

City of Carson Oil and Gas Code Update

Planning Commission Hearing

July 28, 2015

***Prepared By:
MRS***

***Prepared For:
City of Carson***

Update on Progress Since last Meeting

- Responses to Planning Commission Direction
- Meeting with Industry Representatives
- Meeting with Community Members
- Revisions to the Code

Planning Commission Direction

- Petroleum Administrator position options
- Explore a Change to Setbacks
- Meet with Industry representatives/affected businesses and community members.
- Review EPA/CCST Fracking reports
- Additional Changes to the Ordinance

Petroleum Administrator Position

- Option 1 (City Manager)
- Option 2 (Petroleum Administrator – Typical Discretion)
- Option 3 (Petroleum Administrator – Broad Discretion)

Option 1 (City Manager)

- Currently how the Code reads
- City Manager has authority to designate staff or to hire experts to address the issues related to specific oil and gas operations as they may come up.
- The City Manager's discretion would be mostly focused on processing applications, ministerial approvals and enforcement oversight.
- Certain discretionary decisions, such as those related to high-risk operations, are appealable to the Planning Commission.
- Allows for flexibility

Option 2 (Petroleum Administrator – Typical Discretion)

- Creation of a Petroleum Administrator position to implement the Ordinance
- Likely be filled by an appointed staff member, with consultants being retained on an as-needed basis.
- Discretion would be mostly focused on processing applications, ministerial approvals and enforcement oversight.
- Typically be subject to appeal to the Planning Commission

Option 3 (Petroleum Administrator – Broader Discretion)

- Petroleum Administrator position with broader authority and discretion to implement the Ordinance.
- Back to February version of the ordinance with PA involvement as currently applicable
- Potentially provides more flexibility for the unique factual circumstances of particular operations;
- Also provides less certainty for operators and the public as to what uses could potentially be authorized.

Setbacks

- Currently set at 500 feet
- First draft of code was 1,500 feet
- Existing code is 300 feet for industrial areas only

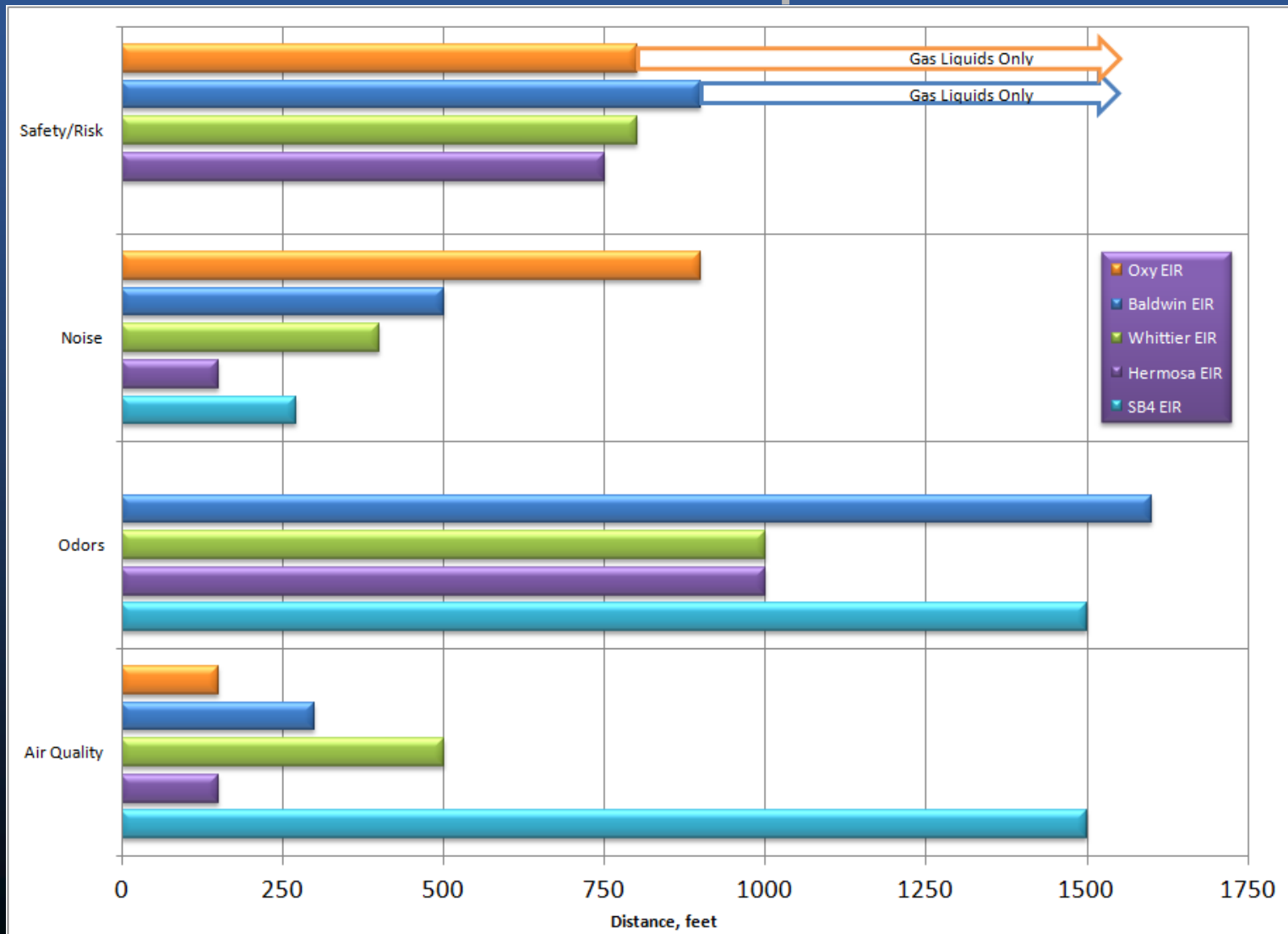
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Oil and Gas Site/Operation Regulatory Setback Comparison

