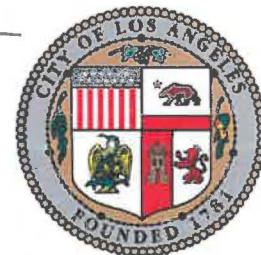


Item 1

Date: 10/15/19
Submitted in ECCEJ Committee
Council File No: 17-0447
Item No. 1
Deputy: L. Campos

Energy, Climate Change, & Environmental Justice

October 15, 2019



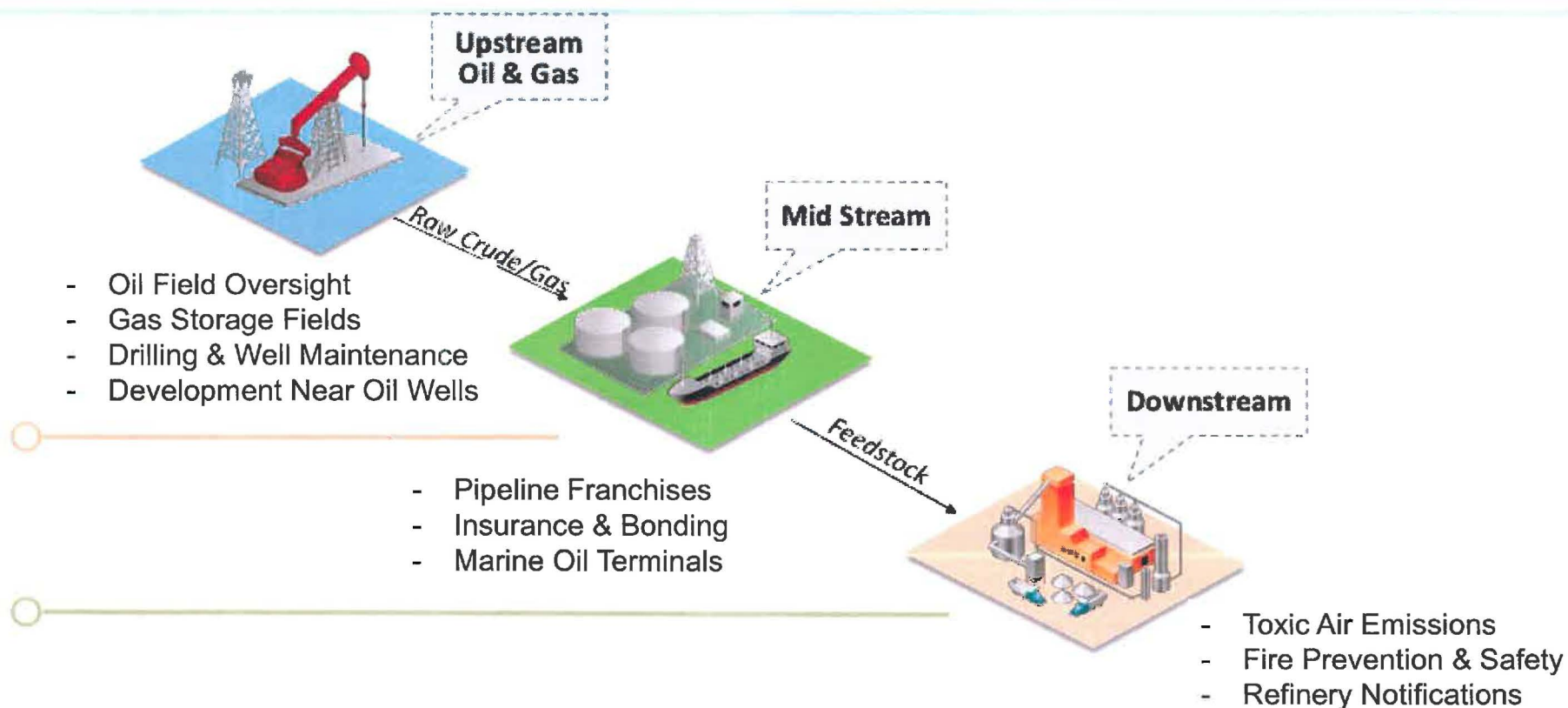
Oil & Gas Health Report



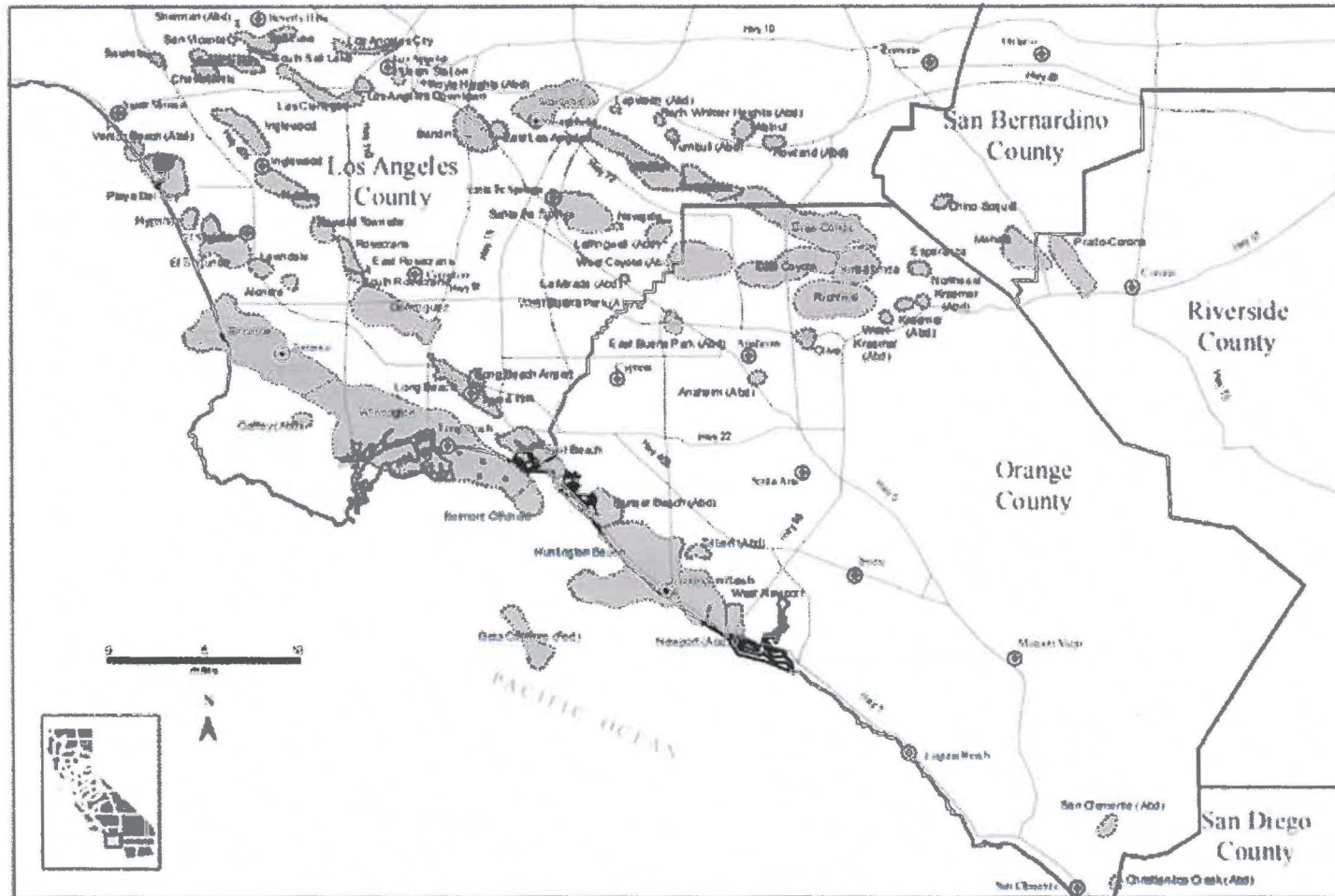
UDUAK-JOE NTUK | PETROLEUM ADMINISTRATOR | PUBLIC WORKS

City of Los Angeles Petroleum Administration Function

CITY WIDE SCOPE OF WORK



City of Los Angeles Oil & Gas Fields



- The City of Los Angeles has twenty-six (26) oil and gas fields that intersect city boundaries and 5,229 oil and gas wells.
- There are approximately 819 active, 296 idle, 3,181 plugged, and 933 buried wells.
- There are oil and gas facilities in nearly every section of the 503 square miles of the City.
- The oil well information in this report is based on March 2018 data provided by the CA DOGGR and verified by the City's Petroleum Administrator.
- City of Los Angeles produces 2% of California's total production

