

Wood Smoke Challenges in the Northeast



Paul J. Miller
Deputy Director

NACAA Communicating Air Quality
March 15, 2016
Chicago, IL

Northeast Overview

- Public perception of wood smoke
- Wood smoke problem areas
- Examples of outreach efforts
- Current challenges

Public Perception of Wood Smoke in Northeast

- Low general awareness
 - Meeting PM2.5 air quality standards
 - No Northeast area has mandated “no burn” days
 - Typically driven by neighbor complaints

Public Health Considerations Beyond the PM2.5 NAAQS

- Short period PM2.5 peaks (minutes to hours) linked to acute cardiovascular and respiratory events
- Wood smoke also contains several known carcinogens

Wood Smoke Problem Areas in Northeast

Looking for Wood Smoke in the Adirondacks

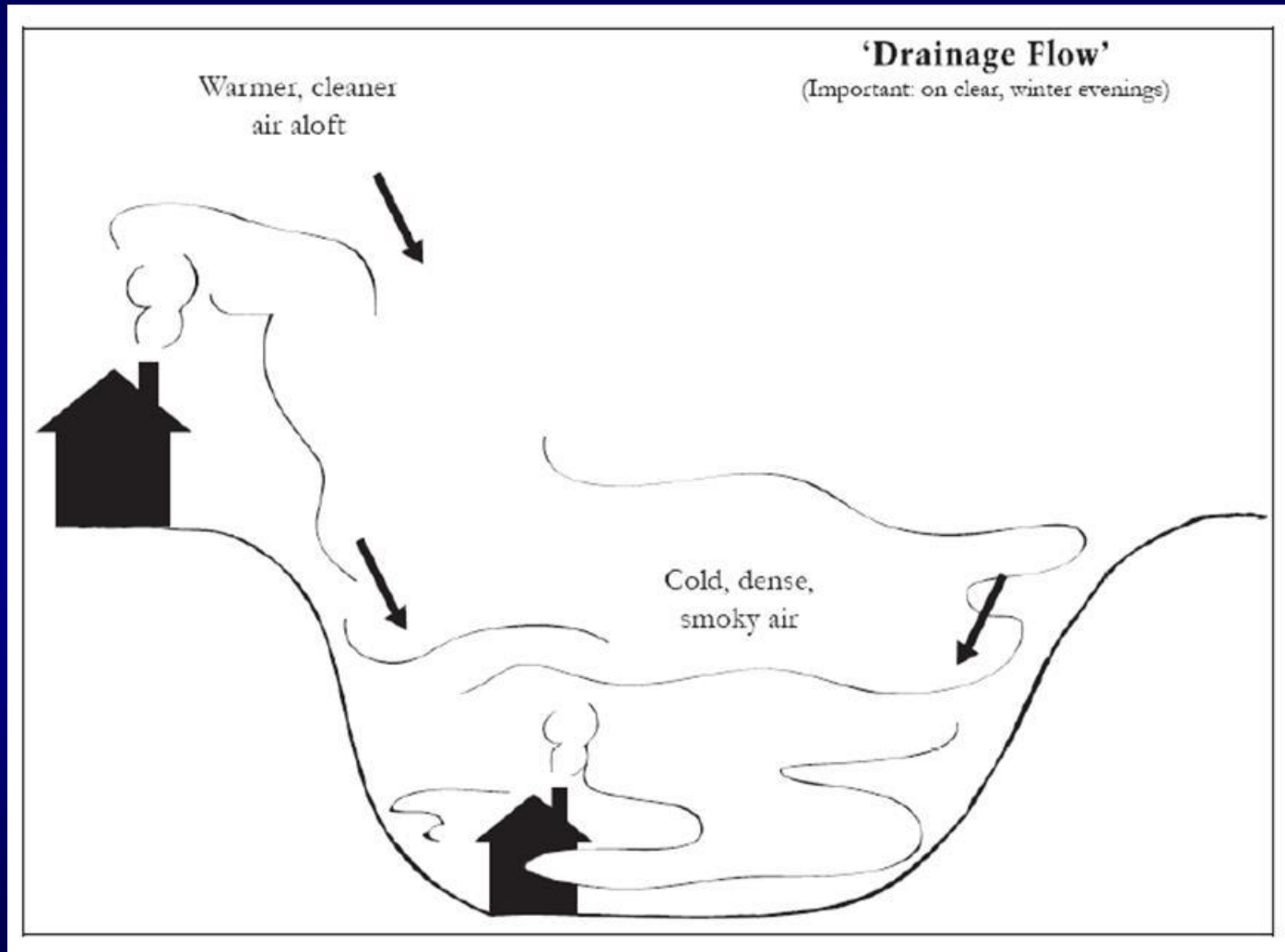


Stagnation Occurs



Fog in Adirondacks

Wood Smoke Can Fill Northeast Valley Towns



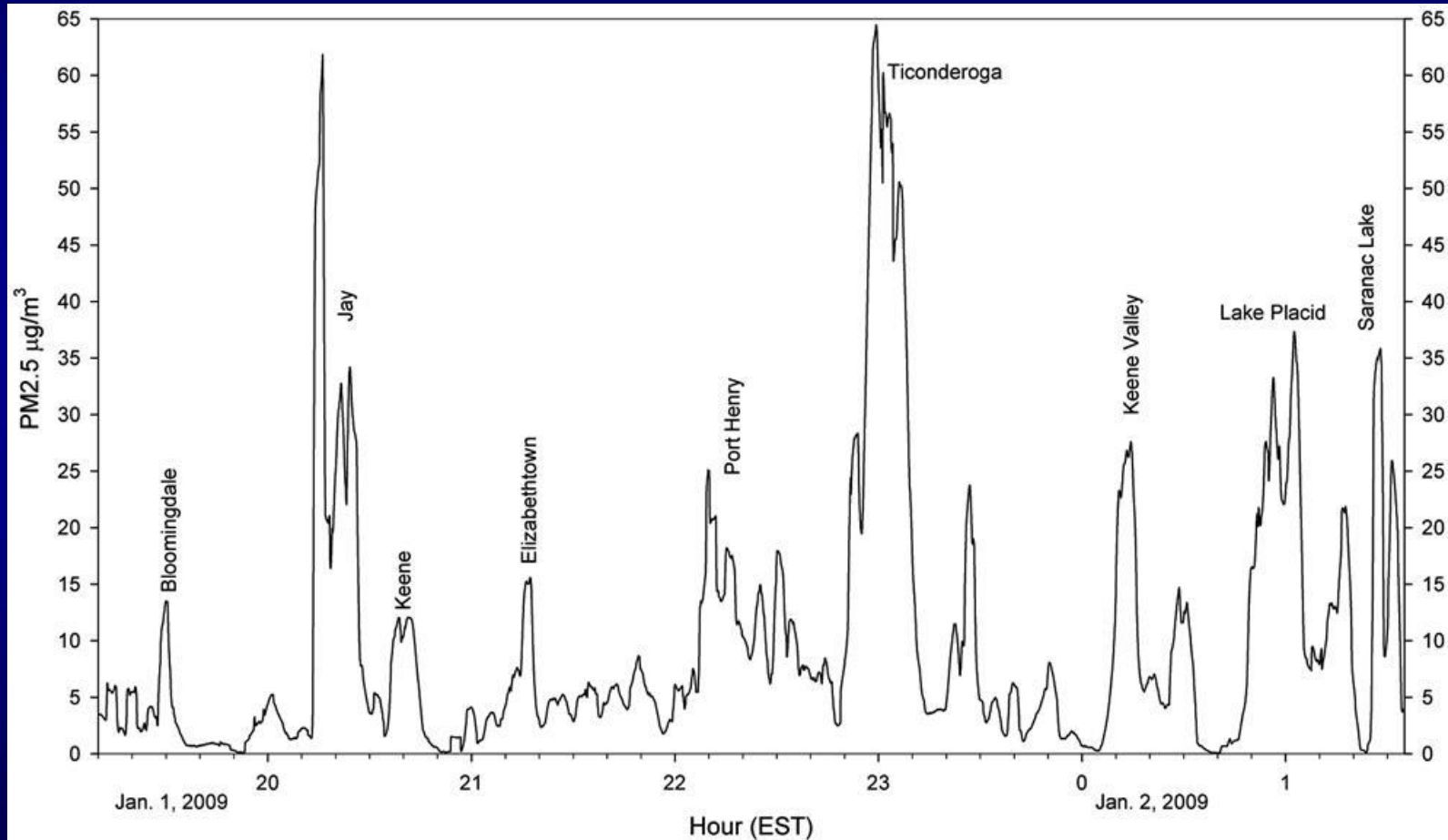
The Neighbors



Mobile Wood Smoke Monitoring Route



High Peaks in the Valleys



Examples of Northeast Outreach Efforts

State Websites

- Connecticut
 - www.ct.gov/deep/owf
- New Hampshire, Cheshire County
 - <http://www.swrpc.org/airquality>