JURISDICTION	RESIDENTIAL SETBACK	COMMERCIAL SETBACK	PUBLIC INSTITUTION SETBACK	PUBLIC ROADWAY SETBACKS
Huntington Beach	100ft.	100ft.	300ft.	25ft.
Bakersfield	500-1000 ft. depending on class of permit, with a 100ft. minimum setback from dwelling not incidental to drilling	500-1000 ft. depending on class of permit, with a 100ft. minimum setback from dwelling not incidental to drilling	100ft.	75ft.
Ventura County	500ft. unless waiver issued- 100ft. min	500ft. unless waiver issued- 100ft. min	500ft.	100ft.
Santa Barbara County	500ft. (from residence not zone)	200ft.	200ft.	200ft.
Signal Hill	100ft.	100ft.	300ft.	75ft.
Santa Fe Springs	300ft. except in certain circumstances- 100 ft. minimum	35-300 ft. depending on zoning	—	300ft.
Orange County	150ft.	Varies widely on zoning	300ft.	150-210ft. with provisions for different setbacks based on width of public streets
San Benito County	500ft.	500ft.	500ft.	500ft. (100 ft. from county road or state hwy)

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Setback Distances and EIR Impacts



Oil wells in The City of Carson

- Brea Canon Oil Co. 19
- Cooper & Brain Inc. 5
- E & B Natural Resources 38
- Fletcher Oil & Refining 1
- Oxy USA Inc. 2
- Pedro First, LLC 1
- Severns Drilling Co. 1

- Total 67

Oil wells in The City of Carson and Setbacks

- Within 500 feet
 - Petro First – 1 well
 - Brea – 3 wells
 - E&B – 18 wells
- Additional wells within 750 or 1,000 feet
 - None
- Additional wells within 1,500 feet
 - Brea – 4 wells
 - E&B – 18 wells

Code Impacts on Existing Operations

- Existing facilities located outside of setbacks can continue to operate indefinitely without a CUP and would not be legal-nonconforming
- Must abide by “Good Neighbor” Provisions
- “New Development” (more than 2 new wells) would trigger the requirements for a CUP
- Existing facilities WITHIN the setbacks:
 - No “new” wells allowed beyond those already vested for the property
 - Re-drills and workovers allowed
 - Equipment replacement and maintenance allowed
 - Legal non-conforming – 20 year life

New Development

- Used to define when a use requires a CUP:
 1. Development of new buildings, structures or wells on a new site or a CUP expired/revoked
 2. Expansion by 3 or more new wells at an existing site (not re-drills of existing active/idle wells)
 3. New tanks exceeding by 25% or more the capacity of existing tanks

- Does not include like for like-in kind replacement, workovers or maintenance or re-drills of existing active or idle wells. Re-drills of abandoned wells are considered new wells.

Good Neighbor Provisions

- “Good Neighbor” Provisions for all existing operations (section 9501.B)
 - Submit DOGGR well drilling permits
 - Setback limits on new wells and equipment changes
 - Deliveries, parking and construction time limits
 - Signs showing agency contact information
 - Submit a steaming plan if plans to steam
 - Fire prevention, blowout and earthquake standards
 - Submit all emergency plans and inspection reports
 - Annual audit of existing regulations
 - Chemical listing submission
 - Mixing of NGLs with crude oil in pipeline

Good Neighbor Provisions

- “Good Neighbor” Provisions (section 9501.B)
 - Transportation risk plans for trucks in residential, non-truck routes
 - Drilling requirements:
 - Air quality monitoring - H₂S and hydrocarbons
 - Clean diesel engines
 - No open pits
 - Stormwater management plans
 - No more than 2 rigs onsite
 - Fracking prohibition
- Residential and commercial zones only
 - Shielded lighting in non-industrial zones
 - No aboveground pumpjacks unless technically infeasible

Good Neighbor Provisions

- If within 1,500 feet of residences
 - Odor minimization plan
 - Drilling - portable flare and odor control if projected to encounter gas,
- If within 1,000 feet of residences
 - Community Alert System
 - Noise nighttime quiet mode for drilling
- If requested by City Manager
 - Groundwater testing program
 - Toxic air monitoring

EPA Fracking Study

- Scope - to examine the relationship between hydraulic fracturing and drinking water
- 25-30,000 hydraulically fractured wells in 20 different states from 2011-2014 examined in the study
- There are mechanisms for activities to impact drinking water resources
- Did not find evidence that these mechanisms led to “widespread, systemic” impacts with appropriate safeguards and regulations
- Small number of specific instances where mechanisms led to impacts on drinking water resources
- Data “were found to be scarce” and “Information on chemicals is not complete”

California Council on Science and Technology (CCST)

- SB4 Initiated – Study on impacts of well stimulation technologies and data gaps
- No reported cases of induced Seismicity in CA
- No recorded negative impacts from hydraulic fracturing chemical use in CA
- No agency has systematically investigated possible impacts
- Characteristics of many chemicals remain unknown
- Hydraulic fracturing in CA is very different than what's happening in other states due to existing regulations and types of Geology
- Unlikely that hydraulic fracturing will be used throughout the LA County Basin

