

Memorandum



CITY OF DALLAS

DATE February 15, 2011

TO Honorable Mayor and Members of the City Council

SUBJECT **Gas Drilling Update**

On Wednesday, April 20, 2011 you will be provided an update briefing on Gas Drilling.

Attached are the briefing materials for your review in preparation for Wednesday's discussion.

Please contact me if you have any questions.

A handwritten signature in black ink that reads "Theresa O'Donnell".

for A.C. Gonzalez
Assistant City Manager

C: Mary K. Suhm, City Manager
Deborah Watkins, City Secretary
Thomas P. Perkins, Jr., City Attorney
Craig Kinton, City Auditor
Judge C. Victor Lander, Administrative Judge
Ryan S. Evans, First Assistant City Manager
Forest Turner, Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Edward Scott, Director, Controller's Office
Helena Stevens-Thompson, Assistant to the City Manager – Council Office
Theresa O'Donnell, Director, Sustainable Development & Construction

GAS DRILLING UPDATE

Dallas City Council

April 20, 2011



Purpose of Today's Briefing

- Update the City Council on a number of environmental and regulatory aspects of gas drilling and provide information on concerns raised recently by citizens.

This Briefing Will Cover

- Important Task Forces and Studies currently underway that examine specific concerns related to gas drilling
- Review of the City's existing regulations and the status of any pending SUPs and permits
- Update on the City's leases with XTO and Trinity East
- Review of state law moratorium process
- Receive direction on possible next steps

Basics of Gas Drilling

Video clip

Broad Range of Issues are Receiving National and Regional Discussion

Water

- Groundwater contamination
- Drinking water contamination
- Amount of non-renewable water used in hydraulic fracturing
- Disposal of used/produced water
- Long-term exposure to pollutants used in drilling
- Accidents (fluid spills)

Air

- Fugitive emissions (e.g., benzene, methane, formaldehyde)
- Ozone (Nitrogen Oxide - NO_x) & Volatile Organic Compounds (VOCs) emissions
- Dust (particulate matter)
- Long-term exposure to above pollutants

Broad Range of Issues are Receiving National and Regional Discussion

Additional concerns

- Seismic issues (earthquakes, instability)
- Public Safety (explosions)
- Noise
- Truck traffic
- Nearby property values
- Aesthetics

Natural Gas Drilling Studies

- Numerous studies have looked at the impact of natural gas operations on the environment
 - Limited in scope
 - Debatable methodologies, results and/or conclusion
- Four comprehensive studies currently in process
 - Overviews on the following pages

Major Efforts Underway

- Fort Worth – \$1+ million study that explores air quality issues. Findings will be released this summer
- NCTCOG ~ North Texas Clean Air Steering Committee
Oil and Gas Task Force - ongoing
- TCEQ Inventory – Air Quality, results available July 2011
- EPA
 - Air Quality - November 2011
 - Effects of Hydraulic Fracturing – 2012/2014

Fort Worth

Natural Gas Air Quality Study

On March 9, 2010, Fort Worth City Council appointed a committee to look at air quality issues and make a recommendation on the qualifications of proposed companies and a scope of work for an air emission study

- Comprised of 14 members from these groups:
 - Citizens
 - Environmental groups
 - North Central Texas Council of Governments
 - Natural Gas Drilling industry
 - Facilitator from University of Texas at Arlington
 - Liaisons from the EPA & TCEQ

- The Committee has met 6 times since March 2010

- Meetings are open to the public and allow for citizen/speaker input

Fort Worth Natural Gas Air Quality Study - Continued

Fort Worth commissioned Eastern Research Group, Inc. to collect information

- How much air pollution is being released by natural gas exploration in Fort Worth?
- Do sites comply with environmental regulation?
- How do releases from these sites affect off-site air pollution levels?
- Are the City's required setbacks for these sites adequate to protect public health?

