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Report to Mayor and City Council

Monday, March 21, 2016

Discussion

SUBJECT:

A CITY COUNCIL WORKSHOP TO DISCUSS THE COMPREHENSIVE UPDATE OF THE CITY'S OIL AND GAS ORDINANCE REGULATING PETROLEUM OPERATIONS AND FACILITIES AND PROHIBITING WELL STIMULATION TECHNIQUES, INCLUDING HYDRAULIC FRACTURING ("FRACKING") AND ACIDIZING, IN CONJUNCTION WITH THE PRODUCTION OR EXTRACTION OF OIL, GAS OR OTHER HYDROCARBON SUBSTANCES IN THE CITY

I. SUMMARY

This is a workshop regarding a proposed ordinance to prohibit well stimulation treatment and a proposed ordinance for a comprehensive update of the Municipal Code regarding oil and gas operations, including modern-day drilling issues and applications, as originally initiated by Council in May of 2014.

II. RECOMMENDATION

HOLD the Workshop.

III. ALTERNATIVES

No formal action may be taken on a workshop item; the City Council may choose to take other action as deemed appropriate by the City Council when the Ordinance is formally introduced.

IV. BACKGROUND

The City of Carson zoning and land use standards and regulations for oil and gas drilling have not been updated in several years. During that period of time, there have been significant changes in oil and gas production practices and changes to state statutes and regulations.

On May 20, 2014, the City Council directed Staff to commence a complete and comprehensive review to update the Municipal Code regarding oil and gas operations and to study and address all modern-day drilling issues and applications as well as ensure that the proposed amendment contain a ban on "fracking" and the use of other stimulants or acidizing consistent with the SB4 definitions.

As directed by the Council, Staff engaged in extensive public outreach and prepared updated regulations for oil and gas uses in the City as two ordinances: (i) a general update of the Oil and Gas Code ("General Update"); and (ii) a specific ban of hydraulic fracturing, acidizing, etc. ("Fracking Ban").

Staff has completed a comprehensive review and update of the Oil and Gas Code with the assistance of Marine Research Specialists (MRS), an environmental consulting firm with expertise with petroleum operations and the City Attorney's office. As part of the review process, the City engaged in significant community outreach regarding this matter. After extensive public testimony and multiple meetings, the Planning Commission recommended approval of the General Update (Zone Text Amendment 19-15) as revised and updated and the Fracking Ban (Zone Text Amendment 20-15) as revised and updated. The Fracking Ban ordinance was presented to the City Council on March 15, 2016 and the General Update Ordinance is currently anticipated to be presented to the City Council on April 5, 2016.

The City's current oil and gas regulations consist of a few pages of regulations. In contrast, the proposed General Update Ordinance is significantly more comprehensive, addressing a variety of issues including:

- Safety and other operational requirements to address noise, traffic, light, glare, odor and other concerns;
- Permit and entitlement requirements for proposed uses;
- Heightened authority of the City Manager to oversee compliance;
- Enforcement mechanisms for violations;
- Preservation of existing uses, with consolidation and relocation incentives;
- Setbacks to address potential impacts on sensitive uses; and
- Establishment of an Environmental Compliance Coordinator to oversee implementation of measures to reduce impacts.

The Fracking Ban Ordinance contains operational prohibitions and prohibited uses. The workshop will also address potential revisions addressed during the March 15, 2016 City Council meeting, including:

- Inclusion of acid concentration and allowed time of storage;
- Revisions of the appeals process;
- Editorial revisions.

Staff will provide additional details during the workshop. As proposed, the Staff believes the General Update is one of the most comprehensive and protective ordinances in the State of California.

V. FISCAL IMPACT

None.

VI. EXHIBITS

1. Planning Commission Resolution No. 15-2557(A). (pgs. 4-83)
2. Planning Commission Resolution No. 15-2562. (pgs. 84-105)
3. Additional documents, studies, letters, etc., can be found at: <http://ci.carson.ca.us/department/communitydevelopment/oilcodeupdate.asp>.

Prepared by: Saied Naaseh, Planning Manager

CITY OF CARSON

PLANNING COMMISSION

RESOLUTION NO. 15- 2557(A)

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF CARSON RECOMMENDING THE CITY COUNCIL TO ADOPT TEXT AMENDMENT NO. 19-15, AN OIL AND GAS ORDINANCE FOR REGULATION OF PETROLEUM FACILITIES AND OPERATIONS, BY ADDING CHAPTER 5 TO ARTICLE IX, CONSISTING OF SECTIONS 9500 THROUGH 9537, AMENDING SECTIONS 9121.1, 9121.12, 9123, 9131.1, 9133, 9141.1, 9146.3, 9146.7, AND 9151.12, AND REPEALING SECTIONS 9128.6, 9138.10 AND 9148.2 OF THE CARSON MUNICIPAL CODE; AND RECOMMENDING APPROVAL OF A FINDING OF A CLASS 8 CATEGORICAL EXEMPTION UNDER CEQA GUIDELINES §15308

WHEREAS, all oil and gas operations have the potential for significant and immediate impacts on the health, safety, and welfare of the citizens of Carson through increased noise, odor, dust, traffic, and other disturbances, as well as the potential to significantly impact the City's air, water, soil, biological quality, geology, storm water and wastewater infrastructure, transportation, noise exposures, emergency response plans, aesthetic values, environmental and community resources; and

WHEREAS, the City of Carson zoning and land use standards and regulations on oil and gas drilling have not been updated in several years, and have not been updated prior to various changes in oil and gas production practices and changes to state statutes and regulations; and

WHEREAS, the City Council held a variety of public meetings regarding these and related issues associated with petroleum operations on March 18, 2014, April 15, 2014, April 29, 2014, and May 20, 2014; and

WHEREAS, on March 18, 2014, the City Council adopted Urgency Ordinance No. 14-1534U entitled, "An Interim Urgency Ordinance of the City of Carson, California, Establishing a 45-Day Temporary Moratorium on the Drilling, Redrilling or Deepening of any Wells Within the Jurisdiction of the City of Carson that are Associated with Oil and/or Gas Operations, and Declaring the Urgency thereof"; and

WHEREAS, on May 20, 2014, the City Council directed City Staff to commence a complete and comprehensive review to update the Municipal Code regarding oil and gas operations and to study and address all modern-day drilling issues and applications; and

WHEREAS, City Staff were also directed to have at least two workshops with the community to receive community input and feedback; and

WHEREAS, the Community Development Department has also initiated a proposed text amendment to facilitate this review; and

WHEREAS, the City of Carson has reviewed and studied revisions as necessary to the City's laws, rules, procedures and fees related to petroleum operations and facilities, to enable the City to adequately and appropriately balance the rights of existing operators and future applicants who wish to develop oil and gas drilling and extraction facilities in the City, with the preservation of the health, safety and welfare of the communities surrounding the oil and gas drilling and extraction facilities in the city including exposure to nuisances; and

WHEREAS, as part of this review process, the City of Carson has engaged in significant community outreach regarding this matter, including sending mailed notices of community meetings and Planning Commission hearing to the approximately 30,000 addresses in the city, publishing notices in the newspaper, and holding three community meetings regarding oil and gas operation issues; and

WHEREAS, City of Carson Staff prepared a proposed Oil and Gas Ordinance, including modifications to the Carson Zoning Ordinance, made it available on the City's Oil Code webpage, on February 11, 2015, and received public feedback during the community meeting on February 18, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Oil and Gas Ordinance, including modifications to the Carson Zoning Ordinance, at a duly noticed meeting at 6:30 p.m. on February 24, 2015, at the Congresswoman Juanita Millender-McDonald Community Center, Community Halls ABC, 801 East Carson Street, Carson, CA, 90745; and

WHEREAS, public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, after closing public testimony, the Planning Commission of the City of Carson continued the item to its regular meeting of April 14, 2015; and

WHEREAS, informal informational sessions were held with various members of the Planning Commission throughout the day on March 30, 2015; and

WHEREAS, City of Carson Staff refined provided additional refinements and made the updated proposed Oil and Gas Ordinance and other studies, reports and documents available on April 7, 2015; and

WHEREAS, the City of Carson engaged in additional community outreach and met with interested members of the community, environmental groups, and oil and gas interests on April 8 and 28, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the updates to the proposed Oil and Gas Ordinance, at a duly noticed meeting at 6:30

p.m. on April 14, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of May 12, 2015, with direction to City Staff to further revise the proposed Oil and Gas Ordinance and engage in further discussions with interested groups; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the revisions to the proposed Oil and Gas Ordinance at a duly noticed meeting at 6:30 p.m. on May 12, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of June 9, 2015, with direction to City Staff to further revise the proposed Ordinance and engage in further discussions with interested groups; and

WHEREAS, the City of Carson engaged in additional community outreach and had an additional meeting with representatives of oil and gas interests on May 26, 2015; and

WHEREAS, City of Carson Staff refined provided additional refinements and made the updated proposed Oil and Gas Ordinance and other studies, reports and documents available on June 1, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Oil and Gas Ordinance at a duly noticed meeting at 6:30 p.m. on June 9, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of July 28, 2015, with direction to City Staff to further revise the proposed Ordinance, set up small group workshops with the

Commissioners, engage in additional community outreach, and provide additional information to the Planning Commission; and

WHEREAS, the City of Carson held separate meetings with members of the community and industry stakeholders on July 6, 2015, three small group workshops with members of the Planning Commission throughout the day on July 7, 2015, and a teleconference was held with petroleum industry stakeholders on July 14, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Oil and Gas Ordinance at a duly noticed meeting at 6:30 p.m. on July 28, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of September 8, 2015, with direction to City Staff to further revise the proposed Ordinance, set up small group workshops with the Commissioners and City Manager, engage in additional community outreach, and provide additional information to the Planning Commission; and

WHEREAS, the City of Carson engaged in additional outreach by holding additional small group workshops with members of the Planning Commission on August 24 and August 25, 2015, met with petroleum industry stakeholders on August 27, 2015, with petroleum industry stakeholders, and met with an environmental group representative on September 2, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently held a duly noticed meeting at 6:30 p.m. on September 8, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, upon recommendation by Staff, the Planning Commission of the City of Carson continued the item to its regular meeting of October 13, 2015, without reopening the public comment portion, to allow for noise studies, as well as to allow the City Manager to hold additional meetings with members of the community, industry stakeholders and other interested parties regarding the Ordinance; and

WHEREAS, the City of Carson engaged in additional community outreach and had additional meetings with representatives of oil and gas, environmental and community group interests at various times on September 15th, 24th, and 29th of 2015; and

WHEREAS, Planning Commissioners were provided with the opportunity to tour existing oil and gas operations within the City of Carson in October of 2015; and

WHEREAS, the City mailed notices of the Planning Commission hearing on October 13, 2015, to the addresses in the city and published a notice in the newspaper regarding the same; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Oil and Gas Ordinance at a duly noticed meeting at 6:30 p.m. on October 13, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, after closing the public comment period, the Planning Commission provided direction to Staff and directed Staff to return with a written resolution consistent with that direction for consideration on November 24, 2015; and

WHEREAS, on November 24, 2015, staff returned with a written resolution consistent with the Planning Commission direction; and

WHEREAS, on November 24, 2015, Planning Commissioner(s) were absent, but a quorum was present; and

WHEREAS, Planning Commission of the City of Carson reviewed Text Amendment No. 19-15, including all associated amendments and repeals of the relevant portions of the Carson Municipal Code in order to enact the Oil and Gas Ordinance, for consistency with the General Plan and all applicable Specific Plans; and

WHEREAS, after reopening and closing the public comment period, and considering public testimony and receiving information, the Planning Commission of the City of Carson desired to recommend approval of Zone Text Amendment No. 19-15, which implements an Oil and Gas Ordinance including modifications to the Carson Zoning Ordinance, to the City Council of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson has also reviewed and also desired to recommend approval of a finding of a Class 8 Categorical Exemption under CEQA Guidelines §15308, as the Ordinance is an action taken by a regulatory agency for the protection of the environment, to the City Council of the City of Carson; and

WHEREAS, it was the intent of the recommendation of the Planning Commission of the City of Carson that petroleum operations shall be permitted within the City of Carson, except where expressly prohibited, subject to the application of the Carson Municipal Code and all other applicable laws, regulations and requirements; and

WHEREAS, it was a purpose of said recommendation of adoption to protect the health, safety, public welfare, physical environment and natural resources of the City of Carson by the reasonable regulation of petroleum facilities and operations; and

WHEREAS, after closing the public comment period, and considering public testimony and receiving information, the Planning Commission voted to recommend approval of Zone Text Amendment No. 19-15, which implements an Oil and Gas Ordinance including modifications to the Carson Zoning Ordinance, to the City Council of the City of Carson with a 1,000-foot setback for certain uses as defined by the Ordinance, through the approval of an unnumbered Resolution (subsequently designated Resolution 15-2557 for ease of reference); and

WHEREAS, a motion to amend something previously adopted (the November 24, 2015, recommendation of approval of a comprehensive update of the City's Oil and Gas Ordinance regulating petroleum operations and facilities, and a finding of a Class 8 Categorical Exemption under CEQA Guidelines §15308) related to setback items only was subsequently requested to be set for consideration by the Planning Commission at its meeting on December 8, 2015; and

WHEREAS, the Planning Commission recommendation of November 24, 2015, had yet to be transmitted to or received by the City Council; and

WHEARES, the City provided notice the item had been set on the agenda for consideration by the Planning Commission on December 8, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the item at a duly noticed meeting at 6:30 p.m. on December 8, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, after considering the public testimony information previously received, the Planning Commission approved a motion to amend something previously adopted (the November 24, 2015, recommendation of approval of a comprehensive update of the City's Oil and Gas Ordinance regulating petroleum operations and facilities, and a finding of a Class 8 Categorical Exemption under CEQA Guidelines §15308) related to setback items only, and did amend the recommendation to include a setback of 750 feet; and

WHEREAS, the Planning Commission of the City of Carson reviewed Text Amendment No. 19-15, including all associated amendments and repeals of the relevant portions of the Carson Municipal Code in order to enact the Oil and Gas Ordinance, including the modified setback, for consistency with the General Plan and all applicable Specific Plans; and

WHEREAS, the Planning Commission of the City of Carson desires to recommend approval of Zone Text Amendment No. 19-15, which implements an Oil and Gas Ordinance including modifications to the Carson Zoning Ordinance, to the City Council of the City of Carson with a modified setback of 750 feet, as set forth in this Resolution 15-2557(A); and

WHEREAS, the Planning Commission of the City of Carson has also reviewed and also continues to desire to recommend approval of a finding of a Class 8 Categorical Exemption

under CEQA Guidelines §15308, as the Ordinance is an action taken by a regulatory agency for the protection of the environment, to the City Council of the City of Carson; and

WHEREAS, it is the intent of the recommendation of the Planning Commission of the City of Carson that petroleum operations shall be permitted within the City of Carson, except where expressly prohibited, subject to the application the Carson Municipal Code and all other applicable laws, regulations and requirements; and

WHEREAS, it is a purpose of said recommendation of adoption to protect the health, safety, public welfare, physical environment and natural resources of the City of Carson by the reasonable regulation of petroleum facilities and operations.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF CARSON, CALIFORNIA, HEREBY FINDS, RESOLVES AND ORDERS AS FOLLOWS:

Section 1. Text Amendment No. 19-15 was assessed in accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), the State CEQA Guidelines (the Guidelines), and the environmental regulations of the City. The Planning Commission hereby recommends finding and determination by the City Council that the adoption of Text Amendment No. 19-15 is exempt from CEQA pursuant to Section 15308 of the Guidelines for actions taken by regulatory agencies to assure the maintenance, restoration, enhancement, or protection of the environment. Such a finding and determination is warranted as the proposed Ordinance addresses the maintenance, restoration, enhancement and protection of the environment and the public health, safety, welfare of the citizens of Carson as related to potential impacts from petroleum operations and facilities within the City. The variety of environmental issues addressed include air, water, soil, geology, storm water and wastewater infrastructure, transportation, noise, emergency response, aesthetic issues, and petroleum operations near potentially sensitive receptors. The Ordinance does not provide for the relaxation of standards as compared to the current regulations in the Carson Municipal Code. Instead, the Ordinance strengthens environmental standards related to petroleum operations and facilities, and thereby advances the protection of environmental resources within the City of Carson. No exception to the exemption under CEQA Guideline Section 15300.2 applies.

Section 2. The Planning Commission of the City of Carson has reviewed Text Amendment No. 19-15, including all associated amendments and repeals of the relevant portions of the Carson Municipal Code in order to enact the Oil and Gas Ordinance, and hereby finds it is consistent with the General Plan and all applicable Specific Plans.

Section 3. The Planning Commission of the City of Carson, based on its own independent judgment, finds that Text Amendment No. 19-15 promotes and protects the health, safety, welfare, and quality of life of City residents, including protection against nuisances, and adopts the Findings of Fact, attached as Exhibit "A" and incorporated in full by reference, any one of which findings would be sufficient to support adoption of this Text Amendment.

Section 4. The Planning Commission hereby recommends approval to the City Council of an Ordinance of to adopt Text Amendment No. 19-15 implementing an Oil and Gas

Ordinance for regulation of petroleum facilities and operations by adding Chapter 5 to Article IX, consisting of sections 9500 through 9537, amending sections 9121.1, 9121.12, 9123, 9131.1, 9133, 9141.1, 9146.3, 9146.7, and 9151.12, and repealing sections 9128.6, 9138.10 and 9148.2 of the Carson Municipal Code, a recommended draft of which is attached as Exhibit B.

Section 5. As an additional item, the Planning Commission hereby recommends the City Council consider an Environmental Compliance Officer to monitor and address environmental impacts from all sources, whether related to oil and gas operations or not. Such an Environmental Compliance Officer is not part of the recommended ordinance, which is limited to oil and gas operations, but such an official could work in conjunction with the Environmental Compliance Coordinator or other designated official to enforce the Oil and Gas Ordinance.

Section 6. As an additional item, the Planning Commission hereby recommends the City Council consider review of a lower noise level for nighttime construction activities and recommends the City Council initiate an update of the City's Noise Ordinance to address this issue.

Section 7. The Secretary shall certify to the adoption of the Resolution and shall transmit copies of the same to the City Council of the City of Carson.

PASSED, APPROVED AND ADOPTED THIS 8th DAY OF DECEMBER, 2015.

CHAIRMAN

ATTEST:

SECRETARY

EXHIBIT "A"

FINDINGS OF FACT

The Planning Commission of the City of Carson, based on its own independent judgment, finds that Text Amendment No. 19-15 promotes and protects the health, safety, welfare, and quality of life of City residents and reduces nuisances as set forth in these Findings of Fact, any one of which findings would be sufficient to support a recommendation to adopt this Text Amendment, and any one of which may rely upon evidence presented in the other, including as follows:

I. Limited Water Supplies Should Be Preserved

A. Extreme Drought Conditions Throughout State Result In Water Shortages

The City, region and State of California are experiencing extreme drought conditions, and have been struggling to preserve potable water resources for most of the decade. On June 12, 2008, the Governor issued Executive Order S-06-08 calling for a State of Emergency regarding water shortages and availability. The State of Emergency was again called on February 27, 2009. Additionally, the Water Conservation Bill of 2009 SBX7-7 was passed, which requires every urban water supplier that either provides over 3,000 acre-feet of water annually, or serves more than 3,000 urban connections, to assess the reliability of its water sources over a 20-year planning horizon, and report its progress on 20% reduction in per-capita urban water consumption by the year 2020. Executive Order S-06-08 was not rescinded until March 30, 2011. Even then the Governor urged Californians to continue to conserve water.

Shortly thereafter, extreme drought conditions once again resulted in water shortages. On January 17, 2014, the Governor again proclaimed a State of Emergency regarding water shortages and availability. On April 25, 2014, the Governor issued an executive order to speed up actions necessary to reduce harmful effects of the drought, and called on all Californians to redouble their efforts to conserve water. On December 22, 2014, Governor Brown issued Executive Order B-28-14, citing to the January 17, 2014 Proclamation and the April 25, 2014 Proclamation, and extending the operation of those proclamations until May 31, 2016.

During this period of time, the State Water Resources Control Board (SWRCB) has been adopting new water conservation regulations. On July 15, 2014, SWRCB adopted emergency regulations prohibiting all individuals from engaging in certain water use practices and require mandatory conservation-related actions of public water suppliers during the current drought emergency. On March 17, 2015, the SWRCB amended and re-adopted the emergency drought conservation regulations, and they became effective on March 27, 2015.

Following the lowest snowpack ever recorded and with no end to the drought in sight, on April 1, 2015, the Governor directed the SWRCB to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent. This is the first time in state history such drastic steps have ever been ordered due severe drought conditions. The SWRCB continues to adopt new water and emergency conservation regulations for all of California to address systemic water shortages.

B. Oil and Gas Operations Can Impact Water Quality and Resources

Oil and gas operations have the potential to impact water quality, surface water and groundwater supplies.

Without the appropriate regulations, or a mechanism to confirm compliance with existing regulations, oil and gas operations can result in an increased level of freshwater pollution or groundwater contamination in the immediate area, or cause regulatory water standards at an existing water production well to be violated. Impacts can occur through a variety of sources, whether through construction, operations, abandonment or redevelopment to another use. Until the appropriate facilities have been built, construction activities can result in storm water pollution. Produced water and wastewater, if not properly contained, transported and disposed, can contaminate both surface water and groundwater supplies. Water quality can also be impacted by operations, and the appropriate steps cannot be taken to address the issue unless water quality is sufficiently monitored for both surface and groundwater monitoring locations. Oil and gas are located at varying depths, often below underground sources of drinking water. The well bore, however, must be drilled through these drinking water sources in order to gain access to the oil and gas. Depending on field conditions, chemicals and natural gas can escape the well bore if it is not properly sealed and cased. While there are state requirements for well casing and integrity, accidents and failures can still occur.[1] Wellbore leakage can lead to the deterioration of the quality of groundwater.[2] Inadequately abandoned wells risk surface and subsurface contamination, which can impact water quality, surface water and groundwater supplies.

Without the adequate financial assurances, there may be insufficient funding available to ensure regulatory compliance, enforcement, and safety measures are implemented to protect the environment including water supplies.

Contamination of surface water and groundwater supplies is nuisance, requiring substantial infrastructure and expense to render such water potable – if at all. Given the City's heavy reliance on groundwater, groundwater contamination could have devastating impacts on the local economy and water supplies. Vulnerable water supplies should be preserved municipal and other critical uses.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential pollution and water quality impacts and nuisances activities from oil and gas operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life.

C. Oil and Gas Operations Can Impact Limited Water Supplies

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[1] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 17.

[2] "Towards a Road Map for Mitigating the Rates and Occurrences of Long-Term Wellbore Leakage," University of Waterloo, Geofirma Engineering Ltd., May 22, 2014.

Oil and gas operations can use significant amounts of fresh water in a relatively short period of time. Depending on the nature of the operation, water usage can exceed hundreds of thousands of gallons of water per day. Additionally, water and material deliveries to an oil and gas site are typically made by diesel trucks operating on a 24-hour basis. Potential land use and nuisance activities from these operations include water shortages from drought conditions, traffic, air emissions, noise, vibration, potential contamination of surface and subsurface water, and aesthetics.