EPA and CCST Recommendations

- Ban chemicals with unknown characteristics
- Water testing for pits and agricultural use
- Special provisions for shallow fracking
- Requirements for fracking near abandoned and other wells
- Air emissions control technologies
- Requirements for cement testing
- Requirements for fracked wells design

Industry Issues

- Fracking
- Legal-non conforming and 20 year limit
- Inconsistent treatment of industrial facilities
- Air quality and GHG for existing facilities
- Elimination of above-ground pumpjacks
- Appeals to City Council

Community Issues

- Increase Setbacks
- Petroleum Administrator add back in
- Speed up the process
- Fire Department inspections and reports
- Air quality monitoring and odor impacts
- Noise and lighting impacts
- Below ground drilling impacts

Ordinance Changes since last version

- Changed to 25% tanks increase for new development
- Added appeals process (to PC only)
- Truck requirements for areas outside designated truck routes
- Limited options for requiring abandonment
- Removed limits on re-drills for existing facilities within setbacks
- Added parking criteria
- Modified requirements for City inspection after earthquakes
- Increased gas levels for odor requirements
- Removed operational prohibitions on pump pressure and acid use
- Added limit on acid storage volume

Possible Ordinance Add-ins

- Petroleum Administrator Language added to definitions and change “City Manager” to “Petroleum Administrator”
- Petroleum Administrator broader discretion: change up to 15 sections of the code
- Setbacks modifications
- Removal of Legal non-conforming status for existing operators within the setbacks
- Pumpjacks allowed without amortization

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Questions

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Add-in Code Language

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Petroleum Administrator Add-in Language

- **"Petroleum Administrator"** (PA) is the City's administrative official, and the Petroleum Administrator's designated assistants, inspectors and deputies having the responsibility for the enforcement of this ordinance. The Petroleum Administrator is authorized and directed to enforce the provisions of this ordinance and the codes adopted by reference herein. The Petroleum Administrator shall be appointed by the City Manager and subject to the City Manager's authority under Section 2107 of this Code.
- The Petroleum Administrator shall have the primary responsibility for enforcing the provisions of this ordinance unless otherwise specified. The Petroleum Administrator is authorized to consult experts qualified in fields related to the subject matter of this ordinance and codes adopted by reference herein as necessary to assist the Petroleum Administrator in carrying out duties. The Petroleum Administrator may also appoint such number of officers, inspectors, assistants and other employees for the petroleum unit as shall be authorized by the City Manager subject to Section 2107 of this Code. The Petroleum Administrator may deputize such employees as may be necessary to carry out the functions of the petroleum unit.
- Change City Manager to Petroleum Administrator in the following sections:
Definitions, 9504, 9505, 9506, 9507.2, 9507.5, 9508, 9508.2, 9509, 9510.3, 9510.3.1, 9510.3.2, 9510.3.3, 9510.3.4, 9511, 9512, 9514, 9515.1, 9516, 9519, 9520, 9521, 9522.2, 9527, 9528, 9530.3, 9530.4, 9530.6, 9530.6.2, 9530.6.3, 9531.1, 9531.2, 9531.3, 9531.4, 9531.5.1, 9531.5.2, 9531.5.3, 9531.6, 9532, 9533.1, 9533.2, 9535, 9536, 9536.1, 9537 and remove "City Manager" definition in 9503

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Petroleum Administrator Broader Authority Add-in Language: Add to multiple sections

- 1. [Petroleum Administrator or City Manager] shall have the powers of a law enforcement officer.
- 2. The decisions of the [Petroleum Administrator or City Manager] ... shall be deemed final.
- 3. In the event the [Petroleum Administrator or City Manager] is unable to obtain compliance, the Petroleum Administrator may order immediate cessation of operations.
- 4. If the [Petroleum Administrator or City Manager] determines it is necessary, the [Petroleum Administrator or City Manager] may require a plan for a community alert system.
- 5. If the [Petroleum Administrator or City Manager] determines it is necessary, the [Petroleum Administrator or City Manager] may require a quiet mode operations plan.
- 6. If the [Petroleum Administrator or City Manager] determines it is necessary, the [Petroleum Administrator or City Manager] may require a photometric analysis.
- 7. CUP filing requirements - other information as deemed reasonably necessary by the [Petroleum Administrator or City Manager].
- 8. Abandonment application - Any other information deemed reasonably necessary by the [Petroleum Administrator or City Manager] to address site-specific factors.
- 9. If the [Petroleum Administrator or City Manager] determines it is necessary, at all times the operator shall comply with the provisions of an odor minimization plan.

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Petroleum Administrator Broader Authority Add-in Language: Add to multiple sections (continued)

- 10. The odor minimization plan shall include any measures requested by the [Petroleum Administrator or City Manager].
- 11. If the [Petroleum Administrator or City Manager] determines it is necessary, the operator shall have a gas buster and a portable flare.
- 12. If the [Petroleum Administrator or City Manager] determines it is necessary, the operator shall use an enclosed mud system.
- 13. If the [Petroleum Administrator or City Manager] determines it is necessary, the operator shall perform a health risk assessment.
- 14. At any distance as per the discretion of the [Petroleum Administrator or City Manager], the operators shall be conducted in a manner that minimizes noise.
- 15. The [Petroleum Administrator or City Manager] may order such tests or inspections deemed necessary to establish the reliability and integrity of any pipeline system.