Fort Worth Air Quality Study - Cont'd

Interim Report released in February 2011 preliminary and partial data:

- Ambient air quality report showed no pollutant concentrations that exceeded any published short-term (or acute) health benchmark published by the TCEQ, EPA, or the Agency for Toxic Substances and Disease Registry
- Preliminary quantitative emission estimates for point sources (which include well pads, compressor stations, and other operations) were generated for 66 sites
- One well pad had preliminary VOC emissions of more than 25 tons per year, greater than TCEQ's Permit-by-Rule (PBR) threshold, the state's lowest level of air permit. Gas well sites producing more than 25 tons per year of VOC emissions must apply for the next level of air permit, the Standard Permit

Final results are expected in the summer of 2011

NTCASC Oil and Gas Task Force

North Texas Clean Air Steering Committee Oil and Gas Task Force convened by the North Central Texas Council of Governments

- Ongoing effort. First meeting held on March 30, 2011
- Purpose is to consider the effects of oil and gas production on regional air quality in North Texas and identify opportunities to mitigate impacts
- Committee will explore ways that cities, counties, industry and environmental interests could work together to minimize the environmental impacts of gas drilling in our region

NTCASC Oil and Gas Task Force

- Membership and composition – 12 members
 - Elected officials from counties and cities
 - Environmental groups
 - Dallas Regional Chamber
 - Fort Worth Chamber of Commerce
 - Texas Business for Clean Air
- Technical expertise
 - COG staff
 - Industry
 - EPA
 - TCEQ

All meetings are open to the public and allow for citizen/speaker input

TCEQ Inventory

- Inventory of drilling-related sources of pollution to understand emissions produced in the Barnett Shale
- Impacts to be considered in State Implementation Plan for ozone serious nonattainment classification
- The inventory will collect information on:
 - Equipment and production information for emission sources associated with Barnett Shale oil and gas production, transmission, processing and related activities
 - Air emissions authorizations for these sources
 - Proximity of these sources to the nearest off-site receptor
 - Annual 2009 emissions for nitrogen oxides, VOCs, and hazardous air pollutants
- Results of the Barnett Shale Phase II Special Inventory expected in July 2011

EPA Review of Existing Regulations

- EPA is conducting a review of current regulations:
 - Identifying emission sources
 - Quantifying emissions
 - Considering mitigation opportunities
 - Analyzing environmental and economic impacts

Will establish “gold standard” for operators and identify new technology

- Preliminary findings by 4/29/11
- Regulatory requirements by 11/30/11

EPA Hydraulic Fracturing Study

The goal of this research is to answer the following questions:

- Can hydraulic fracturing affect drinking water resources?
- If so, what are the conditions associated with the potential impacts on drinking water resources?

Interim results expected in 2012

- Additional results published as individual research projects are completed - 2014

City of Dallas Efforts

Office of Environmental Quality, Sustainable Development and Construction, and City Attorney's Office are:

- Analyzing ordinances on gas drilling from other cities
- Monitoring studies and other task force activities
- OEQ participates in monthly DFW Gas Well Round Table Discussion Group meetings to share lessons learned, discuss latest topics, and receive information from stakeholders with staff from cities throughout the region

Existing City Regulations

Gas drilling ordinance adopted in Sept. 2007

Ordinance requires:

- Specific Use Permit
- Gas Drilling Permit
- Inspections by a registered engineer gas inspector

Zoning Regulations

SUP required in all residential and nonresidential districts

Minimum spacing requirement

- 200 feet from fresh water wells
- 25 feet from property line
- 25 feet from storage tanks
- 75 feet from right of way
- 100 feet from other gas drilling structures
- 300 feet from institutional uses, recreational uses, and residential uses

Must be surrounded by an 8 foot security fence

Permitting Regulations

- Requires a gas well permit
 - Permit expires if drilling of the first well does not begin within 180 days
 - Drilling of all wells must begin within one year, if within 600 feet of a residential use
- Requires inspections by a registered engineer
- Requires liability and environmental insurance

Permitting Regulations

Regulates all facets of operations:

