

Preliminary Well Impact Study

Integra Realty Resources

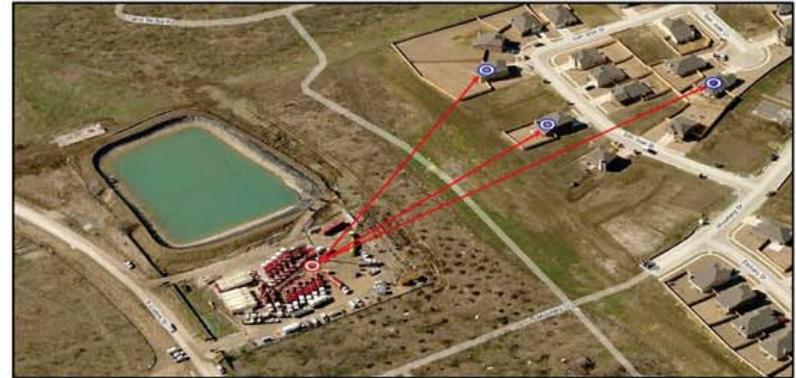
and

Natural Gas Program Summary

Methodology

1. Price-Distance Relationship:

- The sale prices of houses on a per square foot basis were compared to the distance to the well site in feet.
- Distressed sales were excluded.
- Observed the rate of change in price compared to distance from the well.



2. Paired Sales Analysis:

- The sales of houses adjacent to well sites were compared to sales of houses not adjacent to well sites.
- Distressed sales were excluded.
- Observed any differences in value.



3. Survey of Market Participants:

Real estate agents, builders and developers in Arlington and surrounding communities were interviewed to determine if buyers and sellers considered proximity to gas well sites and if this is a pricing criteria of home builders.

Study Results

Price-Distance Array Results

Site	Rate of Value Change per 500 feet	Comments
KISD	-1.45%	Well located near Hwy 287
Day	-1.80%	Well located near electrical transfer station and SH 360
Fossil Lake	+1.65%	Well across Silo Road from subdivision
MITX	+1.1%	Well located near newer phases of construction

Paired Sales Results

Drill Site/Subdivision	Number of Sets	Average Distance from Center of Well Site in Feet	Average Value Difference
Highpoint Hill	2	1,900	+0.52%
Little Chapel Creek	7	1,059	+0.13%
Van Zandt Farms	10	736	+2.68%
MITX	5	330	-2.23%
Fossil Creek	1	1,200	+4.37%

Summary

- At this time, data suggest that no damages result from the presence of a gas drilling site near residential properties in most cases.
- Survey participants indicated that houses in the price range over \$300,000 to \$400,000 can be affected if they are close enough to see the drilling rig in operation. Insufficient data are available to measure the affect.
- One subdivision near the MITX site showed evidence that houses that are immediately adjacent to the well site may experience some temporary damages. This damage may be as much as -5% but appeared to dissipate in this subdivision after a distance of 400 linear feet from the center of the well site.
- As distance from the well site increases, the affect on residential property values diminishes.
- Data in at least one subdivision with resales of houses adjacent to well sites indicate that as time from the drill date increases, the affect on property values appears to decrease.

Conclusion

- At this time, the study finds no definitive and measurable permanent impact on typical residential properties around natural gas well sites.

Natural Gas Program Summary



Quicksilver
Lake Arlington Drill Site

Natural Gas Program Summary 2006 - Present

CITY AS:

MINERAL OWNER

- Mineral asset leasing and management

TAXING ENTITY

- Business Personal Property – Pipelines and drilling equipment
- Mineral Interests Assessed Value – based on market value of estimated recoverable reserves and the corresponding potential future net income discounted to present value
- Land – appraised value of land utilized for exploration and production purposes

