



City Council Public Hearing – June 1, 2021

**Oil Well Abandonment Equivalency Standards (LBMC 18.78) and
Methane Gas Mitigation Ordinance (LBMC 18.79)**

Development of the Ordinances

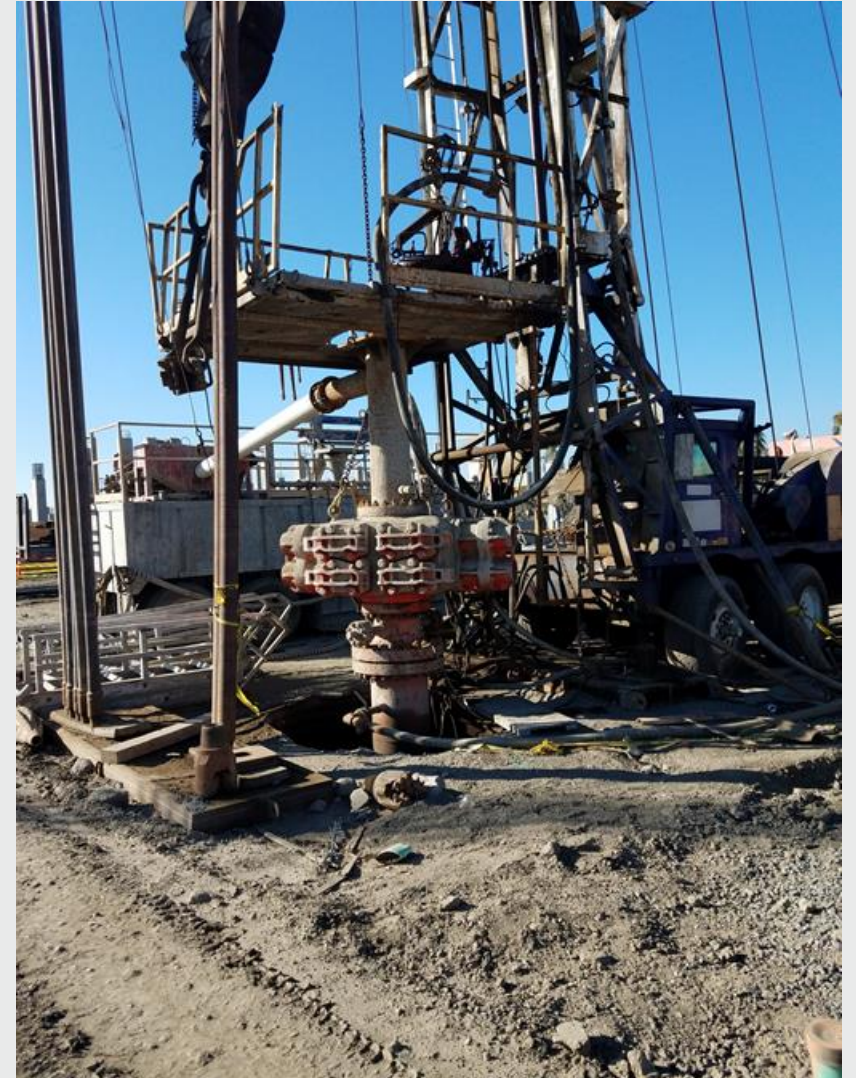
These proposed regulations are a result of feedback from the Department's customers

- Safety is the primary goal.
- Current State regulations create barriers to safe development of former oil/gas extraction sites and those sites can become a source of blight within Long Beach.
- The Department conducted meetings over more than two years to develop its regulations.
- The Department looked at expert technical guidance, the approach of peer cities, and feedback from the construction and development industry.
- Specific changes were made to the Ordinance based on customer feedback to assure issues of tall buildings and natural levels of methane were accounted for.
- Many opportunities were given for customer and general public input.