- Storage
- Vehicle parking
- Signs
- Protection of natural resources
- Prohibits dumping
- Requires clean-up
- Venting of gas
- Erosion control
- Chemical storage
- Road inspections and repairs
- Equipment & structure standards
- Tanks
- Noise
- Vibrations
- Odor
- Time limits on fracturing
- Requires notice prior to fracturing
- Emergency response
- Incident reports
- Period reports
- Restoration of site after abandonment

Gas Well Inspection

- The ordinance also requires inspections, permit administration and ongoing monitoring by a gas inspector
- Gas well inspection requires unique skills not currently available on staff; ordinance provides that third-party inspectors may be used
- RFQ advertised twice in January 2011
 - Two pre-bid meetings, poorly attended
 - Bid due date extended twice
 - No responses received; currently not advertised
 - Currently negotiating with Ft. Worth staff to provide temporary services thru an Administrative Action

Trinity East & XTO Leases

Trinity East Leases

- Started August 15, 2008 for 36 months
- One lease for 2,042 acres – 136 tracts
 - 3 proposed drill sites (222 acres)
 - 1 drill site (29 acres)
- One lease for 1,611 acres – 21 tracts
 - All 21 tracts are designated drill sites
- City received \$19 Million
- If drilling is conducted, City will receive 25% royalty
- Leases contain an option to extend for 3 years for an additional bonus. Trinity has requested an extension without the bonus. Currently in negotiations.

XTO Lease

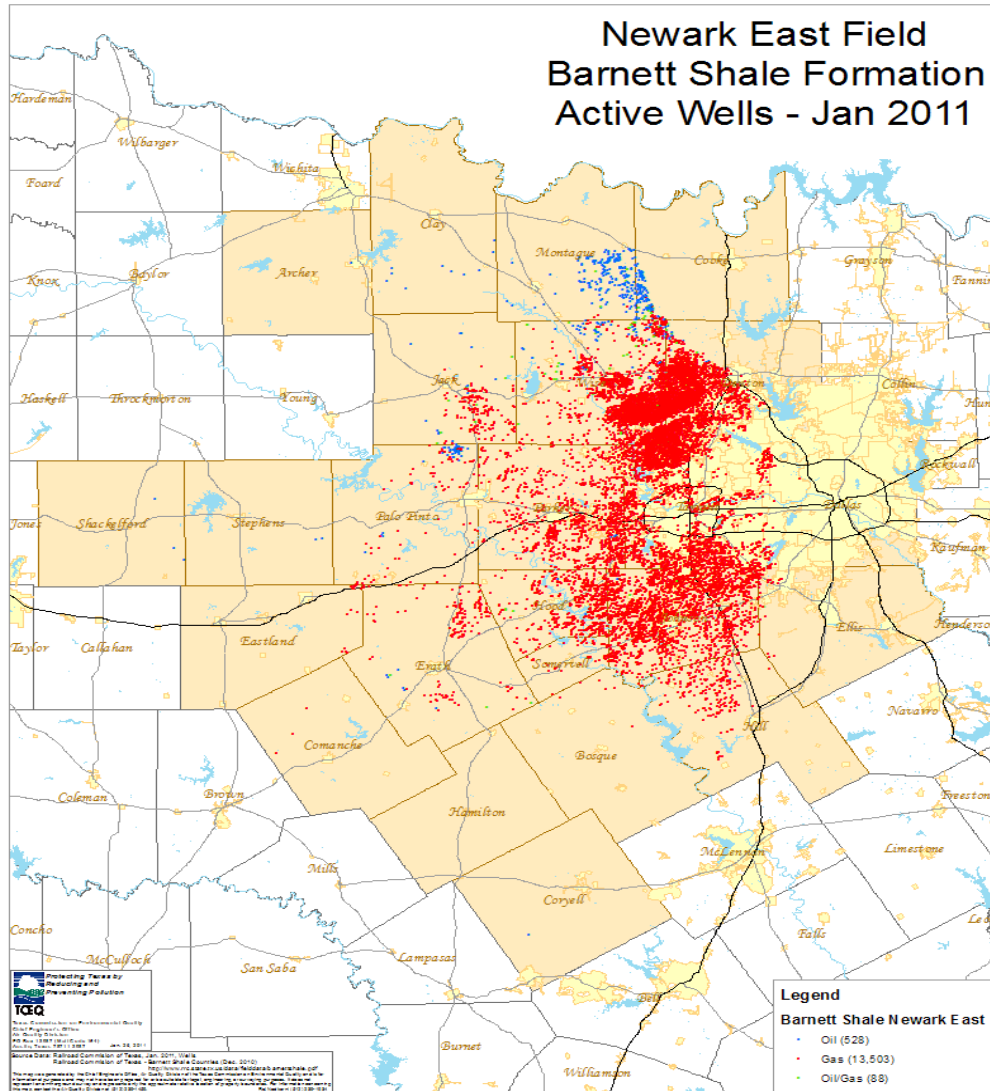
- Started February 27, 2008 for 36 months
- Lease continues as long as gas is produced in paying quantities
- 1603 acres – 38 tracts
- 13 tracts are designated drill sites (983 acres)
- City received \$14.7 Million
- If drilling is conducted, City will receive 26% royalty
- If drilling is conducted, City will receive \$50,000 per acre used for drilling
- Lease was recently extended for 30 months, but limited to Hensley Field (only 720 acres)

