Urban Natural Gas Production: A Planning Approach

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COFW Gas Drilling Ordinance

- Comprehensive Noise Regulations, including Noise Management Plan, Pure Tones and Low Frequency
- Compressor Regulations
- Green Completions
- Setbacks
- Gathering line maps with Well Permit
- Fresh Water Fracture Ponds
- Salt Water Pipelines
Every operator with their well permit must provide a plan.

- Ambient measurements for 72 hours at multiple locations, including one weekend day;
- Address elevations, distance to residences;
- Noise mitigation techniques, including noise walls and buffer pads
Noise Restrictions

- Values based on advice of sound expert that has data on almost every Barnett rig.
- May not exceed ambient by 5db (day) and 3db (night);
- 10 db limit over ambient for fracturing;
- 3 db for flowback
- Limits on pure tones and low frequency
- Ordinance limits compressor noise also.
Setbacks

- How do you measure?
  - Wellbore to structure or edge of site
  - More setback, more sites
- Multiple Well site v. Single Well site
- Pad site equipment
- Line Compressors
- Reverse Setback Effect
- What structures are protected?
Planned Development of Multi Family
Setbacks

- 600 feet from Residence without waivers or Council approval;
  - Council may reduce to 300 feet.
  - Wellbore measurement or pad site boundary
- Other limits on schools, churches and public buildings
Chesapeake Operating, Inc.
8th Avenue Railroad Lease

Intersection of 8th Avenue and Elizabeth Street

600' Buffer
What body makes the review?

- Council
- Appointed Board
- FW has Gas Drilling Review Committee
  - Pipelines in neighborhoods
  - Truck Traffic
  - High Impact Wells

- Regulate by Zoning Class or Not?
Green Completions

- Ordinance requires reduced emission completions i.e. capturing salable gas when completing a well.
- First well on a pad is exempt.
- Some operators had already been doing this and making money vs. venting.
Why Does a City need a Pipeline Ordinance?

- Density-gathering lines and connecting lines more dense than ever seen in urban context;
- Duplication-multiple producers must build out to interstate transmission lines;
- Knowledge-City must know where all of the lines are located;
- Future Land Use and Planning-pipelines have a significant impact on future use by city and private development.
Section 15-46 Highpoints

- Pipelines may not interfere with existing utilities or ROW;
- Must restore to original condition;
- Must meet or exceed federal and state requirements;
- 10 days prior to construction, operator shall give written mailed notice to all tenants, property owners and residents that are located adjacent to proposed line.
City Regulated Pipelines

- Must incorporate all federal and state requirements for lines between well and first transfer;
- Obtain permit;
- When applying for well permit must show proposed route to reach transmission line;
- Must submit application to COFW BEFORE making any offer or initiating any negotiations in residential area.
Waste Disposal

- Biggest Issue facing Hydraulic Fracturing drilling.
- Fort Worth had a Moratorium and has now declined to allow wells.
- Tremendous volumes of waste.
- Other jurisdictions are moving to treatment and re-use of waster vs. disposal.
- Consult technology providers such as GE Water.
Saltwater Pipelines

- Must obtain permission from the City;
- Designed and sealed by a professional engineer;
- Locate 5 feet below City utilities;
- Automatic shutdown system;
- Markers.
- FW Pilot Study on Disposal
Phase I – all trucked
Phase II – 3 months: Trinity South piping completed
Phase III – 12 months: Trinity North piping completed
Phase IV – 15 months: East of 820 piping completed
Recent events have placed increased focus on emission from facilities;
- Condensate tanks
- Compressors
- Disposal facilities
- Well completions
- Idling trucks

TCEQ has been doing intense monitoring and has an expedited response time on complaints.
Air Quality

- Fort Worth recently convened a special panel to develop a methodology for analyzing various impacts from drilling. Consultant has been selected final report has been issued.

- EPA is looking at this issue closely-new enacted rules including green completions.
RRC Planned Development

- Mineral and Surface Owner must be notified
- Advanced plan of development must establish size and location of production site-1 for every 80 acres of surface
- Pipeline corridors
- Once approved is binding on later production activities
Planned Energy Site
Common Pad Sites—used by multiple operators
Common pipeline corridors, under or along city streets
  - Encourage shared pipelines
Saltwater pipelines, centralized treatment facilities
Common Compressor Locations
Entire FW Ordinance and other information at:

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