



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

December 14, 2011

Dennis J. McLerran, Regional Administrator
USEPA Region 10, MS RA-140
1200 Sixth Avenue
Seattle, WA 98101

Dear Mr. McLerran:

On behalf of the State of Idaho, the Department of Environmental Quality hereby submits the following:

- PM₁₀ Limited Maintenance Plan and Request for Redesignation of the Sandpoint Idaho PM₁₀ Nonattainment Area
- Documentation of Public Comment and Hearing.

The enclosed Plan is unchanged from the plan provided for public comment as no written or oral comment was received. This package was developed under close coordination with Donna Deneen of your staff and follows the 2002 SIP Process Improvement Plan agreement. The SIP-PIP process and Ms. Deneen's support are very valuable to Idaho.

Per your April 26, 2011 letter, an original and one electronic copy of these documents are being provided to you and your staff. If you, or your staff, have any questions concerning Idaho's submittal, please contact Sue Richards, Air Quality Analyst, DEQ Air Quality Division, at (208) 373-0586. For any questions of a legal nature, please contact Lisa Carlson, Deputy Attorney General at (208) 373-0494.

Sincerely,

A handwritten signature in blue ink, appearing to read "Toni Hardesty", is written over a horizontal line.

Toni Hardesty
Director

Documentation of Public Comment and Hearing

The following documents (attached) demonstrate the public notice and hearing requirements, found at 40 CFR Part 51.102, were met for the state implementation plan entitled PM₁₀ Limited Maintenance Plan and Request for Redesignation of the Sandpoint, Idaho PM₁₀ Nonattainment Area:

1. Affidavit of Publication – Coeur d’Alene Press.
2. Affidavit of Publication – Bonner County Daily Bee.
3. DEQ Press Release, October 11, 2011
4. Idaho Department of Environmental Quality Website – News and Public Comments and Events – Screenshot.
5. Certificate of Hearing.

No comments were received.

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO,
County of Kootenai,

} ss.

Jan Jeffers

being first duly sworn upon oath deposes and says:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The Legal Notice

of which the annexed is a printed copy, was published in the regular Tuesday issue of said newspaper for one consecutive Day commencing on the 11 day of October 20 11, and ending on the 11 day of October 20 11, and such publication was made as often during said period as said Daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice Jan Jeffers. On this 11 day of October in the year of 2011, before me, a Notary Public, personally appeared Jan Jeffers, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.



Katrina George
Notary Public for the State of Idaho,
residing at Coeur d'Alene, Idaho.

MY COMMISSION EXPIRES 8/29/17

NOTICE OF 30-DAY PUBLIC COMMENT PERIOD AND HEARING REGARDING PROPOSED LIMITED MAINTENANCE PLAN AND ATTAINMENT REDESIGNATION REQUEST FOR THE SANDPOINT NONATTAINMENT AREA

PROPOSED ACTION: The Department of Environmental Quality (DEQ) is proposing to submit a Limited Maintenance Plan and Attainment Redesignation request to the Environmental Protection Agency (EPA). This State Implementation Plan document demonstrates the Sandpoint nonattainment area has attained compliance with the 1987 24-hour PM10 National Ambient Air Quality Standard and that there are adequate control measures in place to assure future compliance with the standard. The 30-day comment period begins October 11, 2011 and concludes November 10, 2011.

AVAILABILITY OF MATERIALS: The Limited Maintenance Plan and Attainment Redesignation Request materials are available for public review on the DEQ's website at <http://www.deq.idaho.gov>. Printed materials will be made available upon request at the Department's Regional Office in Coeur d'Alene and at the Bonner County Library, Sandpoint Branch.

HEARING: A public hearing has been scheduled November 10, 2011 from 4:00 to 5:00 p.m. PST in Room 102 of the Bonner County Library, Sandpoint Branch.

SUBMISSION OF WRITTEN COMMENTS ASSISTANCE ON TECHNICAL QUESTIONS: Anyone may submit written comment regarding this proposal. To be most effective, comments should address air quality considerations and include support materials where available. Comments, requests, and questions regarding the public comment process should be directed to Tessa Stevens, Department of Environmental Quality, 1410 N. Hillon, Boise, ID 83706-1255, tessa.stevens@deq.idaho.gov, or (208) 378-0440. Please reference "Sandpoint" when sending comments or requesting information.

For technical assistance on questions concerning this project, please contact Sue Richards at (208) 378-0586.

All written comments concerning this proposal must be received on or before 5:00 p.m. PST, November 10, 2011.

**NOTICE OF 30-DAY PUBLIC
COMMENT PERIOD AND
HEARING REGARDING
PROPOSED LIMITED
MAINTENANCE PLAN AND
ATTAINMENT
REDESIGNATION REQUEST
FOR THE SANDPOINT
NONATTAINMENT AREA**

PROPOSED ACTION: The Department of Environmental Quality (DEQ) is proposing to submit a Limited Maintenance Plan and Attainment Redesignation request to the Environmental Protection Agency (EPA). This State

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SNP Legal 13426
October 11, 2011

NewsRelease

DEQ asks EPA to reclassify Sandpoint air quality status, seeks public comment on plan

MEDIA CONTACT

■ Mike Boyle
DEQ Coeur d'Alene Regional Office
(208) 666-4607

SANDPOINT – Air quality data show the Sandpoint area is meeting the standard for coarse particulate matter (PM₁₀), prompting the Idaho Department of Environmental Quality (DEQ) to ask the U.S. Environmental Protection Agency (EPA) to redesignate the area as attainment.

EPA designated the Sandpoint area, encompassing Sandpoint, Kootenai, and Ponderay in Bonner County, nonattainment for PM₁₀ in 1987.

When an area is designated nonattainment, it means the federal standard has been violated, which can have adverse impacts on public health, deter growth, limit job opportunities, and restrict highway funding.

PM₁₀ is considered a threat to human health due to the body's inability to effectively filter particles of this size. The particles can accumulate in the lungs and aggravate respiratory conditions, especially among those with heart or lung diseases, the elderly, and children.

"The communities of Sandpoint, Kootenai, and Ponderay, along with DEQ, Idaho Transportation Department, Bonner County, and local industrial sources have made strides in implementing control strategies and improving air quality," said Mark Boyle, DEQ's Coeur d'Alene Region Air Quality Manager.

"Cooperation among these organizations has resulted in marked improvement in air quality and maintained compliance with the federal standard. Continued cooperation will help ensure future success," he said.

Factors contributing to improved air quality include reductions in fugitive road dust and industrial emissions as well as restrictions against the sale of uncertified wood stoves and other solid fuel heating appliances.

DEQ has developed a document, entitled *PM₁₀ Limited Maintenance Plan and Request for Redesignation of the Sandpoint, Idaho PM₁₀ Nonattainment Area*, documenting that air quality in the area has attained the federal standard and outlining how the area intends to maintain compliance with the standard for at least the next 10 years.

Public comment on the document will be accepted through 5 p.m. PST, Thursday, November 10. A public hearing will be held 4-5 p.m. PST, November 9, at the Bonner County Library, Sandpoint Branch, Room 102.

The document is available for review at DEQ's Coeur d'Alene Regional Office, 2110 Ironwood Parkway; the Sandpoint Branch of the Bonner County Library; and on DEQ's website at www.deq.idaho.gov/public-comment-opportunities.

Submit comment online or by mail or email to:

Tessa Stevens
Idaho DEQ State Office
Air Quality Division
1410 N. Hilton
Boise, ID 83706
Email: tessa.stevens@deq.idaho.gov

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DEQ asks EPA to reclassify Sandpoint air quality status, seeks public comment on plan

Tuesday, October 11, 2011

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The document is available for review at DEQ's Coeur d'Alene Regional Office, 2110 Ironwood Parkway; the Sandpoint Branch of the Bonner County Library; and on DEQ's website (download at right).

Submit comment online or by mail or email to:

Tessa Stevens
Idaho DEQ State Office
Air Quality Division
1410 N. Hilton
Boise, ID 83706
Email: tessa.stevens@deq.idaho.gov

Public Comment Form

Fields marked with * are required.

Name: *

Media Contact

Air Quality Manager
Mark Boyle

DEQ Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814
(208) 666-4607

mark.boyle@deq.idaho.gov

Related Documents

[PM10 Limited Maintenance Plan and Request for Redesignation of the Sandpoint, Idaho PM10 Nonattainment Area](#)

CERTIFICATE OF HEARING

SUBJECT: PM10 Limited Maintenance Plan and Request for Redesignation of the Sandpoint, Idaho PM10 Nonattainment Area

LOCATION: Bonner County Library, Sandpoint Branch, Room 102

HEARING DATE: November 9, 2011

The undersigned designated hearing facilitator hereby certifies that on the 9th day of November, 2011, a public hearing was held on the proposed State Implementation Plan entitled *PM10 Limited Maintenance Plan and Request for Redesignation of the Sandpoint, Idaho PM10 Nonattainment Area*. The hearing was held at the Bonner County Library, Sandpoint Branch, Room 102 from 4:00 to 5:00 p.m. PST. No member of the public attended the hearing.

Notice of this hearing appeared in the Bonner County Daily Bee and the Coeur d'Alene Press. Notice was also posted on the Department of Environmental Quality website (<http://www.deq.idaho.gov/>).

DATED this 10th day of November, 2011.



Mark Boyle,
Hearing Facilitator
Regional Air Quality Manager, DEQ Coeur d'Alene

Hearing notes attached.

Bonner County Library Au 102

Sandpoint Resignation Public Hearing - Sandpoint,
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4:47 update time stamp

announce end of slide presentation

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5:00 closure of hearing

stop record.

**PM₁₀ Limited Maintenance Plan and
Request for Redesignation of the
Sandpoint, Idaho
PM₁₀ Nonattainment Area**



Idaho Department of Environmental Quality

October 2011

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1. Introduction

This document contains the State of Idaho's request that the Sandpoint PM₁₀ (particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers) nonattainment area (NAA) be redesignated as attainment. In order to make this request, the State of Idaho Department of Environmental Quality (DEQ) is required to submit:

- air quality data demonstrating that the area has attained the 24-hour PM₁₀ National Ambient Air Quality Standard (NAAQS), and
- a maintenance plan containing those measures necessary to maintain compliance with the NAAQS for at least 10 years after the redesignation to attainment.

On August 9, 2001, the United States Environmental Protection Agency (EPA) issued guidance on streamlined maintenance plan provisions for certain moderate PM₁₀ nonattainment areas seeking redesignation to attainment. A copy of this document entitled: "*Limited Maintenance Plan option for Moderate PM₁₀ Nonattainment Areas*" – Lydia Wegman, Director, Air Quality Standards and strategies Division (hereafter, the Wegman Memo) is in Appendix A. DEQ has determined that the Sandpoint NAA qualifies for the Limited Maintenance Plan (LMP) option. The Sandpoint PM₁₀ LMP is also included in this document.

1.1. Background

EPA promulgated a NAAQS for PM₁₀ on July 1, 1987. The 24-hour standard is 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and the annual standard was 50 $\mu\text{g}/\text{m}^3$ expressed as an annual arithmetic mean. The annual standard was revoked effective December 17, 2006.

PM₁₀ is considered a threat to human health due to the body's inability to effectively filter particles of this size. These particles enter through the nose and mouth and can penetrate into the lung. Even periodic exposure to high levels of PM₁₀ can lead to increased incidence of coughing and symptoms of upper respiratory problems.

On August 7, 1987, EPA designated the Sandpoint area, in Bonner County, as a PM₁₀ NAA due to measured violations of the 24-hour standard. After the Clean Air Act (CAA) was amended in 1990, the State of Idaho was required to submit a State Implementation Plan (SIP) by May 15, 1993, to provide for attainment of the standard no later than December 31, 1994. DEQ submitted a draft attainment demonstration plan to EPA on March 15, 1993.

After review of that submittal, EPA determined, on January 13, 1994, that it was technically deficient. Further, on January 26, 1994, the 24-hour standard was exceeded. These events put the Sandpoint NAA in jeopardy of being reclassified from a "moderate"

to a “serious” nonattainment area. However, the Sandpoint community, DEQ, and EPA worked collaboratively to extend the attainment deadline, to December 31, 1996, while moving forward with various control measures.

DEQ submitted a revised Sandpoint Attainment Demonstration SIP to EPA on August 16, 1996 (<http://www.deq.idaho.gov/cda-region-air-quality>). EPA approved the SIP on August 26, 2002 (<http://www.epa.gov/EPA-AIR/2002/June/Day-26/a16139.htm>).

Due to actions taken in accordance with the Sandpoint NAA SIP, air quality in Sandpoint has markedly improved. These improvements have been sustained for over 16 years.

1.2. Roles and Responsibilities

The communities of Sandpoint, Kootenai, and Ponderay, along with DEQ, Idaho Transportation Department (ITD), Bonner County, and local industrial sources have made strides in implementing control strategies and improving air quality. Cooperation among the aforementioned organizations has resulted in marked improvement in air quality and maintained compliance with the NAAQS. Continued cooperation will help ensure future success.

DEQ has primary responsibility to ensure air pollution sources in Idaho do not cause or significantly contribute to a violation of any National Ambient Air Quality Standard. Through the Idaho Environmental Protection and Health Act, Idaho Code §§ 39-10 et seq, and the *Rules for the Control of Air Pollution in Idaho* (the Rules) promulgated pursuant thereto at IDAPA 58.01.01, DEQ has the authority to promulgate rules, issue permits, adopt State Implementation Plans, and to enforce such rules, permits and plans.

The City of Sandpoint has passed and implemented a number of ordinances that contribute to the maintenance of compliance with the NAAQS. These ordinances will be discussed in more detail in Sections 4.4 and 4.5 of this document.

1.3. Nonattainment Area Description

The Sandpoint NAA is located in north Idaho and includes the communities of Sandpoint, Kootenai and Ponderay, covering approximately fifteen (15) square miles of Bonner County. The Sandpoint NAA is a low-lying area, at 2085 feet above sea level, surrounded by mountain ranges with varying heights of approximately 3000 to 7000 feet. The Sandpoint NAA is located approximately 46 miles north of Coeur d’Alene, Idaho and 70 miles northeast of Spokane, Washington.

Figure 1-1 depicts the exterior boundaries of the Sandpoint NAA. The legal description of the Sandpoint NAA is: Sections 1-3, 9-12, 15, 16, 21, 27, and 28 of Range 2 West, Township 57 North and the western $\frac{3}{4}$ of Sections 14, 23, and 26 of Range 2 West, Township 57 North. The NAA can generally be described as that area bordered on the

west by Syringa Heights Road in Sandpoint and on the east by Providence Road near Kootenai. The north is bordered by Bronx Road in Ponderay, and the southern border stretches east to west connecting Rocky Point with the US Highway 95 Long Bridge south of Sandpoint.

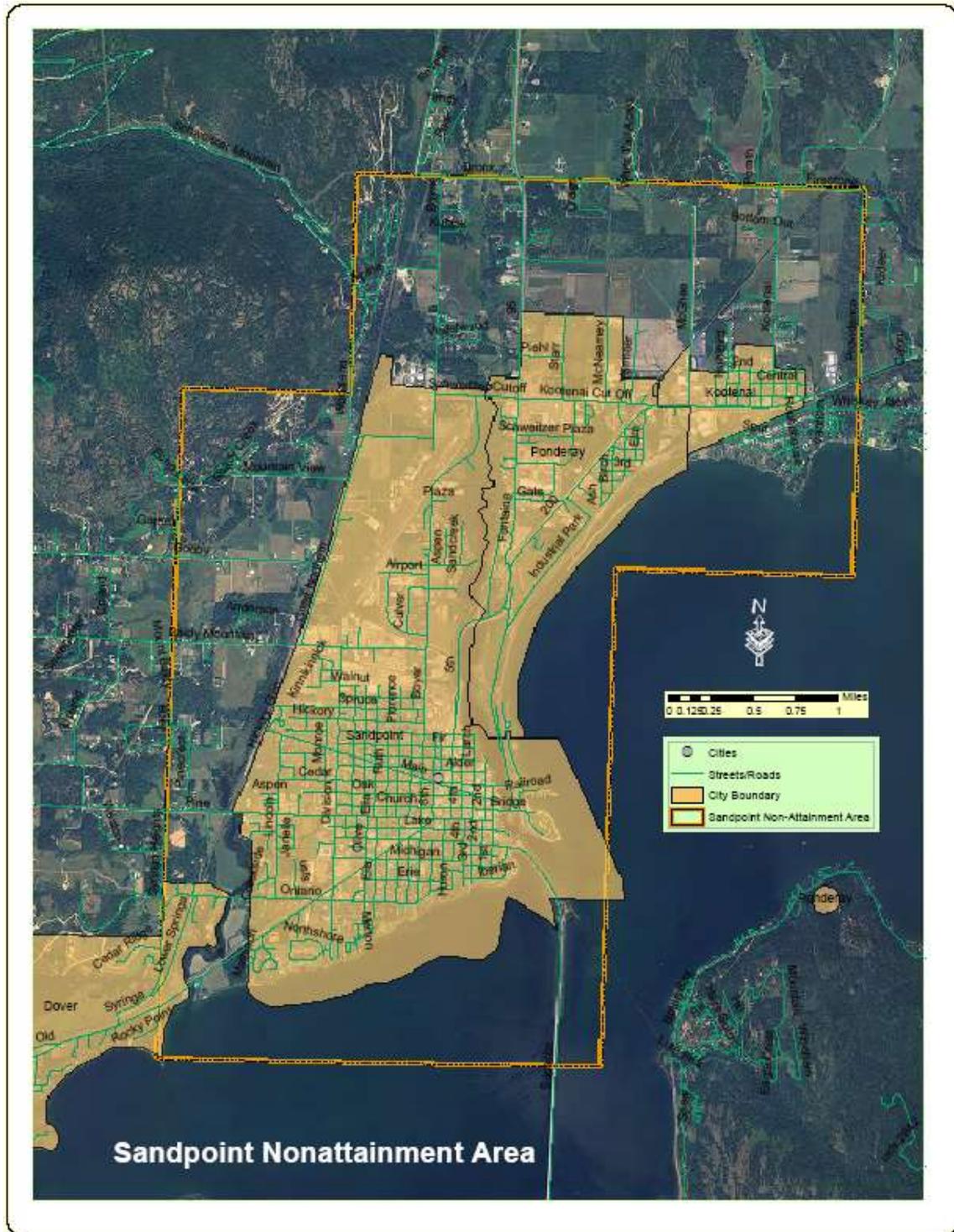


Figure 1-1. Map of Sandpoint Nonattainment Area

1.4. Assurance of Adequate Authority, Personnel and Funding

In accordance with Section 110 of the CAA, the State of Idaho has adequate funding, personnel, and authority to enforce the emissions limitations and control measures listed in the plan and certifies that these controls are in compliance with state and federal law. Idaho's most recent certification of State Implementation Plan Adequacy was sent to EPA August 8, 2011.

2. Air Quality

The basis for determining the air quality of any area is collection of accurate and representative monitoring data. Data collected from an area's monitoring network are used to:

- establish air quality trends,
- determine if and when air quality standards are exceeded,
- inform the public about real-time air quality conditions, and
- aid in the development of appropriate air quality control strategies to avoid excessive pollutant buildup and avoid exceeding the standards.

Data from the Sandpoint monitoring network is also used to support a burn restriction ordinance.

Local meteorology plays a critical role on the impact that regional and airshed emissions activity has on the area's air quality. Therefore, high quality meteorological data are extremely important in conducting modeling studies and interpreting the results. Idaho DEQ operates a 10-meter meteorological tower located at the University of Idaho agriculture research station on Boyer Ave in Sandpoint. Instrumentation is operated in accordance with *Quality Assurance Handbook for Air Pollution Measurement Systems Volume IV: Meteorological Measurements Version 2.0 (Final)* and Idaho's established meteorological station Standard Operating Procedures and Quality Assurance Plan.

2.1. Monitoring Sites and Equipment

The state of Idaho has monitored PM₁₀ in the Sandpoint area since 1985. Particulate matter has been monitored at three separate locations within the Sandpoint NAA. The original monitoring site was located on the roof of the Sandpoint post office building. Access to this location was always problematic and had safety concerns. Long-term occupancy was jeopardized when the building changed ownership in 1999. DEQ began looking for a suitable alternate location.

In 2001, monitoring was conducted at the post office and at what was the second, EPA approved, PM₁₀ monitoring site at Sandpoint Middle School at 310 South Division Street located less than 1 mile from the original PM₁₀ monitoring site. Monitoring was conducted concurrently at both locations to demonstrate the uniformity of particulate matter levels throughout the NAA. A PM_{2.5} monitor operates at the USFS Regional Office located at 1601 Ontario, Sandpoint. This site was identified after DEQ performed a PM_{2.5} saturation study of the Sandpoint NAA during the winter of 2000. Recently PM₁₀ monitoring for the Sandpoint NAA has been relocated once again. PM₁₀ monitoring now occurs at the USFS location co-located with the PM_{2.5} monitor. This move was necessitated by safety and efficiency concerns. EPA has approved this move.