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Setbacks modifications Add-in Language: Section 9521

- A. The surface locations of wells and tanks within an oil and gas site shall not be located within:
 - 1. ~~Five hundred feet (500 feet)~~_____ hundred feet (____ feet) of the property boundaries of any public school, public park, clinic, hospital, long-term health care facility.
 - 2. ~~Five hundred feet (500 feet)~~_____ hundred feet (____ feet) of the property boundaries of any residence or residential zone, as established in this Code, except the residence of the owner of the surface land on which a well might be located and except a residence located on the land which, at the time of the drilling of the well, is under lease to the person drilling the well.
 - 3. ~~Five hundred feet (500 feet)~~_____ hundred feet (____ feet) of the property boundaries of the commercially designated zone CN, CA, MU-CS or MU-SB (see Table 1-1), as established by this Code.
 - 4. Fifty feet (50 feet) of any dedicated public street, highway, public walkway, or nearest rail of a railway being used as such.

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Removal of Legal Non-Conforming - Add-in Language: Sections 9521 and 9507.3

➤ 9521.C

- Legally existing oil and gas operations that do not meet the setback requirements and that were conforming immediately before as of the effective date of this ordinance are not considered non-conforming uses and are not made subject to Article IX, Chapter 1, Part 8, Division 2 (Nonconformities) of this Code by this ordinance. ~~except the City Manager shall act in place of the "Director."~~ ~~Notwithstanding any other provision of these requirements,~~ Such operations may continue to lawfully operate to the extent the operations can demonstrate vested rights as of the effective date of this ordinance, but are prohibited for expanding operations beyond those demonstrated vested rights.

➤ 9507.3.A

- ~~5. Any existing non-conforming oil and gas sites located on the proposed project site shall already be in conformity, or will be brought into conformity, with all applicable provisions of this ordinance without having to relocate existing facilities.~~

Pumpjack Add-in Language: Remove Amortization Section 9532.G

- 9532.G. Aboveground pumpjack assemblies are prohibited for new wells located in non-industrial areas, and oil and gas sites are restricted to the exclusive use of submersible downhole pumping mechanisms for extraction. Additionally, any well already lawfully existing at the time of implementation of this ordinance in all non-industrial zones, lawfully using a pumpjack assembly that is extending its period of production beyond the amortization date established in Section 9189.22(a) shall have its aboveground pump replaced with a submersible downhole pumping mechanism. The pumpjack assembly, along with its motor and fuel system, shall be removed from the oil or gas site within thirty (30) days of the completion of the operation. It is the intent of this Subsection to uninterruptedly carry forward, and not extend, previously existing amortization periods for the removal of pumpjack assemblies and the installation of submersible downhole pumping mechanisms. The requirements of this subsection are applicable to all oil and gas sites in all non-industrial zones except for such facilities where the City Manager determines that the use of submersible downhole pumping mechanisms is infeasible due to technical reasons or impractical due to level of produced volumes or would be of no practical benefit or other circumstances which would specifically preclude the use of such technology.

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Fracking Language

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The 'Fracking Ban' Ordinance

- 9536 Prohibited Uses: Is part of the proposed oil and gas Code but will be passed through a separate ordinance
 - No hydraulic fracturing, acidizing, or any other well stimulation treatment.
 - Unlawful to use any land within the City for the purpose of well stimulation
 - Normal maintenance work that utilizes acidizing techniques is allowed.
 - Well stimulation allowed if:
 - (1) well stimulation is necessary to recover the operator's reasonable investment-backed expectation established through investment made before the effective date of this ordinance; and
 - (2) that such well stimulation will not create a nuisance due to an adverse impact on persons or property within the City.
 - This Section shall remain in full force and effect unless otherwise required by any applicable State or Federal law, regulation or judicial determination.
 - Violation fees of up to \$100,000 per calendar day, at the discretion of the City Manager.
 - May also require immediate shutdown of all operations at an oil and gas facility site

