



Managing Gas Leaks for a Resilient Urban Forest

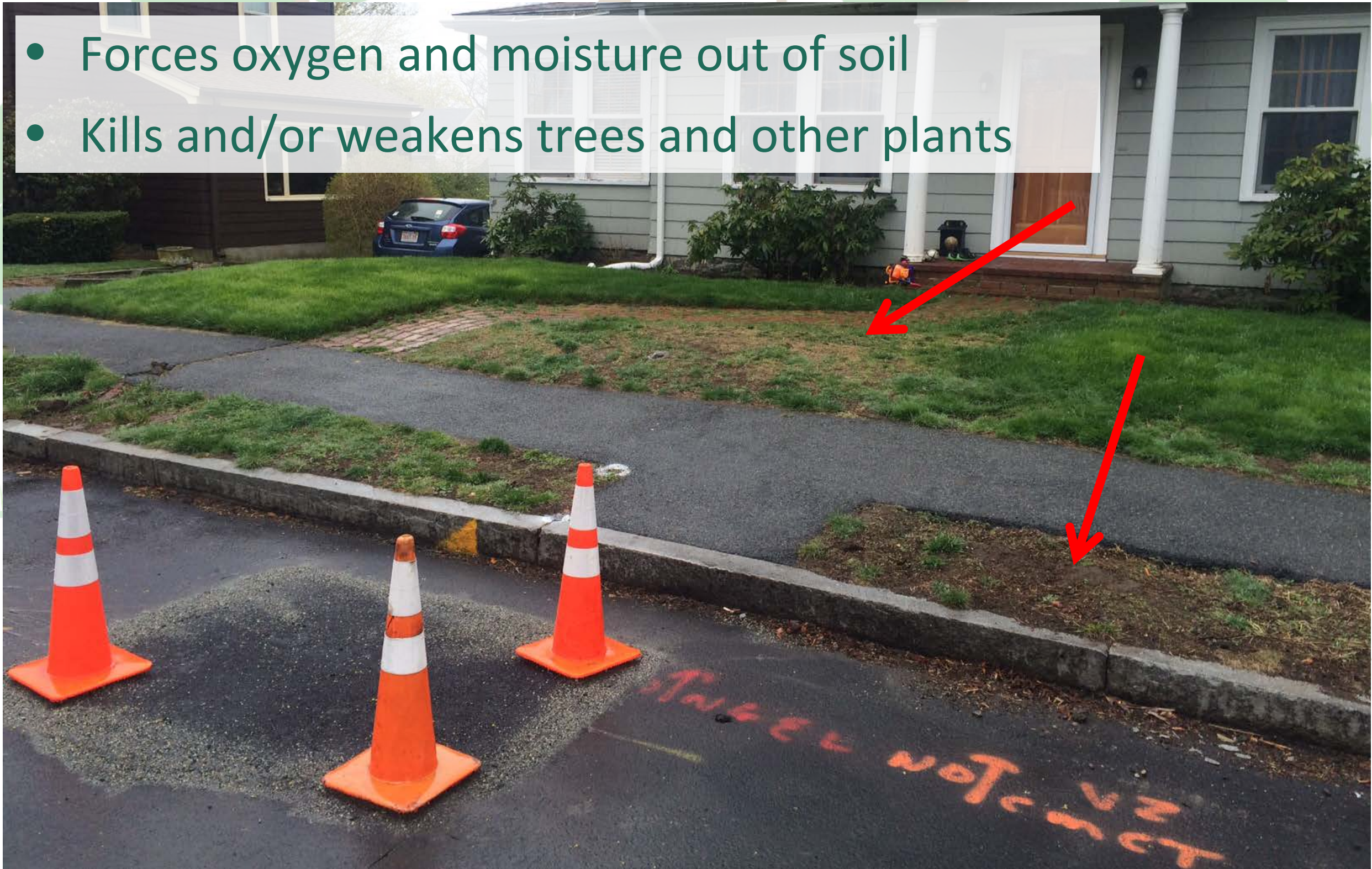
Gas Leaks



- 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



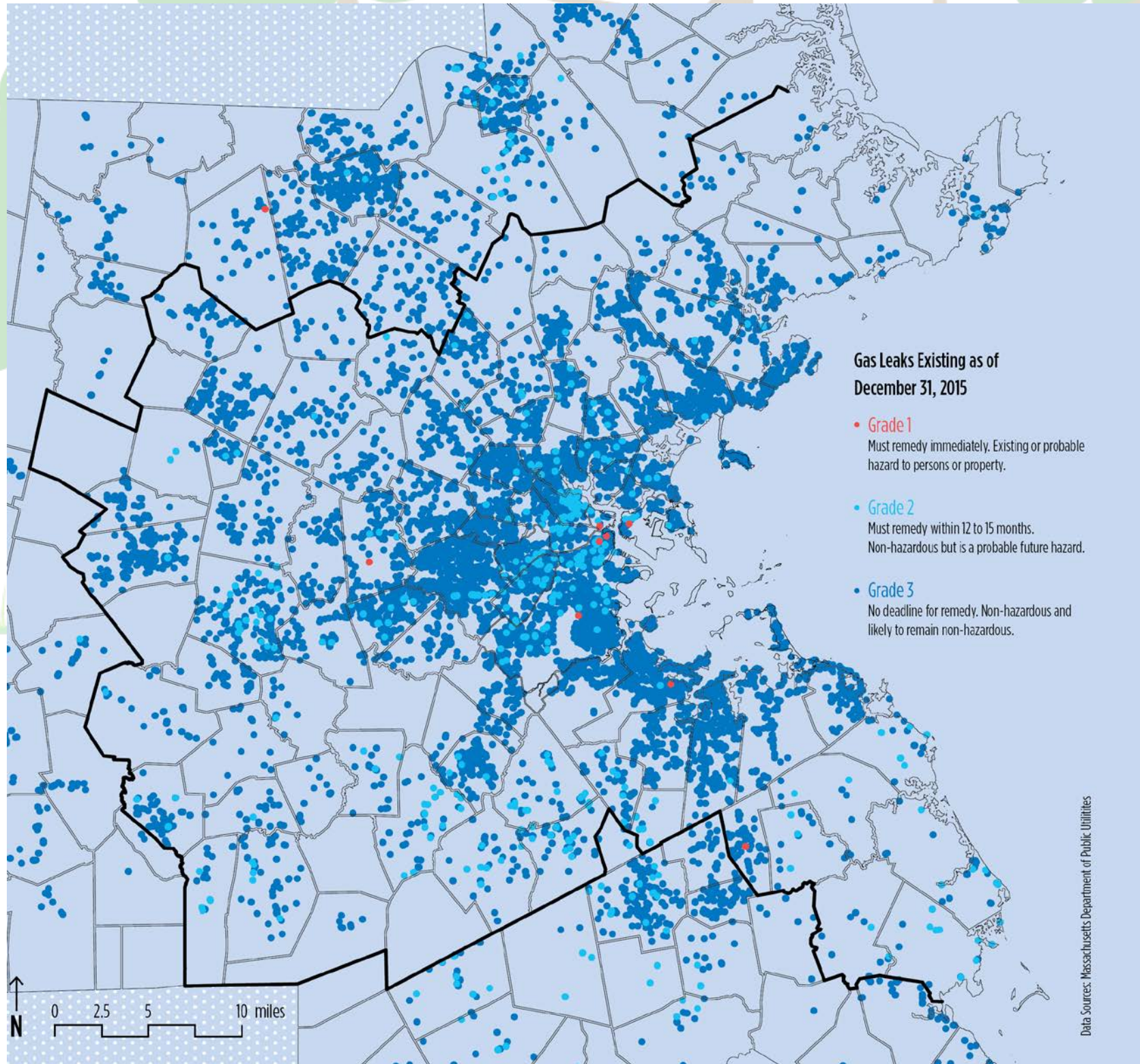