The 2010 Urban Water Management Plan for the California Water Service Company - Dominguez District, which includes the City of Carson, sets district-specific targets of 193 gallons per capita day (gpcd) by 2015, and 171 gpcd by 2020.[3] In order to achieve these targets, as well as other state-mandated targets during this drought emergency, water conservation is imperative.

Excessive use of fresh water for oil and gas operations could result in a significant impact on water resources for both the City and the surrounding area. Imposing requirements for use of reclaimed and other sources of non-potable water preserves, as well as best management practices for water conservation, helps preserve limited water supplies municipal and other critical uses.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against excessive use of potable water and impacts on potable water sources, for the benefit of the public health, safety, welfare, and quality of life of City residents and also reduces associated nuisances.

II. Transportation of Water Required for Operations Creates Land Use and Nuisance Activities

Oil and gas operations generate a significant amount of truck traffic. All of the materials and equipment needed for activities associated with bringing a well into production are typically transported to the site by trucks. Additionally, wastewater and waste materials from certain operations is usually removed by tanker truck to the disposal site or to another well for reuse. Much of the truck traffic is concentrated over the first 50 days following well development.[4] Wastewater disposal may require additional trips.

Transport associated with oil and gas operations through the City to well locations will result in potential adverse land use and nuisance activities including traffic loads, increased risk of truck accidents including releases chemical or wastewater spills, air emissions, noise, traffic congestion, degraded road quality, vibration, and aesthetics - each of which is detrimental to the public health, safety and welfare.

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[3] The 2010 Urban Water Management Plan for the California Water Service Company - Dominguez District, http://www.water.ca.gov/urbanwatermanagement/2010uwmps/CA%20Water%20Service%20Co%20-%20Dominguez%20District/_DOM_UWMP_2010.pdf .

[4] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 25.

Hauling water for oil and gas operations from outside the City also impacts water resources. The City relies on groundwater water sources tracked by the Water Replenishment District. The City is primarily located within the West Coast Basin area, which underlies 160 square miles in Los Angeles County. Additionally, the City is located adjacent to the Central Basin, which also underlies much of the Los Angeles area west of the City. Both of these basins are located in areas subject to extreme drought conditions, and transporting water from other portions of a shared basin will also impact water resources available to the City and surrounding areas. Likewise, hauling water from other regions within the state, or even adjacent states, would be taking water resources from other areas experiencing extreme drought conditions and water shortages.

The City and the surrounding area rely upon groundwater and surface water supplies to provide potable and other types of water for its residences and businesses. Regardless of where water is proposed to be acquired for petroleum operations, transporting the water to and through the City to well locations will result in potential land use and nuisance activities from these operations including water shortages from drought conditions, traffic, air emissions, noise, vibration, potential contamination of surface and subsurface water, and aesthetics.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential land use, impacts and nuisances activities from oil and gas operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life.

III. Surface Spills and Leaks

All extraction activities come with some risk of surface or groundwater contamination from the accidental or intentional release of wasted. Fluids released into the ground from spills or leaks can run off into surface water and/or seep into the groundwater.

Spills can occur at any stage during the drilling lifecycle. Accidents and equipment failure during on-site mixing of the fluids can release chemicals into the environment. Above-ground storage pits, tanks, or embankments can fail. Vandalism and other illegal activities can also result in spills and improper wastewater disposal. Given the large volume of truck traffic associated with petroleum operations, truck accidents can also lead to chemical or wastewater spills.[5]

A recent study noted that reported wellbore leakage in active onshore drilling ranged from approximately 7% to 64% across a wide variety of locations.[6] The likelihood of leakage is significant given the potentially high level of risk that can associate with petroleum operations. Leakage can impact groundwater, air quality, cause odors, contaminate soil, and result in a variety of other nuisance, health, safety and welfare issues.

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[5] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 27, see also Bailin, Deborah, P. Rogerson, J. Agatstein, J. Imm and P. Phartiyal, "Toward an Evidence Based Fracking Debate: Science, Democracy, and Community Right to Know in Unconventional Oil and Gas Development," Union of Concerned Scientists, October 2013, p. 10.

[6] See "Towards a Road Map for Mitigating the Rates and Occurrences of Long-Term Wellbore Leakage," University of Waterloo, Geofirma Engineering Ltd., May 22, 2014.

Given the uncertainty of the frequency, severity, cause and impact of spills associated with petroleum operations, regulations designed to mitigate potential impacts, and provide assurance adequate financial resources are available to address the impacts, are warranted given the severity of the risks associated with such operations.

IV. Air Pollution, Particulate Matter and Odors

Odors, air pollution and particulate matter can be produced as a result of oil and gas operations, whether from mobile or stationary sources. These impacts are not localized, but can be spread by natural air flow caused by weather or physically generated outside a site by truck and other traffic. Odors have been known impact locations around an oil and gas site at distances of approximately 1,500 feet.

Air quality in the City and region already falls below state standards for some of the pollutants related to production activities. Enactment of the Oil and Gas Ordinance provides a regulatory framework to reduce these risks. Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential air pollution, particulate matter and odor impacts and nuisances activities from oil and gas operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City.

V. Deleterious Public Health Effects

Development and production of oil and gas operations involve multiple sources of physical stressors such as noise, light, vibrations, toxicants, and impacts on air emissions. Many chemicals used during drilling and other stages of gas operations may have long-term health effects not immediately expressed.[7] Enactment of the Oil and Gas Ordinance provides a regulatory framework to reduce these risks, including setbacks from residential and other sensitive uses. Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential deleterious public health effects from oil and gas operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City residents.

VI. Oil and Gas Operations Impact Aesthetics

Oil and gas operations utilize unsightly derricks and rigs for drilling, re-drilling, workovers and other operations. This impact can be compounded by the large trucks and traffic traveling on the City's roadways through the community, dust, and light pollution from stadium-type lighting from around-the-clock drilling rigs. These aesthetic impacts are contrary to the urban nature of the City, are a nuisance and create a risk to the public, health and safety.

[7] Colborn, Theo, C. Kwiatkowski, K. Schultz and M. Bachran, "Natural Gas Operations from a Public Health Perspective," Human Ecological Risk Assessment, September 2011, pp. 1309-1056; See also "Chemicals Used in Hydraulic Fracturing," United States House of Representatives Committee on Energy and Commerce, April, 2011, p. 1.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential deleterious aesthetic impacts from oil and gas operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City residents.

VII. Oil and Gas Operations Are Incompatible With Residential Uses

The City is urbanized[8] with a large residential population. The City's population in 2010 was 91,714 people,[9]in an area of approximately 19.2 miles.[10] Oil and gas development projects are industrial operations that are incompatible with residential uses and quality of life. Petroleum operations often generate noise, odor, visual effects, significant heavy truck traffic, and other impacts noted in these Findings that are incompatible with residential areas. For these reasons, all petroleum operations should be directed away from areas with residential land use designations, and other sensitive uses, and the operations regulated to reduce adverse impacts on residents and the community. Requiring additional measures as operations are located closer to residential and sensitive uses reduces the impacts caused by those incompatible operations upon residential uses. These can include landscaping, walls, sanitation, noise barriers and noise reduction devices, odor monitoring, air monitoring and other control issues.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential incompatible impacts with residential uses, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City residents.

VIII. Oil and Gas Operations, Closure, Abandonment and Other Uses

Land uses change. Over the past several decades the City of Carson has been changing from industrial uses to more residential and commercial uses. Former oil and gas operations sites are being utilized for other uses, including commercial and residential uses. These types of sites pose unique challenges to redevelopment, including potential contamination, locations of and impacts of abandoned facilities, potential for well leaks and the need for remedial access to address the same.

Prior to redevelopment or re-use of the site for another use, closed or abandoned sites that have not been properly cleaned and remediated can contribute to adverse impacts and nuisances including aesthetics, air quality, odor, graffiti, vandalism, weeds, contaminants, trash, and other items noted in the administrative record. Wells and sites can be left in an unsafe condition without being properly abandoned. Financial assurances posted with other agencies are often insufficient to address remediation and compliance efforts.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential impacts and nuisances caused by site abandonment and re-development, including those

[8] City of Carson 2004 General Plan, 2014-2021 Housing Element, p. 7.
[9] U.S. Census Bureau, 2015, Quick Facts –Carson California, http://quickfacts.census.gov/qfd/states/06/0611530.html.
[10] City of Carson 2004 General Plan, p. I-3.

articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City residents.

IX. Need for Financial Assurances and Identification of Responsible Parties

Accidents happen, and the nature of oil and gas operations can cause unique and potentially significant impacts upon the community not associated with other uses as has been noted in the administrative record. Financial assurances, to the extent they may be required by other agencies, are often insufficient to assure the impacts have been fully addressed. This leaves the public to pay either through unaddressed impacts on the community (aesthetics, odors, noise, risk of contamination, etc.) or to provide money to address the issue. Additionally, without the appropriate mechanisms in place, it can be difficult or impossible to effectively identify responsible parties. Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential impacts and nuisances caused by insufficient financial assurance and identification issues for the benefit of the public health, safety, welfare, and quality of life of City residents.

X. Need for Enforcement, Compliance Monitoring, and Oversight Mechanisms

Regulations are only as stringent as their enforcement, compliance monitoring, and oversight mechanisms. Without adequate enforcement and oversight, there is an uneven playing field, bad operators are effectively rewarded to the detriment of good operators, and the community as a whole suffers. Given the complexity of oil and gas operations, the potential for significant environmental and other impacts upon the community identified in these Findings including nuisances, as well as the finite public resources available to address those impacts, strong enforcement and oversight mechanisms are warranted. The Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential impacts and nuisances caused by inadequate enforcement compliance monitoring and oversight mechanisms for the benefit of the public health, safety, welfare, and quality of life of City residents.

XI. Impacts Related To Different Field Conditions

There are two oil fields located within the City of Carson: portions of the Dominguez Field are located in the north of the City and portions of the Wilmington Field are located in the south of the City. Recent annual production levels within Dominguez as per DOGGR has been about 35,000 bbls in Dominguez and 45,000 bbls in Wilmington (48 producing wells) in the year 2014. Both Dominguez and Wilmington have historically practiced water flood secondary recovery techniques. Generally, Dominguez field produces higher quality, lighter crude oils with more gas and Wilmington produces lower quality, heavy crude oil with little gas. The shallowest producing zones in Wilmington are 2,000 feet deep, while in Dominguez it is 4,000 feet deep. There are currently (2014) 67 wells within Carson, with 2 wells located in Dominguez Field and 65 wells located in the Wilmington Field.

The Planning Commission finds Text Amendment No. 19-15 promotes and protects against potential impacts and nuisances caused by different operating conditions for the

Dominguez Field and the Wilmington Field, and such regulations benefit of the public health, safety, welfare, and quality of life of City residents.

EXHIBIT 1
To
Exhibit B To
Planning Commission Resolution No. 15-2557(A)
Text Amendment No. 19-15

Oil And Gas Ordinance Of The City Of Carson

(Carson Municipal Code, Article IX, Chapter 5)

CHAPTER 9500

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CHAPTER 5

OIL AND GAS CODE

Part 1. Administrative Procedures

9500 Purpose

A. This Chapter shall be known as the Oil and Gas ordinance of the City of Carson.

B. It is the purpose of this ordinance, amongst other things, to protect the health, safety, public welfare, physical environment and natural resources of the city by the reasonable regulation of oil and gas facilities, equipment, and operations, including but not limited to: exploration; production; storage; processing; transportation; disposal; plugging abandonment and re-abandonment of wells; of operations and equipment accessory and incidental thereto and development and redevelopment of oil and gas sites. It is further the intent of the City that oil and gas operations shall be permitted within this city (except where expressly prohibited herein), subject to the application of this ordinance and all other applicable laws, regulations and requirements.

C. It is not the intent of this ordinance to regulate public utility operations for the storage or distribution of natural gas under the jurisdiction of the California Public Utilities Commission (CPUC). Any well or site related operations, however, shall be subject to this ordinance.

9501 Ordinance Applicability

A. The regulations in this ordinance shall apply, insofar as specifically provided herein, to oil and gas production and related sites and facilities, equipment, structures, or appurtenances including, but not limited to:

1. Drilling, and abandonment operations of any new or existing well or re-entry of a previously abandoned well for the production of oil and gas.

2. Sites, infrastructure, structures, equipment, and/or facilities necessary and incidental to processing of oil, produced water, gas, and condensate obtained from an oil and gas field, zone, subsurface lease or area.

3. Injection wells and incidental equipment necessary for enhanced oil recovery or disposal of produced water.

4. Equipment and facilities necessary for enhanced oil recovery including water flooding, steam flooding, air injection, carbon dioxide injection, or introduction of polymers, or other techniques.

5. Pipelines located within an oil and gas lease area that are necessary for oil and gas production operations.

6. Pipelines that transport oil or gas to another location for sale or transfer to a third party.

7. Storage tanks and equipment necessary or incidental to gathering, separation or treatment of oil, water, and gas, and/or temporary storage of separated fluids and gases, and transfer of the produced hydrocarbons to pipelines or tanker trucks.

8. Oil spill containment and recovery equipment, and facilities including offices, storage spaces, and vehicles for the storage of floating oil and water separators, pumps, generators, hosing, assorted absorbent materials, steam cleaners, storage tanks, and other land and wildlife cleanup and recovery equipment.

B. All portions of this ordinance are applicable to new or existing oil and gas sites and operators if they have or are required to obtain a CUP. For oil and gas sites lawfully existing at the time of adoption of this ordinance which do not have or are not required to obtain a new CUP, only the following sections are applicable:

9506	Well Drilling Permit
9507.4(B)	Modifications and Extensions
9510	Facility Closure, Site Abandonment, and Site Restoration Procedures
9521(C)	Setbacks
9522	Site Access and Operations
9523	Lighting
9526	Signage
9527	Steaming
9530	Safety Assurances and Emergency/Hazard Management (except 9530.4)

9531	Environmental Resource Management (except 9531.3 and 9531.5.1)
9532	Standards for Wells (except subsection G)
9535	Operational Prohibitions
9536	Prohibited Uses

Violations of these sections shall also be subject to enforcement mechanisms contained in this ordinance and Code.

To the extent the ordinance applies to existing oil and gas sites, it is not intended to apply in such manner as to interfere with any vested rights that have accrued to property owners.

C. The provisions of this ordinance which impose any limitation, prohibition, or requirement, or confer a right on the basis of the distance between a well or any other use or improvement and another zone classification, use or improvement, shall be applied solely with reference to zone classification uses and improvements within the City.

9502 Allowable Uses

Table 1-1 below specifies what City zoning designations allow for oil and gas sites and, if allowable, what type of authorization is required for the use.

TABLE 1-1

* In addition to the zones listed in the table below, oil and gas sites shall be permitted in any specific plan area where such uses are specifically allowed in accordance with the requirements of this ordinance.
**CUP indicates a requirement for a Conditional Use Permit, while DA indicates a development agreement.

Zoning Designation	Oil and Gas Facility/Site Permit Required by Zone
Residential	
RS Residential Single Family	Prohibited
RM Residential Multi-Family	Prohibited
RA Residential Agricultural	Prohibited
Commercial	
CN Commercial Neighborhood Center	Prohibited
CR Commercial Regional Center	CUP or DA[1]
CG Commercial General	CUP or DA[1]
CA Commercial Automotive	Prohibited
MU-CS Mixed Use-Carson Street	Prohibited
MU-SB Mixed Use-Sepulveda Blvd.	Prohibited
Industrial	
ML Manufacturing Light	CUP or DA[1]
MH Manufacturing Heavy	CUP or DA[1]
Open Space & Special Uses	
Open Space	Prohibited
Special Uses	Prohibited

[1] Development agreement provisions apply as specified in Section 9508.

9503 Definitions

Unless the context otherwise requires, the definitions hereinafter set forth shall govern the construction of this ordinance.

"**Abandoned Well**" means a non-producing well DOGGR so designates after it has been demonstrated that all steps have been taken to protect underground or surface water suitable for irrigation or other domestic uses from the infiltration or addition of any detrimental substance, and to prevent the escape of all fluids to the surface.

"**Acid Well Stimulation Treatment**" is defined in the DOGGR Statues and Regulations and means a well stimulation treatment that uses, in whole or in part, the application of one or more acids to the well or underground geologic formation. The acid well stimulation treatment may be at any applied pressure and may be used in combination with hydraulic fracturing treatments or other well stimulation treatments. Acid well stimulation treatments include acid matrix stimulation treatments and acid fracturing treatments.

"Acid Fracturing" is an acid well stimulation treatment that, in whole or in part, includes the pressurized injection of acid into an underground geologic formation in order to fracture the formation, thereby causing or enhancing, the production of oil or gas from a well.

Acid Matrix Stimulation Treatment is an acid well stimulation treatment conducted at pressures lower than the applied pressure necessary to fracture the underground geologic formation.

"**Acid Volume Threshold**" means a volume per treated foot of well stimulation treatment, calculated as per DOGGR consistent with DOGGR Statutes and Regulations.

"Air injection" is an enhanced oil recovery process utilizing compressed air that is injected into a reservoir. Oxygen in the gas reacts exothermically with some of the oil, producing highly mobile flue gas. The flue gas advances ahead of the reaction front and achieves an efficient displacement of the in situ oil.

"API" refers to the American Petroleum Institute.

"**ASTM**" ASTM shall mean the American Society of Testing and Materials.

"City Manager" is the City's administrative official, and the City Manager's designated assistants, inspectors and deputies having the responsibility for the enforcement of this ordinance. The City Manager 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 in carrying out duties. The City Manager may also appoint such number of officers, inspectors, assistants and other employees and/or to appoint a Petroleum Administrator to assist in carrying out duties. If the City Manager determines it is necessary based on public health, safety or welfare, he or she may require any information as deemed reasonably necessary for a CUP or an abandonment application.

"DOGGR" is the Division of Oil, Gas and Geothermal Resources which is part of the Department of Conservation of the State of California. DOGGR oversees the drilling, operation, maintenance, and

plugging and abandonment of oil, natural gas, and geothermal wells.

"DOGGR Statutes and Regulations" are the California statutes and regulations related to or governing DOGGR, at California Public Resources Code, Division 3, and Oil and Gas and the California Code of Regulations, Title 14, Division 2.

"Drill" or "Drilling" is to bore a hole in the earth, usually to find and remove subsurface formation fluids such as oil and gas. Drilling, under this ordinance, includes re-drilling and re-working of wells.

"Enforcement action" is any administrative, injunctive, or legal action (either civil or criminal), to enforce, cite or prosecute a violation or efforts to abate or correct a violation (or dangerous or hazardous situation caused by a violation), including investigation, research, legal action, physical abatement, law enforcement and other necessary acts.

"Enhanced oil recovery" is the injection of steam, gas, or other chemical compounds into hydrocarbon reservoirs to stimulate the production of usable oil beyond what is possible through natural pressure and pumping at the wellhead.

"EPA" refers to the U.S. Environmental Protection Agency.

"**Existing**" as applied to oil and gas sites, wells or other facilities and operations, refers to and includes all that were lawfully in existence at the effective date of this ordinance

"Exploratory Well" is defined in the DOGGR Statutes and Regulations and means any well drilled to extend a field or explore a new, potentially productive reservoir.

"Facilities" include tanks, compressors, pumps, vessels, and other equipment or structures pertinent to oil field operations located at an oil and gas site.

"Gas" means any natural hydrocarbon gas coming from the earth.

"**Gas Plant**" means processing equipment for produced gas to separate, recover, and make useful natural gas liquids (condensate, natural gasoline [e.g., pentenes], and liquefied petroleum gas, etc.), to separate, remove, and dispose of other non-hydrocarbon substances, such as water, sulfur, carbon dioxide, ammonia, etc., and to produce utility-grade gas suitable for delivery and sale.

"High risk operation" means an oil or gas production, processing or storage facility which: (a) has been in violation of any applicable section of this ordinance for more than 30 consecutive days and resulted in the issuance of a notice of determination of fines pursuant to Section 9510.3.5 of this ordinance during the preceding twelve months; or (b) has had three separate unauthorized releases of oil, produced water and/or

other hazardous materials of a quantity not less than fifteen barrels (six hundred thirty gallons) other than within secondary containment for each incident during the preceding twelve months

"Hydraulic Fracturing" is defined in the DOGGR Statutes and Regulations and means a well stimulation treatment that, in whole or in part, includes the pressurized injection of hydraulic fracturing fluid into an underground geologic formation in order to fracture, or with the intent to fracture, the formation, thereby causing or enhancing, for the purposes of this ordinance, the production of oil or gas from a well.

"Idle well" is defined in the DOGGR Statutes and Regulations and is any well that has not produced oil or natural gas or has not been used for injection for six consecutive months of continuous operation during the last five or more years. An idle well does not include an active observation well.

"Natural gas liquids" (NGLs) include propane, butane, pentane, hexane and heptane, but not methane and ethane, since these hydrocarbons need refrigeration to be liquefied..

"**NFPA"** refers to the National Fire Protection Agency.

"New Development" means any of the following: 1) development of new buildings, structures or wells for oil and gas operations on a site that has either not previously been used for such activities, or where the previous use was abandoned, or a CUP expired or was revoked ; 2) the expansion by 3 or more wells at an existing site used for oil and gas operations and which conforms to setback requirements; 3) the placement or erection of tanks for holding produced substances or substances intended for subsurface injection in connection with oil and gas operations exceeding by 25% or more the capacity of existing tanks as of the effective date of this ordinance. New development does not include the like-kind replacement of facilities required for legally operating oil and gas operations that are damaged, failed, are at risk of failure, or are at the end of their useful life at an existing site.. New development does not include workovers or other maintenance for legally operating oil and gas operations, including replacement-in-kind, or re-drills of existing active or idle wells. Re-drills of abandoned wells are considered new wells under this ordinance.

"New Well" is defined by the DOGGR Statutes and Regulations as the drilling of a well that requires the submission of the DOGGR form OG105 - Notice of Intention to Drill New Well – Oil and Gas, as may be updated or amended. For the purposes of this ordinance, the re-drilling of an abandoned well is considered a new well.

"Oil" is a simple or complex liquid mixture of hydrocarbons that can be refined to yield gasoline, kerosene, diesel fuel, and various other products**.**

"Oil and Gas Site" or "**Site**" is a oil drilling site and all associated operations and equipment attendant to oil and gas production or injection operations including but not limited to, pipelines, tanks, exploratory

facilities (including exploratory wells), flowlines, headers, gathering lines, wellheads, heater treaters, pumps, valves, compressors, injection equipment, drilling facilities, and production facilities.

"Oil and Gas Operations" are all activities in connection with the exploration, drilling for and the production of oil and gas and other hydrocarbons, together with all incidental equipment and appurtenances thereto.

"Operator" means the person, who by virtue of ownership or under the authority of a lease or any other agreement, has the right to drill, operate, maintain, or control a well or production facility.

"OSHA" refers to the California Occupational Safety and Health Administration.

"Person" encompasses any individual, firm, association, corporation, joint venture or any other group or combination acting as an entity.

"Petroleum" is a substance occurring naturally in the earth in a solid, liquid, or gaseous state and composed mainly of mixtures of chemical compounds of carbon and hydrogen, with or without other nonmetallic elements such as sulfur, oxygen, and nitrogen.

"Pipelines" for the purposes of this ordinance, shall mean all flow lines associated with wells located within the City of Carson used for the transportation of petroleum or petroleum by-products or of materials used in the production of petroleum.

"Produced water" is a term used to describe the water that is produced along with crude oil and gas.

