

Alaska Department of Environmental Conservation



Amendments to:
State Air Quality Control Plan

Volume III: Appendices

**Clean Air Act Section 110 Infrastructure Certification
Documentation**

Public Review Draft

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Bill Walker
Governor

Larry Hartig
Commissioner

**Amendments to State Air Quality Control Plan Volume III:
Clean Air Act §110 Infrastructure Certification Documentation Appendix to Volume II
Section II: State Air Quality Control Program, is amended to update Table 1 and add new
tables, Table 4 and Table 5.**

Table 1

Alaska's State Air Quality Control Plan CAA §110 Infrastructure Certifications

Table 4

Alaska's Compliance with CAA §110(a)(2)(G) Infrastructure Requirements for the 1997 & 2006
PM2.5 24-hour and annual NAAQS

Table 5

Alaska's Compliance with CAA §110 Infrastructure Requirements for the 2012 PM2.5 annual
NAAQS

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List of Acronyms & Abbreviations

AAC	Alaska Administrative Code
AMQA	Air Monitoring & Quality Assurance
CAA	Clean Air Act
CBJ	City & Borough of Juneau
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DEC	Department of Environmental Conservation
EPA	Environmental Protection Agency
FNSB	Fairbanks North Star Borough
MOA	Municipality of Anchorage
MSB	Matanuska-Susitna Borough
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standard
NNSR	Nonattainment New Source Review
NO _x	Nitrous Oxide
NO ₂	Nitrogen Dioxide
NSR	New Source Review
PM-2.5	Fine Particulate Matter
PSD	Prevention of Significant Deterioration
§	Section
SIL	Significant Impact Level
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide

Table 1: Alaska’s State Air Quality Control Plan CAA §110 Infrastructure Certifications.

NAAQS Element	NAAQS Federal Register Date	NAAQS Federal Register Number	State of Alaska NAAQS Effective Date of Regulation	State of Alaska CAA §110 SIP Certification Effective Date of Regulation	Table Number	Notes
Ozone 8-hour	7/18/97	62 FR 38856	6/21/98	8/1/12	2	
PM_{2.5} annual & 24-hour	7/18/97	62 FR 38652	6/21/98	8/1/12	2	
PM_{2.5} 24-hour	10/17/06	71 FR 61144	4/1/2010	8/1/12	2	Complete except for 110(a)(2)(G), <u>see table 4</u>
Ozone 8- hour	3/27/08	73 FR 16436	4/1/2010	8/1/12	2	
Lead	11/12/08	73 FR 66964	4/1/2010	8/1/12	2	
SO₂ 1-hour	6/22/10	75 FR 35520	9/17/2011	<u>4/17/15</u>	3	
NO₂ 1-hour	2/9/10	75 FR 6474	1/4/2013	<u>4/17/15</u>	3	
<u>PM_{2.5} 24-hour</u>	<u>10/17/06</u>	<u>71 FR 61144</u>	<u>4/1/2010</u>	<u>[insert effective date of regulation]</u>	<u>4</u>	<u>110(a)(2)(G) only</u>
<u>PM_{2.5} annual</u>	<u>01/15/13</u>	<u>78 FR 3086</u>	<u>[insert effective date of regulation]</u>	<u>[insert effective date of regulation]</u>	<u>5</u>	

Table 4: Alaska’s Compliance with CAA §110(a)(2)(G) Infrastructure Requirements for the 1997 & 2006 PM2.5 24-hour and annual NAAQS.