The original monitor used in Sandpoint was a PM₁₀ Hi-Vol monitor. Use of the Hi-Vol was discontinued after 2001. In 1995, DEQ began monitoring PM₁₀ using a Tapered Element Oscillating Microbalance (TEOM). The TEOM is a continuous particulate monitor for measuring the airborne particulate matter less than 10 micrometers (µm) in diameter. The TEOM serves two purposes in Idaho's particulate monitoring network: 1) monitoring for compliance determination of the 24-hour and annual NAAQS for PM₁₀ and 2) monitoring support for the Greater Sandpoint Area Air Quality Advisory Program. The TEOM is the only filter-based monitor that measures the mass of particulate suspended in a gas stream in real time.

DEQ monitored PM_{2.5} using Federal Reference Methodology (FRM) in Sandpoint from 1998 through 2004. However, in 2004, EPA funding for air quality monitoring was reduced. DEQ, in coordination with EPA, conducted an assessment of the state-wide monitoring network. As a result of this assessment, monitors were discontinued in Idaho locations where the PM_{2.5} concentrations recorded were at less than 60 percent of the 1997 NAAQS.

In 2003, DEQ installed a PM_{2.5} TEOM in Sandpoint. A PM_{2.5} configured TEOM, while not an EPA federal equivalent method for determining compliance with the PM_{2.5} NAAQS, is nevertheless a very useful tool for administration of a modified Air Quality Advisory and AQI program for the area. Currently, DEQ utilizes data from the PM_{2.5} TEOM as well as the PM₁₀ TEOM for issuance of air quality advisories.

2.2. Historical Air Quality Data

The 24-hr NAAQS for PM₁₀ is in a statistical format of expected exceedances over a 3-year period. In order to comply with the NAAQS, the expected number of exceedances must be less than or equal to 1. Sampling may not occur every day, so the number of days with measured values above the standard must be adjusted to account for days that were not sampled. For example, if a monitor, when sampled once every six days, had one measured exceedance of the NAAQS, then the number of days expected to be above the NAAQS would be six.

The NAAQS then requires that the expected number of exceedances be averaged over a 3-year period. For the example above, if there were no exceedances of the NAAQS in the following 2 years, the Attainment Demonstration Number or Expected Exceedances would be 2.0 (six exceedances divided by three years), thus demonstrating nonattainment.

PM₁₀ monitoring data for the years 1986 through 2008 is summarized in Table 2.1. EPA has determined that the Sandpoint NAA attained the PM₁₀ NAAQS by the required attainment date (75 FR 35302).

Table 2-1. Summary of PM₁₀ Monitoring Data for the years 1986 through 2008

Year	Maximum 24-hr concentration (µg/m ³) (date)	Number of 24-hr measurements > 150 µg/m ³	Expected number of 24-hr exceedances	Weighted arithmetic mean annual concentration** (µg/m ³)
1986	168 (2/28)	1	--	43
1987	125 (10/27)	0	--	41
1988	219* (9/6)	3	4.7	42
1989	116* (9/25)	0	2	32
1990	218 (10/4)	2	3.4	35
1991	144 (2/23)	0	1.5	36
1992	473 (9/4)	2	4.3	41
1993	127 (2/28)	0	2.8	35
1994	157 (1/26)	1	3.5	37
1995	79 (2/22)	0	0.7	26
1996	140 (2/13)	0	0.7	26
1997	74 (2/23)	0	0	22
1998	84 (4/29)	0	0	25
1999	83 (9/23)	0	0	21
2000	67 (8/11)	0	0	22
2001	38 (11/9)	0	0	21
2002	63 (9/19)	0	0	18
2003	58 (11/6)	0	0	17
2004	79 (3/11)	0	0	17
2005	78 (2/10)	0	0	19
2006	68 (2/16)	0	0	18
2007	53 (3/9)	0	0	16
2008	78 (8/18)	0	0	15

* Exceptional event

** The annual arithmetic mean is the average of the four quarterly averages and excludes exceptional events

Monitoring data for 1998 through 2008 can be accessed through EPA's AirData website (<http://www.epa.gov/air/data/index.html>).

2.3. Monitoring Data Trends

Particulate matter concentrations in the Sandpoint NAA have been steadily declining even as population in the area has been increasing. Figures 2-1 and 2-2 show the annual arithmetic mean and the maximum 24-hour PM₁₀ concentration versus population for the years 1990 through 2008. The charts include years prior to the start of monitoring in the area because 1990 was a census year. The change in population between the years 1990 and 2000 establishes the slope of the line used to project population after the year 2000.

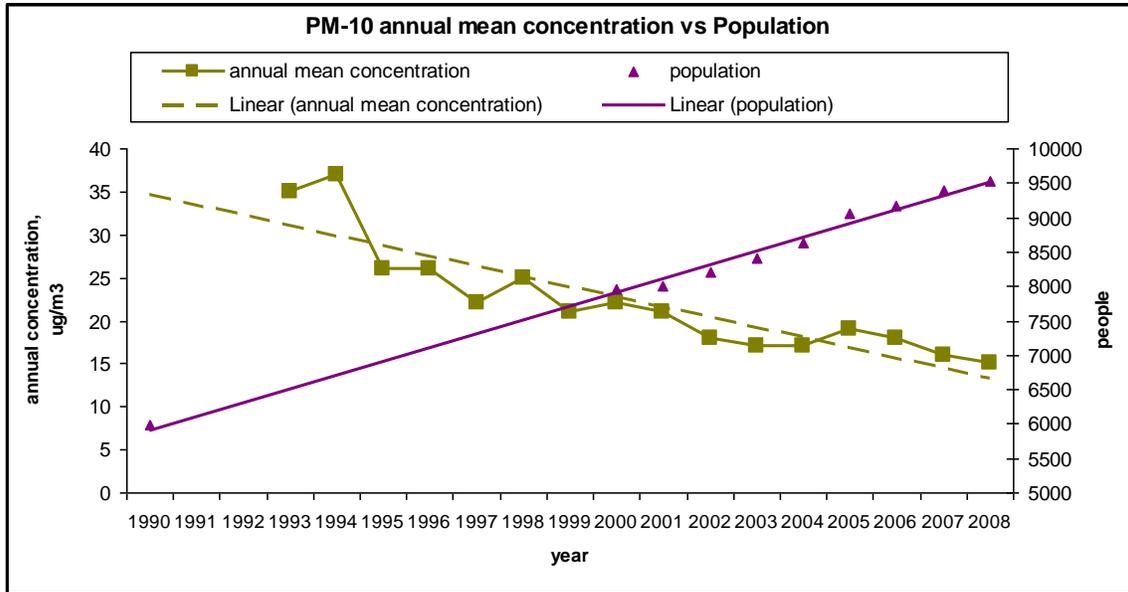


Figure 2-1. Annual arithmetic mean PM₁₀ concentration versus population growth for the years 1990 through 2008

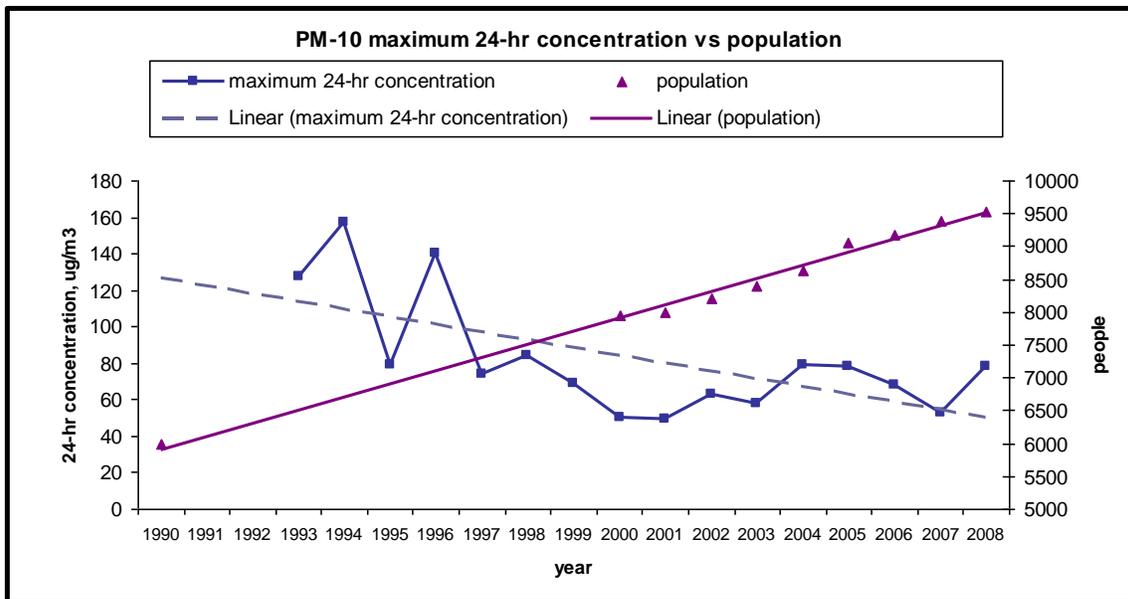


Figure 2-2. Maximum 24-hour PM₁₀ concentration versus population growth for the years 1990 through 2008

Figures 2-3 and 2-4 show the annual arithmetic mean and the 98th percentile PM_{2.5} concentration versus population for the years 1996 through 2008. Data for the years 1998 through 2004 was collected using FRM and the data for the years 2005 through 2008 was collected using a TEOM.

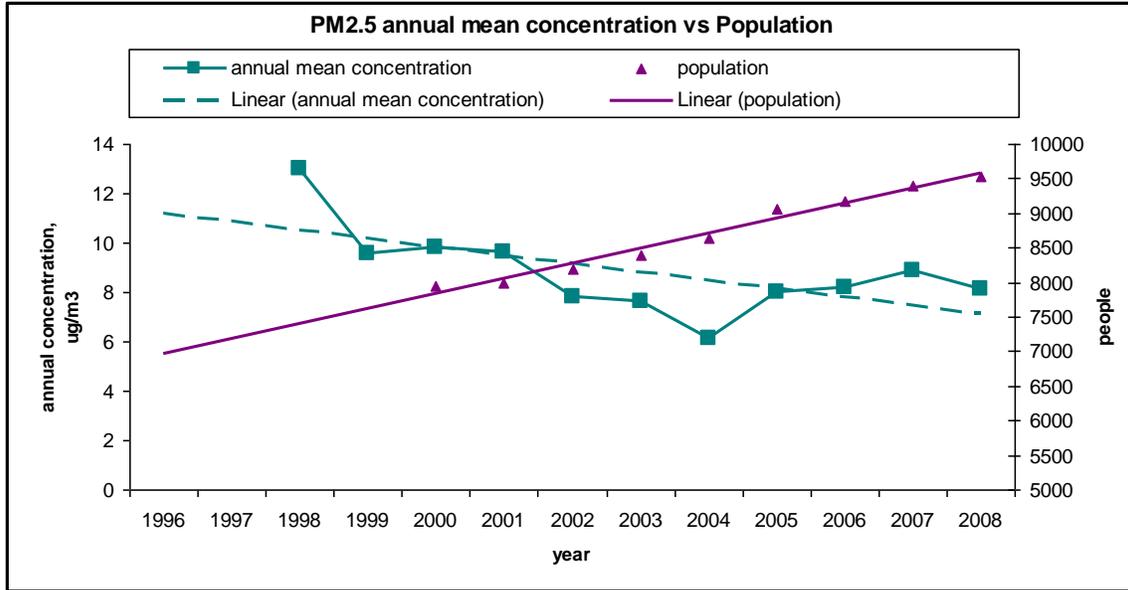


Figure 2-3. Annual arithmetic mean PM_{2.5} concentration versus population growth for the years 1996 through 2008

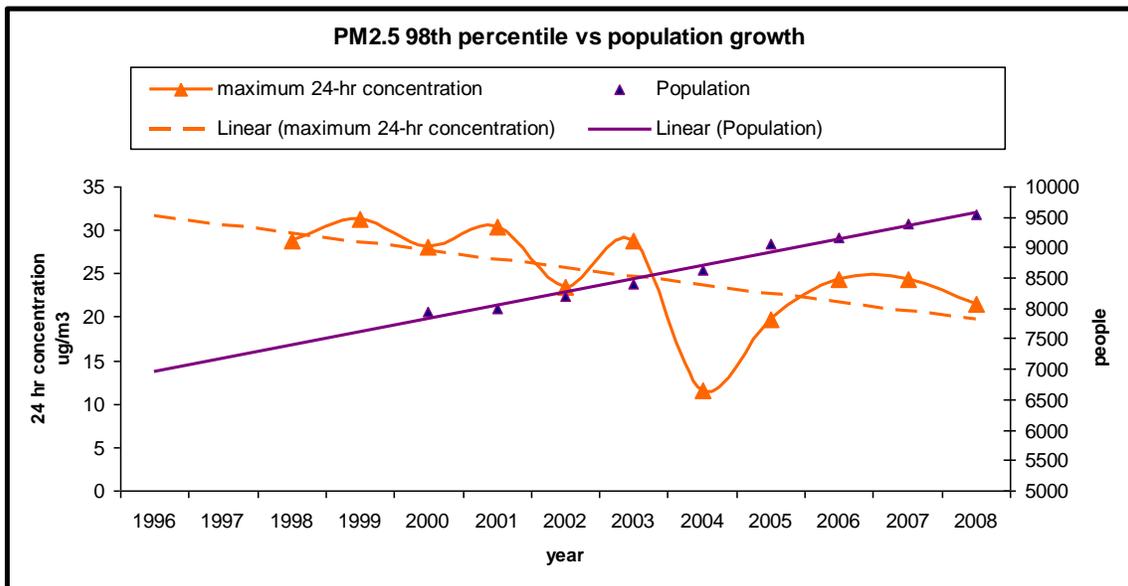


Figure 2-4. PM_{2.5} 98th percentile concentration versus population growth for the years 1996 through 2008

DEQ has concluded, based on this data, the SIP control strategy has been effective and population growth is not interfering with air quality improvements in the Sandpoint area.

The population data used in this analysis was obtained from the US Census website (<http://www.census.gov/census2000/states/id.html>, <http://factfinder.census.gov>) and is the sum of the populations of Sandpoint, Kootenai, and Ponderay.

3. Emissions Inventory

In order to use the LMP option, Idaho is required to submit an emissions inventory (EI) that is representative of emissions during a five-year period associated with air quality data demonstrating attainment of the PM₁₀ NAAQS. There has never been a violation of the annual standard in the Sandpoint NAA and the last violation of the 24-hour standard occurred on January 26, 1994.

3.1. Emissions Inventory Process

An inventory preparation plan, including a quality assurance plan, for the Sandpoint NAA was submitted to EPA in July 2004. The plan included all source categories required by EPA for PM₁₀ emissions inventories. EPA reviewed the plan and directed DEQ that the inventory did not need to include sources that either do not exist in the NAA or that emit PM₁₀ at very low levels. In accordance with requirements of the LMP option, no emissions projections were planned or calculated.

DEQ determined that using 1999 as the base year in the inventory would be representative of the first five years of clean data (i.e. having no violations of the PM₁₀ NAAQS). Estimated emissions from each source category (i.e., wood stoves, fugitive road dust, etc.) were calculated using source activity data and established emissions factors. For example, to calculate emissions from residential wood combustion, DEQ used:

- Data from a phone survey to estimate the number of households burning wood, the type of burning device, and the amount and species of wood burned;
- Emissions factors from EPA's Emissions Inventory Improvement Program; and
- Heating Degree Day data from the Sandpoint Experimental Station.

This information allowed DEQ to estimate the wintertime daily and annual emissions rates of PM₁₀ due to residential wood combustion.

Upon completion of the 1999 emissions inventory, DEQ performed a comparison of the 1999 emissions calculation methods and results with those in the 1993 attainment demonstration. Complete documentation of the emissions inventory process, estimation methods, and quality assurance procedures can be found in Appendix B.

3.2. Emissions Inventory Results and Adequacy Demonstration

The EI completed for the Sandpoint Attainment Demonstration SIP used 1993 as the base year. As discussed in the previous section, a second EI was completed in 2006. Tables 3.1 and 3.2 list the annual and typical winter day inventory results for the two base years. The typical winter day information is important in Sandpoint because most of the

exceedances occurred during the winter.

Table 3-1. Annual emissions rates by activity, tons per year

Activity	1993	1999
Residential Wood Burning	97	124.4
Fugitive Road Dust	305.1	214.8
Industrial Processes	90	172.7
Building Construction	63.4	239.8
Mobile Sources	18.3	7.8
Total	573.8	759.5

Table 3-2. Maximum daily wintertime emissions rates, pounds per day

Activity	1993	1999
Residential Wood Burning	2878	1059
Fugitive Road Dust	2210	624
Industrial Processes	686	1058
Building Construction	469	496
Mobile Sources	110	43
Total	6353	3280

The following discrepancies in emissions inventory methods should be noted when considering the information within Tables 3-1 and 3-2:

Residential Combustion. The home heating survey conducted for the 1999 inventory is believed to be more accurate than that conducted for the 1993 inventory. The more recent survey showed an increase in the number of households burning wood to heat their homes. While it is unclear whether the increase is real or is due to how the survey was conducted, the 1999 inventory shows an increase of 25 tons per year from this source category.

Road Dust. Trip counts/vehicle miles traveled (VMT) were calculated using Idaho Department of Transportation traffic count data rather than a map-based grid-box system based on households per box and average number of occupants per household. In addition, the 1999 inventory takes credit for the SIP road dust control methods (reduction of fines in road sanding material, street sweeping as soon as practicable, and use of liquid de-icer on the main arterial through the NAA). Therefore, despite an increase in VMT, road dust emissions decreased 90 tons per year.

Industrial Sources. Louisiana Pacific – Sandpoint (a lumber company) was the largest industrial source of PM₁₀ in the NAA. The emissions calculation methodology used in the 1999 inventory differs significantly from that used in the 1993 inventory. In the most recent inventory, the condensable portion of emissions was accounted for in addition to

the filterable portion. This change in calculation method resulted in a 50 ton per year increase in the inventory.

Estimates for the smaller industrial sources were based on the emissions rates allowed in their permits. DEQ chose to use the maximum allowable emissions rates from these sources for two reasons: it is the most conservative estimate and it relieved the business owners of the time and cost involved with providing actual operating records from the past. Using permitted rates increased emissions about 35 tons per year.

Construction Dust. The 1999 inventory included emissions from road construction plus those from commercial and residential building construction. The 1993 inventory included emissions from commercial and residential building construction only. For the 1999 inventory, DEQ used EPA's "Open Burning and Construction Activities: Improved PM-fine Emission Estimation Techniques in the National Emissions Inventory" to estimate emissions from construction activities. While it is not entirely clear how construction dust emissions were calculated in the 1993 inventory, DEQ estimated a 180 ton per year increase.

3.3. Other Factors

In the past fifteen years Sandpoint's economy has shifted from resource industries to seasonal recreation. A number of sawmills in the region have closed. Most notably the Louisiana Pacific mill that was located in the heart of the Sandpoint NAA.

The Idaho Transportation Department is constructing the US 95 Sand Creek Bypass that should decrease the amount of truck traffic transiting Sandpoint's downtown.

In 2008 Idaho developed, and EPA approved into the Idaho SIP, the Crop Residue Burning Program. This program is designed to protect Idaho's air quality by requiring DEQ to make a daily determination whether the air quality and dispersion characteristics are sufficient to allow crop residue burning. While agricultural burning was determined to be a negligible portion of the emissions inventory for Sandpoint, this program (and similar programs run by Washington and various tribes) is expected to ensure the crop residue burning in adjacent airsheds does not interfere with maintenance of the PM₁₀ NAAQS in Sandpoint.

Since implementation of the crop residue burning program began, acreage on the Rathdrum Prairie available for "thermal treatment" has been reduced greatly. Changes in crop production and a loss of acreage to increased real estate development have reduced acreage from over 3,000 acres to less than 500 acres during the 2009 burn season. This significant reduction in source strength in the region has further diminished the significance of crop residue burning emissions on the Sandpoint airshed.

3.4. Conclusion

In the six years between 1993 and 1999, DEQ estimated a 186 ton per year increase in annual PM₁₀ emissions. Of that increase, 113 tons is due in large part to changes in emission estimation methodology. Specifically, 50 tons per year is due to counting the condensable fraction of emissions from the Louisiana Pacific – Sandpoint boiler and 63 tons per year is due to road construction activities not previously counted.

