Managing Gas Leaks for a Resilient Urban Forest

Patrick Roche, Energy Coordinator
Gas Leaks

• Often overlooked threat to trees and vegetation
• Degrade existing resiliency capabilities
• May compromise future investments
• Good news - data and testing exists to help manage the threat
Impacts of Gas on Vegetation

- Forces oxygen and moisture out of soil
- Kills and/or weakens trees and other plants
Cost of Lost Trees

- Lost resilience and ecosystem values
- Lost aesthetic value
- Removal cost
- Potential cost of damages to property
- Replanting cost
Gas Leaks Are Plentiful in Eastern MA

At end of 2015:
- Over 5,000 miles of leak prone pipe
- 20,000 active leaks

MAPC / HEET 2016 Study:
- 20% of leaks contained a tree
Take Action: Test for Gas

• Test tree pits prior to planting
  • E.g. Newton Tree Conservancy (independent non-profit)
• Test soil near dead or fallen trees
• Test trees of significance
Take Action: Test for Gas

- **Tools**
  - Combustible Gas Indicator (percent gas in air)
    - MAPC/HEET used Bascom Turner Gas Ranger
  - Flame Ionization Unit (ppm gas in air)
  - Request gas company survey:

**MGL c. 165 Section 144:** “Upon the undertaking of a significant project on a public way exposing confirmed natural gas infrastructure, and with sufficient notice, a municipality or the commonwealth shall submit written notification of the project to a gas company. The gas company shall survey the project area....
Take Action: Get Annual Leak Data

• Know where the gas leaks are
• Gas companies file leak data in Annual Report submitted to DPU in February
• Now in spreadsheet format
• HEET publishes maps

Source: heetma.org map for Brookline showing unrepaired leaks at end of 2015
Take Action: Get Pipe Data

- Know where the leak-prone pipe is
- Request from gas company GIS layer and/or map
- E.g. Melrose
Take Action: Coordinate

- MAPC / HEET study on best practices for municipal-utility coordination
- Goal: synchronize street opening projects
- Key element: Pre-season planning meeting
- Focused on Public Works departments with paving and sewer projects
- Forestry and planning professionals should be involved too

FixOurPipes.Org
Questions?

Contact: Patrick Roche – 617.933.0790 – proche@mapc.org

Best Practices and other Resources: FixOurPipes.Org