

Memorandum



CITY OF DALLAS

DATE May 11, 2012

TO Honorable Mayor and Members of the City Council

SUBJECT Dallas Gas Drilling Task Force

On May 16, 2012, Lois Finkelman, Chair, will present recommendations from the Dallas Gas Drilling Task Force on changes to the current Dallas ordinances for gas drilling and production. Please find attached a copy of the presentation, and feel free to contact me if you need additional information.

A handwritten signature in cursive script, reading "Jiff A. Jordan".

Jiff A. Jordan, P.E.
Assistant City Manager

c: Mary K. Suhm, City Manager
Thomas P. Perkins, Jr., City Attorney
Rosa Rios, City Secretary
Craig Kinton, City Auditor
Judge C. Victor Lander, Administrative Judge
A.C. Gonzalez, First Assistant City Manager
Ryan S. Evans, Assistant City Manager
Forest E. Turner, Assistant City Manager
Joey Zapata, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Frank Libro, Public Information Office
Stephanie Cooper, Assistant to the City Manager

May 11, 2012

Dear Mayor Rawlings and Dallas City Council Members:

On behalf of the Dallas Gas Drilling Task Force, I am pleased to provide you with our recommendations for proposed amendments to the existing Dallas gas drilling regulations. These recommendations carry with them an unstated assumption that the city will adequately fund the resources necessary for implementation and monitoring following adoption of an ordinance.

The Task Force met for almost eight months and received detailed input from representatives of the gas industry, neighborhood and environmental groups, subject matter experts and regulatory agency personnel, as well as members of the public. While this was a slow process at times, the information provided to the Task Force was invaluable, and that input formed the basis of the Task Force's recommendations. Although most of the recommendations were supported by the entire Task Force, we have identified those that were approved by a split vote. The attached recommendations represent the best efforts of the Task Force to be responsive to the charge given us by the city council which was not to determine whether or not to allow gas drilling in the city but to recommend changes to the city's existing process.

In presenting these recommendations, the Task Force recognizes that a detailed ordinance will be drafted by the City Attorney's Office after City Council consideration. The Task Force has endeavored to provide an inclusive list of recommendations but is fully aware that there may be items that have been inadvertently left out. Additionally, while the Task Force is cognizant that the City of Dallas has entered into certain leases related to gas drilling activities inside the City, our recommendations are not based on those leases; rather, they are based on what the Task Force believes is in the best interests of the citizens of the City of Dallas, now and in the future. We also realize that there is incomplete and conflicting information and data about the effects of gas drilling on the environment, public health, property values and a host of other issues, and that there are ongoing studies that could provide more definitive data. While this constantly evolving information will mandate periodic review of any regulations ultimately approved by the City Council, these recommendations are the best efforts of the Task Force to protect the citizens of the City while recognizing the rights of mineral interest owners and producers.

It has been the Task Force's pleasure to serve the citizens of Dallas. I would like to express my personal appreciation to each of the Task Force members who have been diligent and responsible in their roles and to acknowledge the outstanding support of our city staff, in particular, Kris Sweckard and Tammy Palomino.

Sincerely,


Lois G. Finkelman, Chair
Dallas Gas Drilling Task Force

Dallas Gas Drilling Task Force

May 16, 2012



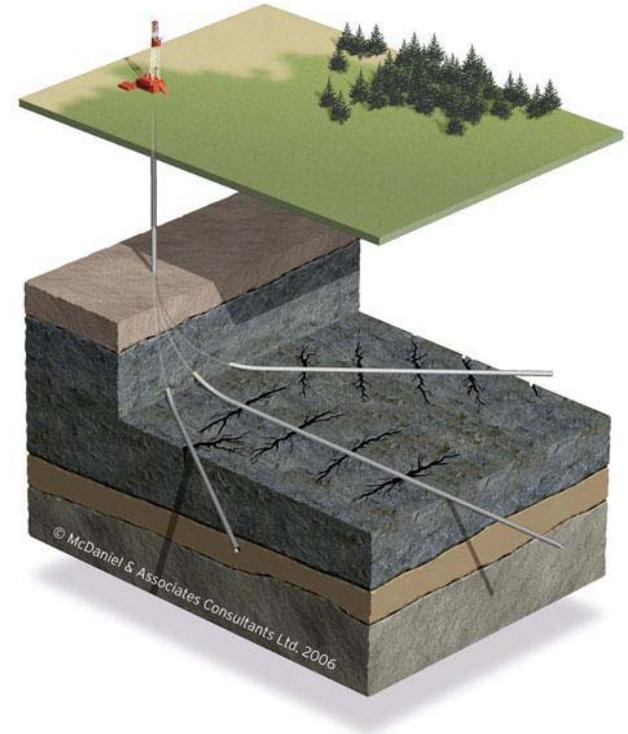
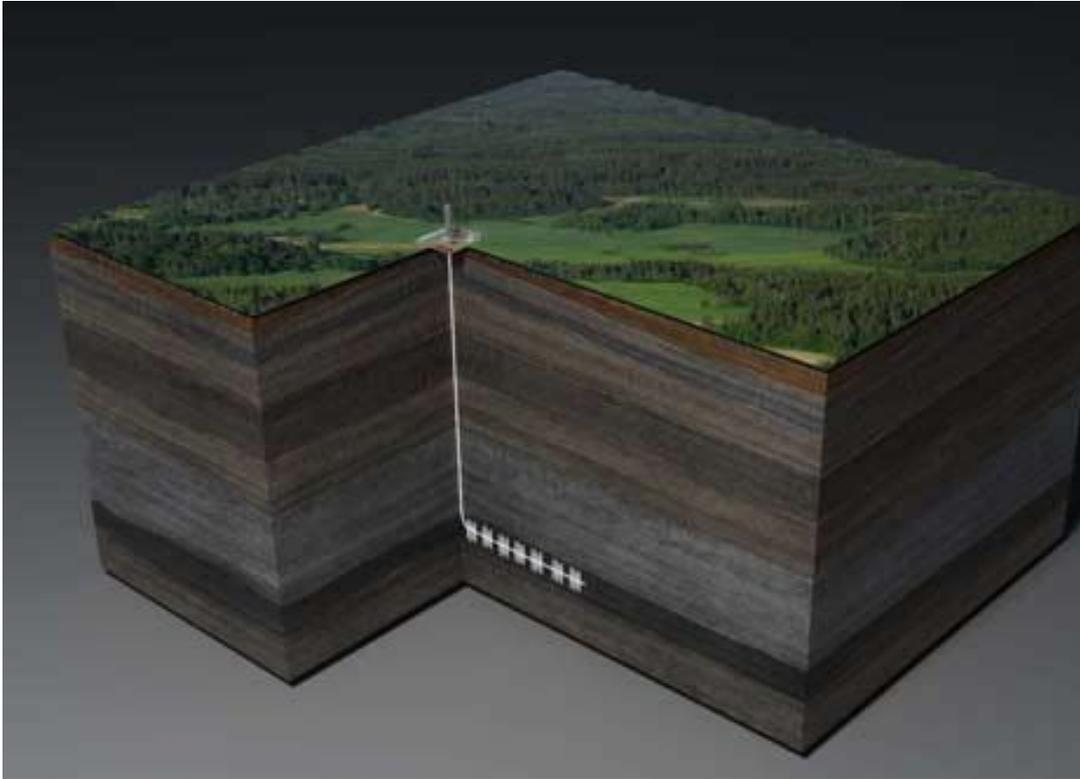
Mission

- The Dallas Gas Drilling Task Force was responsible for making recommendations to the Dallas City Council regarding proposed revisions to the City's gas drilling zoning and permitting ordinances. In forming recommendations, the following topics were reviewed, including, but not limited to:
 - Zoning requirements
 - Permitting requirements
 - Air quality issues
 - Water-related issues

Members

- In June 2011, the Dallas City Council created the Dallas Gas Drilling Task Force with the following appointments:
 - Chair
 - **Lois Finkelman**
 - Park Board Representative
 - **Joan Walne**
 - Three (3) Industry/Business Representatives
 - **David Biegler** – Chairman and CEO of Southcross Energy
 - **Bruce Bullock** – Director of SMU's Maguire Energy Institute
 - **Patrick Shaw** – Attorney, Woodward & Shaw
 - Three (3) Subject Matter Experts
 - **Dr. David Sterling** – Professor and Chair, UNT Health Science Center, Department of Environmental and Occupational Health
 - **Terry Welch** – Attorney, Brown & Hofmeister
 - **Margaret Keliher** – Executive Director of Texas Business for Clean Air
 - Three (3) Citizens and/or Environmental Group Representatives
 - **Dr. Ramon Alvarez** – Environmental Defense Fund
 - **Cherelle Blazer** – Director, You Can't Live in the Woods
 - **John McCall Jr.** – Law Office of John McCall Jr.

