

**From:** [Carrie Nyssen](#)  
**To:** [Dec Air Comment](#)  
**Subject:** American Lung Association comments for Fairbanks SIP  
**Date:** Friday, July 26, 2019 4:04:09 PM  
**Attachments:** [American Lung Association comments Fairbanks SIP.pdf](#)

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I attempted to submit my comments using the online form and received an error message. I wanted to be sure I met your deadline so I am also emailing the comments to you.  
Thank you for the opportunity to review your proposal.

**Carrie Nyssen**

Senior Director | Advocacy | Alaska, Hawaii, Idaho, Montana, Oregon, Washington, Wyoming

**American Lung Association**

9708 NE 133<sup>rd</sup> Ave | Vancouver, WA 98682

O: 503-718-6140 | C: 360-921-1484

Lung HelpLine: 1-800-LUNGUSA

[Lung.org](#) | [Carrie.Nyssen@lung.org](mailto:Carrie.Nyssen@lung.org)



National President and CEO  
Harold P. Wimmer

July 26, 2019

Cindy Heil  
Division of Air Quality  
Alaska Department of Environmental Conservation  
555 Cordova St.  
Anchorage, AK 99501

RE: Proposed regulatory changes in 18AAC 50 dealing with air quality and unhealthy concentrations of particulate matter pollution in Fairbanks

Dear Ms. Heil:

The American Lung Association appreciates the opportunity to provide comments to the Alaska Department of Environmental Conservation on the changes to the state regulations that adopt air regulations statewide and in the Fairbanks Nonattainment Area for fine particulate matter, PM2.5.

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease, through research, education and advocacy. Three of our strategic imperatives directly relate to the actions that ADEC is proposing today: to improve the air we breathe; to defeat lung cancer; and to reduce the burden of lung disease on individuals and their families.

**PM2.5 poses great risk to public health in Fairbanks**

The American Lung Association recognizes the serious threats to health from the high levels of PM2.5 in Fairbanks-North Star Borough and other parts of Alaska. In our 2019 “State of the Air” report, we found that Fairbanks -North Star Borough ranked as the third most polluted city in the nation based on the number and severity of unhealthy air days recorded

**Advocacy Office:**

1331 Pennsylvania Avenue NW, Suite 1425 North  
Washington, DC 20004-1710  
Ph: 202-785-3355 F: 202-452-1805

**Corporate Office:**

55 West Wacker Drive, Suite 1150 | Chicago, IL 60601  
Ph: 312-801-7630 F: 202-452-1805 info@Lung.org

during 2015 to 2017. The weighted average number of unhealthy air days that the people of Fairbanks experienced during that period was the highest we had ever recorded. In addition, the city ranked third most polluted for annual PM2.5, with a design value of 16.5 ug/m3, well above the national ambient air quality standard. It appears quite likely that high number of days when Fairbanks reaches unhealthy levels of PM2.5 contributes to the dangerous year-round averages.

Fairbanks North Star Borough is home to thousands of people who are among the most at risk. The list is long: nearly 24,000 children under age 18, including about 1,900 who have asthma; more than 9,700 adults over age 65; more than 6,400 adults over age 18 with asthma and more than 4,100 adults with COPD; nearly 4,500 adults who have cardiovascular disease; more than 5,200 people who have diabetes; and more than 7,000 people who have low incomes.<sup>1</sup>

According to extensive research, short-term increases in particle pollution have been linked to:

- death from respiratory and cardiovascular causes, including strokes;<sup>2, 3, 4, 5</sup>
- increased mortality in infants and young children;<sup>6</sup>
- increased numbers of heart attacks, especially among the elderly and in people with heart conditions;<sup>7</sup>
- inflammation of lung tissue in young, healthy adults;<sup>8</sup>
- increased hospitalization for cardiovascular disease, including strokes and congestive heart failure;<sup>9, 10, 11</sup>
- increased emergency room visits for patients suffering from acute respiratory ailments;<sup>12</sup>
- increased hospitalization for asthma among children;<sup>13, 14, 15</sup> and
- increased severity of asthma attacks in children.<sup>16</sup>

In general, we support the proposed changes to the proposed regulatory changes to reduce PM2.5 in the state and especially in Fairbanks. In particular, we support the measures below that have the highest determined effectiveness:

1. **Removal of all uncertified devices and cordwood outdoor hydronic heaters.**
  - This change has many benefits, especially as the old devices can continue to contribute significantly more PM2.5. The decision to destroy or render inoperable the removed devices will prevent them from becoming part of an underground market and reused.
  - Outdoor hydronic heaters provide more than just heat for a building; because of their use in providing hot water, they may operate for 8 to 24 hours each day, producing greater emissions than in-home wood heaters. They also operate year-round, not just during the cold weather season.
2. **Require 2.0 g/hr (stoves/inserts) and 0.10 lb/MMBtu certified emission rates for new or reconveyed wood devices.**