SUP Status

Five SUPs approved:

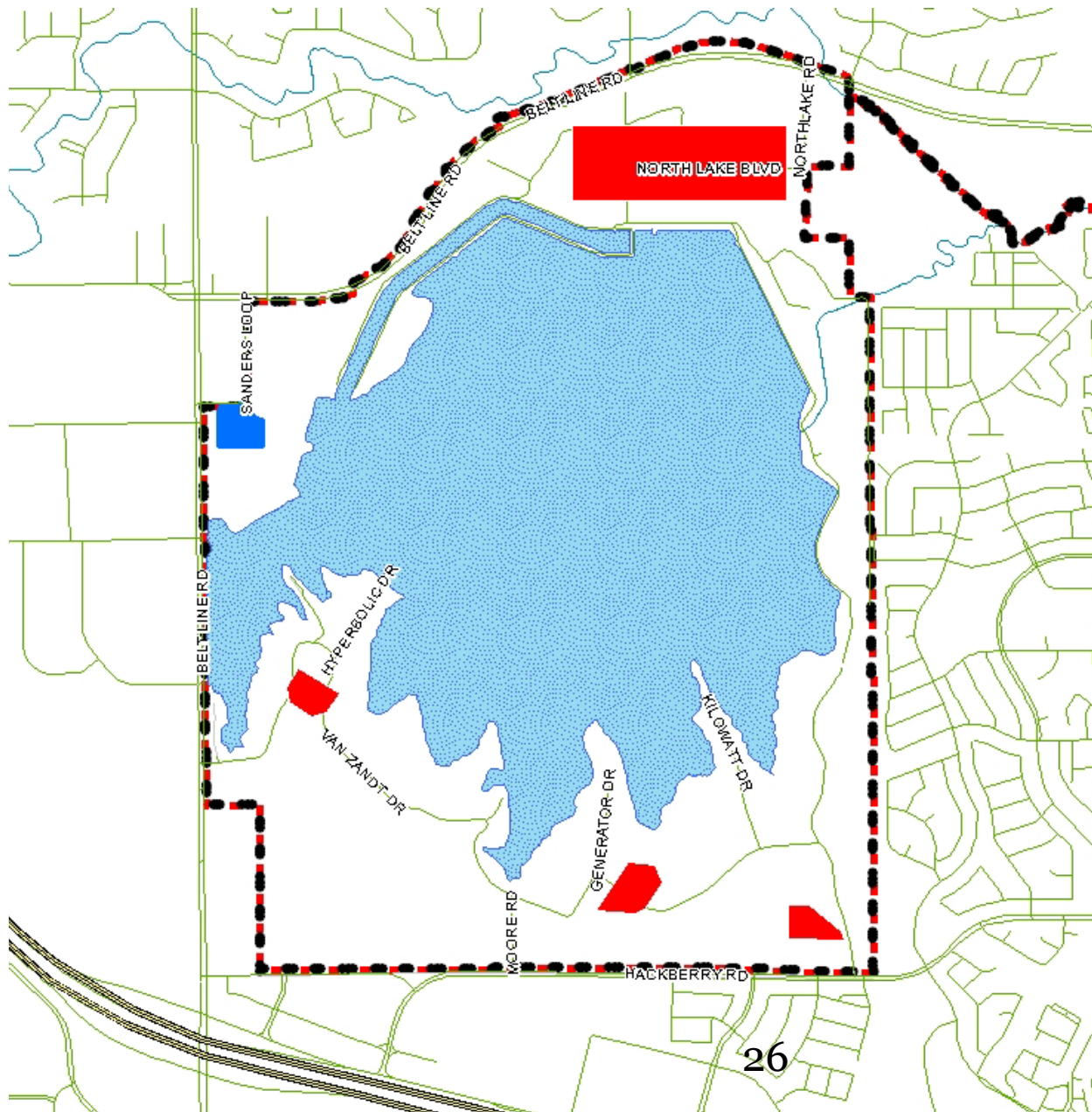
- 3 SUPs on private property before adoption of ordinance
- 2 SUPs on private property after adoption of ordinance
- 8 pending SUPs for gas drilling
 - 5 on private property
 - 3 on city-owned property
 - 2 applications for Trinity East
 - 1 application for XTO
- One pending SUP for gas processing
 - On private property to process gas from Trinity East wells
- No gas well permits have been issued

