



Meeting 1

Presentation to: Air Quality Stakeholders Group

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DEC

Air Quality

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Overview

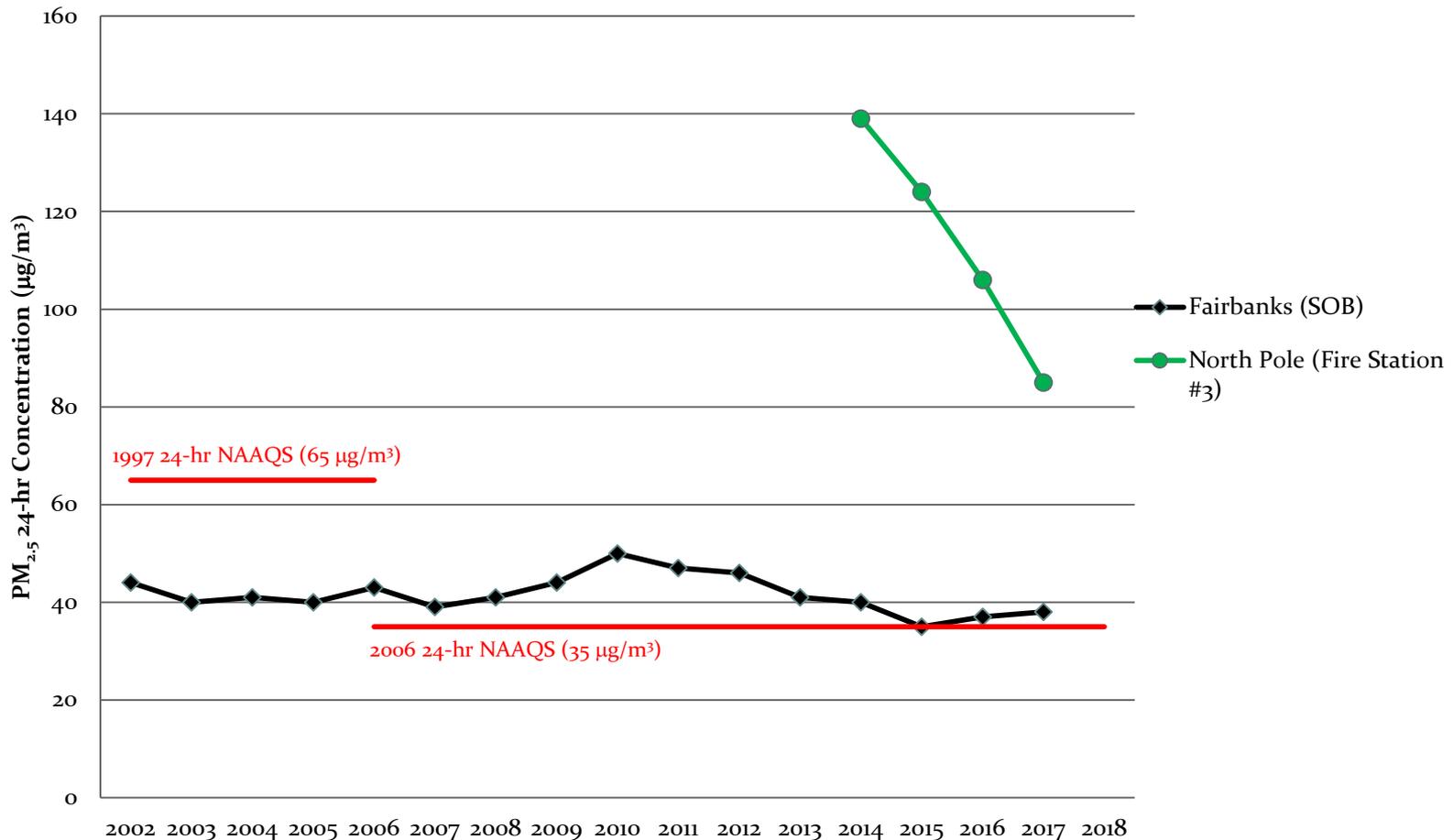
- Magnitude of the problem
- How did we get here?
- Overview of Technical Information
- Best Available Control Measures
- Recommendations
- Next Steps