"PSM" refers to process safety management.

"Redevelopment" for the purposes of this ordinance is the development of all of a portion of a current or former oil or gas site to another authorized use other than petroleum operations.

"Re-drilling" is defined in the DOGGR Statutes and Regulations and is the deepening of an existing well or the creation of a partial new well bore including plugging of the original bore and casings and requires the submission of DOGGR form OG107 - Notice of Intention to Rework/Redrill Well, as may be updated or amended.

"Re-entry" is the process of cleaning a plugged and abandoned well by drilling, jetting, or other method.

"**Re-work**" is defined in the DOGGR Statutes and Regulations and means any operation subsequent to initial drilling that involves re-drilling, plugging, or permanently altering in any manner the casing of a well or its function and requires the filing of a notice of intent to rework/redrill a well with DOGGR. Altering a casing includes such actions as a change in well type, new or existing perforations in casing, running or

removing of cement liners, placing or drilling out any plug (cement, sand, mechanical), running a wireline tool that has the ability to drill through a cased borehole, or any other operation which permanently alters the casing of a well. For the purposes of this ordinance, re-work includes a well abandonment.

"**Refining**" shall mean any industrial process facility where crude oil is processed and refined into more useful products and sold to others without further treatment or processing.

"Regional Water Quality Control Board" shall mean the Los Angeles Regional Water Quality Control Board.

"Secondary recovery" means an improved recovery method of any type applied to a reservoir to produce oil not recoverable by primary recovery methods and would include water flooding, steam flooding and gas injection.

"Secondary containment" means containment, which is external to and separate from the primary containment, typically constructed of masonry block or poured concrete walls which incorporates an impervious barrier, including but not limited to dikes, berms, or retaining walls sufficiently impervious to contain oil.

"Shut down" or "Shut Down Order" is an order by the City Manager, California State Fire Marshall, or DOGGR official, to restrict or prohibit certain (or all) functions or operations at a facility or by an operator pursuant to authority of this ordinance.

"**SPCC**" refers to Spill Prevention, Control, and Countermeasures.

"Steam Flooding" is a thermal oil and gas recovery method in which steam is injected into a reservoir through injection wells and driven toward production wells. The steam reduces the viscosity of crude oil, causing it to flow more freely. The heat vaporizes lighter hydrocarbons; as they move ahead of the steam, they cool and condense into liquids that dissolve and displace crude oil. The steam provides additional gas drive. This method is also used to recover viscous oils. The technique is also called Continuous Steam Injection or Steam Drive. Consistent with Section 3157(b) of Pubic Resources Code Division 3, steam flooding is not considered to be a well stimulation treatment.

"Cyclic Steaming" shall mean a production method with alternating steam flooding and subsequent oil production from the same well. Consistent with Section 3157(b) of Public Resource Code Division 3, cyclic steaming is not considered to be a well stimulation treatment.

"Structure" means anything constructed or erected which requires location on the ground or is attached to something having a location on the ground, except outdoor areas such as walks, paved areas, tennis courts, and similar open recreation areas. This definition includes buildings, but does not include wells.

"Supervisor" means the DOGGR Supervisor.

"**Toxic Air Contaminants**" means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health as defined in California Health and Safety Code Section 39655, as may be amended from time to time. Title 17, Section 93000, of the California Code of Regulations, lists substances defined as Toxic Air Contaminants.

"USEPA" refers to the United States Environmental Protection Agency.

"Regional Water Quality Control Board" shall mean the Los Angeles Regional Water Quality Control Board.

"Waterflooding" is a method of secondary recovery in which water is injected into the reservoir formation to displace residual oil. The water from injection wells physically sweeps the displaced oil to adjacent production wells. Consistent with Section 3157(b) of Public Resource Code Division 3, waterflooding is not considered to be a well stimulation treatment.

"Well" is defined in the DOGGR Statutes and Regulations and means any oil or gas well or well for the discovery of oil or gas; any well on lands producing or reasonably presumed to contain oil or gas; any well drilled for the purpose of injecting fluids or gas for stimulating oil or gas recovery, repressuring or pressure maintenance of oil or gas reservoirs, or disposing of waste fluids from an oil or gas field; any well used to inject or withdraw gas from an underground storage facility; or any well drilled within or adjacent to an oil or gas pool for the purpose of obtaining water to be used in production stimulation or repressuring operations.

"**Well stimulation treatment**" is defined in the DOGGR Statutes and Regulations and means a treatment of a well designed to enhance oil and gas production or recovery by increasing the permeability of the formation. Well stimulation is a short term and non-continual process for the purposes of opening and stimulating channels for the flow of hydrocarbons. Examples of well stimulation treatments include hydraulic fracturing, acid fracturing and acid matrix stimulation. Except for operations that meet the definition of "underground injection project" under 14 CCR Section 1761(a)(2), a treatment at pressures exceeding the formation fracture gradient shall be presumed to be a well stimulation treatment unless it is demonstrated to DOGGR's satisfaction that the treatment, as designed, does not enhance oil and gas production or recovery by increasing the permeability of the formation. Except for operations that meet the definition of "underground injection project" under CCR Section 1761(a)(2), a treatment that involves emplacing acid in a well and that uses a volume of fluid equal to or greater than the Acid Volume Threshold for the operation shall be presumed to be a well stimulation treatment unless it is demonstrated to DOGGR's satisfaction that the treatment, as designed, does not enhance oil and gas production or recovery by increasing the permeability of the formation. Well stimulation treatment does not include

steaming, water flooding or cyclic steaming and does not include routine well cleanout work; routine well maintenance; routine treatment for the purpose of removal of formation damage due to drilling; bottom hole pressure surveys; routine activities that do not affect the integrity of the well or the formation; the removal of scale or precipitate from the perforations, casing, or tubing; a gravel pack treatment that does not exceed the formation fracture gradient; or a treatment that involves emplacing acid in a well and that uses a volume of fluid that is less than the Acid Volume Threshold for the operation and is below the formation fracture gradient.

"Workover is the process of major maintenance or remedial treatments on an oil or gas well without changing the physical design of the well. Workovers include all operations that do not involve the initial drilling or re-working of wells and is regulated by DOGGR but without requirements for notices of intent or permits.

9504 Consistency with Other Laws, Rules and Regulations

This ordinance, insofar as it regulates oil and gas operations also regulated by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), is intended to supplement such state regulations and to be in furtherance and support thereof. Some definitions in Section 9503 are based on DOGGR Statutes and Regulations and the intent of this ordinance is to utilize those definitions, as they may be amended from time to time by the California Legislature or by DOGGR, as applicable. In all cases where there is conflict with state laws or regulations, such state laws or regulations shall prevail over any contradictory provisions, or contradictory prohibitions or requirements, made pursuant to this ordinance. Additionally, the approving body, whether the City Manager, Planning Commission or City Council, may grant an exception or modification to the requirements of this ordinance to the minimal extent necessary to prevent a compensable taking. Such exception or modification shall be as consistent with the intent and purpose of this ordinance as possible given the specific factual circumstances of the particular project.

9505 Appeals

Unless otherwise specified in this ordinance, any interested person may appeal a discretionary decision of the City Manager consistent with procedure set forth in Section 9173.4, except that references to "Director" shall be replaced with "City Manager," and the Planning Commission's decision is final with no right of appeal to the City Council. Section 9173.5 shall govern the statute of limitations. Mandatory requirements of this ordinance are not subject to appeal.

9506 Well Drilling Permit

Prior to commencing drilling or re-working of any oil and gas well, the operator must receive a well drilling or re-work permit from DOGGR. Well permits from DOGGR shall be provided to the City

Manager prior to commencement of drilling or re-working activities.

9507 Required Procedures for Conditional Use Permits

A. New development to which this ordinance applies (see Section 9501) shall be required to receive a Conditional Use Permit (CUP), from the City Planning Commission in order to receive authorization for, and proceed with, the construction and operation of new development. No permits shall be considered or approved without such permits being consistent with provisions of the CUP.

B. All procedures for CUPs to which this ordinance applies shall be consistent with the Article IX, Chapter 1,Part 7 of the Code as well as with the following additional requirements:

9507.1 Conditional Use Permit (CUP) Filing Requirements

In addition to the filing requirements required by Section 9173.1 (Applications) of this Code, for projects within the City to which this ordinance is applicable, the following materials are also required as part of a CUP application for the consideration of the Planning Commission, or the City Council on appeal:

A. A complete statement of the proposed project including, but not limited to, activities, facilities, and sites.

B. A new or updated emergency response plan to deal with potential consequences and actions to be taken in the event of floods, earthquakes, hydrocarbon leaks or fires for the site. The emergency response plan shall be approved by the City's Public Safety and Community Services Manager and the Los Angeles County Fire Department.

C. A phasing plan for the staging of development that includes the estimated timetable for project construction, operation, completion, restoration, and, where applicable, the location and amount of land reserved for future expansion.

D. A site plan showing:

1. Surface property, easement, rights-of-way and pipeline right-of-way boundaries within the site.

2. Proposed access road constructions or modifications and connections with City streets and roads and any existing private roads.

3. Areas to be used for construction.

4. Areas to be used for access and maintenance during pipeline operation within and adjacent to the site.

5. Existing roads, and pipelines and pipeline rights-of-way, if any.

6. Location and type of existing and proposed structures within 50 feet of pipeline right-of- way.

7. Location of existing and proposed wells and oil or gas containing equipment and their measured distance from nearby uses, including the closest residential or school property line.

8. Proposed alteration of surface drainages within the site.

9. A contour map showing existing and proposed contours.

10. A plan for parking on or off site.

11. A map of all known, historic, or suspected active, idle and abandoned oil and gas wells or wellheads within the site and within 1,500 feet of the surface location of any existing or proposed new well within the site.

E. Site operations plan containing process flow diagrams, piping and instrumentation diagrams, expected process flows (rates, pressures, composition, and shut-down/start-up procedures, quarterly/annual production, disposition, injection, and disposal).

F. Plans with measures to be used to prevent or reduce nuisance effects (e.g., dust, fumes, glare, noise, odor, air pollutants, and vibration) and to prevent danger to life, environmental quality, and property, consistent with the Development Standards in this ordinance.

G. Estimates of the amount of cut and fill required by the proposed project.

H. If the site is within 1,000 feet of any prohibited zoning as listed in Table 1-1, a plan for a community alert system (including new or utilizing existing systems, including but not limited to, those operated by the Police, Sheriff or Fire Department) to automatically notify area residences and businesses in the event of an emergency at an oil or gas site that would require residents to take shelter or take other protective actions.

I. If any grading is proposed that results in the loss of vegetated, sandy, permeable ground areas, which could alter surface runoff at the site, a site-specific hydrologic analysis to evaluate anticipated changes in drainage patterns and associated increased runoff at the site.

J. If the site is within 1,000 feet of any prohibited zoning as listed in Table 1-1, a quiet mode operation plan which includes, but is not limited to, the following noise reduction measures:

1. Using signalers for all backup operations instead of backup alarms and turning off backup alarms;

2. Using radios instead of voice communication;

3. Minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading to the maximum extent feasible and nighttime loading only for safety reasons;

4. Prohibiting material and supply deliveries to the Project Site, other than along designated truck routes, between the hours of 6 p.m. and 8 a.m. on weekdays and prohibiting deliveries on weekends and holidays, with exceptions only for safety; and

5. Limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

K. If the site is within 1,000 feet of any prohibited zoning as listed in Table 1-1, a photometric analysis, which compares the baseline of the existing light measurements with the proposed light spill that will result from the oil and gas site.

L. An Environmental Quality Assurance Program ("EQAP"). (Ref. Section 9531.1).

9507.2 Processing and Review

Processing of CUPs shall comply with California's Permit Streamlining Act requirements as consistent with Sections 9170 through 9179 of this Code.

A. The applicant may apply for:

1. The drilling operations only;

2. The production facilities only; or

3. Both the drilling and production facilities.

B. The City Manager will review the submitted application(s) for completeness in compliance with the filing requirements of Section 9507.1 and any other applicable sections of the Code, and shall refer the filed CUP to appropriate City departments or local and state agencies, as appropriate, for review and comment.

9507.3 Findings and Permitting Conditions

A. In addition to the requirements of Section 9172.21D (Commission Findings and Decision), the Planning Commission shall approve a Conditional Use Permit only if it is able to make affirmative findings of the following criteria:

1. The proposed project shall be in conformance with requirements of other local, regional, or State entities;

2. The project shall not be detrimental to the comfort, convenience, health, safety, and general welfare of the community, and will be compatible with the uses in the surrounding area;

3. The project shall be in compliance with the Development Standards contained in Part 2 of this ordinance, commencing with Section 9521; and

4. The project shall not result in an increased level of freshwater pollution or groundwater contamination in the immediate area or cause regulatory water standards at an existing water production well to be violated as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and in the Safe Water Drinking Act, as they may be amended.

B. As a condition of approval of a CUP, the Planning Commission shall consider and impose appropriate conditions as deemed reasonable and necessary to find consistency with the findings 1 through 5 above.

9507.4 Modifications and Extensions

A. The provisions of Section 9172.21 shall apply for all modifications or extensions requested for oil and gas operations.

B. Any existing oil and gas operation that does not have a CUP or development agreement for the operation shall be required to comply with this ordinance if any new development occurs at the existing oil and gas site.

9507.5 Change of Ownership/Operators Criteria

A. Listing on Permit. Any person who operates an oil or gas site that is subject to this ordinance shall be listed as a permittee on the permit(s) issued for that facility.

B. Acceptance of Permit. Prior to being listed on a permit, any operator of an oil or gas site that is subject to this ordinance shall provide the City with a letter from an authorized agent or officer of the operator formally accepting all conditions and requirements of the permit.

C. Permits Transferable. Any CUP issued to any oil and gas site authorized pursuant to this Code shall be transferable to a new operator provided that the new operator accepts and meets all of the conditions and requirements of the CUP and this ordinance.

D. Ongoing Notification. All operators, and guarantors shall, as an ongoing requirement, notify the City Manager in writing of any change in the information required by this Section within thirty days of such change.

E. Change of Operator. A change of operator shall require an application filed with the City within thirty days prior to a change of operator. Upon approval by the City Manager, such change of operator will become effective upon joint notice from the prior and new operators that the change of operator has become effective. An application is not required when the change of operator does not entail a substantive change to operations or personnel of the oil or gas site as determined by the City Manager.

F. Liability for Compliance with Permit Conditions. Any operator listed on a permit pursuant to this ordinance shall comply with all conditions of such permit. Failure to comply with such permit conditions shall subject the operator to the applicable penalty and enforcement provisions of this Code or other applicable ordinance for such permits.

Liability for Abandonment. The operator, as determined by the records of the City Manager, of a facility or site subject to this ordinance shall be responsible for the proper abandonment of the facility or site.

9508 Procedures for Development Agreements

Projects appropriate for development agreements are subject to the requirements of this Section, which establishes procedures for adoption. The procedures for development agreements will comply with Government Code Division 1, Chapter 4, Article 2.5 and the following additional requirements:

9508.1 Filing Requirements

A. Only a qualified applicant may file an application to enter into a development agreement. A qualified applicant is a person(s) who has a legal or equitable interest in the real property of the oil or gas site. The qualified applicant shall provide proof of ownership interest, proof of interest in the real property, and proof of the authority of the agent or representative, to act for the applicant. Said proof of interest and proof of authority shall be subject to review and approval by the City Attorney.

B. The City Manager shall prescribe the form for each application, notice and documents provided for or required under these regulations for the preparation and implementation of development agreements. The applicant shall complete and submit such an application form to the City Manager, along with a deposit for the estimated direct and indirect costs of processing the development agreement.

The applicant shall deposit any additional amounts for all costs and fees to process the development agreement, including all legal fees, within 15 days of request by the City Manager. Upon either completion of the application process or withdrawal of the application, the City shall refund any remaining deposited amounts in excess of the costs of processing.

C. The City Manager shall require an applicant to submit such information and supporting data as the City Manager considers necessary to process the application.

D. A community benefit assessment to evaluate the benefits the DA will provide to the community.

9508.2 Processing and Review

A. The City Manager shall endorse on the application the date it is received. An application or related document shall not be complete until an estimated deposit for the cost of processing has been paid to the City. If within 30 days of receiving the application the City Manager finds that all required information has not been submitted or the application is otherwise incomplete or inaccurate, the processing of the application and the running of any limits shall be suspended upon written notice to the applicant and a new 30 day period shall commence once the required material is received by the City Manager. If the City Manager finds that the application is complete it shall be accepted for filing and the Applicant so notified. The City Manager shall review the application and determine the additional requirements necessary to complete processing of the agreement. After receiving the required information and the application is determined to be complete, the City Manager shall prepare a staff report and recommendation to the Planning Commission and City Council stating whether or not the agreement as proposed or in an amended form would be consistent with policies of the City, this ordinance and any applicable general or specific plan. The City Attorney shall review the proposed development agreement as to legal form.

B. Notice of a hearing regarding the development agreement shall be given by the City Manager and shall comply with the requirements of Government Code Section 65867, as may be amended, as well as in the manner set forth in Section 9173.22 Article IX, Chapter 1, Part 7 of the Code, except that the City Manager, not the Director, shall be responsible for providing notice.

C. The Planning Commission shall review the proposed development agreement and provide a recommendation to the City Council to approve, approve with modifications or deny the proposed development agreement. If the Planning Commission fails to take action within 60 days of opening the hearing on the matter, such failure shall be deemed to have made a recommendation of denial to the City Council unless the applicant has requested an extension of time, either in writing or on the record, which has been approved by the Planning Commission prior to the running of the 60th day.

D. The proposed development agreement shall be set for hearing and consideration before the Council within 60 days of the recommendation of the Planning Commission, unless the applicant agrees in writing to an extension of time with the City Manager prior to the matter being heard by the Council.

E. Within 10 calendar days after the City enters into the development agreement, the City Clerk shall have the agreement recorded with the County Recorder. If the parties to the agreement or their successors in interest amend or cancel the agreement as provided in Government Code Section 65868, or if the City terminates or modifies the agreement as provided in Government Code Section 65865.1 for failure of the applicant to comply in good faith with the terms or conditions of the agreement, the City Clerk shall have notice of such action recorded with the County Recorder.

9508.3 Findings and Development Agreement Conditions

A. After the City Council completes the public hearing, the Council may not approve the development agreement unless it finds that the provisions of the agreement:

1. Are consistent with the goals, objectives, and policies of the general plan and any applicable specific plan;

2. Are compatible with the uses authorized in, and the regulations prescribed for the zoned district in which the real property is located;

3. Will not be detrimental to the health, safety, environmental quality, and general welfare of the community;

4. Will not adversely affect the orderly development of property or the preservation of property values; and

5. Provides for a penalty for any violation of the development agreement consistent with the provisions of Section 9514.

9508.4 Modifications and Extensions

A. The provisions of Government Code Section 65868 shall apply for all modifications, extensions or other amendments of the terms of a development agreement subject to this ordinance.

B. Either party may propose an amendment or termination of an approved development agreement subject to the following:

1. The procedure for amending or terminating, the development agreement is the same as the procedure for entering into an agreement in the first instance.

2. The development agreement may be amended or cancelled only by the mutual consent of the parties, as provided in California Government Code section 65868.

C. Nothing herein shall limit the City's ability to terminate or modify the agreement consistent with Government Code section 65865.1 or 65865.3 as may be amended.

9509 Periodic Review

The City may choose to conduct a comprehensive review of any oil or gas drilling permit, CUP or DA every five years from the date of approval to determine if the project and the associated CUP or DA are adequately mitigating significant environmental impacts caused by the drilling and operations. Nothing in this section shall limit the City's authority to conduct a review at more frequent intervals, engage in mitigation monitoring as required by CEQA, or otherwise act as directed or authorized by law.

A. Within 30 days from the request by the City, the operator shall deposit to the City the funds necessary for the City to retain a third party entity to prepare a periodic review, which includes all records, drawings, specifications, permits from state agencies, and analysis of the effectiveness of this ordinance, enforcement activity, and any other issues associated with potentially adverse effects of and complaints about oil and gas site operations. A periodic review will be funded by the operator at most once every 5 year period following approval. If the periodic review identifies significant deficiencies in an oil and gas drilling permit, a CUP or DA that are resulting in unmitigated adverse impacts then the City Manager may identify these deficiencies and bring forward recommendations of corrective actions to the Planning Commission for consideration and prospective amendments of oil and gas drilling permits and CUPs, and to the Planning Commission for recommendation to the City Council for consideration and prospective amendments of DAs.

B. A permit, CUP, or DA may also be reviewed by the City Manager at any time, if more than three violations occur within a twelve month period and the City Manager determines that resolution of the violations may be addressed by a new permit and/or an amendment to the CUP or DA. The City Manager shall make a recommendation of amendments to the Planning Commission for CUPs and permits, and the Planning Commission and City Council for DAs, as deemed necessary. Nothing in this Section shall preclude the City from taking any other enforcement action authorized by this Code

C. Nothing in this Section shall limit the requirements of an operator with a DA to demonstrate to the City Manager good faith compliance with the terms of the agreement at least every 12 months as required by Government Code section 65865.1. If as a result of that review the City Manager believes there is substantial evidence that the operator has not complied in good faith with the terms or conditions of the agreement, the City Manager shall present the matter to the Commission for a recommendation to the City Council. The Commission shall set the matter for public hearing within 40 days of receipt of the

matter from the City Manager. If the Commission fails to act upon such request within a reasonable time, the Council may, by written notice, require the Commission to render its recommendation within 40 days. Failure to so report to the Council within the above time period shall be deemed to be a recommendation against modification or termination. After the Commission has rendered its recommendation, the matter shall be set for hearing before the City Council, who may terminate or modify the agreement if it finds and determines, on the basis of substantial evidence, that the operator or successor in interest has not complied in good faith with the terms and conditions of the DA.

9510 Facility Closure, Site Abandonment, and Site Restoration Procedures

The following provisions and procedures shall be implemented at the end of life of an oil and gas site, subject to a CUP, and govern the site (including well) facility closure and site restoration procedures:

9510.1 Purpose and Intent

A. Section 9510 et seq. establishes procedures and provisions to achieve the timely abandonment of oil and gas related activities and land uses, and following the abandonment, the timely and proper removal of applicable oil and gas facilities (including wells, equipment and gas-related structures), reclamation and remediation of host sites, and final disposition of pipelines, in compliance with applicable laws and permits.

B. The procedures ensure appropriate due process in differentiating idled from abandoned facilities and protecting the vested rights of permittees while also ensuring that sites with no reasonable expectation of restarting are removed, in compliance with the intent of abandonment permits. These procedures also ensure a process for abandoning or re-abandonment of portions of sites where oil and gas operations will continue on the site, as well as procedures for restoration and redevelopment of a site to other uses at the end of the economic life of oil and gas production.

9510.2 Applicability

Oil and gas sites and operations subject to Section 9510 and its subsections, shall include all permitted uses identified in Section 9501.A of this Code, regardless of whether these uses were permitted in compliance with this ordinance or any preceding ordinance. This includes, all pipeline systems, except for public utility natural gas transmission and distribution systems, that either transport or at one time transported natural gas, oil, produced water, or waste water that originated from a reservoir, regardless of whether these uses were permitted in compliance with this Code or any preceding ordinance.