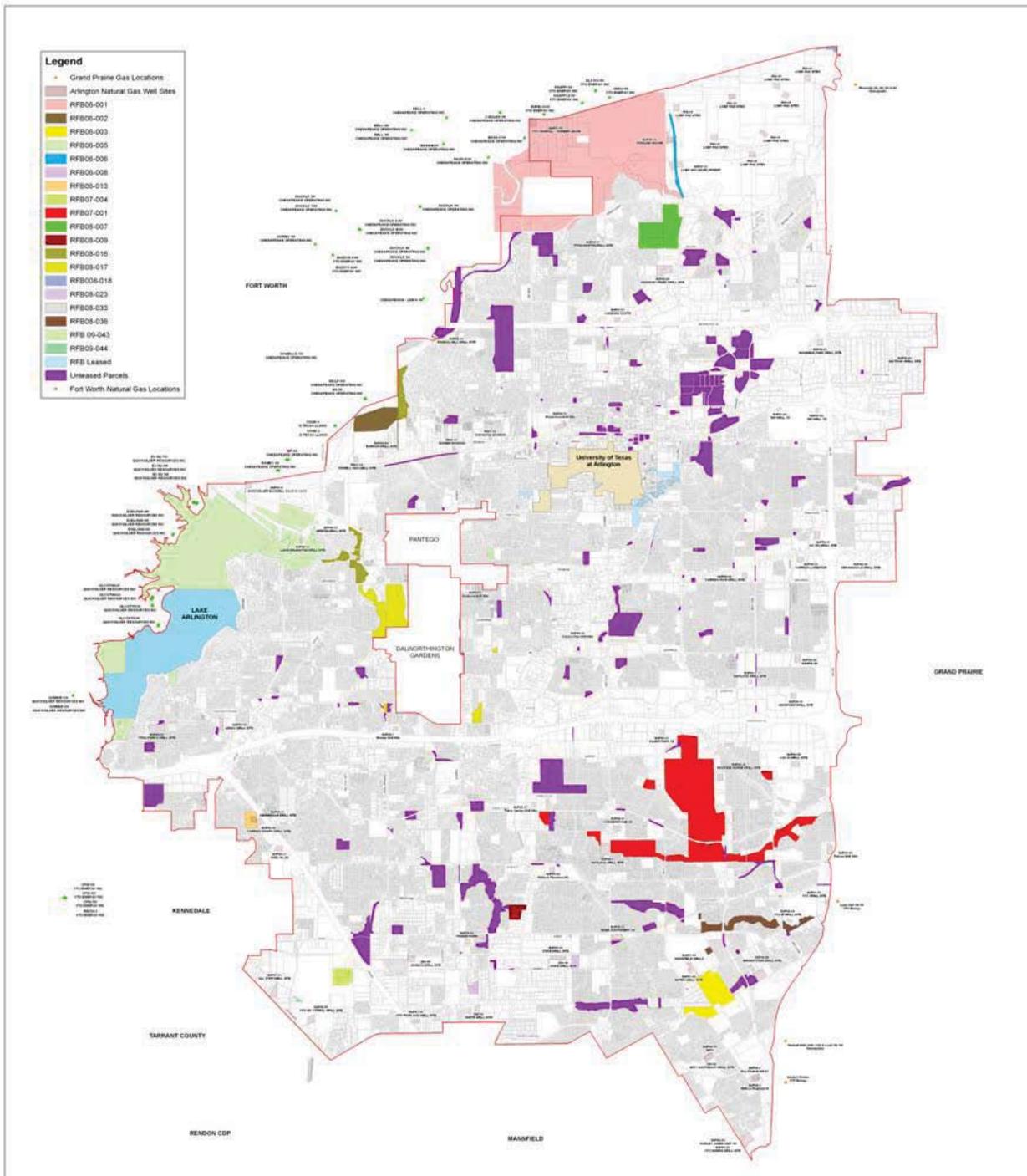
REGULATORY AUTHORITY

- Pipeline Licensing
- Gas Well Permitting and Land Use

Mineral Leasing and Revenue Summary

LEASING SUMMARY

- Current Leases: 21
- Expired Leases: 3
- Leased Acreage: 4,995
- Released Acreage: 181
- Unleased Acreage: 1,343+



Parcels Under Review
No RFB Number, Leased
and Parcels with RFB's



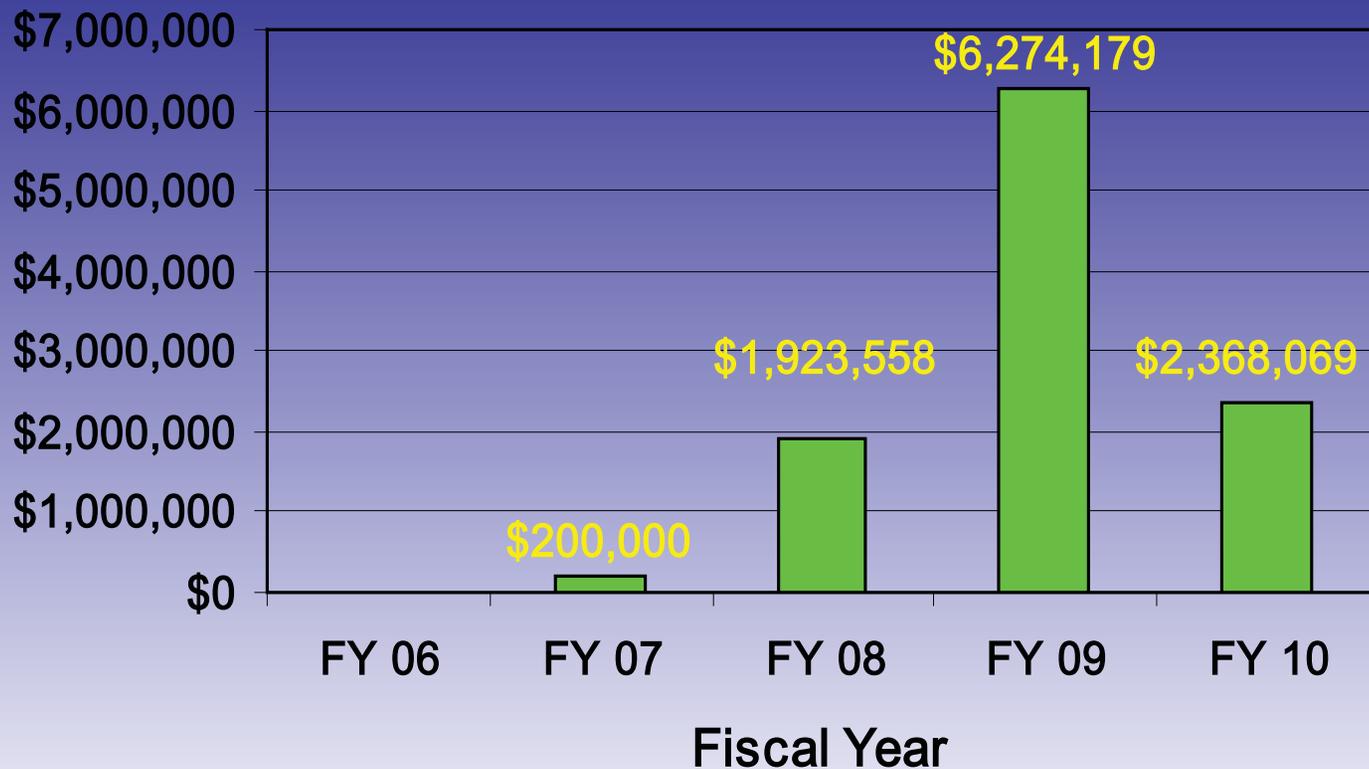
Prepared by
Water Information Services
October 22, 2008

Total Program Receipts by Year

	FY 2006	FY 2007	FY 2008	FY 2009	*FY 2010	TOTAL
Lease Bonus	\$4,772,774.85	\$25,470,913.24	\$11,191,985.64	\$17,407,402.81	\$374,211	\$59,217,288
Royalty Receipts	\$247,196.56	-	\$1,942,654.31	\$6,193,332.24	2,345,569.38	\$10,728,752
Shut-In Royalty Payments	-	-	-	\$20,000	\$22,500	\$42,500
Seismic License Fees	\$8,000	\$15,436.58	\$3,790	\$4,817.47	\$3,702.67	\$35,747
Total	\$5,027,971	\$25,486,350	\$13,138,430	\$23,625,553	\$2,745,983	\$70,024,287