During the same period, calculated wintertime daily emissions rates dropped from 6353 to 3280 pounds per day. These calculated emissions rates, combined with monitor data, demonstrate that the control measures put in place as part of the attainment demonstration are effective.

Since 1999, the only major stationary source in the NAA, Louisiana Pacific – Sandpoint, has ceased operation and been dismantled. This emissions decrease of 76 tons per year or 415 pounds per day (see Appendix B, Table 4-1) represents a 13 percent decrease in annual emissions and a 17 percent decrease in typical winter day emissions.

The ambient monitoring data presented in Section 2 demonstrates that population growth is not interfering with improvement in ambient particulate matter concentrations. Therefore, DEQ believes that the 1999 emissions inventory is representative of emissions during the five year period, 1996 – 2001, associated with air quality data demonstrating attainment of the PM₁₀ NAAQS.

Based on the emissions decreases discussed above, DEQ concludes a more current inventory would not find higher total emissions rates than those estimated for 1999 nor better represent the five year period associated with air quality data demonstrating attainment. Ambient air quality monitoring data trends, Section 2, support this conclusion.

4. Limited Maintenance Plan Demonstration

The Wegman Memo (see Appendix A) contains a statistical demonstration that areas meeting certain air quality criteria have a high likelihood of maintaining compliance with the NAAQS 10 years into the future. EPA, therefore, has already provided the maintenance demonstration for areas that meet the air quality criteria in the document. Areas qualifying for the LMP option are not required to develop future year emissions inventories or to perform certain analyses to determine transportation conformity.

4.1. LMP Qualification Criteria

To qualify for the LMP option, Sandpoint attained the PM₁₀ NAAQS as previously noted. In addition, *“the average annual PM10 design value for the area, based upon the most recent 5 years of air quality data at all monitors in the area, should be at or below 40 μ/m³ and the 24-hour design value should be at or below 98 μ/m³,”* and Sandpoint also *“should expect only limited growth in on-road motor vehicle PM10 emissions (including fugitive dust) and should have passed a motor vehicle regional emissions analysis test.”*

Table 4.1 lists 5-year design values for the Sandpoint area. Sandpoint has met the LMP design value criteria since 1999, the base year for the most recent emissions inventory. Sandpoint also passes the motor vehicle regional emissions analysis test. Please see Appendix C for details of the analysis.

Table 4-1. 5-year design values for the Sandpoint Nonattainment Area

Year	Maximum 24-hr concentration (μg/m ³) ^a (date)	5-year 24-hour design value	Weighted arithmetic mean annual concentration (μg/m ³) ^a	5-year annual design value
1994	157 (1/26)	--	37	--
1995	79 (2/22)	--	26	--
1996	140 (2/13)	--	26	--
1997	74 (2/23)	--	22	--
1998	84 (4/29)	105	25	27
1999	83 (9/23)	92	21	23
2000	67 (8/11)	89	22	23
2001	38 (11/9)	69	21	22
2002	63 (9/19)	67	18	21
2003	58 (11/6)	61	17	19
2004	79 (3/11)	61	17	19
2005	78 (2/10)	63	19	18
2006	68 (2/16)	69	18	17
2007	53 (3/9)	67	16	17
2008	78 (8/18)	71	15	17

a. μg/m³ — micrometers per cubic meter

In accordance with the Wegman Memo, the LMP submission for Sandpoint should contain the following:

- “*An emissions inventory which can be used to demonstrate attainment of the NAAQS.*” See Section 4.2.
- Assurance of “*continued operation of an appropriate, EPA-approved air quality monitoring network.*” See Section 4.3.
- Assurance that “*all controls that were relied on to demonstrate attainment will remain in place.*” See Section 4.4.
- “*Contingency provisions, as necessary, to promptly correct any violation of the NAAQS which may occur after redesignation of the area to attainment.*” See Section 4.5.

The Wegman Memo states: “*the maintenance demonstration requirement of the CAA will be considered to be satisfied if the area meets the air quality criteria.*” This means, for the Sandpoint NAA, Idaho is not required to project emissions over the maintenance period.

4.2. Attainment Year Emissions Inventory

Under the LMP option, Idaho is required to submit an emissions inventory that represents emissions during the same five-year period associated with the air quality data used to determine whether the Sandpoint NAA meets the criteria of the policy. If the attainment inventory year is not one of the most recent five years, Idaho may show that the attainment inventory did not change significantly during the most recent five years.

As discussed in Section 3 of this document, the most recent emissions inventory for the Sandpoint NAA was completed in 2006 using 1999 as the base year. 1999 is the first year that Sandpoint met the LMP design value criteria. Since that time, population in the area has increased but a major emissions source, Louisiana Pacific, has shut down. DEQ has concluded, based on these factors and on monitoring data, that the 1999 attainment inventory best represents a period of greater potential emissions impacts to the air quality in Sandpoint than the current emissions impacts.

4.3. Assurance of Continued Operation of the Monitoring Network

Idaho will comply with the continued air monitoring requirement of Title III, Section 319, of the CAA. The PM₁₀ site is operated in compliance with EPA monitoring guidelines set forth in 40 CFR Part 58, Ambient Air Quality Surveillance, and Appendices A through D of Part 58.

Idaho has requested, and EPA has approved, relocation of the PM₁₀ monitor to the same site as the PM_{2.5} monitor. The Sandpoint PM_{2.5} monitor is located 1456 feet to the south

and east of the previous location on a ground-level platform that provides better safety considerations, more reliable site power supply, better site security, and equivalent representation of the area's particulate concentrations.

Each year, DEQ will analyze the three most recent consecutive years of ambient PM₁₀ monitored data to verify continued attainment of the NAAQS for PM₁₀ in accordance with 40 CFR Part 50. In keeping with the requirements of Title III, Section 319, of the CAA (as defined in 40 CFR Part 58.26), DEQ will continue to submit to EPA, by July 1 of each year, an annual report of PM₁₀ data collected during the previous calendar year. These data, along with the data contained in the annual reports for the previous two years, will provide all the necessary information to determine whether the Sandpoint area continues to comply with the PM₁₀ NAAQS.

4.4. Control Measures

In developing control measures for the Sandpoint SIP, DEQ focused on the three major activities identified as the largest contributors to the PM₁₀ problem in Sandpoint: residential wood combustion, fugitive road dust, and industrial sources. Local ordinances and issuance of air quality operating permits limiting potential emissions from industrial sources have resulted in permanent, enforceable reductions in ambient particulate matter concentrations.

4.4.1. Residential Wood Combustion

Various measures were implemented to reduce emissions from wood stoves. In 1995, activities including a public awareness campaign, an uncertified woodstove replacement program, and adoption of a city ordinance were undertaken. The public awareness program provided citizens with information about stove sizing, installation, proper operation and maintenance, general health risks of wood smoke, new stove technology, and alternatives to wood heating. The replacement program resulted in the removal of 84 uncertified wood stoves. These were replaced by 64 natural gas units, 18 certified wood stoves, and 2 pellet stoves.

City Ordinance 965 restricts sale and installation of uncertified solid fuel heating appliances in the City of Sandpoint. The ordinance, codified in Title 4, Chapter 8 of Sandpoint, Idaho City Code, also established a wood smoke curtailment program. The ordinance was updated July 21, 2010 and September 21, 2011; see Appendix D. Curtailment of wood burning is now triggered when “the Idaho Department of Environmental Quality (“DEQ”) measures or forecasts levels of particulate matter concentrations exceeding 75% of the National Ambient Air Quality Standard.” This change makes the ordinance flexible so that it can remain consistent with the SIP-approved control measure and improve protection by addressing new or modified particulate matter NAAQS.

Violations of the curtailment requirements are now specifically addressed in the

ordinance. A first violation shall be charged as an infraction. Responsible parties may be subject to daily violations. A new or subsequent violation within two years may be charged as a misdemeanor. All violations may be subject to fines pursuant to Idaho Code Section 18-113A.

4.4.2. Fugitive Road Dust

Measures to reduce particulate matter emissions due to winter sanding of road surfaces included changing the type and volume of sanding material used, using alternative materials, and increasing the frequency of street sweeping. Ordinance 939, adopted in 1994, requires applicators of anti-skid material to use only material that meets certain standards for percentage of fines and durability. In addition, the Sandpoint Independent Highway District and Idaho Transportation Department have acquired equipment to apply liquid de-icer and have designated certain roads in Sandpoint as an “anti-skid free zone.” The volume of sanding material used has dropped due to the creation of this zone and to the cost of material meeting the requirements of Ordinance 939.

Ordinance 939 also requires that a Winter Road Maintenance Plan be developed to specify the requirements for road sweeping that must be met by the City of Sandpoint, Bonner County, the Sandpoint Independent Highway District and Idaho Department of Transportation. Adherence to this plan results in approximately 20% of local and highway lane miles and 40% of collector lane miles being swept.

4.4.3. Industrial Sources

The control measures that DEQ relied on to address industrial source emissions are the federally-enforceable Permit to Construct and Tier II Operating Permit Rules. These rules are part of Idaho’s federally approved SIP. 40 CFR 52.681 states: “*Except as otherwise provided in paragraph (b) of this section, emission limitations and other provisions contained in Permits to Construct and Tier II Operating Permits issued by the Idaho Department of Environmental Quality in accordance with the Federally-approved State of Idaho Rules for Control of Air Pollution in Idaho, incorporated by reference in section 52.670 (IDAPA 58.01.01.200 through 222, IDAPA 58.01.01.400 through 406), shall be applicable requirements of the Federally-approved Idaho SIP (in addition to any other provisions) for the purposes of section 113 of the Clean Air Act and shall be enforceable by EPA and by any person in the same manner as other requirements of the SIP.*”

Industrial sources with a potential to emit over 1 ton per year in the Sandpoint NAA were reviewed based on each facility’s emissions inventory. DEQ used a model to predict impacts due to potential emissions from the sources and to identify where reductions in potential emissions were required.

IDAPA 58.01.01.401.03 provides DEQ with broad authority to require or revise a permit of any stationary source, at any time, whenever it determines that:

“a. emission rate reductions are necessary to attain or maintain any ambient air quality standard or applicable prevention of significant deterioration (PSD) increment; or

b. specific emission standards or requirements on operation or maintenance are necessary to ensure compliance with any applicable emission standard or rule.”

In accordance with IDAPA 58.01.01.403, estimates of ambient concentrations are based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51 Appendix W. DEQ used this authority to update the permitting status of the five industrial sources with the potential to emit of 1 ton per year or more. The Tier II Operating Permit emissions limits were developed with input from each facility to ensure the reductions in potential to emit were feasible and offered sufficient operational flexibility. These permits, and the underlying authority that Idaho relied upon in issuing the permits, remain in effect.

DEQ did not submit these specific Tier II operating permits as part of the attainment demonstration because the permit rules and issued permits were, and continue to be already part of Idaho’s federally-approved SIP. Based on the emissions inventory and other factors, no control measure additional to the permitting program was deemed necessary for industrial sources, existing or future, in the Sandpoint NAA. The permits were not intended to remain static. Indeed, had additional reductions been required from industrial sources, DEQ would have used these same rules to modify the permits. Changes in industrial emissions were specifically addressed in the attainment demonstration:

*“**New Sources:** DEQ will evaluate all new industrial sources of PM₁₀ emissions for applicability to the Rules and the control strategy in this SIP. This will include all PM₁₀ emission from portable permitted sources such as crushers, batch plants and asphalt plants. In PM₁₀ nonattainment areas, DEQ will consider PM₁₀ emissions from all sources associated with the facility operations. This specifically includes all fugitive emission sources, such as material transfers, vehicle traffic and storage piles, in addition to the ducted sources of PM₁₀. This practice will provide continued consistency in the evaluation of ambient impacts from industrial processes based on emission inventories and dispersion modeling analysis.*

As an overview, all emission reductions for the industrial facilities described above were developed through direct consultation with the facilities and finalized with the issuance of Tier II Operating Permits. Future emission modifications by the existing facilities and any new source review shall be completed in accordance with the Rules and the control strategy identified in this plan. All applicable sections in the rules that pertain to permitting in nonattainment areas shall be complied with, in particular, sections 16.01.01.203 to 16.01.01.208, inclusive. These sections refer to permit requirements for new and modified

stationary sources in attainment and non-attainment areas as well as offset requirements. Furthermore, there shall be no “Below Regulatory Concern” (BRC) exemptions granted for any air emission generating facility in this non-attainment area (IDAPA Section 16.01.01.220.04).” – page V-14, and

“Further increases in throughputs and related emissions will be done per the Rules for permitting in nonattainment areas.” – page IV-8, and

“Specifically, DEQ will monitor changes in industrial emissions through the permitting program. If PM₁₀ emissions from industrial sources grow significantly, relative to the 1997 emission inventory, then DEQ may restrict specific permitting activity in the Sandpoint PM₁₀ nonattainment area in order to maintain compliance with the ambient PM₁₀ standards.” page V-15.

However, without a request from DEQ, EPA included PM₁₀ operating permit conditions for three of the facilities in a section of the Idaho SIP that EPA designated as EPA-Approved, Source-Specific Requirements (40 CFR 52.670(c)). DEQ asserts this is overly prescriptive for at least two significant reasons. Most importantly, it is the process already approved in the statewide SIP that provided the authority for the reduction in potential to emit of these sources. No new laws were developed.

Secondly, any new source or modification at an existing source would have to follow the SIP-approved permitting process including modeling pursuant to 40 CFR 51 Appendix W demonstrating that the new source or modification would not cause or significantly contribute to a violation of the NAAQS. However, for the three facilities included in the SIP and only those three facilities, such an approvable change would require a modification of the SIP with all attendant demonstrations and comment periods. Such a process could take years but would not change the underlying authorities, laws, or permissible emissions rates.

It is important to note that at the time the attainment demonstration was submitted to EPA, the BRC exemptions were not SIP-approved. Since that time, the rules regarding exemptions have been modified, most notably with the removal of the “Director’s Exemption,” and have been approved into Idaho’s SIP.

Idaho is affirming that the permit program as codified in the Rules is already part of Idaho’s SIP. Thus, DEQ is not submitting any of the Tier II operating permits as control strategies in this proposal.

4.5. Contingency Provisions

Section 175A of the Clean Air Act requires that a maintenance plan include contingency provisions, as necessary, to promptly correct any violation of the NAAQS which may occur after redesignation of the area to attainment.

The primary contingency measure is the Episodic Curtailment Program that is part of the “over control” strategy used in the EPA-approved implementation plan for the Sandpoint NAA. In brief, before the recent modification of City of Sandpoint Ordinance No.965, the ordinance required mandatory curtailment if the PM₁₀ concentration reached 100 µ/m³. The Coeur d’Alene Regional Office has been using PM_{2.5} concentration data and corresponding AQI values as triggers for curtailment in order to protect both the PM₁₀ and PM_{2.5} NAAQS. Ordinance No. 965 has recently been modified to ensure it can be used to protect any particulate matter NAAQS. The more restrictive PM_{2.5} levels will help ensure woodstove and open burning impacts will not lead to any exceedances of the PM₁₀ 24-hour NAAQS.

This measure is complemented by other control measures included in the Sandpoint implementation plan. Continued adherence to local Ordinances 965 and 939 will help to ensure wood smoke and road dust emissions remain controlled.

For industrial source emissions, IDAPA 58.01.01.401.03 provides DEQ with broad authority to require or revise a permit of any stationary source, at any time, should it be determined that emission rate reductions are necessary to attain or maintain the PM₁₀ NAAQS.

4.6. Conformity

The Wegman Memo does not exempt an area from the need to affirm conformity. It allows qualifying areas to demonstrate conformity without submitting an emissions budget. Because it is unreasonable to expect that qualifying areas would experience so much growth that a violation of the PM₁₀ NAAQS would result, the LMP policy treats emissions budgets as not constraining for the length of the maintenance period. Therefore, for transportation conformity, emissions in qualifying areas do not need to be capped for the maintenance period and a regional emissions analysis is not required. In addition, federal actions subject to the general conformity rule could be considered to satisfy the “budget test” specified in section 93.158 (a)(5)(i)(A) of the transportation conformity rule.

Although the “budget test” will not be used to satisfy Conformity for “Regional Emissions,” all federally funded projects must adhere to the NEPA process and assure they are not causing or contributing to violations of the NAAQS. DEQ has developed a project level analysis process in conjunction with Idaho Transportation Department and Federal Highways Administration. It is expected that all future federally funded projects in Idaho will go through this process. The Idaho Transportation Department Air Screening Policy can be accessed at

http://www.itd.idaho.gov/enviro/air/Air_Screening_Policy_12_04_07.pdf.

5. Request for Redesignation

Nonattainment areas can be redesignated to attainment after the area has measured air quality data showing that it has attained compliance with NAAQS and after certain planning requirements are met. This section demonstrates that the Sandpoint NAA can be redesignated to attainment.

5.1. Redesignation Criteria

Section 107(d)(3)(E) of the Clean Air Act and the General Preamble to Title I provide the criteria for redesignation. In the following paragraphs, each of these criteria is identified and followed with a description of how it is met.

5.1.1. Attainment of NAAQS

The Administrator of EPA determines that the area has attained the applicable NAAQS: EPA determined (75 FR 35302, June 22, 2010) that Sandpoint attained the NAAQS for PM₁₀ by the required attainment date of December 31, 1996. As demonstrated in Section 3 of this document, Sandpoint has never violated the annual PM₁₀ standard and has not exceeded the 24-hour standard since January 26, 1994. Therefore, Sandpoint has attained the applicable NAAQS.

5.1.2. Approved SIP under 110(k)

The Administrator of EPA has fully approved the applicable SIP for the area under section 110(k) of the Clean Air Act: EPA approved the Sandpoint Attainment Demonstration SIP on June 26, 2002.

5.1.3. 110 and Part D Requirements Met

The State containing the area has met all requirements applicable to the area under section 110 and part D of the Clean Air Act. These requirements include:

Section 110: Idaho has met the applicable requirements of Section 110 with an EPA approved State Implementation Plan. November 26, 2010 is the most recent date EPA approved updates to Idaho's SIP.

Part D, Subpart 1, Section 172(c): Idaho has met the applicable requirements of Section 172(c) with: an EPA-approved SIP for the Sandpoint NAA (June 26, 2002), an EPA-approved New Source Review program (November 26, 2010), a commitment to continue operation of the air quality monitoring network in Sandpoint (section 4.3), and contingency measures (section 4.5).

Part D, Subpart 4: Idaho met the applicable requirements of Subpart 4 with an EPA-approved SIP for the Sandpoint NAA (June 26, 2002).

5.1.4. Air Quality Improvement

The air quality improvement in the area is due to permanent and enforceable reductions in emissions: The EPA-approved SIP for this area provided emissions reductions through various control measures and enforceable regulations discussed in section 4. The air quality monitoring data, discussed in section 2, demonstrate a long-term improvement in PM₁₀ concentrations.

5.1.5. Approved Maintenance Plan

EPA has approved a maintenance plan for the area meeting the requirements of section 175A: A limited maintenance plan, meeting the requirements of the Wegman Memo is included with this redesignation request

5.2. Conclusion and Request for Redesignation

Included in this LMP submittal and redesignation request is information that demonstrates the Sandpoint NAA may be redesignated to attainment. Section 2 contains air quality data which show Sandpoint has attained compliance with NAAQS. Section 3 provides emissions inventory data which are representative of emissions during a five-year period associated with air quality data that demonstrate attainment of the PM₁₀ NAAQS. Section 4 contains provisions of the LMP for the Sandpoint NAA.

The State of Idaho will continue to monitor PM₁₀ and PM_{2.5} concentrations in the Sandpoint area. If violations occur, this maintenance plan contains contingency provisions to ensure prompt corrective action is taken. This plan fulfills the requirements of the CAA as they pertain to SIPs and maintenance plans.

DEQ requests that EPA approve the Limited Maintenance Plan and redesignate the Sandpoint Nonattainment Area to attainment for the PM₁₀ NAAQS in accordance with Section 207 of the CAA. DEQ further requests that, as part of EPA's approval action, the operating permits for Louisiana Pacific Corporation – Sandpoint, Lake Pre-Mix, and Interstate Concrete and Asphalt be removed from Idaho's State Implementation Plan. As discussed in Section 4.4, Idaho's federally-approved and federally-enforceable permit program requirements are sufficient to maintain air quality for any new sources or modifications in Sandpoint. This action will ensure that all permit actions in this area, for existing or new sources, will have the same technical and administrative process.