Vermont Enviroflash



Air Quality Notifications

Forecast for Rutland, VT

Today and Tomorrow's Forecast

Tuesday, Jan 13: 40 AQI Good



Particle Pollution (2.5 microns)

Wednesday, Jan 14: 110 AQI Unhealthy for Sensitive Groups



Particle Pollution (2.5 microns)

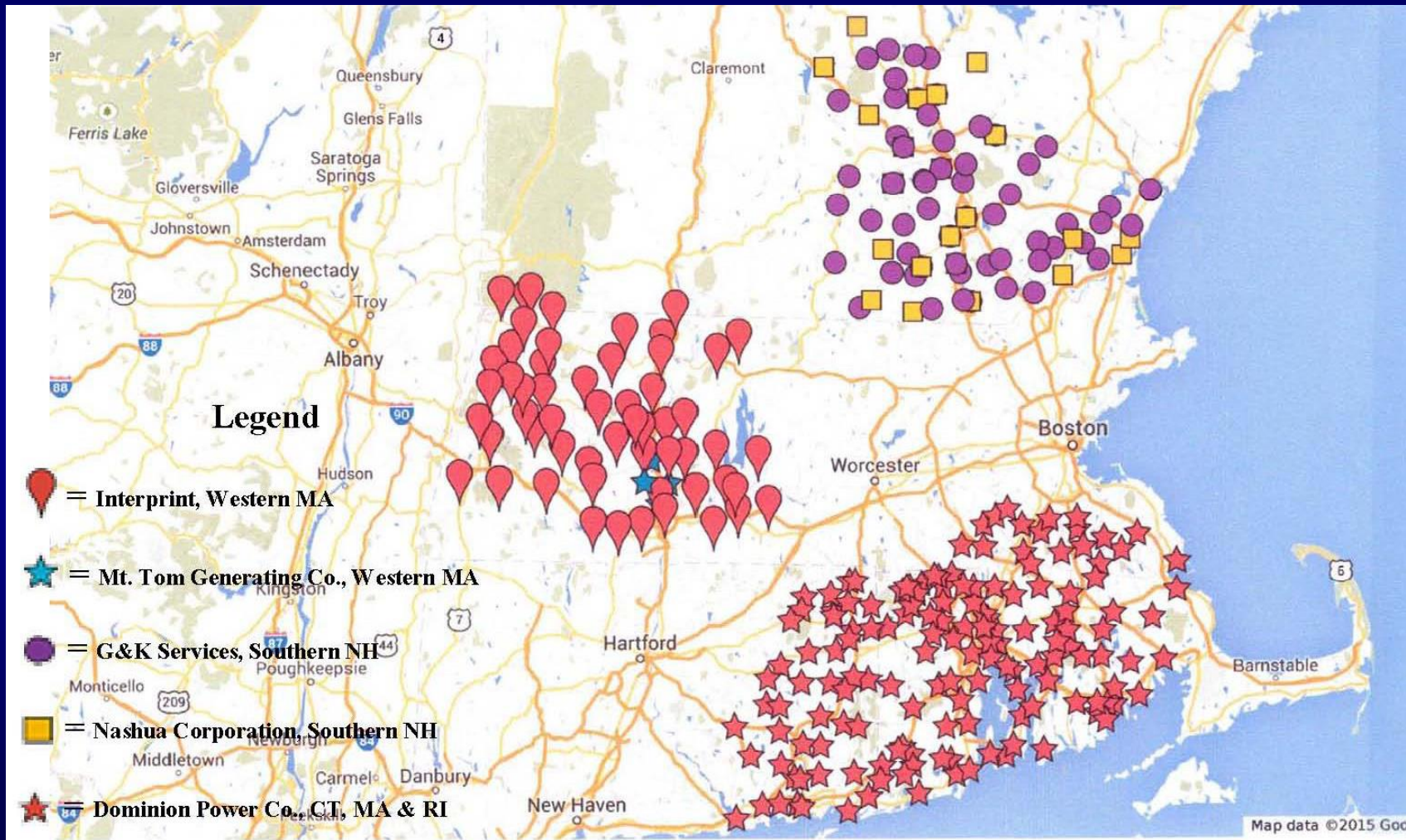
Expect levels of fine particulate matter (PM25), to average in the 'unhealthy for sensitive groups' (USG), range in Rutland City on Wednesday, January 14th. Note that the pollutant levels will be greatest during the morning hours prior to 10 a.m., and in the evening hours after about 4 p.m.