* NOTE- FY2010 Represents 3 months of revenue activity

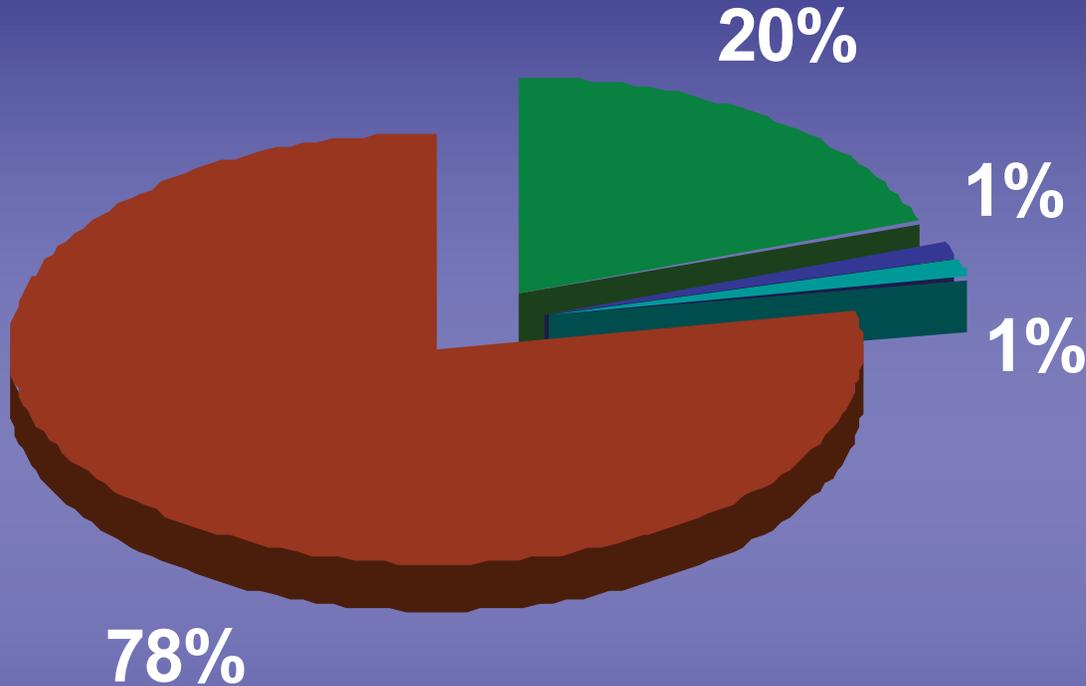
Royalty Receipts by Fiscal Year



* NOTE- FY2010 – 1st Qtr receipts

Revenue Allocation

* Fund Total
\$69,988,540



- City
- Expenses
- Land Banking
- Arlington Tomorrow Foundation

Ad Valorem Tax

Business Personal Property

Mineral Interest Assessment

Land

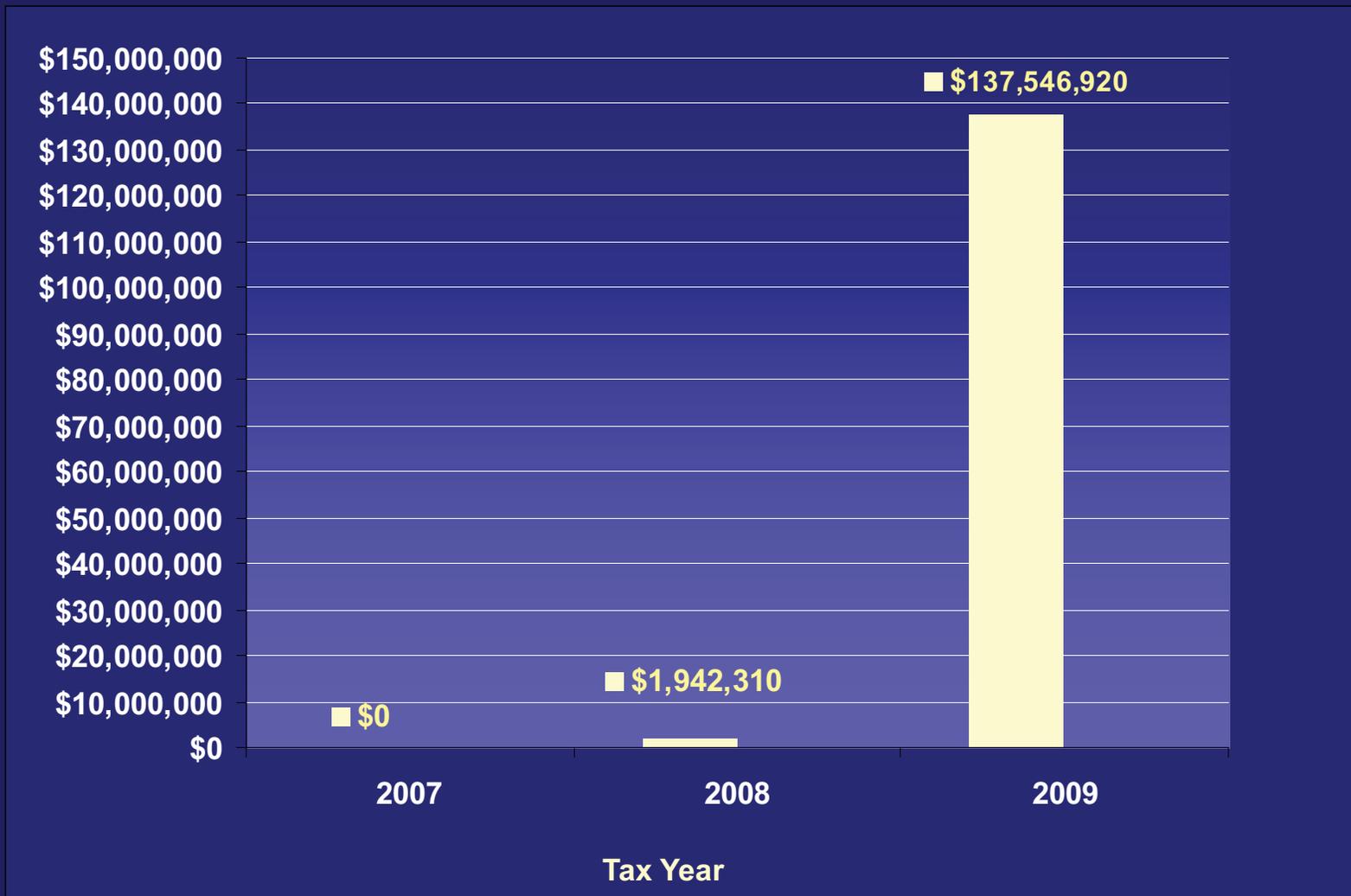
Business Personal Property Assessed Value by Year



Includes pipelines, drilling rigs and compressors

Data Source: Tarrant Appraisal District

Mineral Interest Total Assessed Value by Year



Data Source: TAD

Taxable Value Summary by Year

Tax Year	Business Personal	Mineral Interest	Totals	Tax Revenue (City Only)
2006	\$3,865,610	\$ 0	\$ 3,865,610	\$ 38,656.10
2007	\$2,153,120	\$ 0	\$ 2,153,120	\$ 21,531.20
2008	\$21,412,770	\$ 1,942,310	\$ 23,355,080	\$ 151,340.91
2009	\$22,284,770	\$137,546,920	\$159,831,690	\$1,035,709.35*
			Total	\$1,247,237.56

Data Source: Tarrant Appraisal District

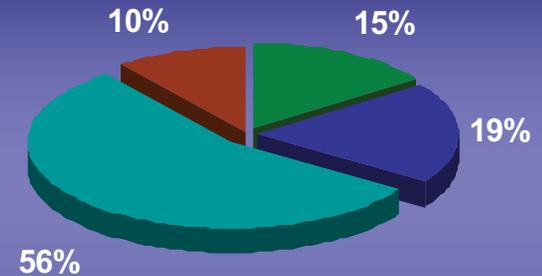
*Note- Anticipated tax collection based on certified appraised value