9510.3 Application Process

The procedures for processing an abandonment and site restoration permit shall utilize the notice, hearing

and appeal process for a Conditional Use Permit as detailed in Article IX, Chapter 1, Part 7 of the Code, as refined herein by Section 9505. For any item required to be submitted less than 180 days in advance, the City Manager has the discretion to process and approve the application. Any person may submit an appeal to the City Manager or the Planning Commission within 15 days of the City Manager's notice of decision consistent with Section 9173.4. Mandatory requirements of the Code are not subject to appeal. All procedures shall be consistent with the following requirements:

9510.3.1 Requirement to File an Application

A. Complete Abandonment of oil and gas operations: The operator shall submit an application to the City Manager upon intentional abandonment of the entire oil and gas operation or site. The application for abandonment and site restoration proceedings shall be submitted 180 calendar days prior to the planned shutdown of all the facilities.

B. Partial Abandonment of oil and gas operations: If any portion of the oil or gas site is being abandoned, or if a well is being re-abandoned, the operator shall submit an application to the City Manager for partial abandonment of oil or gas operations. Said application shall be submitted not later than 30 calendar days prior to abandonment or re-abandonment of wells involving no more than 10% of the total number of wells on site or 10 wells, whichever is more; all other applications shall be submitted not later than 180 calendar days prior to abandonment, re-abandonment or restoration.

C. Other Events Requiring an Application. The operator shall submit an application for abandonment, re-abandonment, and site restoration proceedings to the City Manager upon any of the following:

1. Any event or condition designated in an existing City permit or entitlement that would require consideration of abandonment. The Application shall be submitted 90 days in advance of the event or condition. If the event or condition cannot be known until after it occurs, the application must be submitted within 15 days of the event or condition.

2. Upon order of DOGGR. The application shall be submitted within 30 days of a DOGGR order to abandon, re-abandon, and restore the site, provided, however, that if the operator timely appeals such an order of the DOGGR, it shall have no obligation hereunder until 30 days after a final decision affirming such order.

D. Nothing in this ordinance shall limit the City's police powers. The City may require those measures reasonably necessary to address specific site or operational conditions that threaten public health, morals, safety or general welfare, which measures could include partial or complete abandonment.

9510.3.2 Content of Application

The application shall be in a form and content specified by the City Manager and this Section. The application shall contain the following:

A. Name, address, and contact information for the permittee.

B. Name, address, and general description of the permitted land use.

C. Gross and net acreage and boundaries of the subject property.

D. Location of all structures, above and underground, proposed to be removed.

E. Location of all structures, above and underground, proposed to remain in-place.

F. Locations of all structures, above and underground, proposed for development, if any.

G. Location of all wells, including active, idled, abandoned or re-abandoned wells, including distances from site boundaries, and existing structures. Each well shall include the DOGGR well name and number, as well as the American Petroleum Institute (API) well number. If available, the location of the wells shall be identified with the name of the operator and well designation.

H. An American Land Title Association (A.L.T.A) survey of the site, showing all improvements, easements, rights-of-way, and other elements impacting the ownership of land.

I. Location of all utilities on the subject property.

J. Location of all easements on or adjacent to the subject property that may be affected by demolition or reclamation.

K. To the extent known, the type and extent of all contamination and proposed remedial actions to the level of detail that can be assessed through environmental review. This information does not require a new or modified Phase 2 site assessment in advance of any requirement by the Fire Department or State agencies with regulatory oversight of site assessments.

L. Location of areas of flood, geologic, seismic, and other hazards.

M. Location of areas of archeological sites, habitat resources, prime scenic quality, water bodies, and significant existing vegetation.

N. Location and use of all structures within 100 feet of the boundaries of the subject property.

O. A proposed abandonment and restoration plan that details the activities for the proposed action, including the following details: hours of operation, estimated number of workers required on site to decommission facilities and structures or to otherwise abandon or re-abandon wells, disposition of equipment and structures proposed for decommissioning, projected method and routes of transporting equipment, structures, and estimated debris from the site to the place of disposition as well as the number of trips required, and an estimated schedule for decommissioning the facilities or completion of the work.

P. A proposed waste-management plan to maximize recycling and minimize wastes.

Q. Other permit applications that may be required by the Code to retain any existing structures, roadways, and other improvements to the property that were ancillary to the oil or gas operations and are proposed to be retained to support other existing or proposed uses of the property following abandonment of the oil or gas operations.

R. A proposed grading and drainage plan.

S. A proposed plan to convert the site to natural condition or convert to other proposed land use, including a detailed schedule for restoring the site. In the latter case, include other applicable permit applications required, if any, for the proposed land use.

T. A statement of intent regarding the disposition of utilities that served the oil and gas operations, including fire protection, power, sewage disposal, transportation, and water.

U. Measures proposed to be used to prevent or reduce nuisance effects (e.g., dust, fumes, glare, noise, odor, smoke, traffic congestion, vibration) and to prevent danger to life and property.

V. A copy of DOGGR approval to abandon, re-abandon or remediate well(s).

W. A leak test report for each abandoned well on the site that meets the requirements of Section 9537.

X. For abandonment or restoration in any circumstances where the permit is approved by the City Manager without Planning Commission action, proof of mailed notice of intent to seek a permit to abandon or restore to the owner of record on the latest assessment roll for neighboring parcels within 500 feet of the oil and gas site property boundaries. The notice shall generally describe the scope of the activity being proposed.

Y. Any other information deemed reasonably necessary by the City Manager to address site-specific factors.

9510.3.3 Permitting Specifications

A. Application Filing. The City Manager shall process complete applications for permits after determining the applications to be complete in compliance with Section 9510.3.2 of this ordinance, and submit applications subject to initial Planning Commission review to the Planning Commission with a recommendation regarding approval if the findings in Section 9510.3.4 are met. An application shall not be complete unless the applicant has made a deposit for the estimated direct and indirect costs of processing the application. The applicant shall deposit any additional amounts for the costs to process the application, including legal review, within 15 days of request by the City Manager. Upon either completion of the permitting process or withdrawal of the application, the City shall refund any remaining deposited amounts in excess of the direct and indirect costs of processing.

B. Independent or concurrent processing of applications. For applications subject to initial Planning Commission review, the Planning Commission shall process complete applications for abandonment and site restoration permits independently of any other permit applications to develop the site in question, unless the City Manager makes the determination that the concurrent processing of abandonment and site restoration permits and development permits for the same site do not unduly hinder timely restoration of abandoned sites or result in long delays in securing approval of development permits.

C. Demolition and restoration permit shall supersede. Upon approval of a demolition and restoration permit subject to initial approval by the Planning Commission, or upon abandonment of operations, whichever occurs later, the demolition and reclamation permit shall supersede any inconsistencies in the discretionary permit approved for construction and operation of the facilities.

D. Conditions of Permit. In addition to any other requirements of this Code, any permit for abandonment, re-abandonment or restoration shall be subject to the following requirements regardless whether initially approved by the City Manager or the Planning Commission:

1. Oil well abandonment shall be performed by oil service company contractors licensed to do business in the city.

2. All equipment and surface installations used in connection with the well which are not necessary, as determined by the City Manager or Planning Commission, for the operation or maintenance of other wells on the drill or operation site shall be removed from the site.

3. The abandoned site or portions of the oil and gas site shall be restored to its original condition or as nearly as is practical given the nature of the location and continuing uses for an oil and gas site, so long as the restoration will not adversely impact ongoing oil and gas production operations.

4. All sumps, cellars, and ditches which are not necessary for the operation or maintenance of other wells on the oil or gas site shall be cleaned out and all oil, oil residue, drilling fluid, and rubbish shall be removed to reduce hydrocarbons to standards acceptable to federal, state, or local agencies. All sumps, cellars, and ditches shall be leveled or filled. Where such sumps, cellars, and ditches are lined with concrete, the operator shall cause the walls and bottoms to be broken up and all concrete shall be removed.

5. The portions of the site not necessary for continuing oil or gas site operations shall be cleaned and graded and left in a clean and neat condition free of oil, rotary mud, oil-soaked earth, asphalt, tar, concrete, litter, and debris.

6. All public streets, alleys, sidewalks, curbs and gutters, and other places constituting public property which may have been disturbed or damaged in connection with any operation, including operations for the abandonment or re-abandonment of the well shall be cleaned, and, except for ordinary wear and tear, shall be repaired and restored to substantially the same condition thereof as the same existed at the time of issuance of the permit, or at the time operations were first commenced in connection with the drilling, operation, or maintenance of the well.

7. A copy of written approval of DOGGR confirming compliance with all state abandonment proceedings for all abandoned facilities must be furnished to the City Manager.

8. Proposed restoration will leave the subject site in a condition that is compatible with any existing easements or dedications for public access through, or public use of a portion of the property.

9510.3.4 Findings Required for Approval

In addition to the findings specified in 9172.21 of the Code, for permits the City Manager or Planning Commission shall also make affirmative findings based on the following criteria:

A. The subject site will be restored and remediated to its pre-project conditions unless areas within the site are subject to approved development, in which case restoration and landscaping of these areas will conform to the permitted development. In cases where development is proposed but not yet permitted, restoration of affected areas to natural conditions may be waived by the Planning Commission; provided, the development is permitted within five years and the permittee has posted financial assurances acceptable to the City Manager to ensure restoration to natural conditions if the proposed development is not permitted.

B. The proposed restoration will leave the subject site in a condition that is compatible with any existing easements or dedications for public access through, or public use of a portion of the property

C. The permit conditions comply with Section 9510.3.3 and contain specific enforceable requirements to ensure the timely completion of any abandonment or re-abandonment of wells, restoration activities or cessation of other oil and gas site operations subject to the permit.

9511 Operational Noticing

A. Each operator shall submit copies of notices provided to or received from DOGGR, to the City Manager, within ten business days of transmission or receipt of such notices, as applicable. These shall include: designation of agents, notice of intent to drill a new well, division approvals (permit to conduct well operations, notice and permit to drill, permit to rework/redrill well (p-report), enhanced recovery project approval, water-disposal project approval, commercial water-disposal approval), notice of intention to rework/redrill well, notice of intention to abandon/re-abandon well, supplementary notices, report of property transfer forms and any inspection reports or notices of violation, as these notices may be updated or amended. All other DOGGR notices or other DOGGR communications shall be submitted at the discretion of the City Manager.

B. The operator of (or any person who acquires) any well, property, or equipment appurtenant thereto, whether by purchase, transfer, assignment, conveyance, exchange or otherwise, shall each notify the City Manager within ten business days of the transaction closing date. The notice shall contain the following:

1. The names and addresses of the person from whom and to whom the well(s) and property changed.

2. The name and location of the well(s) and property.

3. The date of acquisition.

4. The date possession changed.

5. A description of the properties and equipment transferred.

6. The new operator's agent or person designated for service of notice and his address.

C. The operator of any well shall notify the City Manager, in writing, of the idling of any well. The operator shall notify the City Manager in writing upon the resumption of operations of an idle well giving the date thereof.

D. The operator shall report any violations of state or federal laws that occur on an oil and gas site to the City Manager within 30 days of their date of documentation by a state or federal agency.

9512 Complaints

All complaints related to activities regulated by this ordinance received by the operator shall be reported within one business day to the City Manager. If the complaint is received after normal business hours, it shall be reported to the City Manager the next business day. In addition, the operator shall maintain a written log of all complaints and provide that log to the City Manager on a quarterly basis.

9513 Injunctive Relief

In addition to any administrative remedies or enforcement provided in this Code, the City may seek and obtain temporary, preliminary, and permanent injunctive relief to prohibit violation or mandate compliance with this Code. All remedies and enforcement procedures set forth herein shall be in addition to any other legal or equitable remedies provided by law.

9514 Notice of Violation and Administrative Fines

A. The operator shall also be subject to a fine for violation of any requirement of a CUP or this ordinance as determined by the City Manager, subject to the following:

1. Depending on the specific type and degree of the violation, the operator in violation may be penalized at a rate of up to $10,000 per day, per violation, until it is cured, but in no event, in an amount beyond that authorized by state law. The City Manager will develop a violation fine schedule for Council approval to specifically identify the fines associated with oil or gas site violations. This violation fine schedule may also include nuisance violations.

2. In the event of a violation of any of the City's permitting actions, a written notice of violation and the associated fine determination will be sent to the operator by the City Manager. The operator shall deposit the sum of $5,000 per well, up to $100,000, in an interest-bearing trust fund with the City within thirty days of the date of the second violation notice sent to the operator by the City Manager, to establish a draw down account. If the noted violation is not corrected within thirty calendar days to the satisfaction of the City Manager, or if steps satisfactory to the City Manager have not been initiated during that period to affect a cure or to seek modification of the condition, the fine amount cited in the written notice will be deducted from the account. The operator shall reimburse the City for any additional reasonable costs above the amount of the original deposit.

3. The operator has a right of appeal to the City Manager or Commission within 15 days of the written notice or contested determination of compliance. Decisions of the City Manager not appealed within 15 days become final. If the operator appeals to the City Manager or the Commission such that the decision is ultimately reversed and the operator is specifically designated the "prevailing party" by the City Manager or Commission, then the City shall refund the operator the deposit related to the challenged determination.

B. Nothing in this Section or ordinance shall limit the City's ability to pursue other enforcement procedures, including CUP revocation proceedings, actions to enforce a DA, or other legal or equitable remedies provided by this Code or available under the law. Revocations of a permit or CUP may be done pursuant to Section 9172.28, except that the Commission may choose to amend rather than revoke, and the references to "Director" shall be replaced with "City Manager."

9515 Nuisance Procedures

Any violation of this ordinance is hereby declared to be a public nuisance for the purposes of Section 5702, and may be abated pursuant to the procedures set forth in Article V, Chapter 7 (Property Maintenance) of this Code, except that references to "Director" shall be replaced with "City Manager or designee". The procedures for abatement shall not be exclusive, and shall not in any manner limit or restrict the City from otherwise enforcing this ordinance or abating public nuisances in any other manner as provided by law, including the institution of legal action by the City Attorney to abate the public nuisance at the request of the City Manager.

9515.1 High-Risk Operations

A. Upon determination that any oil and gas production, processing or storage operation meets the definition of high risk operation from Section 9503, the City Manager shall give the operator written notice of the City Manager's intent to determine the operation a high risk operation under this Section. The intent of this Section shall be to remediate the high-risk operation and bring the oil or gas site and the operator within normal, safe operating standards and protect the public safety, health and environment. The written notice of the intent to determine the operation a high-risk operation shall include:

1. Facts substantiating the determination; and

2. A notice regarding the right to appeal the determination to the Commission within 15 days. During the pendency of any such appeal, the City Manager's determination shall remain in full force and effect until affirmatively set aside by the Commission. The Commission's decision shall be supported by substantial evidence, and refusal by the operator to provide

access to the operation to allow inspection or investigation to determine compliance as authorized by this Code or other law shall be deemed evidence the definition of a high risk operation has been met.

B. Along with the determination of the site being a high risk operation, the City Manager may take either or both of the following actions:

1. An investigation of the causes leading up to the high risk determination;

2. Require a mandatory restoration plan to be submitted by the operator. Such plan shall include, but is not limited to:

   i. A mandatory restoration schedule for bringing the site and operator within normal, safe operating standards. Such schedule does not supersede any timeline for abatement otherwise established for individual outstanding violations.

   ii. An audit of overall site operation(s):

      a. The audit shall be conducted by an independent third party approved by the City Manager. Costs associated with the audit shall be borne by the operator;

      b. The audit shall identify and analyze the root causes leading to the high risk designation;

      c. The audit shall further identify and analyze other potential areas in overall site operation that could impact the site's ability to operate within safe and normal standards (e.g. personnel training, operational policies, internal procedures, etc.);

      d. Provide a plan for remediating all issues identified in the audit, including a mandatory schedule for remediating those issues. Such restoration plans shall be subject to approval by the City Manager.

      e. The audit may be ordered in lieu of, or in addition to the investigation undertaken by the City Manager.

   iii. Any other requirements the City Manager deems necessary to bring the site and operation within normal, safe operating standards for the purposes of protecting the public safety, health and environment.

C. The operator of the high risk operation shall carry out the approved restoration plan and shall be responsible for paying all reasonable costs associated with the implementation of the plan, including:

1. City staff time in enforcing these provisions at an hourly rate that provides for full cost recovery of the direct and indirect costs. Staff time shall include, but is not limited to, the ongoing monitoring and verification of compliance with the approved restoration plan;

2. Investigative, research (including legal research) and consulting costs associated with preparation of the restoration plan;

3. Third party costs for investigation, consultation, engineering, clean-up, operator staff training, operations and all other related costs necessary to carry out the restoration plan;

4. Any other costs necessary to remediate the high risk operation as ordered by the City Manager.

D. At the sole discretion of the City Manager, at any time during which a site or operator is subject to this Section, the City Manager may require a bond be posted to cover the cost of remediating the causative problems of the high risk operation.

E. The determination of high risk operations shall continue to apply until the goals and guidelines of the restoration plan established hereunder is achieved. The high risk operator shall notify the City Manager when a milestone in the restoration plan has been satisfied. The City Manager may conduct independent verification of the compliance upon such notification. The restoration plan may be amended from time to time as necessary to achieve the purposes of this Section. Upon a determination by the City that the goals and guidelines of the restoration plan have been achieved, the City shall notify the operator in writing that the site is no longer a high risk operation.

F. Failure of the operator of a high risk operation to post a bond required under this Section, prepare the restoration plan within a reasonable timeframe as ordered by the City Manager, or to reasonably achieve the goals and guidelines of an approved restoration plan under this Section, may be cause for a shutdown of the high risk operation(s) or any other petroleum operations located in the City that are co-owned or co-operated by the high risk operator, at the discretion of the City Manager.

G. The operator of a high risk operation shall compensate the City for any costs associated with the enforcement of this Section within 30 days of written demand by the City Manager. Any City costs associated with enforcement of this Section, which are not promptly paid by the operator shall be subject to enforcement by tax bill lien or other collection methods at the discretion of the City.

H. The City may institute legal proceedings to require compliance provisions with this Section.

9516 Compliance Monitoring

A. Environmental Compliance Coordinator(s). The City may hire Environmental Compliance Coordinators as needed to oversee the monitoring and condition compliance requirements of the City's permitting actions subject to regulation under this ordinance, the costs of which shall be reimbursed by operator. The number of Environmental Compliance Coordinators shall be determined by the City and shall take into account the level of oil and gas operations associated with the project site. The Environmental Compliance Coordinator(s) shall be approved by, and shall report to, the City Manager consistent with the City Manager's authority under Section 2107 of this Code. The responsibilities of the Environmental Compliance Coordinator(s) shall be determined by the City for the project site and shall generally include:

1. Monitoring of oil and gas sites for compliance with this ordinance as it relates to construction, drilling, operational or abandonment and site restoration activities as determined by the City Manager.

2. Taking steps to ensure that the operator, and all employees, contractors and other persons working in the project site, have knowledge of, and are in compliance with all applicable provisions of the conditional use permit or development agreement.

3. Reporting responsibilities to the various City departments with oversight responsibility at the project site, as well as other agencies such as DOGGR, and SCAQMD.

B. Compliance Deposit Account. An applicant must establish a compliance deposit account with the City within 30 days of receiving authorization for a CUP or DA from the City. The compliance security deposit amounts shall be determined by the City Manager, and shall be based on the nature and extent of the compliance actions required.

9517 Financial Assurances Applicability

A. Sections 9518 through 9520 shall apply to any person who operates any oil or gas site involved in exploration, production, processing, storage or transportation of oil or gas extracted from reserves in the City of Carson:

B. This ordinance shall not apply to the change of operator of the following:

1. Sales gas pipelines operated by a public utility and regulated by the California Public Utilities Commission;

2. A change of ownership consisting solely of a change in percentage ownership of a site and which does not entail addition or removal of an owner or affect any financial guarantee or bonds for a permit, CUP, and/or DA.

9518 Operator's Financial Responsibilities

The applicant shall be fully responsible for all reasonable costs and expenses incurred by the City or any City contractors, consultants, or employees, in reviewing, approving, implementing, inspecting, monitoring, or enforcing this ordinance or any CUP, DA, or permit, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring (including well abandonment and re-abandonment), reviewing and verifying information contained in reports, inspections, administrative support, and including the fully burdened cost of time spent by City employees, City Attorney, or third-party consultants and contractors on such matters.

9519 Securities and Bond Requirements

The operator or any contractor of any oil and gas operation subject to this ordinance shall provide, or cause to be provided, the securities and bond requirements described below

A. The operator shall file a faithful performance bond with the City Manager consistent with the following bonding requirements:

1. The City Manager shall determine the amount of the bond based on the total number of wells, proposed operations, size and nature of the property, appropriate environmental studies on the property, including a Phase I, II or Human Health Risk Assessment Reports and other relevant conditions related to the proposed wells or operations at a specific oil or gas site, and recognized commercial standards.

2. The amount of the bond shall be sufficient to assure the completion of the abandonment, necessary re-abandonment, site restoration, to the extent not fully covered by DOGGR bonds, and remediation of contamination of the oil or gas site if the work had to be performed by the City in the event of forfeiture. The performance bond shall be inflation indexed to ensure the amount of the bond shall be sufficient to assure completion of the abandonment, restoration and remediation of contamination of the oil or gas site. The bond shall be available within a time frame to allow the City to undertake related activities in a timely manner, including at least half for immediate access and use in the event of an emergency as determined by the City Manager.

3. Prior to expansion of an oil or gas site, the operator shall apply to the City Manager for a determination of the amount of the bond necessary to ensure completion for both the existing

and expanded operations. In addition, every bond shall be re-assessed by the City Manager every 5 years to ensure the amount is sufficient to ensure the completion of the abandonment, site restoration, and remediation of contamination of the oil or gas site.

4. Upon application by the operator, the City Manager may reduce bonding amounts based upon change of physical circumstances, completion or partial completion of work, or significant reduction in cost to perform the work. In no event shall the amount of the bond be reduced to an amount insufficient to complete any remaining work, nor shall the bond be reduced due to economic hardship or similar considerations.

5. After completion of all abandonment and site restoration requirements, the bond shall be maintained in a sufficient amount to ensure remediation of contamination at the oil or gas site for a period not less than 15 years.

6. In no event shall the bonding amount required by the City be less than $10,000 per well.

7. The bond may be drawn only from a qualified entity without any economic interests or relationship with the operator and any related economic entities related thereto, and bonds must and must be rated "A" or better by a nationally recognized bond rating organization. The City Manager shall receive all pertinent information related to the bond and bonding entity prior to issuance of a final approved permit, CUP, or DA.

B. In lieu of these bonding requirements, an operator may also submit any other legally adequate and binding financial mechanism, subject to City Attorney approval, to satisfy the monetary assurance requirements set by the City Manager to assure completion of the abandonment, restoration and remediation of contamination of the oil or gas site.

C. For any evaluation of bonding amounts by the City Manager in this Section, or evaluation of a financial mechanism proposed in lieu of a bond by the City Attorney, the operator shall deposit the estimated costs with the City Manager with the application, and shall also make any additional deposit(s) within 30 days of written request by the City Manager. The City Manager may retain consultants or other experts in the industry to assist in deriving a commercially reasonable bond amount.

9520 Operator Liability Insurance

The operator of any oil and gas operation subject to this ordinance shall provide, or cause to be provided, the insurance described below for each oil and gas site during the pendency of oil and gas operations. The operator or contractor must provide to the City sufficient documentation that the insurance complies with the minimum requirements and coverage amounts of this Section before a permit may be issued.