Well Abandonment Standards and Construction In the Vicinity of Oil/Gas Wells

The purpose of this ordinance is to create tailored regulations specific to Long Beach

- California Geologic Energy Management Division (CalGEM) requires multiple cement plugs and setbacks
- Proposed regulations (Long Beach Equivalency Standards)
 - Establish three cement plugs or other approach (subject to study)
 - Allow development of certain projects over abandoned wells subject to certain safety provisions
 - Create process to locate and examine well conditions
 - Creates process to test and monitor wells

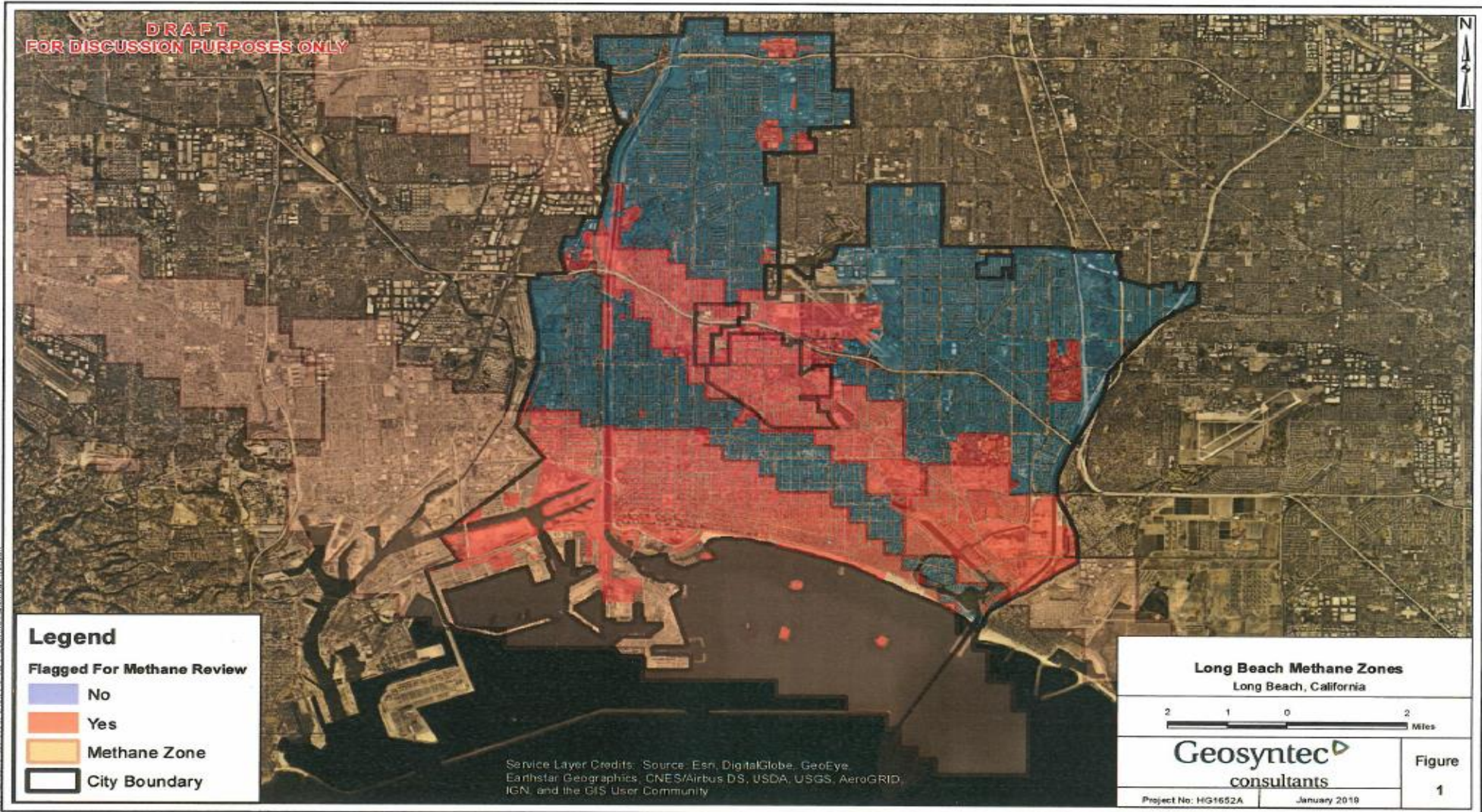


Methane Gas Mitigation

The purpose of these new standards is to establish a detection and mitigation process for those projects proposing construction over areas of detectable amounts of methane gas

- Required for all newly constructed buildings (structures), additions to existing buildings (structures), or changes of use in the following:
 - Petroleum-bearing formations and within the limits of a reservoir boundary, as mapped by CalGEM
 - Proposed development within 300' from any active or 100' of an idle and/or abandoned oil/gas well
 - Proposed development of structures within 1,000' from the refuse footprint of any existing or new landfill or disposal site
 - Upon a determination of a methane intrusion hazard
- Proposed prescriptive standards
 - Standards/mitigation is based upon detectable gas levels
 - Mitigation includes membrane barriers, vent pipes, gas detection system, etc.