Taxable Land Value Analysis

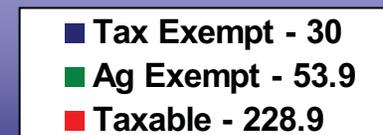
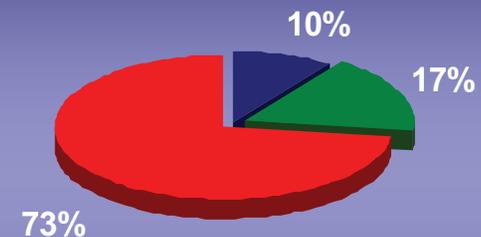
Assessed Values



Acreage Distribution by Zoning



Taxable Status



Alternative Land Use Tax Value Comparison

Use Category	Developed Acres	Total Tax Value	Tax Value per Acre
Multi Family			
Gateway Park	9.5939	\$13,717,976	\$1,429,864
Mission Rock Ridge	12.5897	\$17,281,306	\$1,372,654
Bardin Greene	15.8586	\$15,941,030	\$1,005,198
Chesterfield	13.86	\$13,577,000	\$ 979,582
Falcon Lakes	17.45	\$16,407,000	\$ 940,229
Medlin Square	2.1149	\$ 1,448,000	\$ 684,666
Retail/Commercial			
Arlington Highlands	87.638	\$183,909,560	\$2,098,523
Lake Prairie Towne Crossing	61.453	\$ 57,313,381	\$ 932,638
Mansfield Towne Crossing	45.519	\$ 38,818,348	\$ 852,796
Mansfield Town Center	28.029	\$ 20,734,967	\$ 739,758
Creekside Plaza	32.391	\$ 15,404,354	\$ 475,575
Drill Site	78.312	\$138,196,652	\$1,764,693

Leasing, Production and Tax Value Highlights

- Natural gas production is in the early stages of development with only **20%** of the City's leased mineral acres designated for production
- Royalty receipts **increased 326%** between Fiscal Years 2008 and 2009.
- Taxable value of mineral interests in Arlington **increased 7,081%** between Fiscal Years 2008 and 2009
- Properties with agricultural exemption prior to the construction of a drill site will not lose their agricultural exempt status
- Based on Railroad Commission filings approximately 21,300 mineral acres have been unitized for drilling out of an estimated 63,000 mineral acres in Arlington
- **66 sites** comprised of **312 acres** have been approved for gas drilling and production as a permitted use

REGULATORY AUTHORITY

- ❑ Pipeline Licensing
- ❑ Gas Well Permitting and Land Use

PIPELINE REGULATION

Natural Gas Pipelines are permitted by the Texas Railroad Commission

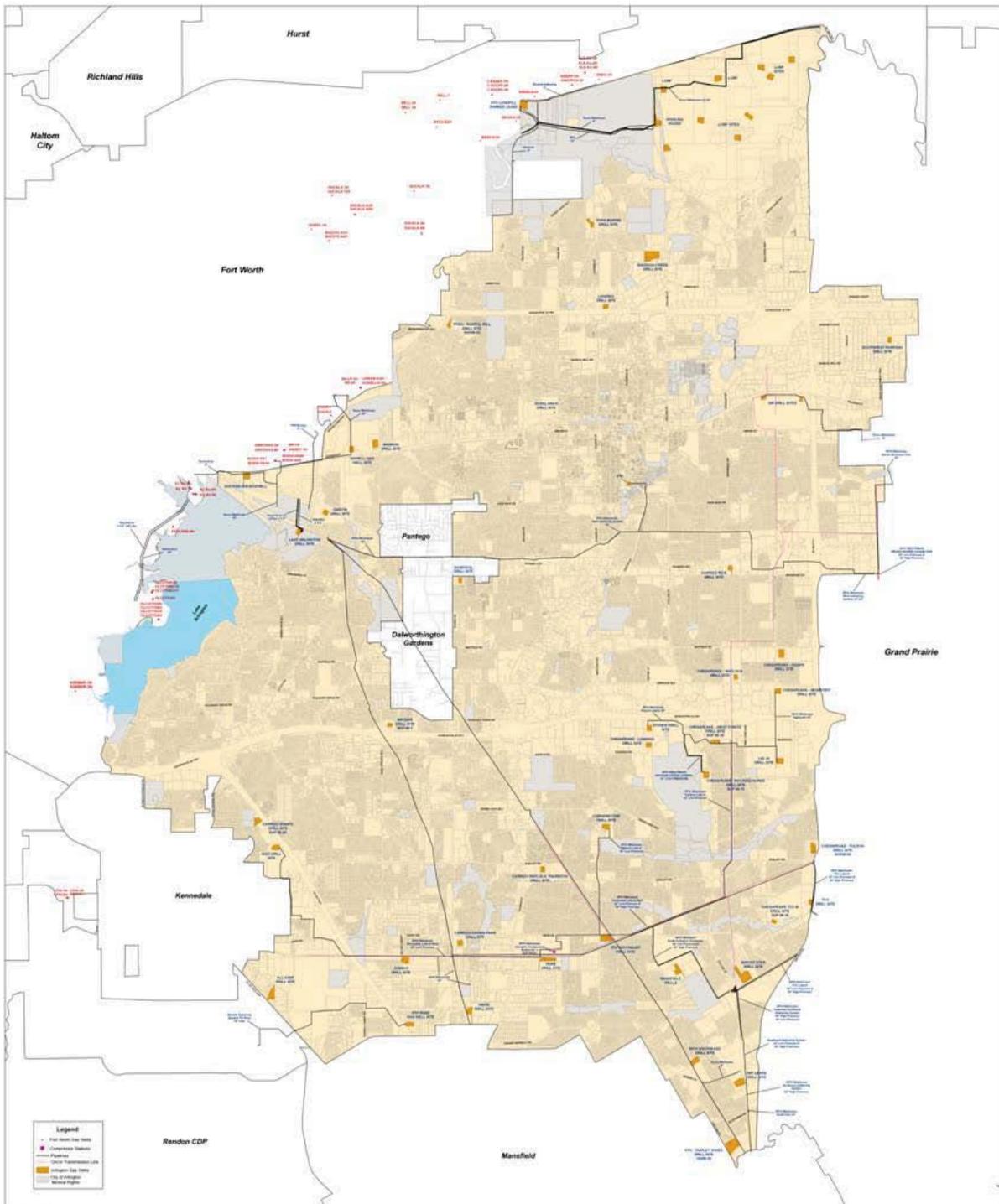
**The City regulates
where and how they cross
public rights-of-ways and public land**

The City uses Pipeline License Agreements to require operators to:

- Communicate planned pipeline route and locations
- Complete ROW Permit process and plan review
- Provide adequate insurance and bonding
- Preserve future municipal expansion opportunities
- Submit “As-Built” construction plans