A. General provisions regarding insurance:

1. The operator or any contractor shall pay for and maintain in full force and effect all policies of insurance described in this Section with an insurance company(ies) admitted by the California Insurance Commissioner to do business in the State of California and rated not less than "A-VII" in Best's Insurance Rating Guide.

2. In the event any policy is due to expire, the operator or any contractor shall provide a new certificate evidencing renewal of such policy not less than 30 calendar days prior to the expiration date of the expiring policy. Upon issuance by the insurer, broker, or agent of a notice of cancellation in coverage, operator or any contractor shall file with the City Manager a new certificate and all applicable endorsements for such policy.

3. Liability policies shall name as "additional insured" the City, including its officers, officials, agents, employees and authorized volunteers.

4. All policies shall be endorsed to provide an unrestricted 30 calendar day written notice in favor of City of policy cancellation of coverage, except for: 1) non-payment, which shall provide a 10-day written notice of such cancellation of coverage, and 2) the Workers' Compensation policy which shall provide a 10 calendar day written notice of such cancellation of coverage.

5. The operator shall present to the City Manager copies of the pertinent portion of the insurance policies evidencing all coverage and endorsements required by this Section before the issuance of any permit subject to this ordinance, and the acceptance by the City of a policy without the required limits or coverage shall not be deemed a waiver of these requirements. The City may, in its sole discretion, accept a certificate of insurance in lieu of a copy of the pertinent portion of the policy pending receipt of such document by the City. After the issuance of the permit, the City may require the operator to provide a copy of the most current insurance coverage and endorsements for review at any time. The operator will be responsible for paying an administration fee to cover the costs of such review as may be established by the City's fee schedule.

6. Claims-made policies shall not be accepted except for excess policies and environmental impairment (or seepage and pollution) policies.

7. Insurance coverage shall be reviewed by the City Manager as required by Section 9509 to ensure adequate insurance is maintained.

B. Required insurance coverage:

1. Commercial or comprehensive general liability insurance:

   i. Bodily injury and property damage coverage shall be a minimum combined single limit of $2,000,000 per occurrence $2,500,000 in the aggregate. This coverage must include premises, operations, blowout or explosion, products, completed operations, blanket contractual liability, underground property damage, underground reservoir (or resources) damage, broad form property damage, independent contractor's protective liability and personal injury.

   ii. Environmental impairment (or seepage and pollution) coverage shall be either included in the comprehensive general liability coverage or as separate coverage. Such coverage shall not exclude damage to the lease site. If environmental impairment (or seepage and pollution) coverage is written on a "claims made" basis, the policy must provide that any retroactive date applicable precedes the effective date of the issuance of the permit. Coverage shall apply to sudden and accidental pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, oil and gas, waste material, or other irritants, contaminants or pollutants. Such policy shall provide for minimum combined single limit coverage of $2,000,000 per occurrence and $2,500,000 in the aggregate. A discovery period for such peril shall not be less than ten years after the occurrence.

2. Commercial automobile liability insurance: Minimum combined single limit of $1,000,000 per occurrence for bodily injury and property damage. The policy shall be at least as broad as the most current version of Insurance Services Office (ISO) Business Auto Coverage Form CA 00 01 and shall include coverage for all owned, hired, and non-owned automobiles or other licensed vehicles (Section 1, subsection A.1 entitled "Any Auto")

3. Worker's compensation insurance: Maintain the minimum statutory requirements, coverage which shall not be less than $1,000,000 for each occurrence.

4. Excess (or umbrella) liability insurance: Minimum limit of $25,000,000 providing excess coverage for each of the perils insured by the preceding liability insurance policies, except for underground reservoir (or resources) damage.

5. Control of well insurance (only during drilling or re-working):

i. Minimum limit of $40,000,000 per occurrence, with a maximum deductible of $500,000 per occurrence.

ii. Policy shall cover the cost of controlling a well that is out of control, drilling or restoration expenses, and seepage and pollution damage. Damage to property in the operator's care, custody and control with a sub-limit of $500,000 may be added.

6. Self-Insurance: The operator shall have the option to self-insure if insurance is not commercially feasible to obtain and maintain in the commercial insurance market, as certified by a written report prepared by an independent insurance advisor of recognized national standing, for the following types of insurance required by this Subsection: Excess (or umbrella) liability insurance, control of well insurance, and environmental impairment (or seepage and pollution) coverage. The operator shall provide a certificate for self insurance subject to approval by the City Manager and Risk Management, and to the City Attorney for approval as to legal sufficiency. To the extent said insurance is limited to amounts less than that required by this ordinance, the operator must first obtain available insurance coverage to the extent it is commercially feasible, and then shall self insure for the remaining amount.

C. Failure to maintain coverage: Upon failure of the operator, or contractors to provide that proof of insurance as required by this Section when requested, the City Manager may order the suspension of any outstanding permits and petroleum operations of the operator until the operator provides proof of the required insurance coverage.

Part 2. Development Standards for Petroleum Operations

The following Sections of Part 2 apply only to those operations subject to a CUP or DA, except for those existing operations as noted in Section 9501.B.

9521 Setback Requirements

A. The surface locations of wells and tanks within an oil and gas site shall not be located within:

1. Seven hundred and fifty feet (750 feet) of the property boundaries of any public school, public park, clinic, hospital, long-term health care facility.

2. Seven hundred and fifty feet (750 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. Seven hundred and fifty feet (750 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.

B. For all injection wells, the Applicant shall provide a copy of the area of review (AOR) study, consistent with the requirements of Title 14 California Code of Regulations Section 1724.7, as per DOGGR.

C. Legally existing oil and gas operations that do not met the setback requirements and were conforming immediately before 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. Such operations may continue to lawfully operate to the extent the operations can demonstrate to the City vested rights as of the effective date of this ordinance, but are prohibited for expanding operations beyond those demonstrated vested rights. Vested rights for a particular well may be demonstrated by the existence of an installed conductor in a cellar for that well or any other method established by law. The operator can replace structures and equipment required for oil and gas operations that are damaged, have failed, are at risk of failure, or are at the end of their useful life. Said replacements shall be made with like-kind structures and equipment that does not expand capacity or structural footprint. If the operator can demonstrate that such structure or equipment is not reasonably available or appropriate for current operational practices, the City Manager may approve minor expansion of equipment or structure upon findings the proposed changes are minor and do not constitute or tend to produce an expansion or intensification of capacity for the site. For existing oil and gas facilities and operations that do not meet the setback requirements as of the effective date of this ordinance, drilling of new wells is prohibited unless the operator can demonstrate vested rights for each new well.

D. Consolidation and Relocation Incentives.

1. Existing Uses in Setback: For existing wells legally operating within the prohibited setback identified in Section 9521.A, an operator can exchange wells, either existing or vested, at a 1:2 ratio to another (existing) receiving site(s) without counting toward new development that would require a CUP or DA.

2. Existing Uses Outside Setback: For existing wells legally operating outside the prohibited setback, an operator can exchange only wells actually existing at the time of the ordinance (not vested or hypothetical wells) at a 1:1 ratio to another existing receiving site(s) without counting toward "new development" that would require a CUP or DA. The contributing site must be completely abandoned before wells can be constructed at any receiving site. The operator must completely abandon all surface rights to the contributing site (i.e., no future oil and gas operations to occur at the site) and provide acceptable proof to the City of the same. All receiving sites must exist and have active operations as of the date of approval of this ordinance.

3. For All Consolidation or Relocation: The operator must provide the City with notice of intent to transfer prior to abandonment of any well(s) or contributing site intended to be consolidated or relocated. Transfers may occur at any time after abandonment is complete and the rights may be "banked" and assigned to another operator upon notice to the City. No well can be transferred more than one time. The receiving well location or site must be located outside the boundaries identified in Section 9521.A.1-3, and comply with Section 9521.A.4 outside of the prohibited setback. The receiving site cannot expand by more than 10 wells from any source or exchange, in addition to those existing or vested, without being considered new development. All receiving sites must comply with Section 9501.B for sites not required to obtain a new CUP.

9522 Site Access and Operation

The following measures shall be implemented throughout the operation of any oil and gas site or project subject to this ordinance:

9522.1 Deliveries

For oil and gas sites located in non-industrial areas or for delivery routes, other than designated truck routes, that pass through or adjacent to prohibited zones as listed in Table 1-1, (a) deliveries to the oil or gas sites shall not be permitted after 6:00 p.m. and before 8:00 a.m., except in cases of emergency and (b) no deliveries shall be permitted on Saturdays, Sundays or legal holidays, except in cases of emergency.

9522.2 Construction Time Limits

Construction of permanent structures, workovers and other maintenance, including replacement in kind, shall not be permitted after 7:00 p.m. and before 7:00 a.m., or during Saturdays, Sundays, or legal holidays, except in the event of an emergency as approved by the City Manager. The drilling or re-drilling of wells is not subject to construction time limits.

9522.3 Oil and Gas Site Parking

A. At all times during the construction and operation of any oil and gas site, parking facilities shall be provided for all vehicles associated with the oil or gas site at a rate of 1 parking space per shift-employee. If approved as part of a CUP or a DA, parking for vehicles of employees or workers engaged in any oil or gas site activities can also be provided by the operator at off-site parking lots or in parking facilities, other than public streets, at locations other than the oil or gas site. The operator shall prohibit personal parking on City streets by operator, permitees, contractors, or consultant staff. If the parking lot or parking facilities are not located within a reasonable walking distance of the controlled drill site, the operator shall provide transportation to and from the parking site for employees and workers.

B. At all times vehicular access to an oil and gas drill site shall be provided in accordance with the plans for vehicular access reviewed and approved by the City Engineer, except for operations existing prior to the effective date of this ordinance..

C. All entrances to an oil and gas site shall be equipped with sliding or swinging gates which shall be kept closed at all times except when authorized vehicles are entering or leaving the oil and gas site.

D. When traffic lanes on any public street are closed or impaired by the operator 's operations, flagmen, and safety officers as required by the L.A. County Sheriff's office shall be provided by the operator at all such times to control traffic and maintain traffic flow.

9523 Lighting

Except for oil and gas sites located within industrial zones, and located farther than 1,000 feet from any prohibited zone as listed in table 1-1, all lighting sources that may be introduced on a site in support of nighttime operations, at the onset and throughout all operations at an oil and gas site shall be screened and directed to prevent light or glare from passing beyond site boundaries. Outdoor lighting shall be restricted to only those lights that are required by Article VIII of this Code for lighting building exteriors and safety and security needs.

9524 Aesthetics

The following measures shall be implemented for all projects that are subject to this ordinance:

9524.1 Landscaping/Visual Resources

A. Prior to any new development, the operator shall implement a landscaping plan prepared by a licensed landscape architect, that has been approved as part of a CUP or a DA, which provides adequate screening and blending of the facilities so that the site shall not appear unsightly or aesthetically deficient

compared with the surrounding character of the area. Except for oil and gas sites located within industrial zones, all tanks shall not extend more than twenty feet above the surface of any site, unless otherwise approved in a CUP or DA.

B. Within six months after the completion of activities related to the drilling or re-drilling of a well and the removal of the drilling well mast/rig, any oil and gas site shall be landscaped with suitable shrubbery and trees in accordance with a plan approved by the Planning Commission, unless the site is to be otherwise developed in such a manner that would preempt re-vegetation requirements.

C. If the site is within 1,000 feet of any prohibited zoning as listed in Table 1-1, if any drilling masts are in place on an oil and gas site for a time period of more than one year and are visible from public viewing points, then the operator shall wrap all such masts to reduce their visibility prior to the onset of operations at an oil and gas site.

9524.2 Walls

Prior to commencement of operations at an oil or gas site the following development standards shall be satisfied:

A. All oil and gas sites shall be enclosed with a wall not less than six feet (6 feet) high, which shall be of a material and texture that blends in with the surrounding environment and is not visually obtrusive. There shall be no aperture below the wall larger than one foot (1 foot) in height.

B. The wall enclosure around the oil and gas site shall have a setback of twenty-five feet from all property lines. The gate or entrance through the wall shall remain locked at all times and constructed in a manner to prevent the public from coming closer than twenty-five feet to the pumping facilities. Pursuant to the approval of the CUP, the location of the wall may be modified subject to compliance with the California Fire Code as approved in a CUP or DA with modifications as applicable.

C. The entire outside facing length of the wall must be coated with anti-graffiti paint or solutions.

9524.3 Sanitation

The oil and gas site shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse, and other wastes.

9524.4 Architecture

The architectural design of any oil or gas site buildings, equipment, drilling mechanisms or other associated structures shall be consistent with the character of the surrounding community and shall utilize finishing materials and colors which blend in with the surrounding environment and are not visually obtrusive.

9525 Roads

The following policies specific to streets or other roads shall apply to all projects for which this ordinance is applicable:

9525.1 Construction of Site Access Roads

Private roads and other excavations required for the construction of access roads shall be designed, constructed, and maintained to provide stability of fill, minimize disfigurement of the landscape, prevent deterioration of vegetation, maintain natural drainage, and minimize erosion. Prior to construction of any new road, the operator shall prepare and submit to the Department of Public Works for review and approval a private road construction plan. The operator shall thereafter comply with all provisions of the approved private road construction plan. All new private access roads leading off any surfaced public street or highway shall be paved with asphalt or concrete not less than three inches thick for the length of said access road from the public street or highway.

9526 Signage

The following policies apply only to signs visible from the public right of way.

A. Signage as required by DOGGR or law shall be kept in good legible condition at all times.

B. No sign other than that described in this ordinance or required by law shall be allowed, other than informational signs, no smoking signs, and other signs as reasonably required for safe operation of the project.

C. Identification signs shall be posted and maintained in good condition along the outer boundary line and along the walls adjoining the public roads that pass through the oil or gas site. Each identification sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach, at all times, a representative of the operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the telephone number of the City department of planning or zoning enforcement section and the number of SCAQMD that can be called if odors are detected. For existing oil and gas sites, the signs shall be updated when they are replaced or repaired.

9527 Steaming

The installation of any surface equipment designed to produce steam shall be prohibited without the approval of the City Manager. The operator shall submit a steaming plan addressing equipment sizing and design to the City Manager for review and approval. The operator shall also submit well casing and

cementing design specifications as required by DOGGR.

9528 Utilities

A. Each oil or gas site shall be served by and utilize only reclaimed water, aside from potable water used for human consumption, unless the use of reclaimed water is deemed infeasible by the City Manager, in which case the following criteria apply:

1. The operator must prepare and submit a supply assessment study of all water resources available for use and submit the study for review to the City Manager.

2. If the study indicates that potable water is the only feasible alternative then the operator may utilize such a water source only if the operator provides an equal and measurable benefit to the community for such use, as determined by the City Manager.

B. New electrical power shall be routed underground from the nearest source adequate to meet the needs of the well site.

9529 On-Site Storage and Placement of Equipment

No equipment shall be stored or placed on the site, which is not either essential to the everyday operation of the oil or gas well located thereon or required for emergency purposes.

9530 Safety Assurances and Emergency/Hazard Management

The following measures shall be implemented throughout the operation of any oil or gas site or project subject to this ordinance:

9530.1 Fire Prevention Safeguards

A. All oil and gas site operations shall conform to all applicable fire and safety regulations, codes, and laws.

B. The oil and gas site shall be kept free of debris, pools of oil, water or other liquids, weeds, and trash.

C. Land within twenty-five feet of the facilities shall be kept free of dry weeds, grass, rubbish or other combustible material at all times.

D. All equipment, facilities, and design shall be approved by the Los Angeles County Fire Department, as applicable, prior to approval of a CUP or DA.

9530.2 Blowout Standards and Testing

The operator shall comply with DOGGR regulations for blowout prevention and will provide all equipment as stipulated in the DOGGR regulations during the drilling operations of any well.

9530.3 Earthquake Shutdown

A. The operator shall immediately inspect all oil and gas-related facilities, equipment, and pipelines following any seismic event with a magnitude of 4.0 or greater with an epicenter within 10 kilometers (km) of the oil and gas site, magnitude 4.5 or greater within 30 km, or magnitude 6.0 within 100 km.

B. The operator shall either, (1) Operate and maintain an accelerometer at the project site or (2) Obtain real time data from the USGS to determine the earthquake magnitude of any seismic event in the area. The operator shall immediately inspect all project site pipelines, facilities, equipment, storage tanks, and other infrastructure following any seismic event above the thresholds defined in 9530.3.A and promptly notify the City Engineer and the City Manager of the results of the inspection within 24 hours of the seismic event. Shall there be any structural damage or equipment failure as a result of any seismic event, the operator shall isolate and address any damage or equipment failure as appropriate to minimize environmental or safety impacts. The operator shall prepare and submit a written report of all inspections and findings to the City for review with one week of the seismic event.

C. The operator shall not reinstitute operations at those portions of the project site and associated pipelines damaged by a seismic event until the damage has been repaired and confirmed by the operator to be structurally sound and safe for operation, and has passed any otherwise required inspection. Before returning any damaged structure, fixture or equipment to operation, the operator shall prepare and submit to the City Manager a written report of inspections and repairs of that structure, fixture or equipment, and the results of any required inspection.

9530.4 Storage Tank Monitoring

The operator shall install tank leak detection monitoring system that will indicate the physical presence of a leaked product underneath storage tanks on site that have the potential to result in soil contamination. The results of the monitoring shall be submitted to the City Manager upon request. The monitoring system required by 14 California Code of Regulations Section 1773.2 is sufficient. This section does not apply to existing facilities.

9530.5 Safety Measures and Emergency Response Plan

The operator is responsible for compliance with safety and emergency response requirements.

A. Copies of all Emergency Response Plans, Emergency Action Plans, Oil Spill Plans, inspections, reports and any emergency response drill training as required by DOGGR, CalEPA, OSHA, Los Angeles County Fire Department, SCAQMD or any other agency shall be submitted to the City.

B. Safety Audit. The operator shall cause to be prepared an independent third-party audit, under the direction and supervision of the City, of all facilities, once constructed or within 1 year of the adoption of this ordinance, including the well pads, to ensure compliance with the California Fire Code (as may be adopted by the City with modifications as applicable), applicable API and NFPA codes, EPA RMP, OSHA PSM, DOGGR and SPCC and emergency response plans requirements. All audit items shall be implemented in a timely fashion, and the audit shall be updated annually, as directed by the City and the Los Angeles County Fire Department. The operator shall also cause to be prepared a seismic assessment, including walkthroughs, of equipment to withstand earthquakes prepared by a registered structural engineer in compliance with Local Emergency Planning Committee Region 1 CalARP guidance and the seismic assessment shall be updated, with walkthrough inspections, annually to ensure compliance with the codes and standards at the time of installation.

C. Community Alert System. If the site is within 1,000 feet of any prohibited zoning as listed in Table 1-1, the operator shall implement a community alert notification system, or utilize an existing system operated by the Police, Sheriff or Fire Department, to automatically notify area residences and businesses in the event of an emergency at an oil or gas site that would require residents to take shelter or take other protective actions.

9530.6 Transportation of Chemicals and Waste On and Off-site

The operator shall implement the following measures throughout the operations of any oil and gas site subject to this ordinance:

A. Solid Waste Disposal. Solid waste generated on the site shall be transported to a permitted landfill or hazardous waste disposal site as may be appropriate for the life of the operation. The operator shall provide written notice to the City Manager of the landfill or hazardous waste disposal facility being utilized.

B. Site Waste Removal. The operator shall comply with the following provisions:

1. All drilling and workover waste shall be collected in enclosed bins. Any drilling and workover wastes that are not intended to be injected into a Class II Well, as permitted by DOGGR, shall be removed from the project site no later than thirty days following completion of the drilling and workover.

2. No site waste shall be discharged into any sewer unless permitted by the Sanitation District, or into any storm drain, irrigation system, stream, or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground.

C. Storage of Hazardous Materials. The operator shall submit to the City Manager a copy of the Hazardous Material Business Plan, as reviewed by the Los Angeles County Fire Department, annually. This plan shall include a complete listing and quantities of all chemicals used onsite, and provide the location of where hazardous materials are stored at the site. Hazardous materials shall be stored in an organized and orderly manner, and identified as may be necessary to aid in preventing accidents, and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the Fire Chief of the Los Angeles County Fire Department or designee.

9530.6.1 Natural Gas Liquids (NGLs)

Throughout the operation of any oil and gas site subject to this ordinance, NGLs, as defined by this code, shall be blended with crude oil for shipment by pipeline to the maximum extent allowable within the technical specifications of the pipeline. Oil transportation pipelines and gas processing facilities shall be designed to maximize the blending of NGLs into the crude oil stream.

9530.6.2 Transportation Risk Management and Prevention Program (TRMPP)

If the transportation routes of any product from oil and gas development in the City passes through or adjacent to any prohibited zoning as listed in Table 1-1, excluding designated truck routes, the operator shall prepare and maintain a Transportation Risk Management and Prevention Program which shall be provided to the City Manager upon request. The TRMPP may contain the following components including, but not limited to:

A. Provisions for conducting comprehensive audits of carriers biennially to assure satisfactory safety records, driver hiring practices, driver training programs, programs to control drug and alcohol abuse, safety incentive programs, satisfactory vehicle inspection and maintenance procedures, and emergency notification capabilities. The operator shall submit to the City any audits that were conducted each calendar year.

B. Provisions for allowing only carriers which receive a satisfactory rating under the above audit process to transport oil and gas.

C. Truck loading procedures for ensuring that the loading rack operator and the truck driver both conduct, and document in writing, a visual inspection of the truck before loading and procedures to specify actions to be taken when problems are found during the visual inspection.

9530.6.3 Pipeline Leak Detection

All new offsite DOT oil pipelines shall use a supervisory control and data acquisition (SCADA-type) monitoring system for leak detection; unless the City Manager determines that there is better available technology that shall be utilized instead. Flow meters used on the SCADA system shall be accurate to within one percent. If a leak is detected the operator shall be responsible for immediately reporting it to the City Manager.

9531 Environmental Resource Management

Throughout operation of an oil and gas site, the operator shall comply with the following environmental resource management policies:

9531.1 General Environmental Program

A. Environmental Quality Assurance Program ("EQAP"). The operator shall comply with all provisions of an environmental quality assurance program that has been accepted by the City Manager and approved as part of a CUP or DA. For oil and gas sites that are existing at the time of the adoption of this ordinance and are not required to have a CUP, completion of the requirements of section 9530.5.B satisfies the requirements of section 9531.1. The following provisions relate to the EQAP:

1. EQAP Requirements. The EQAP shall provide a detailed description of the process, individual steps, and submissions, the operator shall take to assure compliance with all provisions of this Section, including but not limited to, all of the monitoring programs called for by this Section.

2. Annual EQAP Reports. Within sixty days following the end of each calendar year, the operator shall submit to the City Manager an annual EQAP report that reviews the operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the City Manager. The annual EQAP report shall include the following:

   i. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to therein or in this Section, were not fully and timely complied with, and an analysis how compliance with such provisions shall be improved over the coming year.

   ii. Results and analyses of all data collection efforts conducted by the operator over the previous year pursuant to the provisions of this Section.

3. EQAP Updates. Proposed updates to the EQAP shall be submitted to the City Manager for approval along with the annual EQAP report. The City Manager shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the operator with a list of specific items that must be included in the EQAP prior to approval. The operator shall respond to any request for additional information within thirty days of receiving such request from the City Manager and shall modify the proposed EQAP update consistent with the City Manager's request.