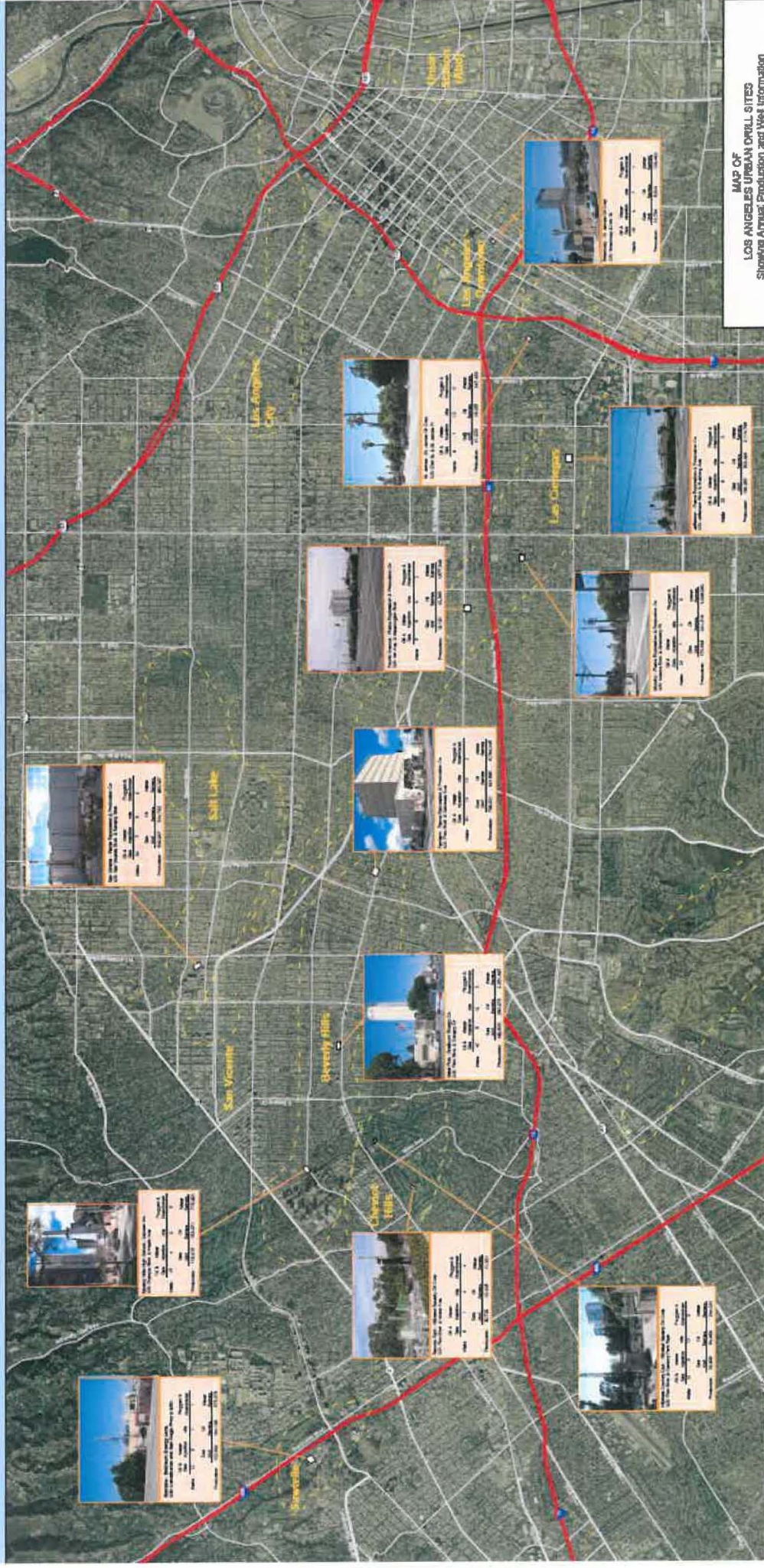
Health Impacts at Oil & Gas Wells and Drill Sites Report Back

CF #17-0447 (Wesson-Huizar)

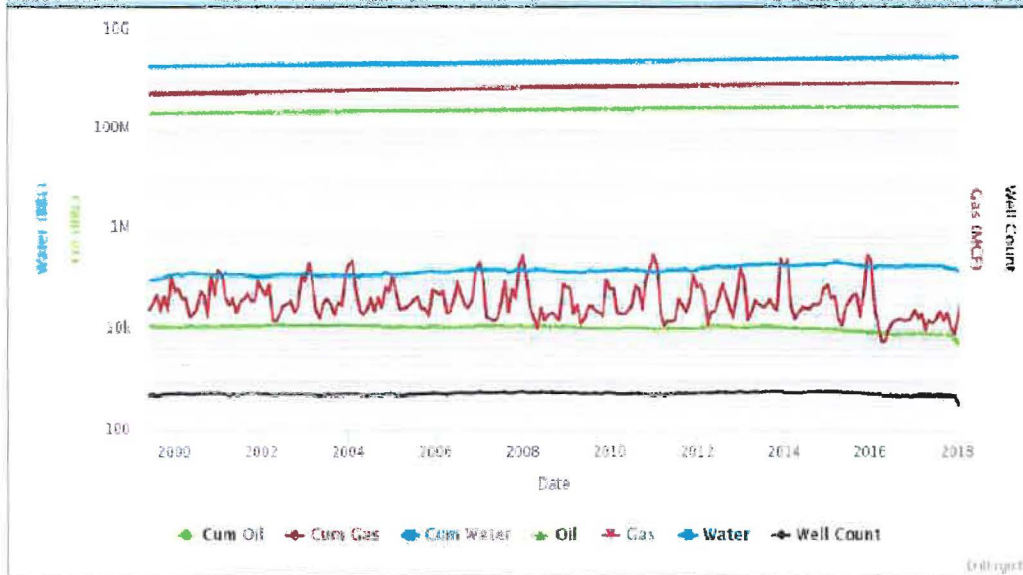
Amended Directives of Health, Mental Health, and Education Committee