Natural Gas Drilling



Geology of the Barnett Shale

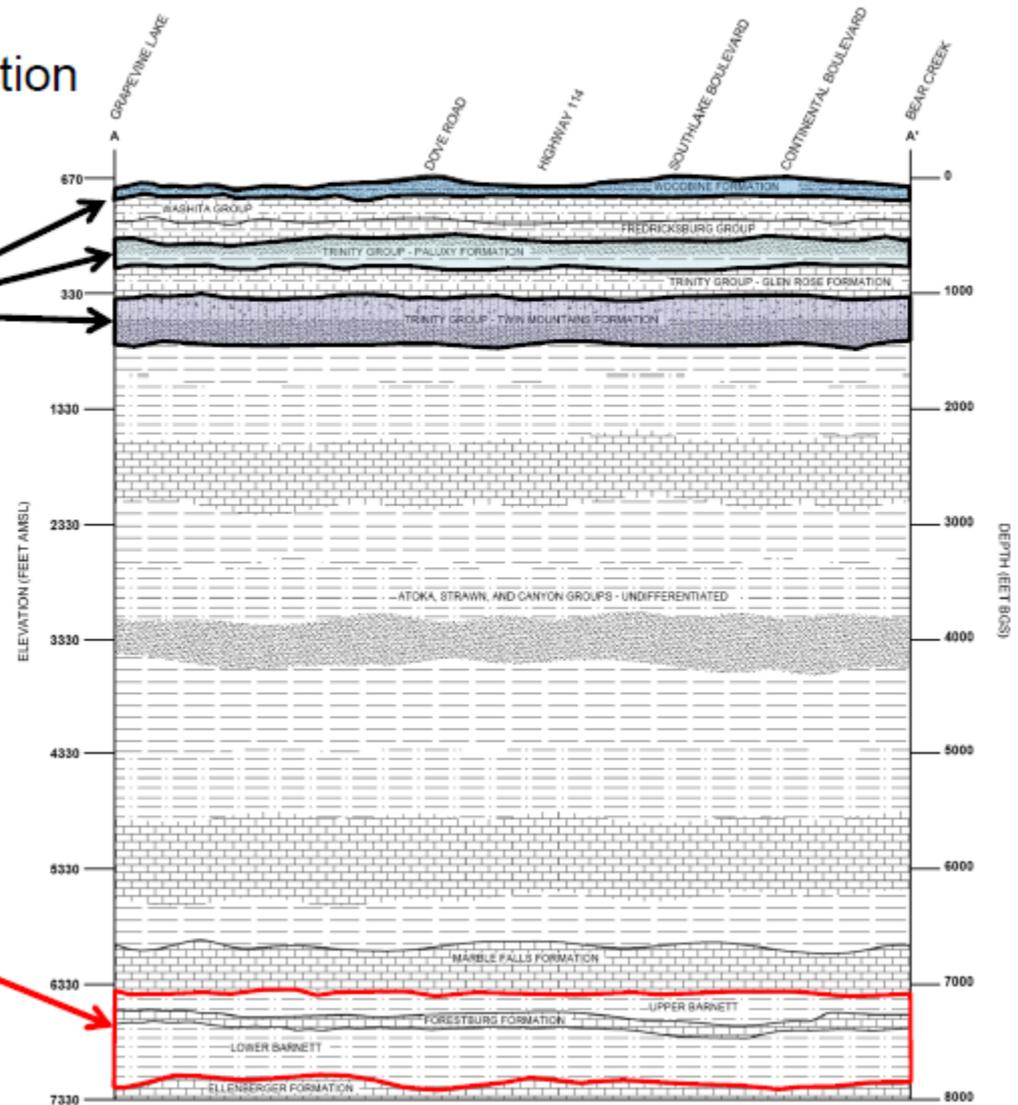
Geologic Cross Section

Aquifers

Woodbine
Paluxy (Trinity)
Twin Mountain (Trinity)

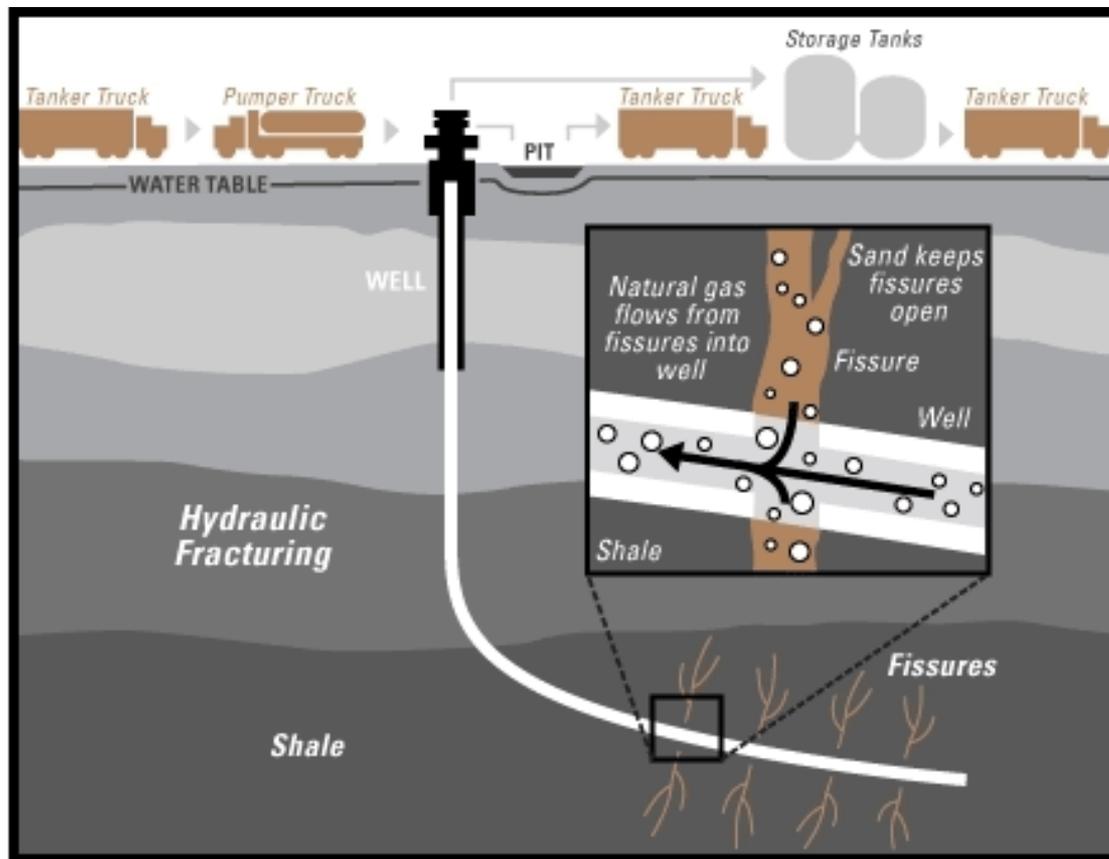
Sample diagram
from Southlake, TX

**Barnett
Shale**



Hydraulic Fracturing ("Fracking")

Hydraulic fractures are created when a mixture of water, sand, and chemicals is pumped down production wells at high pressure for short periods of time (hours).



Sample Site During Drilling Stage



Sample Pad Site



Production

Gas continues to flow from the wells and into gathering pipelines, to compressor stations, and distribution lines for use.

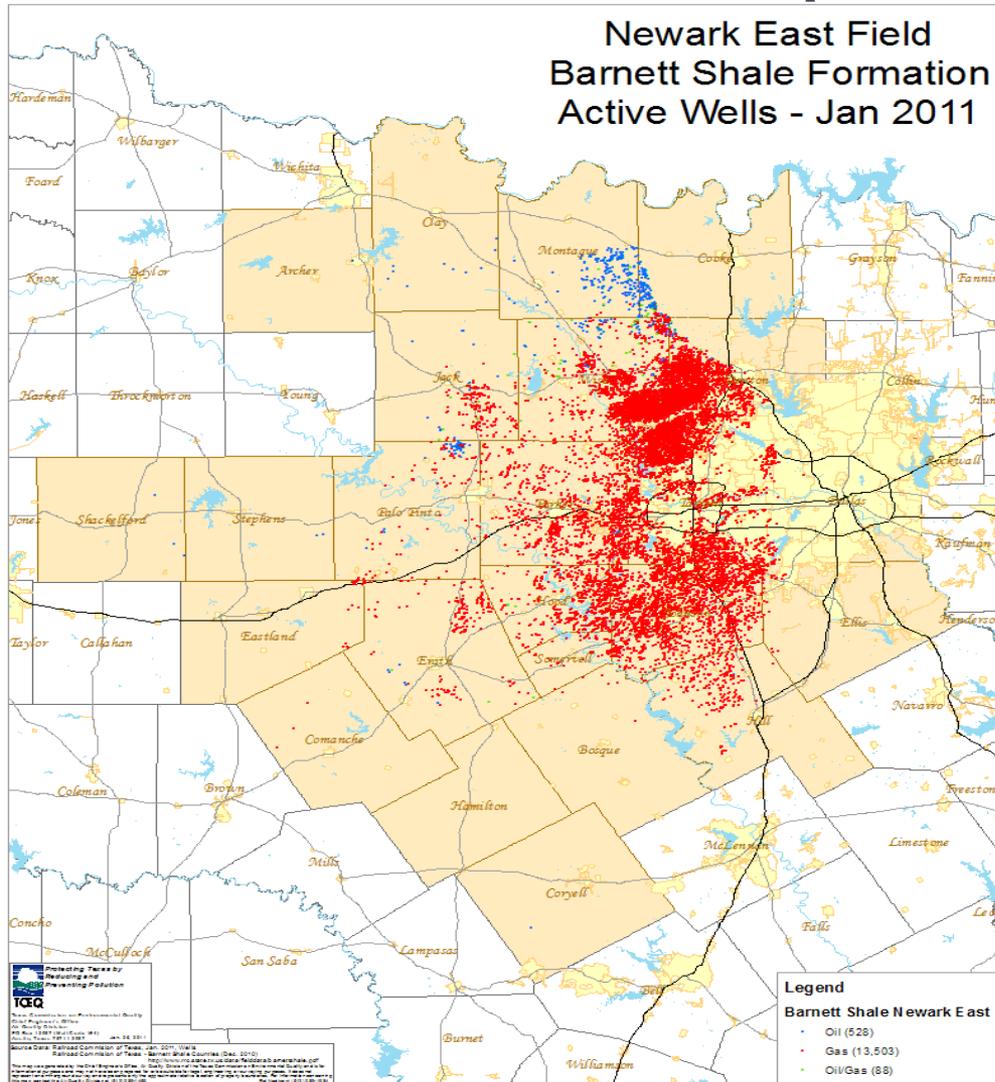


Sample Compressor Station



photo by Taryn Walker

Barnett Shale Map



Fewer applications in Dallas than in areas farther west due to the uncertainty of Barnett Shale this far east