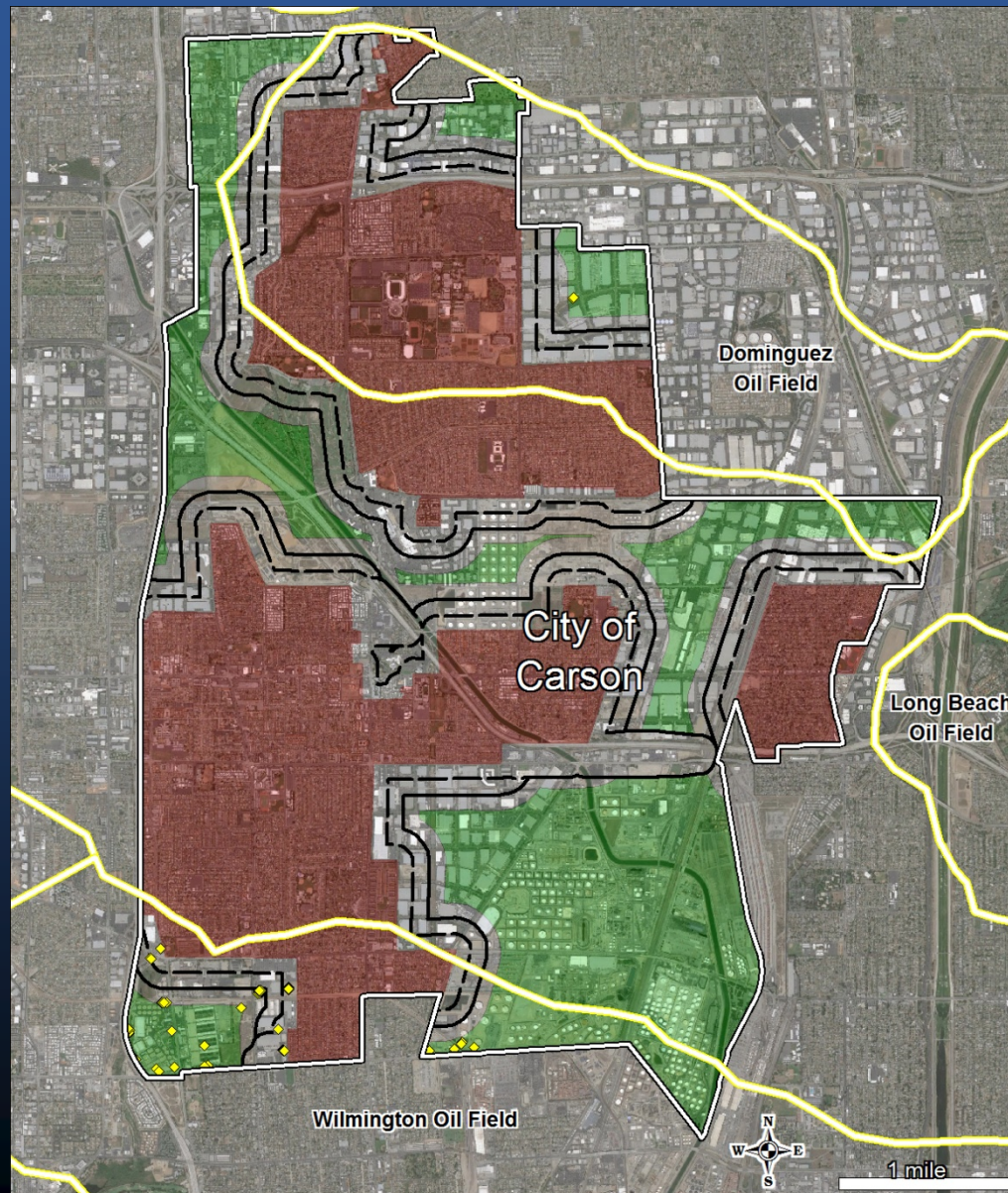
EPA Study Specific Instances of Concern

- 3% of wells did not have cement through the protected ground water resource;
- Casing or cement inadequately designed or constructed, or failed - at least 3 examples of issues
- Fracturing older wells not designed for fracturing - 6% of wells were drilled more than 10 years before fractured
- Separation between production zone and drinking water resources - 20% of wells less than 2,000 ft of distance
- Oil and gas resources and drinking water resources co-exist in the same formation - hydraulic fracturing occurs within these formations, but at a low frequency
- Potential for liquid and gas movement from the production zone to underground drinking water resources via other nearby wells

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Setbacks

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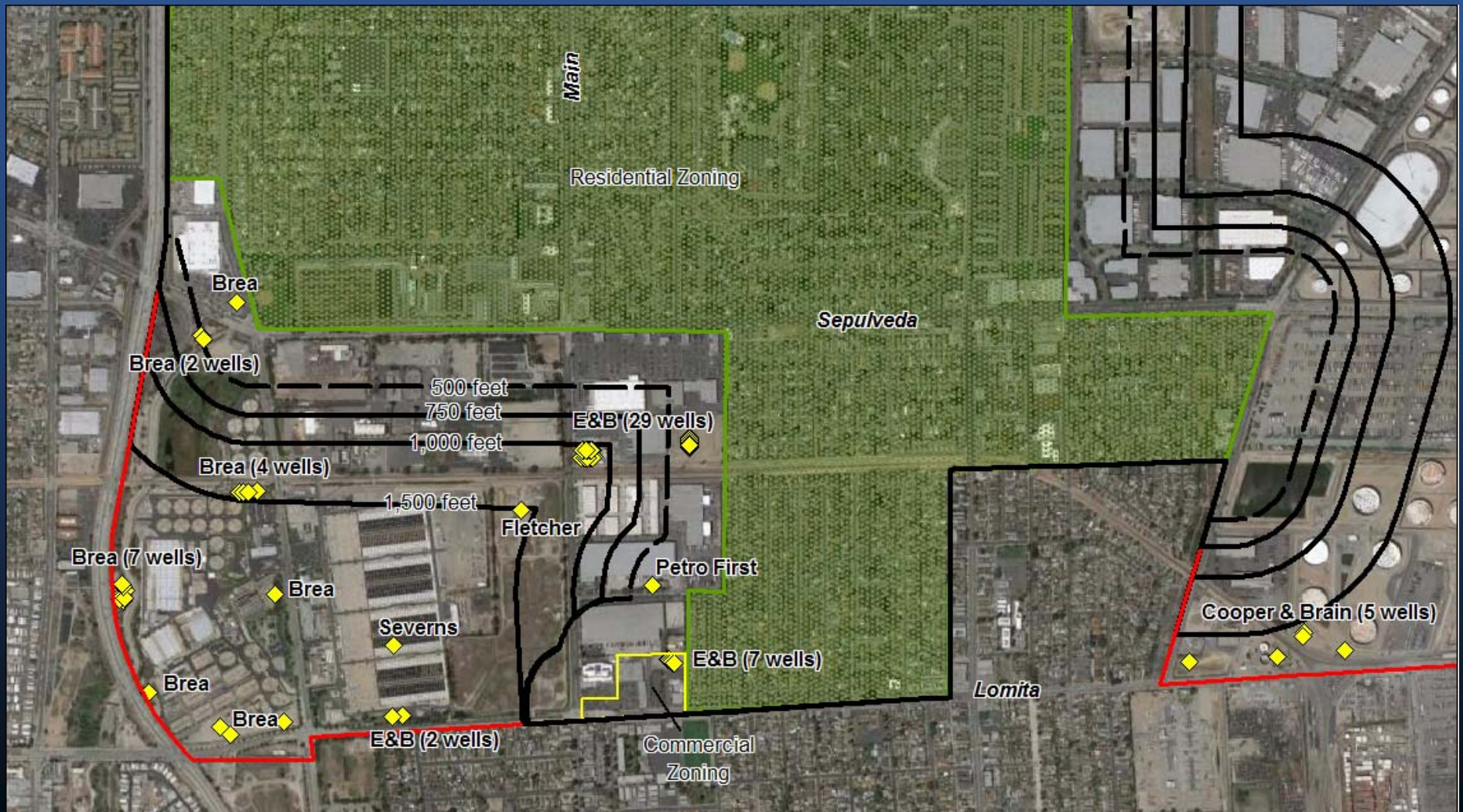
**City of Carson Map of
Zones from which
drilling is permitted
and residential areas:**