- 1. What types of health and environmental impacts drill sites?**
- 2. What distance a setback and potential mitigation measures?**
- 3. Evaluation of the various types of materials used at oil and gas sites.**
- 4. Evaluation of the various types of drill sites.**
- 5. What agencies currently govern or regulate oil and gas sites?**
- 6. Summary of the LACDPH Interim Guidance on Urban Oil and Gas Operations.**
- 7. Any recommendations from the LACDPH on whether a Health Impact or Health Risk Assessment.**
- 8. Any recommendation to enhance public health collaboration regarding oil and gas drill site.**
- 9. Draft Memorandum of Agreement between the City and the LACDPH**
- 10. An economic, employment, and fiscal impacts analysis of implementing a setback**
- 11. Analysis of the human rights standards and environmental standards of the countries exporting oil to Los Angeles refineries**

City of Los Angeles Oil & Gas Drill Sites



Oil & Gas Production and Drill Site Inventory



City of Los Angeles Oil and Gas Production (2000 - 2018)

Oil Field	Active	New	Idle	Plugged	Buried	Total
Aliso Canyon	25	0	5	11	0	41
Beverly Hills	92	0	33	80	0	205
Boyle Heights (ABD)	0	0	0	4	0	4
Cascade	21	0	2	12	0	35
Cheviot Hills	14	0	14	45	0	73
Horse Meadow (ABD)	0	0	0	5	0	5
Hyperion	0	0	0	5	0	5
La Cienegas	66	0	37	30	0	133
Los Angeles City	5	0	10	317	854	1,186
Los Angeles Downtown	15	0	13	6	0	34
Mission (ABD)	0	0	0	13	0	13
Pacoima (ABD)	0	0	0	10	0	10
Playa Del Rey	42	0	5	35	4	86
Rosecrans	11	0	0	0	3	14
Salt Lake	5	0	2	1	29	37
Sawtelle	0	0	0	1	0	1
South Salt Lake	11	0	5	2	4	22
Torrance	58	0	12	65	0	135
Union Station (ABD)	0	0	0	12	0	12
Venice Beach (ABD)	0	0	0	3	0	3
Wilmington	284	0	80	745	0	1,109
Total	649	0	218	1,402	894	3,163

Oil and Gas Infrastructure in City of LA:

- 18 of 23 oil fields are still active
- 650-870 active & idle oil and gas wells
- 7,600-8,000 barrels of oil production per day
- 67% of oil wells are within Drill Sites
- 9 abandoned & 17 active Drill Sites



Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County

Los Angeles County Department of Public Health
February 2018



RECOMMENDATIONS:

- EXPAND MINIMUM SETBACK BEYOND 300'
- IMPLEMENT CONTINUOUS AIR MONITORING SYSTEMS
- LOCAL INSPECTION AUDITS OF OIL & GAS SITES
- COMPREHENSIVE SAFETY PLANS
- ENHANCED EMERGENCY PREPAREDNESS PLANS
- SITE SPECIFIC HEALTH RISK ASSESSMENTS
- IMPROVE COORDINATION BETWEEN STAKEHOLDERS

Consultant Literature Review and Chemical Inventory Analysis

RECOMMENDATIONS:

○ CONDUCT HEALTH STUDIES IN THE CITY OF LOS ANGELES*

○ FIELD BASED AIR MONITORING NEAR SENSATIVE RECEPTORS

○ IMPLEMENT A MINIMUM SETBACK DISTANCE**

○ UTILIZE BEST AVAILABLE TECHNOLOGY

○ CONSIDER LIMITING DENSITY OF WELLS WITHIN CITY

○ CHEMICALS OF CONCERN ARE PRESENT WITHIN CITY & REGION

○ MAJOR DATA GAPS LIMIT CHEMICAL RISK ASSESSMENT

*Health risks found in literature from 0.1 mile – 1 mile

**Setback distance alone is not a policy recommendation

Human health and oil and gas development: An assessment of chemical usage in oil and gas activities in the Los Angeles Basin and the City of Los Angeles