CAA §110 Infrastructure Element	How Infrastructure Requirement is Addressed in Alaska’s SIP
<p style="text-align: center;">§110(a)(2)(G) Authority to declare air pollution emergency and notify public</p>	<p>DEC’s regulatory authority to act during PM2.5 air episodes is found in 18 AAC 50.246. This authority is promulgated under the following statutes: AS 46.03.020; AS 46.03.820; AS 46.14.010; AS 46.14.020, AS 46.14.030 and AS 46.14.540.</p> <p>DEC adopted regulations found at 18 AAC 50.246 Table 6 “Concentrations Triggering an Air Episode” to include provisions more stringent than EPA’s recommended, interim, PM2.5 Significant Harm Levels (SHLs) for triggering an Air Alert, Air Warning and Air Emergency. DEC has provisions in 18 AAC 50.246(a), (b) and (c) to give local air quality control programs, recognized by the State of Alaska, the authority to declare PM2.5 air quality episodes and advisories and to take action. Prescribed opacity limits during PM2.5 episodes are located in 18 AAC 50.075(d). These provisions have been finalized and submitted to EPA for action and inclusion in Alaska’s federally approved SIP.</p> <p>The three major municipalities in Alaska (MOA, FNSB, and CBJ) also have ordinances, codes, or regulations that enable them to declare emergencies in the case of poor air quality due to forest fires, volcanoes, wood smoke or other air quality problem.</p> <p>DEC has worked with the FNSB to develop an Emergency Episode Contingency Plan for PM2.5 for the FNSB nonattainment area as outlined in 40 CFR Subpart H- Prevention of Air Pollution Emergency Episodes, and in Appendix L to Subpart 51 “Example Regulations for Prevention of Air Pollution Emergency Episodes”. DEC personnel remain in close contact with each municipality when an air emergency is declared, assisting with air monitoring and analysis, and implementing safety and control measures, as needed.</p>

Table 5: Alaska’s Compliance with CAA §110 Infrastructure Requirements for the 2012 PM2.5 annual NAAQS.

CAA §110 Infrastructure Element	How Infrastructure Requirement is Addressed in Alaska’s SIP
<p style="text-align: center;">§110(a) (2)(A) Emission limits & other control measures</p>	<p>Alaska Administrative Code (AAC), Title 18 Environmental Conservation, Chapter 50 Air Quality Control</p> <p>DEC has promulgated regulations to implement and enforce the NAAQS and other emission limitations. These regulations include statewide ambient air quality standards, major and minor permits, transportation conformity and fees, among others which are found in the following articles of AAC Title 18 Environmental Conservation, Chapter 50. Air Quality Control:</p> <ul style="list-style-type: none"> • Article 1. Ambient Air Quality Standards (18 AAC 50.005 - 18 AAC 50.110); • Article 2. Program Administration (18 AAC 50.200 - 18 AAC 50.250); • Article 3. Major Stationary Source Permits (18 AAC 50.300 - 18 AAC 50.390); • Article 5. Minor Permits (18 AAC 50.502 - 18 AAC 50.560); • Article 7. Conformity (18 AAC 50.700 – 18 AAC 50.735); and • Article 9. General Provisions (18 AAC 50.900 – 18 AAC 50.990). <p>On <i>[insert effective date of regulation]</i>, the State of Alaska adopted the 2012 PM2.5 annual NAAQS into 18 AAC 50, Article 1. Alaska’s current ambient air quality standards are found in Article 1 at 18 AAC 50.010.¹</p> <p>Alaska’s air quality designations, classifications and control regions are found in 18 AAC 50.015. There are no annual PM2.5 nonattainment areas in Alaska.</p>

¹ The Division of Air Quality’s current regulations are found in **Title 18 AAC 50 Air Quality Control**, as amended through April 17, 2015; refer to <http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2050.pdf>

