

**Air Quality in the Barnett Shale and the  
City of Fort Worth's Air Quality Study;  
The Purpose, Process, and What We Hope to Learn**



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# Today's Talk

- Review what we know about the air quality in the Barnett Shale
- Discuss the City of Fort Worth's AQS
  - Why we are doing it
  - How we are going about doing it
  - What we hope to learn
- Next steps

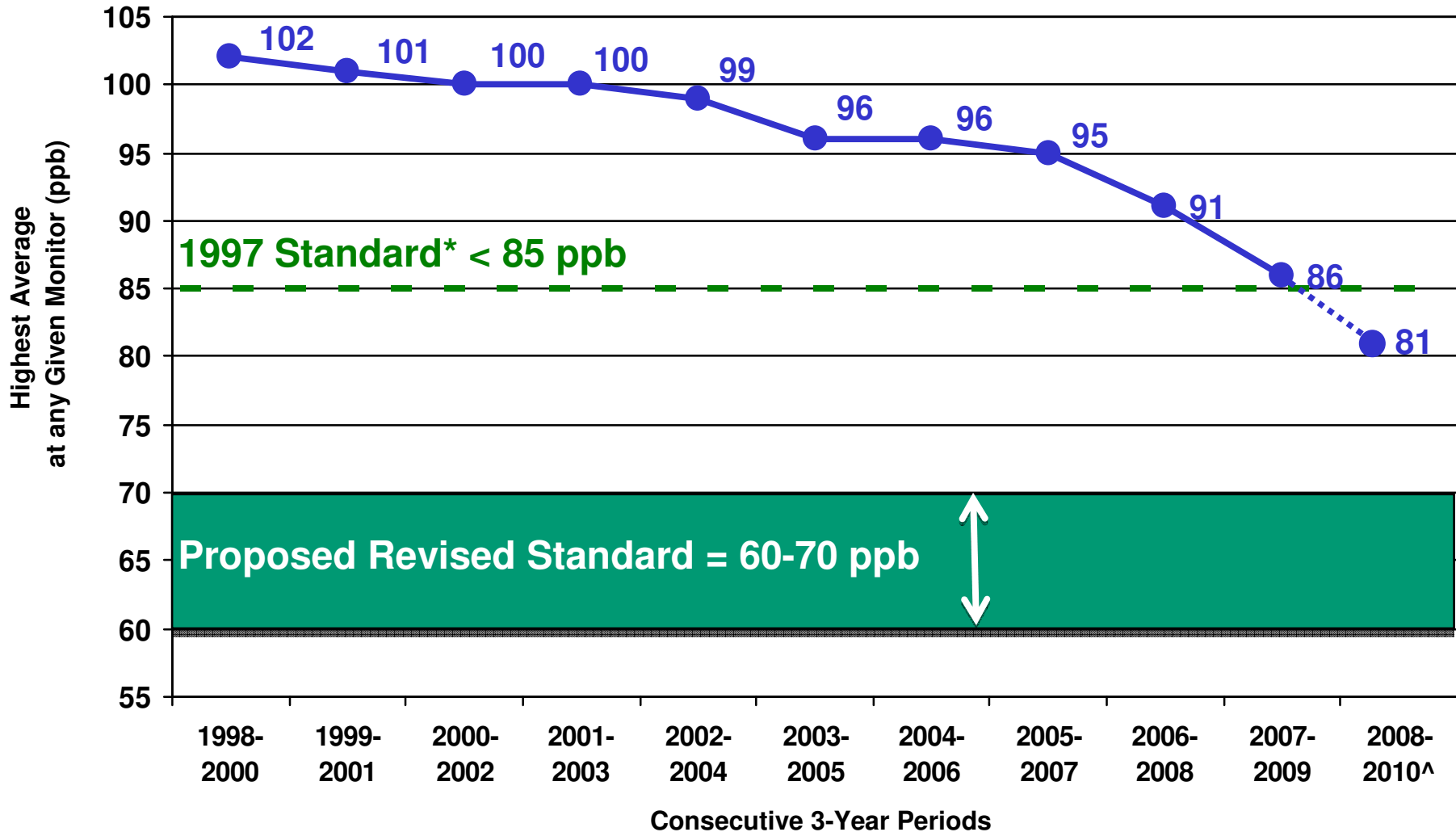
# What do we know about air quality within the Barnett Shale?

- Ozone Non-attainment area
  - Largest source of air pollution is mobile sources
- Barnett Shale (23 Counties) much larger than non-attainment area (9 counties)
- Transport