Summary of Pipeline Licensing

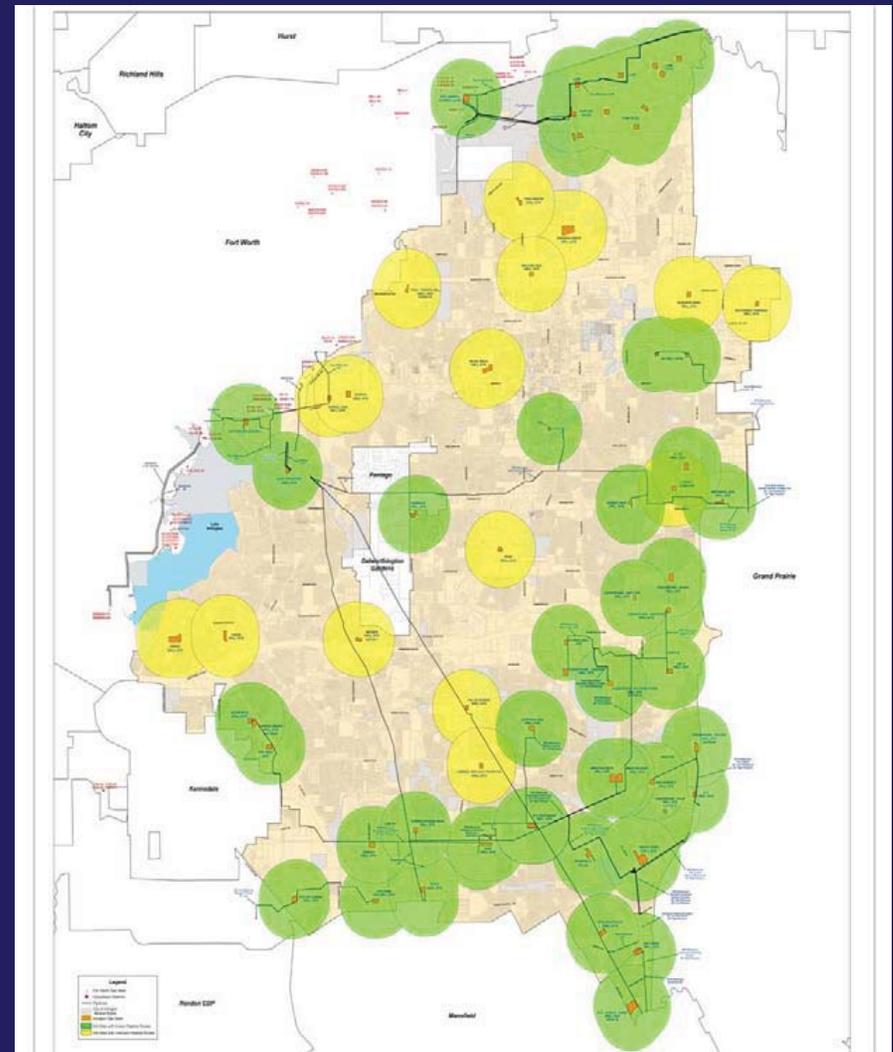
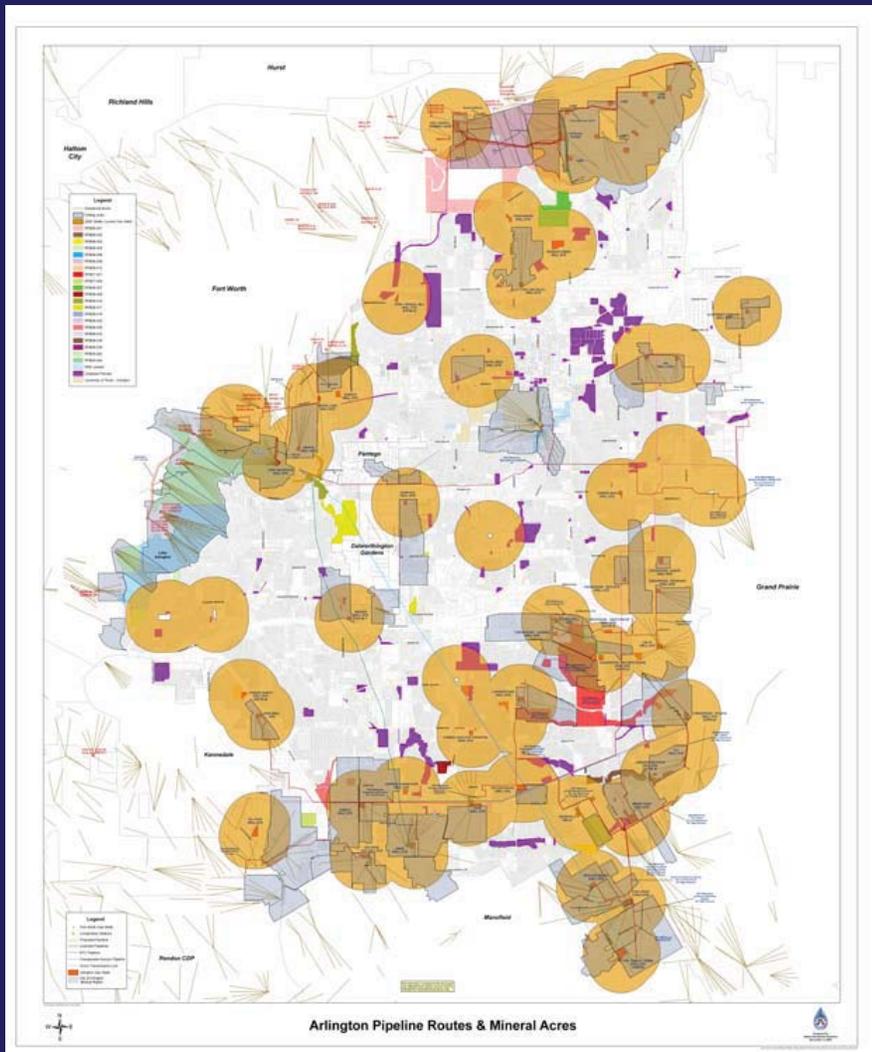
- Licensed linear feet- 86,866
- Constructed linear feet-”city-wide”:
111,177
- Projected linear feet not constructed:
259,692
- Collected license fees
\$3,149,345.85



Arlington Pipeline Routes



Approved Drill Site Locations with Identified Pipeline Routes



Highlights of Pipeline Licensing Activity

- Pipeline access has been identified for 50 of the 66 approved drill sites
- Use of existing electrical distribution and rights-of-way corridors has allowed pipeline access to drill sites that would otherwise be difficult reach
- Projected **234% increase** in the number of linear feet of pipeline to be constructed based on current routes and approved rights-of-way crossings