Magnitude of the problem

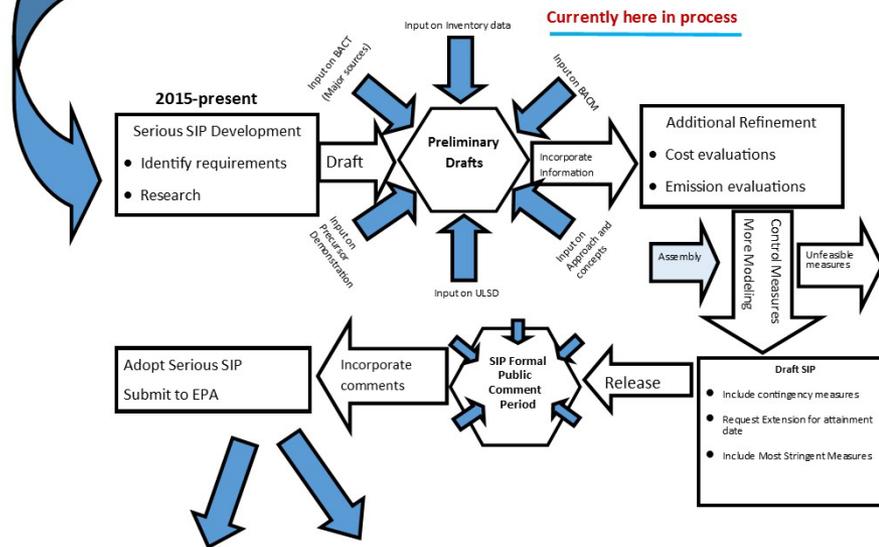
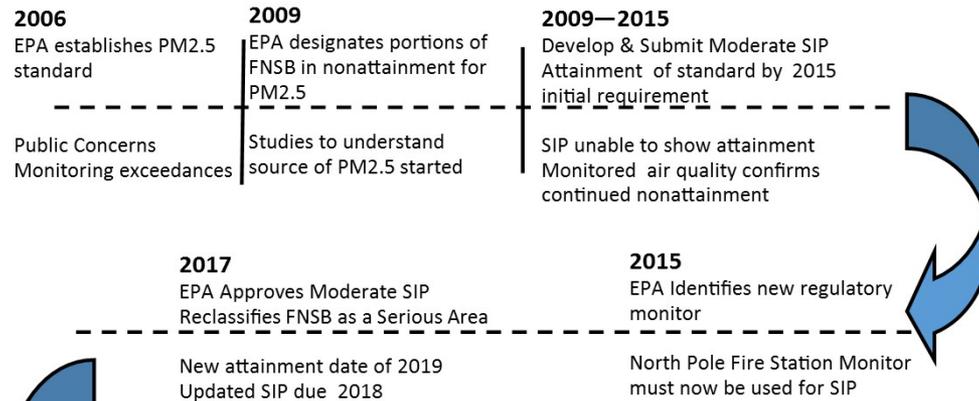
PM_{2.5} 24-hr Design Values

Fairbanks State Office Building (SOB) & North Pole Fire Station #3





How we got here



Meet Commitments/ Attainment

- Implement strategies
- Achieve compliance
- Meet health based standards

Failure to meet commitments or meet attainment:

- Implement Contingency measures
- More control measures
- Potential Sanctions

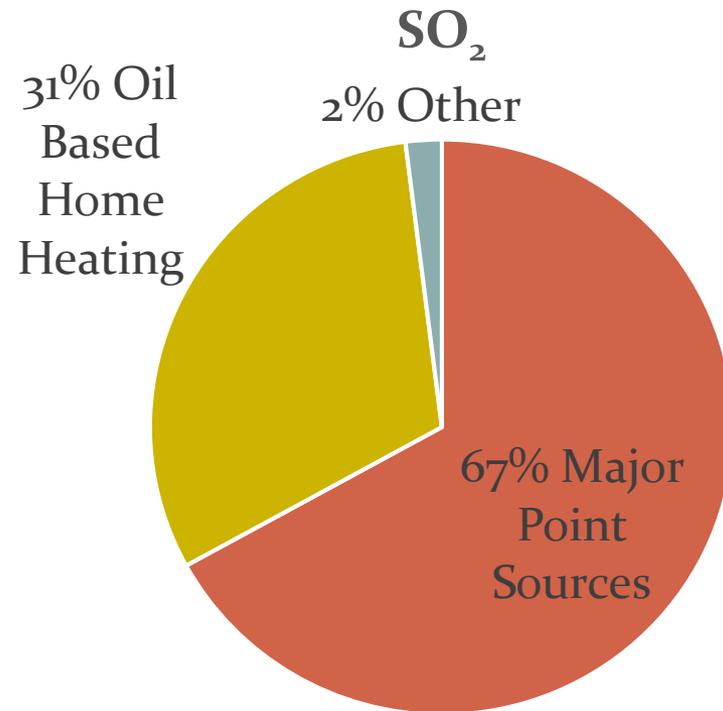
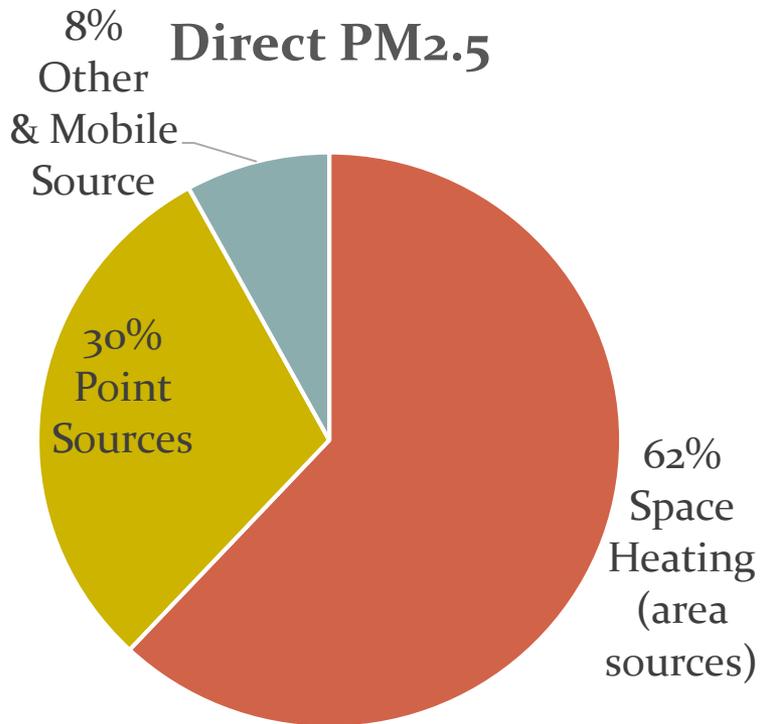


Overview of Technical Information

- Released 7 Preliminary Draft Documents on March 22, 2018, close of public input on May 23
- No final decisions.
- Drafts – Not Complete.
- Purpose to Seek Additional Information
- Start Conversations regarding possible solutions



Emission Inventory — 2013 Baseline Winter Season Highlights





Overview of Technical Information cont.

- Precursor and Best Available Control Technology (BACT) Analysis Draft Results:
 - Community needs to have sulfur controls of some kind (point source and area source)
 - Sulfur Controls may be very expensive for minimal reduction of the main problem
 - Point Sources have adequately controlled PM_{2.5} at least for BACT.



Overview of Technical Information cont.

- Input Received on Technical Documents
 - Preliminary Draft Costs could be too low
 - Best Available Control Measure (BACM) **and** MSM analysis must include all categories: Point, Area, On-Road, Non-Road
 - A separate Most Stringent Measure (MSM) Analysis will need to be done for point sources, which could result in additional control measure requirements.
 - **De minimis or minimal contributions are not allowable reasons to dismiss a control measure**



Initially Identified Potential Control Measures

- 71 separate measures identified in Preliminary Draft BACM analysis
- Presented 14 after analysis as moving forward
- EPA response: “The Clean Air Act and the PM_{2.5} SIP Requirements Rule requires that all available control measures and technologies that meet the BACM (including BACT) and MSM criteria need to be implemented.”



Control Measures –

- Technical Feasibility
 - From EPA comments on Preliminary Draft BACM analysis: “All available control measures and technologies including those that have been implemented in nonattainment areas or attainment areas, or those potential measures and technologies that are available or new but not yet implemented. Alaska may not automatically eliminate a particular control measure because other sources or nonattainment areas have not implemented the measure. **The regulations do not have a quantitative limit on number of controls that should be implemented.**”



Control Measures continued–

- Control measures may be rejected:
 - Technically infeasible – **must be well documented**, may consider: local circumstances, condition and extent of needed infrastructure, population size or workforce type and habits, which may prohibit certain potential control measures from being implemented.
 - Economic infeasibility – **must be well documented**
 - Must provide basis
 - More stringent criteria for determining infeasibility of potential MSM over BACT or BACM will be required



