

Acton's Methane Leaks



Resource Force — ABRHS
Mar. 22, 2018

Why do gas leaks matter?

- **Gas leaks release powerful greenhouse gases** - methane is **84 times more** powerful than CO2 over 20 years.
- **Gas leaks sicken & kill street trees** by suffocating their roots.
- **Gas leaks cost ratepayers money as utilities pass on the cost of lost gas** (up to \$135 million every year in Massachusetts).
- **Gas leaks exacerbate asthma** and other respiratory illnesses.
- **Gas leaks cause explosions.**



Timeline

- **2011 Howarth & Ingraffea** — investigation suggests methane leaks are much higher than reported.
- **2014 Mass. legislation: “An Act Relative to Natural Gas Leaks”** — utility gas leak data must be made public.
- **2015 McKain et al. study (Harvard/Boston University)** — 2.7% of natural gas in Boston area pipelines is leaking into atmosphere; if extrapolated statewide, this equals ~10% of state’s greenhouse gas emissions.
- **2016 Hendrick et al. study (Boston University)** — study of gas leaks in Boston using the chamber method finds that **7% of gas leaks are “super-emitters” and emit half of all the leaked methane** by volume.
- **2016 Mass. legislation: “Omnibus Energy Bill”** — environmental impact must be considered in prioritizing leak repair. 16,000 leaks are on utility lists, but no info on **size or priority**.

People!

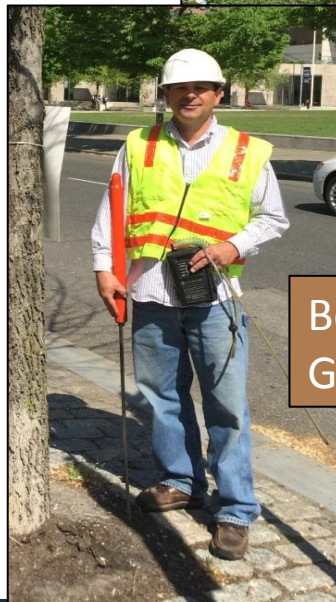
Audrey Schulman
President, HEET



Nathan Phillips
Boston University



Bob Ackley
Gas mapping expert



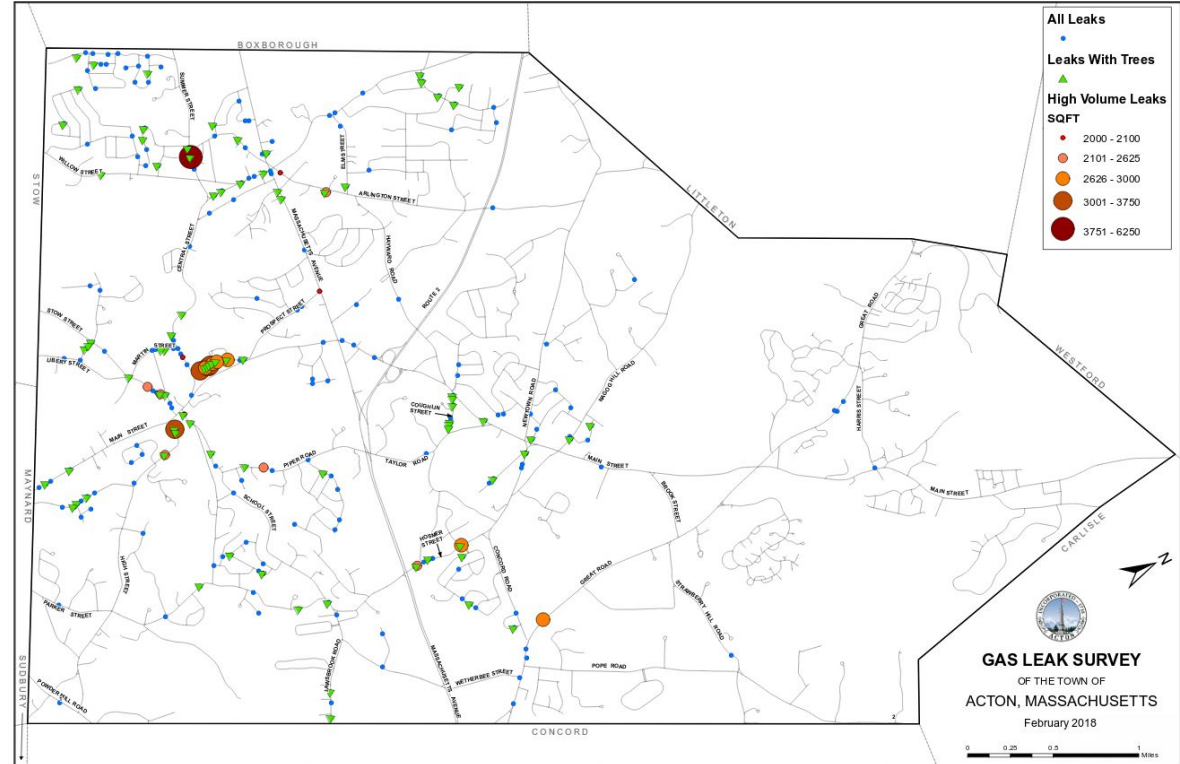
MAPC-HEET Study (2016)