15,000 active oil & gas wells in the Barnett Shale;
1,500 in Ft. Worth;
0 in Dallas

Task Force Meetings

1. July 12, 2011
 - Gas Drilling Overview 101 – City of Fort Worth
 - Review Dallas' Gas Drilling and Production Ordinances (Zoning and Permitting) and Status of SUPs – City of Dallas
2. July 19, 2011
 - Field Trip to Gas Drilling Sites in Arlington
3. July 26, 2011
 - Regulatory Reviews
 - a. Environmental Protection Agency (EPA)
 - b. Texas Railroad Commission
 - c. Texas Commission on Environmental Quality (TCEQ)

Task Force Meetings (cont.)

4. August 2, 2011
 - Public Hearing to Receive Citizen Input
5. August 23, 2011
 - Briefings from Industry Representatives
 - a. Masterplan
 - b. Barnett Shale Energy Education Council
 - c. Encana Oil & Gas (USA)
 - d. Chesapeake Energy
6. August 30, 2011
 - Briefings from Neighborhood and/or Environmental Group Representatives

Task Force Meetings (cont.)

7. September 6, 2011

- Real Estate Value Impacts from Drilling
- Noise/Sound and Mitigation
- Geology of the Shale

8. September 13, 2011

- Briefings on Air Quality Issues
 - a. North Texas Clean Air Steering Committee and Ozone State Implementation Plan (SIP) Impacts
 - b. Fort Worth Air Quality Study Results
 - c. Long Term Site Monitoring Options for Air Quality

9. September 20, 2011

- Briefings on Water-related Issues
 - a. Environmental Protection Agency
 - b. Dallas Water Utilities

Task Force Meetings (cont.)

10. October 4, 2011

- Perspectives on Fort Worth Experience
- Preemption and the City's Environmental Regulatory Role

11. October 11, 2011

- City of Dallas Zoning and Permitting
- Review Ordinances of Other Texas Cities and Identify "Best Practices"
 - a. Grand Prairie
 - b. Fort Worth
 - c. Hurst
 - d. Southlake

Task Force Meetings (cont.)

12. October 27, 2011

- Public Hearing to Receive Citizen Input

13. - 22. November 8, 15, 29; December 6, 13, 2011; January 10, 17, 24, 2012; February 21, 28, 2012

- Develop Recommendations

Recommendation Highlights

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern
 - Air emissions
 - All salable gas must be directed to the sales line as soon as practicable or shut in.
 - All wells that have a sale pipeline must employ reduced emission completion techniques and methods.
 - Vapor recovery system equipment is required for tanks or tank batteries that have an estimated rolling annual aggregate emissions rate of 25 tons or greater of total volatile organic hydrocarbons per pad site and must be operated to ensure 95% recovery efficiency between the internal and external atmospheres of the tanks.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Water
 - All costs related to water sampling and monitoring equipment operation will be borne by the operator.
 - At a minimum, must test for: volatile organic compounds, total petroleum hydrocarbons, semi-volatile organic compounds, total dissolved solids, total suspended solids, methane, ethane, ethene, sulfate, glycols, chloride, hexavalent chromium, sodium, barium, strontium, and turbidity. Additional compounds may be tested for based on the provided MSDS information.
 - Task force suggests that City Council have Dallas Water Utilities consider the amount of water used in fracturing when reviewing and forming their drought contingency plan.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Pad site operations
 - Disposal / Injection wells are prohibited.
 - Restrictions on hours of activities.
 - The operator shall conduct all drilling and production operations in such a manner as to minimize, so far as practicable, dust, vibration or noxious odors, and in accordance with the best accepted practices.
 - Drilling, re-drilling, or any other equipment may not exceed the ambient noise level by more than 10 dB(a) during fracturing operations and production; and more than 5 dB(a) during daytime hours or 3 dB(a) during nighttime hours for activities other than fracturing.
 - If within 2,000 feet of a protected use, must install noise reduction blankets on the drill site with a minimum height of 30 ft.
 - Additional noise requirements/monitoring, including continuous noise monitoring during drilling, reworking, or operating compressors if the proposed well is within 1,000 feet of a protected use.
 - Temporary flow back tanks must be removed within 90 days.
 - Top of tanks may not exceed height of fence around site.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Abandonment and Restoration
 - Restoration of site required within 60 days after last well plugged.
 - Soil sampling required after last well is plugged and remediation in accordance with surface reclamation must take place within 30 days if contaminants in violation of rules are found.
 - Pipelines
 - Existing Dallas ordinance has little regarding pipelines, so numerous recommendations made based upon Southlake and Flower Mound ordinances.
 - Compressors
 - Compression is permitted on the pad site.
 - Line compressors are permitted in all districts by SUP.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Land use
 - Only allowed in a floodplain with the approval of the city and, where applicable, the U.S. Army Corps of Engineers, and other agencies as appropriate.
 - Gas drilling and production is permitted on park land as follows:
 - Only if the park land is not currently being used as a public park or playground.
 - Is located adjacent to industrial uses.
 - The pad site is as close as practicable to the perimeter of the park land.
 - The park land is not an environmentally sensitive area.
 - Portion of revenue generated go to a park property fund for parks and recreation.
 - SUP must be approved by 3/4 of City Council.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Notification
 - Within 60 days, notice of the pending SUP request shall be provided by the City to all property owners and residents within 2,000 feet of the edge of the proposed pad site.
 - Inform property owners and residents of a public meeting.
 - Property owners and residents may ask questions about and discuss the pending permit application.
 - All costs borne by the operator, who must attend.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Permits
 - New permit required for refracturing, redrilling, or recompletion.
 - All drilling activities must cease five years from the issuance of the initial gas well permit for a particular pad site.
 - Seismic permits
 - A seismic survey permit is required for all seismic surveys.
 - Low impact vibrator system designed for urban operations.
 - Limit testing to 8:00 am to 5:00 pm.
 - Emergency Response
 - If Dallas Fire-Rescue requests, operator must provide firefighter / emergency responder training to the fire department and other emergency responders.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Distance requirements
 - “Protected use” means:
 - Institutional and community service uses (except cemeteries and mausoleum use)
 - Lodging uses
 - Residential uses
 - Recreation uses (except country clubs and golf courses)
 - Office uses, with an office use of greater than 10,000 sq ft
 - Retail and personal service uses (except auto service center, commercial motor vehicle parking, commercial parking lot or garage, dry cleaning or laundry store, motor vehicle fueling station, and taxidermist)

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Distance requirements (cont.)
 - Distance required from a gas drilling and production use to a protected use is as follows: 1,000 ft minimum spacing measured from the property line of the operation/pad site to:
 - For institutional and community service uses: to the property line of the protected use.
 - For lodging uses: to the protected use.
 - For recreational uses: to the protected use.
 - For residential uses: to the property line of the protected use.
 - For office uses: to the protected use.
 - Retail and personal service uses: to the protected use.
 - City Council may grant setback distance of not less than 500 ft for a protected use with 2/3 vote in favor.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Distance requirements (cont.)
 - “Habitable structure” means any use/structure that is not a protected use and that has a means of ingress/egress, light, and ventilation. Habitable structure excludes accessory structures, such as a garage or shed.
 - Distance required from a gas drilling and production use to a habitable structure is as follows: 300 ft minimum spacing measured from the property line of the pad/operation site to the habitable structure.

Recommendation Highlights (cont.)

- To highlight the recommendations made by the Task Force, the following address some of the major areas of concern (cont.)
 - Plans required before permits granted
 - Surveyed site plan
 - Dust mitigation plan
 - Pipeline map
 - Waste management plan
 - Water management plan (including baseline testing)
 - Storm water pollution prevention plan
 - Erosion control plan
 - Material data safety sheets
 - Spill prevention plan
 - Hazardous materials management plan
 - Soil sampling plan
 - Emergency action response plan
 - Noise management plan
 - Vector control plan
 - Leak detection and compliance plan
 - Continuous air quality management and monitoring plan
 - Signage plan
 - Screening and fencing plan
 - Landscape and irrigation plan
 - Transportation plan
 - Surface reclamation plan
 - Site lighting plan
 - Communications plan / Public education plan

Questions



Appendix

Matrix of Ordinance Recommendations

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS
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Notes:

- For each topic and subtopic addressed in the attached task force recommendations, the existing city of Dallas gas drilling regulations and the task force recommendations are provided.
- The parenthetical reference at the end of a bullet in the task force recommendations column indicates the source of the regulation.
- If a task force recommendation vote was not unanimous, the record vote is shown in brackets in the task force recommendations column.
- RRC = Railroad Commission; TCEQ = Texas Commission on Environmental Quality; EPA = Environmental Protection Agency.