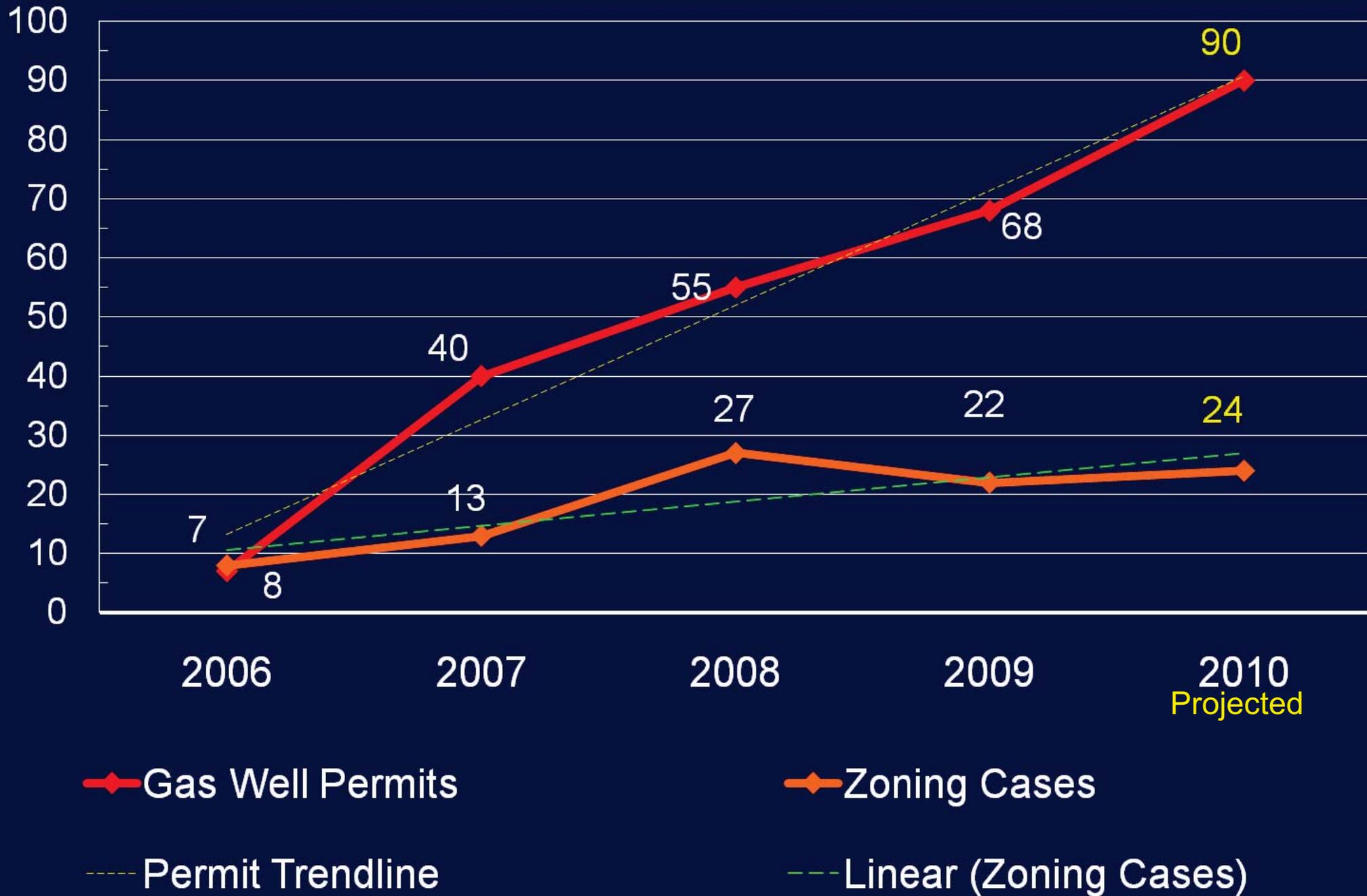
Gas Well Permitting and Land Use

Permit Applications

Permitting and Land Use

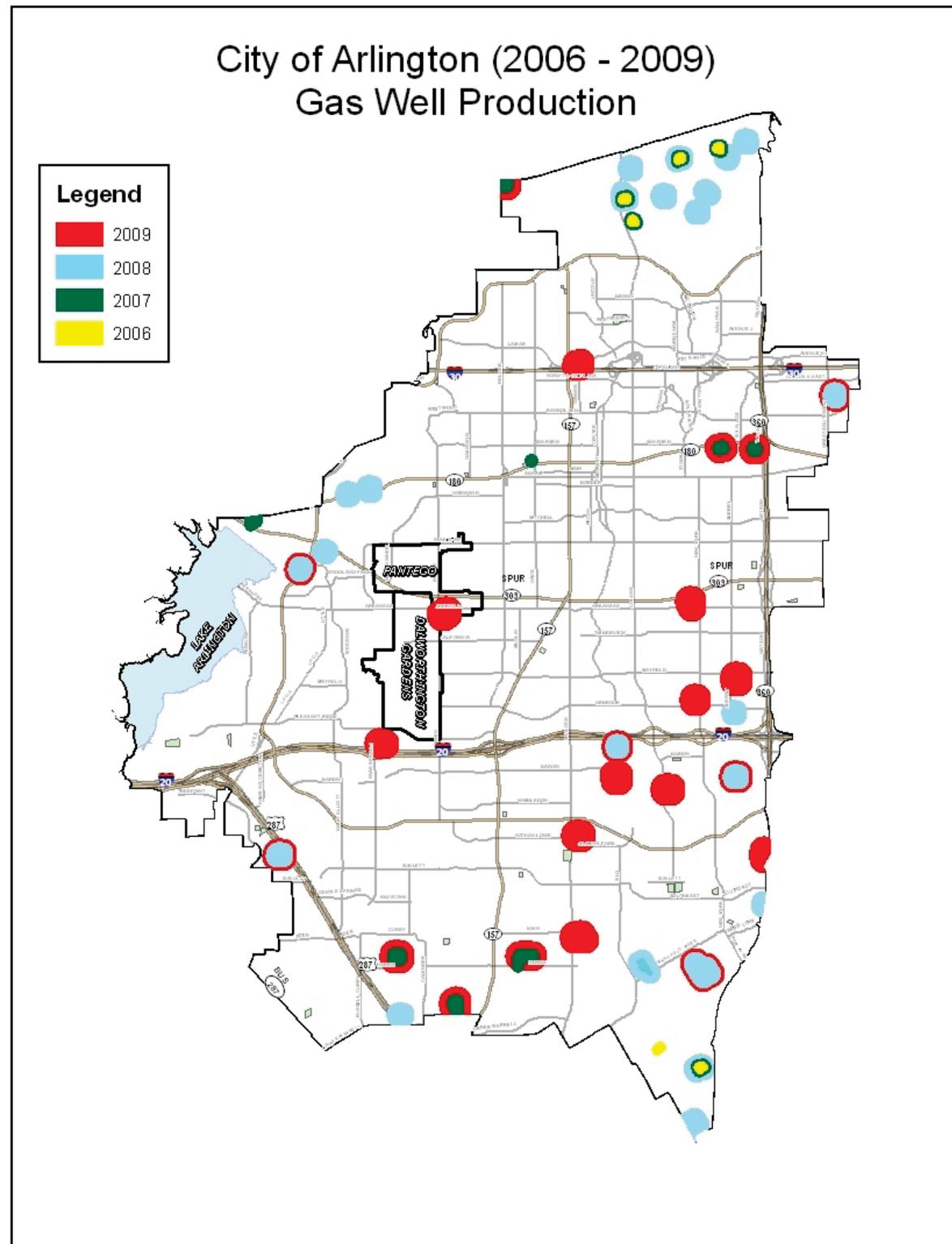
- Road Damage Fee
- Frac Ponds
- SUP Process
- Notifications
 - ✓ Opposition and Setbacks
- Compliance/Enforcement
- Noise
- Landscaping
- Green Completions
- TCEQ

