
Wood Devices Work Group – July 20, 2018

In Attendance:

Voting Members

Kendall Brehm
Jimmy Fox
Dan Givens
Dr. Owen Hanley
Lisa Herbert
Deb Hickok
Rick Hinkey
Jacob Howdeshell
Donna Robertson
Chad Schumacher
Dave Turbovsky

Non-Voting Members

Facilitation Team

Sherry Modrow

Work Group Discussion

Challenges

- Voluntary Wood Stove Change Out Program (WSCOP) = very small percentage of total 12,000-plus wood-burning devices
 - \$8.8 million
 - Strategic use of remaining funds
 - Catalyst – both integral to stove and retrofit would apply to curtailment exemption
 - Estimate 60% of remaining wood stoves would qualify for changeout program
 - Focus first on 3,000 worst stoves
 - Exchange ticket for burning with installation of cat/ESP?
- Building code needed for home efficiency and heat calculation
 - New construction not required to meet efficiency standards
 - AHFC offers interest rate reductions for energy efficient homes
 - Inspectors are key – cost-to-benefit?
- Need testing program – choose 1 device for testing in lab, then field test
 - August 9 intro of open RFP for post-production devices
- Currently illegal to sell non-listed device to install in nonattainment area
 - Vendors elsewhere advised
 - No statewide registration system for dealers - would violate federal rules

Require installation permits

- Installation by recognized, licensed, borough-listed techs
- Modify for Fairbanks & North Pole:
 - Pellet stoves
 - Stoves equipped with catalytic and ESP on borough-listed devices
 - Masonry stoves
- Work Group consensus: Immediately implement requirement for 1.5 grams of PM_{2.5} per hour or less

- Many options now available at 1.5 g/hr
- In 2 years, implement reduction to 1 g/hr or less
- Timeline for scoping down level of allowable device emissions over time
- Require technology approved by FNSB at the time of permit issuance as best available given our AQ (device emission ratings will continue to improve)
- Include restrictions/burn limitations on all higher emission stoves
- Include remodels that add heated square feet
 - Does not apply to existing devices in the home
 - Does apply to adding new device
- Just as driver's license, burning solid fuel requires permit for device installation - responsibility of every homeowner
- Dry wood also essential
- Know what's going into new construction
- Incentives:
 - Remove 1 to get 1
 - Purchase property with an old stove and remove it to be able to install a new device

Require registration and inventory of solid fuel devices

- Reasonable time to accomplish
- Incentivize first, have accountability; but use penalties when warranted
 - Offer property tax credit upon registration
 - Wifi thermometer on stacks – monitor burning
 - Equip devices with red light (no burn day)/green light (OK to burn)
 - Pay to replace heat on restricted days
- Burn Ban revision: add Stage 3
- Tax bill include survey for home heating type
 - Opt-in for AQ alerts
- Red Flag days auto-dialer for all registered devices
- Offer outdoor signs at registered homes, such as
 - I breathe clean air
 - I switched to...
 - We all share the air
 - Clean air has no walls
 - We did our fair share for clean air

Additional discussion items

- Catalytic stoves and Electro Static Precipitators (ESPs)
 - WSCOP will include catalytic stoves if greater than 50% emission reduction and certain date required in work plan
 - Need timeline for catalyst maintenance, repair, update
 - Mandate retrofit on NOASH homes if not catalytic
 - ESPs ordinance in process: exemption to curtailment
 - Combination of ESP and catalytic is the best available
- Education
 - Outreach via chimney sweeps - literature
 - Reach homebuilders who are installing stacks on new homes or remodels

- Importance of having appropriate chimney size and draft
- More technical stoves require training before use
- Stoves need combustion air and makeup air
- Proper fuel, i.e. dry wood
- Big Dipper biomass: public concerned about it
 - Publish data
 - Projected to produce ½ of their existing emissions
- Tipping point (Diffusion of Innovation)
 - Early adopters of WSCOP move others toward general public acceptance of cleaner burning
 - Observability: signage outside homes, neighborhood watch, public campaigns
 - Has to be easy to try
 - Public campaigns pick up over time