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS

TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
1 - Air Quality	1A Equipment /engine requirements	<ul style="list-style-type: none"> • Electric motors or internal combustion engines may be used during drilling. • Only electric motors may be used during production. 	<ul style="list-style-type: none"> • Only electric motors may be used during production. (Dallas) • Electric power may be generated on pad site but may not be sold for offsite use. (Ft. Worth, Southlake, and others) • Electric motors (powered off the grid) are encouraged. If electric motors cannot be used, operator may use internal combustion engines but must submit plan documenting why electric engines cannot be used. (task force)
	1B Emissions	<ul style="list-style-type: none"> • Except as permitted by the RRC, operator shall not vent gases into the atmosphere or burn gases by open flame. • If venting or burning is permitted, it must be at least 300 ft from any structure. • Chapter 5A motor vehicle idling ordinance. 	<ul style="list-style-type: none"> • Chapter 5A motor vehicle idling ordinance. (Dallas) • Well may not flow or vent directly into the atmosphere without first directing the flow through separation equipment or into a portable tank. (Ft. Worth) • Requires city to certify that they comply with best practices of TCEQ/EPA for air quality. (Ft. Worth) • Exhaust from any internal combustion engine, stationary or mounted on wheels, shall not be discharged into the open air unless equipped with an exhaust muffler or exhaust muffler box sufficient to suppress noise and prevent escape of obnoxious gases, fumes, etc. (Ft. Worth) • After fracturing, operator must employ appropriate equipment and processes to minimize natural gas and associated vapor release. (Ft. Worth) • All salable gas must be directed to the sales line as soon as practicable or shut in. (Ft. Worth) • All wells that have a sale pipeline must employ reduced emission completion techniques and methods. (Ft. Worth) • Vapor recovery system equipment is required for tanks or tank batteries that have an estimated rolling annual aggregate emissions rate of 25 tons or greater of total volatile organic hydrocarbons per pad site. (Ft. Worth) • Vapor recovery equipment must be operated to ensure 95% recovery efficiency between the internal and external atmospheres of the tanks. (Ft. Worth) • If a gas or oil field is identified as a Hydrogen Sulfide (H₂S) field in accordance with RRC, TCEQ, or EPA regulations or if a well is producing Hydrogen Sulfide (H₂S) gas in excess of applicable RRC, TCEQ, or EPA standards, the operator shall stabilize and cease any

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS

TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
	<p style="text-align: center;">1C Monitoring requirements</p>	<ul style="list-style-type: none"> • Any person proposing to construct a new facility (a stationary source of air contaminants) that requires a TCEQ permit must register with the city within 30 days of submittal of the TCEQ permit application. • The director may require a facility whose activity causes or may cause emission of an air contaminant to submit additional information to evaluate the air pollution nature or potential of the activity. • (Ch. 5A Air Pollution) 	<p>additional operation of that well or facility. (Southlake with modifications) [8-2 vote]</p> <ul style="list-style-type: none"> • Any person proposing to construct a new facility (a stationary source of air contaminants) that requires a TCEQ permit must register with the city within 30 days of submittal of the TCEQ permit application. (Dallas) • The director may require a facility whose activity causes or may cause emission of an air contaminant to submit additional information to evaluate the air pollution nature or potential of the activity. (Dallas) • Ch. 5A Air Pollution. (Dallas) • An extended gas analysis of raw produced gas must be provided upon initial production and after any recompletion. (task force)
	<p style="text-align: center;">1D Emissions mitigation</p>	<p>Internal combustion engines must be equipped with an exhaust muffler or comparable device that suppresses noise and prevents escape of gases, fumes, ignited carbon, or soot.</p>	<ul style="list-style-type: none"> • Task Force suggests that City Council consider options for addressing greenhouse gas emissions, including fees to mitigate. • An emission compliance plan must be submitted if 2 or more violations of TCEQ or EPA emission regulations within any 12-month period. The plan must include an emission dispersion model showing the extent of the violation. (Flower Mound with modifications)
<p>2 - Water</p>	<p style="text-align: center;">2A Ground water / casing protections</p>	<p>Operator must ensure that ground water is not contaminated by gas drilling and production and related activities.</p>	<ul style="list-style-type: none"> • Operator must ensure that ground water is not contaminated by gas drilling and production and related activities. (Dallas) • All costs related to water sampling and monitoring equipment operation will be borne by the operator. (Southlake) • At a minimum, must test for: volatile organic compounds, total petroleum hydrocarbons, semi-volatile organic compounds, total dissolved solids, total suspended solids, methane, ethane, ethene, sulfate, glycols, chloride, hexavalent chromium, sodium, barium, strontium, and turbidity. Additional compounds may be tested for based on the provided MSDS information. (Southlake) • Operator shall set surface casing in full compliance with the applicable rules and regulations of the appropriate state and local authorities for groundwater protection and permit the gas inspector or city consultant to access the site during casing installation. The gas inspector or city representative must be provided with access to all relevant reports associated with the setting of the casing. The operator shall provide the

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS

TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
			<p>city with 72-hours' notice before setting the well casing. (Southlake)</p> <ul style="list-style-type: none"> Operator must offer baseline testing of wells within 2,000 feet of a well bore and surface water within 750 feet of the well bore, including immediately upstream and downstream. <p>[8-2 vote]</p>
	2B Depositing materials	<ul style="list-style-type: none"> Operator shall not deposit any substance (i.e., brine, refuse, wastewater, etc.) into or upon a right-of-way, storm drain, ditch, sewer, body of water, sanitary drain, private property, or public property. Operator must comply with all federal, state and local storm water quality regulations. 	<ul style="list-style-type: none"> Operator shall not deposit any substance (i.e., brine, refuse, wastewater, etc.) into or upon a right-of-way, storm drain, ditch, sewer, body of water, sanitary drain, private property, or public property. (Dallas) Operator must comply with all federal, state and local storm water quality regulations. (Dallas)
	2C Conservation		<ul style="list-style-type: none"> Task force suggests that City Council have Dallas Water Utilities consider the amount of water used in fracturing when reviewing and forming their drought contingency plan.
	2D Fracturing pond requirements	No specific regulations.	<ul style="list-style-type: none"> Ponds with source water (no additives) are permitted for fracturing. (Grand Prairie, Ft. Worth modified)
	2E On-site waste storage	<ul style="list-style-type: none"> Only items that may be stored and vehicles that may be parked on operation site are those necessary for everyday operation of the well and are not a fire hazard. Operator must remove waste materials from the operation site at least once every 30 days. 	<ul style="list-style-type: none"> Only items that may be stored and vehicles that may be parked on operation site are those necessary for everyday operation of the well and in compliance with fire regulations. (Dallas) Operator must remove waste materials from the operation site at least once every 30 days. (Dallas) Drilling mud, cuttings, liquid hydrocarbons and all other field waste derived or resulting from or connected with the drilling, re-working or deepening of any well shall be discharged into an above-ground self-contained tank. All disposals must be in accordance with the rules of the RRC and any other applicable local, state or federal agency. Unless otherwise directed by the RRC, waste materials shall be removed from the site and transported to an off-site disposal or recycling facility not less often than one time every 30 days. Water stored in on-site tanks shall be removed as necessary. (Southlake)

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS

TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
	<p>2F Fracturing fluid disclosure</p>	<p>See hazardous chemical plan requirements.</p>	<p>See hazardous chemical plan requirements. (Dallas)</p>
<p>3 – Physical Pad Site</p>	<p>3A Soil sampling</p>	<p>Not regulated under oil and gas regulations.</p>	<ul style="list-style-type: none"> • Must comply with all applicable federal, state, and local rules and regulations regarding contamination remediation of drill site. • Soil sampling must be conducted (1) before any drilling activities begin to establish a baseline and (2) post-drilling soil samples must be collected and analyzed. (Flower Mound) • At time of abandonment, additional soil sampling is required once equipment is removed. (Flower Mound)
<p>4 - Pad Site Operations</p>	<p>4A In general</p>	<ul style="list-style-type: none"> • Only freshwater-based mud systems are permitted. • Metal additives in drilling fluids are prohibited. • Salt-water disposal wells are prohibited. • Operation site must not become dilapidated, unsightly, or unsafe (i.e., high grass, weeds, pools of liquids, contaminated soil, etc.) 	<ul style="list-style-type: none"> • Only freshwater-based mud systems are permitted. (Dallas) • Metal additives in drilling fluids are prohibited. (Dallas) • Salt-water disposal wells are prohibited. (Dallas) [5-4 vote] • Air, gas, or pneumatic drilling is not permitted. (Southlake) • Produced water or other wastewater pipelines are prohibited without City Council approval in SUP. (Grand Prairie with modification) • The operator shall keep the drill site and operation site clear of debris, pools of water or other liquids, contaminated soil, brush, high grass, weeds, combustible trash and other waste material. (Southlake) • Land farming is prohibited (depositing, spreading drilling fluids, drilling mud, produced water, etch onto the ground). (Grand Prairie)
	<p>4B Hours of Operation</p>	<p>Fracturing activities may only occur during <u>daylight hours</u>, except that flowback operations may occur 24 hrs a day.</p>	<ul style="list-style-type: none"> • Daytime hours mean 7:00 am to 7:00 pm Monday through Friday and 8:00 am to 6:00 pm on Saturdays. Sundays and City of Dallas holidays are not considered daytime hours. (task force) [Sundays and COD holidays restriction passed by 5-4 vote] • Nighttime hours mean 7:01 pm to 6:59 am Monday through Friday and 6:01 pm to 7:59 am on Saturdays. Sundays and City of Dallas holidays are not considered nighttime hours. (task force) • NOTE: If an activity is not covered in this section, it is not restricted by hours of operation. • All open hole formation or drill stem testing shall be done during daytime hours. (Southlake) • Fracturing activities/operations may only occur during daytime hours, unless waived. (Southlake with modification) [Waived by Gas Inspector