Incentive Programs for Cleaner Wood Burning Devices

Change out or Bounty Program?

- Program choice depends on goal
 - Promote new cleaner units
 - Maximize number of old wood units removed
- Change out programs
 - \$ towards new unit
 - Can have high transaction costs
- Bounty programs
 - \$ with no requirement to buy new wood device
 - Potential to remove more old devices

ALA-Northeast Wood Stove Change out Program



Map data ©2015 Google

CT OWF Incentive Program

- Choice of bounty or purchase incentive
 - \$3,000 to remove old OWF
 - \$6,000 if replaced with 0.1 lb/mmBtu cleaner unit
- Most applicants for removal rather than replacement



MA & NY

- Incentives given only to best performing devices, not just those that meet NSPS
- Sizing & efficiency are taken into account
- Old unit must be destroyed

Lessons Learned in NH

- Voucher value is important
 - Typically higher for gas or pellet stoves
- Require professional installation of new devices
- Old stoves must be destroyed

VT Program

- Incentives on sliding scale: increase with better units
- Non-wood units are eligible for vouchers
- Disallows commercial units on residential property
- Buyer must fill out form recognizing zoning limits
- Old unit must be destroyed

Current Challenges



“Free and Cheap Wood Stove Recycling and Reuse”

“I’ve seen many loads waiting in lines at the scrap yards with wood stoves in them. Sure a 300 pound wood stove is worth \$30 or \$40 in scrap but it is worth so much more as a working wood stove.”

“The free ones I picked up with a wanted listing in Craigslist. Seems that once someone ... upgrades their wood stove the old one often ends up in the back yard or garage.”

“I’m still hunting for more and will continue to do so all year as I believe good used wood stoves is a growing market.”

NSPS Re-labeling?

- Commercial devices not covered under recent wood devices NSPS
- Pre-existing residential models could be re-labeled “commercial” with no other change
- Re-labeling for “coal” fuel instead of wood

Not All NSPS-Compliant Devices are Equal

- Not all testing is equal
 - Low burn rate loop hole
 - Cord wood vs. crib wood
- Correct sizing and installation is important

Effort to Address Challenges

- NESCAUM coordinating national meeting with New York State Energy Research & Development Authority (NYSERDA)
 - Albany, NY location
 - November 2016 – exact date tbd
- NESCAUM-led workgroup reviewing info now; will help make recommendations
- To participate or for more info, contact:
 - Lisa Rector, NESCAUM, lrector@nescalum.org

Thank you
Questions?