Cost of Lost Trees



- 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



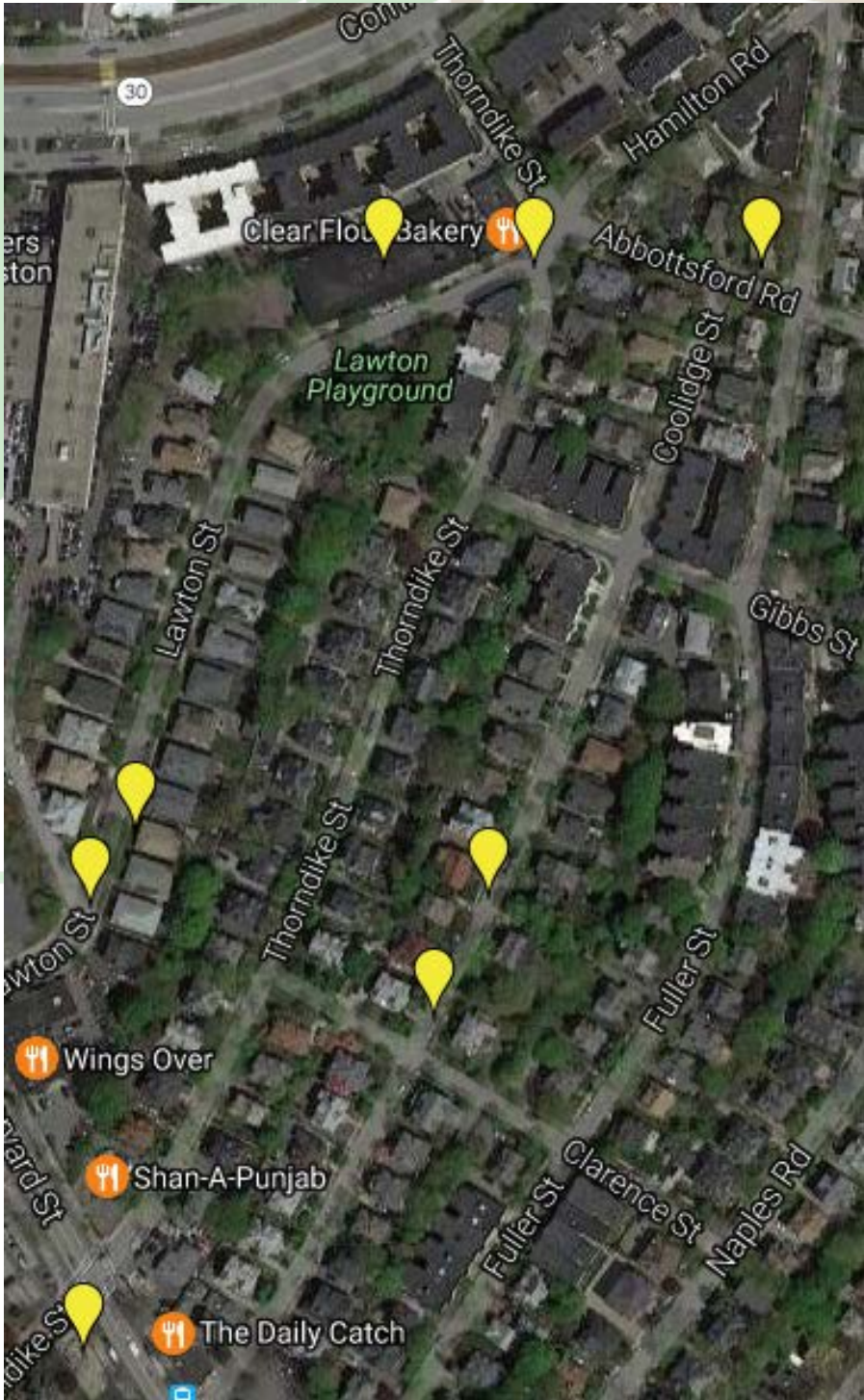
Take Action: Test for Gas

