The State of Natural Gas Pipelines in Fort Worth
This Fort Worth League of Neighborhood Associations commissioned this report with a Community Technical Assistance Grant from the federal Pipeline and Hazardous Materials Safety Administration.
Increased numbers of pipelines increases the risk
Why Should City Council Members Care?

After most pipeline tragedies local officials can credibly claim they had no idea there were pipelines in the area. In Fort Worth you can’t make that claim.
Pipelines 101

Pipeline Diagram

- Gathering Lines (Red)
- Transmission Lines (Blue)
- Distribution Lines (Green)
Where are pipelines in Fort Worth?

Transmission Lines
Gathering Lines
What’s the risk?

- Very low probability!

<table>
<thead>
<tr>
<th>NAME</th>
<th>DATE</th>
<th>CITY</th>
<th>FATALITY</th>
<th>INJURY</th>
<th>PROPERTY DAMAGE</th>
<th>PIPELINE TYPE</th>
<th>CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONE STAR GAS CO</td>
<td>19840723</td>
<td>FORT WORTH</td>
<td>1</td>
<td>1</td>
<td>$25</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19840907</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$5,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19841106</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$20,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19850205</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$30,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19850529</td>
<td>FORT WORTH</td>
<td>0</td>
<td>2</td>
<td>$50</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19860312</td>
<td>FORT WORTH</td>
<td>0</td>
<td>19</td>
<td>$1,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19880129</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$5,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19880929</td>
<td>FORT WORTH</td>
<td>3</td>
<td>4</td>
<td>$30,000</td>
<td>DISTRIBUTION</td>
<td>OTHER</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19911230</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$12,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19921209</td>
<td>FORT WORTH</td>
<td>0</td>
<td>1</td>
<td>$0</td>
<td>DISTRIBUTION</td>
<td>CONST./OPERATING ERROR</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19940119</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$20,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19970730</td>
<td>FORT WORTH</td>
<td>0</td>
<td>3</td>
<td>$15,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19971110</td>
<td>FORT WORTH</td>
<td>1</td>
<td>0</td>
<td>$0</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19980707</td>
<td>FORT WORTH</td>
<td>1</td>
<td>0</td>
<td>$450,000</td>
<td>TRANSMISSION</td>
<td>DAMAGE BY OUTSIDE FORCE</td>
</tr>
<tr>
<td>TXU GAS DISTRIBUT</td>
<td>20001125</td>
<td>FORT WORTH</td>
<td>0</td>
<td>1</td>
<td>$40,000</td>
<td>DISTRIBUTION</td>
<td>NO DATA</td>
</tr>
<tr>
<td>ATMOS ENERGY CORP</td>
<td>20050614</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$123,577</td>
<td>DISTRIBUTION</td>
<td>EARTH MOVEMENT</td>
</tr>
<tr>
<td>ENERGY TRANSFER CO</td>
<td>20070423</td>
<td>FORT WORTH</td>
<td>0</td>
<td>0</td>
<td>$235,889</td>
<td>TRANSMISSION</td>
<td>MISCELLANEOUS</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19840907</td>
<td>FT. WORTH</td>
<td>0</td>
<td>0</td>
<td>$1,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
<tr>
<td>LONE STAR GAS CO</td>
<td>19841016</td>
<td>FT. WORTH</td>
<td>0</td>
<td>0</td>
<td>$5,000</td>
<td>DISTRIBUTION</td>
<td>DAMAGE BY OUTSIDE FORCES</td>
</tr>
</tbody>
</table>
What’s the risk?

- Very Low Probability
- Potentially Huge Consequences
What is the risk?
What are the causes of pipeline incidents?

Significant Incident Cause Breakdown
Texas, Gas Transmission Onshore, 2000-2009

- ALL OTHER CAUSES: 5.4%
- CORROSION: 24.7%
- EXCAVATION DAMAGE: 25.8%
- INCORRECT OPERATION: 6.5%
- MAT’L/WELD/EQUIP FAILURE: 15.1%
- NATURAL FORCE DAMAGE: 2.2%
- OTHER OUTSIDE FORCE DAMAGE: 0%

Source: PHMSA Significant Incidents Files February 17, 2010

Transmission Pipelines
What are the causes of pipeline incidents?

Gathering Pipelines
What are the causes of pipeline incidents?

