

# **Alaska Department of Environmental Conservation**



## **Amendments to: State Air Quality Control Plan**

### **Vol. II: Analysis of Problems, Control Actions Section II: Air Quality Control Program**

**Public Review Draft**

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**Volume II, Section II is amended as follows:****Section II****STATE AIR QUALITY CONTROL PROGRAM**

The Department of Environmental Conservation (ADEC) administers the state air quality control program in Alaska and is the primary agency responsible for implementing the state air quality control plan. Portions of the control plan make up Alaska's State Implementation Plan (SIP) and address the requirements of the Clean Air Act Amendments (CAA) of 1990 and subsequent requirements set out by the U.S. Environmental Protection Agency (EPA). Each time EPA approves an amendment to the state's control plan those amendments become a part of the federally required and approved SIP. Other portions of the control plan are state requirements that may be pending approval by EPA or cover control measures that are not required by EPA. The air quality control plan, including the SIP, has been adopted by reference into Title 18, Chapter 50 of the Alaska Administrative Code. ADEC is responsible for establishing the air quality standards throughout the state, and ensuring that regulations are enforced statewide to maintain ambient air quality standards.

The Fairbanks North Star Borough (FNSB) and the Municipality of Anchorage (MOA) both operate local air quality control programs in their respective jurisdictions. Their local programs concentrate on ambient air monitoring, enforcement of visible emission and dust control regulations, and local control measures to reduce motor vehicle carbon monoxide emissions. In addition, the interjurisdictional Southcentral 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 the air shed common to the two jurisdictions. As a matter of policy, ADEC encourages the development of strong local air quality control programs. ADEC provides technical assistance to ensure that air quality objectives are satisfactorily carried out. The legal authority for establishing local air pollution control programs is found in Alaska Statute (AS) 46.14.400—Local Air Quality Control Programs.

**Department of Environmental Conservation**

ADEC's Division of Air Quality works to protect the public from the adverse health effects of air pollution and is divided into three programs: Air Permits Program; Air Non-Point & Mobile Source Program; and Monitoring & Quality Assurance Program.

The Air Permits Program issues both construction and operating permits from offices in Anchorage, Fairbanks, and Juneau. The Air Permits Program also focuses on compliance assurance with an enforcement program and a regulation development team.

The Air Non-Point & Mobile Source Program consists of two sections: mobile sources and area source pollutants. The mobile sources section is centered in Anchorage, with staff also located in Fairbanks. The mobile sources section is responsible for implementation of mobile source air pollution programs such as the Inspection and Maintenance (I/M) program and low-sulfur diesel requirements. The area source pollutants group is centered in Juneau, with staff also located in Fairbanks, and is responsible for development of the State Air Quality Control Plan, the state implementation plan (SIP), and air quality regulations such as I/M and conformity regulations.

The Monitoring and Quality Assurance Program is centered in Anchorage, with staff also in Juneau and is responsible for air monitoring projects that measure the actual concentrations of carbon monoxide, particulate matter, sulfur dioxide, nitrogen oxides, ozone, lead, or other meteorological parameters. The monitoring program's Juneau laboratory assists in operation and maintenance of a statewide monitoring network and assists in special monitoring projects.

AS 44.46.020, 46.03.020, 46.03.024, 46.03.760, 46.03.765, 46.03.780, 46.03.790, and AS 46.14 .010 through 46.14.990 provide ADEC's legal authority (copies are in the appendix to Section II). In 1972, the State of Alaska Department of Law determined that AS 46.03 contained the necessary legal authorities as required by the Clean Air Act to carry out the statewide air quality control plan. This legal opinion, found in the appendix to section II, identifies the prerequisite legal authorities for the state's air quality control program. It also covers the six basic legal requirements identified in 40 C.F.R. Part 51.11(a) in 1972. (Note: in 1986, the legal requirements were moved to 40 C.F.R. Section 51.230.)

ADEC's Air Quality Control regulations, 18 AAC 50, are located in the appendix to Section II. Amendments adopted in 1982 allowed assumption of the Prevention of Significant Deterioration (PSD) program, New Source Performance Standards review for six sources, and other activities. Amendments adopted in 1983 created administrative procedures to maintain ambient air quality standards in locations where emissions from residential wood burning activities threaten public health and modified open burning regulations.

ADEC is required to submit a written SIP amendment to EPA in order to meet the basic requirements of CAA section 110 (a) (2)(A)-(M), also known as the “infrastructure” elements, within three years after promulgation of any new or revised National Ambient Air Quality Standard (NAAQS). The written SIP amendment must demonstrate that ADEC has the statutory and regulatory authorities to implement the CAA “infrastructure” elements for each new or revised NAAQS adopted by the State of Alaska. ADEC’s SIP certification documentation, demonstrating that Alaska complies with the CAA section 110 “infrastructure” elements, are found within Volume III of Alaska’s SIP; the appendix to Volume II, Section II.

In 1987, the department amended regulations that control the height of stacks and the use of dispersion techniques. In 1988, the department amended fugitive emission accounting procedures for determining permit applicability, and asphalt plant emission standards. In 1991, ADEC adopted an ambient air quality standard for ammonia. In a separate 1991 amendment package, further amendments accomplished the following:

- established an ambient air quality standard for particulate matter smaller than 10 microns (PM<sub>10</sub>);
- set an upper boundary for any increases of nitrogen dioxide emissions;
- reduced the visible emission standard for marine vessels from 40 to 20 percent opacity;
- revised the criteria for owners of incinerators to obtain an operating permit;
- established a new permit procedure for facilities in Anchorage and Fairbanks;
- established a new air episode category called "air quality advisory"; and
- restricted wood stove operation during an air quality advisory and an air emergency.