SUP Status - Continued



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

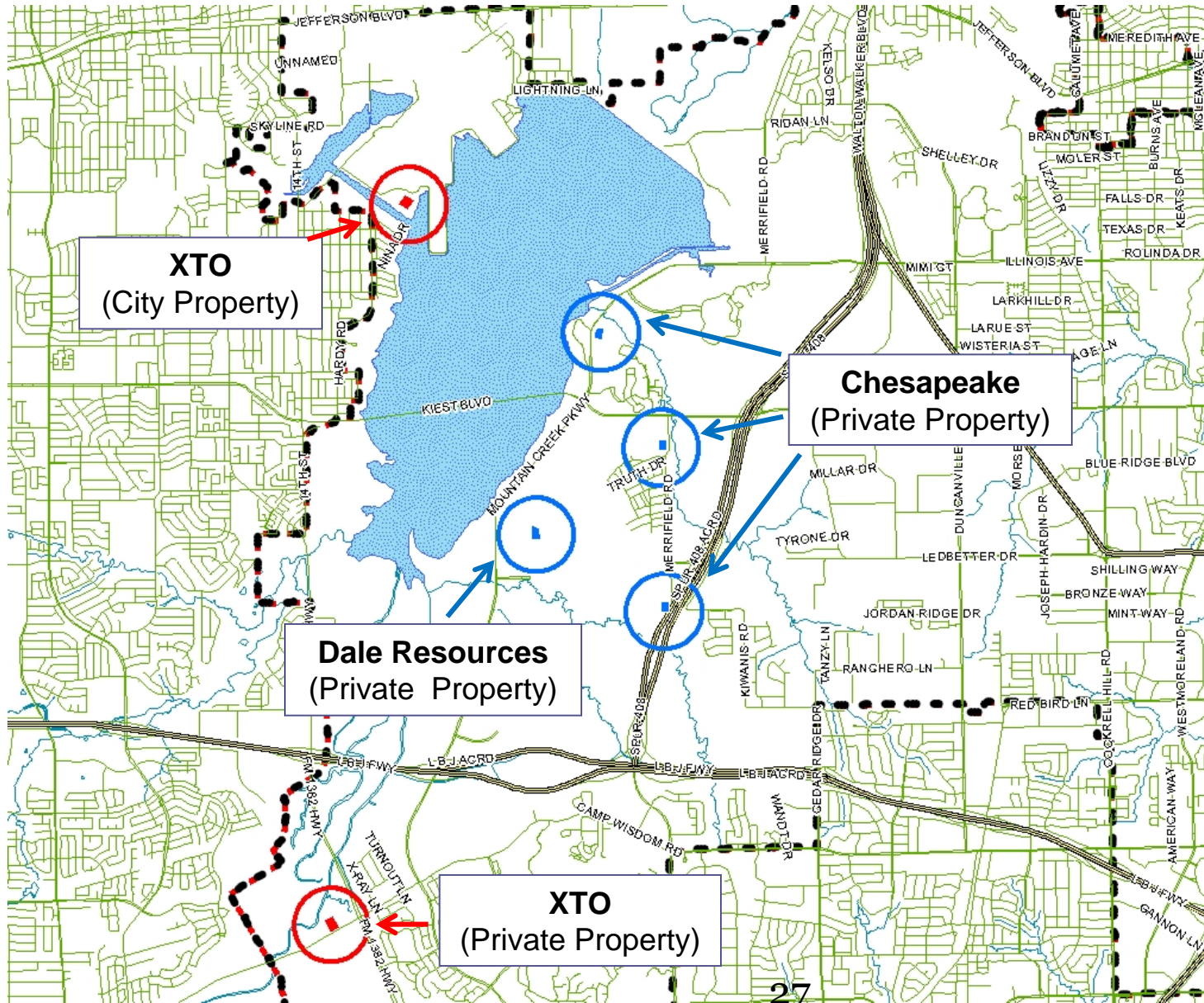