Seth B.C. Shonkoff, PhD, MPH^{1,2,3}, Jeremy K. Domen, MS³, Lee Ann L. Hill, MPH¹

Human health and oil and gas development: A review of the peer-reviewed literature and assessment of applicability to the City of Los Angeles

Seth B.C. Shonkoff, PhD, MPH^{1,2,3}, Lee Ann L. Hill, MPH¹

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² Department of Environmental Science, Policy, Management, University of California – Berkeley, Berkeley, CA

³ Lawrence Berkeley National Laboratory, Berkeley, CA

May 9, 2019

PSE

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Summary of surface setback distance from oil and gas development

LOCAL & STATE SETBACK DISTANCES

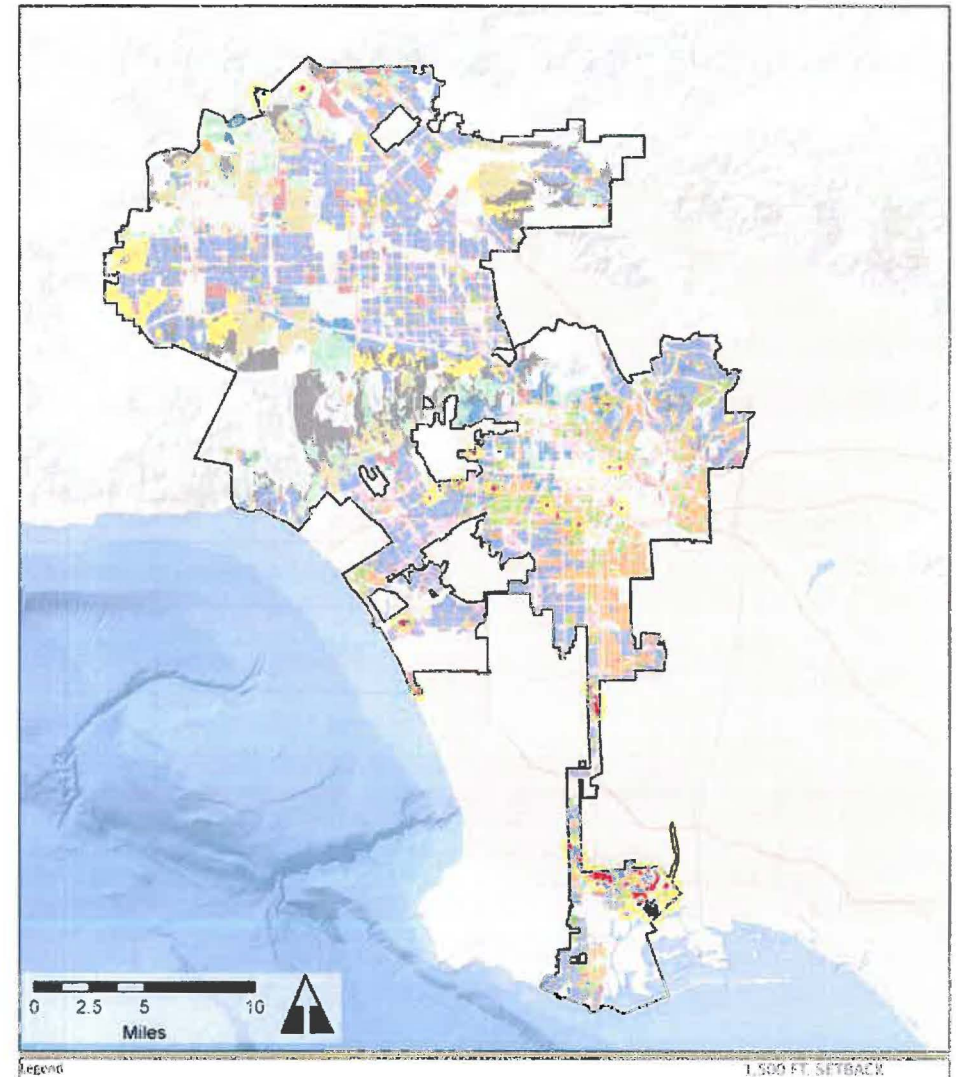
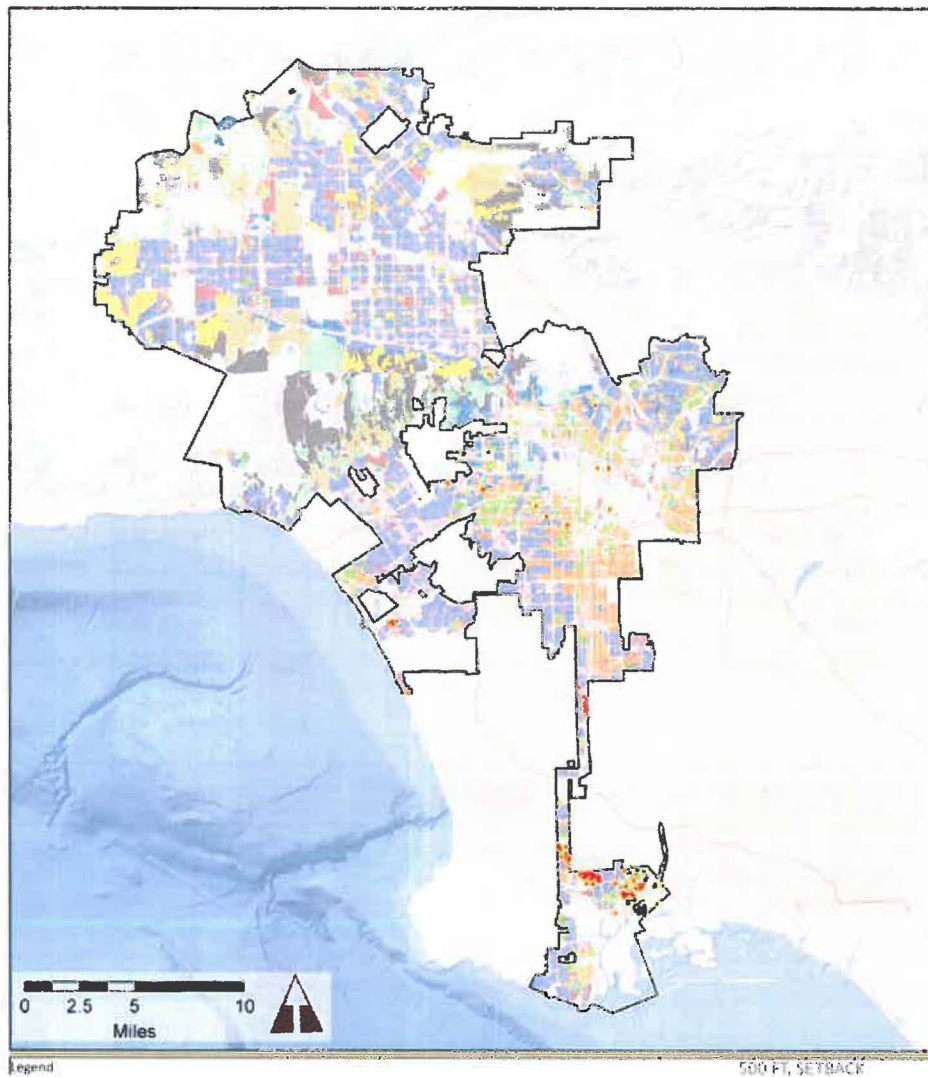
State	Jurisdiction	Year Adopted	Setback Distance (ft)	Setback Target	Source
California	City of Arvin	2018	300	New Development	City of Arvin (2018)
			600	Sensitive sites, such as parks, hospitals, and schools	
	City of Carson	2015	750	Housing, schools, hospitals	LACDPH (2018)
	City of Los Angeles	2011	200	School, hospital, sanitarium, or assembly occupancy	City of Los Angeles (2011)
			50	Building (>400 ft ² area, 36 ft tall)	
	Los Angeles County	2013	100	Building not necessary to the operation of a well	LA County Fire Department (2013)
			300	Place of assembly, institution, or school	
	Kern County	2015	210	Housing, schools, hospitals	LACDPH (2018)
	SCAQMD ¹	2015	1,500	Requires notification of nearby sensitive receptors (residences, schools, health care facilities)	SCAQMD Rule 1148.2 (2015)
Colorado	State	2013	500	Housing or commercial buildings	LACDPH (2018); Haley et al. (2016)
			1000	High occupancy buildings – schools, day care centers, hospitals, nursing homes, and correctional facilities)	Haley et al. (2016); COGCC (2013)
			350	Outdoor recreational areas (playgrounds and sports fields)	Haley et al. (2016); COGCC (2013)
			150	Surface property line	Haley et al. (2016); COGCC (2013)