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS

TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
			<p>or City Council?]</p> <ul style="list-style-type: none"> • No activities involving excavation, alterations to, or repair work on any road or pad site may occur during <u>nighttime</u> hours or at any time on Sunday, unless varied by City Council. (Ft. Worth with modification) • Truck deliveries related to site work are limited to daytime hours except in case of emergency. (Ft. Worth) • Unless otherwise required by law, no loudspeakers are permitted during nighttime hours. (Hurst with modification)
	<p>4C Lighting</p>	<ul style="list-style-type: none"> • Cannot conduct use that has a visible source of illumination that produces glare or direct illumination across a property line of an intensity that creates a nuisance or detracts from the use/enjoyment of adjacent property. • Outside lights must be made up of a light source and reflector so that acting together the light beam is controlled and not directed across a property line. 	<ul style="list-style-type: none"> • Lights on operation site may not be directed in a manner so that they shine directly on public roads, adjacent property, or property in the vicinity of the operation site. (Ft. Worth) • Site lighting must be directed downward and internally to avoid glare on public roads, adjacent dwellings, and buildings within 300 ft. (Ft. Worth)
	<p>4D Dust, vibrations, and odor</p>	<ul style="list-style-type: none"> • Operator must conduct drilling and production in a manner to minimize dust, vibration, or odors consistent with the best practices of the industry. • Operator shall adopt proven technologic improvements in industry standards of drilling and production if capable of reducing dust, vibrations, and odors. • If the inspector determines that the dust, vibrations, or orders related to the gas drilling and production present a risk of injury or are a nuisance, the operator must adopt any reasonable methods for reducing the dust, vibrations, and odors. 	<ul style="list-style-type: none"> • The operator shall conduct all drilling and production operations in such a manner as to minimize, so far as practicable, dust, vibration or noxious odors, and in accordance with the best accepted practices incident to drilling for the production of oil, gas and other hydrocarbon substances. (Southlake) • Proven technological improvements in industry standards of drilling and production in this area shall be adopted as they become available if capable of reducing factors of dust, vibration and odor. (Southlake) • Brine water, sulphur water, or water in mixture with any type of hydrocarbon may not be used for dust suppression. (Southlake) • If the inspector determines that the dust, vibrations, or odors related to the gas drilling and production present a risk of injury or are a nuisance, the operator must adopt any reasonable methods for reducing the dust, vibrations, and odors. (Dallas)

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	<p>4E Noise</p>	<ul style="list-style-type: none"> • Drilling may not produce a sound level greater than 78 dB(a). • Fracturing may not product a sound level greater than 85 dB(a) or five dB(a) above background noise, whichever is greater. • Maximum production of sound levels for other activities depends on the zoning district in which the use is located. 	<ul style="list-style-type: none"> • Drilling, re-drilling, or any other equipment may not exceed the ambient noise level by more than 10 dB(a) during fracturing operations and production; and more than 5 dB(a) during daytime hours or 3 dB(a) during nighttime hours for activities other than fracturing. (Southlake) • Cannot drill, re-drill, or operate equipment to create low-frequency outdoor noise levels that exceed one-third octave band sound-pressure level of 16 hertz octave band: 65 dB. . . . (Southlake) • Continuous noise monitoring is required during drilling, reworking, or operating compressors if the proposed well is within 1,000 feet of a protected use. The compliance point is at the protected uses property line or 100 feet from the nearest protected use structure, whichever is closer. (Grand Prairie) • Boundary noise reduction blanket must be removed within 90 days after drilling, well completion, or fracturing operations are completed. (Grand Prairie) • Cannot drill, re-drill or operate equipment to create pure tones of frequencies of 500 hertz and above. . . . (Southlake) • If within 2,000 feet of a protected use, must install noise reduction blankets on the drill site with a minimum height of 30 ft. Council may waive the minimum height requirement for noise reduction blankets if the proposed noise mitigation is adequate. (Southlake with mitigation)
	<p>4F Truck equipment traffic/road repair agreements rights-of-way</p>	<ul style="list-style-type: none"> • Map of truck routes and videotape of the truck routes. <p><u>Rights-of-way</u></p> <ul style="list-style-type: none"> • Operator must periodically inspect for damage to public rights-of-way. • If public works determines that rights-of-way have been damage, notify operator. • Operator must repair damage within 10 days after discovering/ receiving notice of damage. • If operator fails to make repairs, public works will make repairs and bill operator. • After abandonment/ reclamation of site, 	<p><u>Rights-of-way</u></p> <ul style="list-style-type: none"> • Operator must periodically inspect for damage to public rights-of-way. (Dallas) • If public works determines that rights-of-way have been damage, notify operator. (Dallas) • Operator must repair damage within 10 days after discovering/ receiving notice of damage. (Dallas) • If operator fails to make repairs, public works will make repairs and bill operator. (Dallas) • After abandonment/ reclamation of site, public works shall notify operator of any needed repairs. (Dallas) • Traffic impact analysis with proposed routes, types/weights of vehicles, hours/days of week entering/leaving site, maneuvering for truck traffic,

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		<p>public works shall notify operator of any needed repairs.</p>	<p>etc. (Southlake)</p> <ul style="list-style-type: none"> • Operator must provide map of the proposed transportation routes that are consistent with SUP. (Southlake) • Road repair agreement must be submitted with an SUP or seismic survey permit and approved by City Council as a condition of the SUP. (Southlake) • Vehicle truck routes must be approved by gas inspector before permit is issued. (Ft. Worth)
	<p>4G Landscaping</p>	<ul style="list-style-type: none"> • Street trees 1 per 50 ft of street frontage; • Site trees 1 per 6,000 square ft • Additional landscaping conditions may be imposed in SUP. • Must be irrigated. • Must be maintained. 	<ul style="list-style-type: none"> • Street trees 1 per 50 ft of street frontage. (Dallas) • Site trees 1 per 6,000 square ft. (Dallas) • Additional landscaping conditions may be imposed in SUP. (Dallas) • Must be irrigated. (Dallas) • Must be maintained. (Dallas)
	<p>4H Fencing</p>	<ul style="list-style-type: none"> • Once any gas drilling related activities begin 8-foot-tall temporary chain-linked fence or guard to supervise operations. • Within 30 days after the first well is completed, an 8-foot-tall permanent fence must be erected around the perimeter of the site. • NOTE: SUP may require different form of screening. • Gates must be installed on fences and remain locked when no personnel on site. 	<ul style="list-style-type: none"> • Once any gas drilling related activities begin, 8-foot-tall temporary chain-linked fence or guard to supervise operations. • Within 30 days after wells are completed, an 8-foot-tall permanent fence must be erected around the perimeter of the site. • NOTE: SUP may require different form of screening. • Gates must be installed on fences and remain locked when no personnel on site. <p>(Dallas with modification to 2nd bullet) [6-2 vote]</p>
	<p>4I Equipment</p>	<ul style="list-style-type: none"> • All equipment and permanent structures must conform to the American Petroleum Institute (API). • Unless a specific color is required, all equipment/ structures must be painted with a neutral color. • All equipment must be maintained in good repair and with neat appearance. • The drill rig and associated equipment must 	<ul style="list-style-type: none"> • All equipment and permanent structures must conform to the American Petroleum Institute (API). (Dallas) • Unless a specific color is required, all equipment/ structures must be painted with a neutral color. (Dallas) • All equipment must be maintained in good repair and with neat appearance. (Dallas) • The drill rig and associated equipment must be removed from operation site within 30 days after completion. (Dallas)