- 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

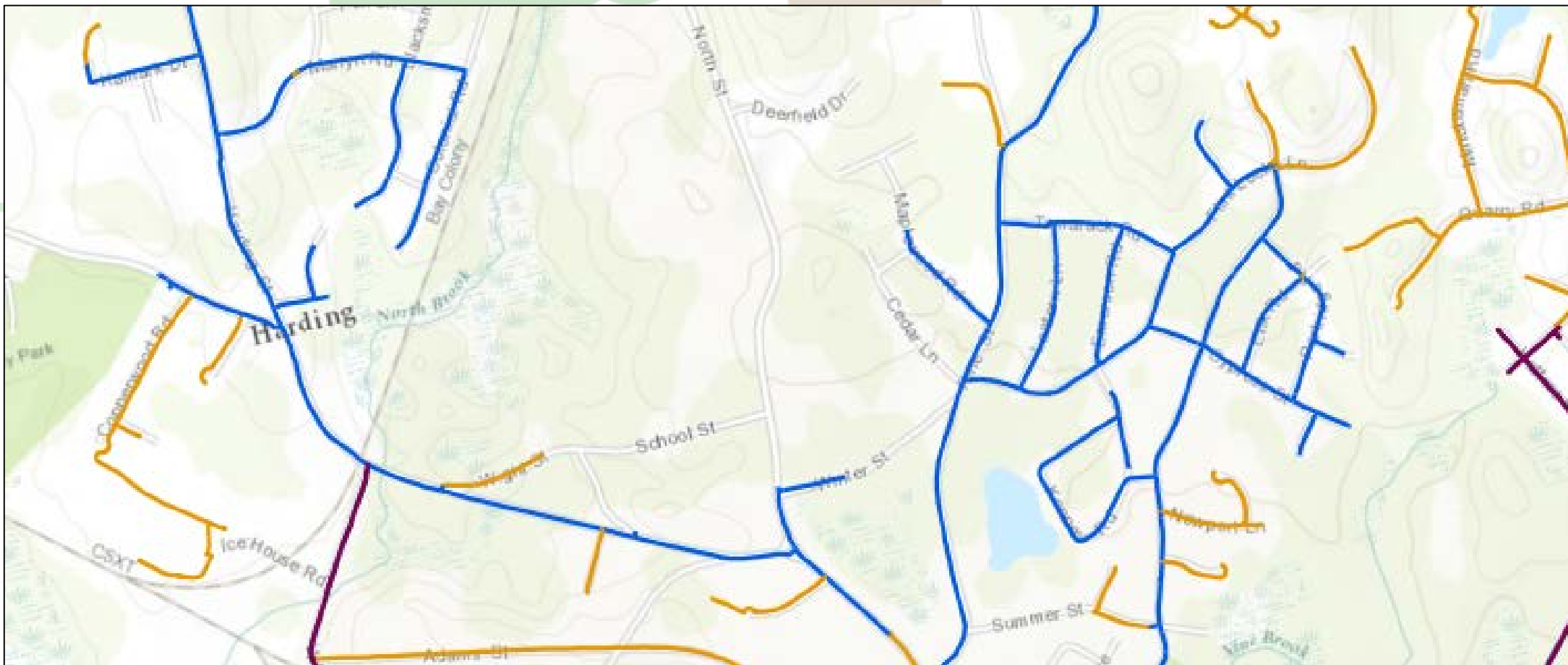


Source: heetma.org map for Brookline showing unrepaired leaks at end of 2015

- 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

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?

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Best Practices and other Resources: FixOurPipes.Org