Permit Applications



Permit Applications

- 2006
 - 6 pad sites
- 2007
 - 13 pad sites
- 2008
 - 22 pad sites
- 2009
 - 23 pad sites



Road Damage Fee

➤ Current Procedure

- Permit not issued until road damage fee paid
- *Road Damage Assessment Study* prepared by C&P Engineering, Ltd (3/07)
 - based on road type, roadway assessment, and lane miles
- Average amount paid per well: **\$ 198.59**
- Total collected since 2008: **\$ 23,433.66*** *As of 12-31-2009

➤ Consideration

- Re-evaluate fee calculation

Frac Ponds

➤ Procedure

- Lined pit used to store fresh water for fracture operations
- Temporary fencing required around perimeter of the pond
- Concerns over stagnant water pools as ideal breeding grounds for mosquitoes

➤ Considerations

- Time limits for site restoration
- Streetscape or alternative screening in addition to fencing
- Pond drainage and maintenance when not fracing, not just end-of-life restoration
- Encourage alternatives: frac tanks, existing pond sources and temporary water lines

Royal Arch Drill Site



Frac Pond constructed 10/2008

SUP Process

➤ Current Procedure

- SUPs expire after 1 year - unless permit issued and drilling commenced on the site
- One extension of 1 year may be granted
- After first drilled well, SUP has indefinite validity (no expiration)
- Boundary defined by metes and bounds description

➤ Considerations

- Sunset provisions requiring another Council meeting to re-examine the site and proposed drilling activities
- SUP boundaries to follow current parcel or tract boundary

Notification and Setback Petitions

➤ Zoning

- **OPPOSITION; $\frac{3}{4}$ vote required IF:**
 - 20% within proposal; or outside, within 200 feet, protest

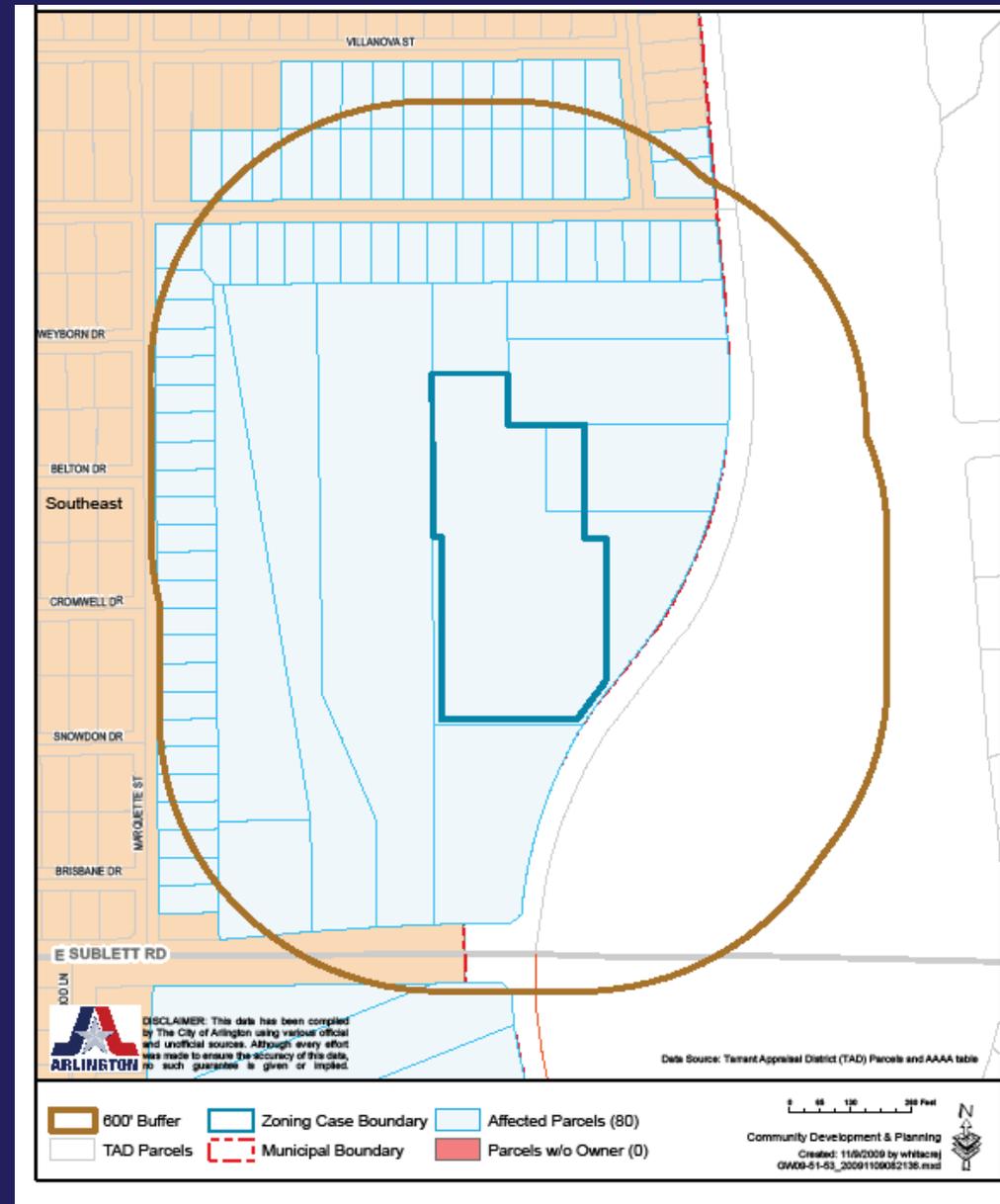
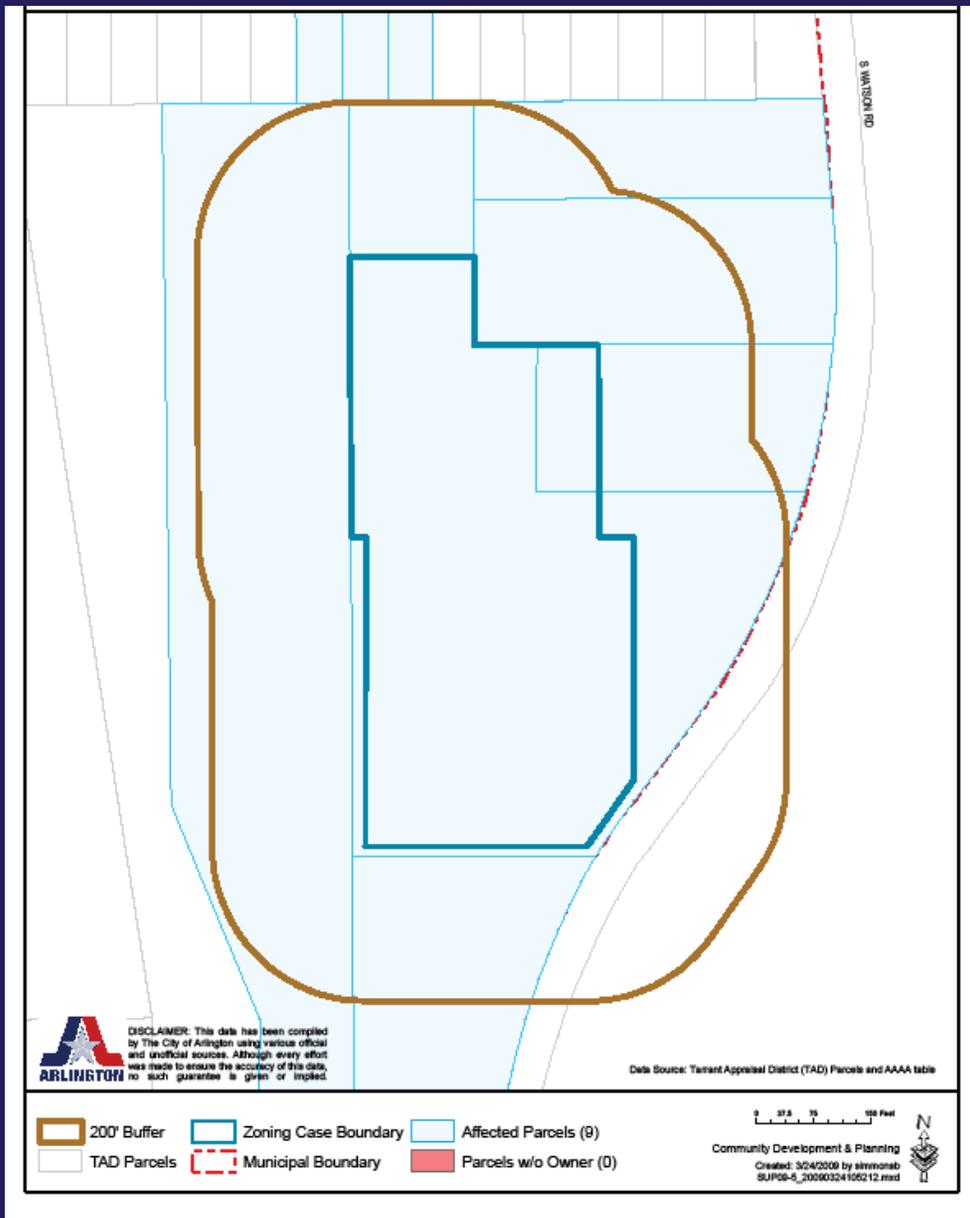
➤ Gas Well Permits