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TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
		<p>be removed from operation site within 30 days after completion.</p>	
	<p>4J Electric lines</p>	<ul style="list-style-type: none"> • Must be located in a manner compatible to those already installed in the surrounding area. 	<ul style="list-style-type: none"> • Must be located in a manner compatible to those already installed in the surrounding area. (Dallas)
	<p>4K Mud pits and drilling fluids</p>	<ul style="list-style-type: none"> • Council may require a closed-loop system that uses sealed tanks, instead of reserve pits, to collect drilling waste. • No drilling fluid storage pits. • If using open-looped system, mud pits must have an impervious lining • Contents of any mud pit must be maintained at least two ft below the top of the mud pit. 	<ul style="list-style-type: none"> • No drilling fluid storage pits. (Dallas) • No drilling fluid mud or reserve pits may be located within the city except in containers used in closed-loop mud system. (Southlake) • Must use closed-loop mud system. (Flower Mound) • Open pits, lined earthen mud, or circulating pits are prohibited. (Hurst) • Oil-based drilling fluids are prohibited. Low-toxicity glycols, synthetic hydrocarbons, polymers and esters must be substituted for conventional oil-based drilling fluids. (Southlake and Flower Mound with modification)
	<p>4L Wells</p>	<ul style="list-style-type: none"> • Each well must have an automated valve that closes the well if there is an abnormal change in operating pressure. • All wellheads must have an emergency shutoff valve to the well distribution line • Surface casing must be run and set in full compliance with the RRC and TCEQ. • A blowout preventer must be used when wells are being drilled, reworked, or at any time when tubing is being changed. 	<ul style="list-style-type: none"> • Each well must have an automated valve that closes the well if there is an abnormal change in operating pressure. (Dallas) • All wellheads must have an emergency shutoff valve to the well distribution line (Dallas) • Surface casing must be run and set in full compliance with the RRC and TCEQ. (Dallas) • A blowout preventer must be used when wells are being drilled, reworked, or at any time when tubing is being changed. (Dallas)
	<p>4M Chemical and hazardous materials; storage</p>	<ul style="list-style-type: none"> • All chemicals/hazardous materials must be stored to prevent, contain, and facilitate rapid remediation / clean up. • Operator shall keep all material safety data sheets for hazardous materials on site. 	<ul style="list-style-type: none"> • All chemicals/hazardous materials must be stored to prevent, contain, and facilitate rapid remediation / clean up. (Dallas) • Operator shall keep all material safety data sheets for hazardous materials on site. (Dallas) • Must take all appropriate pollution prevention actions. (Southlake) • All MSDS for all hazardous materials located or used on operations site must be submitted to the gas inspector. (Ft. Worth modified)

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TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
	<p>4N Clean-up after spills, leaks, and malfunctions</p>	<ul style="list-style-type: none"> Operator shall remove, to the satisfaction of the fire marshal, gas inspector, and TCEQ all waste materials from any property affected. If loss of control of any well, operator must immediately take all reasonable steps to regain control and shall notify the inspector as soon as practicable. If cannot regain control, city may employ experts to regain control at the const of the operator. 	<ul style="list-style-type: none"> Operator shall remove, to the satisfaction of the fire marshal, gas inspector, and TCEQ all waste materials from any property affected. (Dallas) Clean-up must begin immediately and gas inspect may employ any cleanup expert or experts as necessary to clean up spill. (Ft. Worth) If loss of control of any well, operator must immediately take all reasonable steps to regain control and shall notify the inspector immediately. If cannot regain control, city may employ experts to regain control at the cost of the operator. (Dallas)
	<p>4O Drip pans and other containment devices</p>	<p>Must be placed underneath all tanks, containers, pumps, lubricating oil systems, engines, fuel and chemical storage tanks, system valves, and connections, and any other area or other structure that could leak, discharge, or spill hazardous liquid, semi-solids, or solid waste materials</p>	<ul style="list-style-type: none"> Must be placed underneath all tanks, containers, pumps, lubricating oil systems, engines, fuel and chemical storage tanks, system valves, and connections, and any other area or other structure that could leak, discharge, or spill hazardous liquid, semi-solids, or solid waste materials. (Dallas)
	<p>4P Tanks</p>	<ul style="list-style-type: none"> Must be used to store liquid hydrocarbons. Must be portable, closed, and made of steel or fiberglass. Must have a vent line, flame and lightening arrestor, pressure-relief valve and level-control device. Level-control device must automatically activate a valve to close the well to prevent a tank from overflowing. Must have a secondary containment system. If closed-loop system is used, mud, cuttings, liquid hydrocarbons, and other waste materials must be discharged into tanks. 	<ul style="list-style-type: none"> Must be used to store liquid hydrocarbons. (Dallas) Must have a vent line, flame and lightening arrestor, pressure-relief valve and level-control device. (Dallas) Level-control device must automatically activate a valve to close the well to prevent a tank from overflowing. (Dallas) Mud, cuttings, liquid hydrocarbons, and other waste materials must be discharged into tanks. (Dallas) Tanks and permanent structures must comply with API specifications unless other specifications are approved by the fire marshall. (Southlake and Flower Mound) Tanks must be equipped with a secondary containment system including lining with an impervious material. (Grand Prairie) Top of tank may not exceed fence height. (task force) Temporary flow back tanks must be removed within 90 days. (Ft. Worth)

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TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
<p>5 - Abandonment and Restoration</p>		<ul style="list-style-type: none"> • Operator must abandon each well after production has ceased. • Operation site is not considered abandoned until inspector approves the abandonment and restoration of the site. • Approve abandonment and restoration when restored to original condition; all wells are plugged and all well casing are cut and removed to a depth of at least three ft below surface, all equipment is removed and holes filled/plugged; RRC approves abandonment; and abandonment complies with the fire code. 	<ul style="list-style-type: none"> • Operator must abandon each well after production has ceased. (Dallas) • Operation site is not considered abandoned until inspector approves the abandonment and restoration of the site. (Dallas) • Approve abandonment and restoration when complies with surface reclamation plan; all wells are plugged and all well casing are cut and removed to a depth of at least three ft below surface, all equipment is removed and holes filled/plugged; RRC approves abandonment; and abandonment complies with the fire code. (Dallas with modification) • Restoration of site required within 60 days after last well plugged. (Ft. Worth with modification) • Soil sampling required after last well is plugged and remediation in accordance with surface reclamation must take place within 30 days if contaminants in violation of rules are found. (Flower Mound with modification)
<p>6 - Pipelines</p>	<p>6A Flow and gathering lines and other pipeline regulations.</p>	<ul style="list-style-type: none"> • Flow lines and gathering lines may not exceed maximum allowable operating pressure of installed pipes. • Flow lines and gathering lines must be installed with the minimum cover or backfill specified by the American National Safety Institute Code, as amended. • Operator must place an identifying sign at each point when a flow line or gathering line crosses an intersection • Structures may not be constructed over a flow or gathering line. 	<ul style="list-style-type: none"> • Pipeline standards do not apply to pipelines franchised by the city. (Southlake) <p>To the extent not preempted by state or federal law, the following standards apply to pipelines:</p> <ul style="list-style-type: none"> • Flow lines and gathering lines may not exceed maximum allowable operating pressure of installed pipes. (Dallas) • Flow lines and gathering lines must be installed with the minimum cover or backfill specified by the American National Safety Institute Code, as amended. (Dallas) • Structures may not be constructed over a flow or gathering line. (Dallas) • Within 60 day after a pipeline is abandoned, it must be purged and plugged. (Southlake) • Must have a pipeline permit to install, construct, rework, etc a pipeline or any section of a pipeline except in emergency situation. (Southlake with modification) • Must place a marker at each point that crosses a public street, utility easement or RR. (Southlake) • Pipelines must obtain a license from the city to place in any city easements / rights-of-way or easements. (Southlake)

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			<ul style="list-style-type: none"> • Must equip all pipelines with automated pressure monitoring system that detects leaks and shut-offs. (Southlake) • Operator must provide an as-built or record drawing of pipelines. (Southlake) • Inactive or idled pipelines must be reported, purged and isolated. (Southlake) • Operator must provide at least two primary persons to contact that are available 24 hours a day to respond to an emergency. (Southlake) • Must submit annual safety reports to city. (Flower Mound) • Must maintain written an emergency response plan and provide for emergency incident reporting. (Flower Mound) • Operator must maintain a public education program at least annually to the habitable structure occupants within 1,000 ft of a pipeline. (Southlake) • Must provide bond, letter of credit, or cash deposit in accordance with Chapter 42. (Dallas)
7 - Compressors	6B Routing Planning / 7A Location	Not regulated / Would require a planned development district because no defined use; or must create a use in zoning districts.	<ul style="list-style-type: none"> • All new and relocated pipelines within private residential areas shall be located as near as feasible with existing pipelines unless operator can demonstrate to council that the alignment is infeasible. (Southlake) • Compression is permitted on the pad site. (Fort Worth modified) • Line compressors are permitted in all districts by SUP. (Ft. Worth modified)

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<p>8 - Land Use</p>	<p>8A Type of use/where permitted restrictions /</p>	<ul style="list-style-type: none"> Gas drilling and production is an industrial use -permitted in residential and nonresidential zoning districts 	<ul style="list-style-type: none"> Gas drilling and production is an industrial use - permitted in residential and nonresidential zoning districts. (Dallas) Only allowed in a floodplain with the approval of the city and, where applicable, the U.S. Army Corps of Engineers, and other agencies as appropriate. [5-4 vote] (Amends Article V to allow in floodplain) (Southlake modified) Gas drilling and production is permitted on park land as follows: <ul style="list-style-type: none"> Only if the park land is not currently being used as a public park or playground. Is located adjacent to industrial uses. The pad site is as close as practicable to the perimeter of the park land. The park land is not an environmentally sensitive area. Portion of revenue generated go to a park property fund for parks and recreation. SUP must be approved by 3/4 of City Council. <p>[8-3 vote]</p>
	<p>8B Specific use permit (SUP)</p>	<ul style="list-style-type: none"> Permitted by SUP only in all zoning districts; Must obtain SUP before a gas well permit may be approved. 	<ul style="list-style-type: none"> Permitted by SUP only in all zoning districts. (Dallas) Must obtain SUP before a gas well permit may be approved. (Dallas) Within 60 days of filing an application for an SUP, operator/applicant of SUP must, at operator’s expense, provide notice of the pending SUP to all property owners and residents within 2,000 feet of the property line of the proposed pad site, informing them of a meeting open to the public at which meeting the property owners and residents may ask questions about and discuss the pending permit application. The meeting must occur no later than 21 days after the date of mailing of property owner and resident notification letters. The operator shall attend the public meeting and at the meeting, typical operations associated with oil and gas drilling activity shall be discussed including, the following topics: site preparation, site development and construction, drilling, casing, fracturing, pipeline construction, production, transportation, and maintenance of the operation site. In the operator initial notice and at follow-up meetings, operator must offer property owners and residents within 2,000 feet of the property line of the proposed pad site the option of subscribing to an electronic notification list through which the