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Appendix A Wegman Memo



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

AUG 09 2001

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Limited Maintenance Plan Option for Moderate PM₁₀ Nonattainment Areas

FROM: *John O. Edwards*
Lydia Wegman, Director
AQSSD (MD-15)

TO: Director, Office of Ecosystem Protection, Region I
Director, Division of Environmental Planning & Protection, Region II
Director, Air Protection Division, Region III
Director, Air, Pesticides & Toxics Management Division, Region IV
Director, Air and Radiation Division, Region V
Director, Air Pesticides & Toxics, Region VI
Director, Air and Toxics Division, Regions VII, IX
Director, Air Program, Region VIII
Director, Office of Air Quality, Region X

I. What is a Limited Maintenance Plan?

This memorandum sets forth new guidance¹ on maintenance plan submissions for certain moderate particulate matter (PM₁₀) nonattainment areas seeking redesignation to attainment (see section IV for further details on qualifying for the policy). If the area meets the criteria listed in this policy the State may submit a maintenance plan at the time it is requesting redesignation that is more streamlined than would ordinarily be permitted. This new option is being termed a limited maintenance plan (LMP)².

II. Why is there a need for a limited maintenance plan policy?

Before the U.S. Court of Appeals for the District of Columbia handed down its decision vacating the 1997 PM₁₀ national ambient air quality standards (NAAQS)(see American Trucking Associations, et al. v. Environmental Protection Agency (EPA), 175 F.3d 1027 (D.C. Cir. 1999),

¹This memorandum is intended to provide EPA's preliminary views on how certain moderate PM10 nonattainment areas may qualify to submit a maintenance plan that meets certain limited requirements. Since it represents only the Agency's preliminary thinking that is subject to modification, this guidance is not binding on States, Tribes, the public, or EPA. Issues concerning the applicability of the limited maintenance plan policy will be addressed in actions to redesignate moderate PM10 nonattainment areas under § 107 of the CAA. It is only when EPA promulgates redesignations applying this policy that those determinations will become binding on States, Tribes, the public, and EPA as a matter of law.

²Moderate PM₁₀ areas that do not meet the applicability criteria of this policy, and all serious PM₁₀ nonattainment areas, should submit maintenance plans that meet our guidance for submission of a full maintenance plan as described in the September 4, 1992 memorandum, "Procedures for Processing Requests to Redesignate Areas to Attainment," from John Calcagni, former Director of the Office of Air Quality Planning and Standards (OAQPS) Air Quality management Division to the Regional Air Division Directors (hereafter known as the Calcagni Memo).

we were prepared to make case-by-case determinations that would make the 1987 PM₁₀ NAAQS no longer applicable in any area meeting the standards. In taking actions to remove the applicability of the 1987 NAAQS, we would have removed, as well, the nonattainment designation and Clean Air Act (CAA) part D requirements from qualifying areas. As a result of the D.C. Circuit's decision, for areas subject to the 1987 NAAQS, the only route to recognized attainment of the NAAQS and removal of nonattainment status and requirements is formal redesignation to attainment, including submittal of a maintenance plan. Since many areas have been meeting the PM₁₀ NAAQS for 5 years or more and have a low risk of future exceedances, we believe a policy that would allow both the States and EPA to redesignate speedily areas that are at little risk of PM₁₀ violations would be useful.

III. How did EPA develop the approach used in the LMP option?

The EPA has studied PM₁₀ air quality data information for the entire country over the past eleven years (1989-1999) and has determined that some moderate PM₁₀ nonattainment areas have had a history of low PM₁₀ design values with very little inter-annual variation. When we looked at all the monitoring sites reporting data for those years, the data indicate that most of the average design values fall below 2 levels, $98 \cdot \text{g}/\text{m}^3$ for the 24-hr PM₁₀ NAAQS and $40 \cdot \text{g}/\text{m}^3$ for the annual PM₁₀ NAAQS. For most monitoring sites these levels are also below their individual site-specific critical design values (CDV). The CDV is an indicator of the likelihood of future violations of the NAAQS given the current average design value and its variability. The CDV is the highest average design value an area could have before it may experience a future exceedance of the NAAQS with a certain probability. A detailed explanation of the CDV is found in Attachment A³ to this policy which, because of its length, is a separate document accompanying this memorandum.

We believe that the very small amount of variation between the peaks and means in most of the data indicates a very stable relationship that can be reasonably expected to continue in the future absent any significant changes in emissions. The period we assessed provides a fairly long historical record and the data could therefore be expected to have been affected by a full range of meteorological conditions over the period. Therefore, the amount of emissions should be the only variable that could affect the stability in the air quality data. We believe we can reliably make estimates about the future variability of PM₁₀ concentrations across the country based on our statistical analysis of this data record, especially in areas where the amount of emissions is not expected to change.

IV. How do I qualify for the LMP option ?

To qualify for the limited maintenance plan option, an area should meet the following applicability criteria. The area should be attaining the NAAQS and the average PM₁₀ design

³ Dr. Shao-Hang Chu's paper entitled "Critical Design Value and Its Applications" explains the CDV approach and is included in its entirety in Attachment A. This paper has been accepted for publication and presentation at the 94th Air and Waste Management Association (A&WMA) Annual Conference in June 2001 in Orlando, Florida.

value⁴ for the area, based upon the most recent 5 years of air quality data at all monitors in the area, should be at or below $40 \text{ } \mu\text{g}/\text{m}^3$ for the annual and $98 \text{ } \mu\text{g}/\text{m}^3$ for the 24-hr PM_{10} NAAQS with no violations at any monitor in the nonattainment area⁵. If an area cannot meet this test it may still be able to qualify for the LMP option if the average design values of the site are less than their respective site-specific CDV.

We believe it is appropriate to offer this second method of qualifying for the LMP because, based on the air quality data we have studied, we believe there are some monitoring sites with average design values above $40 \text{ } \mu\text{g}/\text{m}^3$ or $98 \text{ } \mu\text{g}/\text{m}^3$, depending on the NAAQS in question, that have experienced little variability in the data over the years. When the CDV calculation was performed for these sites we discovered that their average design values are less than their CDVs, indicating that the areas have a very low probability (1 in 10) of exceeding the NAAQS in the future. We believe it is appropriate to provide these areas the opportunity to qualify for the LMP in this circumstance since the $40 \text{ } \mu\text{g}/\text{m}^3$ or $98 \text{ } \mu\text{g}/\text{m}^3$ criteria are based on a national analysis and don't take into account each local situation.

The final criterion is related to mobile source emissions. The area should expect only limited growth in on-road motor vehicle PM_{10} emissions (including fugitive dust) and should have passed a motor vehicle regional emissions analysis test. It is important to consider the impact of future transportation growth in the LMP, since the level of PM_{10} emissions (especially from fugitive dust) is related to the level of growth in vehicle miles traveled (VMT). Attachment B (below) should be used for making the motor vehicle regional emissions analysis demonstration.

If the State determines that the area in question meets the above criteria, it may select the LMP option for the first 10 year maintenance period. Any area that does not meet these criteria should plan to submit a full maintenance plan that is consistent with our guidance in the Calcagni Memo in order to be redesignated to attainment. If the LMP option is selected, the State should continue to meet the qualifying criteria until EPA has redesignated the area to attainment. If an area no longer qualifies for the LMP option because a change in air quality affects the average design values before the redesignation takes effect, the area will be expected to submit a full maintenance plan.

Once an area selects the LMP option and it is in effect, the State will be expected to recalculate the average design value for the area annually and determine if the criteria used to qualify for the LMP will still be met. If, after performing the annual recalculation of the area's average design value in a given year, the State determines that the area no longer qualifies for the LMP, the State should take action to attempt to reduce PM_{10} concentrations enough to requalify for the LMP. One possible approach the State could take is to implement a contingency measure

⁴The methods for calculating design values for PM_{10} are presented in a document entitled the "PM₁₀ SIP Development Guideline", EPA-450/2-86-001, June 1987. The State should determine the most appropriate method to use from this Guideline in consultation with the appropriate EPA Regional office staff.

⁵If the EPA determines that the meteorology was not representative during the most recent five-year period, we may reject the State's request to use the LMP option and request, instead, submission of a full maintenance demonstration.

or measures found in its SIP. If, in the next annual recalculation the State is able to re-qualify for the LMP, then the LMP will go back into effect. If the attempt to reduce PM₁₀ concentrations fails, or if it succeeds but in future years it becomes necessary again to address increasing PM₁₀ concentrations in the area, that area no longer qualifies for the LMP. We believe that repeated increases in PM₁₀ concentrations indicate that the initial conditions that govern air quality and that were relied on to determine the area's qualification for the LMP have changed, and that maintenance of the NAAQS can no longer be assumed. Therefore, the LMP cannot be reinstated by further recalculations of the design values at this point. Once the LMP is determined to no longer be in effect, a full maintenance plan should be developed and submitted within 18 months of the determination.

Treatment of data used to calculate the design values.

Flagged Particulate Matter Data:

Three policies allow PM-10 data to be flagged for special consideration:

- Exceptional Events Policy (1986) for data affected by infrequent events such as industrial accidents or structural fires near a monitoring site;
- Natural Events Policy (1996) for data affected by wildfires, high winds, and volcanic and seismic activities, and;
- Interim Air Quality Policy on Wildland and Prescribed Fires for data affected by wildland fires that are managed to achieve resource benefits.

We will treat data affected by these events consistently with these previously-issued policies. We expect States to consider all data (unflagged and flagged) when determining the design value. The EPA Regional offices will work with the State to determine the validity of flagged data. Flagged data may be excluded on a case-by-case basis depending on State documentation of the circumstances justifying flags. Data flagged as affected by exceptional or natural events will generally not be used when determining the design value. However, in order for data affected by a natural event to be excluded, an adequate Natural Events Action Plan is required as described in the Natural Events policy.

Data flagged as affected by wildland and prescribed fires will be used in determining the design value. If the State is addressing wildland and prescribed fire use with the application of smoke management programs, the State may submit an LMP if the design value is too high only as a result of the fire-affected data.

We are in the process of developing a policy to address agricultural burning. When it is finalized we will amend the LMP option to account

for the new policy.

V. What should an LMP consist of?

Under the LMP, we will continue to satisfy the requirements of Section 107(d)(3)(E) of the Act which provides that a nonattainment area can be redesignated to attainment only if the following criteria are met:

1. The EPA has determined that the NAAQS for the applicable pollutant has been attained.
2. The EPA has fully approved the applicable implementation plan under section 110(k).
3. The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
4. The State has met all applicable requirements for the area under section 110 and part D.
5. The EPA has fully approved a maintenance plan, including a contingency plan, for the area under section 175A.

However, there are some differences between what our previous guidance (the Calcagni memo) recommends that States include in a maintenance plan submission and what we are recommending under this policy for areas that qualify for the LMP. The most important difference is that under the LMP the demonstration of maintenance is presumed to be satisfied. The following is a list of core provisions which should be included in an LMP submission. Note that any final EPA determination regarding the adequacy of an LMP will be made following review of the plan submitted in light of the particular circumstances facing the area proposed for redesignation and based upon all available information.

a. Attainment Plan

The State's approved attainment plan should include an emissions inventory (attainment inventory) which can be used to demonstrate attainment of the NAAQS. The inventory should represent emissions during the same five-year period associated with the air quality data used to determine whether the area meets the applicability requirements of this policy (i.e., the most recent five years of air quality data). If the attainment inventory year is not one of the most recent five years, but the State can show that the attainment inventory did not change significantly during that five-year period, it may still be used to satisfy the policy. If the attainment inventory is determined to not be representative of the most recent 5 years, a new inventory must be developed. The State should review its inventory every three years to ensure emissions growth is incorporated in the attainment inventory if necessary.

b. Maintenance Demonstration

The maintenance demonstration requirement of the Act will be considered to be satisfied for the moderate PM₁₀ nonattainment areas meeting the air quality criteria discussed above. If

the tests described in Section IV are met, we will treat that as a demonstration that the area will maintain the NAAQS. Consequently, there is no need to project emissions over the maintenance period.

c. Important elements that should be contained within the redesignation request

1. Monitoring Network Verification of Continued Attainment

To verify the attainment status of the area over the maintenance period, the maintenance plan should contain a provision to assure continued operation of an appropriate, EPA-approved air quality monitoring network, in accordance with 40 CFR part 58. This is particularly important for areas using an LMP because there will be no cap on emissions.

2. Contingency Plan

Section 175A of the Act states that a maintenance plan must include contingency provisions, as necessary, to promptly correct any violation of the NAAQS which may occur after redesignation of the area to attainment. These contingency measures do not have to be fully adopted at the time of redesignation. However, the contingency plan is considered to be an enforceable part of the SIP and the State should ensure that the contingency measures are adopted as soon as possible once they are triggered by a specific event. The contingency plan should identify the measures to be adopted, and provide a schedule and procedure for adoption and implementation of the measures if they are required. Normally, the implementation of contingency measures is triggered by a violation of the NAAQS but the State may wish to establish other triggers to prevent a violation of the NAAQS, such as an exceedance of the NAAQS.

3. Approved attainment plan and section 110 and part D CAA requirements:

In accordance with the CAA, areas seeking to be redesignated to attainment under the LMP policy must have an attainment plan that has been approved by EPA, pursuant to section 107(d)(3)(E). The plan must include all control measures that were relied on by the State to demonstrate attainment of the NAAQS. The State must also ensure that the CAA requirements for PM₁₀ pursuant to section 110 and part D of the Act have been satisfied. To comply with the statute, the LMP should clearly indicate that all controls that were relied on to demonstrate attainment will remain in place. If a State wishes to roll back or eliminate controls, the area can no longer qualify for the LMP and the area will become subject to full maintenance plan requirements within 18 months of the determination that the LMP is no longer in effect.

V. How is Conformity treated under the LMP option?

The transportation conformity rule (40 CFR parts 51 and 93) and the general conformity rule (58 FR 63214; November 30, 1993) apply to nonattainment areas and maintenance areas operating under maintenance plans. Under either conformity rule one means of demonstrating conformity of Federal actions is to indicate that expected emissions from planned actions are consistent with the emissions budget for the area. Emissions budgets in LMP areas may be treated as essentially not constraining for the length of the maintenance period because it is unreasonable to expect that an area satisfying the LMP criteria will experience so much growth during that period of time such that a violation of the PM₁₀ NAAQS would result. While this policy does not exempt an area from the need to affirm conformity, it does allow the area to demonstrate conformity without undertaking certain requirements of these rules. For transportation conformity purposes, EPA would be concluding that emissions in these areas need not be capped for the maintenance period, and, therefore, a regional emissions analysis would not be required. Similarly, Federal actions subject to the general conformity rule could be considered to satisfy the "budget test" specified in section 93.158 (a)(5)(i)(A) of the rule, for the same reasons that the budgets are essentially considered to be unlimited.

EPA approval of an LMP will provide that if the LMP criteria are no longer satisfied and a full maintenance plan must be developed to meet CAA requirements (see Calcagni Memo referenced in footnote #2 for full maintenance plan guidance), the approval of the LMP would remain applicable for conformity purposes only until the full maintenance plan is submitted and EPA has found its motor vehicle emissions budgets adequate for conformity purposes under 40 CFR parts 51 and 93. EPA will condition its approval of all LMPs in this fashion because in the case where the LMP criteria are not met and a full maintenance plan is required EPA believes that LMPs would no longer be an appropriate mechanism for assuring maintenance of the standards.

For further information concerning the LMP option for moderate PM₁₀ areas please

contact Gary Blais at (919) 541-3223, or for questions about the CDV approach contact Dr. Shao-Hang Chu at (919) 541-5382. For information concerning transportation conformity requirements, please contact Meg Patulski of the Office of Transportation and Air Quality at (734) 214-4842.

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ATTACHMENT B: MOTOR VEHICLE REGIONAL ANALYSIS METHODOLOGY

The following methodology is used to determine whether increased emissions from on-road mobile sources could, in the next 10 years, increase concentrations in the area and threaten the assumption of maintenance that underlies the LMP policy. This analysis must be submitted and approved in order to be eligible for the LMP option.

The following equation should be used:

$$DV + (VMT_{pi} \times DV_{mv}) \cdot MOS$$

Where:

DV	=	the area's design value based on the most recent 5 years of quality assured data in $\mu\text{g}/\text{m}^3$
VMT_{pi}	=	the projected % increase in vehicle miles traveled (VMT) over the next 10 years
DV_{mv}	=	motor vehicle design value based on on-road mobile portion of the attainment year inventory in $\mu\text{g}/\text{m}^3$
MOS	=	margin of safety for the relevant PM-10 standard for a given area: $40 \mu\text{g}/\text{m}^3$ for the annual standard or $98 \mu\text{g}/\text{m}^3$ for the 24-hour standard

Please note that DV_{mv} is derived by multiplying DV by the percentage of the attainment year inventory represented by on-road mobile sources. This variable should be based on both primary and secondary PM_{10} emissions of the on-road mobile portion of the attainment year inventory, including re-entrained road dust.

States should consult with EPA regarding the three inputs used in the above calculation, and all EPA comments and concerns regarding inputs and results should be addressed prior to submitting a limited maintenance plan and redesignation request.

The VMT growth rate (VMT_{pi}) should be calculated through the following methods:

- 1) an extrapolation of the most recent 10 years of Highway Performance Monitoring System (HPMS) data over the 10-year period to be addressed by the limited maintenance plan; and
- 2) a projection of VMT over the 10-year period that would be covered by the limited maintenance plan, using whatever method is in practice in the area (if different than #1).

Areas where method #1 is the current practice for calculating VMT do not also have to do calculation #2, although this is encouraged. All other areas should use methods #1 and #2, and VMT_{pi} is whichever growth rate produced by methods #1 and #2 is highest. Areas will be expected to use transportation models for method #2, if transportation models are available.

Areas without transportation models should use reasonable professional practice.

Examples

1. DV = $80 \cdot \text{g}/\text{m}^3$
 VMT_{pi} = 36%
 DV_{mv} = $30 \cdot \text{g}/\text{m}^3$
 MOS = $98 \cdot \text{g}/\text{m}^3$ for 24-hour PM-10 standard

$$80 + (.36 * 30) = 91$$

Less than 98 – Area passes regional analysis criterion.

2. DV = $35 \cdot \text{g}/\text{m}^3$
 VMT_{pi} = 25%
 DV_{mv} = $6 \cdot \text{g}/\text{m}^3$
 MOS = $40 \cdot \text{g}/\text{m}^3$ for annual PM-10 standard

$$35 + (.25 * 6) = 37$$

Less than 40 – Area passes regional analysis criterion.

3. DV = $115 \cdot \text{g}/\text{m}^3$
 VMT_{pi} = 25%
 DV_{mv} = $60 \cdot \text{g}/\text{m}^3$
 MOS = $98 \cdot \text{g}/\text{m}^3$ for 24-hour PM-10 standard

$$115 + (.25 * 60) = 130$$

More than 98 – Area does not pass criterion. Full section 175A maintenance plan required.

Appendix B Emissions Inventory

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Sandpoint Particulate Matter (PM₁₀) Nonattainment Area
Base Year 1999 Emissions Inventory

Prepared by
Idaho Department of Environmental Quality
Air Quality Division

March 31, 2006

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1 Introduction

1.1 Background

On August 7, 1987, Sandpoint was designated a nonattainment area for PM₁₀ by EPA based on violations of the 24-hour National Ambient Air Quality Standard (NAAQS). In May 1993, the Idaho Department of Health and Welfare - Division of Environmental Quality developed a plan that identified the sources contributing to the PM₁₀ problem and outlined a strategy for the implementation of various control measures to reduce particulate emissions from local sources. Problems were encountered in the implementation phase, which resulted in continued violations of the PM₁₀ air quality standard. These violations had the potential to trigger other federal action that could have resulted in the reclassification of the area from "moderate" to "serious." This potential reclassification prompted action at the local and state level, which resulted in major revisions to the original plan. A revised State Implementation Plan (SIP) was written for the Sandpoint Nonattainment Area in 1996 and submitted to EPA for final approval.

Sandpoint attained the standards by 1997, and currently meets the criteria for redesignation to attainment. A maintenance plan is prepared as part of a redesignation request. Sandpoint qualified for a PM₁₀ limited maintenance plan (LMP). An emissions inventory is a required element of the limited maintenance plan.

1.2 Inventory Requirements

A base year emissions inventory is required for the limited maintenance plan. The base year inventory is an estimate of actual emissions from point, non-point (area), and mobile sources in the nonattainment area (NAA). The inventory is expressed as an estimate of annual emissions and emissions occurring on a typical PM₁₀ season day. The base year chosen was 1999 so as to be representative of the five years of air monitoring data used for design values in the LMP worksheet.

1.3 Geographic Area

The NAA is located in central Bonner County, in the northern portion of Idaho's panhandle. It is a double-rectangle-shaped area covering approximately 15 square miles. The following are the section number designations for the Sandpoint PM₁₀ NAA: Sections 1-3, 9-12, 15, 16, 21, 27, 28, of Range 2 West and Township 57 North; and the western three-fourths of Sections 14, 23, and 26 of Range 2 West and Township 57 North.