<p>§110(a) (2)(B) Ambient air quality monitoring & data analysis system</p>	<p>DEC’s statutory and regulatory authority to conduct ambient air monitoring investigations is found in AS 46.03.020 (5), AS 46.14.180 and 18 AAC 50.201.</p> <p>On April 1, 2010, the State of Alaska adopted into Articles 1 and 2 of 18 AAC 50 the following 40 CFR Part 50 reference methods for the 2012 PM2.5 annual NAAQS:</p> <ul style="list-style-type: none"> • Appendix L: Reference Method for the Determination of Fine Particulate Matter as PM2.5 in the Atmosphere; <p>The Municipality of Anchorage (MOA) and Fairbanks North Star Borough (FNSB) both have a Memorandum of Understanding (MOU) with DEC to operate air quality control programs in their respective jurisdictions.^{2,3} DEC’s Air Non-Point Mobile Source Program (ANPMS) and Air Monitoring & Quality Assurance Program (AMQA) work with the MOA and FNSB to prepare Alaska’s annual ambient air monitoring network plan.⁴ Alaska’s ambient air monitoring network plan includes appropriate monitoring provisions and procedures to comply with the PM2.5 NAAQS monitoring requirements within the FNSB PM2.5 non-attainment area. Ambient PM2.5 monitoring data are collected by the MOA, the FNSB and DEC. Both the MOA and FNSB report their ambient air data to DEC on a quarterly basis. DEC collects PM2.5 data for the City and Borough of Juneau (CBJ) and the Matanuska-Susitna Valley and reports these data to EPA on a quarterly basis. Ambient air quality and meteorological data that are collected for Prevention of Significant Deterioration (PSD) purposes by permitted stationary sources are reported to DEC on a quarterly and annual basis.</p> <p>DEC’s revised “<i>Quality Assurance Project Plan for the State of Alaska Air Monitoring & Quality Assurance Program</i>”⁵ was adopted by reference into the State Air Quality Control Plan under 18 AAC 50.030(4) on</p>
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² MOU between DEC and Municipality of Anchorage for Air Quality Control, signed June 30, 2011.

³ MOU between DEC and Fairbanks North Star Borough for Air Pollution Control, dated January 26, 2010.

⁴ Division of Air Quality’s “Alaska’s 2012 Air Monitoring Plan” www.dec.state.ak.us/air/am/am_airmonplan.htm.

⁵ Division of Air Quality’s “Quality Assurance Project Plan for the State of Alaska Air Monitoring & Quality Assurance Program” http://www.dec.state.ak.us/air/doc/ADEC_AMQA_QAPP_23FEB10-final.pdf

§110(a)(2)(B) (continued)	October 29, 2010. This manual includes the appropriate, federally referenced ambient air quality monitoring and analysis procedures for PM2.5. As described in this plan, validated State & Local Air Monitoring Stations (SLAMS), and Special Purpose Monitoring (SPM) ambient air quality monitoring data are reported to the AMQA’s database manager. This person verifies the data, and electronically reports these data to EPA through the Air Quality System (AQS) on a quarterly basis.		
	PM2.5 NAAQS Monitoring: There are no current nonattainment areas for the 2012 annual PM2.5 NAAQS. PM2.5 monitoring for NAAQS compliance occurs at 9 sites throughout Alaska:		
	PM 2.5 Monitoring Site	Location	2012-2014 Design Value
	Garden Site	MOA	5.8
	Parkgate Site	MOA	5.2
	Butte Site	Mat-Su Valley	6.7
	Palmer Site	Mat-Su Valley	3.1
	Wasilla Site	Mat-Su Valley	4.4
	State Office Building	FNSB	11.0
	NCORE Site	FNSB	11.3
North Pole Fire #3	FNSB	Not Calculated ⁶	
Floyd Dryden Site	Juneau	6.7	