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<p>9 - Gas Drilling or Well Permit</p>	<p>9A When required</p>	<ul style="list-style-type: none"> At site preparation through production or any other related activity. Each well on an operation site must obtain a separate gas well permit. 	<p>operator must send out information about significant events during the life of a well pad, as described in section 13 “Required Plans.” [6-3 vote]</p> <ul style="list-style-type: none"> Each well on an operation site must obtain a separate gas well permit. (Dallas) New permit required for refracturing, redrilling, or recompletion. (Flower Mound modified)
	<p>9B Duration of permit and/or time requirements for drilling</p>	<ul style="list-style-type: none"> Automatically terminates if the operator does not begin drilling <u>within 180 days</u> after the gas well permit is issued (one 180 day extension permitted) If within 600 ft of a residential use, must begin drilling all wells approved by SUP <u>within one year</u> after receiving the gas well permit for the first well. Automatically terminates after well is abandoned. 	<ul style="list-style-type: none"> Automatically terminates if the operator does not begin drilling <u>within 180 days</u> after the gas well permit is issued (one 180 day extension permitted). (Dallas) Automatically terminates after well is abandoned. (Dallas) All drilling activities must cease five years from the issuance of the initial gas well permit for a particular pad site. (Grand Prairie)
	<p>9C Insurance requirements (in addition to bond or LOC) (before issuance of permit)</p>	<ul style="list-style-type: none"> Risk management division sets/modifies insurance requirements. Operator must provide insurance requirements. <u>Subcontractor insurance</u>: Operator shall require each subcontractor to obtain insurance that is appropriate for the service subcontractor is performing. All insurance must be in effect until inspector approves abandonment and restoration of operation site. <p><u>Required coverage</u>:</p> <ul style="list-style-type: none"> Workers’ compensation Employer’s liability insurance Business automobile insurance Commercial general liability insurance for operational, site, personal injury, independent contractors, and contractual 	<ul style="list-style-type: none"> Risk management division sets/modifies insurance requirements. (Dallas) Operator must provide insurance requirements. (Dallas) <u>Subcontractor insurance</u>: Operator shall require each subcontractor to obtain insurance that is appropriate for the service subcontractor is performing. (Dallas) All insurance must be in effect until inspector approves abandonment and restoration of operation site. (Dallas) <p><u>Required coverage</u>: (Dallas)</p> <ul style="list-style-type: none"> Workers’ compensation Employer’s liability insurance Business automobile insurance Commercial general liability insurance for operational, site, personal injury, independent contractors, and contractual liability Environmental impairment or pollution legal liability insurance. Umbrella liability insurance for the previous five required coverage. Control-of-well insurance for cost of regaining control of well Certificates of insurance must be provided at least 30 days before the

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		liability <ul style="list-style-type: none"> • Environmental impairment or pollution legal liability insurance. • Umbrella liability insurance for the previous five required coverage. • Control-of-well insurance for cost of regaining control of well • Certificates of insurance must be provided at least 30 days before subcontractor begins work NOTE: If an insurance policy is cancelled or not renewed, inspector shall suspend the gas well permit.	subcontractor begins work <p>NOTE: If an insurance policy is cancelled or not renewed, inspector shall suspend the gas well permit.</p> <ul style="list-style-type: none"> • Automobile liability insurance for owned and non-owned vehicles. (Ft. Worth, Hurst) • For seismic activity, standard commercial general liability insurance. (Southlake) • For pipelines, Public liability insurance for accidents and property damage, Workers compensation, employer’s liability, commercial general liability coverage, and automobile liability insurance. (Southlake)
	9D Operator responsibility / Subcontractor disclosure	<ul style="list-style-type: none"> • By accepting a gas well permit, operator agrees to be bound by and comply with the provisions of the gas drilling and production regulations. • NOTE: Operator means person listed on the RRC drilling permit application. 	<ul style="list-style-type: none"> • By accepting a gas well permit, operator agrees to be bound by and comply with the provisions of the gas drilling and production regulations. (Dallas) • NOTE: Operator means person listed on the RRC drilling permit application. (Dallas)
10 - Seismic Permits	10A Permit	Not regulated	<ul style="list-style-type: none"> • A seismic survey permit is required for all seismic surveys. (Flower Mound) • A seismic permit is required for all seismic testing on rights-of-ways and city property. (Grand Prairie) • Must use a low impact vibrator system designed for urban operations. (Grand Prairie) • Must provide notice to residents within the area shown on the map attached to the access agreement. (Grand Prairie) • Must display temporary notification signs on affected streets with the company’s name and hotline number. (Grand Prairie) • Testing limited to 8:00 am to 5:00 pm. (Grand Prairie)

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11 - Distance Requirement	11A Setback or spacing requirements	<p>Gas wells must be spaced at least:</p> <ul style="list-style-type: none"> • 300 ft from any institutional and community service use, recreation use, or residential uses; • 200 ft from any fresh water well; • 25 ft from any property line; • 25 ft from any storage tank or source of ignition; • 75 ft from any right-of-way; and • 100 ft from any structure that is not used for the everyday operation of the well. <p>All structures and equipment, including tanks and tank batteries must be spaced at least 100 ft from institutional and community service use, recreation use, or residential uses.</p> <p>Tanks and tank batteries must be spaced at least</p> <ul style="list-style-type: none"> • 25 ft from all rights-of-ways and property lines. • Dallas Fire Code may require additional spacing. 	<ul style="list-style-type: none"> • PROTECTED USE means institutional and community service uses (except cemeteries and mausoleum use); lodging uses; residential uses; and recreation uses (except country clubs and golf courses); office uses, with an office use of greater than 10,000 sq ft [office uses 5-4 vote]; retail and personal service uses (except auto service center, commercial motor vehicle parking, commercial parking lot or garage, dry cleaning or laundry store, motor vehicle fueling station, and taxidermist. [retail uses 8-1 vote] (task force) • Distance required from a gas drilling and production use to a protected use is as follows: 1,000 ft minimum spacing measured from the property line of the operation/pad site [8-2 vote] to: <ul style="list-style-type: none"> ○ For institutional and community service uses: to the property line of the protected use. ○ For lodging uses: to the protected use. ○ For recreational uses: to the protected use. ○ For residential uses: to the property line of the protected use. ○ For office uses: to the protected use. ○ Retail and personal service uses: to the protected use. (task force) • City Council may grant setback distance of not less than 500 ft for a protected use with 2/3 vote in favor. [5-3 vote] (task force) • HABITABLE STRUCTURE means any use/structure that is not a protected use and that has a means of ingress/egress, light, and ventilation. Habitable structure excludes accessory structures, such as a garage or shed. (task force) • Distance required from a gas drilling and production use to a habitable structure is as follows: 300 ft minimum spacing measured from the property line of the pad/operation site to the habitable structure. (task force) • Gas wells must be spaced at least: (Dallas) <ul style="list-style-type: none"> ○ 200 ft from any fresh water well; ○ 25 ft from any property line; ○ 25 ft from any storage tank or source of ignition; ○ 75 ft from any right-of-way; and ○ 100 ft from any structure that is not used for the everyday operation

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			<p>of the well.</p> <ul style="list-style-type: none"> • Tanks and tank batteries must be spaced at least <ul style="list-style-type: none"> ○ 25 ft from all rights-of-ways and property lines. ○ Dallas Fire Code may require additional spacing. (Dallas) • If within 3,000 feet of a dam or critical infrastructure, must provide written approval from U.S. Corps of Engineers, if required, before final approval of gas well permit. (task force) • Once an SUP is granted, the City on its GIS maps and through recording at the County will establish a notice overlay of the gas drilling use within 1,000 feet of the gas drilling pad site to provide notice for future development. The notice must remain for the length of the SUP. (task force)
12 - Variance Procedure	12A Variance / Waiver	Council may vary zoning requirements or add conditions through SUP process.	<ul style="list-style-type: none"> • Council may vary zoning requirements or add conditions through SUP process. (Dallas)