- **Setback Reduction Support**
- **Reduced to not less than 300 feet IF:**
 - 60% of property owners 300-600 feet around the well consent, or
 - Operator attempts to obtain 60% consent and super-majority vote

➤ Considerations

- **Increase SUP notification distance to 600 feet**
- **Should setback reductions below 600-feet continue to be allowed?**

PON Maps for Fulson Drill Site



Zoning Case: 9 notices
200 foot notice area (TLG § 211.007c)

Gas Well Permit: 83 notices
600 foot notice area (GDP § 5.03E)

Compliance and Enforcement

➤ **Current Procedure**

- **Pre-activity meetings prior to each stage**
- **Notifications from operator to City prior to work**
- **On-site inspections**
- **Annual inspection of each Gas Well Permit**
- **Operators cited for violations of approved City ordinances**
- **Citizen Everest, phone, and email responses within 24 hours**

➤ **Consideration**

- **Increase enforcement and oversight of each gas well facility**
- **Evaluate current enforcement tools, i.e. financial penalties**

Noise

➤ Current Procedure

- Pre-drilling ambient report submitted with permit application
- Increases over ambient noise level allowed
 - 3 dB nighttime; 5 dB daytime; and 7 dB fracing
- Continuous monitoring if within 600 feet of protected uses
 - Reports emailed to City daily

➤ Considerations

- Increase penalty for noise violations
- Reporting in 1-minute intervals with overage explanations

Landscaping

➤ **Current Procedure**

- **As identified in the approved SUP**
- **Required 30 days after completion of final well**
- **Site enclosed by masonry wall and vegetation; however, Council may approve an alternative**

➤ **Considerations**

- **Streetscaping to screen site from Rights-of-Way**
- **Landscape phasing plans**

Royal Arch Drill Site

PROPLEX BARNETT SHALE, LLC
ARLINGTON, TEXAS
ROYAL ARCH #1H
ADDRESS: 1301 WEST DIVISION ST.

Chesapeake
1301
W. Division
Chesapeake Operating, Inc.
1001 266-0000
Division # 107115

Site after drilling, awaiting completion of final well – no landscape

Green Completions

➤ Background

- Definition: Direct recovered gas through dehydrator and meter to existing, available sales line
- Benefit: Reduces need for venting and flaring of wells and ensures pipeline infrastructure is ready with permit
- Condition already exists on various governmental levels
 - Fort Worth requires Reduced Emission Completion
 - State of Colorado requires Green Completion Practices

➤ Consideration

- Consider Green Completion requirements

Texas Commission on Environmental Quality (TCEQ)

- TCEQ is the state environmental agency
 - Region 4 - Fort Worth Office
- Currently studying emissions from gas production and their impacts
 - 80+ locations: Tarrant, Parker, Wise, Denton, & Johnson Counties
- Fort Worth study found “No cause for concern”
 - Initial investigation during cold weather at urban sites
- Upcoming urban study focus on Fort Worth & Arlington
- **Considerations**
 - Provide data to TCEQ to identify sample sites for analysis
 - Release results of study for peer review and public examination

Summary of Initial Considerations

- **Re-evaluate Road Damage Fee**
- **Fracing alternatives & restoration time limits**
- **SUP: sunset provisions & boundary lines**
- **Increase distance for SUP notifications**
- **Setback distance reductions**
- **Consider additional enforcement and compliance**
- **Streetscape landscaping and phasing plans**
- **Green Completions**

QUESTIONS