⁶ Data completeness criteria not met for 2013 and 2014 datasets

<p style="text-align: center;">§110(a) (2)(C) Program to enforce control measures, regulate modification & construction of stationary sources and a permit program</p>	<p>DEC’s statutory authority to regulate stationary sources via an air permitting program is established in AS 46.14 Air Quality Control, Article 01, General Regulations and Classifications; and Article 02, Emission Control Permit Program. DAQ’s Air Permits Program issues air discharge permits for stationary sources according to the following regulations:</p> <ul style="list-style-type: none"> • Construction permit for new or modified construction projects (18 AAC 50.302); • Prevention of significant deterioration (PSD) permit (18 AAC 50.306); • Non-attainment area major stationary source permit (18 AAC 50.311); and • Minor Permits (18 AAC 50 Article 5). <p>Alaska’s PSD/NSR program was originally approved by EPA on February 16, 1995 [60 FR 8943]. Amendments to Alaska’s PSD/NSR program were more recently approved by EPA on August 14, 2007 [72 FR 45378], February 9, 2011 [76 FR 7116], and January 7, 2015 [80 FR 832].</p> <p>Standard and compliance conditions for stationary sources are found in 18 AAC 50.345. Owner requested limits (ORL) and plant-wide applicability limitations (PALs) are regulated according to 18 AAC 50.508, 18 AAC 50.540, and 18 AAC 50.542. Minor permit regulations requiring analysis of ambient air quality are found at 18 AAC 50.542(c). Regulations governing air pollution prohibitions are found at 18 AAC 50.045, 18 AAC 50.110, and 18 AAC 50.345(c). A violation of these prohibitions or any permit condition can result in civil actions (AS 46.03.760), administrative penalties (AS 46.03.761), or criminal penalties (AS.03.790). Regulations pertaining to compliance orders and enforcement proceedings are found in 18 AAC Chapter 95 Administrative Enforcement.</p>
<p style="text-align: center;">§110(a)(2)(D)(i)(I) and (II) Interstate transport and international pollution abatement</p>	<p>DEC is concurrently submitting Alaska’s Interstate Transport of Pollution SIP for the 2012 PM2.5 annual NAAQS to demonstrate compliance with CAA §110(a)(2)(D)(i)(I)&(II) requirements. DEC concludes that emissions from Alaska do not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM2.5 NAAQS in another state; or interfere with measures required to be included in the SIP for any other state to prevent significant deterioration of air quality or to protect visibility.</p>

<p>§110(a)(2)(D)(ii) Interstate transport and interstate & international pollution abatement "... insuring compliance with the applicable requirements of CAA § 126 and 115".</p>	<p>Compliance with CAA §110(a)(2)(D)(ii) requirements is satisfied through the implementation of Alaska’s PSD/NSR program originally approved by EPA on February 16, 1995 [60 FR 8943] and more recently approved by EPA on August 14, 2007 [72 FR 45378], February 9, 2011 [76 FR 7116] , and January 7, 2015 [80 FR 832].</p> <p>Alaska does not have any pending obligations under Clean Air Act sections 115 (International air pollution) or 126 (Interstate pollution abatement) because no other state or country is formally petitioning EPA regarding air emissions from Alaska sources.</p>
<p>§110(a)(2)(E)(i) Adequate personnel, funding and authority to carry out plan</p>	<p>DEC has implemented CAA requirements and the State Air Quality Control Plan since its inception in 1972. DEC’s statutory and regulatory authority to implement and enforce the State of Alaska’s Air Quality Control Plan are found in AS 46.14.030 and 18 AAC 50.030. The State of Alaska has adequate personnel, funding, and authority to implement the 2012 annual PM2.5 NAAQS. The statutory authority for establishing local air pollution control programs is found in AS 46.14.400—Local Air Quality Control Programs. DEC relies on local programs to implement some SIP requirements and demonstrates local programs have adequate resources in the SIP.</p>
<p>§110(a)(2)(E)(ii) Comply with state boards</p>	<p>Alaska’s regulations meeting the intent of CAA §110(a) (2) (E) and CAA §128 “conflict of interest” phrases are found in AAC Title 2- Administration; Chapter 50- Alaska Public Offices Commission: Conflict of Interest, Campaign Disclosure, Legislative Financial Disclosure, and Regulations of Lobbying - Article 1- Public Official Financial Disclosure (2 AAC 50.010- 2 AAC 50.920) and -Title 9- Law; Chapter 52- Executive Branch Code of Ethics (9 AAC 52.010-9 AAC 52.990). These regulations were adopted into Alaska’s SIP and approved by EPA on October 22, 2012 (77 FR 64427).</p> <p>There are no state air quality boards in Alaska, however, the DEC Commissioner, as an appointed official and the head of an executive agency, is required to file a financial disclosure statement annually by March 15th of each year with the Alaska Public Offices Commission (APOC). These disclosures are publically available through APOC’s Anchorage office. Alaska’s Public Officials Financial Disclosure Forms and Internet links to Alaska’s financial disclosure regulations can be found at the APOC website: http://doa.alaska.gov/apoc/home.html.</p>