DALLAS GAS DRILLING TASK FORCE RECOMMENDATIONS

TOPIC AREAS	SUBTOPICS	EXISTING DALLAS REGULATIONS	TASK FORCE RECOMMENDATIONS
<p>13 - Required Plans</p>	<p>13A Plans, reports, studies</p>	<ul style="list-style-type: none"> • <u>Site plan of operation site</u> (must be approved by fire marshal) showing location of all improvements equipment, existing watercourses, zoning of all property within 600 ft of site, etc. • <u>Electricity usage plan</u> showing equipment powered by electricity, amount need source and location of lines, poles, generators, etc. • Copy of the storm water pollution prevention plan required by EPA. • Copy of TCEQ determination of depth of useable-quality ground water. • <u>Hazardous materials management plan</u> filed with fire department; • Copy of the RRC drilling permit and its attached documents. 	<ul style="list-style-type: none"> • <u>Surveyed site plan</u> showing location of all on-site improvements, equipment, proposed wells and other facilities, including tanks, compressors, separators, lights, fencing, etc. and all off-site structures, pipelines, and utilities within 1,200 feet of proposed pad site boundary (Fort Worth with modifications) • <u>Dust mitigation plan</u> detailing mitigation / suppression measures and a mud shaker for exiting vehicles. (Southlake) • <u>Pipeline map</u> showing location of nearest gathering station and alignment of pipelines connecting operation site to gathering station and/or a description of how operator intends to get gas and any other products to market. (Grand Prairie with modification) • <u>Waste management plan</u> to include recycling and/or disposal methods for drilling mud, cuttings, fracturing fluids, flow back water, produced water, solid waste, etc. (Grand Prairie with modifications) • Copy of all permits, disclosures, and reports required by the RRC and TCEQ, provided with initial applications to the City to extent they are available, and on a monthly basis thereafter for all subsequent filings. • <u>Water management plan</u> identifying the source(s), volume, and disposition of water. • <u>Baseline testing</u> of wells within 2,000 feet of well bore; surface water within 750 feet of the well bore and immediately upstream and downstream with permission from property owners. • Copy of the TCEQ determination of the depth of useable-quality ground water. • Copy of the <u>storm water pollution prevention plan</u> required by EPA, and any amendments as they occur. • <u>Erosion control plan.</u> (Southlake) • Current <u>material safety data sheets (MSDS)</u> with all hazardous and non-hazardous materials and chemicals brought onto site for all drilling activities (Southlake) • MSDS must include all types, quantities, volumes, and concentrations of all additives used in drilling activities in accordance with state law. (Southlake with modifications) • <u>Spill prevention plan.</u> (Flower Mound)

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			<ul style="list-style-type: none"> • <u>Hazardous materials management plan</u> filed with fire department (Dallas and others) • <u>Emergency action response plan</u> approved by fire marshal. Includes <u>emergency evacuation plan</u> detailing all persons to be notified including all persons residing within ½ mile of the edge of the site. (Dallas and others) • <u>Noise management plan</u> addressing noise impacts; establishing ambient noise levels, and mitigation techniques; detailing how the equipment used complies with maximum permitted noise levels. (Southlake and Fort Worth) • <u>Vector control plan</u> with measures taken to ensure pond will not become mosquito harborage (Southlake) • <u>Continuous air quality management and monitoring plan</u> with identification of planned measures to comply with federal and state regulations or other measures to be used to reduce emissions, lead detection and other monitoring techniques to be employed to ensure emissions comply with applicable limits, and how emissions reporting will be done. Must also include a categorization of the EPA Tier (Tier 0 to Tier 4) of all diesel equipment to be used including but not limited to all drilling, fracturing, completion and compressor engines. (Grand Prairie with modifications) • <u>Signage plan</u> – include Spanish. (Southlake) • <u>Screening, fencing and landscape plan</u> including timing of screening, landscaping and fencing. (Southlake) • <u>Landscape and irrigation plan</u> for adequate irrigation and replacement of dead/dying vegetation. (Southlake) • <u>Transportation plan</u> – Estimated number of truck trips required for each stage of a planned well’s life, a traffic management plan, truck routing, map showing access from major arterials to the vicinity of the operation site and planned ingress and egress to the actual site, videotape of the truck route, and road maintenance agreement providing that the operator shall repair at his own expense any damaged road. (Dallas and others) • <u>Surface reclamation plan</u> including measures to be taken to restore property, clean up of polluted soil, surface and ground water, and plan for re-vegetation, etc. (Fort Worth)

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			<ul style="list-style-type: none"> • <u>Site lighting plan</u> to promote safety of nighttime operations, including a photometric plan indicating type and color of lights. (Southlake) • <u>Communications plan / Public education plan</u> to notify, solicit feedback and respond to concerns of all occupants of habitable structures within 2,000 feet of the operation site. The operator must identify activities for early and continuous engagement, and development and use of advance or near-real-time notices whenever possible of all significant events during a well's life (e.g., drilling, fracturing, well flowback, refracturing, decommissioning, etc.) and non-routine occurrences including but not limited to, flaring, spills or emission events. (Southlake) • <u>Period reports</u>. After each well is completed until abandonment, operator must submit a written report identifying any changes to the information included in the permit application. (Dallas and others) • For pipelines covered by this ordinance, emergency response plan establishing procedures to minimize any hazards. (Ft. Worth) • Description of planned electricity usage and all fuel sources to be used including all public utilities needed during drilling, fracturing and operation. • <u>Emergency response plan</u> establishing procedures to minimize any hazard from drilling, completion, or production. (Southlake) • Soil sampling plan. (Southlake) • Security plan. (Southlake and others)
<p>14 - Bonding Requirements</p>	<p>14A Bond/Letter of Credit (LOC)</p>	<p>Before gas well permit is issued, operator must provide a performance bond or irrevocable letter of credit that remains in effect for at least six months after well abandoned.</p> <ul style="list-style-type: none"> • At least \$50,000, not more than \$250,000. • If cancelled, gas well permit suspended. • City may draw against the bond or irrevocable LOC to recover damages, fees, fines, etc. <p>Before issuance of gas well permit, operator must provide a road repair performance bond or irrevocable LOC</p>	<p>Before gas well permit is issued, operator must provide a performance bond or irrevocable letter of credit that remains in effect for at least six months after well abandoned.</p> <ul style="list-style-type: none"> • At least \$50,000, not more than \$250,000. • If cancelled, gas well permit suspended. • City may draw against the bond or irrevocable LOC to recover damages, fees, fines, etc. <p>Before issuance of gas well permit, operator must provide a road repair performance bond or irrevocable LOC</p> <ul style="list-style-type: none"> • Must remain in effect for at least six months after public works completes final inspection of rights-of-ways • Public works determines amount of PB or irrevocable LOC based on

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		<ul style="list-style-type: none"> • Must remain in effect for at least six months after public works completes final inspection of rights-of-ways • Public works determines amount of PB or irrevocable LOC based on estimated cost to restore rights-of-way. • If cancelled, gas well permit suspended. • City may draw against the bond or irrevocable LOC to recover damages, fees, fines, etc. 	<p>estimated cost to restore rights-of-way.</p> <ul style="list-style-type: none"> • If cancelled, gas well permit suspended. • City may draw against the bond or irrevocable LOC to recover damages, fees, fines, etc. <p>(Dallas)</p>
<p>15 - Site Monitoring and Review of Permit Application</p>	<p>15A Gas inspectors (inspector)</p>	<ul style="list-style-type: none"> • Reviews and approve/deny all gas well permit applications. • Denial is appealed to city board. • Inspections of all wells and operation sites <u>at least yearly</u> for compliance with permit and SUP <p>Enforces and has authority to enter premises to determine compliance of gas drilling and production</p> <ul style="list-style-type: none"> • permitting regulations, • city codes • SUPs 	<ul style="list-style-type: none"> • Reviews and approve/deny all gas well permit applications. (Dallas) • Denial is appealed to city board. (Dallas) • Inspections of all wells and operation sites <u>at least yearly</u> for compliance with permit and SUP. (Dallas) • Enforces and has authority to enter premises to determine compliance of gas drilling and production <ul style="list-style-type: none"> ○ permitting regulations, ○ city codes ○ SUPs <p>(Dallas)</p> <ul style="list-style-type: none"> • Request, receive, review, and inspect any records relating to status/condition of any permitted wells (including RRC records). (Southlake with modifications) • Pad sites are required to have a contact number posted for the office of the gas inspector. (task force)
	<p>15B Enforcement</p>	<p>Violations of permit or other city codes:</p> <ul style="list-style-type: none"> • Issue orders and directives required • Written notice of violation and reasonable time to cure (>30 days) • If operator fails to cure violation, suspend, revoke permit; • Issue citations to obtain compliance with city ordinances; • Contact the appropriate state agency if 	<p>Violations of permit or other city codes:</p> <ul style="list-style-type: none"> • Issue orders and directives required • Written notice of violation and reasonable time to cure (within 30 days) • If operator fails to cure violation, suspend, revoke permit; • Issue citations to obtain compliance with city ordinances; • Contact the appropriate state agency if operator is violating state law. • NOTE: Operator may appeal suspended/revoked permit to city board. <p>(Dallas)</p>

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		<p>operator is violating state law.</p> <ul style="list-style-type: none"> • NOTE: Operator may appeal suspended/revoked permit to city board. 	
16 Emergency Response	- 15C Activities outsourced	<p>City may hire technical or legal advisors to advise city on gas drilling and production matters.</p> <ul style="list-style-type: none"> • Access to operation site must comply with Dallas Fire Code. • Operator shall provide fire fighting apparatus and supplies on site at all times during drilling and production. 	<ul style="list-style-type: none"> • City may hire technical or legal advisors to advise city on gas drilling and production matters. (Dallas) • Access to operation site must comply with Dallas Fire Code. (Dallas) • Operator shall provide fire fighting apparatus and supplies on site at all times during drilling and production. (Dallas) • If Dallas Fire-Rescue requests, operator must provide firefighter / emergency responder training to the fire department and other emergency responders. (Southlake with modification)