# 2010 OZONE SEASON

## North Central Texas 8-Hour Ozone Historical Trend

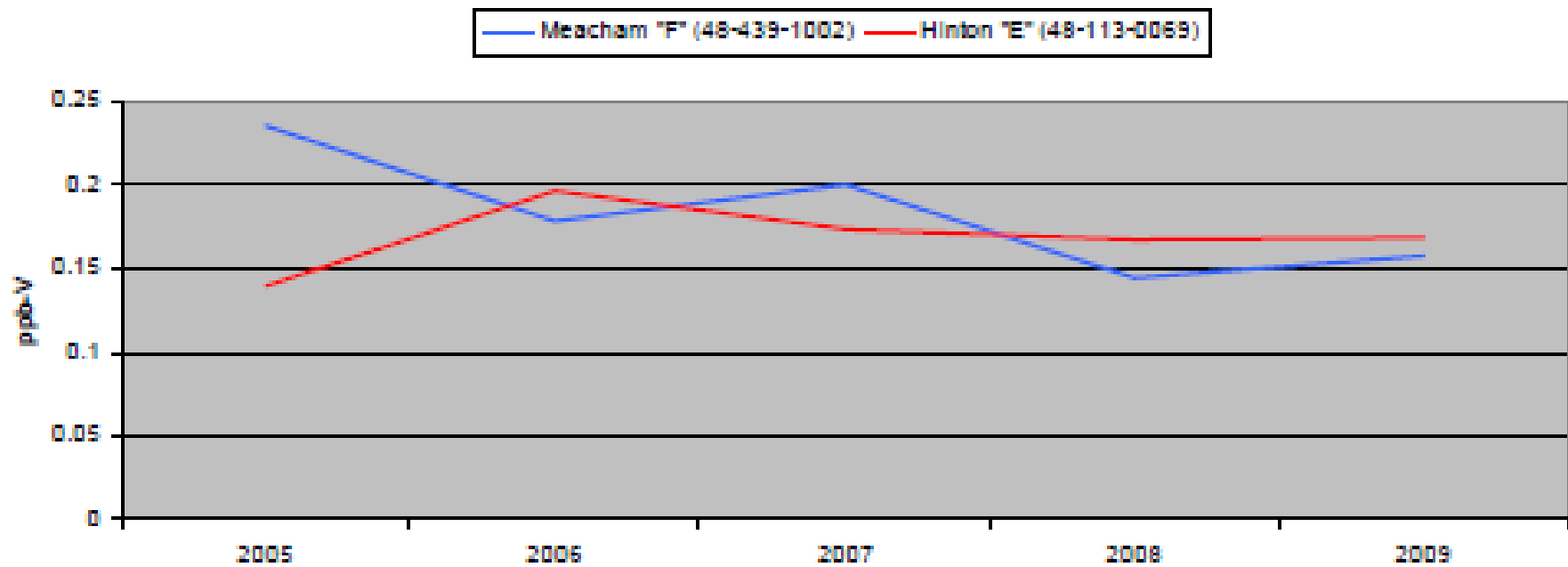


\* 2010 Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than 85 parts per billion (ppb).

<sup>^</sup> As of June 29, 2010; Not a full year of data for 2010.

# Ambient Benzene Concentrations

AutoGC Benzene(ppbV) Annual Averages



# What do we know about Barnett Shale gas well impacts on air quality?

- Not Much!!
  - Private Studies
    - Dish reports
    - Environmental Defense Fund
    - University Studies
    - City of Flower Mound
    - Barnett Shale Energy Education Council
  - Public Studies
    - TCEQ
      - Impacts Localized
      - no adverse health effects expected
    - EPA

# What do we know about Barnett Shale gas well impacts on air quality?

- Data Deficiency
  - Not enough data exists to assess gas well impacts
    - short term
    - Long term
  - Too spotty
  - Reactive
  - Not comprehensive

# What do we know about Barnett Shale gas well impacts on air quality?

- Message not accurately communicated
  - Agencies
    - Messages too technical
    - Lack of trust
  - Media
    - TV
    - Blogs
    - Print
- Results
  - Confusion
  - Fear
  - “MSDS Syndrome”

# City of Fort Worth Air Quality Study

- Purpose
  - Quantify the volume and mass of emissions from natural gas operations during all phases
    - At the well site
      - Impacts from onsite equipment
      - Fugitive impacts
    - At the edge of the pad/fence line
    - Ambient air quality

# City of Fort Worth Air Quality Study

- Purpose
  - Assess air quality impacts to the community
    - Air Monitoring Comparison Values
      - Short Term impacts
      - Long Term Impacts
    - Modeling using observed site emissions
    - Are setbacks and other protective buffers appropriate?

# City of Fort Worth Air Quality Study

- Purpose
  - Create a body of knowledge that will serve as the cornerstone of a larger body of gas well air quality impact data
    - Statistically significant
    - Robust
    - Consistent and representative
    - Transparent

# City of Fort Worth Air Quality Study

*Answer the Question*

Does oil and gas operations negatively affect the health and/or safety of the residents of Fort Worth?

# How to perform an Air Quality Assessment

- Simple process
  - Define a Scope of Work
  - Publish a Request for Qualifications
  - Evaluate Submittals
  - Contract with the most qualified firm

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**How do we keep the process transparent and garner trust in the community?**

**Create a committee!**

# Fort Worth Air Quality Study Committee

Mayor and Council appointed the Committee  
made up of:

- 5 Citizens
- 2 Interest Groups
- 3 Gas Well Operators

Additionally, included Liaisons

- Texas Commission on Environmental Quality
- Environmental Protection Agency

# Fort Worth Air Quality Study Committee Charge

- Identify objectives and questions for study
- Review the proposed scope of work
- Evaluate submitted qualification packages
  - Interview as appropriate
- Recommend a consultant and study framework
- Receive a briefing on the study results

# Who responded to the RFQ?

- Eastern Research Group
- Houston Area Research Council
- Kleinfelder
- MACTEC
- Minnich and Scotto, Inc.
- Providence
- University of Texas
- Weston

# Short Listed Firms

- Eastern Research Group
- Providence
- University of Texas

# **Selected Firm**

- Eastern Research Group

# Eastern Research Group

- Contract anticipated August 4, 2010
- Sampling to begin mid August 2010
  - Hottest part of the summer
  - Sampling to take several weeks
  - QA\QC
- Final Report Submitted
  - Early 2011

# What We Hope to Learn:

- What emissions result from gas well operations
  - Onsite
    - Equipment
    - Fugitive
  - At the pad site
  - Ambient
- Do these emissions impact residents

# Next Steps

- Cautiously optimistic
- Results will drive
  - Potential review of Gas Drilling Ordinance
  - Additional control measures at local level
  - Comments to State and Federal Agencies
    - TCEQ and EPA Air Permitting
    - Hydraulic Fracturing study
  - Legislative Agenda

Questions?