<p>§110(a)(2)(E)(iii) oversee local & regional government/agencies</p>	<p>As a matter of policy, DEC encourages the development of strong local air quality control programs. DEC provides technical assistance and regulatory oversight to the MOA, FNSB and other local jurisdictions to ensure that the State Air Quality Control Plan and SIP objectives are satisfactorily carried out. DEC has MOUs with the MOA and FNSB which allows them to operate air quality control programs in their respective jurisdictions. The South Central Clean Air Authority has been established to aid the MOA and the Matanuska-Susitna Borough in pursuing joint efforts to control emissions and improve air quality in their shared air-shed.</p>
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<p>110(a)(2)(F) Stationary source emissions monitoring and reporting system</p>	<p>DEC’s general statutory authority to regulate stationary sources via an air permitting program is established in AS 46.14 Air Quality Control, Article 01, General Regulations and Classifications; and Article 02, Emission Control Permit Program. Alaska’s statutes regarding stationary source permit reporting requirements, completeness determinations, administrative actions, and stack source monitoring requirements are found at AS 46.140 through AS 46.14.180. DEC’s regulatory authority to determine compliance with these statutes is found in 18 AAC 50.200 Information requests; and 18 AAC 50.201 Ambient air quality investigations.</p> <p>Monitoring protocols and test methods for stationary sources have been adopted by reference in the State Air Quality Control Plan and are found at 18 AAC 50.030. Other documents, procedures and test methods adopted by reference, including the federal reference and interpretation methods for the new NAAQS, are found at 18 AAC 50.035. Federal standards adopted by reference are found at 18 AAC 50.040.</p> <p>On August 3, 2011, DEC adopted the PM2.5 source testing requirements into 18 AAC 50.220(c), as required in Appendix M to 40 C.F.R. Part 51. Monitoring, reporting, and record keeping requirements for permitted stationary sources are found in the standard permit conditions for construction and operating permits at 18 AAC 50.345.</p> <p>Alaska’s PSD/NSR program was originally approved by EPA on February 16, 1995 [60 FR 8943] and more recently approved February 16, 1995 [60 FR 8943] and more recently approved by EPA on August 14, 2007 [72 FR 45378], February 9, 2011 [76 FR 7116], and January 7, 2015 [80 FR 832]. Ambient air quality and meteorological data that are collected for PSD purposes by stationary sources are reported to DEC on a quarterly and annual basis.</p>
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<p style="text-align: center;">§110(a)(2)(G) Authority to declare air pollution emergency and notify public</p>	<p>DEC’s regulatory authority to act during PM2.5 air episodes is found in 18 AAC 50.246. This authority is promulgated under the following statutes: AS 46.03.020; AS 46.03.820; AS 46.14.010; AS 46.14.020, AS 46.14.030 and 46.14.540.</p> <p>DEC adopted regulations found at 18 AAC 50.246 Table 6 “Concentrations Triggering an Air Episode” to include provisions more stringent than EPA’s recommended, interim, PM2.5 Significant Harm Levels (SHLs) for triggering an Air Alert, Air Warning and Air Emergency. DEC has provisions in 18 AAC 50.246(a), (b) and (c) to give local air quality control programs, recognized by the State of Alaska, the authority to declare PM2.5 air quality episodes and advisories and to take action. These provisions have been finalized and submitted to EPA for action and inclusion in Alaska’s federally approved SIP.</p> <p>The three major municipalities in Alaska (MOA, FNSB, and CBJ) also have ordinances, codes, or regulations that enable them to declare emergencies in the case of poor air quality due to forest fires, volcanoes, wood smoke or other air quality problem.</p> <p>DEC has worked with the FNSB to develop an Emergency Episode Contingency Plan for PM2.5 for the FNSB nonattainment area as outlined in 40 CFR Subpart H- Prevention of Air Pollution Emergency Episodes, and in Appendix L to Subpart 51 “Example Regulations for Prevention of Air Pollution Emergency Episodes”. DEC personnel remain in close contact with each municipality when an air emergency is declared, assisting with air monitoring and analysis, and implementing safety and control measures, as needed.</p>
<p style="text-align: center;">§110(a)(2)(H) Future SIP Revisions</p>	<p>DEC’s statutory authority to adopt regulations in order to implement the CAA and the state air quality control program is found in AS 46.03.020(10) (A), and AS 46.14.010(a). DEC’s regulatory authority to implement any provision of the CAA is found in 18 AAC 50.010. DEC strives to establish regulations and update Alaska’s SIP in a timely fashion as new NAAQS are promulgated by EPA.</p>
<p style="text-align: center;">§110(a)(2)(I) Areas designated nonattainment</p>	<p>Alaska does not currently contain any nonattainment areas for the 2012 PM2.5 annual standard.</p>