**1,500,
1,000 and
500 foot setbacks**

Red = residential areas
Green = allowed drilling areas
with 1,000 foot setback
Solid line = Green areas with
1,000 foot setback
Dashed line = Green areas with
500 foot setback

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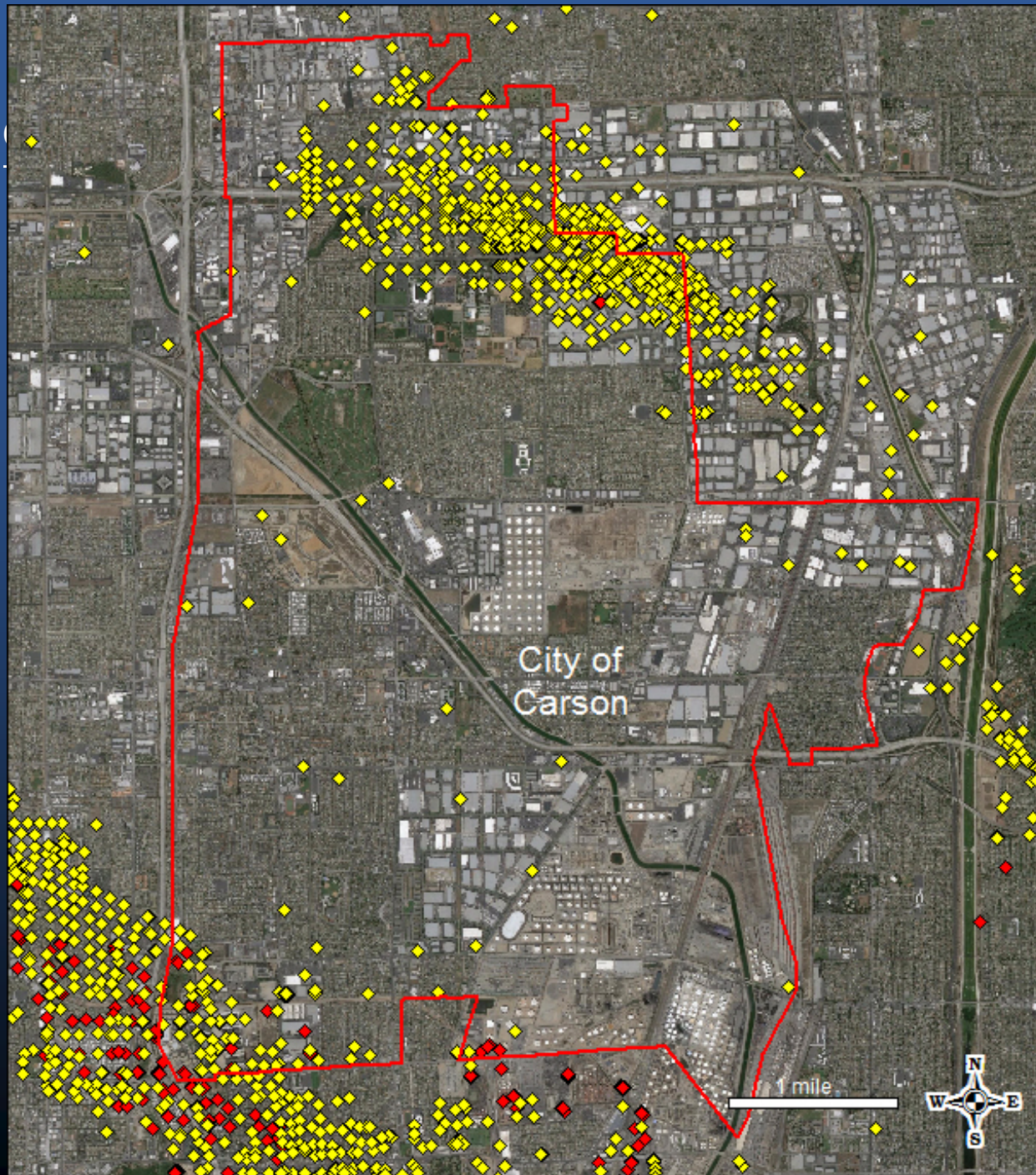
Existing Facilities and Setbacks