State	Jurisdiction	Year Adopted	Setback Distance (ft)	Setback Target	Source
Maryland	State	2016	1,000	Housing, schools, faith institutions	LACDPH (2018)
			2,000	Private drinking water wells	
New Mexico	Santa Fe County	2008	750	Housing, schools	LACDPH (2018)
			1,000	Groundwater and surface water resources	LACDPH (2018)
Oklahoma	Oklahoma City	2015	300	Housing, fresh water well	LACDPH (2018)
			600	Faith institutions	LACDPH (2018)
Pennsylvania	State	2012	500	Housing and commercial buildings	Haley et al. (2016)
Texas	City of Arlington	2011	200	Fresh water well	LACDPH (2018)
			600	Housing, schools, faith institutions, hospitals	
	City of Dallas	2013	1,500	Housing, schools, faith institutions	LACDPH (2018)
	City of Flower Mound	2011	1,500	Housing, schools, faith institutions, hospitals, existing water wells	LACDPH (2018)
	City of Fort Worth	2010	200	Fresh water well	LACDPH (2018)
			600	Housing, schools, faith institutions, hospitals	

¹ Setback table updated with information from the peer-reviewed literature and California county and city policies

² Distance that requires notification of sensitive receptors, not a setback distance.

Every jurisdiction's setback distances are for future development or did not impact production



Source: Catalyst Environmental Solutions, "Evaluation of the Effects of Buffer Zone Setbacks on City of Los Angeles Oil and Gas Production" (2018)

Summary of fiscal impacts of surface setback distances

OIL & GAS IMPACT BY SETBACK DISTANCES

Setback from Sensitive Land Use (Feet)	Number of Potentially Affected Wells (Shutdown)	Percentage of All Active Oil & Gas Wells in City of LA
500	403	64%
1,000	470	74%
1,500	535	84%
2,500	548	87%

Setback (Feet)	Total Production Loss from Setbacks	
	Oil (bbl)	Gas (MCF)
500	1,726,409	1,118,081
1,000	2,136,245	1,468,486
1,500	2,344,374	1,669,230
2,500	2,383,435	3,190,458

City/County	Setback from Potentially Sensitive Land Use (Feet)	Number of Potentially Affected Wells	Percentage of All Active Oil & Gas Wells in City of LA
City of Los Angeles	300	347	55%
	500	403	64%
	750	440	70%
	1,000	470	74%
	1,500	535	84%
	2,500	548	87%

Potential Production and Economic Impacts for City of Los Angeles:

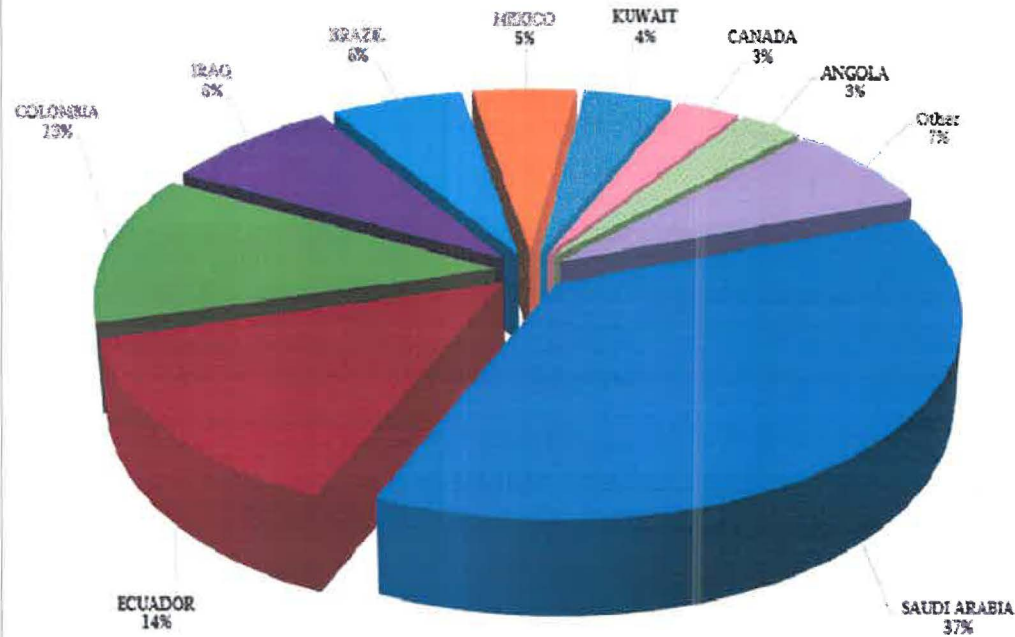
- Current Oil Production - **\$148 million**
- Future Oil Reserves - **\$97.6 billion**
- Land Value (24 acres) - **\$100 million**
- Well Abandonment - **\$321 million**
- Environmental Clean Up - **\$150 million**
- Litigation - **\$1 million per year**

