Oil and Gas Emission Inventory Improvements

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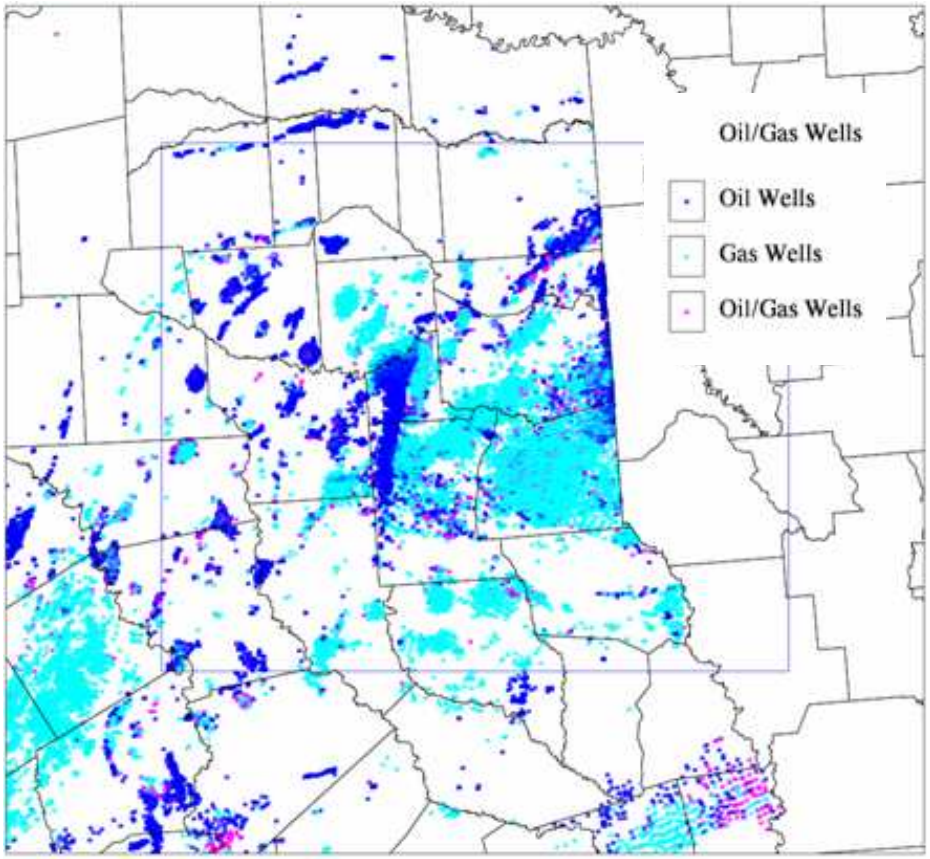
Introduction

- Recent projects related to oil and gas emissions
  - Pilot Project to demonstrate compressor emission controls
  - 2005 emissions inventory for gas compressors
  - VOC monitoring at CAMS19
- Current projects
  - Improve and update 2005 emissions inventory
  - Utilize well location data in ozone modeling
  - Evaluate VOC emissions from oil and gas sector

Improve and update 2005 emissions inventory

- Discussed 2005 inventory with TCEQ
- Determined that data for engine load factor would improve the inventory
- Pollution Solutions will:
  - Conduct surveys to collect load factor data for gas compressor engines in NE Texas
    - Contact/visit leasing companies
    - Visit production sites
  - Update the 2005 gas compressor emissions inventory

Using Well Locations for Ozone Modeling



- Want to represent emissions distribution as accurately as possible
- Obtained Texas well locations for 2005 from TCEQ/Railroad Commission
- Using these data in the inventory for ozone modeling

Evaluating VOC Emissions from the Oil and Gas Sector

- VOC monitoring at CAMS 19 during 2006 showed that natural gas was frequently present
  - Not highly reactive like biogenic VOCs, so far less important to ozone, but potentially a very large source of VOCs
  - Ozone formation in NE Texas is NOx-limited
  - Need to ensure that emissions from oil and gas production are accurately represented in the ozone model

- Used 2005 model to evaluate oil and gas VOC emissions inventory developed by TCEQ
  - Simple test to evaluate sensitivity
  - Results suggest inventory too low by about factor of 5
  - Fairly small impact on ozone
  - Warrants further study

End