City of Carson Map of Abandoned and Active Wells

◆ Previously
abandoned wells

◆ Active Wells

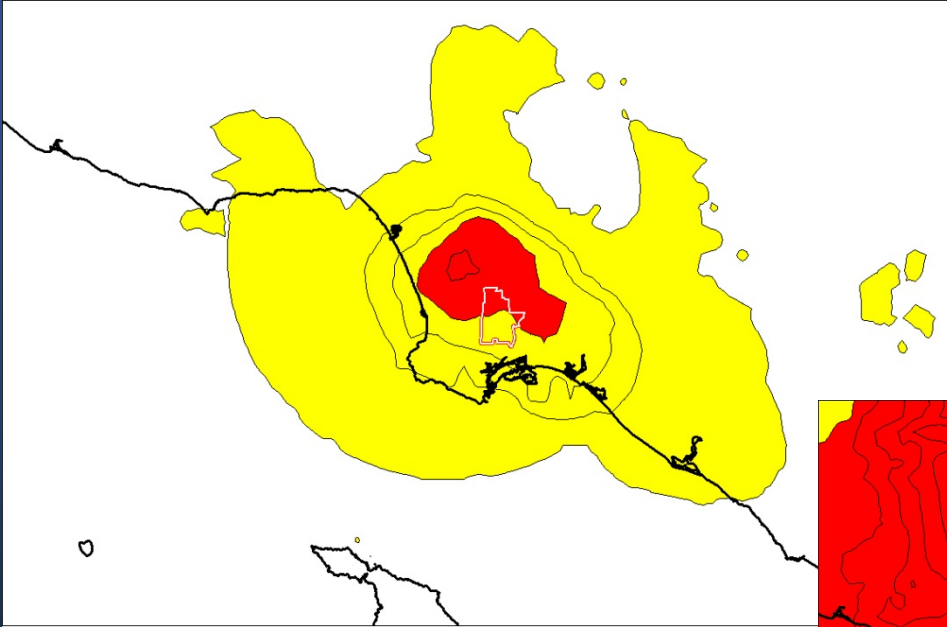


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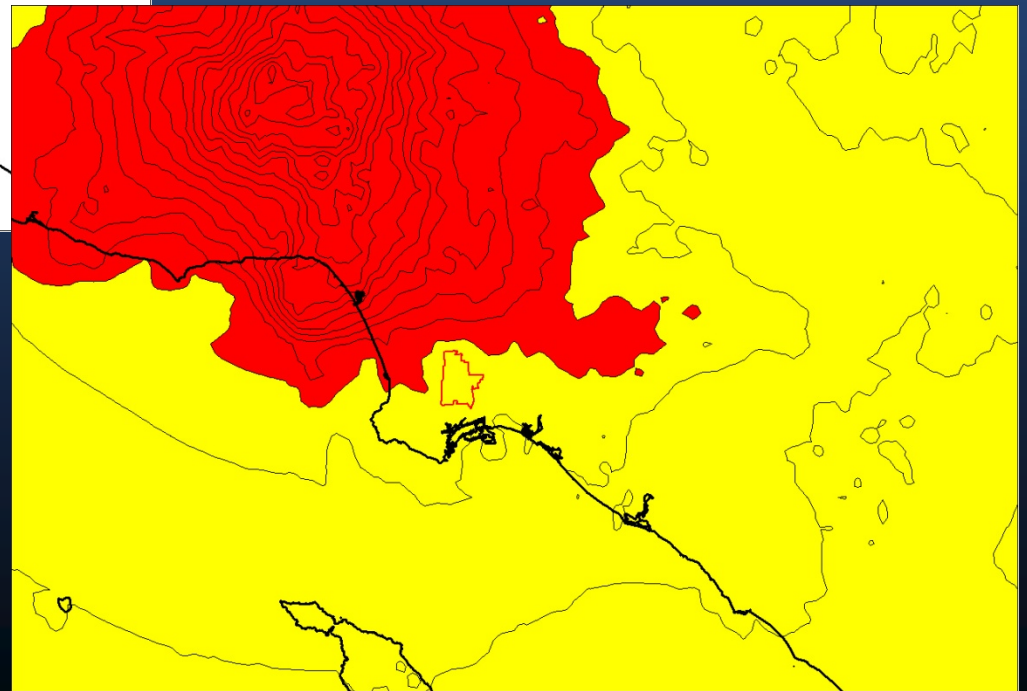
Earthquakes

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Earthquakes: Acceleration and Magnitude