SUP Status

- Pending
- Approved

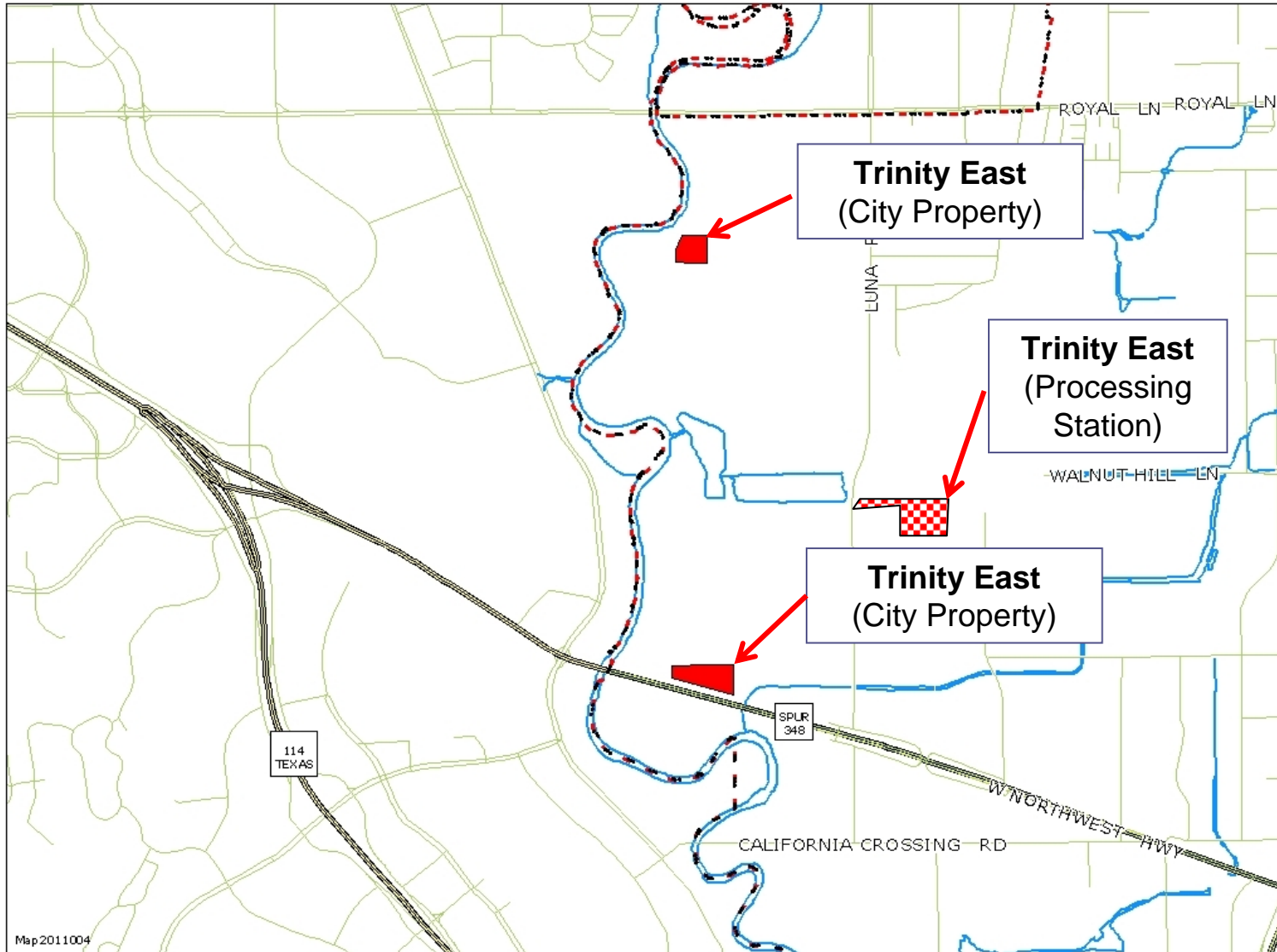
Property Owner:
Luminant Energy
(Private Property)