Total Potential Economic Costs and Job Impacts:

- Total Direct Costs - **\$724 million**
- Total Jobs - **575 to 1,221 Jobs**

Crude Oil Imports to California and Los Angeles

Foreign Sources of Marine Crude Oil Imports to California 2018



2018 Foreign Sources of Crude Oil Imports to California

Source	Barrels of Crude Oil	Percentage
Saudi Arabia	134,818,000	37.0%
Ecuador	51,799,000	14.2%
Colombia	44,648,000	12.2%
Iraq	29,828,000	8.2%
Kuwait	22,548,000	6.2%
Brazil	17,688,000	4.9%
Mexico	15,064,000	4.1%
Canada	10,989,000	3.0%
Angola	10,691,000	2.9%
Other	26,294,000	7.2%
Total	364,367,000	100.0%

Foreign Countries Exporting Oil to Los Angeles Refineries:

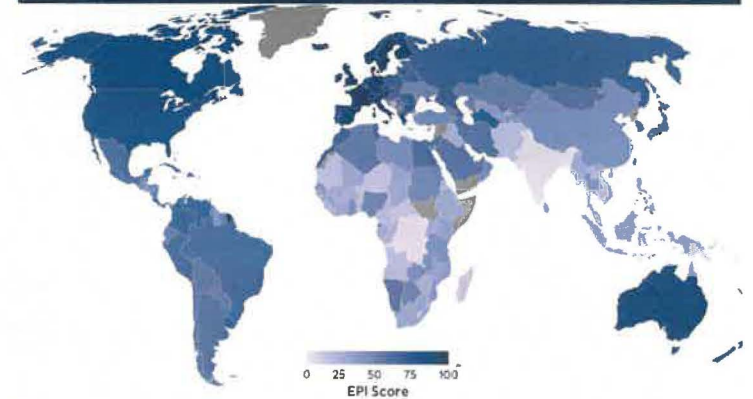
- Angola
- Canada
- Columbia
- Ecuador
- Iraq
- Mexico
- Panama
- Saudi Arabia
- Singapore
- South Korea
- Uruguay

*Ports of LA & LB imported 130 million barrels of crude oil in 2017

HUMAN RIGHTS REPORT



2018 ENVIRONMENTAL PERFORMANCE INDEX



2018 Freedom House Human Rights Ranking

Country	Freedom Rating	Political Rights	Civil Liberties	Freedom Status
Saudi Arabia	7	7	7	Not Free
Ecuador	3	3	3	Partly Free
Colombia	3	3	3	Partly Free
Iraq	5.5	5	6	Not Free
Kuwait	5	5	5	Partly Free
Brazil	2	2	2	Free
Mexico	3	3	3	Partly Free
Canada	1	1	1	Free
Angola	6	6	6	Not Free

2018 Environmental Performance Index

Source	EPI Ranking	EPI Index	Environmental Health	Ecosystem Vitality
Angola	170	37.44	33.79	39.88
Canada	25	72.18	97.51	55.29
Colombia	42	65.22	71.05	61.33
Ecuador	87	57.42	72.58	47.31
Iraq	152	43.20	61.46	31.02
Mexico	72	59.69	66.04	55.46
Panama	56	62.71	66.96	59.87
Saudi Arabia	86	57.47	72.81	47.25
Singapore	49	64.23	72.14	58.96
South Korea	60	62.3	73.3	54.96
Uruguay	47	64.65	84.72	51.27

Health Impacts at Oil & Gas Wells and Drill Sites Report Back

Petroleum Administrator's Recommendations

1. Establish a **setback distance of 600 ft.** for all existing oil and gas wells;
2. Establish a **setback distance of 1,500 ft.** for all future oil and gas development;
3. Ask that City Attorney's Office to **report back with a legal analysis**;
4. Begin the process of **modernizing and adding enhanced operating conditions in the City's Oil Code** for all drill sites to create health and safety technology zones;
5. Identify funding for **Health Risk Assessments (HRA)** at each drill site;
6. Update **Emergency Preparation & Community Safety Plans** for each Drill Site;
7. **Participate in SNAPS & AB 617** to incorporate findings into fenceline air monitoring;
8. **Designate Health Office Authority** from LA County to LAFD;
9. **Transfer Hazardous Waste Generator Program** from LA County to LAFD;
10. Add to **City's Legislative Agenda** to identify funding for oil and gas health studies;
11. Establish **Mitigation Funds** for cleanup and transition costs & **explore a barrel tax**

Contact Information

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