3. **Require commercially sold wood to be dry before sale.**
  - In this, we urge consideration of more rapid implementation than October 1, 2021. Recognizing that the wood needs 9 months to dry, an implementation date of October 1, 2020 would still allow plenty of time to meet that schedule.
4. **Requiring that wood-fired devices may not be the primary or the only heating source.**
5. **Removing the existing coal-fired devices.**
  - We would urge a more aggressive implementation date than December 31, 2024, but we support the plan to remove or replace these during real estate transactions.
6. **Continuing the Solid Fuel Burning Application Episodic Curtailment Program.**
  - “Don’t burn” days can be tricky to enforce, but they can help increase public awareness of unhealthy air days and compliance.
7. **Continuing the Borough Wood Stove Change Out Program.**
  - This program has been effective at replacing older wood stoves with newer, lower emitting stoves. This coupled with the new requirements that new stoves must meet the 2015 EPA standards provides even more opportunity to reduce emissions.
8. **Continuation of Alaska Housing Finance Corporation Energy Household Programs to reduce the cost of home heating and reduce dependence on solid fuel heating.**
  - Programs such as the AHFC provides to assist with improving energy efficiency and weatherization, particularly for lower income residents, can help reduce the dependence on solid fuel heating.

In summary, the American Lung Association appreciates the multi-pronged strategies proposed in this plan to reduce this dangerous air pollutant. We look forward to the day when Fairbanks moves to our list of cleanest cities for particle pollution, earning an A on our “State of the Air” report card.

Sincerely,



Carrie Nyssen  
Senior Director | Advocacy

American Lung Association



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- <sup>1</sup> American Lung Association. State of the Air Report, 2019. [Alaska: Fairbanks-North Star Borough](#).
- <sup>2</sup> Dominici F, McDermott A, Zeger SL, Samet JM. On the use of generalized additive models in time-series studies of air pollution and health. *Am J Epidemiol*. 2002; 156: 193-203.
- <sup>3</sup> Hong Y-C, Lee J-T, Kim H, Ha E-H, Schwartz J, Christiani DC. Effects of air pollutants on acute stroke mortality. *Environ Health Perspect*. 2002; 110: 187-191.
- <sup>4</sup> Tsai SS, Goggins WB, Chiu HF, Yang CY. Evidence for an association between air pollution and daily stroke admissions in Kaohsiung, Taiwan. *Stroke*. 2003; 34: 2612-6.
- <sup>5</sup> Wellenius GA, Schwartz J, Mittleman MA. Air Pollution and Hospital admissions for ischemic and hemorrhagic stroke among Medicare beneficiaries. *Stroke*. 2005; 36: 2549-2553.
- <sup>6</sup> Pope CA III, Dockery DW. Health effects of fine particulate air pollution: Lines that connect. *J Air Waste Manage Assoc*. 2006; 56: 709-742.
- <sup>7</sup> D'Ippoliti D, Forastiere F, Ancona C, Agabity N, Fusco D, Michelozzi P, Perucci CA. Air pollution and myocardial infarction in Rome: A case-crossover analysis. *Epidemiology*. 2003; 14: 528-535. Zanobetti A, Schwartz J. The effect of particulate air pollution on emergency admissions for myocardial infarction: A multicity case-crossover analysis. *Environ Health Perspect*. 2005; 113: 978-982.
- <sup>8</sup> Ghio AJ, Kim C, Devlin RB. Concentrated ambient air particles induce mild pulmonary inflammation in healthy human volunteers. *Am J Respir Crit Care Med*. 2000; 162(3 Pt 1): 981-988.
- <sup>9</sup> Metzger KB, Tolbert PE, Klein M, Peel JL, Flanders WD, Todd K, Mulholland JA, Ryan PB, Frumkin H. Ambient air pollution and cardiovascular emergency department visits in Atlanta, Georgia, 1993-2000. *Epidemiology*. 2004; 15: 46-56.
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- <sup>11</sup> Wellenius GA, Schwartz J, Mittleman MA. Particulate air pollution and hospital admissions for congestive heart failure in seven United States cities. *Am J Cardiol*. 2006; 97 (3): 404-408; Wellenius GA, Bateson TF, Mittleman MA, Schwartz J. Particulate air pollution and the rate of hospitalization for congestive heart failure among Medicare beneficiaries in Pittsburgh, Pennsylvania. *Am J Epidemiol*. 2005; 161: 1030-1036.
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- <sup>15</sup> Tolbert PE, Mulholland JA, MacIntosh DD, Xu F, Daniels D, Devine OJ, Carlin BP, Klein M, Dorley J, Butler AJ, Nordenberg DF, Frumkin H, Ryan PB, White MC. Air quality and pediatric emergency room visits for asthma in Atlanta, Georgia. *Am J Epidemiol*. 2000; 151: 798-810.
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