Vol. III: Appendix to Vol. II Section II - §110 Infrastructure Certifications
 Table 5. 2012 annual PM2.5 NAAQS

<p>§110(a)(2)(J) § 121 consultation</p>	<p>DEC’s statutory authority to consult and cooperate with officials of local governments, state and federal agencies, and non-profit groups is found in AS 46.030.020 (3), (8). Municipalities and local air quality districts seeking approval for a local air quality control program must enter into a cooperative agreement with DEC according to AS 46.14.400(d). DEC can adopt new CAA regulations only after a public hearing (AS 46.14.010(a)).</p>
<p>§110(a)(2)(J) § 127 public notification</p>	<p>Public notice and public hearing regulations for SIP submittals and air quality discharge permits are found at 18 AAC 15.050 and 18 AAC 15.060.</p>
<p>§110(a)(2)(J) PSD & visibility protection</p>	<p>February 16, 1995 [60 FR 8943] and more recently approved by EPA on August 14, 2007 [72 FR 45378], February 9, 2011 [76 FR 7116], and January 7, 2015 [80 FR 832]. Alaska’s Regional Haze SIP and Open Burn SIP was approved by EPA (78 FR 10546, February 14, 2013) and meets the regional haze program requirements found in 40 CFR §51.308; DEC concludes that there are no new visibility protection obligations under CAA §110(a) (2) (J) as a result of the 2012 PM2.5 annual NAAQS.</p>
<p>§110(a)(2)(K) Air quality modeling/data</p>	<p>Air quality modeling by DEC is conducted under 18 AAC 50.215(b), Ambient air quality analysis methods. Estimates of ambient concentrations and visibility impairment must be based on applicable air quality models, databases, and other requirements specified in the EPA’s Guideline on Air Quality Models adopted by reference in 18 AAC 50.040(f). This regulation allows some provisions to exclude concentrations attributable to temporary construction activity for a new or modified source, or to new sources outside the United States. DEC has updated the baseline dates and maximum allowable increases for PM2.5, found in 18 AAC 50.020. EPA most recently approved changes to 18 AAC 50.020 on September 19th 2014 (79 FR 56268).</p>
<p>§110(a)(2)(L) Major Stationary source permitting fees</p>	<p>DEC’s statutory authority to assess and collect permit fees is established in AS 46.14.240 and AS 46.14.250. The permit fees for permitting major and minor stationary sources are assessed and collected by the Air Permits Program according to 18 AAC 50 Article 4. User Fees (18 AAC 50.400 through 18 AAC 50.430). The Air Permits Program is required to evaluate emission fee rates at least every four years, and provide a written evaluation of the findings (AS 46.14.250(g); 18 AAC 50.410). The Division is currently developing its 2014 emission fee evaluation report. The most recent emission fee evaluation report was completed in October 2010.</p>

Vol. III: Appendix to Vol. II Section II - §110 Infrastructure Certifications
Table 5. 2012 annual PM2.5 NAAQS

§110(a)(2)(M) Consultation/Participation by affected local entities	DEC has the statutory authority to consult and cooperate with officials and representatives of any organization in the state; and persons, organization, and groups, public and private using, served by, interested in, or concerned with the environment of the state (AS 46.03.020 (3) (A)(B)).
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