

Fairbanks PM_{2.5} Planning

5th in a Series:

Plan Development & Control
Measure Implementation

August 16, 2012

Overview

- Review of reductions needed for attainment
- Discussion of new measures planned for this winter
- What happens if selected measures don't demonstrate attainment
- Schedule for completing Plan
- Borough actions needed

Plan Requirements

- Plan must either demonstrate attainment by 2014 or in future year
 - ❖ Attainment demonstration required for every grid cell in model domain
 - ❖ Can only look at future year demonstration if unable to demonstrate by 2014
 - ❖ Future year demonstration requires additional modeling & control measure analysis
- Initial modeling indicated high benefit claims needed for attainment

Plan Requirements (cont.)

- EPA cannot approve maximum benefits for new measures
 - ❖ Easier to credit measures with compliance mechanisms & history
 - ❖ Strict policy limits on benefits for voluntary measures
- All voluntary measure benefits limited to $0.6 \mu\text{g}/\text{m}^3$ out of $10 \mu\text{g}/\text{m}^3$ reduction needed
- To maximize measure credit need to demonstrate accountability to ensure emission reductions

Updated Plan Benefits 2014, Downtown Fairbanks

Control Program	Relative Reductions ($\mu\text{g}/\text{m}^3$)	
	March Estimate	August Update
Expanded Wood Stove Change Out	0.2	0.8
Existing State Measures	1.1	0.1
Dry Wood	1.6	2.0
Reduce Wood Use on High PM Days	8.8	4.7
Voluntary Measures	-	0.6
Cumulative Total	11.7	8.1

Reductions Needed to Attain the $PM_{2.5}$ Standard

- Wood stove change out
 - ❖ Reductions insufficient for attainment
 - ❖ Most of funds needed available through 2014
 - ❖ Provides permanent reductions
- Continuation of other existing measures
- Additional measures needed for an approvable Plan

New Measures Planned for this Winter

- New measures are designed to provide maximum reductions during transition to long-term Borough energy supply shift
- New measures include:
 - ❖ Dry wood program
 - ❖ Economic incentive program
 - ❖ Pellet stove implementation

Dry Wood Program

- Goal is to reduce moisture and extra PM emissions from burning wet wood
- 2012 telephone survey – ~60% wood sales and 40% “cut your own”
- Public education highlights benefits of burning dry wood
- Inadequate dry wood supply to meet winter demand
- Options to obtain dry wood include:
 - ❖ Public/private partnerships
 - Summer drying
 - Kiln drying
 - Importation of dry wood from outside local area

Dry Wood Program (cont.)

- Borough exploring wood seller interest in wood kilns and other options
- Initial funds available from state air quality grants
- Pilot program planned for this winter - scope under development
- Attainment demonstration in 2014 assumes successful dry wood program implementation (see slide 5)

Economic Incentive Program

- Goal is to minimize wood burning on high PM days
- Options available to minimize wood burning are:
 - ❖ Voluntary request
 - ❖ Mandatory burn ban
 - ❖ Provide an \$ incentive to heat with another fuel
- Telephone survey – 72% of people will heat with another fuel if paid
- Participant Interviews:
 - ❖ Minimum payment of \$30/day needed to interest participation
 - ❖ Multiple days needed to warrant participation ~ 10+
 - ❖ Direct communication for each “Alert Day”
 - ❖ Interest in bonus for perfect participation

Economic Incentive Program (cont.)

- Pilot program planned for this winter
 - ❖ Goal is to assess program interest/benefits and maximize health benefits to community
 - ❖ Recruit 2,000 participants
 - ❖ Initial funds available from state grant
- Attainment demonstration in 2014 assumes successful program implementation (see slide 5)

EPA Region 10 Discussions

- Policy issues included:
 - ❖ Benefits allowed for unfunded controls in 2014 and beyond
 - ❖ Viability of untested short-term transition measures
 - ❖ Contingency requirements
 - ❖ Reasonable Further Progress (RFP) requirements
 - ❖ Scheduling

Review of Available Contingency Measures

- Contingency measures must be able to supply emission reductions needed for 1-year's progress towards attainment
- Options include:
 - ❖ Mandatory burn ban on Alert Days
 - ❖ Mandatory fuel switching on Alert Days
 - ❖ Ban on wet wood sales
 - ❖ Wood cutting restrictions
 - ❖ Increased black smoke compliance for motor vehicles
 - ❖ Diesel idle restrictions
 - ❖ Fuel oil sulfur reductions
 - ❖ Additional stationary source permit restrictions
- Key is to ensure enough attainment “cushion” so these are never implemented

RFP Requirements – Separate Additional Plan

- Demonstrate “generally linear” progress between 2008 and future attainment year
- Demonstrate that Borough has adopted all relevant controls implemented by other communities, examples include:
 - ❖ Mandatory burn bans (e.g., Juneau, Tacoma, Salt Lake City, etc.)
 - ❖ Ban on wet wood sales (e.g., Sacramento, etc.)
 - ❖ Variety of travel reduction measures (e.g., carpooling, etc.)

RFP Requirements – Separate Additional Plan (cont.)

- Additional modeling and control measure analysis to determine which year between 2014 and 2019 Borough can attain the standard
- Additional plan documenting measures to be implemented, timing, benefits, etc.

Schedule for Completing Plan (2014 versus RFP)

- Determine if attainment is possible at:
 - ❖ Grid cell with State Office Building monitor
 - ❖ Unmonitored grid cells in nonattainment area
- Technical decision by end of August
 - ❖ If yes, complete Plan ASAP, target October
 - ❖ If no, additional analysis to determine attainment year and measures, target end of the year

Additional Measures Available to Support Attainment Demonstration

- Minimal benefits anticipated
- Mobile source measures
 - ❖ Additional plug-ins
 - ❖ Enhancing Smoking Commercial Vehicle/Truck compliance
 - ❖ Diesel retrofits
- Stationary source measures
 - ❖ Still being analyzed

Upcoming Borough/Assembly Actions

- Borough needs to:
 - ❖ Implement new programs to gain experience and improve public health
 - ❖ Secure resources to continue successful programs
 - ❖ Bring forth Plan for review/approval
- Assembly needs to:
 - ❖ Review/support for measure implementation and Plan
 - ❖ Appropriate resources to continue successful programs