



2020 Amendments to the Fairbanks North Star Borough Fine Particulate Matter (PM_{2.5}) Serious State Implementation Plan

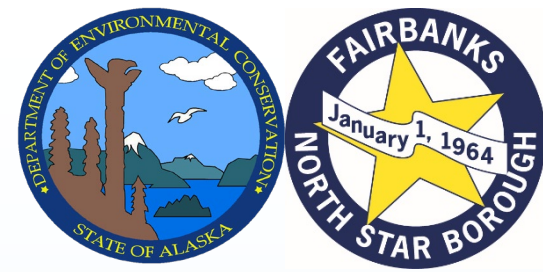
Cindy Heil, DEC Air Quality

Alice Edwards, DEC Air Quality

Nick Czarniecki, FNSB Air Quality

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Why are we updating the plan?



- Area failed to attain the health standard by December 2019
- Clean Air Act Section 189(d) sets out requirements for Serious nonattainment areas that fail to attain by the deadline
 - Submit plan revisions by 12 months after the failed attainment date
 - 5% annual reduction in PM2.5 emissions (or precursor emissions) from the new baseline emission inventory
- Goal is to achieve attainment as quickly as possible
- DEC let the community know this was the planning path last year during the public review on the Serious SIP



What is included in the package?

- ▶ No new, immediate control measures
 - ▶ Existing controls and programs from the Serious SIP will continue to be implemented by DEC or the Borough
- ▶ One new contingency measure
 - ▶ Reduce the threshold for Stage 2 Alerts from $30 \mu\text{g}/\text{m}^3$ to $25 \mu\text{g}/\text{m}^3$
 - ▶ Only triggered by future EPA finding of failure (fail to attain or meet progress requirements)
- ▶ Attainment projected in 2024
- ▶ New progress milestones and motor vehicle emission budgets established
- ▶ Technical updates
 - ▶ Air monitoring data, emission estimates, air modeling

Air Monitoring Results



Site	PM2.5 yearly 98 th percentile				PM2.5 Design Values (3 year DV unless noted)					
	2016	2017	2018	2019	2016	2017	2018	2019	Serious SIP Modeling Design Value rolling average 2011-2015	5% SIP Modeling "Base Year" Design Value 2016-2019
State Office Building	39.7	38.0	27	27.7	37	38	35	31	38.9	32.9
NCORE – Downtown Fairbanks	30.3	34.4	25.3	27.7	33	34	30	29	38.0	29.6
Hurst Road	66.8	75.5	52.8	65	106	85	65	64	131.6	64.7
A Street				34.1				N/A		

- ▶ Air Quality Standard Level is a 3-year Design Value (DV) of 35 $\mu\text{g}/\text{m}^3$
- ▶ The baseline modeling design values for Hurst Road are the ones used in SIP modeling analyses

Attainment Modeling Results



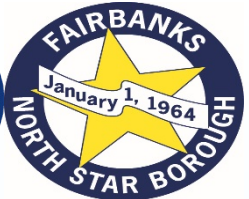
Modeled Year	Base/Future Design Value PM2.5 (ug/m3)
2019	64.7
2023	37.0
2024	30.9
2026	24.8

Future projections are at the Hurst Road monitor grid cell



Timeline

- ▶ Amendments released for public review on September 11
 - ▶ Telephonic hearing scheduled October 15
- ▶ Comment period closes on October 29
- ▶ DEC will evaluate comments and finalize plan updates for adoption
- ▶ Final Legal Review
- ▶ Plan is filed by Lt. Governor
- ▶ Plan is due to EPA by December 31, 2020
- ▶ Proposal can be found online at:
 - ▶ <http://dec.alaska.gov/air/anpms/communities/fbks-pm2-5-proposed-regulations/>



Measures currently in plan to reach attainment

- Serious SIP contains comprehensive control measure package for residential wood combustion as well as controls for other sources
 - Developed following recommendations from Stakeholders Group
- Solid Fuel/Wood Heating Controls
 - Registration requirements
 - Fuel (dry wood) requirements
 - New appliance requirements
 - Date certain removal of uncertified (wood/pellet/coal) appliances
 - Strengthened curtailment program
 - Wood stove change out program



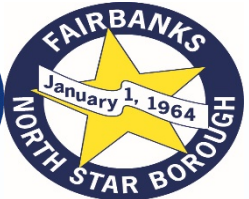
Measures currently in plan to reach attainment

- ▶ Diesel #1 heating fuel switch in 2022
- ▶ Industrial Sources (Best Available Controls)
 - ▶ Air permit modifications in process
- ▶ Other Commercial Sources
 - ▶ DEC sent out information requests
 - ▶ No additional controls proposed
- ▶ Contingency measure triggered by failure to attain
 - ▶ Removal of higher emitting certified wood heaters that are more than 25 years old



When is attainment achieved?

- ▶ 3-year monitored design value must meet the 35 ug/m³ ambient air quality standard
- ▶ 2024 is the projected attainment year based on the current data and model, but must monitor attainment at all the regulatory monitoring sites
- ▶ To request redesignation from EPA, must monitor attainment and have a Maintenance Plan



Maintaining attainment once achieved

- ▶ Existing control measures to stay in place while maintenance plan is developed
- ▶ Maintenance plan will contain the control measures necessary to keep the area in attainment
- ▶ Maintenance plan is in place for 10 years and then must be updated for a second 10-year period.
 - ▶ The two 10-year periods start upon the effective date of EPA approval.