The NAA includes the communities of Sandpoint, Ponderay, and Kootenai, which lie on a 2,000-foot-high plain at the base of the Selkirk Mountains, along the northwest shore of Lake Pend Oreille. Mountain peaks averaging approximately 5,000 feet surround the nonattainment area.

One major stationary source (Louisiana Pacific - Sandpoint sawmill -- now closed), and several small stationary sources was/are within the nonattainment area boundaries in 1999.

1.4 Demographic and Vehicle Miles Traveled Statistics

- Demographic statistics are used in estimating emissions from some source types. Population, households, and vehicle miles traveled were obtained from various sources.^{1,2}

All other values were derived from the statistics provided. Statistics used in the preparation of this inventory are shown in Table 1-1 for the year 1999.

Table 1-1: County and Nonattainment Area Statistics

	Bonner County	NAA
Population	36,835	7,914
Kootenai		441
Ponderay		638
Sandpoint		6,835
Households	14,693	3,583
Kootenai		171
Ponderay		264
Sandpoint		3,308
Vehicle Miles Traveled (Annual Combined)		84,267,915
Paved Roads (Daily)		230,853
Unpaved Roads (Daily)		9

1.5 Spatial Allocation and Calculation of VMT

Roadways segments were accurately located and segment length in miles provided inside the NAA using GIS and the average annual daily traffic (AADT) count data provided by the Idaho Transportation Department (ITD). Information to calculate emissions from mobile sources are often only readily available at the county level and cannot be specifically located in smaller geographic areas such as the NAA. In these cases, surrogates which can be accurately located are used to allocate the sources spatially. IDEQ was able to use GIS and a map from the Bonner County Area Transportation Plan on roadway types to determine VMT.³

The process for calculating VMT in the Sandpoint PM₁₀ NAA is described below in Table 1-2.

Table 1-2: VMT Calculation Process

Process:
1. Assign 2003 spatial layer and the 1999 AADT values provided by ITD; add road segments from census layer where missing from 2003 layer
2. Using both spatial layers, assign 2002 AADT values provided by IDEQ Coeur d'Alene Regional Office to the unassigned segments; for those roads with AADT values given for particular segments only, assume AADT value applies across all sections of the road (pers. comm., Jay Witt, COMPASS, 3/4/05)
3. Using Bonner County Urban Areas map from ITD, assign roads MOBILE road types (arterial, collector, and local)
4. For road segments with no data available from 1999 or 2002 data sources, assign average of AADT from both years based on road type (e.g. average AADT for local roads =783)
5. Multiply AADT values by segment length in miles to calculate VMT

1.6 Season Determination

Sandpoint has exceeded the PM₁₀ 24-hour standard of 150 µg/m³ several times, but has never exceeded the annual arithmetic mean of 50 µg/m³. Past exceedances of the 24-hour standard have occurred in association with inversions during the winter, primarily during the months of January and February. To address the annual and 24-hour standards, both annual and typical season day emissions were estimated. Season day emissions were based on conditions during three month

segments of the year (e.g., winter = December - February). Exceedances taking place during the fall were determined to be mainly wind erosion events that were modeled in the SIP 1996 Final Revision and are from sources outside the NAA.

Table 1-3: Exceedances of the 24-hour Standard^{4,5}

Date	µg/m ³
February 28, 1986	168
February 21, 1988	157
February 24, 1988	179
September 6, 1988	219 (exceptional event)
February 26, 1990	192
October 4, 1990	218
September 4, 1992	473
February 4, 1992	199
January 26, 1994	157

1.7 Application of Rule Effectiveness and Rule Penetration

Rule effectiveness (RE) reflects the ability of a control device or regulation to achieve all the emissions reductions that could be achieved by full compliance at all times. Rule penetration (RP) is a measure of the extent to which a regulation may cover emissions from a source category.

Both RE and RP have been the subject of ongoing discussion nationally and are the topic of a draft report by the Emissions Inventory Improvement Program (EIIP). The EIIP is a joint project of EPA, State and Territorial Air Pollution Program Administrators (STAPPA), and the Association of Local Air Pollution Control Officials (ALAPCO).⁶ The report recognizes that control efficiencies are often based on in-use conditions -- when this is the case, RE has already been taken into account. Additionally, point source emissions for the base year EI were taken from 1999 Periodic Emissions Inventory "actuals" and Idaho does not have rules on the books for controls on most area or non-point sources; therefore, RE and RP were not considered.

1.8 Inventory Planning

An Inventory Preparation Plan (IPP), including a Quality Assurance plan, was submitted to EPA in July 2004. The plan was utilized during preparation and finalization of the inventory. The source categories required by EPA for the PM₁₀ inventory were included. Sources that either did not exist in the nonattainment area or were present at very insignificant levels were excluded from the IPP and EI per EPA instruction. Some sources that were included in prior efforts were shown to emit PM₁₀ at very low levels. These sources were not included in the inventory.

When the IPP was written, it was known that the NAA qualified for the LMP, which does not require emissions projections. Therefore, no emissions projections were planned or made.

1.9 Report Contents and Major Contributors

This report presents emissions summaries, methodology, and the information sources used to develop the 1999 inventory. The Idaho Transportation Department, DEQ Coeur d'Alene Regional Office, and EPA Region 10 were major contributors for this project. Many other people and agencies contributed information and answered questions essential to the completion of this EI.

1.10 Table Numerical Values

Emissions and activity data values shown in tables are generally rounded to the nearest hundredth or nearest whole number. The sum of individual entries may not equal category totals due to rounding. In a few tables, the full numbers are used.

1.11 Contact Person

Any questions regarding the information contained in this report may be directed to Chris Ramsdell, Air Quality Division, Idaho Department of Environmental Quality, 208.373.0237, christopher.ramsdell@deq.idaho.gov.

1.12 Abbreviations Used Throughout the Inventory

NAA	nonattainment area
EPA	Environmental Protection Agency
ITD	Idaho Transportation Department
DEQ	Idaho Department of Environmental Quality
WRAP	Western Regional Air Partnership
EI	emissions inventory
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
AADT	average annual daily traffic (count)
TPY	tons per year
ppd	pounds per day
VMT	vehicle miles traveled
ADVMT	average daily VMT

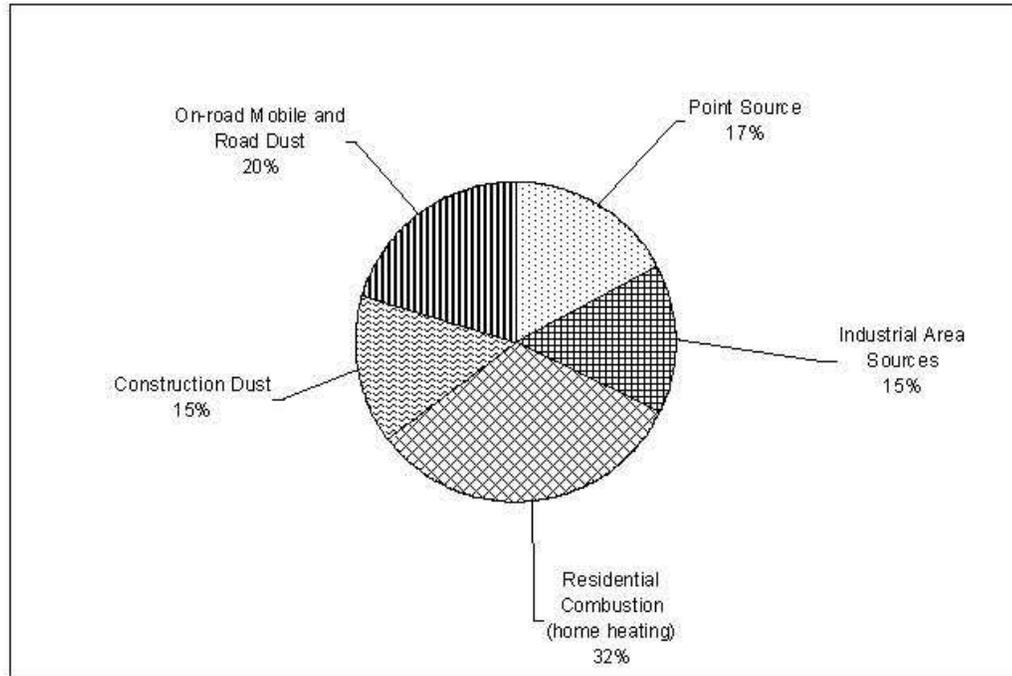
2 PM₁₀ Emissions Summary

Table 2-1: PM₁₀ Emissions Summary for 1999

Category	TPY	Season Day (winter) ppd	%ppd
POINT SOURCES			
Louisiana-Pacific Sandpoint	102.73	562.90	17
AREA SOURCES			
Interstate Asphalt & Concrete	3.81	107.30	15
Lake Pre-Mix Concrete	14.20	77.82	
Lignetics of Idaho	45.45	249.02	
L.D. McFarland Co.	6.08	59.62	
Coffelt Funeral Services (Crematory)	.24	1.33	
Residential Combustion (wood & oil - heat)	124.41	1,059.00	32
Construction Dust	239.79	496.00	15
Paved & Unpaved Road Dust	214.76	624.22	20
ON-ROAD MOBILE			
On-road Mobile Sources	7.79	43.11	
TOTAL ALL SOURCES	758.76	3,280.32	99*

* Does not equal 100% due to rounding

Figure 2-1: Base Year 1999 Daily PM₁₀ Emissions



3 Base Year Inventory PM₁₀ Emissions Estimates

The 1999 base year inventory is an estimate of actual 1999 emissions representative of a typical PM₁₀ season day. Per EPA guidance, annual emissions were also calculated.

To estimate emissions, four basic tasks were completed for each source category. These tasks were as follows: 1) estimate activity level; 2) adjust/allocate the activity level (or emissions) temporally and spatially; 3) determine PM₁₀ emission rates per the activity; and 4) calculate the emissions. The tasks are described below for each source category. Unless otherwise noted, all data presented in this report are for the nonattainment area.

3.1 Point Sources

For moderate nonattainment areas, point sources are defined as any stationary source having the potential to emit 100 tons per year of PM₁₀. DEQ point source permitting records show that Louisiana Pacific - Sandpoint (LP) was the only source with the potential to emit 100 tons of PM₁₀ in the nonattainment area (now closed and dismantled). The 1999 periodic emissions inventory data for this facility was used in this inventory.⁷ The periodic inventory submittal was in "actual" emissions. No further calculation was needed for PM₁₀ emissions since the facility provided this data directly to DEQ in the periodic inventory conducted for that calendar year. Since only filterable PM₁₀ was gathered for LP in the 1999 periodic inventory, augmented data from EPA's 1999 NEI were used for the condensible portions of PM₁₀ and the PM_{2.5} calculations. Daily emissions were generally calculated by dividing annual emissions by the total number of operating days or hours. Where permit conditions restrict the use of this method, daily emissions were calculated using the maximum daily limits found in the permit, a worst case winter day, for example.

Table 3-1: Louisiana Pacific - Sandpoint PM₁₀ Emissions by Emission Point

Point Number	Point Description - Facility Point ID	TPY	ppd
Stack or Vent Emissions			
010	Kipper & Sons Boiler - Hog Fuel Boiler	9.296	50.94
020	EFB Filter Media Cleaning - EFB Media Bag House	10.14	55.56
030	Cleaver Brooks Boiler - Natural Gas Boiler #1	3.836	21.02
040	Cleaver Brooks Boiler - Natural Gas Boiler #2	3.836	21.02
050	Kiln Roof Vents - Dry Kilns	24.775	135.75
050	Dry Kiln #2 - Dry Kiln #2	9.006	49.35
050	Dry Kiln #3 - Dry Kiln #3	9.006	49.35
050	Dry Kiln #4 - Dry Kiln #4	9.006	49.35
050	Dry Kiln #5 - Dry Kiln #5	9.006	49.35
070	Lumber Planing Operation - Planer Cyclone	2.522	13.82
080	Lumber Planing Operation - Truck Bin Bag House	0.101	0.55
100	Lumber By-product Handling - Transfer Cyclone	2.522	13.82
110	Truck Bin Load Out - Truck Bin	5.474	29.99
Fugitive Emissions			
170	Fugitive Road Dust - Paved Roads	4.204	23.04
Total		102.73	562.90

3.2 On-road Mobile Sources

On-road mobile source emissions are those generated by operating vehicles on public roadways. Emissions from fuel combustion, and brake and tire wear were estimated.

Activity Level and Spatial Allocation

The activity measurement for on-road mobile sources is the number of miles driven. The units are typically given in vehicle miles traveled (VMT). DEQ determined VMT by spatially allocating 1999 annual average daily traffic (AADT) counts provided by ITD for road segments in the NAA (see Table 1-2 for calculation process). DEQ then used MOBILE6.2-generated factors and the 1999 VMT calculations shown in Table 3-2 to determine on-road emissions of PM₁₀.

Table 3-2: Daily VMT by Roadway Type

Facility Type	VMT
Arterial	156,587
Collector	19,274
Local	54,592
Local (unpaved)	9
Total	230,862

Emission Rates

Emission rates of PM₁₀ in grams-per-mile were generated using MOBILE6.2.⁸ Local or near-local data was used for the following input parameters: temperature, relative humidity, speeds, and the fuel Reid vapor pressure (RVP). The remaining input parameters were MOBILE6.2 defaults for 1999. MOBILE6.2 computes emission rates for all criteria pollutants; not all of the parameters affect particulate emissions. Temperature and RVP have no effect on particulate emissions. The humidity factors used are as follows and were from the 2002 Mobile Sources Emissions Inventory Report for Idaho:⁹

	Winter:	Spring:	Summer:	Fall:
Relative Humidity	82.7	62.8	48.2	63.3
Absolute Humidity	20	27.64	40.55	27.63

Fleet-mix and fuel sulfur content, will affect PM₁₀ emission rates. DEQ used MOBILE model defaults from 1999 for the fleet-mix and the fuel program flag was set to model the Conventional Gasoline - West phase-in schedule. The RVP is from a Western Regional Air Partnership (WRAP)/Sierra Research analysis of the 2002 fuel survey.¹⁰

Emission factors for exhaust, brake wear, and tire wear PM₁₀ are shown in Table 3-3 below. The MOBILE6.2 input and output files can be found in the Attachments.

Table 3-3: On-road Mobile PM₁₀ Emission Factors for 'All Vehicles'

		Exhaust	Brake Wear	Tire Wear	Total PM
Winter/Spring	Arterial	0.0628	0.0125	0.0095	0.0848
	Local	0.0637	0.0125	0.0095	0.0857
Summer/Fall	Arterial	0.0606	0.0125	0.0095	0.0827
	Local	0.0616	0.0125	0.0095	0.0836

Emissions Estimates and Temporal Allocation

Annual emissions in tons were calculated using the following equation:

$$V \times E \times 365 \text{ days} \times (\text{lb}/454 \text{ g}) \times (\text{tons}/2000 \text{ lbs})$$

Where: V = calendar year 1999 ADVMT, and
E = seasonal emission factor in g/mi

Annual and average daily emissions estimates are shown in Table 3-4.

Table 3-4: On-road Mobile PM₁₀ Emissions

	Tons/Year Annual Average	Winter lb/day	Spring lb/day	Summer lb/day	Fall lb/day
Exhaust	5.39	32.01	24.35	30.91	30.91
Brake Wear	1.09	6.35	4.85	6.35	6.35
Tire Wear	0.83	4.83	3.68	4.83	4.83
Total	7.31	43.19	32.88	42.12	42.12

3.3 Area Sources

Area sources include all stationary sources whose individual emissions fall below the 100 ton potential to emit level (e.g. woodstoves), and sources that are of short duration and/or cover larger geographic areas (e.g. road dust). Emissions are typically estimated by multiplying the activity level by an emission factor in mass per activity.

Area sources inventoried include smaller industrial sources, residential combustion for home heating, and three fugitive dust sources -- paved road dust, unpaved road dust, and construction dust. Data was also put together on acreage burned in northern Idaho -- agriculture, prescribed fire, and wildfire. This data was from a report done for gap-filling monitoring data in the NAA prior to the LMP option being approved for Sandpoint.¹¹ Estimation methods and data sources used to estimate emissions are detailed below.

3.3.1 Paved Road Dust

Dust emissions are generated as vehicles pass along the roadways and disturb the layer of loose material on or near the road surface.

Activity Level

The activity measurement for paved road dust generation is the number of miles driven. The activity level in daily VMT shown in Table 3-2 above includes travel over both paved and unpaved roads. The estimate of unpaved VMT (Table 3-8) was subtracted from VMT used for the following calculations for each paved road type -- Collector, Arterial, and Local.

Spatial Allocation

Because the VMT was totaled for the NAA, no spatial allocation was done.

Emission Rates

The PM₁₀ emission rates in pounds per VMT were calculated for paved roads using Equations 2 in EPA's AP42.¹² Equation 1 estimates an emission rate for paved roads under dry conditions and was not used since precipitation was factored in on a seasonal average. Equation 2 estimates an emission rate for monthly average conditions by incorporating a precipitation correction factor and also accounts for dry days. This equation was used to calculate monthly (and seasonal) emission rates. The AP42 Equation 2 is as follows:

$$E = [k (sL/2)^{0.65} (W/3)^{1.5} - C][1-(P/4N)]$$

where E is the emission factor in lbs/VMT

k = particle size multiplier (0.016 for = PM₁₀)

sL = silt loading in g/m²

C = material from exhaust, brake and tire wear (AP42 default: 0.00047 lb/mi)

W = mean vehicle weight (tons)

P = number of days with at least 0.01 inches of precipitation in the given month

N = number of days in the given month

The MOBILE Part 5 Information Sheet #1 mean vehicle weight was used (6,000 pounds).¹³ Data (1997-2001) from the Spokane National Weather Service Station was used to get an average number of days per three-month season in the Sandpoint NAA with precipitation greater than 0.01 inches.¹⁴ The silt loading on roads was kept the same as those silt-loading figures in the Sandpoint SIP.¹⁵ The silt content values used were from the 1996 Air Quality Improvement Plan for Sandpoint. These values were 0.36g/m² for Arterial, 0.92g/m² for Collector, and 1.41g/m² for Local. These values were used for 100% of the VMT for the months March through November. For December through February, 50% of the VMT were assumed to be traveled on roads with higher silt loading due to sanding during the winter. The other 50% were assumed to be traveled on the roads where de-icer was used or no sand was spread. The high silt loading numbers, also from the 1996 AQI, were 1.09, 2.76, and 4.23 g/m² for arterial, collector, and local roads, respectively. Sandpoint has implemented road dust control procedures including the primary use of chemical de-icer on the main arterial through town and uses street sweepers year round. Any sand used has no fines smaller than what can pass through a 200 sieve and this same, higher quality sand is used on some local roads during the snow season.

Calculated seasonal emission rates (using Equation 2) are shown in Table 3-5 below.

Table 3-5: Average Season Rainfall, Silt Loading, and Paved Road Dust Emission Rates

Month	Days > 0.01" Rain (P)	Silt Loading (sL) Arterial g/m ²	Silt Loading (sL) Collector g/m ²	Silt Loading (sL) Local g/m ²	PM ₁₀ (lb/VMT)
Winter	37	4.23 for 50% VMT 1.41 for 50% VMT	2.76 for 50% VMT 0.92 for 50% VMT	1.09 for 50% VMT 0.36 for 50% VMT	0.0125
Spring	30	1.41	0.92	0.36	0.0228
Summer	16	1.41	0.92	0.36	0.0237
Fall	28	1.41	0.92	0.36	0.0229

Emissions Estimates and Temporal Allocation

The total non-winter (and 50% of winter fugitive) road dust emissions were calculated separate from 50% of the winter VMT to take into account the anti-skid sand usage control efficiency seen below.

Table 3-6: Paved Road Dust - Wintertime^a Control Measures

Control	Percent of VMT Application	Control Efficiency
High Quality Anti-skid Material	50%	55% ^b
Street Sweeping ^c	100%	34% Local 9% Collector 34% Arterial
Liquid De-icer	20% Local 40% Collector 80% Arterial	70%

a - wintertime is December, January, and February

b - Control efficiencies in this table, other than Street Sweeping, were provided in Technical Support Document - PM₁₀ SIP Revision for Sandpoint, Idaho. Provided by Donna Deneen Region 10 - EPA. Dated May 28, 2002.

c - Street Sweeping control efficiency is from the Western Regional Air Partnership Fugitive Dust Handbook, November 2004 (<http://www.wrapair.org/forums/dej/f/dh/>)

The emissions were then temporally allocated first by season, taking into account average precipitation days per season and calculated using AP42 Equation 2 above in Section 3.3.1. The emissions rates in pounds-per-VMT were then figured for each season (see Table 3-5), then applied to daily VMT figures and multiplied by each season's number of days to get an average pounds-per-day for each road type, in each season.