The 1991 package also included amendments to reduce PM<sub>10</sub> levels in Eagle River and in the Mendenhall Valley. Those amendments include a public notice and 30-day comment period for *all* new air quality control permits; and clarify certain permit requirements and procedures, especially issues pertaining to the definition and application of "actual" and "allowable" emissions.

In 1994, the department amended the Air Quality Control regulations (18 AAC 50) to address New Source Review and Conformity requirements. In 1998, the Transportation Conformity requirements were updated. In 2004, 18 AAC 50 was updated to identify Anchorage’s and Fairbanks’ re-designations as maintenance areas.

The department’s Emissions Inspection and Maintenance Requirements for Motor Vehicles (18 AAC 52), initially adopted in 1985, were amended twice in 1994, once to

establish an I/M program for vehicles used to commute into the MOA, and again in response to federal I/M regulations dated November 1992. In 1996, the regulations were amended to change the implementation schedule from an annual to a biennial inspection frequency. In 1999, DEC amended Chapter 52 to incorporate a switch from BAR-90 to the Alaska2000 Emissions Inspection System. In 2000, an amendment changed the start date of the OBDII testing requirement from January 1, 2001 to July 1, 2001. In 2009, some minor changes were made to 18 AAC 52 to add flexibility for enforcement options and to recognize improved performance of new vehicles through a multi-year exemption period prior to inclusion in the program. A copy of 18 AAC 52, as amended through November 4<sup>th</sup>, 2009, is contained in Volume III, in the Appendix to Section III.A.

State oxygenated fuel regulations are contained in 18 AAC 53. These regulations were initially adopted in 1992. These regulations required the sale of oxygenated fuels in the MOA during the control period of November 1 to March 1 from 1995 until 2004 when the MOA was re-designated from nonattainment to attainment.

In 2000, DEC amended Chapter 53 to change the per-gallon CAR fee amount and in 2004 amended it to suspend the required use of gasoline containing 10% ethanol during the winter months. The amendments clarified the procedure for reestablishing blended gasoline should there be a violation of the carbon monoxide (CO) standard in the future. The use of ethanol containing gasoline has been effective for reducing tailpipe carbon monoxide emissions. However, the technology of newer vehicles reduces the emission benefits associated with this control program. Consequently as new cars replace older cars this strategy provides diminished air quality returns. It is also no longer necessary for meeting clean air standards in Anchorage. The amendments inserted language that defines guidelines for suspension or reestablishment of fuel control periods. A copy of 18 AAC 53, as amended through February 20, 2004, is contained in Volume III in the appendix to III.A.

## **Municipality of Anchorage**

The Southcentral Clean Air Authority (SCAA) includes the MOA and the Matanuska-Susitna Borough (Mat-Su Borough). As a means to address inter-jurisdictional issues, the MOA and the Mat-Su Borough may activate the SCAA, as needed.

The Anchorage Air Pollution Control Agency (AAPCA), the air quality section of the Municipal Department of Health and Human Services, confines its control activities to just the MOA. The MOA is also the official Metropolitan Planning Organization (MPO) for Anchorage, and has lead responsibility for the continuing, cooperative and

comprehensive (3C) transportation planning process throughout the MOA. In Anchorage, the MOA, along with ADEC and the Alaska Department of Transportation and Public Facilities (ADOT/PF), conducts the 3C process through the Anchorage Metropolitan Area Transportation Study (AMATS) planning group. The AMATS group has a key role in the ongoing development of Anchorage's transportation control plan, as described in Section III.B.

The local ordinances establishing a local air program in Anchorage are included in the appendix to Section III.B. To minimize duplicate efforts and maximize the use of available resources, ADEC and MOA maintain a formal Memorandum of Understanding (MOU) that serves as the basis for the division of responsibilities between state and local government for air pollution control within the Municipality of Anchorage

MOA's air pollution control efforts currently involve the AAPCA and the Municipality's Department of Community Planning and Development (DCPD). AAPCA had lead responsibility for developing the transportation control plan described in Section III.B, and is also responsible for conducting the remaining local air pollution control program functions throughout the MOA. DCPD has lead responsibility within the MOA for coordinating AMATS transportation planning activities, and works closely with AAPCA on all transportation control efforts.

## **Fairbanks North Star Borough**

The Fairbanks North Star Borough (FNSB) has operated a local air pollution control program since 1972. The FNSB became an official "small-urbanized area" in the spring of 2002, when the Census Bureau issued its designations of urbanized areas based on the 2000 population census. With a population surpassing 50,000, Fairbanks is now required to operate as a Metropolitan Planning Organization. The FNSB Department of Transportation has the responsibility for air pollution control in the borough, including the administration of the Fairbanks I/M Program. The FNSB air ordinances cover the I/M program, open burning, visible emissions from stationary sources, and emergency procedures. These ordinances, which have undergone several minor revisions since 1983, are included in the appendix to Section III.C.9. In 2001, the Borough Assembly approved an ordinance mandating plug-ins in some parking lots. This ordinance, No. 2001-17, is found in the Appendix to Section III.C.5.

The Fairbanks air pollution control efforts, discussed in detail in Section III.C, concentrate on violations of the carbon monoxide ambient air quality standards. The FNSB has relied on the ADEC to control large stationary emission sources within the

borough. The division of responsibilities between ADEC and the FNSB is formalized in an MOU, which is reviewed periodically by both parties.

The FNSB, along with ADEC, ADOT/PF and the cities of Fairbanks and North Pole, participates in MPO transportation planning through the Fairbanks Metropolitan Area Transportation Study (FMATS) planning group. The FMATS group is involved in the ongoing development of the transportation control plan for Fairbanks, as described in Section III.C.