Control Measure Requirements - reminder

- Control Measures must be
 - **Enforceable**
 - **Permanent emission reductions**
 - **Not voluntary**
- Need Control Measures for all sectors (point, area, on-road, off-road)
- Control Measures for both Direct PM_{2.5} and Precursor (SO₂)
- **All measures must be identified and implemented regardless of impact on attainment with limited exceptions**



Initial list of technically feasible control measures

Control Measure #/Title	Expected Economic Feasibility
3. Require Building or Other Permit	Feasible
8. Prohibit Installation of Solid Fuel Heating Device in New Construction	Feasible
9. Limit the Density of Solid Fuel Heating Devices in New Construction	Feasible
10. Install EPA-Certified Device Whenever a Fireplace or Chimney in Remodeled	Feasible
22. Require Registration of All Devices	Feasible
24. Require Permanent Installed Alternative Heating Method in Rental Units	Feasible
29. Allow Only NOASH Households to Burn During Curtailment Periods	Feasible
47. Inspection Warrants	Feasible
48. Date Certain Removal of "Coal Only Heater"	?
51. Ultra-low Sulfur Heating Oil	?
52. Operation and Sale of Small "Pot Burners" Prohibited	?
53. No Use Sale or Exchange of Used Oil for Fuel, unless it Meets Constituent Property Limits	?
R5. Ban New Installations - Hydronic Heaters	Feasible
R29. Increase Coverage of the District Heating System	Not Feasible



Additional Control Measures identified by EPA (21)

Numbers in parenthesis are control measure numbers and correspond to detailed descriptions and analysis found in the BACM analysis

• Devices:

- Surcharge on device sales (1)
- Require notice & proof of destruction or surrender of removed, uncertified devices (date certain removal) (16)
- All wood stoves must be certified (R₄ & R₉)
- Replace uncertified stoves in rental units (R₁₂)
- Require registration of devices to qualify for exemption from curtailments (19)
- Require renewals with inspection requirements (20)
- Require detailed application or inspection to verify need for NOASH permit (25)



Additional Control Measures identified by EPA (21)

Numbers in parenthesis are control measure numbers and correspond to detailed descriptions and analysis found in the BACM analysis

● Curtailment:

- Require sale of only dry wood during late summer to the end of winter (31)
- Burn permits required (33)
- Restrict burning during air pollution events (35)
- Prohibit residential open burning (36)
- Period burn windows (37)
- Exempt ceremonial or religious fires (43)



Additional Control Measures identified by EPA (21) Continued...

Numbers in parenthesis are control measure numbers and correspond to detailed descriptions and analysis found in the BACM analysis

- Prohibitions:
 - Prohibit use of coal burning heaters (49)
 - Ban use of wood stoves (R17)
 - Remove hydronic heaters at time of home sale (R6)
- Other:
 - Transportation control measures (R20)
 - Weatherization/heat retention programs
 - Fuel oil boiler upgrades
 - Controls for minor point sources (waste oil, coffee roasters)



ADEC Recommendation on approach

- **Look at each control measure on list – and ask**
 - How can it be implemented in FNSB
 - Try to come up with scenarios where implementation is possible
 - Or identify modifications to allow implementation
 - If item can't be implemented in FNSB
 - Identify (legally defensible) data needed to justify inability to implement
 - Identify another project (not on list) as possible replacement



Recommendation on approach - continued

- **Once all existing list items reviewed**
 - Identify any new potential control measures
 - Come up with ways to implement any new items
 - Can any of these new projects offset any point source BACT/MSM requirement?



Control Measure List – what's next

- Control Measures will be broken into four groups
 - BACM/BACT
 - Measures implementable by 2021 or as soon as possible
 - MSM
 - Measures implementable by Dec. 2023 that can't be implemented before 2021 (all or in part).
 - Contingency measure
 - A measure in regulation automatically triggered if fail to meet attainment or fail to meet reasonable further progress.
 - Feasible measure
 - Any measure that can be implemented after Dec. 2023.



Next Steps for SIP

- Incorporate information received on Preliminary Drafts
- Continue to work on inventories, BACM for commercial entities, BACT, baseline modeling
- Receive list of control measures from Stakeholder group
- Final modeling
- Final documentation
- Final regulation development
- Formal public review release of draft SIP winter 2018-2019.



Consequences

- Failure of Stakeholder Process
- Failure to Submit Complete SIP
- Failure to Submit Approvable SIP
- Failure to Attain
- Failure to Meet Reasonable Further Progress