Long Beach Methane Gas Zone – City GIS System



Recommendation

Accept and adopt Negative Declaration ND 02-20 for the Long Beach Building Standards Code Amendments Project relating to ordinances regulating construction adjacent to abandoned oil or gas wells; and construction near areas exhibiting detectable amounts of methane gas;

Adopt ordinance amending Title 18 of the Long Beach Municipal Code by adding Chapter 18.78 relating to construction in the vicinity of oil/gas wells, read for the first time and laid over to the next regular meeting of the City Council for final reading; and,

Adopt ordinance amending Title 18 of the Long Beach Municipal Code by adding Chapter 18.79 relating to methane gas mitigation, read for the first time and laid over to the next regular meeting of the City Council for final reading. (Citywide)



Thank you

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Long Beach Equivalency Standards Process Summary

- A qualified professional hired by the project applicant submits to the City the reasons why CalGEM current standards cannot be achieved
- A Peer Review Consultant hired by the City researches and evaluates the well abandonment conditions and evaluates the report submitted by the qualified professional
- A Peer Review report is prepared by the consultant and accepted by the City Development Coordinator (Building Official or designee)
- The Peer Review report and the necessary well mitigations are incorporated into the project plans by the project applicant prior to approval of grading or building permit (based on project nature)

Long Beach Equivalency Standards

- **Below Well Head Mitigation:**
 - Review the WSRL including all data submitted with CSWR application to CalGEM
 - Evaluation of well existing condition (active, non-active, abandoned, or idle)
 - Evaluation of well existing plugs and well rig access (post building construction)
 - Long-term safety evaluation based on proposed property use
- **Above Well Head Mitigation:**
 - Leak Testing conducted under supervision of a qualified professional and observed by a City inspector
 - Installation of vent cone and vent pipe per City standards
- **Abandonment Certification** - signed by the qualified professional certifying the mitigations are installed properly
- **Covenant** - The project owner submits a rerecorded covenant prior to project final inspection
- **Indemnity Agreement** - The project owner submits a recorded document and indemnifies the City for all future liabilities prior to project approval

Site Methane Gas Design Levels & Associated Mitigation

SITE DESIGN LEVEL	LEVEL I	LEVEL II		LEVEL III
METHANE CONCENTRATION	<50,000 PPMV	<50,000 PPMV	≥50,000 PPMV <300,000 PPMV	≥300,000 PPMV
PRESSURE	<2" WC	≥2" WC	ALL PRESSURES	ALL PRESSURES
MITIGATION REQUIREMENTS				
Gas Membrane Barrier (18.79.060 C)	X	X	X	X
Perforated Horizontal Pipes (18.79.060B.E.2)	X	X	X	X
Vent Risers (18.79.060.E.4)	X	X	X	X
Gas Detection System (in-room and vent risers) (18.79.060.F)		X	X	X
Alarm System (18.79.060.F)		X	X	X
Control Panel (18.79.060.F)		X	X	X
Mechanical Ventilation (18.79.060.G)		X	X	X
Mechanical Sub Slab Extraction (18.79.060.H)				X
Pavement Venting (18.79.060.I.1)		X	X	X
Signs (18.79.060.I.2)	X	X	X	X
Conduit or Cable Seal Fittings (18.79.060B.J.1)	X	X	X	X
Trench Dam (18.79.060B.J.3)	X	X	X	X

Methane Mitigation Process

- **Observation of methane gas test and review of the report by City staff**
 - Performed per the City Ordinance
- **Site methane mitigation plans**
 - The City's prescriptive standard details and notes can be used by project design team and reviewed by City Staff
- **Methane mitigation measures inspection**
 - Contractor must be approved by the membrane manufacturer
 - City inspector will observe smoke test of the membrane
 - Special electrical installation (Class I, Division I and II) will be required
 - Alarm and sensor mitigation system can be required
- **Certification** - The qualified professional certifying the methane mitigation has been installed property
- **Covenant** - Must be recorded prior to completion of project final inspection to inform future property/building owners