The calculated seasonal daily emissions estimates are shown in Table 3-7 below.

Table 3-7: Seasonal Paved Road Dust PM₁₀ Emissions with SIP Control Measures

Wintertime Maximum Emissions	620.42 lb/day
Spring Emissions	1336.80 lb/day
Summer Emissions	1392.23 lb/day
Fall Emissions	1343.48 lb/day

3.3.2 Unpaved Road Dust

Similar to paved roads, dust emissions are generated as vehicles pass along unpaved roadways and disturb the layer of loose material on or near the road surface.

Activity Level

In 1999, ITD estimated an AADT of 10 on the one unpaved road in the NAA. That road is .9 miles long, so unpaved VMT is estimated at 9 miles a day. Therefore, the annual unpaved VMT is estimated by taking 9 and multiplying by 365. The calculated annual unpaved VMT estimate is shown in Table 3-8.

Table 3-8: Annual VMT on Unpaved Roads

Year	VMT
1999	3,285

Emission Rates

Seasonal daily and annual emissions for unpaved road dust were calculated according to Equation 2 in AP42.¹⁶ Equation 2 includes an adjustment for rainfall which acts as a control efficiency term by assuming that emissions occur only on days where the rainfall is below 0.01 inches. Equations 2 from AP42 is shown below.

$$E = \{ [k (s/12)^a (S/30)^d / (M_{dry}/0.5)^c] - C \} \times [(365-p)/365]$$

where E is the emission factor in lbs/VMT

k = particle size multiplier (1.8 for = PM₁₀)

a = PM₁₀ constant (1)

c = PM₁₀ constant (0.2)

d = PM₁₀ constant (0.5)

s = silt content of surface material

S = speed

C = material from exhaust, brake and tire wear (AP42 default: 0.00047 lb/mi)

M_{dry} = surface material moisture content (%)

p = number of days with at least 0.01 inches of precipitation in the year

Vehicle speed was assumed to be the same as the local road estimate of 19.6 mph. The silt loading factor of 3.9% was used for all VMT on unpaved roads and was found in the 1999 NEI spreadsheet by E.H. Pechan & Associates.¹⁷ In the absence of a reliable estimate of Surface Moisture Content, 0.5% was used as a conservative estimate.

Days of precipitation greater than or equal to 0.01 inches were obtained from the Spokane National Weather Service Station.

Calculated seasonal unpaved road dust emission rates are shown in Table 3-9.

Table 3-9: Seasonal PM₁₀ Emission Rates in lb/VMT

Season	Rate lb/VMT
Spring (March, April, May)	0.43
Summer (June, July, August)	0.45
Fall (September, October, November)	0.44
Winter (December, January, February)	0.42

Emissions Estimates and Temporal Allocation

Annual emissions were calculated by adding the seasonal calculations together. Seasonal emissions were calculated using AP42 Equation 2, which includes the number of days in that season, as well as the average number of rain days above .01 inch in that period. Daily emissions were calculated by dividing the seasonal total by the number of days in the season. Similar to on-road mobile and paved road dust emissions calculations (Sections 3.2 and 3.3.1), VMT was utilized to reflect seasonal driving volumes.

The final emissions estimates are shown in the table below.

Table 3-10: Unpaved Road Dust PM₁₀ Emissions

Season	lbs	ppd
Spring	358.80	3.9
Summer	374.44	4.07
Fall	356.72	3.92
Winter	342.00	3.8
total	1431.96 ppy or 0.716 TPY	

3.3.3 Construction Dust

Emissions from windblown construction dust were calculated using methods described in EPA's "Open Burning and Construction Activities: Improved PM fine Emission Estimation Techniques in the National Emissions Inventory."¹⁸ The Thesing/Huntley formula in this document used for calculating construction emissions is as follows for single and two-family dwellings*:

$$E = (0.032 \text{ tons PM}_{10}/\text{acre}/\text{month})(B)(f)(m)$$

Where E = emissions

B = the number of single and two-family houses constructed

f = buildings-to-acres conversion factor

m = the duration of construction activity in months

* Additional formulas from the Thesing/Huntley document for construction of commercial buildings and roadways can be found in the Attachments, in the report titled, Miscellaneous Area Sources - Windblown Construction Dust.

Per Thesing/Huntley, each dwelling was assigned 1/4 acre per building with construction duration of six months. Thesing/Huntley also assigns a factor of 0.032 tons PM₁₀ per acre, per month.

The single- and two family-dwelling construction dust results, as well as the other construction dust results, are shown in Table 3-11 .

Temporal Allocation

Thesing/Huntley was used to apply timelines for residential and commercial construction. The roadways departed from Thesing/Huntley only where that document applied 12 months for a road project. In the NAA, only nine months are suitable for road construction because of poor winter weather. This adjustment for roads and the other construction calculations are explained in detail, with examples given for each, in the Attachments.

Table 3-11: Construction Dust PM₁₀ Emissions

Construction Type	NAA	
	TPY	Average (Winter Day) ppd
Residential Construction	12.56	40.8
Commercial Construction	163.86	455.2
Road Construction	63.37	0.00
total	239.79	496.00

3.3.4 Residential Fuel Combustion (Home Heating)

Residential combustion consists of home heating through the use of woodstoves, fireplaces, fireplace inserts and central furnaces that burn coal, natural gas, liquefied petroleum gas (LPG), and distillate oil.

Activity Level

The measure of activity for home heating was gathered through a 2003 residential heating survey conducted by Northwest Research Group - Boise for DEQ. The survey was conducted using a random telephone dialing system that was programmed to use telephone prefixes for the towns in the NAA. The phone survey and US Department of Energy - Energy Information Administration Residential Energy Consumption Estimates for 1999 were used to determine that residential wood burning and distillate oil were the only sources of energy used in the NAA that had PM emissions of any significance. The PM₁₀ from LPG and natural gas use in all of Bonner County, where the NAA is located, are .223 TPY and 0.000528 TPY, respectively. Therefore, the small portion of users in the NAA is too small and only residential wood burning and heating with distillate oil were included in the emissions inventory.

Census data and an Idaho housing statistics report were used to determine the number of households in the NAA and to determine what the growth was between 1999 and the 2000 (1.6% increase). Since growth was negligible, the 2000 housing numbers from the Idaho report were used. A comparison was then done between total fuel oil sold in Idaho, which was taken from a US Department of Energy document mentioned above. The report listed 22,700,000 gallons of fuel oil used statewide in 1999, which was then divided by the total number of households that burn fuel oil in Idaho. This was then apportioned by fuel oil using households in Bonner County, for a total of 434,345.7 gallons used; then the 17% of fuel oil using households inside the NAA were taken into account and assigned 73,838.769 gallons of fuel oil consumed in the NAA in 1999. A PM₁₀ emission factor of 3.00 lbs/1000 gallons was then taken from FIRE 6.25, multiplied by the number of gallons used in the NAA and divided by 2000 to get PM₁₀ emissions of 0.111 TPY. This is also negligible, but since it reflects just that PM₁₀ emitted by users inside the NAA rather than all of Bonner County, it will be retained in the emissions inventory.

The activity level for residential wood heating is the amount of wood burned. In 2003, DEQ conducted a telephone survey of residential heating in the NAA. The survey included questions to estimate the number of households burning wood, the type of burning device and whether it was certified, how much wood was burned, the species of wood burned, and the results were applied to population of households in the NAA. The 1996 number of households from the Sandpoint SIP

was used along side 2000 census data to create a trend-line analysis from 1990 to 2000 in order to determine a total number of households in the NAA for 1999. It was determined using this methodology that there were 3,775 households in the NAA. The numbers collected in the wood heating portion of the 2003 survey were then used to calculate the number of wood burning households in the NAA. The survey revealed that 60% of households burn wood for heat and 4% burned wood pellets for space heating.

Wood burning device information is presented in Table 3-12.

Table 3-12: Wood and Pellet Burning Devices -- Number of Households

Device Type	Households with Device	Certified Devices (% of total)
Wood Stove	1,744	1,046 (60%)
Fireplace Insert	249	137 (55%)
Fireplace	294	
Furnace/Boiler	113	
Pellet Stove	151	
total	2,552	

Temporal Allocation, Emission Rates and Emissions Estimates

The 2003 survey gathered information on the wood type burned and the number of cords of wood burned by each household during the winter. The density of the wood type was used to calculate the weighted average mass in tons of each cord of wood based on the species and distribution reported in the survey. The results are in Table 3-13 below.

Table 3-13: Wood Usage and Average Mass

Type	% Burned	Weighted Average ton/cord
W. Larch/Tamarack	30.1%	0.348
Douglas Fir/Other Fir	25%	0.278
Lodgepole Pine	3.3%	0.030
White Pine/Other Pine	16.1	0.136
Alder/Cottonwood	1.4%	0.011
W. Hemlock	1.4%	0.014
Other -- hardwood	4.1%	0.052
Other -- unknown	18.3%	0.203
totals	100%	1.073

Next, the weighted average mass of wood (1.073 tons per cord) was applied to the population of wood burning devices. The 2003 survey indicated that wood stove owners burned 3.7 cords/year, those with fireplace inserts burned 7.5 cords/year and those with a fireplace burned 2.9 cords/year. This consumption data was used to calculate the tons of wood burned annually in the NAA. The same technique was used for the pellet stove households.

Table 3-14: Calculation of Wood Mass Burned by Device Type

Device	Number of Devices	Average Cords Burned per year	Total Number of Cords/year	Average Mass tons/cord	Tons Burned Annually
Conv./Uncertified Wood Stove	698	3.7	2581	1.073	2,769
Conv./Uncertified Insert	112	7.5	841	1.073	902
Certified Wood Stove	1,046	3.7	3872	1.073	4,154
Certified Insert	137	7.5	1028	1.073	1,103
Fireplace	294	2.9	854	1.073	916
Furnace/Boiler	113	6.2	702	1.073	753
totals	2,401		9,878		10,597

To obtain the annual PM₁₀ emissions, emission factors for wood heating devices were obtained from EPA's Emissions Inventory Improvement Program (EIIP), Volume IV, Chapter 2 and were applied to the mass of wood burned by each device type. All wood stoves were assumed to be non-catalytic since the survey did not distinguish between the two types and wood stove representatives said people wouldn't know the difference if asked. For this inventory, total tons wood was multiplied by the emissions factor for the device type to get 124.30 tons/year PM₁₀, as shown in the formula and Table 3-15 below.

$$TPY = (\text{tons burned/device-yr}) \times (\text{PM}_{10} \text{ lbs /T}) \times (\text{T}/2000 \text{ lbs})$$

Table 3-15: PM₁₀ Emissions by Wood Burning Device

Device Type	Wood Burned TPY	PM ₁₀ Emission Factor for Device in lbs/ton	PM ₁₀ Emissions TPY
Conv./Uncertified Wood Stove	2,769	30.6	42.37
Conv./Uncertified Insert	902	30.6	13.80
Certified Wood Stove*	4,154	14.6	30.32
Certified Insert	1,103	14.6	8.05
Fireplace	916	34.6	15.85
Furnace/Boiler	753	34.6	13.03
Pellet Stove - Certified	196	4.2	0.41
Pellet Stove - Exempt	106	8.8	0.47
totals	10,597		124.30

* It was assumed all wood stoves and inserts were non-catalytic Phase II

The average winter day calculations were based on a winter burning period of January through March, plus November and December of 1999. Heating degree days (HDD) were gathered from the Sandpoint Experimental Station¹⁹ for the NAA during those burn months, which equaled 4,420 in 1999. To get the HDD per day, 4,420 was divided by 151 (the number of days in the five burn months) to equal 29.3 HDD. The annual PM₁₀ emissions from wood burning were then divided by the total HDD for 1999 in the NAA (6,885) to get an emissions factor in tons-per-HDD. This factor was then applied to the 29.3 HDD per day for winter day emissions in pounds-per-day shown by the equation below and in Table 3-16.

$$(\text{PM}_{10} \text{ emissions TPY/annual HDD}) \times (29.3 \text{ HDD per winter day}) \times (2000 \text{ lbs/T}) = \text{Winter ppd}$$

Table 3-16: Winter Day Emissions from Residential Wood Heating

Wood Burning PM ₁₀ Emissions TPY	Annual Heating Degree Days (HDD)	Winter Day Average HDD	lbs/T	Average Winter Day PM ₁₀ Emissions in ppd
124.30	6,885	29.3	2,000	1057.95

3.3.5 Agricultural Burning, Prescribed Burns, and Wildfire

A monitoring data gap-fill was required during the approval process of the Limited Maintenance Plan option for the Sandpoint PM₁₀ NAA. An assessment of the acreage burned near the NAA had to be performed to ensure that the three weeks lacking monitoring data due to equipment failure were similar meteorologically and the burning/fire emissions were not above what would be considered normal for a given year.²⁰ Should the rainfall, inversions, winds, or acreage burned been higher than normal during this third quarter (high burn/fire season of July - September) for the year with the missing monitoring data, it would not have been possible for DEQ to substitute another year's monitoring numbers into the three-week data gap. This monitoring data was used in the calculation of design values used in the LMP determination.

The meteorological and acreage burned data DEQ gathered indicated that the year in question was average weather-wise and for all types of burning or fire. The data gap-fill was accepted by EPA and the LMP option was approved for the NAA. More importantly, the numbers for each year (2000-2003) revealed that there are a relatively small number of acres burned in all source types -- agricultural, prescribed, or wildfire burns -- near the NAA. Therefore, since the PM₁₀ issues in this NAA are a largely a fall/wintertime, inversion-related phenomenon, data from these types of burning were not calculated for this emissions inventory since they take place during summer and fall. The impacts from burning have never contributed to any exceedances in the Sandpoint NAA.

Table 3-17: Northern Idaho Third-Quarter Burning Activity Data 2000-2003²¹

Year	Agricultural Burning ^a		Prescribed Forest Burning ^b Airshed 11	Wildfires ^c Airshed 11
	Rathdrum Prairie	Coeur d'Alene Reservation		
2000	6,804	29,936	742	1,241
2001	6,869	30,730	0	59
2002	4,893	23,403	149	340
2003	3,842	24,422	335	47

a Acres burned from DEQ, ISDA and Coeur d'Alene Tribe annual reports for field burning.

b Acres burned in Airshed 11 from annual reports prepared by the MT/ID Airshed Group, Dave Grace email 8/4/04

c Wildfire acres burned for Airshed 11 (Sandpoint Ranger District and Pend Oreille Lake Supervisory Area) from USFS, Panhandle National Forest

3.3.6 Industrial/Commercial Area (Non-point) Sources

Within the NAA, five PM₁₀-producing businesses, all with the potential to emit less than 100 tons-per-year, were included in the 1999 base-year LMP inventory. These industrial/commercial facilities are listed as follows and also appear in Table 2-1 with their respective emissions:

Mineral processes:	-- Lake Pre-Mix Concrete
	-- Interstate Asphalt & Concrete
	▪ Concrete plant
	▪ Asphalt plant
	▪ Retail aggregate sales
Wood products:	-- Lignetics of Idaho
	-- L.D. McFarland
Health services:	-- Coffelt Funeral Services

Activity Level

Some of these facilities are mom-and-pop shops that can't afford to hire a contractor to complete a detailed DEQ survey for an emissions inventory project. Therefore, the activity level was calculated for each facility using maximum permit throughputs, maximum daily limits, or the maximum annual hourly thresholds specified in their individual permits. Because of the number of calculations made, each is not detailed here. These calculations are located in the Attachments.

DEQ believes using these methods provides a conservative estimate of the area source industrial PM₁₀ emissions. These estimates could be more refined with survey data, but this would have taken considerable resources for DEQ and the facilities, as well as additional time. The emissions from these smaller industrial sources are of lesser concern in the NAA since the only major facility located there has since been shut down and dismantled. Therefore, no effort was made to refine the industrial area sources, since at their maximum they make up just 15% of PM₁₀ emissions.

Emission Rates, Temporal Allocation and Emissions Estimates

The annual maximum PM₁₀ emissions were calculated for each point or activity at the facility using the facility's permit. The daily emissions were calculated in different methods dependent on whether there were daily production or emissions limits in the permit. In cases where there was a daily maximum allowed, the division by the number of days in a year (365) of the annual emissions into daily average emissions was not used. Instead, the daily maximum production allowed or emissions limit was used as the daily "high" or to calculate the worst-case winter day emissions. Examples and calculations of daily emissions for each facility are in the Attachments. One example for a point is below for the concrete plant at Interstate Asphalt & Concrete.

Emissions from the concrete batch plant were calculated using the maximum permitted throughput specified in the August 2, 1999, Operating Permit and AP42, Section 11.12 (October 2001) emission factors. The permit allows for the production of a maximum of 1400 yd³ of concrete per day and 70,000 yd³ of concrete per year. The AP42 emission factor for aggregate transfer to elevated storage is 0.0031 lb PM₁₀ per yd³ of concrete produced. To obtain annual PM₁₀ aggregate transfer emissions, the total cubic yards of concrete produced annually are multiplied by the emission factor for PM₁₀ to obtain the total pounds of PM₁₀ emitted. That number is divided by 2000 to obtain the total tons of PM₁₀ emitted by the transfer of aggregate to elevated storage bins. (See Area Source Spreadsheet, Interstate Concrete & Asphalt Tab, Line 4).

$(70000 * 3.10E-03) / 2000 = 0.1085$ tons per year PM_{10}

Table 3-18: Industrial/Commercial Area Source PM_{10} Emissions

	TPY	Season Day (winter) ppd
Interstate Asphalt & Concrete	3.81	107.30
Lake Pre-Mix Concrete	14.20	77.82
Lignetics of Idaho	45.45	249.02
L.D. McFarland Co.	6.08	59.62
Coffelt Funeral Services (Crematory)	.24	1.33
totals	69.78	495.09

4 PM_{2.5} Emissions Summary

The 1999 base year inventory included calculation of PM_{2.5} for the NAA because this criteria pollutant is of interest and is monitored along side PM₁₀ in Sandpoint. Again, the PM_{2.5} is an estimate of actual 1999 emissions representative of a typical PM_{2.5} season day. Annual emissions were also calculated. Both can be reviewed in Table 4-1 below.

Table 4-1: PM_{2.5} Emissions Summary for 1999

Category	TPY	Season Day (winter) ppd	%ppd
POINT SOURCES			
Louisiana-Pacific Sandpoint	75.72	414.90	21
AREA SOURCES			
Interstate Asphalt & Concrete	2.30	36.98	16
Lake Pre-Mix Concrete	2.58	14.15	
Lignetics of Idaho	40.95	224.37	
L.D. McFarland Co.	3.26	44.19	
Coffelt Funeral Services (Crematory)	.24	1.33	
Residential Combustion (wood & oil - heat)	124.41	1,059.00	53
Construction Dust	47.95	99.20	5
Paved & Unpaved Road Dust	43.29	80.93	6
ON-ROAD MOBILE			
On-road Mobile Sources	5.97	32.71	
TOTAL ALL SOURCES	346.67	2,007.76	101*

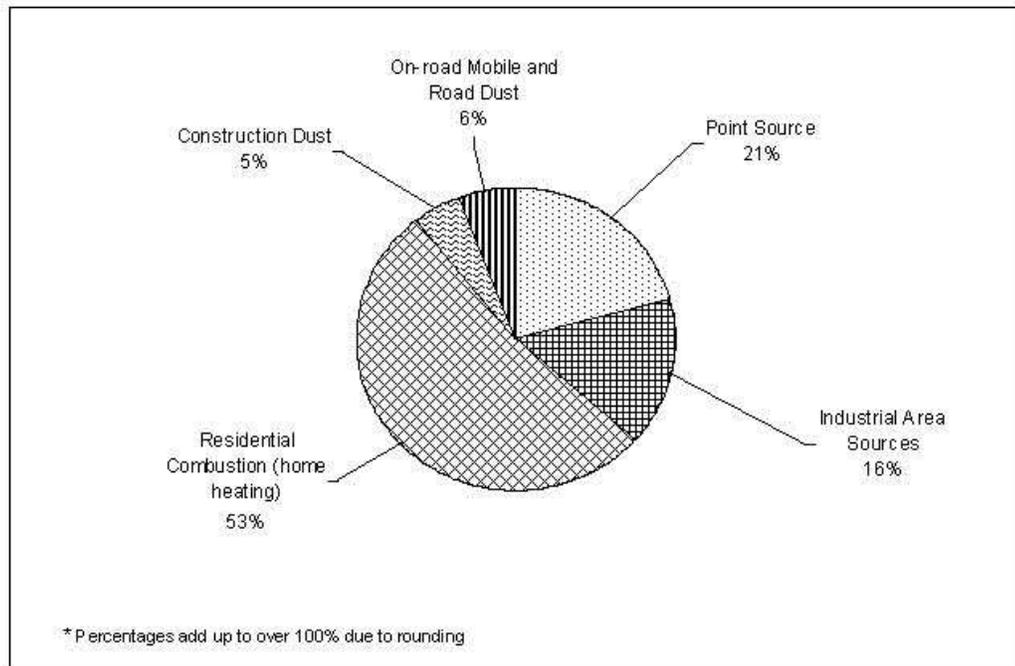
* Percentage is over 100 because of rounding

To estimate PM_{2.5} emissions, AP42 emission factors were applied to the point, process, or activity data whenever available. If AP42 PM_{2.5} emission factors did not exist for that activity, factors from other references were applied and explained in the data generation reports included as attachments to this document. In some instances, assumptions were made, such as 100% of PM₁₀ is PM_{2.5}. These assumptions are again explained in the Attachments.