B. Publically Available Monitoring Data. The operator shall be responsible for making current monitoring results and data available to the public unless otherwise required by law. The up-to-date monitoring data and results shall be maintained by the operator. The monitoring results and data shall include the following information:

1. Air quality data (if required to be collected);

2. Wind direction speed (if required to be collected);

3. Seismic events;

4. Water quality monitoring results for both surface and groundwater monitoring locations at an oil or gas site, or from nearby groundwater monitoring location(s) as authorized by the City Manager;

5. Pipeline testing and monitoring results;

6. Vibration (if required to be collected); and

7. Ambient noise levels (if required to be collected).

9531.2 Air Quality

The operator shall at all times conduct oil or gas site operations to prevent the unauthorized release, escape, or emission of dangerous, hazardous, harmful and/or noxious gases, vapors, odors, or substances, and shall comply with the following provisions:

A. Odor Minimization. If the site is within 1,500 feet of any prohibited zoning as listed in Table 1-1, or if three (3) odor complaints from three (3) different citizens of the City have been confirmed by the SCAQMD or the City within any 12-month period, at all times the operator shall comply with the provisions of an odor minimization plan that has been approved by the City Manager. The plan shall provide detailed information about the site and shall address all issues relating to odors from oil or gas

operations. Matters addressed within the plan shall include setbacks, signs with contact information, logs of odor complaints, method of controlling odors such as flaring and odor suppressants, and the protocol for handling odor complaints. The odor minimization plan shall be reviewed and updated by the operator on an annual basis to determine if modifications to the plan are required. Any modifications to the odor minimization plan shall be submitted to the City Manager for review and approval. Any operator's submissions to the SCAQMD shall be provided to the City Manager and shall be consistent with Section 9531.2. An odor minimization plan is not required for facilities existing at the time of the adoption of this ordinance if the operator can demonstrate that the facility has not experienced a confirmed odor complaint within the previous 5 years.

B. Portable Flare for Drilling. If the well is within 1,500 feet of any prohibited zoning as listed in Table 1-1, and either the historical operations of the producing zone have exhibited a gas-oil ratio (scf/bbl) of more than 400 or no data is available on the producing zone targeted, the operator shall have a gas buster and a portable flare, approved by the SCAQMD, at the oil and gas site and available for immediate use to remove any gas encountered during drilling and abandonment operations from well muds prior to the muds being sent to the shaker table, and to direct such gas to the portable flare for combustion. The portable flare shall record the volume of gas that is burned in the flare. The volume of gas burned in the flare shall be documented in the operations logs. The operator shall notify the Fire Chief of the Los Angeles County Fire Department and the SCAQMD within forty-eight hours in the event a measurable amount of gas is burned by the flare, and shall specify the volume of gas that was burned in the flare. All other drilling and abandonment operations shall be conducted so that any measurable gas that is encountered can, and will, be retained in the wellbore until the gas buster and portable flare are installed on the rig, after which the gas will be run through the system to flare. The operator shall immediately notify the Fire Chief of the Los Angeles County Fire Department and the SCAQMD in the event any gas from operation is released into the atmosphere without being directed to and burned in the flare.

C. Odor Control for Drilling Operations. If the well is within 1,500 feet of any prohibited zoning as listed in Table 1-1 and either the historical operations of the producing zone have exhibited a gas-oil ratio of more than 400 (scf/bbl) or no data is available on the producing zone targeted, the operator shall use an enclosed mud system that directs all mud vapors through an odor capturing system, such as a carbon bed, to prevent odorous pollutants from passing the site boundaries and impacting the area. An odor suppressant spray system may be used on the mud shaker tables for all drilling operations to ensure that no odors from said operations can be detected at the outer boundary line of the oil and gas site.

D. Closed Systems. The operator shall ensure that all produced water, gas and oil associated with production, processing, and storage, except those used for sampling only, are contained within closed

systems at all times and that all pressure relief systems, including tanks, vent to a closed header and flare-type system to prevent emissions of pollutants. This subsection does not apply to existing facilities.

E. No open pits are allowed.

F. Off-Road Diesel Construction Equipment Engines. All off road diesel construction equipment shall comply with the following provisions:

1. Utilize California Air Resources Board ("CARB") EPA Certification Tier III or other methods approved by the CARB as meeting or exceeding the Tier III standard.

2. Utilize a CARB Level 3 diesel catalyst. The catalyst shall be capable of achieving an eighty-five percent reduction for diesel particulate matter. Copies of the CARB verification shall be provided to the City Manager. Said catalysts shall be properly maintained and operational at all times when the off-road diesel construction equipment is in use. Use of an EPA Certification Tier 4i engine will also satisfy this requirement.

G. Drill Rig Engines. All drilling rig diesel engines shall comply with the following provisions:

1. Utilize CARB/EPA Certification Tier III or better certified engines

2. Utilize a CARB Level 3 diesel catalyst. The catalyst shall be capable of achieving an 85 percent reduction for diesel particulate matter. Copies of the CARB verification shall be provided to the City Manager. Said catalysts shall be properly maintained and operational at all times when the off-road diesel construction equipment is in use. Use of an EPA Certification Tier 4i engine will also satisfy this requirement.

9531.3 Greenhouse Gas Emissions and Energy Efficiency Measures

A. The operator of an oil and gas site shall completely offset all emissions from the oil and gas site through participation in the statewide cap and trade program, if applicable, or obtaining credits from another program, such as the SCAQMD Regulation XXVII, as approved by the City Manager. On an annual basis, the operator shall provide the City Manager with documentation of the operator's participation in the program. This section does not apply to existing facilities.

B. Throughout the oil and gas site life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design.

9531.4 Air Quality Monitoring and Testing Plan

If the site is within 1,500 feet of any prohibited zoning as listed in Table 1-1, at all times the operator shall

comply with the provisions of an air monitoring plan that has been approved by the City Manager. During all well operations, including but not limited to drilling, re-drilling and workover operations, the operator shall continuously monitor for hydrogen sulfide, in a manner that allows for detection of pollutants from all wind directions, as approved by the City Manager. Total hydrocarbon vapors shall be monitored at drilling, workover and processing plant areas as specified in the approved plan. Such monitors shall provide automatic alarms that are triggered by the detection of hydrogen sulfide or total hydrocarbon vapors. The alarms shall be audible and/or visible to the person operating the equipment. Actions to be taken shall be as follows when specified alarm levels are reached:

A. At a hydrogen sulfide concentration of equal to or greater than five parts per million but less than 10 parts per million, the operator shall immediately investigate the source of the hydrogen sulfide emissions and take prompt corrective action to eliminate the source. The corrective action taken shall be documented in the drilling or workover log. If the concentration is not reduced to less than five parts per million within four hours of the first occurrence of such concentration, the operator shall shut down the drilling or workover operations and equipment in a safe and controlled manner, until the source of the hydrogen sulfide emissions has been eliminated, unless shutdown creates a health and safety hazard.

B. At a hydrogen sulfide concentration equal to or greater than 10 parts per million, the operator shall promptly shut down the drilling or workover operations and equipment in a safe and controlled manner until the source of the hydrogen sulfide emissions has been eliminated, unless shutdown creates a health and safety hazard. The corrective action taken shall be documented in the drilling or workover log. When an alarm is received, the operator shall promptly notify the Los Angeles County Fire Department, the City Manager, and the SCAQMD.

C. At a total hydrocarbon concentration equal to or greater than 500 parts per million but less than 1,000 parts per million, the operator shall immediately investigate the source of the hydrocarbon emissions and take prompt corrective action to eliminate the source. The corrective action taken shall be documented in the drilling log for drilling or workover and in the log for the oil and gas site. If the concentration is not reduced to less than 500 parts per million within four hours of the first occurrence of such concentration, the operator shall shut down the drilling or workover, or site operations in a safe and controlled manner, until the source of the hydrocarbon emissions has been eliminated, unless shutdown creates a health and safety hazard.

D. At a total hydrocarbon concentration equal to or greater than 1,000 parts per million, the operator shall promptly shut down the drilling or workover or operations in a safe and controlled manner, until the source of the hydrocarbon emissions has been eliminated, unless shutdown creates a health and safety hazard. The corrective action taken shall be documented in the drilling log for drilling or workover and

in the log. When an alarm is received, the operator shall promptly notify the Los Angeles County Fire Department - Health Hazardous Materials Division, and the SCAQMD.

E. The City Manager may also require additional monitoring at the closest residential receptor periodically for hydrogen sulfide, hydrocarbons or Toxic Air Contaminants. All the monitoring equipment shall keep a record of the levels of total hydrocarbons and hydrogen sulfide detected at each of the monitors, which shall be retained for at least five years. The operator shall, on a quarterly basis, provide a summary of all monitoring events where the hydrogen sulfide concentration was at five parts per million or higher and the total hydrocarbon concentration was at 500 parts per million or higher to the Fire Chief of the Los Angeles County Fire Department. At the request of the Fire Chief, the operator shall make available the retained records from the monitoring equipment.

9531.5 Water Quality

The operator shall at all times conduct operations to avoid any adverse impacts to surface and groundwater quality, and shall comply with the following provisions:

9531.5.1 Water Management Plan

The operator shall comply with all provisions of a potable water management plan that has been approved by the City Manager. The plan shall include best management practices, water conservation measures, and the use of a drip irrigation system. The water management plan shall be reviewed by the operator every three years to determine if modifications to the plan are required. Any modifications to the water management plan shall be submitted to the City Manager for review and approval. This Section does not apply to existing facilities.

9531.5.2 Stormwater Runoff

Construction Storm Water Pollution Prevention Plan ("SWPPP"). The operator shall maintain and implement all provisions of a storm water pollution prevention plan ("SWPPP") that has been submitted to the Regional Water Quality Control Board, if required. The operator shall provide the City Manager with a copy of the SWPPP, and any future modifications, revisions, or alterations thereof, or replacements therefore upon written or verbal request of the City Manager. The SWPPP shall be updated prior to new construction activities as required by the Regional Water Quality Control Board.

9531.5.3 Groundwater Quality

A. Prior to any new development, the operator shall prepare and submit a baseline study of all groundwater resources located within and beneath the project site or directly adjacent to the site, to

specifically include an analysis of the location and reservoir characteristics of all existing groundwater resources, a chemical analysis of the groundwater, and an overall assessment of the groundwater quality.

B. The operator shall not inject any water spoils/wastewater derived from the any oil or gas operations into any non-exempt or DOGGR exempt freshwater aquifers.

C. Within 30 days of request by the City, the operator shall deposit funds with the City necessary to retain a third party to prepare a hydrological analysis Groundwater Testing Program prior to any construction activities, or alternately, provide comparable analyses performed through the Groundwater Ambient Monitoring and Assessment Program or other reliable source as determined by the City Manager. Depending on the results of the geo-hydrological analyses the City Manager has the discretion to require the operator to install one or more groundwater monitoring wells to allow for confirmation that groundwater is not being affected by oil and gas activities. As part of the Groundwater Testing Program the operator is required to provide the City Manager with annual monitoring and testing results.

D. The operator shall be responsible for obtaining a field/site study from DOGGR. If DOGGR does not provide this to the operator then the operator shall submit evidence detailing DOGGR's response to their field/site study request to the City Manager for review.

E. The operator shall provide to the City Manager a copy of the DOGGR Annual Injection Project Review (if the operator is operating a water injection or water disposal well) upon written or verbal request by the City Manager. The operator shall provide to the City Manager the results of any DOGGR required cement casing integrity testing, including radial cement evaluation logs or equivalent upon written or verbal request by the City Manager, before any wells are put into production.

9531.6 Noise Impacts

All facilities at an oil or gas site located within 1,000 feet of any prohibited zones, as indicated in Table 1-1, or if noise levels exceed City thresholds as confirmed by the City Manager, operations shall comply with the following provisions:

A. All noise produced from the site shall conform to the noise thresholds specified in Sections 5500, 5501, 5502, and 5503 of the Code.

B. Backup alarms on all vehicles operating within 1,000 feet of the prohibited zone in Table 1-1, shall be disabled between the hours of 6:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the operator shall employ alternative low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

C. Any and all operations, construction, or activities on the site between the hours of 6:00 p.m. and 8:00 a.m. shall be conducted in conformity with a quiet mode operation plan that has been approved by the City Manager. The quiet mode operation plan shall be reviewed by the operator every year to determine if modifications to the plan are required. Any modifications to the quiet mode drilling plan shall be submitted to the City Manager for review and approval. Operations that are existing at the time this ordinance is adopted are exempt from the quiet mode plan submittal requirements but are required to comply with the quiet mode provisions listed in section 9507.1.J.

D. All noise producing oil and gas site equipment shall be regularly serviced and repaired to minimize increases in pure tones and other noise output over time. The operator shall maintain an equipment service log for all noise-producing equipment.

E. All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

F. Unnecessary idling of construction equipment internal combustion engines is prohibited.

G. The operator shall instruct employees and subcontractors about the noise provisions of this ordinance. The operator shall prominently post quiet mode policies at every oil and gas site if applicable.

H. All oil operations on the oil and gas site shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from oil or gas operations at the site, as measured from the perimeter of the oil or gas site, shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz.

I. For all oil and gas operations if noise levels exceed the levels prescribed in Section 5500, 5501, 5502, and 5503 of the Code or the vibration thresholds specified in Subsection (H) of this Section, including those outside of 1,000 feet as indicated above, within 30 days of request by the City Manager, the operator shall deposit funds for the City Manager to retain an independent qualified acoustical engineer to monitor (1) ambient noise levels and (2) vibration levels in the areas surrounding the oil or gas site as determined necessary by the City Manager. The monitoring shall be conducted unannounced and within a time frame specified by City Manager. Should noise or vibrations from the oil or gas site exceed the noise thresholds specified in Sections 5500, 5501, 5502, and 5503,of the Code or the vibration thresholds specified in Subsection (H) of this Section , operation can also be subject to enforcement under this ordinance including notices of violation per Section 9514. No new drilling permits, CUPs, or DAs shall be issued by the City until the operator in consultation with the City Manager identifies the source of the noise or vibration and the operator takes the steps necessary to assure compliance with thresholds specified in this ordinance. The results of all such monitoring shall be promptly posted on the website for the oil or gas site and provided to the City Manager.

9532 Standards for Wells

The operator shall comply with all of the following provisions:

A. All DOGGR regulations related to drilling, workovers, operations and abandonment operations.

B. No more than two rigs shall be present within the oil or gas site at any one time.

C. All derricks and portable rigs and masts used for drilling and workovers shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.

D. All drilling and workover equipment shall be removed from the site within ninety days following the completion of drilling or workover activities unless the equipment is to be used at the site within thirty days for drilling or workover operations.

E. All drilling sites shall be maintained in a neat and orderly fashion.

F. Belt guards shall be required over all drive belts on drilling and workover equipment. Guarding shall be as required by Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

G. Aboveground pumpjack assemblies are prohibited for new wells located in non-industrial areas, and new wells in non-industrial areas sites are restricted to the exclusive use of submersible downhole pumping mechanisms for extraction. However, any well already lawfully existing at the time of implementation of this ordinance using a pumpjack assembly may continue to do so. The requirements of this subsection are applicable to all oil and gas sites in all non-industrial zones except where the City Manager determines that the use of submersible downhole pumping mechanisms is infeasible due to technical reasons or other circumstances which would specifically preclude the use of such technology.

9533 Standards for Pipelines

The operator shall comply with the following provisions related to pipelines throughout operation of an oil or gas site:

9533.1 Pipeline Installations and Use

A. Pipelines shall be used to transport oil and gas off-site to promote traffic safety and air quality, unless it can be demonstrated to the satisfaction of the City Manager that a pipeline is infeasible and that transportation of products do not pass through or adjacent to prohibited areas as defined in Table 1-1, except on designated truck routes. Trucking on a temporary basis is allowed with approval of the City Manager.

B. The use of a pipeline for transporting crude oil or gas may be a condition of approval for expansion of existing facilities or construction of new facilities unless it can be demonstrated to the satisfaction of the City Manger that a pipeline is infeasible and that transportation of products do not pass through or adjacent to prohibited areas as defined in Table 1-1, except on designated truck routes.

C. New pipeline corridors shall be consolidated with existing pipeline or electrical transmission corridors where feasible, unless there are overriding technical constraints or significant social, aesthetic, environmental or economic reasons not to do so, as approved by the City Manager.

D. New pipelines shall be routed to avoid residential, recreational areas, and schools if possible. Pipeline routing through recreational, commercial or special use zones shall be done in a manner that minimizes the impacts of potential spills by considering spill volumes, durations, and projected spill paths. New pipeline segments shall be equipped with automatic shutoff valves, or suitable alternatives approved by the City Manager, so that each segment will be isolated in the event of a break.

E. Upon completion of any new pipeline construction, the site shall be restored to the approximate previous grade and condition. All sites previously covered with vegetation shall be reseeded with the same or recovered with the previously removed vegetative materials, and shall include other measures as deemed necessary to prevent erosion until the vegetation can become established, and to promote visual and environmental quality, unless there are approved development plans for the site, in which case re-vegetation would not be necessary.

F. Gas from wells shall be piped to centralized collection and processing facilities, rather than being flared, to preserve energy resources and air quality, and to reduce fire hazards and light sources, unless the AQMD approves the flaring of gas during the temporary operation of an well. Oil shall also be piped to centralized collection and processing facilities, in order to minimize land use conflicts and environmental degradation, and to promote visual quality.

9533.2 Pipeline Inspection, Monitoring, Testing and Maintenance

A. Operators shall visually inspect all aboveground pipelines for leaks and corrosion on a monthly basis.

B. The operator shall install a leak detection system for all offsite DOT regulated oil and gas pipelines. The leak detection system for oil shall include pressure and flow meters, flow balancing, supervisor control and data acquisition system, and a computer alarm and communication system in the event of a suspected leak. The leak detection system for gas pipelines shall include pressure sensors. The accuracy shall be defined once the system is established and tested and approved by the City

Manager. The City Manager may deviate from these requirements to address system specific operating requirements.

C. Pipe clamps, wooden plugs or screw-in plugs shall not be used for any permanent repair approved by the City Manager.

D. Pipeline abandonment procedures shall be submitted to the City Manager for review and approval prior to any pipeline abandonment.

E. Copies of pipeline integrity test results required by any statute or regulation shall be maintained in a local office of the operator and posted online on the same website that provides the monitoring results required in Section 9531.1 for five years and shall also made available to the City, upon request. The City shall be promptly notified in writing by the operator of any pipeline taken out of service due to a test failure.

9534 Temporary Buildings

During full production of an oil or gas site no temporary buildings are allowed to be constructed or maintained anywhere at the site.

9535 (Reserved)

9536 (Reserved)

Part 3. Development Standards for Site Abandonment and Redevelopment

9537 Development Standards

The following development standards shall be applied to all redevelopment projects within the footprint of an oil or gas site, including any building permit involving a current or former oil or gas site:

A. Any demolition, abandonment, re-abandonment, or restoration shall be adequately monitored by a qualified individual, funded by the permittee or operator and retained by the City, to ensure compliance with those conditions designed to mitigate anticipated significant adverse effects on the environment and

to provide recommendations in instances where effects were not anticipated or mitigated by the conditions imposed on the permit or entitlement. Pre-restoration and post- restoration surveys of sensitive biological resources shall be employed as appropriate to measure compliance.

B. The site shall be assessed for previously unidentified contamination.

1. The permittee shall ensure that any discovery of contamination shall be reported to the City Manager and the Los Angeles County Fire Department.

C. The permittee shall diligently seek all necessary permit approvals, including revisions to an entitlement or the demolition. Abandonment, re-abandonment and restoration permit, if any are required, in order to remediate the contamination.

D. The permittee shall be responsible for any cost to remediate the contamination on the site. This ordinance is not intended to limit the permittee or operator's rights under the law to seek compensation from parties who have contributed to contamination of the site.

E. The permittee shall ensure that appropriate notification has been recorded with the County Recorder to describe the presence and location of any contamination left in place under the authority of the Los Angeles County Fire Department.

F. All abandoned or re-abandoned wells shall be leak tested subject to the following requirements:

1. All abandoned wells located within on the oil and gas site must be tested for gas leakage and visually inspected for oil leakage. The operator shall apply to the City Manager for an inspection permit to witness the well testing. The leak test shall be completed utilizing a gas detection meter approved in advance by the City Manager, and shall be conducted by a state licensed geotechnical or civil engineer or a state registered environmental assessor, Class II, or the City Manager, or a designee, as determined necessary by the City Manager.

2. The permitee shall prepare and submit a methane assessment report for each tested well prepared per the City of LA Department of Building and Safety "Site Testing Standards for Methane" (P/BC 2014-101), as may be amended. The operator may use the City's consultant to observe the leak test or be responsible for City consultant test fees. Following satisfactory test results as per the City of LA Department of Building and Safety standards, a well vent and vent cone shall be installed to the satisfaction of the City Manager and in compliance with the recommendations contained in the methane assessment report.

3. The submitted methane assessment report shall be prepared by a state licensed geotechnical or civil engineer. A well shall be considered leaking if the leak test report indicates the meter

read is greater than Level II as defined by the City of LA Department of Building and Safety "Site Testing Standards for Methane", which is set at 1,000 parts per million.

4. An approved methane assessment report is valid for 24 months from approval by the City Manager. If an abandonment permit has not been issued by this time, retesting shall be required. Following all testing and inspection, the test area shall be returned to its previous state to the satisfaction of the City building official.

5. If there has not been a change to the well, no leak test is required if a valid methane assessment report, accepted by the City Manager and showing no leaks in excess of the leak limit, has been completed for an abandoned or re-abandoned well within the prior 24 months.

G. Prior to any development or redevelopment of a current or former oil or gas site, or prior to abandoning or re-abandoning any well, the operator shall:

1. Obtain permit(s) and abandon all idled wells consistent with Section 9510.3 and provide a certificate of compliance to show that the wells and/or sites are abandoned consistent with standards recommended or required by DOGGR to the satisfaction of the City Manager. Permits shall not be required if the idled well is scheduled to produce oil or natural gas, or to be used for injection, as part of the development or redevelopment of a former oil or gas site and if said production or injection occurs within 5 years of issuance of a CUP or DA under this ordinance.

2. Obtain permit(s) consistent with Section 9510.3 to re-abandon all previously abandoned wells that do not meet standards recommended or required by DOGGR for abandonment in effect at the time of re-abandonment, and provide a certificate of compliance that the wells and/or sites are re-abandoned consistent with current conditions and standards recommended or required by DOGGR to the satisfaction of the City Manager. Permits shall not be required if re-entry of an abandoned well is scheduled to occur within 5 years of issuance of a CUP or DA under this ordinance, and if re-entry actually occurs within that period of time.

3. In lieu of Subsections (1) and (2), above, obtain a deferral covenant from the City requiring abandonment or re-abandonment to standards recommended or required by DOGGR, or equivalent standards as determined by the City Manager, at a specific time or upon the occurrence of a future event. The deferral covenant shall be approved as to form by the City Attorney, contain a provision to indemnify and hold harmless the City for damages related to wells not abandoned or re-abandoned consistent with standards recommended or required by DOGGR, and shall be recorded by the operator with the County Clerk prior to approval.