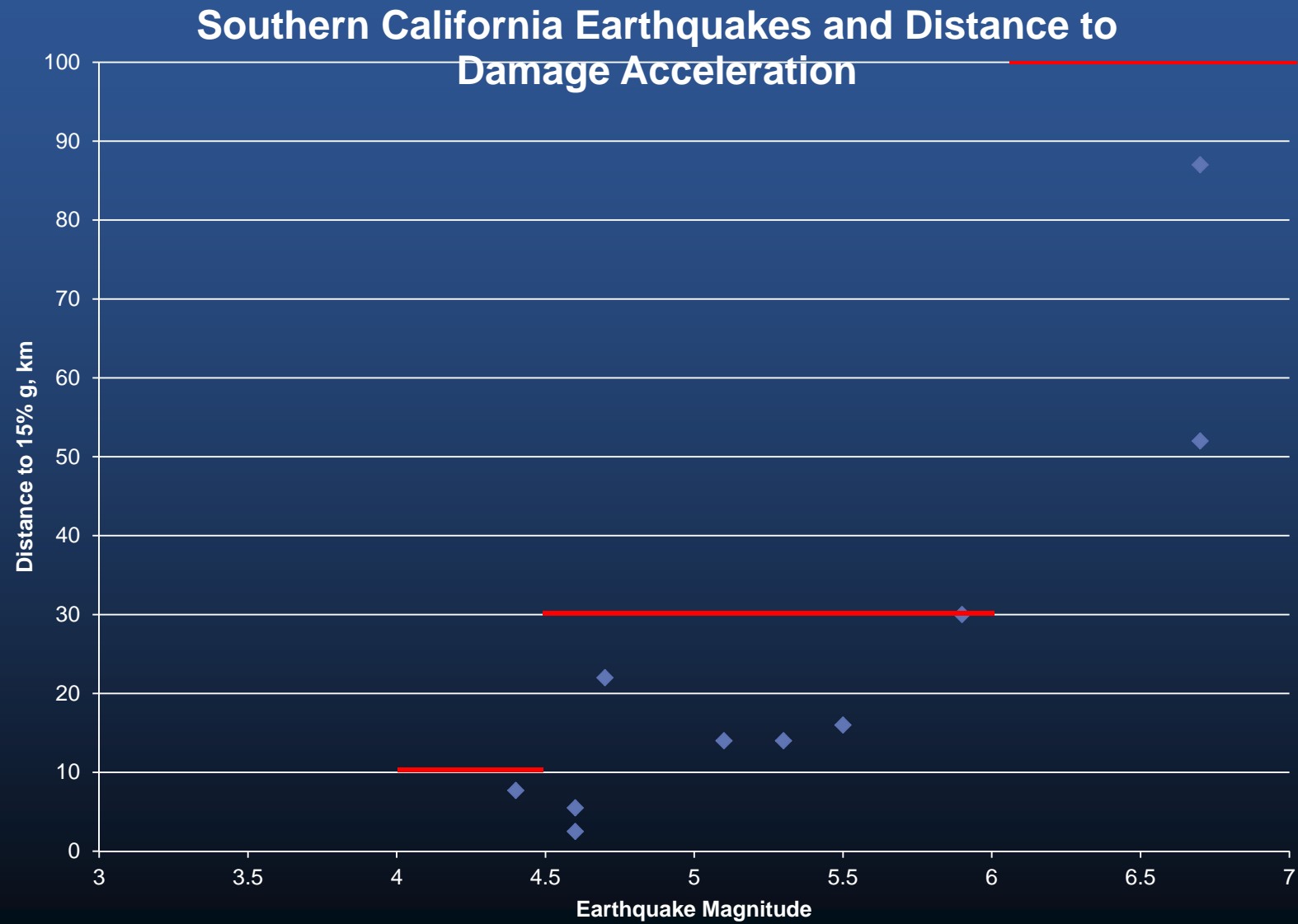


Hawthorne 4.7M



Northridge 6.7M

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PA Discretion issues

PA Discretion issues: Typical Discretion (Option 2)

- Authorized to appoint such number of officers, inspectors, assistants and other employees for the petroleum unit as shall be authorized by the City Manager subject to Section 2107 of this Code
- **9507.2:** Has discretion to review CUP applications for completeness and deem them filed
- **9507.5.F:** Has discretion to determine when a substantive change of operator has occurred and implement the requirements of this Section
- **9508.1B:** Has discretion to oversee and determine if additional filing requirements are necessary for Development Agreement (DA) applications
- **9508.2:** Has discretion to determine the filing of DA applications

PA Discretion issues cont.

- **9510.3:** Has discretion to approve abandonment, re-abandonment, site restoration, or redevelopment permits
- **9510.3.2:** Has discretion over requiring additional filing materials as part of an application for abandonment, re-abandonment, site restoration, or redevelopment
- **9514:** Has discretion to increase violation fees based on specific violation
- **9516.A:** Has discretion to establish and oversee environmental compliance coordinators
- **9516.B:** Has discretion over determining compliance security deposit amount
- **9519:** Can determine amount of faithful performance bond
- **9527:** Discretion over installation of any surface equip. designed to produce steam, review and approval of a steaming plan
- **9528:** Has discretion to determine that the use of reclaimed water is infeasible on a site and to allow the operator to use potable water under specific circumstances

PA Discretion issues cont.

- **9530.3.B&C:** Has discretion to give approval for recommencement of operations following an earthquake shutdown
- **9530.6.3:** Has discretion to require improved leak detection technology
- **9531.1:** Has discretion over acceptance of EQAP program
- **9533.1.D:** Has discretion to allow an operator to use suitable alternatives to automatic shutoff valves in new pipeline segments
- **9537.F:** Has discretion over leak testing requirements for abandoned or re-abandoned wells

PA Discretion issues: Broader Discretion (Option 3)

- Petroleum Administrator shall have the powers of a law enforcement officer
- Has discretion to require various plans (quiet mode, CAN, TRMPP, odor, HRA)
- Has discretion to require specific operations: flare, enclosed mud systems
- Discretion to approve modifications to pipeline standards/construction
- The Petroleum Administrator may order any such tests or inspections deemed necessary to establish the reliability and integrity of any pipeline system