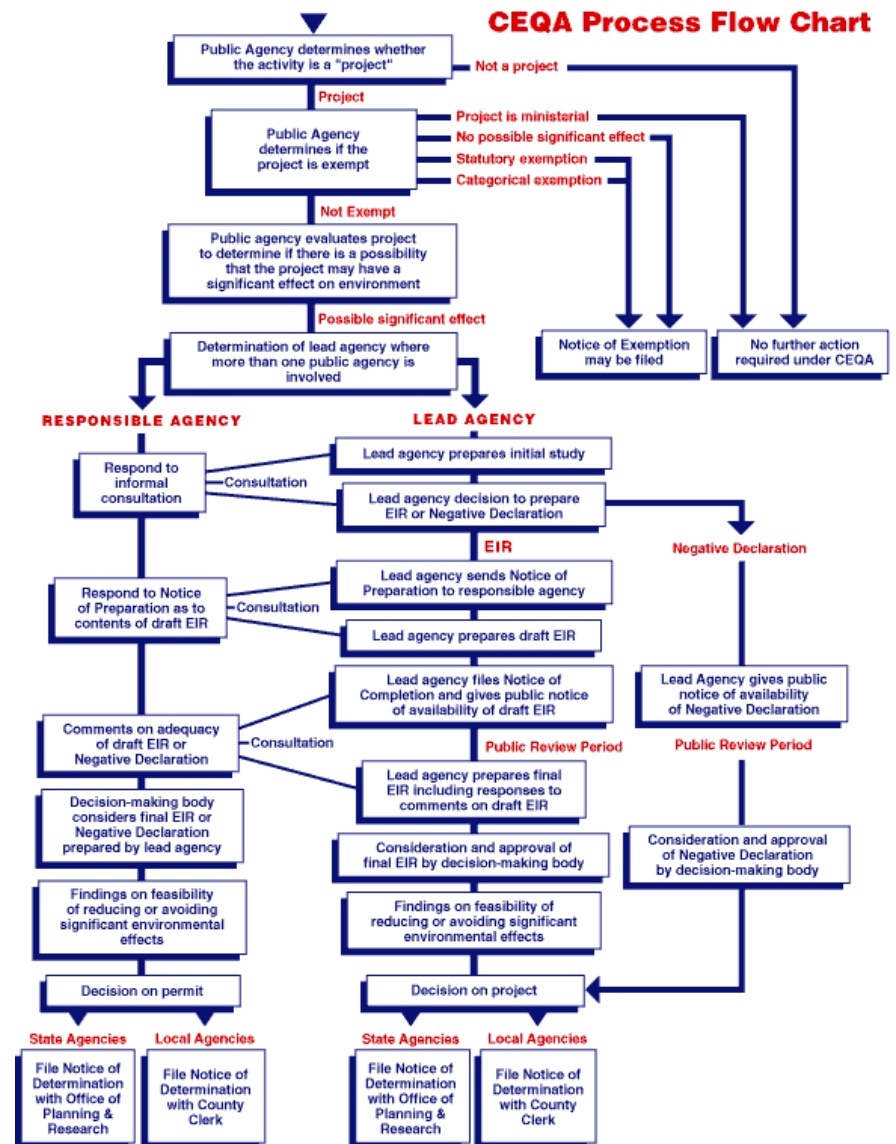
IV. CEQA Overview

CEQA Generally

- Enacted in 1970, right after NEPA
- Purpose: information for public and decision-makers
- Public comment period

Three Major Questions:

1. Does CEQA apply?
2. Could the project have significant environmental impacts?
3. What are those impacts and how can they be reduced?



IV. CEQA Question 1

Does CEQA Apply?

- Scoping
 - What is the proposed project? What kinds of effects could it conceivably have?
 - Ex) for SB 4, study fracking in every county or just some
- Does this trigger CEQA?
 - Applies to
 - 1) “Discretionary” project either
 - 2a) carried out by public agency, or
 - 2b) requiring approval by a public agency, that
 - 3) is not exempted (next slide)
 - Discretionary vs. ministerial
 - Is the agency action/approval required; “shall” vs. “may”

IV. CEQA Question 1 Cont'd: Exemptions

- Specific major projects can be exempted on their own
 - The legislature can exempt a project
 - Ex) proposed construction of Los Angeles Stadium in 2009
 - 2014 CA Supreme Court case upheld a project w/o CEQA review where the project proponent gathers enough signatures to petition a city council for a special election and the council decides to just adopt the initiative rather than put it to a vote (valid under Elections Code)
 - Being used to circumvent CEQA review for Inglewood and Carson stadium proposals
- Certain categories of projects are generally deemed not to have significant impacts, or to be allowed (without review) despite some impacts for policy reasons
 - Examples:
 - Maintenance for existing facilities
 - Minor alterations to land (grading, gardening that doesn't disturb big trees)
 - Information gathering (bore holes, soil, water, vegetation collection for sampling)
 - Actions by regulatory agencies for protection of natural resources/environment
 - Minor actions to prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release of hazardous waste or hazardous substances
 - Historical resource restoration or habilitation
 - Actions related to securing a bid for, or actually conducting, the Olympics
 - Oil projects often try to fit themselves into one or more of these

IV. CEQA Question 2

Could the project have a significant environmental impact?

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

IV. CEQA Question 3

What are the environmental impacts and can they be reduced?

3 possible outcomes: after initial study,

- 1) No significant impacts → Negative Declaration
- 2) Significant impacts, but can be fully mitigated → Mitigated Negative Declaration
- 3) Significant, unavoidable impacts cannot be fully mitigated → full EIR
 - EIR must study analyze each impacts
 - Demonstrate the tradeoffs of pursuing the project with unmitigable impacts
 - Identify mitigation
 - Additional requirement: alternatives analysis

IV. CEQA Mitigation/Alternatives

Mitigation

- For each impact, EIR must identify ways to avoid or substantially reduce effects
- Mitigation measures *must* be made a part of the approved project, unless unfeasible
 - Complicated case law, but infeasibility must be more than just expensive
 - Key distinction between CEQA and NEPA, makes CEQA stronger

Alternatives

- EIR must analyze:
 - The proposed project
 - A reasonable number of alternatives (that accomplish same general objectives)
 - A no-project alternative
- EIR must identify the environmentally superior alternative, but is not compelled to pick it

IV. CEQA Flawed SB 4 EIR

107-page comment letter with Sierra Club, CBD, LA Waterkeeper submitted March 16th

- Scoping
 - Not statewide; omits 27/58 counties
 - Excludes Kern, 95% of projected fracking
 - Trying to have it both ways re: programmatic vs. project EIR
- Alternatives Analysis
 - Basically finds creative ways not to measure effects against baseline of no fracking
 - “No-project alternative” frames “project” as the positive SB 4 regulations
 - Assumes continued unregulated fracking; useless baseline
 - Rejects no future fracking alternative as environmentally inferior on assumption that 100% of lost instate production would need to be offset by imported oil
- Mitigation
 - Mostly vague, unenforceable, deferred, or promises to study effects
 - Even enforceable measures, like setbacks from wells, are arbitrary and scientifically unfounded
- Comparative Timing for Regulations, EIR, Scientific Assessment

QUESTIONS?



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