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To: [Dec Air Comment](#); [Brune, Jason W \(DEC\)](#); [Bryce Ward](#)
Cc: [Edwards, Alice L S \(DEC\)](#); [Heil, Cynthia L \(DEC\)](#); [Jill Dolan](#); [Glenn Miller](#)
Subject: SIP Comments
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Attachments: [2019-07-25 SIP Comments.pdf](#)

Commissioner Brune,

On behalf of Mayor Ward, attached are comments on the draft Serious Area State Implementation Plan.

The Borough is fortunate to have a partner agency with the dedication, skill and resources needed to assemble the information and analysis required to prepare the SIP. We sincerely appreciate the opportunity to comment on this document.

A hard copy will also be mailed.

Regards,

Nick Czarnecki

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July 25, 2019

Jason W. Brune, Commissioner
Alaska Department of Environmental Conservation
410 Willoughby Avenue
Juneau, AK 99811

RE: Draft Serious Area State Implementation Plan Comments

Dear Commissioner Brune,

The Fairbanks North Star Borough administration and staff (Borough) encourages and supports the State of Alaska Department of Environmental Conservation's (ADEC) efforts to develop the Borough's fine particulate matter (PM_{2.5}) Serious Area State Implementation Plan (SIP). The Borough appreciates this opportunity to comment on the public notice draft of the Serious Area SIP. The Borough has worked cooperatively with ADEC in developing the Serious Area SIP with the common goal of bringing the area into attainment with the PM_{2.5} National Ambient Air Quality Standards (NAAQS) with the least economic impact as possible.

The draft Serious Area SIP represents the culmination of years of work that follows the framework of the Clean Air Act and the PM_{2.5} Final Rule to bring the area into attainment as expeditiously as possible. The process laid out in the Clean Air Act requires the U.S. Environmental Protection Agency to provide oversight and review the Serious Area SIP, ultimately approving or disapproving all or portions of the Serious Area SIP. Putting forth an approvable Serious SIP is advantageous because it brings clean air to the community as quickly as possible and avoids economic penalties, such as highway fund sanctions. The draft Serious Area SIP contains all of the elements for an approvable document. It is paramount to keep all of the following sections intact, which are requirements for an approvable Serious SIP: emission inventory, serious area attainment plan control strategy requirements, attainment demonstration and modeling requirements, reasonable further progress, quantitative milestones, contingency measures, and nonattainment new source review.

Comment 1 is focused on keeping elements of the plan that, based on our review, are necessary for an approvable SIP.

1. Control Measures - While there are many elements to the SIP, a particular area of interest and concern to the Borough is ADEC's commitment to adopt the control measures leading to attainment of the PM_{2.5} ambient air quality standards. We recognize that the control measures included in the draft SIP are not firm commitments until ADEC has responded to public comments. While adjustments to the control measures may be required to address new information brought forth during the public comment process, it is imperative to retain the intent of the control measures identified in the draft Serious Area SIP. Adoption of those measures is critical to approval of the SIP. Therefore, the Borough requests that ADEC retain the commitment to implement all of control measures included in the SIP. Specifically the Borough requests that ADEC retain the proposed regulation modifications to: 18 AAC 50.030, 18 AAC 50.075, 18 AAC 50.076, 18 AAC 50.077, 18 AAC 50.078, and 18 AAC 50.079; and the proposed modifications to SIP Chapter III.D.7.12 Fairbanks Emergency Episode Plan.

Additionally, the Borough requests that ADEC considers the significant public input provided by the Air Quality Stakeholders group during drafting of the draft Serious Area SIP, and weigh their public input equally with the comments received during this public comment period.

Comment 2 is focused on details of a specific control measure. As noted in comment 1, while adjustments to the control measures may be required it is imperative to retain the intent of each control measure.

2. Dry Wood Measures - There is no debate about the benefit of dry wood in reducing wood burning emissions; the challenge is ensuring that local suppliers have sufficient land area to store the volume of dry wood needed to satisfy annual demand. The technology/economics of drying wood has been carefully addressed in DEC's analysis. It is less clear that the cost of purchasing/leasing the land needed to store sufficient wood supplies either on the part of individual suppliers or through a government program have been adequately characterized. Therefore, the Borough recommends that DEC quantify the annual wood volume and related space required under the proposed modifications to 18 AAC 50.076(g) and (j) to store it and meet with suppliers to assess alternative options to ensure that sufficient land is available to meet the dry wood mandate by the proposed September 30, 2021 date.