H. Other Development Standards:

1. Permanent structures, or other construction that would be difficult or expensive to demolish, shall not be located on top of any abandoned oil or gas well such that access for a well abandonment rig or other well maintenance equipment is constrained or inhibited from access to the well in the event of a future oil or gas leak, unless it can be demonstrated to the satisfaction of the City Manger that it is not feasible or, within an industrial zone, the developer proposing such construction provides written assurances to the satisfaction of the City Manager, to be included in the recorded declaration of covenant prescribed in Subsection 3, below, that they are aware of and accept the risks associated with such construction. Pervious improvements, such as landscaping and porous parking areas with adequate landscape buffers, may be located on top of an abandoned or re-abandoned well which has passed the leak test consistent with this Section.

2. Redevelopment of a Former Oil and Gas Site: If redevelopment of an oil and gas site for use other than an oil and gas operation is proposed at a completely or partially abandoned oil or gas site, the applicant shall submit an application to be processed as a Conditional Use Permit consistent for that use under Chapter 1, Article IX of this Code. Said application shall include the content required by Section 9510.3.2, and the Conditional Use Permit shall comply with the development standards of Section 9537.

3. Prior to issuance of a permit or entitlement for redevelopment of a former oil and gas site, the owner shall record a declaration of a covenant, in a form subject to the review and approval of the City Attorney, putting future owners and occupants on notice of the following: the existence of abandoned oil wells on the site; that the wells within the site have been leak tested and found not to leak; description of any methane mitigation measures employed; a statement as to whether or not access to these wells has been provided to address the fact that they may leak in the future causing potential harm; acknowledgment that the state may order the re-abandonment of any well should it leak in the future; acknowledgment that the state does not recommend building over wells; and releasing and indemnifying the City for issuing any project permit or entitlement for the project, along with notice of the assurances, if any, required by Subsection 1, above. The covenant shall run with the land, apply to future owners, and may only be released by the City.

CITY OF CARSON

PLANNING COMMISSION

RESOLUTION NO. 15-2562

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF CARSON RECOMMENDING THE CITY COUNCIL TO ADOPT TEXT AMENDMENT NO. 20-15, ADDING SECTIONS 9535, 9536 AND 9536.1 TO, AND AMENDING SECTION 9501.B OF, CHAPTER 5 OF ARTICLE IV OF THE CARSON MUNICIPAL CODE TO PROHIBIT WELL STIMULATION TREATMENT INCLUDING HYDRAULIC FRACTURING ("FRACKING") AND ACIDIZING, IN CONJUNCTION WITH THE PRODUCTION OR EXTRACTION OF OIL, GAS OR OTHER HYDROCARBON SUBSTANCES IN THE CITY; AND RECOMMENDING APPROVAL OF A FINDING OF A CLASS 8 CATEGORICAL EXEMPTION UNDER CEQA GUIDELINES §15308

WHEREAS, all oil and gas operations have the potential for significant and immediate impacts on the health, safety, and welfare of the citizens of Carson through increased noise, odor, dust, traffic, and other disturbances, as well as the potential to significantly impact the City's air, water, soil, geology, storm water and wastewater infrastructure, transportation, noise exposures, emergency response plans and aesthetic values and community resources; and

WHEREAS, the City of Carson zoning and land use standards and regulations on oil and gas drilling have not been updated in several years, and have not been updated prior to various changes in oil and gas production practices and changes to state statutes and regulations; and

WHEREAS, the City Council held a variety of meetings regarding these and related issues associated with petroleum operations on March 18, 2014, April 15, 2014, April 29, 2014, and May 20, 2014; and

WHEREAS, on March 18, 2014, the City Council adopted Urgency Ordinance No. 14-1534U entitled, "An Interim Urgency Ordinance of the City of Carson, California, Establishing a 45-Day Temporary Moratorium on the Drilling, Redrilling or Deepening of any Wells Within the Jurisdiction of the City of Carson that are Associated with Oil and/or Gas Operations, and Declaring the Urgency thereof"; and

WHEREAS, on May 20, 2014, the City Council directed City Staff to commence a complete and comprehensive review to update the Municipal Code regarding oil and gas operations and to study and address all modern-day drilling issues and applications; and

WHEREAS, as part of this process, City Council directed City Staff to address regulation and prohibition of well stimulation including hydraulic fracturing ("fracking") and acidizing in conjunction with the production or extraction of oil, gas or other hydrocarbon substances in the city; and

WHEREAS, City Staff were also directed to have at least two workshops with the community to receive community input and feedback; and

WHEREAS, the Community Development Department also initiated Text Amendment No. 20-15 to facilitate this review; and

WHEREAS, the City of Carson has reviewed and studied revisions as necessary to the City's laws, rules, procedures and fees related to petroleum operations and facilities involving well stimulation, to enable the City to adequately and appropriately balance the rights of existing operators and future applicants who wish to develop oil and gas drilling and extraction facilities in the City, with the preservation of the health, safety and welfare of the communities surrounding the oil and gas drilling and extraction facilities in the city; and

WHEREAS, as part of this review process, the City of Carson has engaged in significant community outreach regarding this matter, including sending mailed notices of community meetings to the approximately 30,000 resident addresses in the city, publishing notices in the newspaper, and holding three community meetings regarding oil and gas operation issues, including fracking and other well stimulation techniques; and

WHEREAS, City of Carson Staff prepared a proposed Ordinance prohibiting fracking and other well stimulation techniques, made it available on the internet on February 11, 2015, and received public feedback during the community meeting on February 18, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Ordinance prohibiting fracking and other well stimulation techniques at a duly noticed meeting held at 6:30 p.m. on February 24, 2015, at the Congresswoman Juanita Millender-McDonald Community Center, Community Halls ABC, 801 East Carson Street, Carson, CA, 90745; and

WHEREAS, public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson continued the item to its regular meeting of April 14, 2015; and

WHEREAS, informal informational sessions were held with various members of the Planning Commission throughout the day on March 30, 2015; and

WHEREAS, City of Carson Staff provided additional refinements and made the updated proposed Ordinance and other studies, reports and documents available on April 7, 2015; and

WHEREAS, the City of Carson engaged in additional community outreach and met with interested members of the community, environmental groups, and oil and gas interests on April 8 and 28, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the updates to the proposed Ordinance at a duly noticed meeting at 6:30 p.m. on April 14, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of May 12, 2015, with direction to City Staff to engage in further discussions with interested groups; and

WHEREAS, the City of Carson engaged in additional community outreach and met with interested members of the community, environmental groups, and oil and gas interests, including a meeting on May 12, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the revisions to the proposed Ordinance at a duly noticed meeting at 6:30 p.m. on May 12, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of June 9, 2015, with direction to City Staff to further revise the proposed Ordinance and engage in further discussions with interested groups; and

WHEREAS, the City of Carson engaged in additional community outreach and had an additional meeting with representatives of oil and gas interests on May 26, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Ordinance at a duly noticed meeting at 6:30 p.m. on June 9, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of July 28, 2015, with direction to City Staff to further revise the proposed Ordinance, set up small group workshops with the

Commissioners, engage in additional community outreach, and provide additional information to the Planning Commission; and

WHEREAS, the City of Carson held separate meetings with members of the community and industry stakeholders on July 6, 2015, three small group workshops with members of the Planning Commission throughout the day on July 7, 2015, and a teleconference was held with petroleum industry stakeholders on July 14, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Ordinance at a duly noticed meeting at 6:30 p.m. on July 28, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson closed the public comment portion and continued the item to its regular meeting of September 8, 2015, with direction to City Staff to set up small group workshops with the Commissioners and City Manager, engage in additional community outreach, and provide additional information to the Planning Commission; and

WHEREAS, the City of Carson engaged in additional outreach by holding additional small group workshops with members of the Planning Commission on August 24 and August 25, 2015, met with petroleum industry stakeholders on August 27, 2015, with petroleum industry stakeholders, and met with an environmental group representative on September 2, 2015; and

WHEREAS, the Planning Commission of the City of Carson subsequently held a duly noticed meeting at 6:30 p.m. on September 8, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, upon recommendation by Staff, the Planning Commission of the City of Carson continued the item to its regular meeting of October 13, 2015, without reopening the public comment portion, to allow for noise studies, as well as to allow the City Manager to hold additional meetings with members of the community, industry stakeholders and other interested parties regarding the Ordinance; and

WHEREAS, the City of Carson engaged in additional community outreach and had an additional meetings with representatives of oil and gas, environmental and community group interests at various times on September 15th, 24th, and 29th of 2015; and

WHEREAS, Planning Commissioners were provided with the opportunity to tour existing oil and gas operations within the City of Carson in October of 2015; and

WHEREAS, the City mailed notices of the Planning Commission hearing on October 13, 2015, to the addresses in the city and published a notice in the newspaper regarding the same; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Ordinance at a duly noticed meeting at 6:30 p.m. on October 13, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, the public comment portion was reopened, and public testimony and evidence, both written and oral, was considered by the Planning Commission of the City of Carson; and

WHEREAS, after closing the public comment period, upon recommendation by Staff, the Planning Commission of the City of Carson continued the item to its regular meeting of December 8, 2015, to allow the City Manager to continue to meet with stakeholders and assess recent legislation; and

WHEREAS, the Planning Commission of the City of Carson subsequently received and reviewed the proposed Ordinance at a duly noticed meeting at 6:30 p.m. on December 8, 2015, at City Hall, Helen Kawagoe Council Chambers, 701 East Carson Street, Carson, California, 90745; and

WHEREAS, Planning Commission of the City of Carson has reviewed Text Amendment No. 20-15 for consistency with the General Plan and all applicable Specific Plans; and

WHEREAS, after considering public testimony and receiving information, the Planning Commission of the City of Carson desires to recommend approval of Zone Text Amendment No. 20-15, which prohibits well stimulation, including fracking and acidizing, in conjunction with the production or extraction of oil, gas or other hydrocarbon substances, to the City Council of the City of Carson; and

WHEREAS, the Planning Commission of the City of Carson has also reviewed and also desires to recommend approval of a finding of a Class 8 Categorical Exemption under CEQA Guidelines §15308, as the Ordinance is an action taken by a regulatory agency for the protection of the environment, to the City Council of the City of Carson; and

WHEREAS, it is the intent of the recommendation of the Planning Commission of the City of Carson that petroleum operations shall be permitted within the City of Carson, except where expressly prohibited, subject to the application of the Carson Municipal Code and all other applicable laws, regulations and requirements; and

WHEREAS, it is a purpose of said recommendation of adoption to protect the health, safety, public welfare, physical environment and natural resources of the City of Carson, and to prevent nuisances, by the reasonable regulation of certain petroleum operations.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF CARSON, CALIFORNIA, HEREBY FINDS, RESOLVES AND ORDERS AS FOLLOWS:

Section 1. Text Amendment No. 20-15 was assessed in accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), the State CEQA Guidelines (the Guidelines), and the environmental regulations of the City. The Planning Commission hereby recommends a finding and determination by the City Council that the adoption of Text Amendment No. 20-15 is exempt from CEQA pursuant to Section 15308 of the Guidelines for actions taken by regulatory agencies to assure the maintenance, restoration, enhancement, or protection of the environment. This Categorical Exemption is applicable as this Ordinance is intended to further regulate oil and gas production in the City in such a way as to better protect the environment. Additionally, prohibiting hydraulic fracturing, acidizing, or any other well stimulation treatment, and regulating associated uses, further limits – not relaxes – the environmental impacts these types of operations may potentially have on the environment, including air quality, greenhouse gas emissions, water resources, geology, noise, traffic and public health and safety. By doing so, the Ordinance effectively strengthens environmental standards related to the prohibited uses, and thereby advances the protection of environmental resources within the City of Carson. No exception to the exemption under CEQA Guideline Section 15300.2 applies.

Section 2. The Planning Commission of the City of Carson has reviewed Text Amendment No. 20-15, an Ordinance prohibiting well stimulation techniques within the City of Carson, and hereby finds it is consistent with the General Plan and all applicable Specific Plans.

Section 3. The Planning Commission of the City of Carson, based on its own independent judgment, finds that Text Amendment No. 20-15 promotes and protects the health, safety, welfare, and quality of life of City residents, including protection against nuisances, and adopts the Findings of Fact, attached as Exhibit "A" and incorporated in full by reference, any one of which findings would be sufficient to support adoption of this Text Amendment.

Section 4. The Planning Commission hereby recommends approval to the City Council of an Ordinance to adopt Text Amendment No. 20-15 adding Sections 9535, 9536 and 9536.1 to, and amending Section 9501.B of, Chapter 5 of Article IV of the Carson Municipal Code to prohibit any form of well stimulation, including hydraulic fracturing and acidizing, in conjunction with the production or extraction of oil, gas or other hydrocarbon substances in the city (Exhibit "B").

Section 5. The Secretary shall certify to the adoption of the Resolution and shall transmit copies of the same to the City Council of the City of Carson.

PASSED, APPROVED AND ADOPTED THIS 8th DAY OF DECEMBER, 2015.

CHAIRMAN

ATTEST:

SECRETARY

EXHIBIT "A"

FINDINGS OF FACT

The Planning Commission of the City of Carson, based on its own independent judgment, finds that Text Amendment No. 20-15 promotes and protects the health, safety, welfare, and quality of life of City residents and reduces nuisances as set forth in these Findings of Fact, any one of which findings would be sufficient to support a recommendation to adopt this Text Amendment, and any one of which may rely upon evidence presented in the other, including as follows:

I. Well Stimulation Treatments Have More Intense Impacts Than Traditional Operations

Low-intensity traditional petroleum operations generally involve drilling wells through which oil or gas flows naturally or is pumped up to the surface. Well stimulation treatments are different. Hydraulic fracturing, acidizing, or any other well stimulation treatments typically include high-pressure injections of solvents, acids, and other chemicals, to fracture or dissolve underground formations. Well stimulation treatments threaten limited water resources in ways that low-intensity and traditional petroleum operations do not. While some well stimulation treatments have previously occurred, new advances in fracturing and stimulation technologies enable oil and gas recovery in fields and formations that were previously uneconomical to produce. Use of well stimulation treatments to extract oil and gas could give rise to an increase in the number of active wells in the City, leading to additional operational impacts on the City's residents, including noise, odor, glare and other impacts. Additionally, there are currently dozens of inactive or plugged oil and gas wells scattered throughout the City and neighboring jurisdictions, many of which have not been abandoned to current State requirements. These wells have been drilled through, and penetrate, a groundwater basin relied upon by the City to provide potable water. Well stimulation treatments may be used not only to drill new wells but also to reactivate these old wells or cause abandoned wells to fail in ways that adversely impact the public health, safety and welfare. The impacts and risks associated with well stimulation treatments are too great for the City to accept.

II. Limited Water Supplies Should Be Preserved

A. Extreme Drought Conditions Throughout State Result In Water Shortages

The City, region and State of California are experiencing extreme drought conditions, and have been struggling to preserve potable water resources for most of the decade. On June 12, 2008, the Governor issued Executive Order S-06-08 calling for a State of Emergency regarding water shortages and availability. The State of Emergency was again called on February 27, 2009. Additionally, the Water Conservation Bill of 2009 SBX7-7 was passed, which requires every urban water supplier that either provides over 3,000 acre-feet of water annually, or serves more than 3,000 urban connections, to assess the reliability of its water sources over a 20-year planning horizon, and report its progress on 20% reduction in per-capita urban water consumption by the year 2020. Executive Order S-06-08 was not rescinded until March 30, 2011. Even then the Governor urged Californians to continue to conserve water.

Shortly thereafter extreme drought conditions once again resulted in water shortages. On January 17, 2014, the Governor again proclaimed a State of Emergency regarding water shortages and availability. On April 25, 2014, the Governor issued an executive order to speed up actions necessary to reduce harmful effects of the drought, and called on all Californians to redouble their efforts to conserve water. On December 22, 2014, Governor Brown issued Executive Order B-28-14, citing to the January 17, 2014 Proclamation and the April 25, 2014 Proclamation, and extending the operation of those proclamations until May 31, 2016.

During this period of time the State Water Resources Control Board (SWRCB) has been adopting new water conservation regulations. On July 15, 2014, SWRCB adopted emergency regulations prohibiting all individuals from engaging in certain water use practices and require mandatory conservation-related actions of public water suppliers during the current drought emergency. On March 17, 2015, the SWRCB amended and re-adopted the emergency drought conservation regulations, and they became effective on March 27, 2015.

Following the lowest snowpack ever recorded and with no end to the drought in sight, on April 1, 2015, the Governor directed the SWRCB to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent. This is the first time in state history such drastic steps have ever been ordered due to severe drought conditions. The SWRCB continues to adopt new water and emergency conservation regulations for all of California to address systemic water shortages.

B. Hydraulic Fracturing ("Fracking") Can Use Several Magnitudes More Water A Day Than Used By The Entire City of Carson

Between 100,000 and 1,000,000 gallons of water are required to perform a typical fracking operation for a single well, and the process is most successful when all wells in a particular field are fracked simultaneously. These numbers can vary according to the type of operation being conducted. For example, the U.S. EPA reports that fracturing shale gas wells requires between 2,300,000 to 3,800,000 gallons of water per well – not including 40,000 to 1,000,000 gallons of water required to drill the well.[1] Water requirements within Texas' Eagle Ford Shale area can be even greater, where fracking can use up to 13,000,000 gallons of water per well excluding water required to drill the well.[2]

Even using the more conservative numbers, a fracking field of 200 wells can require 20,000,000 to 200,000,000 gallons of water, requiring approximately 3,300 to 33,000 round-trip deliveries by diesel trucks often occurring in as little as a 24-hour period – just for water.[3] Potential land use and nuisance activities from these operations include water shortages from

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[1] Cooley, Heather and Kristina Donnelly, "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 15; see also "Information on Shale Resources, Development, and Environmental and Public Health Risks," United States Government Accountability Office, September 2012 (showing average ranges of 3,000,000 gallons to 4,600,000 for certain oil fields).

[2] Cooley, Heather and Kristina Donnelly, "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 15.

[3] Use of trucks having a capacity of approximately 3,000 gallons would more than double this amount. See Shonkoff, Seth B, "Public Health Dimensions of Horizontal Hydraulic Fracturing: Knowledge, Obstacles, Tactics, and Opportunities," April, 2012. p. 3.

drought conditions, traffic, air emissions, noise, vibration, potential contamination of surface and subsurface water, and aesthetics. These impacts can increase by more than 130% - 380% using the averages from the U.S. EPA.

The 2010 Urban Water Management Plan for the California Water Service Company - Dominguez District, which includes the City of Carson, sets district-specific targets of 193 gallons per capita day (gpcd) by 2015, and 171 gpcd by 2020.[4] The City of Carson had a 2010 population of 91,714,[5] which at target levels would result in a targeted consumptive use of water of about 18,000,000 gallons per day by 2015, and about 16,000,000 gallons per day by 2020. As a result, a single fracking operation for 200 wells could use more water in a one- or two-day period than the entire City of Carson would use more than 12 days under the Urban Water Management Plan. When recent drought reduction targets are added in, fracking a field of 200 wells could use more water in a one- or two-day period than the entire City of Carson would use in about 14 days. If the U.S. EPA averages are used, fracking a field of 200 wells could use more water than the entire City of Carson would consume for a period of 26 to 42 days based on 2015 water consumption targets. With each well potentially expected to be fracked between one and ten times over its lifetime,[6] fracking a field of more than 200 wells could use more water than the entire City would consume in a year.

Use of water for fracking operations could result in a significant impact on water resources for both the City and the surrounding area. Limited water supplies should be preserved for municipal and other critical uses.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects against potential pollution and water quality impacts and nuisances activities from oil and gas operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life.

III. Transportation of Water Required for Operations Creates Land Use and Nuisance Activities

As noted above, well stimulation techniques including hydraulic fracturing operations generate a significant amount of truck traffic. All of the materials and equipment needed for activities associated with hydraulic fracturing, including water and chemicals, are typically transported to the site by trucks. Additionally, wastewater from natural gas operations is usually removed by tanker truck to the disposal site or to another well for reuse. Truck trips for hydraulic fracturing of a horizontal well have been estimated at 3,950 truck trips per well during early development of the well field, which is two to three times greater than is required for conventional wells. Much of the truck traffic is concentrated over the first 50 days following

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[4] The 2010 Urban Water Management Plan for the California Water Service Company - Dominguez District, http://www.water.ca.gov/urbanwatermanagement/2010uwmps/CA%20Water%20Service%20Co%20-%20Dominguez%20District/_DOM_UWMP_2010.pdf .

[5] U.S. Census Bureau, 2015, Quick Facts –Carson California, http://quickfacts.census.gov/qfd/states/06/0611530.html.

[6] See Shonkoff, Seth B, "Public Health Dimensions of Horizontal Hydraulic Fracturing: Knowledge, Obstacles, Tactics, and Opportunities," April, 2012. p. 3.

well development.[7] For an operation involving 200 wells, this would result in approximately 790,000 truck trips. Wastewater disposal may require additional trips.

One report has noted the increase in traffic associated with well stimulation techniques to be "the most constant source of aggravation, stress, and fear" for residents in the area.[8] Transport associated with well stimulation treatments operations through the City to well locations will result in potential adverse land use and nuisance activities, including traffic loads, increased risk of truck accidents including releases chemical or wastewater spills, air emissions, noise, traffic congestion, degraded road quality, vibration, and aesthetics - each of which is detrimental to the public health, safety and welfare and a nuisance.

Hauling water for fracking from outside the City also impacts water resources. The City relies on groundwater resources tracked by the Water Replenishment District. The City is primarily located within the West Coast Basin area, which underlies 160 square miles in Los Angeles County. Additionally, the City is located adjacent to the Central Basin, which also underlies much of the Los Angeles area west of the City. Both of these basins are located in areas subject to extreme drought conditions, and transporting water from other portions of a shared basin will also impact water resources available to the City and surrounding areas. Likewise, hauling water from other regions within the state, or even adjacent states, would be taking water resources from other areas experiencing extreme drought conditions and water shortages. Even use of saltwater or other non-potable sources of water in fracking and other well-stimulation activities increases nitrates and other chemicals in both groundwater and surface water supplies as a result of migration, spills, flow-back, and other factors related to petroleum operations and hydrocarbon extraction.

The City and the surrounding areas rely upon groundwater and surface water supplies to provide potable and other types of water for its residences and businesses. Regardless of where water is proposed to be acquired for fracking operations, transporting the water to and through the City to well locations will result in potential land use and nuisance activities from these operations, including water shortages from drought conditions, traffic, air emissions, noise, vibration, potential contamination of surface and subsurface water, and aesthetics.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects against excessive use of potable water and impacts on potable water sources, for the benefit of the public health, safety, welfare, and quality of life of City residents and also reduces associated nuisances.

IV. City Cannot Afford the Risks of Groundwater Pollution or Negative Impacts on Water Quality

While water withdrawals directly affect the availability of water for other uses, water withdrawals in the volumes required for well stimulation techniques such as fracking can also

[7] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 25.