- MAPC and HEET receive federal funding for gas leaks study
 - Survey of small portion of pipelines in 15 towns
 - Many more gas leaks found than utility records
- Acton leaks: **the largest in the study**
- “Fixing Our Pipes” report at www.fixourpipes.org

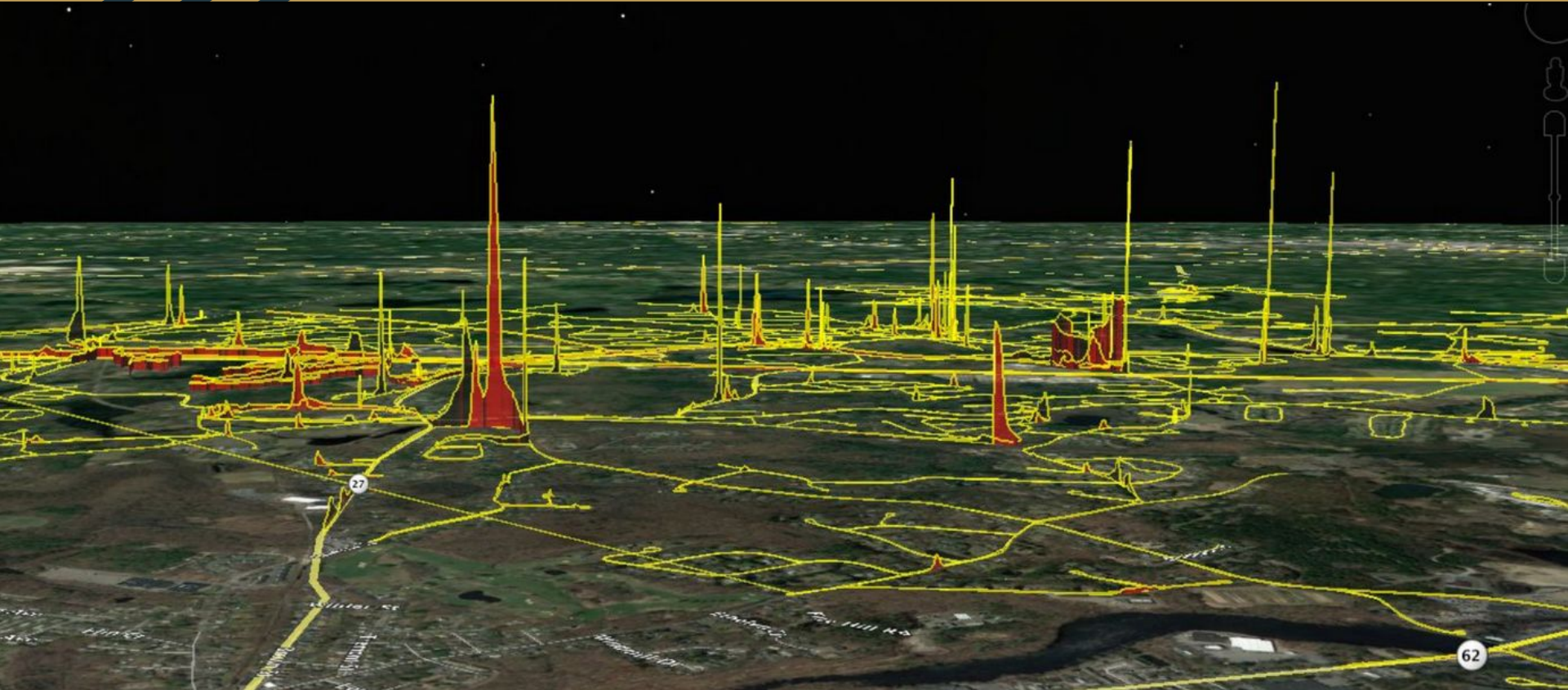


Town of Acton Survey (2017)

- Townwide survey approved by Acton Board of Selectmen
- 234 leaks found across the town - size of leaks documented
- 82 leaks with trees nearby, 120 trees affected

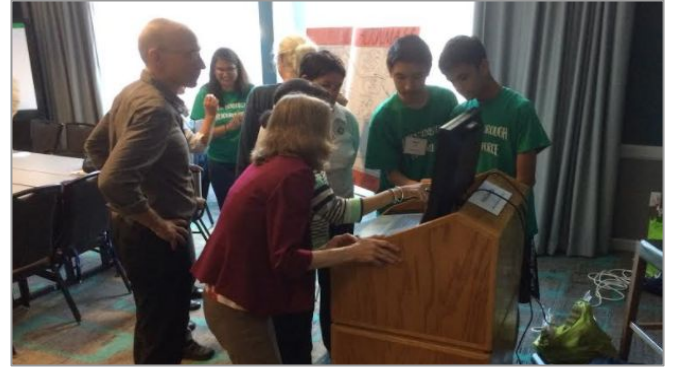


GAS LEAKS in ACTON (Town survey)



More Action

- [Large Volume Leak Study](#) —establishes that “leak footprint” in square feet correlates well to the amount of methane being emitted. Bar hole method unreliable. (2017)
- [“Common Goals, Uncommon Partners” summit](#) to present study findings and “[shared action plan](#)” to fix super-emitters (Oct., 2017)
- **DPU regulations** in the works to prioritize large leaks based on environmental impact. (Oct., 2017 hearing in Boston, and ongoing work)
- Repair of gas leaks!!!