Table 4-2: PM_{2.5} Emissions Estimation Methods

Category	PM _{2.5} Calculation Methodology	Assumption, if made
POINT SOURCES		
Louisiana-Pacific Sandpoint	Taken from EPA 1999 NEI	
AREA SOURCES		
Interstate Asphalt & Concrete	AP42 Emission Factors	
Lake Pre-Mix Concrete	AP42 Emission Factors	
Lignetics of Idaho	AP42 Emission Factors - road dust only	All other PM ₁₀ is PM _{2.5}
L.D. McFarland Co.	Fire6.25 Emission Factors - boiler only AP42 Emission Factors - road dust only	All other PM ₁₀ is PM _{2.5}
Coffelt Funeral Services (Crematory)		All PM ₁₀ is PM _{2.5}
Residential Combustion (wood & oil - heat)		All PM ₁₀ is PM _{2.5}
Construction Dust	Emission rate from Thesing/Huntley	
Paved & Unpaved Road Dust	AP42 Method	
ON-ROAD MOBILE		
On-road Mobile Sources	MOBILE6.2 Emission Factors	

Figure 4-1: Base Year 1999 Daily PM_{2.5} Emissions



5 Quality Assurance Report

The quality assurance (QA) plan for the 1999 emissions inventory was included as Section 8 in the Sandpoint PM₁₀ NAA. ²² Several specific QA checks were presented. A summary of these checks performed and a description of the inventory process with emphasis on quality control/assurance activities follows.

5.1 Inventory Process - Quality Control/Assurance Activities

The inventory process is divided into several tasks as follows: identification of significant PM₁₀ emissions sources, emissions data collection or estimation procedures, validation procedures, calculations, and seasonal/daily adjustments. Details for each significant source category are listed below.

5.1.1 Point Sources

Prioritization and Identification of Emissions Sources

One source with the potential to emit 100 tons of PM₁₀ was identified in the nonattainment area: Louisiana-Pacific Sandpoint. Experienced staff from DEQ identified the facility and the points within the source in our 1999 periodic emissions inventory and the 1999 NEI. It is believed that all sources and emissions points have been identified and taken into account for this LMP base-year inventory.

Collection Procedures

Every three years, DEQ conducts a periodic emissions inventory for EPA's NEI per the Code of Federal Regulations (40 CFR Part 51 - Consolidated Emissions Reporting Rule). The point source inventory is completed during this project. Each point source is surveyed independently for actual emissions from the calendar year of the inventory (e.g. 1999, 2002, and 2005). This data was quality assured, stored here at DEQ, and transferred to EPA for further quality assurance, gap-filling, and enhancement before release as the 1999 NEI. Both the DEQ and EPA NEI versions of the point source data from 1999 were used for Louisiana-Pacific Sandpoint for this base-year inventory.

Emission Estimations Procedures and Rule Effectiveness

Emissions are estimated in several ways during the periodic inventories. Valid estimation methods include: source test, material balance, AP42 and other EPA factors, non-AP42 factors, or engineering judgment. Data availability is one determining factor in method selection.

A small portion of the emissions at Louisiana-Pacific Sandpoint were estimated based on testing and therefore were not subject to rule effectiveness. Most of the actual emissions were estimated through EPA AP42 emission factors. Rule effectiveness was not applied since emissions calculations were based on in-use conditions.

Seasonal/Daily Adjustments

Emissions in pounds-per-day were calculated by dividing the individual emission point annual emissions by the number of hours/days each point operated. Where permit conditions restrict the use of this method, daily emissions were calculated using the maximum daily limits found in the permit, a worst case winter day, for example.

Geographical Allocation

Point sources in the NAA were not located in the area by use of UTM coordinates because of the small size of the NAA and no need for modeling of future year emissions in the LMP.

Validation Procedures

As stated under Collection Procedures, DEQ inventory and quality assurance staff has reviewed all data. This ensures reasonableness and consistency of data and the calculations performed. The quality assurance team member also checked 100% of all facility and DEQ calculations and checked the data again after it was transferred to a spreadsheet for use in this project. One emission factor discrepancy was found and corrected.

Measures to Avoid Double Counting as Area Sources

Louisiana-Pacific Sandpoint did not duplicate any of the area source categories.

5.1.2 Area Sources

Prioritization and Identification of Sources

There is no size cutoff for area sources. All source categories listed in the EPA's PM-10 Emission Inventory Requirements (September 1994) were inventoried or stated to be of little or no significance for this base-year 1999 project.

Collection Procedures

Area source data collection methods were mainly dictated by inventory constraints and by EPA guidance. With these considerations, the best methods were used. Where good local data was accessible, it was used and documented.

Emission Estimation Methods and Consistency of Application

Inventory methods were mainly chosen from EPA guidance including the Procedures Document for the 1999 National Emissions Inventory, and EPA's PM-10 Emission Inventory Requirements (September 1994). Methods are documented in the inventory text. Resource constraints, EPA guidance, and the relative importance of the source category within the NAA were considered when choosing an estimation methodology.

Calculations

Calculations are documented along with assumptions, engineering judgments, and references in the inventory text. Calculations for most of the area sources were done electronically. Emissions were calculated according to general EPA guidance and any deviation was documented in the inventory text.

Rule Effectiveness/Penetration

RE/RP was not applied to any area source because the state of Idaho has few or no rules regarding controls on area sources.

Seasonal Adjustment and Typical Day

Verified air quality data was used to determine the three month problematic PM₁₀ season (December - February). Seasonal allocation methods and any deviations from the Dec-Feb season are documented in the inventory text. The daily emissions were calculated in a number of different ways, but all were conservative in order to determine a worst-case winter day.

Geographical Allocation

The area sources, aside from roadway segments used to determine VMT, were not specifically pinpointed, located using GIS or spatial surrogates, or placed using local agency knowledge. The NAA is only 15-square-miles in size and there is no future year modeling to be done for the LMP.

Validation Procedures

Quality control and spot checks were completed by the data generators to ensure reasonableness and consistency of data and calculations while they were performed and the inventory was being completed, as well as during proofing of the draft through a peer review process. Some consistency checks include: year of data, sample-checking calculations, verifying spreadsheet formulas, look-ups of emissions factors, and reviewing methodologies used. The quality assurance team member then checked 100% of all DEQ area source calculations and emission factors. Any discrepancies were sent back to the data generators for correction or adjustment and were then sent back through the quality assurance team member for double-check.

Measures to Avoid Double Counting as Area Sources

There was no overlap between sources so double-counting was not an issue.

5.1.3 On-road Mobile Sources

Estimating emissions from on-road mobile sources required developing emission factors to be used with vehicle miles traveled data. The Idaho Transportation Department supplied VMT estimates. The focus of QA was on the MOBILE6.2 emission factor modeling and the combination of the emissions factors with the VMT data.

Prioritizing Sources and Data Elements

MOBILE6.2 allows the substitution of local data for national default data. The model year registration distribution and diesel fuel sulfur content affect particulate emissions, and may be locally derived. The fleet-mix inputs were kept as national defaults while the fuel sulfur content was adjusted to match Idaho fuel parameters were provided by Chevron, WRAP, and Sierra Research from analysis of the fuel survey.

Emission Estimation Methods and Consistency of Application

Use of MOBILE6.2 is documented in the inventory report text. The input file was provided in the inventory reports in the Attachments. The use of MOBILE model-generated emission factors and VMT data are also explained in the inventory text.

Calculations

Emissions calculations and seasonal allocations were performed electronically.

Seasonal Adjustment and Typical Day

Verified air quality data was used to determine the three month PM₁₀ season (December - February) for the NAA. All seasonal allocation methods and factors are documented in the inventory text. The roadway segment data provided by the ITD represented a typical day, so no daily adjustment was necessary. A seasonal adjustment was made in the model using different meteorological data averages.

Geographical Allocation

Roadway segment counter data (AADT) was provided for the NAA by ITD and allocated to the roads in the NAA using GIS.

Validation Procedures

Spot checks to ensure reasonableness, consistency of data and accuracy of calculations were performed as the inventory was being completed and during proofing of the draft. Checks performed by the quality assurance team member included 100% of the following: MOBILE6.2 input files, seasonal and local traffic scenarios, output datasets, VMT calculations, emissions calculations, and any corrective actions sent back to the data generator when they were returned for double-check.

5.2 Summary of Quality Checking Procedure

5.2.1 Inventory Preparation Plan Adherence, Reality/Peer Review and Sample Calculations

The inventory source category list in the inventory preparation plan was checked against the inventory for inclusion of all appropriate source categories. Information sources and emissions estimation methods specified in the inventory preparation plan were also checked against the inventory. Reality/peer review, and sample calculation checks were performed on the final inventory as specified in the quality assurance plan.

Wherever possible, the inventory preparation plan had been followed. For all sources, the methods, data, and inventory assumptions were judged reasonable. Checking 100% of all emissions calculations verified inventory results. The checking procedure brought out errors in the inventory and areas where the text could be improved. Follow-up corrective actions were taken and were sent back through quality assurance and peer review.

5.2.2 Comparability Analysis

An emission inventory comparison with the Sandpoint 1993 SIP base year inventory was completed as specified in the quality assurance plan. The check involved comparing the base year 1999 inventory to the 1993 SIP base year inventory completed in 1993 and 1994. More detailed information on the emissions estimates can be found in the inventory report text.

Comparison Discrepancies - Base Year 1999 to 1993 SIP Base Year

The 1999 base year inventory for the LMP was compared to the SIP base year inventory for Sandpoint, 1993. There were notable differences in the inventories that affect the comparison: 1) the base year inventory was for year 1999, while the SIP inventory was for 1993; 2) the base year inventory was for the nonattainment area, while the 1993 inventory was for the city limits of distinct, nearby towns in the regions, 3) there were some differences in sources inventoried, and 4) the methods of calculating source data were different in places.

To compare the two inventories, the sources the inventories had in common were examined. A brief explanation is given for discrepancies involving sources in the two inventories. Six source categories were identified under these criteria: point sources, industrial area sources, residential combustion for home heating, paved and unpaved fugitive road dust, on-road mobile emissions, and fugitive construction dust. Agricultural tilling was dropped since the 1999 inventory did not look at this source because it is negligible, and point and industrial area sources were combined in the 1993 inventory.

Point Sources: Louisiana-Pacific Sandpoint is the largest industrial source of PM₁₀ in both inventories. Between 1993 and 1999, the difference is largely in methodology -- the 1999 inventory includes PM₁₀-primary (filterable + condensable), while the 1993 only has the filterable portion. This resulted in a large increase in PM₁₀ emissions. This equates to nearly 50 tons per year of additional PM₁₀ -- 55 TPY v. 103 TPY.

Industrial Area Sources: There are five in the 1999 inventory and only four in the 1993 inventory. Coffelt Crematory was added for the 1999 project, but the PM₁₀ emissions are under 1 TPY. A differing methodology again contributed to a perceived increase in emissions. The area industrial sources were not individually surveyed for 1999 actual emissions. Their permit limits were taken and maxed out for their 1999 contribution. This method was used to ensure the facilities did not encounter financial hardship since several are small family owned operations that cannot afford to hire consultants to help them get through an exercise like this. Using the permit limit maximum emissions equates to nearly 35 TPY of additional PM₁₀ -- 69 TPY (1999) v. 35 TPY (1993).

Residential Combustion: The population and number of household grew in the NAA between 1993 and 1999 and a new, more accurate home heating survey was conducted for wood usage and other combustion activity. This new survey showed an increase in the number of households burning wood to heat their homes in 1999. The increased use of wood stoves and inserts is possibly from the rising price of electricity and natural gas between 1993 and 1999, or it stems from the call-back mechanism used in the automated calling used for the 1999 survey. The 1999 inventory showed an increase of about 25 TPY of wood burning PM₁₀ emissions in the NAA.

Road Dust: The NAA contains approximately 100 miles of roads. All are paved with the exception of a 0.9 mile stretch of unpaved road. The 1999 base year inventory was calculated using the AP42 equation but trip counts/VMT were calculated using ITD counter data rather than a grid-box system based on households per box and average number of occupants. The new method appears to be more accurate. The VMT estimates were reviewed by people that run travel demand models and met with their approval for this area and the type of roadways. Several control measures were put in place in the 1996 SIP, to include the following: reduced fines in the traction sand used, spreading of 50% less traction sand, street sweeping of 100% of roadways when streets would allow, and the use of liquid de-icer on the main arterial through the NAA. These controls created a reduction in the road dust emissions of around 90 TPY, though VMT increased.

Construction Dust: The methodology in the 1993 inventory was unclear for this source. For 1999, we used the Thesing/Huntley memo plus construction permits issued to calculate the fugitive from all forms of construction in the NAA. One thing that was clear in the 1993 project, road construction dust numbers were not included. Therefore, the 1999 inventory appears to have used a more conservative method of calculation (Thesing/Huntley) and added the dust from road construction. The change in population, methodology, and the addition of road construction provide a nearly 180 TPY increase in construction dust.

On-road Mobile Sources: MOBILE6.2 was used to determine the emissions factors and the VMT estimates were derived from counter data gathered from ITD. The newer fleet created a reduction in on-road emissions of nearly 10 TPY, though VMT had increased in the NAA.

The comparison can be seen below in Table 5-1 and Table 5-2.

Table 5-1: Comparison of Annual PM₁₀ Emissions - 1999 Inventory to 1993 Inventory

Source Category	1993	Source Category	1999
	PM ₁₀ Emissions (TPY)		PM ₁₀ Emissions (TPY)
Residential Wood Burning	97.00	Residential Wood Burning	124.41
Construction Dust	63.40	Construction Dust	239.79
Industrial Sources	90.00	Industrial Area Sources	69.98
Agricultural Tilling	0.05	Industrial Point Sources	102.73
Road Dust	305.10	Road Dust	214.76
On-Road Mobile Sources	18.30	On-Road Mobile Sources	7.79

Table 5-2: Winter Day PM₁₀ Emissions - 1999 Inventory to 1993 Inventory

Source Category	1993	1999
	PM ₁₀ Emissions (ppd)	PM ₁₀ Emissions (ppd)
Industrial Sources	686.00	1,057.99
Residential Combustion (wood & oil - heat)	2,881.00	1,059.00
Construction Dust	469.00	496.00
Paved & Unpaved Road Dust	2,210.00	624.22
On-road Mobile Sources	110.00	43.11
TOTAL ALL SOURCES	6,356.00	3,280.32

Assessment of Sensitivity Analysis and Inventory Limitations

Table 2-1 shows the emissions sources and their contributions to the PM₁₀ inventory. The inventory ranking shows that residential wood heating and construction dust are now the largest contributors to the daily inventory. Also significant are fugitive emissions from roads and existing industrial sources at the time. During the summer season when there is a curtailment of woodstove burning and no inversions present that trap pollutants in the valley, the mix of sources changes. This truly limits or shows a weakness in the "typical" day, nonattainment area approach that is required for a base year inventory.

5.3 Conclusion

Overall, the inventory accuracy, completeness and comparability objectives were met. All estimates were calculated and documented using accepted methods (accuracy). All source categories in the IPP were included in the inventory, and all information required to estimate emissions was present (completeness). Data was comparable with the 1993 SIP inventory and even exceeded it in scope. The increase of PM₁₀ exhibited in the 1999 base year inventory in certain sources is negated by the decrease in wintertime, problem period emissions through the use of controls.

6 References

- ¹ <http://www.census.gov/> (for calendar-year 2000 census data). February 26, 2003.
- ² Memorandum from Valerie Greear, Engineer in Training - IDEQ Technical Services Division to Christopher Ramsdell, Monitoring & Emissions Inventory Coordinator - IDEQ Air Division. October 28, 2005. Subject: Sandpoint Nonattainment Area Mobile Source Emissions Report.
- ³ Memorandum from Valerie Greear, Engineer in Training - IDEQ Technical Services Division to Christopher Ramsdell, Monitoring & Emissions Inventory Coordinator - IDEQ Air Division -- Attachment L. October 28, 2005. Subject: Sandpoint Nonattainment Area Mobile Source Emissions Report.
- ⁴ PM10 Air Quality Improvement Plan for Sandpoint, Idaho - Final Revision. Idaho Department of Health & Welfare, Division of Environmental Quality. August 1996.
- ⁵ Technical Support Document - PM10 SIP Revision for Sandpoint, Idaho. Provided by Donna Dencen Region 10 - EPA. Dated May 28, 2002.
- ⁶ "Emissions Inventories and Proper Use of Rule Effectiveness." September 23, 1998. Memorandum from EIIP Point Sources Committee Members to EIIP Steering Committee Members. September 23, 1998.
- ⁷ DEQ Periodic Emissions Inventory point source database, 1999.
- ⁸ MOBILE6.2. US Environmental Protection Agency. Draft model released Nov. 12, 2002.
- ⁹ Memorandum from Valerie Greear, Engineer in Training - IDEQ Technical Services Division to Christopher Ramsdell, Monitoring & Emissions Inventory Coordinator - IDEQ Air Division -- Attachment K. October 28, 2005. Subject: Sandpoint Nonattainment Area Mobile Source Emissions Report.
- ¹⁰ Memorandum from Valerie Greear, Engineer in Training - IDEQ Technical Services Division to Christopher Ramsdell, Monitoring & Emissions Inventory Coordinator - IDEQ Air Division -- Attachment G. October 28, 2005. Subject: Sandpoint Nonattainment Area Mobile Source Emissions Report.
- ¹¹ Report: Sandpoint PM10 Nonattainment Area Attainment Determination - Exceptions to Data Requirements for Determining Attainment of PM Standards -, August 5, 2004.
- ¹² Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources. AP42. Section 13.2.1 (12/03).

- ¹³ Part5 Information Sheet #1: Fleet Average Fugitive Dust; Fugitive Dust Emission Factors; Particle Size Cutoff Limitations. <http://www.epa.gov/otaq/models/part5/p5info1.pdf>.
- ¹⁴ Climate Summary - Precipitation. Spokane National Weather Service. 1997-2001 precipitation data. <http://www.wrh.noaa.gov/otx/climate/lcd/lcd.php>.
- ¹⁵ PM10 Air Quality Improvement Plan for Sandpoint, Idaho. Idaho Department of Health and Welfare - Division of Environmental Quality. August 1996.
- ¹⁶ Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources. AP42. Section 13.2.2 (12/03).
- ¹⁷ Unpaved Roads Surface Material Silt Content Values Used in the 1999 NEI. EH Pechan & Associates, Maureen Mullen.
- ¹⁸ Open Burning and Construction Activities: Improved PM Fine Emission Estimation Techniques in the National Emissions Inventory. US Environmental Protection Agency; Kirstin Thesing and Roy Huntley.
- ¹⁹ <http://snow.ag.uidaho.edu:8642/FMPro> (for Heating Degree Days in Sandpoint NAA).
- ²⁰ Report: Sandpoint PM10 Nonattainment Area Attainment Determination - Exceptions to Data Requirements for Determining Attainment of PM Standards -, August 5, 2004.
- ²¹ Report: Sandpoint PM10 Nonattainment Area Attainment Determination - Exceptions to Data Requirements for Determining Attainment of PM Standards -, August 5, 2004.
- ²² Inventory Preparation Plan for the Sandpoint PM₁₀ Nonattainment Area Limited Maintenance Plan. Idaho Department of Environmental Quality - Air Quality Division. September 22, 2004.

7 Attachments (Data Generator's Reports)

- I. Point Sources: Louisiana-Pacific Sandpoint (taken from 1999 Periodic Inventory)
- II. Area Sources: Industrial Sources - Mineral Products
- III. Area Sources: Industrial Sources - Wood Products
- IV. Area Sources: Industrial Sources - Health Services
- V. Area Sources: Miscellaneous Area Sources - Windblown Construction Dust
- VI. Area Sources: Miscellaneous Area Sources - Residential Fuel Combustion
- VII. Mobile Sources & Road Dust: Sandpoint Nonattainment Area Mobile Source Emissions
- VIII. Quality Assurance: Base-year 1999 Emissions Inventory Quality Assurance Report

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Appendix C Motor Vehicle Regional Analysis

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Motor Vehicle Regional Analysis

The following calculations were performed to demonstrate that increased emissions from on-road mobile sources, in the next ten years, would not increase particulate matter concentrations in the Sandpoint nonattainment area to levels that would threaten the assumption of maintenance that underlies the LMP policy.