**Significant Incident Cause Breakdown**
Texas, Gas Distribution, 2000-2009

- **44.8%** ALL OTHER CAUSES
- **27.6%** EXCAVATION DAMAGE
- **12.1%** INCORRECT OPERATION
- **8.6%** MATERIAL/WELD/EQUIP FAILURE
- **5.2%** NATURAL FORCE DAMAGE
- **1.7%** OTHER OUTSIDE FORCE DAMAGE

**Distribution Pipelines**
Pipeline Routing

Agencies that regulate pipeline safety are disconnected from pipeline routing decisions

• The Texas Legislature has given pipeline companies the right of eminent domain to route pipelines

• The Legislature has also provided cities the power “necessary to protect health, life, and property and to preserve the good government, order, and security of the municipality and its inhabitants.”
Routing considerations for greater safety

The City of Fort Worth should ensure
• that pipelines are routed in the least populated areas.

• adequate public discussion before route approval is granted

• The use of road rights-of-way when appropriate
Routing considerations for greater safety

• The State Legislature, or failing that the City of Fort Worth, should consider forming a pipeline siting commission.

• The State Legislature should fund a study to determine how much duplicate pipeline infrastructure could be avoided if companies were required to master plan shared pipeline infrastructure as part of their well development strategy.
Recommendation to increase pipeline safety regulations

The federal Office of Pipeline Safety should

• clarify the point where onshore regulated gas gathering lines begin

• include all Type A gas gathering lines under the integrity management rules.
Recommendation to increase pipeline safety regulations

- the RRC or the state legislature should amend current rules to allow municipal government to adopt stricter pipeline safety standards on intrastate pipelines.
Land Use Planning Near Pipelines

- Recommendation - The Fort Worth City Council should adopt the part of the Pipelines and Informed Planning Alliance (PIPA) Report they think are important.
130 people representing diverse stakeholders came up with 46 recommended practices that local governments should consider adopting to increase pipeline safety.

The PIPA Report and more information about planning near pipelines can be found at: http://www.pstrust.org/planningnearpipes.htm
Recommendation to increase safety during pipeline construction

• The Railroad Commission of Texas should provide clear publicly available documentation regarding their involvement during construction of new intrastate pipelines.

“Inspectors observed very serious issues covering all aspects of construction” - PHMSA

<table>
<thead>
<tr>
<th>Topic</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coating*</td>
<td>117</td>
</tr>
<tr>
<td>Welding*</td>
<td>87</td>
</tr>
<tr>
<td>Excavation</td>
<td>20</td>
</tr>
<tr>
<td>Nondestructive testing</td>
<td>20</td>
</tr>
<tr>
<td>Pipe material*</td>
<td>12</td>
</tr>
<tr>
<td>Bending</td>
<td>9</td>
</tr>
<tr>
<td>Lowering in*</td>
<td>7</td>
</tr>
<tr>
<td>Hydrotesting</td>
<td>4</td>
</tr>
<tr>
<td>Design</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
</tr>
</tbody>
</table>
Recommendation to increase safety during pipeline operation

The federal Office of Pipeline Safety or the RRC should undertake a study to determine the benefits and risks of odorizing gathering lines in populated areas.
Recommendation to increase safety through existing damage prevention programs

- The RRC should add the cause of excavation incidents as well as the fines levied to their Damage Prevention database.

- The City of Fort Worth should review their employee training and that of their outside contractors and sub-contractors regarding damage prevention.

In 2009 the RRC database shows that there were 290 incidents of excavation damage to pipelines in Fort Worth, with 78 of those happening after the excavator failed to use the One Call system. 40 of the total incidents involved excavation being done by the City of Fort Worth.
Recommendation to increase transparency

- The RRC should create a publicly accessible docket system that would include all information about pipeline enforcement cases and fines.
Recommendation
to increase transparency

The City of Fort Worth should
• make all pipeline permit information available online, including
  - the maximum allowable operating pressure (MAOP)
  - pipe diameter
  - potential impact radius distance
• make all permitted pipeline routes available online before approval is provided.
Know what’s below.
Path to Greater Pipeline Safety
Thanks for listening, and thanks to the Fort Worth League of Neighborhoods for helping educate residents!

The entire report is at:
http://www.fwlna.org/