AB Resource Force presenting map at summit Oct., 2017



AB Resource Force testifying at DPU hearing Oct., 2017

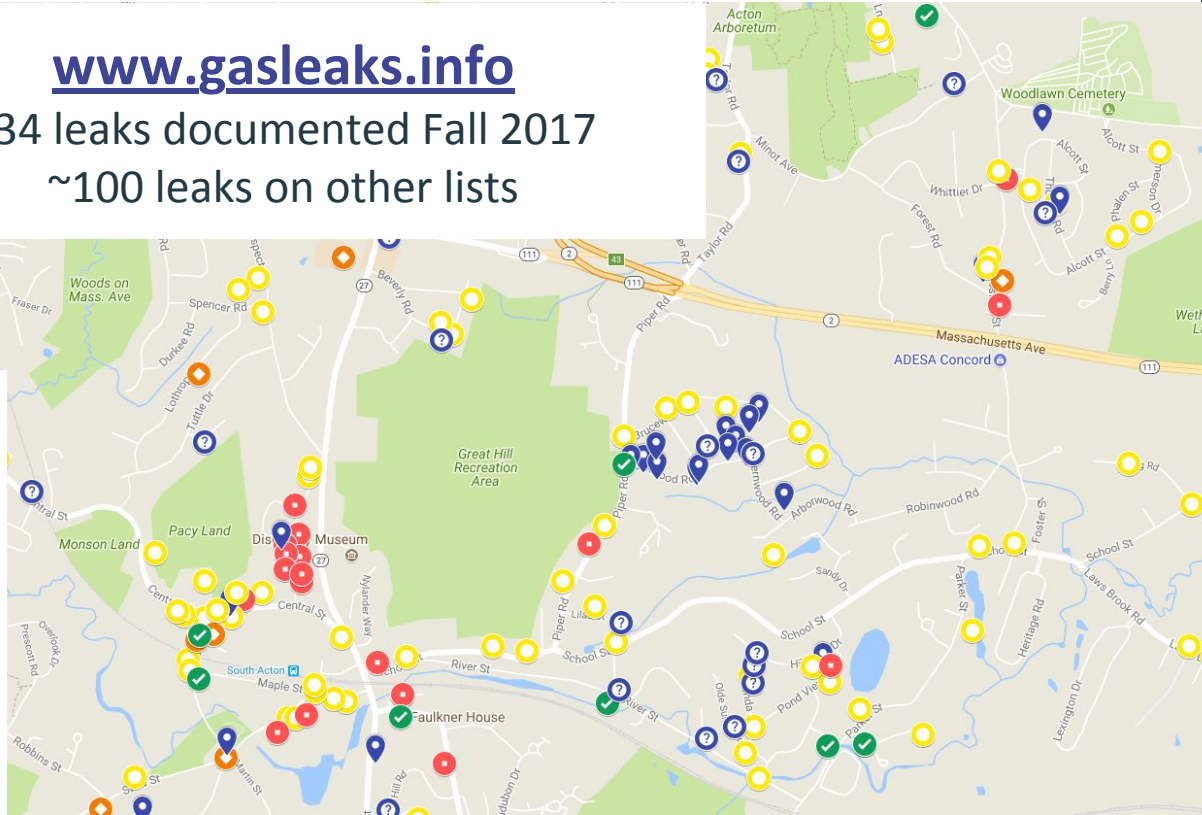
Resource Force Map of Acton Gas Leaks

Combines NGRID and independent data

www.gasleaks.info

234 leaks documented Fall 2017
~100 leaks on other lists

- 1-999 sq. ft., Acton independent survey
- NGRID Unrepaired
- NGRID Missing
- Repaired
- 2000+ sq. ft., Acton independent survey
- 1000-1999 sq. ft., Acton independent survey
- Exposed fitting above ground, Acton indepe...



Thanks!

Further Reading

- Acton gas leak map with town survey results from AB Resource Force
- Gas leak maps for 200 Massachusetts communities from HEET
- McKain et al. study (Harvard/Boston University) (2015)
- Hendrick et al. study (Boston University) (2016)
- Large Volume Leak Study (2017)
- MAPC~HEET study: Fixing Our Pipes report
- How Bad of a Greenhouse Gas Is Methane? (Scientific American)
- Gas leaks: A Hidden Culprit for Dead Trees (NPR)