The following equation from Attachment B of the Wegman Memo was used for this analysis:

$$DV + (VMT_{pi} * DV_{mv}) < MOS$$

Where:

- DV** = The area's design value, in $\mu\text{g}/\text{m}^3$, based on the most recent 5 years of quality assured data
- VMT_{pi}** = The projected % increase in vehicle miles traveled (VMT) over the next 10 years
- DV_{mv}** = The motor vehicle design value in $\mu\text{g}/\text{m}^3$, based on the on-road mobile portion of the attainment year inventory. It is calculated by multiplying DV by the fraction of the attainment year inventory represented by on-road mobile sources.
- MOS** = The margin of safety for the relevant PM10 standard for a given area ($40 \mu\text{g}/\text{m}^3$ for the annual standard or $98 \mu\text{g}/\text{m}^3$ for the 24-hour standard)

The DVs for Sandpoint for the years 2004 through 2008 are:

$$DV_{\text{annual}} = (17 + 19 + 18 + 16 + 15)/5 = 17 \mu\text{g}/\text{m}^3$$

$$DV_{\text{24-hour}} = (79 + 78 + 68 + 53 + 78)/5 = 71 \mu\text{g}/\text{m}^3$$

Using the 2007-2030 VMT growth factor, expressed as a percentage (available on EPA's Technology Transfer Network (<http://www.epa.gov/ttn/naaqs/ozone/areas/vmtidgf.htm>), the resulting expected increases in particulate matter concentrations are:

$$17 + [0.456 * (7.8/760 * 17)] = 17.1 \mu\text{g}/\text{m}^3 < 40 \mu\text{g}/\text{m}^3$$

$$71 + [0.456 * (43/3280 * 71)] = 71.4 \mu\text{g}/\text{m}^3 < 98 \mu\text{g}/\text{m}^3$$

Therefore, the Sandpoint nonattainment area passes the regional analysis criteria for both the annual and 24-hour PM₁₀ standards.

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Appendix D City Ordinance:

1. Sandpoint City Code Title 4, Chapter 8 showing changes to Ordinance 965
2. Ordinance 1258 passed by Sandpoint City Council September 21, 2011

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Sandpoint City Code Title 4, Chapter 8 showing changes to Ordinance 965

City Ordinance 965 was modified on July 21, 2010 (Ordinance 1237) and September 21, 2011 (Ordinance 1258). Following is Sandpoint City Code with Underline and Strikeout showing differences between the Ordinance listed in Idaho's SIP and current City Code (http://www.sterlingcodifiers.com/codebook/index.php?book_id=437):

4-8-1: DEFINITIONS:

AIR POLLUTION: The presence in the outdoor atmosphere of any contaminant or combinations thereof in such quantity or of such nature and duration and under such conditions as would be injurious to human health or welfare, to animal or plant life, or to property, or to interfere unreasonably with the enjoyment of life or property.

BUILDING: Any structure, dwelling, office, industrial plant, garage, or barn, whether publicly or privately owned or any other structure as defined by the building code as adopted by [title 8, chapter 1](#) of the ~~Sandpoint~~ this code.

BURN DOWN: That period of time following an air pollution alert required for the cessation of combustion within any solid fuel heating appliance or any outdoor fires or burning or incineration included within this ~~ordinance~~ chapter.

CLEAN BURNING APPLIANCE: A solid fuel heating appliance that ~~has EPA Phase II approval~~ is EPA certified and has been placed on the list of approved clean burning appliances maintained by the city building inspector.

ECONOMIC HARDSHIP: Fifty percent (50%) or less of Sandpoint's median income as established by the U.S. department of housing and urban development.

~~**HEAT OUTPUT:** The BTU/hour output of a solid fuel heating appliance measured under testing criteria as adopted by the city building department.~~

OPEN BURNING: The combustion of any material not contained in a heating appliance or incinerator.

PARTICULATE MATTER: Gasborne particles resulting from incomplete combustion, consisting predominately, but not exclusively, of carbon and other combustible matter.

REFUSE: All solid wastes, garbage and rubbish, including, but not limited to, cardboard, plastic, rubber, styrofoam, petroleum products, foodstuff, Christmas trees, yard debris or chemically treated wood.

REFUSE INCINERATOR: Any device designed or operated to reduce the volume of refuse. Natural gas fired pathological incinerators are excluded.

SOLE SOURCE: One or more solid fuel heating devices which constitute the only source of heat in a building for the purpose of space heating. No solid fuel heating device(s) shall be the sole source of heat if the building is equipped with a permanently installed furnace or heating system designed to heat the building that is connected or unconnected from its

energy source, utilizing oil, natural gas, electricity or propane.

SOLID FUEL: Nonliquid combustible material including wood, coal, pressed logs, pellet fuel, but excluding items defined herein as "refuse".

SOLID FUEL HEATING APPLIANCE: An enclosed device designed for solid fuel combustion that is EPA Phase II approved certified. Explicitly excluded are furnaces, boilers, cook stoves, masonry heaters and open fireplaces.

~~**WEIGHTED AVERAGE:** The weighted average of the test results of the distribution of the heating needs in the City of Sandpoint as calculated by the building department.~~

WORKING DAY: Monday through Friday. (Ord. 965, 2-21-1995; amd. Ord. 1237, 7-21-2010)

4-8-2: AIR QUALITY DESIGNATIONS AND ADVISORY ALERT CRITERIA:

- A. The quality of Sandpoint's air shall be determined by monitoring pollutant levels with equipment and methods approved by the Idaho State Air Quality Bureau department of environmental quality.
- B. The quality of Sandpoint's air shall be designated according to the following table—“PM10” indicates particulate matter with an aerodynamic diameter less than or equal to 10 micron:

HEALTH EFFECT DESIGNATION	PM10 CONCENTRATIONS 24 HOUR (UG/M3)
Good	0—50
Moderate	51—150
Unhealthful	151—350
Very Unhealthful	351—420
Hazardous	>420

Health Effect Designation	Air Quality Index Value ¹
Good	0 _ 50
Moderate	51 _ 100
Unhealthy for sensitive groups	101 _ 150
Unhealthy	151 _ 200
Very unhealthy	201 _ 300
Hazardous	301 _ 500

Note:

1. An air quality index is applicable to all pollutants and is the EPA nationally recognized pollutant reporting system.

- C. In order to prevent the existence of air quality that is ~~unhealthful, an air pollution "alert" will be declared whenever the Idaho State Air Quality Bureau measures levels of PM 10 concentrations exceeding 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and forecasts air stagnation and conditions continuing for at least twenty four (24) hours unhealthy for sensitive groups and a potential exceedance of national ambient air quality standard for particulate matter a "yellow" air pollution "advisory" will be declared whenever:~~
1. The Idaho department of environmental quality ("DEQ") measures or forecasts levels of particulate matter concentrations exceeding 75% of the National Ambient Air Quality Standard, or
 2. Forecasted air stagnation and conditions are expected to continue for at least twenty four (24) hours, or
 3. When a "stage one" forecast and caution is declared by DEQ for particulate concentrations in accordance with the Air Pollution Emergency Rule IDAPA 58.01.01.556.01. (Ord. 1237, 7-21-2010)

4-8-3: PUBLIC NOTIFICATION:

Whenever ~~air pollution alert conditions are met~~ an air quality advisory is issued, local print, radio, and television news media will be notified. Announcements of the existence of an air pollution "alert" will be made by the news media during regularly scheduled broadcasts and in all editions of the official newspaper of the city of Sandpoint. (Ord. 1237, 7-21-2010)



4-8-4: BURNING SOLID FUEL OR REFUSE:

- A. No person shall cause or allow refuse or coal to be burned in a solid fuel heating appliance designed for wood fuel at any time, regardless of advisory condition. (Ord. 1237, 7-21-2010)
- B. No person shall cause or allow a refuse incinerator to be operated contrary to design specifications and manufacturers' instructions. (Ord. 965, 2-21-1995)

4-8-5: AIR QUALITY ADVISORY; ADDITIONAL RESTRICTIONS:

At the onset and during the pendency of a declared air quality ~~"alert"~~ "advisory", the following additional restrictions shall apply:

- A. No person shall cause or allow, after a three (3) hour "burn down" period, the operation of a solid fuel heating appliance or open fireplace, unless an exemption has been granted by the building department.

- B. No person shall cause or allow the operation of a solid waste incinerator.
- C. No person shall cause or allow open burning of refuse. (Ord. 1237, 7-21-2010)

4-8-6: AIR QUALITY ALERT EXEMPTIONS:

- A. The building department shall grant exemptions from this ~~ordinance~~-chapter if it is directed by the building inspector or his designated representative that:
 - 1. A solid fuel heating appliance is the sole source of heat for the building in which it is situated; or
 - 2. Using alternative heating would cause an unreasonable economic hardship; or
 - 3. The solid fuel heating appliance is listed by the building department as a clean burning appliance.
- B. Any person denied an exemption under this chapter shall be provided, at the option of the applicant for exemption, a hearing before the city council as provided for in this chapter.
- C. Any building constructed after the effective date of this chapter shall not be eligible for an exemption under subsections A1 and A2 ~~above~~-of this section. (Ord. 965, 2-21-1995)



4-8-7: SOLID FUEL HEATING APPLIANCE PERMITS:

- A. It shall be unlawful for any person in the city of ~~Sandpoint~~ to install a solid fuel heating appliance in any new or existing structure until first procuring from the building department a solid fuel heating appliance permit. Permit fees shall be set by resolution adopted by the ~~Sandpoint~~-city council. (Ord. 965, 2-21-1995)
- B. It shall be unlawful ~~on or after July 1, 1995~~ for any person in the city of ~~Sandpoint~~ to advertise for sale, offer to sell, or sell, for installation in any new or existing building, or to install or allow to be installed in any new or existing building, a solid fuel heating appliance which has not been certified as clean burning by the United States environmental protection agency (EPA). (Ord. 1237, 7-21-2010)

4-8-8: DENIAL OF PERMIT OR EXEMPTION:

Upon showing of sufficient cause to believe that grounds exist for denial of a permit, or exemption of the rules and regulations of the building department, as provided for in this chapter, the building inspector or his designated representative may deny said permit or exemption by:

- A. Notifying the applicant by certified mail, personal service, or substituted service of the grounds for said denial and of the applicant's opportunity to appeal said denial to the Sandpoint-city council.
- B. Failure of a person to actually receive a notice sent or served shall not invalidate the denial.
- C. The applicant, upon receiving notice of the denial, may appeal said denial by making application for a hearing before the Sandpoint-city council within ten (10) working days of receipt of above notice. (Ord. 965, 2-21-1995)

4-8-9: DENIAL HEARING AND DETERMINATION BY THE CITY COUNCIL:

The hearing shall be before the Sandpoint-city council. At such hearing the applicant may present evidence, call witnesses and be represented by counsel. Within ten (10) working days after the date of the hearing, the city council shall either:

- A. Uphold the denial by the building inspector or his designated representative; or
- B. Allow the issuance of the permit or exemption with modifications or conditions as the council may impose, such modifications or conditions to be reasonably related to the use of the permit or exemption. (Ord. 965, 2-21-1995)

4-8-10: APPEAL OF DECISION OF THE BOARD:

The decision of the city council on a denial shall be final and conclusive. Appeal from a decision of the council must be made to the district court for Bonner County. (Ord. 965, 2-21-1995)

4-8-11: MINIMUM STANDARDS FOR CLEAN BURNING APPLIANCES:

- ~~A. In no event shall the standards for clean burning solid fuel heating appliances allow a weighted average particulate emissions greater than:

 - ~~1. For a new clean burning solid fuel heating appliance with a minimum heat output of less than 40,000 Btu per hour when tested pursuant to procedures approved by the building department:

 - ~~a. 7.5 grams per hour for a non-catalytic solid fuel heating appliance.~~
 - ~~b. 4.1 grams per hour for a catalytic solid fuel heating appliance.~~~~
 - ~~2. Clean burning solid fuel heating appliances with a minimum heat output of greater than 40,000 Btu per hour shall not exceed an average particulate~~~~

~~emission standard equal to the sum of 8.0 grams per hour plus 0.2 grams per hour for each thousand Btu per hour heat output.~~

- A. Appliances shall meet the requirements of the code of federal regulations title 40, part 60, subpart AAA, "standards of performance for new residential wood heaters". (Ord. 1237, 7-21-2010)
- B. The building department shall maintain a list of appliances certified to be clean burning. (Ord. 965, 2-21-1995)

4-8-12: REPEAL OF PRIOR ORDINANCES AND CODE SECTIONS IN CONFLICT:

~~Any and all prior and existing ordinances and code sections of the revised municipal code of the city of Sandpoint in conflict herewith be and are hereby repealed. (Ord. 965, 2-21-1995)~~

4-8-13: SEVERABILITY:

~~If any portion of this chapter is held invalid, it is the intent of the city of Sandpoint that such part shall be deemed severable and the invalidity shall not affect the remaining portions of this chapter. (Ord. 965, 2-21-1995)~~

4-8-14: VIOLATION; PENALTY:

A first violation of a provision of this chapter shall be charged as an infraction. The court may assess a fine pursuant to Idaho Code section 18-113A. Each day that a responsible party(ies) allows burning or incineration to continue on property under his or her control may be a separate violation. A new or subsequent violation within two (2) years may be charged as a misdemeanor with penalties pursuant to Idaho Code section 18-113. (Ord. 1237, 7-21-2010)

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Ordinance 1258 passed by Sandpoint City Council
September 21, 2011

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ORDINANCE NO. 1258

AN ORDINANCE OF THE CITY OF SANDPOINT, A MUNICIPAL CORPORATION OF THE STATE OF IDAHO; AMENDING TITLE 4, CHAPTER 8, SANDPOINT MUNICIPAL CODE; PROVIDING FOR CHANGES TO AIR QUALITY DESIGNATIONS AND ADVISORY ALERT CRITERIA; PROVIDING THAT THESE PROVISIONS SHALL BE DEEMED SEVERABLE; PROVIDING FOR PUBLICATION AND AN EFFECTIVE DATE.

WHEREAS: The City has adopted regulations regarding air quality to protect the environment and enhance the living conditions of the citizens of Sandpoint;

WHEREAS: The U.S. Environmental Protection Agency ("EPA") has determined that particulate levels should be monitored, and when they are expected to exceed healthy levels, an air advisory is to be declared;

WHEREAS: Portions of the current City Code are outdated and must be amended to allow the EPA to change the City's current non-attainment status; and

WHEREAS: The Sandpoint Mayor and City Council find it in the public interest to amend the Sandpoint City Code so as to maintain the Code's currency.

NOW, THEREFORE, be it ordained by the Mayor and City Council of the City of Sandpoint:

Section 1: Statement of Purpose

The purpose of these amendments is to update and refine the City of Sandpoint City Code to make it consistent with EPA air quality standards.

Section 2: That Section 4-8-2 C be and the same is hereby amended to read as follows:

~~C. In order to prevent the existence of air quality that is unhealthy for sensitive groups and a potential exceedance of national ambient air quality standard for fine particulate (PM2.5), a "yellow" air pollution "advisory" will be declared whenever:~~

~~1. The Idaho department of environmental quality ("DEQ") measures levels of PM2.5 concentrations exceeding DEQ air quality advisory program limits, or~~

~~2. Forecasted air stagnation and conditions are expected to continue for at least twenty-four (24) hours, or~~

~~3. When a "stage one" forecast and caution is declared by DEQ for particulate concentrations reaching or forecasted to reach and persist at or above levels indicated in IDAPA 58.01.01.556.01.~~

ORDINANCE NO. 1258

C. In order to prevent the existence of air quality that is unhealthy for sensitive groups and a potential exceedance of national ambient air quality standard for particulate matter, a "yellow" air pollution "advisory" will be declared whenever:

1. The Idaho Department of Environmental Quality ("DEQ") measures or forecasts levels of particulate matter concentrations exceeding 75% of the National Ambient Air Quality Standard, or

2. Forecasted air stagnation and conditions are expected to continue for at least twenty four (24) hours, or

3. When a "stage one" forecast and caution is declared by DEQ for particulate concentrations in accordance with the Air Pollution Emergency Rule IDAPA 58.01.01.556.01.

Section 3: Repeal and Severability

A. That any provision of the Sandpoint City Code found to be inconsistent with this Ordinance be and the same is hereby repealed.

B. Should any provision of this ordinance be deemed unlawful or unconstitutional, such finding shall not affect the remaining provisions of this ordinance.

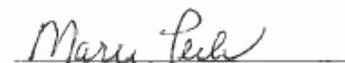
Section 4: Effective Date

This Ordinance shall be in full force and effect from and after its passage, approval, and publication according to law.

PASSED BY THE CITY COUNCIL as an ordinance of the City of Sandpoint on this 21st day of September, 2011.


GRETCHEN A. HELLAR, MAYOR

ATTEST:


MAREE PECK, CITY CLERK

SUMMARY OF ORDINANCE NO. 1258

Air Quality

AN ORDINANCE OF THE CITY OF SANDPOINT, A MUNICIPAL CORPORATION OF THE STATE OF IDAHO; AMENDING TITLE 4, CHAPTER 8, SANDPOINT MUNICIPAL CODE; PROVIDING FOR CHANGES TO AIR QUALITY DESIGNATIONS AND ADVISORY ALERT CRITERIA; PROVIDING THAT THESE PROVISIONS SHALL BE DEEMED SEVERABLE; PROVIDING FOR PUBLICATION AND AN EFFECTIVE DATE.

SECTION 1 provides a statement of purpose; SECTION 2 amends Sandpoint City Code Section 4-8-2 C; SECTION 3 provides for repeal and severability; and SECTION 4 provides an effective date.

The full Ordinance is on file with the Sandpoint City Clerk and will be promptly provided during regular business hours to any citizens on personal request.

Dated this 21st day of September, 2011.



Maree Peck, City Clerk

Published September 30, 2011

STATEMENT OF LEGAL ADVISER

I, Scot Campbel, legal adviser for the City of Sandpoint, Idaho, have examined the foregoing summary of Sandpoint Ordinance No. 1258, and find it to be a true and complete summary of said ordinance, which provides adequate notice to the public of the contents thereof.



Scot Campbell, City Attorney

AFFIDAVIT OF PUBLICATION

LETTING FOR THE STATE OF IDAHO

STATE OF IDAHO)
) ss.
County of Bonner)

Jerry Albert, being first duly sworn on oath, deposes and states:

1. I am a citizen of the United States of America, over the age of 18 years, a resident of Bonner County, Idaho, and am not a party to the proceedings referred to in the attached Ordinance no. 1358. My business address is P.O. Box 159, Sandpoint, Idaho.
2. I am the bookkeeper of the Bonner County Daily Bee, a newspaper of general publication in Bonner County, Idaho;
3. Said newspaper has been continuously and uninterruptedly published in Bonner County, Idaho during a period of 12 months prior to the first publication of said Notice, and thereafter.
4. The attached Notice was published in the regular and entire issue of the Bonner County Daily Bee for a period of 14 consecutive weeks, commencing on the 30th day of Sept., 2011, and ending on the 30th day of Sept., 2011.

Jerry Albert

State of Idaho, county of Bonner ss.
On this 30 day of Sept, in the year of 2011, before me, Sherilyn Jones, Notary Public, personally appeared Jerry Albert, known or identified to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he (or they) executed the same.

Sherilyn Jones
Notary Public
Residing at: Sandpoint
Comm. Exp: 2/24/17



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SUMMARY OF ORDINANCE
NO. 1258
Air Quality
AN ORDINANCE OF THE CITY
OF SANDPOINT, A
MUNICIPAL CORPORATION
OF THE STATE OF IDAHO,
AMENDING TITLE 4,
CHAPTER 8, SANDPOINT
MUNICIPAL CODE;
PROVIDING FOR CHANGES
TO AIR QUALITY
DESIGNATIONS AND
ADVISORY ALERT CRITERIA,
PROVIDING THAT THESE
PROVISIONS SHALL BE
DEEMED SEVERABLE;
PROVIDING FOR
PUBLICATION AND AN
EFFECTIVE DATE.
SECTION 1 provides a
statement of purpose; SECTION
2 amends Sandpoint City Code
Section 4-8-2 C; SECTION 3
provides for repeal and
severability; and SECTION 4
provides an effective date.
The full Ordinance is on file with
the Sandpoint City Clerk and will
be promptly provided during
regular business hours to any
citizens on personal request.
Dated this 21st day of
September, 2011.
Murree Peck, City Clerk
SNP Legal 13400
September 30, 2011