[8] Bailin, Deborah, P. Rogerson, J. Agatstein, J. Imm and P. Phartiyal, "Toward an Evidence Based Fracking Debate: Science, Democracy, and Community Right to Know in Unconventional Oil and Gas Development," Union of Concerned Scientists, October 2013, p. 15.

affect water quality. For example, withdrawals of large volumes of water can adversely impact groundwater quality through a variety of means, such as mobilizing naturally occurring substances, promoting bacterial growth, causing land subsidence, and mobilizing lower groundwater quality from surrounding areas.[9] A number of studies reviewed by the United States Governmental Accountability Office indicate that shale oil and gas development pose risks to water quality from contamination of surface water and groundwater as a result of erosion from ground disturbances, spills and releases of chemicals and other fluids, or underground migration of gases and chemicals.[10] A study has also found dissolved methane at levels more than 17 times higher than those found in wells in areas without drilling.[11]

Groundwater contamination from oil and gas operations can occur through a variety of mechanisms. Oil and gas are located at varying depths, often below underground sources of drinking water. The wellbore, however, must be drilled through these drinking water sources in order to gain access to the oil and gas. Vibrations and pressure pulses associated with drilling can cause short-term impacts to groundwater quality, including changes in color, turbidity, and odor. Chemicals and natural gas can escape the wellbore if it is not properly sealed and cased. While there are state requirements for well casing and integrity, accidents and failures can still occur.[12] Further, wells that are hydraulically fractured have some unique aspects that increase the risk of contamination. For example, hydraulically fractured wells are commonly exposed to higher pressures than wells that are not hydraulically fractured. In addition, hydraulically fractured wells are exposed to high pressures over a longer period of time, as fracturing is conducted in multiple stages, and wells may be re-fractured multiple times – primarily to extend the economic life of the well when production declines significantly or falls below the estimated reservoir potential.[13] An analysis has found that more than 6% of wells utilized for hydraulic fracturing had compromised structural integrity, and that the risk of water contamination from such failure may be significant.[14] Another study noted that wellbores used for enhanced oil recovery operations were particularly vulnerable to leakage problems.[15]

As an additional consideration, old, abandoned wells can also potentially service as migration pathways for contaminates to enter groundwater basins and systems.[16] There are currently large numbers of abandoned wells located within the City, and hundreds located in adjacent jurisdictions sharing a common groundwater basin. Natural underground fractures as

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[9] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 17.

[10] See "Information on Shale Resources, Development, and Environmental and Public Health Risks," United States Government Accountability Office, September 2012.

[11] "Blind Rush? Shale Gas Boom Proceed Amid Human Health Questions," Environmental Health Perspectives, Vol. 119, No. 8, 2011.

[12] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 17.

[13] "Information on Shale Resources, Development, and Environmental and Public Health Risks," United States Government Accountability Office, September 2012, p. 45.

[14] See Kiparsky, Michael and Jayni Foley Hein, "Regulation of Hydraulic Fracturing in California: A Wastewater and Water Quality Perspective," Berkeley Center for Law, Energy & the Environment, April 2013, p. 20.

[15] "Towards a Road Map for Mitigating the Rates and Occurrences of Long-Term Wellbore Leakage," University of Waterloo, Geofirma Engineering Ltd., May 22, 2014, 3.3.2.1.

[16] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 17; see also Jackson, Robert B., et al., "The Environmental Costs and Benefits of Fracking," Annual Review, 2014, 39:340.

well as those potentially created during the fracturing process could also serve as conduits for groundwater contamination. Wellbore leakage can lead to the deterioration of the quality of groundwater.[17]

Many well stimulation treatments involve the mixing, transport, or storage of toxic and hazardous chemicals for use in fracking or acidizing fluid. They also generate a considerable amount of wastewater that can contain these chemicals along with hydrocarbons, naturally occurring dissolved salts, and other elements harmful to human health and safety. The wastewater and chemicals from these operations could contaminate the City and surrounding region's groundwater through improper storage or disposal, surface spills, or other means. Given the City's heavy reliance on groundwater, groundwater contamination could have devastating impacts on the local economy and water supplies.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects against excessive impacts on groundwater quality and or negative impacts on water quality, for the benefit of the public health, safety, welfare, and quality of life of City residents and also reduces associated nuisances.

V. Surface Spills and Leaks

All extraction activities come with some risk of surface or groundwater contamination from the accidental or intentional release of wastes. In the case of hydraulic fracturing, common wastes of concern include fracking fluid, additives, flowback and produced water. Fluids released into the ground from spills or leaks can run off into surface water and/or seep into the groundwater.

Spills can occur at any stage during the drilling lifecycle. Chemicals are hauled to the site, where they are mixed to form the fracturing fluid. Accidents and equipment failure during on-site mixing of the fracturing fluid can release chemicals into the environment. Above-ground storage pits, tanks, or embankments can fail. Vandalism and other illegal activities can also result in spills and improper wastewater disposal. Given the large volume of truck traffic associated with hydraulic fracturing, truck accidents can also lead to chemical or wastewater spills.[18]

While there are reports of spills and leaks associated with well stimulation operations, the extent of the issue has yet to be quantified on a national basis. Given the uncertainty of the frequency, severity, cause and impact of spills associated with well stimulation techniques, prohibition and regulation of well stimulation treatments is warranted given the severity of the risks associated with such operations.

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[17] "Towards a Road Map for Mitigating the Rates and Occurrences of Long-Term Wellbore Leakage," University of Waterloo, Geofirma Engineering Ltd., May 22, 2014.

[18] Cooley, Heather and Kristina Donnelly. "Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction," Pacific Institute, June 2012, p. 27, see also Bailin, Deborah, P. Rogerson, J. Agatstein, J. Imm and P. Phartiyal, "Toward an Evidence Based Fracking Debate: Science, Democracy, and Community Right to Know in Unconventional Oil and Gas Development," Union of Concerned Scientists, October 2013, p. 10.

Finally, a recent study noted that reported wellbore leakage in active onshore drilling ranged from approximately 7% to 64% across a wide variety of locations.[19] The likelihood of leakage is significant given the potentially high level of risk that can be associated with petroleum operations. Leakage can impact groundwater, air quality, cause odors, contaminate soil, and result in a variety of other nuisance, health, safety and welfare issues.

Given the uncertainty of the frequency, severity, cause and impact of spills associated with petroleum operations, prohibition and regulation of well stimulation techniques are warranted given the severity of the risks associated with such operations in order to protect the public health, safety, welfare and quality of life, as well as to address associated nuisances.

VI. Air Pollution, Particulate Matter and Odors

Odors, air pollution and particulate matter can be produced as a result of well stimulation activities, whether from mobile or stationary sources. These impacts are not localized, but can be spread by natural air flow caused by weather or physically generated outside a site by truck and other traffic. Odors have been known impact locations around an oil and gas site at distances of approximately 1,500 feet.

Significant methane emissions have been attributed to natural gas production activities.[20] In addition to land and water contamination issues, at each stage of production and delivery, tons of toxic volatile compounds (VOCs), including BETX, other hydrocarbons and fugitive natural gas (methane) can escape and mix with nitrogen oxides (NOx) from the exhaust of diesel-fuel, mobile and stationary equipment, to produce ground-level ozone. This ozone can cause irreversible damage to the lungs.[21] The most commonly used air toxins in production involving well stimulation techniques include crystalline silica, methanol, hydrochloric acid, formaldehyde, amorphous silica, hydrofluoric acid, naphthalene, 2-butoxy ethanol, alumina/aluminum oxide, xylene and glutaral/pentanedial.[22] Each of these toxins can pose significant health and safety risks.[23] The pollutant of primary health concern emitted from the transportation component of hydraulic fracturing is fine diesel particulate matter (PM). A review by the California Air Resources Board indicated there is a 10% increase in the number of premature deaths per 10 ug/m^3 increase in $PM_{2.5}$ exposure.[24] A study has also found that residents living less than half a mile from unconventional gas well sites were at greater risk of

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[19] See "Towards a Road Map for Mitigating the Rates and Occurrences of Long-Term Wellbore Leakage," University of Waterloo, Geofirma Engineering Ltd., May 22, 2014.

[20] See Allen, David T., V.M. Torres, J. Thomas, et al., "Measurements of Methane Emissions at Natural Gas Production Sites in the United States," Proceedings of the National Academy of Sciences, August 2013.

[21] Colborn, Theo, C. Kwiatkowski, K. Schultz and M. Bachran, "Natural Gas Operations from a Public Health Perspective," Human Ecological Risk Assessment, September 2011, pp. 1309-1056.

[22] See "Air Toxics One-Year Report: Oil Companies Used Millions of Pounds of Air-Polluting Chemicals in Los Angeles Basin Neighborhoods," Center for Biological Diversity, Physicians for Social Responsibility - LA, Communities for a Better Environment, Center on Race, Poverty and the Environment, June 2014, p. 4-5.

[23] Id.

[24] Shonkoff, Seth B, "Public Health Dimensions of Horizontal Hydraulic Fracturing: Knowledge, Obstacles, Tactics, and Opportunities," April, 2012. p. 3.

health effects from air pollution from natural gas development than those living farther away from well sites.[25]

Well stimulation can also create silica dust clouds. Large quantities of silica sand are used during hydraulic fracturing. Transporting, moving and refilling silica sand into and through sand hoppers can release dusts containing silica into the air. Breathing silica can cause silicosis, a lung disease. Acute silicosis nearly always leads to disability and death. The operational Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) have issued a hazard alert for worker exposure to silica dust during hydraulic fracturing.[26]

Air quality in the City and region already falls below state standards for some of the pollutants related to production activities. Residents want to protect the air they breathe from these threats. Enactment of the Ordinance provides a regulatory framework to reduce these risks. Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects against potential air pollution, particulate matter and odor impacts and nuisances activities from well stimulation techniques, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City, and to reduce nuisances.

VII. Deleterious Public Health Effects

Development and production of operations utilizing well stimulation techniques involve multiple sources of physical stressors such as noise, light, and vibrations, toxicants (e.g., benzene, constituents in drilling and well stimulation treatment fluids) and impacts on air emissions.[27]

Technology to recover natural gas depends on undisclosed types and amounts of toxic chemicals. Based on compilations of products used during natural gas operations, approximately 353 chemicals contained in these products have potential health effects. Of these, more than 75% of the chemicals could affect the skin, eyes and other sensory organs, and the respiratory and gastrointestinal systems. Approximately 40-50% could affect the brain/nervous system, immune and cardiovascular systems, and the kidneys; 37% could affect the endocrine system; and 25% could cause cancer and mutations. These results indicate that many chemicals used during the fracturing and drilling stages of gas operations may have long-term health effects not immediately expressed.[28]

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[25] See Bailin, Deborah, P. Rogerson, J. Agatstein, J. Imm and P. Phartiyal, "Toward an Evidence Based Fracking Debate: Science, Democracy, and Community Right to Know in Unconventional Oil and Gas Development," Union of Concerned Scientists, October 2013, p. 11.

[26] "Hazard Alert: Worker Exposure to Silica during Hydraulic Fracturing," Occupational Safety and Health Administration, 2012.

[27] Macey, Gregg P., et al, "Air Concentrations Of Volatile Compounds Near Oil And Gas Production: A Community-Based Exploratory Study," Environmental Health, October 30, 2014, p. 2.

[28] Colborn, Theo, C. Kwiatkowski, K. Schultz and M. Bachran, "Natural Gas Operations from a Public Health Perspective," Human Ecological Risk Assessment, September 2011, pp. 1309-1056; See also "Chemicals Used in Hydraulic Fracturing," United States House of Representatives Committee on Energy and Commerce, April, 2011, p. 1.

Well stimulation treatments associated with development gas resources can result in direct and fugitive air emissions of a complex mixture of pollutants from the natural gas itself as well as diesel engines, tanks containing produced water, and onsite materials used in production, such as drilling muds and fracking fluids. This complex mixture of chemicals and resultant secondary air pollutants, such as ozone, can be transported to nearby residences and population centers.[29]

Residents living less than ½ mile from wells are at greater risk for health effects from well stimulation treatments and other types of unconventional natural gas development. Multiple studies on inhalation exposure to petroleum hydrocarbons in occupational settings as well as residences near refineries, oil spills and petroleum stations indicate an increased risk of eye irritation and headaches, asthma symptoms, acute childhood leukemia, acute myelogenous leukemia, and multiple myeloma. Many petroleum hydrocarbons near wells include benzene, ethylbenzene, toluene, and xylene, all of which have known toxicity impacts. Assessments have concluded that ambient benzene levels demonstrate an increased potential risk of developing cancer as well as chronic and acute non-cancer health effects. Health effects associated with benzene include acute and chronic nonlymphoctic leukemia, acute myelogenous leukemia, acute myeloid leukemia, chronic lymphocytic leukemia, anemia and other blood disorders and immunological effects. Additionally, inhalation of xylenes, benzene and alkanes can adversely affect the nervous system.[30]

Enactment of the Ordinance provides a regulatory framework to reduce these risks. Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects against potential deleterious public health effects from well stimulation operations, including those articulated herein, for the benefit of the public health, safety, welfare, and quality of life of City residents, and for the reduction of nuisances.

VIII. Risk of Induced Seismicity

While available research does not identify a direct link between hydraulic fracturing and increased seismicity, studies indicate that there could be an effect to the extent that increased use of hydraulic fracturing produces increased amounts of water that is disposed of through underground injection.[31]

In addition to requiring large amounts of water, well stimulation treatments also create large quantities of wastewater ("flowback" or "produced water") that contain contaminants which can reach toxic concentrations. Flowback and produced water are typically very saline and can contain heavy metals, organic contaminants and other materials from deep in the formation which makes treatment and recycling difficult. As a result, the wastewater produced during oil and gas extraction is either disposed of or reused for additional oil and gas extraction in a process called "secondary recovery" or "enhanced oil recovery." In California, the most

[29] McKenzie, Lisa M., et al., "Human Health Risk Assessment Of Air Emissions From Development Of Unconventional Natural Gas Resources," Science of the Total Environment, February 2012.
[30] Id.
[31] "Information on Shale Resources, Development, and Environmental and Public Health Risks," United States Government Accountability Office, September 2012, p. 52.

common wastewater disposal method is trucking or piping the wastewater for injection into deep wastewater injection wells.[32] Approximately 90-95% of wastewater is re-injected either for reuse or disposal.[33]

The underground injection of wastewater has long been documented to induce earthquakes. Wastewater injected into rock formations can build up significant pressure depending on a variety of complex factors. This pressure build-up can induce an earthquake if the pressure is relayed to a fault that is already stressed and close to failure. The pressure can reduce the natural friction on the fault enough to cause it to slip and trigger an earthquake. The larger the fault, the larger the magnitude of earthquakes it can host.[34]

Earthquakes can cause catastrophic levels of damage and are a threat to the public health, safety and welfare. The magnitude of earthquakes accompanying wastewater injection has been attributed up to 5.7 M_w.[35] Almost half of the 4.5 M or larger earthquakes to strike the interior of the United States in the past decade have occurred in regions of potential injection-based seismicity.[36] If a major earthquake such as a magnitude 7.8 were to occur along the San Andreas fault, it could cause 1,800 fatalities and nearly $213 billion in economic damages.[37]

One of the main areas of concern lies in Los Angeles County, where underground injection wells and oil and gas wells subjected to well stimulation techniques are located very near faults that have been shown to be active within 150 to 200 years.[38] The City of Carson is within Los Angles County and near a variety of faults in the area. Given the increased risk of inducing earthquakes, as well as the severity of the danger posed, the Planning Commission finds that operations utilizing well stimulation techniques are a nuisance and create a risk to the public, health, safety, and quality of life of City residents.

IX. Well Stimulation Operations Impact Aesthetics

Oil and gas operations utilize unsightly derricks and rigs for drilling, re-drilling, workovers and other operations. The number of unsightly derricks, rigs and other surface equipment would be increased in order to carry out operations involving well stimulation techniques, and lead to more wells for a sustained period of time to pump additional oil and gas resulting from the well stimulation operations. This is compounded by the large trucks and traffic traveling on the City's roadways through the community, dust, and stadium lighting from around-the-clock drilling rigs. The Planning Commission finds these aesthetic impacts are contrary to the urban nature of the City, are a nuisance and create a risk to the public, health, safety and quality of life in the City.

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[32] Arbelaes, J., et al., "On Shaky Ground: Fracking, Acidizing, and Increased Earthquake Risk in California," 2014, p. 6-9.
[33] Kiparsky, Michael and Jayni Foley Hein, "Regulation of Hydraulic Fracturing in California: A Wastewater and Water Quality Perspective," Berkeley Center for Law, Energy & the Environment, April 2013, p. 19.
[34] Id.
[35] Jackson, Robert B., et al., "The Environmental Costs and Benefits of Fracking," Annual Review, 2014, 39:345.
[36] Bailin, Deborah, P. Rogerson, J. Agatstein, J. Imm and P. Phartiyal, "Toward an Evidence Based Fracking Debate: Science, Democracy, and Community Right to Know in Unconventional Oil and Gas Development," Union of Concerned Scientists, October 2013, p. 13.
[37] Id., p. 22
[38] Id.

X. Well Stimulation Is Incompatible With Residential Uses

The City is urbanized[39] with a large residential population. The City's population in 2010 was 91,714 people,[40]in an area of approximately 19.2 miles.[41] Well stimulation operations and associated oil and gas operations are industrial operations that are incompatible with residential uses and quality of life. Well stimulation and resulting petroleum operations often generate noise, odor, visual effects, significant heavy truck traffic, and other impacts noted in these Findings that create safety and general welfare concerns in residential areas. For these reasons, the Planning Commission finds that all well stimulation operations should be directed away from populated areas, such as the City of Carson, to reduce adverse impacts on residents and the community.

XI. Well Stimulation Operations Are Not The Way To Grow A Health Economy

Operations utilizing well stimulation techniques do not provide the long-term local job opportunities that are necessary for a healthy, sustainable local economy. Rather, rapid development of oil resources can lead to "boom-and-bust" growth that is ultimately harmful to the local economy. It is debatable whether operations utilizing well stimulation techniques will create any new jobs in the City in the long term – and they could degrade the assets and resources upon which a prosperous future for the City depends.

The City wishes to create modern job opportunities in clean energy, renewables, and green technology, which can be compatible with existing economic strengths and the quality of the community. A healthy, sustainable economy requires developing a diversity of energy resources, such as wind and solar. The City plans to meet California greenhouse gas reduction targets and stimulate local businesses and the economy by supporting new renewable energy development. Operations utilizing well stimulation techniques are non-renewable, carbon emitting, and extractive technologies that are incompatible with these goals and with preserving what makes the City a desirable place to live and work.

Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects the goals of the City for the benefit of the public health, safety, welfare, and quality of life of City residents.

XII. Accidents and Risks

Accidents happen, and the nature of well stimulation and associated operations can cause unique and potentially significant impacts upon the community not associated with other uses as has been noted in the administrative record. The severity of the potential impacts can be high. Based on these considerations and other impacts found in the administrative record, the Planning Commission finds Text Amendment No. 20-15 promotes and protects against potential impacts

[39] City of Carson 2004 General Plan, 2014-2021 Housing Element, p. 7.
[40] U.S. Census Bureau, 2015, Quick Facts –Carson California, http://quickfacts.census.gov/qfd/states/06/0611530.html.
[41] City of Carson 2004 General Plan, p. I-3.

and nuisances caused by well stimulation operations for the benefit of the public health, safety, welfare, and quality of life of City residents.

EXHIBIT "B" TO
PLANNING COMMISSION RESOLUTION

TEXT AMENDMENT NO. 20-15

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CARSON, CALIFORNIA, TO ADOPT TEXT AMENDMENT NO. 20-15, ADDING SECTIONS 9535, 9536 AND 9536.1 TO, AND AMENDING SECTION 9501.B OF, CHAPTER 5 OF ARTICLE IV OF THE CARSON MUNICIPAL CODE TO PROHIBIT WELL STIMULATION TECHNIQUES, INCLUDING HYDRAULIC FRACTURING ("FRACKING") AND ACIDIZING, IN CONJUNCTION WITH THE PRODUCTION OR EXTRACTION OF OIL, GAS OR OTHER HYDROCARBON SUBSTANCES IN THE CITY

Section 1. Article IX, Chapter 5, Section 9535 (Operational Prohibitions) of the Carson Municipal Code is hereby added to read, in its entirety, as follows:

9535 Operational Prohibitions

It shall be unlawful to perform or cause to be performed the following activities within the City for the purpose of the production or extraction of oil, gas or other hydrocarbon substance from any subsurface location within the City as follows:

A. No storage of acid on the oil and gas site shall occur in a volume in excess of 2,500 gallons.

B. No oil and gas operations shall utilize more than 25,000 gallons of water in a 24 hour period, or more than 100,000 gallons per week, unless during an emergency and as approved by the City Manager. This restriction does not apply to produced water, or waste water that originated from a petroleum reservoir, or uses authorized by this ordinance.

C. No more than 15 truck trips in a 24-hour period may be used for water deliveries, unless such water is used for a purpose other than extracting oil, gas, or any other hydrocarbon substance, unless for repairs or during an emergency and as approved by the City Manager.

Section 2. Article IX, Chapter 5, Section 9536 (Prohibited Uses) of the Carson Municipal Code is hereby added to read, in its entirety, as follows:

9536 Prohibited Uses

The operator shall not use or cause to be used any well stimulation treatment, including hydraulic fracturing or acidizing. Notwithstanding any other provision of this article, it shall be unlawful to use or cause to be used any land within the City for the purpose of conducting or enabling any well stimulation treatment, including hydraulic fracturing or

acidizing, in conjunction with the production or extraction of oil, gas or other hydrocarbon substance from any subsurface location within the City, other than normal maintenance work that utilizes acidizing techniques. However, to the extent that any permittee demonstrates to the City Manager, that (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, then the City Manager may authorize such well stimulation pursuant to a permit issued pursuant to this ordinance. The decision of the City Manager may be appealed to the Planning Commission by any interested person. This Section shall remain in full force and effect unless otherwise required by any applicable State or Federal law, regulation or judicial determination.

Section 3. Article IX, Chapter 5, Section 9536.1 (Violation of Prohibited Uses) of the Carson Municipal Code is hereby added to read, in its entirety, as follows:

9536.1 Violations of Prohibited Uses

Any operator who violates Section 9536 of this ordinance shall be subject to the enforcement proceedings including those found in Sections 9512, 9513, and 9515 in addition to the following:

A. If an operator is found responsible for violation of Section 9536, the operator will be responsible for paying the City a fine of up to $100,000 per calendar day, as authorized by law, and depending on the severity of the violation, at the discretion of the City Manager.

B. In addition to fines, the City Manager may also require an immediate shutdown of all operations at an oil and gas site where violations of Section 9536 have been identified, as long as the shutdown would not otherwise threaten public health, safety or welfare.

Section 4. Article IX, Chapter 5, Section 9501 (Ordinance Applicability), Subsection B of the Carson Municipal Code is hereby amended to read, in its entirety, as follows:

9501 Ordinance Applicability

...

B. All portions of this ordinance are applicable to new or existing oil and gas sites and operators if they have or are required to obtain a CUP. For oil and gas sites lawfully existing at the time of adoption of this ordinance which do not have or are not required to obtain a new CUP, only the following sections are applicable:

9506 Well Drilling Permit

9507.4(B) Modifications and Extensions

9510 Facility Closure, Site Abandonment, and Site Restoration Procedures

9521(C) Setbacks

9522 Site Access and Operations

9523 Lighting

9526 Signage

9527 Steaming

9530 Safety Assurances and Emergency/Hazard Management (except 9530.4)

9531 Environmental Resource Management (except 9531.3 and 9531.5.1)

9532 Standards for Wells (except subsection G)

9535 Operational Prohibitions

9536 Prohibited Uses

Violations of these sections shall also be subject to enforcement mechanisms contained in this ordinance and Code.

To the extent the ordinance applies to existing oil and gas sites, it is not intended to apply in such manner as to interfere with any vested rights that have accrued to property owners.