Driller: Chief Oil & Gas



SUP Status

- Pending
- Approved



SUP Status

■ Pending

Summary of Moratorium Process

- Only applies to commercial property
- Requires public hearings, notice, two readings of the ordinance
- Written findings by Council
 - Identifying the harm to public health, safety, or welfare that will occur if a moratorium is not adopted
 - Boundaries of the moratorium
 - Specific types of commercial property to which the moratorium will apply
 - Goals to be reached by adopting a new ordinance
- Expires in 90 days
- Permits only one 90 day extension after additional public hearings, findings and a $\frac{3}{4}$ vote of Council
- Does not apply to zoning applications filed before the moratorium is in place
- Precludes the City from adopting another moratorium on the same property for 2 years

Moratorium Process Details

Limitations

- Texas Local Government Code Chapter 212, Subchapter E limits the ability of cities to impose moratoriums.

Findings

- An ordinance imposing the moratorium must be supported by findings that:
 - There is a need to prevent a shortage of essential public facilities;
 - There is a significant need for other public facilities such as police and fire; or
 - **Ordinance or regulations are inadequate to prevent the new development of commercial property from being detrimental to the public health, safety, or welfare of residents.**
- A commercial moratorium based on public health, safety, or welfare must be supported by the following findings:
 - Identification of the harm to the public health, safety, or welfare that will occur if the moratorium is not adopted.
 - The geographic boundaries of the moratorium.
 - The specific types of commercial property to which the moratorium will apply. Commercial property is property zoned for use other than single-family use, multifamily use, heavy industrial use, or use as a quarry.
 - The goals to be reached by adopting the new ordinance.

Moratorium Process Details

Process to impose a moratorium

- Two public hearings, one before CPC and one before City Council.
- Notice of a public hearing must be published in a newspaper 4 days before the CPC public hearing.
- The day after the CPC hearing, a temporary moratorium goes into effect.
- The public hearing before City Council and the first reading of the ordinance must occur within 12 days after the CPC public hearing.
- A second reading of the ordinance by City Council must occur at least 4 days after the first reading.