The Borough requests that ADEC amend 18 AAC 50.076(j) by adding that in lieu of the requirement to split and store dry wood for 9 months, the dried wood could be inspected and verified by ADEC staff.

The Borough requests that ADEC amend 18 AAC 50.076(j) by adding an exclusion for 8 foot rounds. This request is consistent with Air Quality Stakeholder's Recommendation 13.

Comments 3 – 6 are focused on implementation of the draft Serious Area SIP. While not specifically required in the PM_{2.5} Final Rule, identifying and committing the appropriate resources to implement the control measures identified in SIP Chapters III.D.7.7, III.D.7.11, and III.D.7.12, would assure that the area is brought into attainment as expeditiously as possible, which is a requirement of the CAA.

3. Implementation Resources - SIP Chapter III.D.7.09 contains details of an attainment demonstration for 2029, which is the most expeditious alternative attainment date. Table 7.9-6 in SIP Chapter III.D.7.09 shows the projected 2029 emission reductions for post-2019 control measures under alternative attainment date analysis. The combined total area space heating reductions (accounting for measure overlap) are estimated at 2.60 tons/episodic day accounting for benefits under a Stage 2 Curtailment program. The following control measure categories account for 2.05 tons/episodic day or 78.8% of the projected emission reductions:
 - a. Curtailment program;
 - b. Dry wood measures;
 - c. Date certain removal of uncertified devices and cordwood outdoor hydronic heaters;
 - d. Solid fuel heating appliance emission standards;
 - e. Date certain removal of coal heaters; and,
 - f. Wood-fired devices may not be the primary or only heating source.

The projected benefit of the 6 listed control measure categories, which are imperative to reach attainment, will require significant resources to develop, implement, and enforce. The compliance rate of each control measure is a key metric to achieving the projected emission benefits. While education, outreach, and voluntary compliance provide some

benefit, the projected benefits can only be achieved through expanded enforcement. That means increased surveillance, identification, and warnings to offenders; flexibility in working with offenders to understand requirements and options to comply; and following through with penalties for repeat offenders. While ADEC has a program with these elements in place, the community is aware that no offenders were penalized last winter. Without commitment, enforcement will be dependent on the staff and finances available within a structure that does not envision the expanded activity required to bring about increased compliance; therefore, the Borough, requests that ADEC make a commitment to increase resources or provide justification that existing resources are sufficient to achieve the projected emission reductions.

4. Air Quality Control Zones – The Borough has collected a significant amount of data to delineate hot-spots within the nonattainment area and establish Air Quality Control Zones (AQCZ). ADEC has recognized the AQCZs in the moderate SIP; the Borough encourages ADEC to do the same within the serious SIP. Targeting efforts in the hot-spot areas is an efficient and effective method to maximize limited resources, such as the prioritization matrix established for the Wood Stove Change Out Program (WSCOP). As outlined in comment 2, significant resources will be required to implement the suite of control measures proposed in the serious SIP. Targeting efforts has the potential to reduce the total resources required. As ADEC is aware, the Borough has an abundance of data that defines hot-spots and justifies the AQCZs. The Borough is willing to work collaboratively with ADEC to incorporate a plan that maximizes emission reductions with the limited resources available.
5. Compliance Rate Measurement - A key metric for quantifying the emissions benefit of wood burning curtailment is the public's "compliance rate" (i.e., the fraction of homes that stop burning on days when alerts are called). Assumptions about the compliance rate were used to estimate wood burning emissions in the base and forecast years in the SIP. Since measurements of the compliance rate take time and resources to collect, they require planning to ensure that the staff and technology is in place to collect, compile, and analyze them on a regular basis; therefore, the Borough, requests that ADEC make a commitment to set aside the resources needed to plan and collect compliance rate data annually. The information produced by this effort has many values, which includes:
 - a. Establishing and maintaining the credibility of estimates of emission reductions achieved by alerts;
 - b. Providing the information needed to prepare quantitative milestone and reasonable further progress reports;
 - c. Providing a key metric for use in enforcement program management; and
 - d. Providing relevant measurements of public responsiveness to alerts for presentation to the public and policy makers.
6. Annual Report Card - ADEC and DEC are to be commended for the broad and expansive effort it has undertaken not only to manage the preparation of a complex and challenging, plan but also the effort it has taken to communicate that plan to the affected parties within the nonattainment area. Meetings have been held with elected officials, the public, industry, the military, etc., to ensure that all are aware of the regulations, data, assumptions, models, technology performance, etc., used to reach decisions incorporated into the plan. We are aware this process will not stop at the end of comment period and that many more meetings will be held between now and the time at which the SIP is formally adopted. Our concern is that once the plan is adopted those meetings, except as mandated by regulation, will stop. We believe that regular communication with the public and affected sectors is essential to the plan successfully achieving PM_{2.5} attainment; therefore, the Borough requests ADEC make a commitment to present an annual report card to the public at the beginning of each heating season which provides information on trends observed in the community during the previous heating season, including:

complaints received, compliance rate measurements, enforcement activities, penalties levied, availability of dried wood, progress towards attainment, take public comment, discuss EPA activities, present information on new technologies to reduce emissions that have become available, etc. Similar meetings should also be conducted with the other regulated source sectors.

Comment 7 focuses on additional data and analysis that the Borough would like to see included in the final serious area SIP.

7. Control Measure Economics – The Air Quality Stakeholders Group spent considerable effort evaluating control measures. They relied on DEC contractor analysis of costs and benefits to make recommendations for measures that would aid the Borough in reaching attainment of the ambient PM_{2.5} standard. Separately, DEC analyzed over 80 control measures used in other communities to reduce fine particulate and related precursor emissions. The draft SIP referenced analysis of the costs and benefits of those control measures and that information was used to make decisions about which measures could be implemented in the near term. At this point, there is little information in the public domain about the cost of implementing controls in Fairbanks. This information is critical to educating the public about the economics of implementing alternate controls and aid public acceptance of the selected measures. The Borough requests that ADEC assemble available control measure cost/benefit analysis information and provide it in a format that is accessible to the public, either as part of the SIP or at public workshop, and online for individuals to download and review.

Comment 8 addresses ADEC's Best Available Control Technology (BACT) analysis. The Memorandum of Understanding established between ADEC and the Borough designate agency responsibilities, and the permitting authority for stationary sources lies solely with ADEC. The Borough respects these divided responsibilities and the comment below does not address the technical analysis, but rather the larger community issues which are not highlighted in a source specific BACT analysis.

8. As detailed in source apportionment and speciation studies completed by ADEC, the largest contributing source sector is residential wood combustion. While the Borough acknowledges that secondary sulfates contribute to PM_{2.5} pollution, we contend that the community's limited resources are better spent controlling the largest contributing source sector. The Air Quality Stakeholders Group came to a similar conclusion, recommending six control measures for the point sources with a focus on an emission offset program. ADEC's BACT analysis does not offer an emission offset program; however, the Borough is supportive of ADEC's BACT analysis. Additionally, the Borough's residents, businesses, military bases, and university rely exclusively on the point sources for electric generation, and three of the five point sources provide combined heat and power. Knowing that the services provided by the five point sources are essential elements to the daily lives of all Borough residents, we are supportive of ADEC's BACT analysis which provides flexibility for the point sources to continue providing these essential services to the community.

In addition to the above commitment requests, the Borough recommends that ADEC address the limitations that are currently embedded in the analysis framework used to prepare the SIP. The recommendations listed below are not meant to be critical of the process followed to prepare the SIP, but recognize the age and representativeness of the episodes, chemistry, surveys, and meteorological modeling used to construct the analytical framework employed in forecasting attainment. The Borough recommends that ADEC take the following steps to improve analysis:

- a. Update the Community Multiscale Air Quality (CMAQ) modeling platform;
- b. Establish new episode days specific around North Pole;

- c. Update the Weather Research and Forecasting (WRF) model;
- d. Conduct new speciation sampling; and,
- e. Conduct new surveys to update emission inventory.

The Borough is fortunate to have a partner with the dedication, skill and resources needed to assemble the information and analysis required to prepare the SIP. We sincerely appreciate the opportunity to comment on this document.

Sincerely,



Bryce J. Ward
Mayor

cc: Alice Edwards, ADEC Air Quality Director
Cindy Heil, ADEC Program Manager
Jill Dolan, FNSB Attorney
Glenn Miller, FNSB Transportation Director
Nick Czarnecki, FNSB Air Quality Manager