2020 Amendments to the Fairbanks North Star Borough Fine Particulate Matter (PM2.5) Serious State Implementation Plan

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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 \( \mu g/m^3 \) to 25 \( \mu g/m^3 \)
  - 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

<table>
<thead>
<tr>
<th>Site</th>
<th>PM2.5 yearly 98th percentile</th>
<th>PM2.5 Design Values (3 year DV unless noted)</th>
<th>Serious SIP Modeling Design Value rolling average 2011-2015</th>
<th>5% SIP Modeling “Base Year” Design Value 2016-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Office Building</td>
<td>39.7</td>
<td>38.0</td>
<td>27</td>
<td>27.7</td>
</tr>
<tr>
<td>NCORE – Downtown Fairbanks</td>
<td>30.3</td>
<td>34.4</td>
<td>25.3</td>
<td>27.7</td>
</tr>
<tr>
<td>Hurst Road</td>
<td>66.8</td>
<td>75.5</td>
<td>52.8</td>
<td>65</td>
</tr>
<tr>
<td>A Street</td>
<td></td>
<td>34.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Air Quality Standard Level is a 3-year Design Value (DV) of 35 μg/m³
- The baseline modeling design values for Hurst Road are the ones used in SIP modeling analyses
## Attainment Modeling Results

<table>
<thead>
<tr>
<th>Modeled Year</th>
<th>Base/Future Design Value PM2.5 (ug/m3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>64.7</td>
</tr>
<tr>
<td>2023</td>
<td>37.0</td>
</tr>
<tr>
<td>2024</td>
<td>30.9</td>
</tr>
<tr>
<td>2026</td>
<td>24.8</td>
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</tbody>
</table>

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/](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.