Moratorium Process Details

Duration

- A moratorium based on public health, safety, or welfare expires **90 days** after adoption.
- Notice of an extension must be published in the newspaper 15 days before the public hearing.
- The moratorium may be extended for another **90 days** if the City Council holds another public hearing and adopts findings that:
 - Identify the problem requiring the need for the extension;
 - Describe the progress made to date;
 - Specify the length of the extension; and
 - Summarize evidence that the problem will be resolved during the extension.

A moratorium extension must be approved by $\frac{3}{4}$ vote of City Council.

Moratorium Process Details

Waivers and exceptions

- The moratorium must allow applicants to apply for a waiver.
- A moratorium does not apply to:
 - A project with permit applications filed before the effective date of the moratorium (vested).
 - A zoning application filed before the effective date of the moratorium.

Subsequent moratorium

- A municipality may not adopt another moratorium on commercial property for two years after the previous moratorium expires if the subsequent moratorium addresses the same harm or covers the same area.

Possible Next Steps

~ Options for Moving Forward

- 1.) Formulation of a Council - appointed Gas Drilling Task Force
- 2.) Engage an expert, outside consultant for further study and recommendations
- 3.) Continue to monitor major studies and task force work and keep Council abreast of significant shifts and progress on this issue. Delay formal action until more conclusive information is available.

Option 1 - Council-Appointed Gas Drilling Task Force

Composition - Eleven members

Three subject-matter experts with a background in environmental impact studies, air quality, water quality, and/or soil contamination issues in relation to oil and gas drilling

- Examples: professors, environmental attorneys, environmental consultants, land use / zoning attorneys

Three industry/business

- Examples: gas drilling company representatives with a presence in the area and/or who have implemented “best practices,” oil and gas attorneys

Three citizens and/or environmental group representatives

One chairperson

One Park Board representative

Option 1 - Council-Appointed Gas Drilling Task Force

Necessary technical expertise and support from other agencies, City staff and outside subject matter professionals

- EPA Air Quality
- TCEQ Water Quality
- SD & C Engineering
- Office of Environmental Quality
- City Attorney's Office
- Dallas Water Utilities
- Intergovernmental Services

Option 1 - Gas Drilling Task Force

Scope and Timeframe

- Review and consider relevant studies and discussions currently available on the environmental/health effects of gas drilling and production
- Review and consider the City's current regulatory policy and ordinances and recommend appropriate and necessary changes
- Hold public hearings at beginning and end of process to receive input
- Provide monthly update to Council
- Provide recommendations, including any minority report

Option 1 - Council-Appointed Gas Drilling Task Force

- Staff commitment from outside agencies and experts must be identified, confirmed and funds identified
- City of Dallas staff resources limited and priorities would be diverted from other ongoing efforts
(CAO, OEQ and SD&C)
- Additional outside subject matter expertise would be necessary for environmental and engineering knowledge, advice and recommendations
- Estimated range of funding a Gas Drilling Task Force - \$300k to \$800k. Funds have not been identified.

Option 2 - Engage an Outside, Expert Consultant on Gas Drilling

- Gas Drilling technical expertise is available within the North Central Texas region
- Range of studies currently underway
 - Fort Worth \$1+M
 - EPA - \$5M
- Scope and timeframes would need to be discussed and determined
- RFP process would be undertaken, contract approved by Council and negotiated by staff
- Currently, funds have not been identified for this effort

Option 3 - Monitor Significant Studies and Taskforces Currently Underway

Office of Environmental Quality, Sustainable Development and Construction, and City Attorney's Office will continue:

- Analyzing ordinances on gas drilling from other cities
- Monitoring studies and other task force activities
- Participating in monthly DFW Gas Well Round Table Discussion Group meetings

Staff will keep City Council abreast of significant trends and shifts in policy and regulations throughout the region and be prepared to take additional action if/when directed by Council

Estimated range of funding for City staff and experts/consultants - \$100k to \$300k. Funds have not been identified.

Council Discussion and Direction to Staff on Appropriate Next Steps